



**EUROPEAN COMMISSION**  
European Research Executive Agency

Director



## GRANT AGREEMENT

**NUMBER 101021851 — NESTOR**

This **Agreement** ('the Agreement') is **between** the following parties:

**on the one part,**

the **European Research Executive Agency (REA)** ('the Agency'), under the powers delegated by the European Commission ('the Commission'), represented for the purposes of signature of this Agreement by Acting Head of Unit, European Research Executive Agency, Future Society, Secure Society, [REDACTED]

**and**

**on the other part,**

1. 'the coordinator':

**HELLENIC POLICE (HP)**, established in 4 KANELLOPOULOU AVENUE, ATHENS 101 77, Greece, VAT number: [REDACTED], represented for the purposes of signing the Agreement by [REDACTED]

and the following other beneficiaries, if they sign their 'Accession Form' (see Annex 3 and Article 56):

2. **ADMINISTRATION OF THE STATE BORDER GUARD SERVICE OF UKRAINE (SBGS)**, established in VOLODYMYRSKA 26, KYIV 01601, Ukraine,

3. **GLAVNA DIREKTSIA GRANICHNA POLITSIA (CDBP-MOI)**, established in KNYAGINYA MARIA LOUISA 46, SOFIA 1202, Bulgaria, VAT number: [REDACTED]

4. **MINISTRY OF INTERIOR OF THE REPUBLIC OF NORTH MACEDONIA (DBAM)**, established in DIMCE MIRCEV NR.9, SKOPJE 1000, Republic of North Macedonia, VAT number: [REDACTED],

5. **MINISTRY OF TRANSPORT, COMMUNICATIONS AND WORKS (JRCC)**, established in Acheon 28, NICOSIA 1424, Cyprus,

6. **VALSTYBES SIENOS APSAUGOS TARNYBA PRIE VIDAUS REIKALU MINISTERIJOS (SBGSLT)**, established in SAVANORIU PROSPEKTAS 2, VILNIUS 03116, Lithuania,

7. **MINISTERIO DEL INTERIOR (GUCI)**, established in CALLE AMADOR DE LOS RIOS 7, MADRID 28071, Spain,

8. **WOITSCH CONSULTING OY (WCO)**, established in WILLEBRANDINTIE 1 B 5, HELSINKI 00840, Finland, VAT number: [REDACTED]

9. **KENTRO MELETON ASFALIAS (KEMEA)**, established in P KANELLOPOULOU 4 ST, ATHINA 10177, Greece, VAT number: [REDACTED]

10. **ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS (CERTH)**, established in CHARILAOU THERMI ROAD 6 KM, THERMI THESSALONIKI 57001, Greece, VAT number: [REDACTED]

11. **SATWAYS - PROIONTA KAI YPIRESIES TILEMATIKIS DIKTYAKON KAI TILEPIKINONIAKON EFARMOGON ETAIRIA PERIORISMENIS EFTHINIS EPE (STWS)**, established in CHRISTOU LADA STREET 3, HALANDRI 15233, Greece, VAT number: [REDACTED]

12. **DECODIO AG (DCD)**, established in TECHNOPARKSTRASSE 1, ZURICH 8005, Switzerland, VAT number: [REDACTED]

13. **NARDA SAFETY TEST SOLUTIONS GMBH (NARDA)**, established in SANDWIESENSTR 7, PFULLINGEN 72793, Germany, VAT number: [REDACTED]

14. **MILTECH HELLAS BIOMICHANIA EMPORIOANTIPROSOPEIES ILEKTRONIKON OPTIKON KAI MICHANOLOGIKON EIDON AE (MILTECH)**, established in METAXA STREET 90, PAGKRATI PAIANIA 19002, Greece, VAT number: [REDACTED]

15. **MAGGIOLI SPA (MAG)**, established in VIA DEL CARPINO 8, SANTARCANGELO DI ROMAGNA 47822, Italy, VAT number: [REDACTED]

16. **ELISTAIR (ELI)**, established in 12 CHEMIN DES HIRONDELLES, DARDILLY 69570, France, VAT number: [REDACTED]

17. **OCEANSCAN - MARINE SYSTEMS & TECHNOLOGY LDA (OMST)**, established in AVENIDA DA LIBERDADE POLO DO MAR DO UPTEC, MATOSINHOS PORTO 4450 718, Portugal, VAT number: [REDACTED]

18. **ROBOTNIK AUTOMATION SLL (ROB)**, established in CARRER DE BARCELONA, 3-A. P.I. FUENTE DEL JARRO, PATERNA 46988, Spain, VAT number: [REDACTED]

19. **OULUN YLIOPISTO (OUULU)**, established in PENTTI KAITERAN KATU 1, OULU 90014, Finland, VAT number: [REDACTED]

20. **SHEFFIELD HALLAM UNIVERSITY (CENTRIC)**, established in HOWARD STREET CITY CAMPUS, SHEFFIELD S1 1WB, United Kingdom, VAT number: [REDACTED]

21. **HENSOLDT SENSORS GMBH (HEN)**, established in WILLY MESSERSCHMITT STRASSE 3, TAUFKIRCHEN 82024, Germany, VAT number: [REDACTED]

22. **INGENIERIA DE SISTEMAS PARA LA DEFENSA DE ESPANA SA-SME MP (ISDEFE)**, established in CALLE BEATRIZ DE BOBADILLA 3, MADRID 28040, Spain, VAT number: [REDACTED]

Unless otherwise specified, references to ‘beneficiary’ or ‘beneficiaries’ include the coordinator.

The parties referred to above have agreed to enter into the Agreement under the terms and conditions below.

By signing the Agreement or the Accession Form, the beneficiaries accept the grant and agree to implement it under their own responsibility and in accordance with the Agreement, with all the obligations and conditions it sets out.

The Agreement is composed of:

Terms and Conditions

- Annex 1 Description of the action
- Annex 2 Estimated budget for the action
  - 2a Additional information on the estimated budget
- Annex 3 Accession Forms
- Annex 4 Model for the financial statements
- Annex 5 Model for the certificate on the financial statements
- Annex 6 Model for the certificate on the methodology

## **TERMS AND CONDITIONS**

### **TABLE OF CONTENTS**

<b>CHAPTER 1 GENERAL.....</b>	<b>12</b>
ARTICLE 1 — SUBJECT OF THE AGREEMENT.....	12
<b>CHAPTER 2 ACTION.....</b>	<b>12</b>
ARTICLE 2 — ACTION TO BE IMPLEMENTED .....	12
ARTICLE 3 — DURATION AND STARTING DATE OF THE ACTION.....	12
ARTICLE 4 — ESTIMATED BUDGET AND BUDGET TRANSFERS.....	12
4.1 Estimated budget.....	12
4.2 Budget transfers.....	12
<b>CHAPTER 3 GRANT.....</b>	<b>12</b>
ARTICLE 5 — GRANT AMOUNT, FORM OF GRANT, REIMBURSEMENT RATES AND FORMS OF COSTS.....	12
5.1 Maximum grant amount.....	12
5.2 Form of grant, reimbursement rates and forms of costs.....	12
5.3 Final grant amount — Calculation.....	13
5.4 Revised final grant amount — Calculation.....	15
ARTICLE 6 — ELIGIBLE AND INELIGIBLE COSTS.....	15
6.1 General conditions for costs to be eligible.....	15
6.2 Specific conditions for costs to be eligible.....	16
6.3 Conditions for costs of linked third parties to be eligible.....	22
6.4 Conditions for in-kind contributions provided by third parties free of charge to be eligible.....	23
6.5 Ineligible costs.....	23
6.6 Consequences of declaration of ineligible costs.....	23
<b>CHAPTER 4 RIGHTS AND OBLIGATIONS OF THE PARTIES.....</b>	<b>23</b>
<b>SECTION 1 RIGHTS AND OBLIGATIONS RELATED TO IMPLEMENTING THE ACTION.....</b>	<b>24</b>
ARTICLE 7 — GENERAL OBLIGATION TO PROPERLY IMPLEMENT THE ACTION.....	24
7.1 General obligation to properly implement the action.....	24
7.2 Consequences of non-compliance.....	24
ARTICLE 8 — RESOURCES TO IMPLEMENT THE ACTION — THIRD PARTIES INVOLVED IN THE ACTION.....	24
ARTICLE 9 — IMPLEMENTATION OF ACTION TASKS BY BENEFICIARIES NOT RECEIVING EU FUNDING.....	24
ARTICLE 10 — PURCHASE OF GOODS, WORKS OR SERVICES.....	24

10.1 Rules for purchasing goods, works or services..... 24

10.2 Consequences of non-compliance..... 25

ARTICLE 11 — USE OF IN-KIND CONTRIBUTIONS PROVIDED BY THIRD PARTIES AGAINST PAYMENT..... 25

11.1 Rules for the use of in-kind contributions against payment..... 25

11.2 Consequences of non-compliance..... 26

ARTICLE 12 — USE OF IN-KIND CONTRIBUTIONS PROVIDED BY THIRD PARTIES FREE OF CHARGE.....26

12.1 Rules for the use of in-kind contributions free of charge.....26

12.2 Consequences of non-compliance..... 26

ARTICLE 13 — IMPLEMENTATION OF ACTION TASKS BY SUBCONTRACTORS.....26

13.1 Rules for subcontracting action tasks..... 26

13.2 Consequences of non-compliance..... 27

ARTICLE 14 — IMPLEMENTATION OF ACTION TASKS BY LINKED THIRD PARTIES..... 27

ARTICLE 14a — IMPLEMENTATION OF ACTION TASKS BY INTERNATIONAL PARTNERS.....27

ARTICLE 15 — FINANCIAL SUPPORT TO THIRD PARTIES..... 27

15.1 Rules for providing financial support to third parties.....27

15.2 Financial support in the form of prizes..... 27

15.3 Consequences of non-compliance..... 28

ARTICLE 16 — PROVISION OF TRANS-NATIONAL OR VIRTUAL ACCESS TO RESEARCH INFRASTRUCTURE.....28

16.1 Rules for providing trans-national access to research infrastructure..... 28

16.2 Rules for providing virtual access to research infrastructure..... 28

16.3 Consequences of non-compliance..... 28

**SECTION 2 RIGHTS AND OBLIGATIONS RELATED TO THE GRANT ADMINISTRATION..... 28**

ARTICLE 17 — GENERAL OBLIGATION TO INFORM.....28

17.1 General obligation to provide information upon request.....28

17.2 Obligation to keep information up to date and to inform about events and circumstances likely to affect the Agreement.....28

17.3 Consequences of non-compliance..... 29

ARTICLE 18 — KEEPING RECORDS — SUPPORTING DOCUMENTATION.....29

18.1 Obligation to keep records and other supporting documentation..... 29

18.2 Consequences of non-compliance.....30

ARTICLE 19 — SUBMISSION OF DELIVERABLES..... 30

19.1 Obligation to submit deliverables..... 30

19.2 Consequences of non-compliance..... 30

ARTICLE 20 — REPORTING — PAYMENT REQUESTS.....	30
20.1 Obligation to submit reports.....	30
20.2 Reporting periods.....	31
20.3 Periodic reports — Requests for interim payments.....	31
20.4 Final report — Request for payment of the balance.....	32
20.5 Information on cumulative expenditure incurred.....	32
20.6 Currency for financial statements and conversion into euro.....	33
20.7 Language of reports.....	33
20.8 Consequences of non-compliance.....	33
ARTICLE 21 — PAYMENTS AND PAYMENT ARRANGEMENTS.....	33
21.1 Payments to be made.....	33
21.2 Pre-financing payment — Amount — Amount retained for the Guarantee Fund.....	33
21.3 Interim payments — Amount — Calculation.....	34
21.4 Payment of the balance — Amount — Calculation — Release of the amount retained for the Guarantee Fund.....	34
21.5 Notification of amounts due.....	35
21.6 Currency for payments.....	35
21.7 Payments to the coordinator — Distribution to the beneficiaries.....	35
21.8 Bank account for payments.....	36
21.9 Costs of payment transfers.....	36
21.10 Date of payment.....	36
21.11 Consequences of non-compliance.....	36
ARTICLE 22 — CHECKS, REVIEWS, AUDITS AND INVESTIGATIONS — EXTENSION OF FINDINGS.....	37
22.1 Checks, reviews and audits by the Agency and the Commission.....	37
22.2 Investigations by the European Anti-Fraud Office (OLAF).....	39
22.3 Checks and audits by the European Court of Auditors (ECA).....	39
22.4 Checks, reviews, audits and investigations for international organisations.....	39
22.5 Consequences of findings in checks, reviews, audits and investigations — Extension of findings.....	39
22.6 Consequences of non-compliance.....	41
ARTICLE 23 — EVALUATION OF THE IMPACT OF THE ACTION.....	41
23.1 Right to evaluate the impact of the action.....	41
23.2 Consequences of non-compliance.....	42
<b>SECTION 3 RIGHTS AND OBLIGATIONS RELATED TO BACKGROUND AND RESULTS.....</b>	<b>42</b>
<b>SUBSECTION 1 GENERAL.....</b>	<b>42</b>

ARTICLE 23a — MANAGEMENT OF INTELLECTUAL PROPERTY.....	42
23a.1 Obligation to take measures to implement the Commission Recommendation on the management of intellectual property in knowledge transfer activities.....	42
23a.2 Consequences of non-compliance.....	42
<b>SUBSECTION 2 RIGHTS AND OBLIGATIONS RELATED TO BACKGROUND.....</b>	<b>42</b>
ARTICLE 24 — AGREEMENT ON BACKGROUND.....	42
24.1 Agreement on background.....	42
24.2 Consequences of non-compliance.....	43
ARTICLE 25 — ACCESS RIGHTS TO BACKGROUND.....	43
25.1 Exercise of access rights — Waiving of access rights — No sub-licensing.....	43
25.2 Access rights for other beneficiaries, for implementing their own tasks under the action.....	43
25.3 Access rights for other beneficiaries, for exploiting their own results.....	43
25.4 Access rights for affiliated entities.....	43
25.5 Access rights for third parties.....	44
25.6 Consequences of non-compliance.....	44
<b>SUBSECTION 3 RIGHTS AND OBLIGATIONS RELATED TO RESULTS.....</b>	<b>44</b>
ARTICLE 26 — OWNERSHIP OF RESULTS.....	44
26.1 Ownership by the beneficiary that generates the results.....	44
26.2 Joint ownership by several beneficiaries.....	45
26.3 Rights of third parties (including personnel).....	45
26.4 Agency ownership, to protect results.....	45
26.5 Consequences of non-compliance.....	46
ARTICLE 27 — PROTECTION OF RESULTS — VISIBILITY OF EU FUNDING.....	46
27.1 Obligation to protect the results.....	46
27.2 Agency ownership, to protect the results.....	47
27.3 Information on EU funding.....	47
27.4 Consequences of non-compliance.....	47
ARTICLE 28 — EXPLOITATION OF RESULTS.....	47
28.1 Obligation to exploit the results.....	47
28.2 Results that could contribute to European or international standards — Information on EU funding.....	47
28.3 Consequences of non-compliance.....	47
ARTICLE 29 — DISSEMINATION OF RESULTS — OPEN ACCESS — VISIBILITY OF EU FUNDING.....	48
29.1 Obligation to disseminate results.....	48
29.2 Open access to scientific publications.....	48

29.3	Open access to research data.....	49
29.4	Information on EU funding — Obligation and right to use the EU emblem .....	49
29.5	Disclaimer excluding Agency responsibility.....	49
29.6	Consequences of non-compliance.....	49
<b>ARTICLE 30 — TRANSFER AND LICENSING OF RESULTS.....</b>		<b>49</b>
30.1	Transfer of ownership.....	50
30.2	Granting licenses.....	50
30.3	Agency right to object to transfers or licensing.....	50
30.4	Consequences of non-compliance.....	51
<b>ARTICLE 31 — ACCESS RIGHTS TO RESULTS.....</b>		<b>51</b>
31.1	Exercise of access rights — Waiving of access rights — No sub-licensing.....	51
31.2	Access rights for other beneficiaries, for implementing their own tasks under the action.....	51
31.3	Access rights for other beneficiaries, for exploiting their own results.....	51
31.4	Access rights of affiliated entities.....	51
31.5	Access rights for the EU institutions, bodies, offices or agencies and EU Member States.....	52
31.6	Access rights for third parties.....	52
31.7	Consequences of non-compliance.....	52
<b>SECTION 4 OTHER RIGHTS AND OBLIGATIONS.....</b>		<b>52</b>
<b>ARTICLE 32 — RECRUITMENT AND WORKING CONDITIONS FOR RESEARCHERS.....</b>		<b>52</b>
32.1	Obligation to take measures to implement the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers.....	52
32.2	Consequences of non-compliance.....	53
<b>ARTICLE 33 — GENDER EQUALITY.....</b>		<b>53</b>
33.1	Obligation to aim for gender equality.....	53
33.2	Consequences of non-compliance.....	53
<b>ARTICLE 34 — ETHICS AND RESEARCH INTEGRITY.....</b>		<b>53</b>
34.1	Obligation to comply with ethical and research integrity principles.....	53
34.2	Activities raising ethical issues.....	54
34.3	Activities involving human embryos or human embryonic stem cells.....	54
34.4	Consequences of non-compliance.....	55
<b>ARTICLE 35 — CONFLICT OF INTERESTS.....</b>		<b>55</b>
35.1	Obligation to avoid a conflict of interests.....	55
35.2	Consequences of non-compliance.....	55
<b>ARTICLE 36 — CONFIDENTIALITY.....</b>		<b>55</b>
36.1	General obligation to maintain confidentiality.....	55



36.2	Consequences of non-compliance.....	56
ARTICLE 37 — SECURITY-RELATED OBLIGATIONS.....		56
37.1	Results with a security recommendation.....	56
37.2	Classified information.....	57
37.3	Activities involving dual-use goods or dangerous materials and substances.....	57
37.4	Consequences of non-compliance.....	57
ARTICLE 38 — PROMOTING THE ACTION — VISIBILITY OF EU FUNDING.....		57
38.1	Communication activities by beneficiaries.....	57
38.2	Communication activities by the Agency and the Commission .....	58
38.3	Consequences of non-compliance.....	59
ARTICLE 39 — PROCESSING OF PERSONAL DATA.....		59
39.1	Processing of personal data by the Agency and the Commission.....	59
39.2	Processing of personal data by the beneficiaries.....	60
39.3	Consequences of non-compliance.....	60
ARTICLE 40 — ASSIGNMENTS OF CLAIMS FOR PAYMENT AGAINST THE AGENCY.....		60
<b>CHAPTER 5 DIVISION OF BENEFICIARIES' ROLES AND RESPONSIBILITIES — RELATIONSHIP WITH COMPLEMENTARY BENEFICIARIES — RELATIONSHIP WITH PARTNERS OF A JOINT ACTION.....</b>		<b>61</b>
ARTICLE 41 — DIVISION OF BENEFICIARIES' ROLES AND RESPONSIBILITIES — RELATIONSHIP WITH COMPLEMENTARY BENEFICIARIES — RELATIONSHIP WITH PARTNERS OF A JOINT ACTION.....		61
41.1	Roles and responsibility towards the Agency.....	61
41.2	Internal division of roles and responsibilities.....	61
41.3	Internal arrangements between beneficiaries — Consortium agreement.....	62
41.4	Relationship with complementary beneficiaries — Collaboration agreement.....	62
41.5	Relationship with partners of a joint action — Coordination agreement.....	62
<b>CHAPTER 6 REJECTION OF COSTS — REDUCTION OF THE GRANT — RECOVERY — SANCTIONS — DAMAGES — SUSPENSION — TERMINATION — FORCE MAJEURE.....</b>		<b>62</b>
<b>SECTION 1 REJECTION OF COSTS — REDUCTION OF THE GRANT — RECOVERY — SANCTIONS.....</b>		<b>63</b>
ARTICLE 42 — REJECTION OF INELIGIBLE COSTS.....		63
42.1	Conditions.....	63
42.2	Ineligible costs to be rejected — Calculation — Procedure.....	63
42.3	Effects.....	63
ARTICLE 43 — REDUCTION OF THE GRANT.....		63
43.1	Conditions.....	63
43.2	Amount to be reduced — Calculation — Procedure.....	64

43.3	Effects.....	64
<b>ARTICLE 44 — RECOVERY OF UNDUE AMOUNTS.....</b>		<b>64</b>
44.1	Amount to be recovered — Calculation — Procedure.....	65
<b>ARTICLE 45 — ADMINISTRATIVE SANCTIONS.....</b>		<b>68</b>
<b>SECTION 2 LIABILITY FOR DAMAGES.....</b>		<b>68</b>
<b>ARTICLE 46 — LIABILITY FOR DAMAGES.....</b>		<b>68</b>
46.1	Liability of the Agency.....	68
46.2	Liability of the beneficiaries.....	69
<b>SECTION 3 SUSPENSION AND TERMINATION.....</b>		<b>69</b>
<b>ARTICLE 47 — SUSPENSION OF PAYMENT DEADLINE.....</b>		<b>69</b>
47.1	Conditions.....	69
47.2	Procedure.....	69
<b>ARTICLE 48 — SUSPENSION OF PAYMENTS.....</b>		<b>69</b>
48.1	Conditions.....	69
48.2	Procedure.....	70
<b>ARTICLE 49 — SUSPENSION OF THE ACTION IMPLEMENTATION.....</b>		<b>70</b>
49.1	Suspension of the action implementation, by the beneficiaries.....	70
49.2	Suspension of the action implementation, by the Agency.....	71
<b>ARTICLE 50 — TERMINATION OF THE AGREEMENT OR OF THE PARTICIPATION OF ONE OR MORE BENEFICIARIES.....</b>		<b>72</b>
50.1	Termination of the Agreement, by the beneficiaries.....	72
50.2	Termination of the participation of one or more beneficiaries, by the beneficiaries.....	73
50.3	Termination of the Agreement or the participation of one or more beneficiaries, by the Agency.....	75
<b>SECTION 4 FORCE MAJEURE.....</b>		<b>79</b>
<b>ARTICLE 51 — FORCE MAJEURE.....</b>		<b>79</b>
<b>CHAPTER 7 FINAL PROVISIONS.....</b>		<b>80</b>
<b>ARTICLE 52 — COMMUNICATION BETWEEN THE PARTIES.....</b>		<b>80</b>
52.1	Form and means of communication.....	80
52.2	Date of communication.....	81
52.3	Addresses for communication.....	81
<b>ARTICLE 53 — INTERPRETATION OF THE AGREEMENT.....</b>		<b>81</b>
53.1	Precedence of the Terms and Conditions over the Annexes.....	81
53.2	Privileges and immunities.....	81
<b>ARTICLE 54 — CALCULATION OF PERIODS, DATES AND DEADLINES.....</b>		<b>81</b>
<b>ARTICLE 55 — AMENDMENTS TO THE AGREEMENT.....</b>		<b>82</b>

55.1	Conditions.....	82
55.2	Procedure.....	82
ARTICLE 56 — ACCESSION TO THE AGREEMENT.....		82
56.1	Accession of the beneficiaries mentioned in the Preamble.....	83
56.2	Addition of new beneficiaries.....	83
ARTICLE 57 — APPLICABLE LAW AND SETTLEMENT OF DISPUTES.....		83
57.1	Applicable law.....	83
57.2	Dispute settlement.....	83
ARTICLE 58 — ENTRY INTO FORCE OF THE AGREEMENT.....		84

## **CHAPTER 1 GENERAL**

### **ARTICLE 1 — SUBJECT OF THE AGREEMENT**

This Agreement sets out the rights and obligations and the terms and conditions applicable to the grant awarded to the beneficiaries for implementing the action set out in Chapter 2.

## **CHAPTER 2 ACTION**

### **ARTICLE 2 — ACTION TO BE IMPLEMENTED**

The grant is awarded for the action entitled ‘**aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders**’ — ‘**NESTOR**’ (‘**action**’), as described in Annex 1.

### **ARTICLE 3 — DURATION AND STARTING DATE OF THE ACTION**

The duration of the action will be **18 months** as of 1 November 2021 (‘**starting date of the action**’).

### **ARTICLE 4 — ESTIMATED BUDGET AND BUDGET TRANSFERS**

#### **4.1 Estimated budget**

The ‘**estimated budget**’ for the action is set out in Annex 2.

It contains the estimated eligible costs and the forms of costs, broken down by beneficiary and budget category (see Articles 5, 6).

#### **4.2 Budget transfers**

The estimated budget breakdown indicated in Annex 2 may be adjusted — without an amendment (see Article 55) — by transfers of amounts between beneficiaries, budget categories and/or forms of costs set out in Annex 2, if the action is implemented as described in Annex 1.

However, the beneficiaries may not add costs relating to subcontracts not provided for in Annex 1, unless such additional subcontracts are approved by an amendment or in accordance with Article 13.

## **CHAPTER 3 GRANT**

### **ARTICLE 5 — GRANT AMOUNT, FORM OF GRANT, REIMBURSEMENT RATES AND FORMS OF COSTS**

#### **5.1 Maximum grant amount**

The ‘**maximum grant amount**’ is **EUR 4 999 578.13** (four million nine hundred and ninety nine thousand five hundred and seventy eight EURO and thirteen eurocents).

#### **5.2 Form of grant, reimbursement rates and forms of costs**

The grant reimburses **100% of the eligible costs of the beneficiaries that are non-profit legal entities and 70% of the eligible costs of the beneficiaries that are profit legal entities** (see Article 6) (**‘reimbursement of eligible costs grant’**) (see Annex 2).

The estimated eligible costs of the action are EUR **6 108 593.75** (six million one hundred and eight thousand five hundred and ninety three EURO and seventy five eurocents).

Eligible costs (see Article 6) must be declared under the following forms (**‘forms of costs’**):

(a) for **direct personnel costs**:

- as actually incurred costs (**‘actual costs’**) or
- on the basis of an amount per unit calculated by the beneficiary in accordance with its usual cost accounting practices (**‘unit costs’**).

Personnel **costs for SME owners or beneficiaries that are natural persons** not receiving a salary (see Article 6.2, Points A.4 and A.5) must be declared on the basis of the amount per unit set out in Annex 2a (**unit costs**);

(b) for **direct costs for subcontracting**: as actually incurred costs (**actual costs**);

(c) for **direct costs of providing financial support to third parties**: not applicable;

(d) for **other direct costs**:

- for costs of internally invoiced goods and services: on the basis of an amount per unit calculated by the beneficiary in accordance with its usual cost accounting practices (**‘unit costs’**);
- for all other costs: as actually incurred costs (**actual costs**);

(e) for **indirect costs**: on the basis of a flat-rate applied as set out in Article 6.2, Point E (**‘flat-rate costs’**);

(f) **specific cost category(ies)**: not applicable.

### 5.3 Final grant amount — Calculation

The **‘final grant amount’** depends on the actual extent to which the action is implemented in accordance with the Agreement’s terms and conditions.

This amount is calculated by the Agency — when the payment of the balance is made (see Article 21.4) — in the following steps:

Step 1 — Application of the reimbursement rates to the eligible costs

Step 2 — Limit to the maximum grant amount

Step 3 — Reduction due to the no-profit rule

Step 4 — Reduction due to substantial errors, irregularities or fraud or serious breach of obligations

### **5.3.1 Step 1 — Application of the reimbursement rates to the eligible costs**

The reimbursement rate(s) (see Article 5.2) are applied to the eligible costs (actual costs, unit costs and flat-rate costs; see Article 6) declared by the beneficiaries (see Article 20) and approved by the Agency (see Article 21).

### **5.3.2 Step 2 — Limit to the maximum grant amount**

If the amount obtained following Step 1 is higher than the maximum grant amount set out in Article 5.1, it will be limited to the latter.

### **5.3.3 Step 3 — Reduction due to the no-profit rule**

The grant must not produce a profit.

‘**Profit**’ means the surplus of the amount obtained following Steps 1 and 2 plus the action’s total receipts, over the action’s total eligible costs.

The ‘**action’s total eligible costs**’ are the consolidated total eligible costs approved by the Agency.

The ‘**action’s total receipts**’ are the consolidated total receipts generated during its duration (see Article 3).

The following are considered **receipts**:

- (a) income generated by the action; if the income is generated from selling equipment or other assets purchased under the Agreement, the receipt is up to the amount declared as eligible under the Agreement;
- (b) financial contributions given by third parties to the beneficiary specifically to be used for the action, and
- (c) in-kind contributions provided by third parties free of charge and specifically to be used for the action, if they have been declared as eligible costs.

The following are however not considered receipts:

- (a) income generated by exploiting the action’s results (see Article 28);
- (b) financial contributions by third parties, if they may be used to cover costs other than the eligible costs (see Article 6);
- (c) financial contributions by third parties with no obligation to repay any amount unused at the end of the period set out in Article 3.

If there is a profit, it will be deducted from the amount obtained following Steps 1 and 2.

### **5.3.4 Step 4 — Reduction due to substantial errors, irregularities or fraud or serious breach of obligations — Reduced grant amount — Calculation**

If the grant is reduced (see Article 43), the Agency will calculate the reduced grant amount by deducting the amount of the reduction (calculated in proportion to the seriousness of the errors,

irregularities or fraud or breach of obligations, in accordance with Article 43.2) from the maximum grant amount set out in Article 5.1.

The final grant amount will be the lower of the following two:

- the amount obtained following Steps 1 to 3 or
- the reduced grant amount following Step 4.

#### 5.4 Revised final grant amount — Calculation

If — after the payment of the balance (in particular, after checks, reviews, audits or investigations; see Article 22) — the Agency rejects costs (see Article 42) or reduces the grant (see Article 43), it will calculate the ‘**revised final grant amount**’ for the beneficiary concerned by the findings.

This amount is calculated by the Agency on the basis of the findings, as follows:

- in case of **rejection of costs**: by applying the reimbursement rate to the revised eligible costs approved by the Agency for the beneficiary concerned;
- in case of **reduction of the grant**: by calculating the concerned beneficiary’s share in the grant amount reduced in proportion to the seriousness of the errors, irregularities or fraud or breach of obligations (see Article 43.2).

In case of **rejection of costs and reduction of the grant**, the revised final grant amount for the beneficiary concerned will be the lower of the two amounts above.

### ARTICLE 6 — ELIGIBLE AND INELIGIBLE COSTS

#### 6.1 General conditions for costs to be eligible

‘**Eligible costs**’ are costs that meet the following criteria:

(a) for **actual costs**:

- (i) they must be actually incurred by the beneficiary;
- (ii) they must be incurred in the period set out in Article 3, with the exception of costs relating to the submission of the periodic report for the last reporting period and the final report (see Article 20);
- (iii) they must be indicated in the estimated budget set out in Annex 2;
- (iv) they must be incurred in connection with the action as described in Annex 1 and necessary for its implementation;
- (v) they must be identifiable and verifiable, in particular recorded in the beneficiary’s accounts in accordance with the accounting standards applicable in the country where the beneficiary is established and with the beneficiary’s usual cost accounting practices;
- (vi) they must comply with the applicable national law on taxes, labour and social security, and

- (vii) they must be reasonable, justified and must comply with the principle of sound financial management, in particular regarding economy and efficiency;

(b) for **unit costs**:

- (i) they must be calculated as follows:

{amounts per unit set out in Annex 2a or calculated by the beneficiary in accordance with its usual cost accounting practices (see Article 6.2, Point A and Article 6.2.D.5)

multiplied by

the number of actual units};

- (ii) the number of actual units must comply with the following conditions:

- the units must be actually used or produced in the period set out in Article 3;
- the units must be necessary for implementing the action or produced by it, and
- the number of units must be identifiable and verifiable, in particular supported by records and documentation (see Article 18);

(c) for **flat-rate costs**:

- (i) they must be calculated by applying the flat-rate set out in Annex 2, and
- (ii) the costs (actual costs or unit costs) to which the flat-rate is applied must comply with the conditions for eligibility set out in this Article.

## 6.2 Specific conditions for costs to be eligible

Costs are eligible if they comply with the general conditions (see above) and the specific conditions set out below for each of the following budget categories:

- A. direct personnel costs;
- B. direct costs of subcontracting;
- C. not applicable;
- D. other direct costs;
- E. indirect costs;
- F. not applicable.

‘Direct costs’ are costs that are directly linked to the action implementation and can therefore be attributed to it directly. They must not include any indirect costs (see Point E below).

‘Indirect costs’ are costs that are not directly linked to the action implementation and therefore cannot be attributed directly to it.

### A. Direct personnel costs

#### Types of eligible personnel costs



A.1 Personnel costs are eligible, if they are related to personnel working for the beneficiary under an employment contract (or equivalent appointing act) and assigned to the action (**‘costs for employees (or equivalent)’**). They must be limited to salaries (including during parental leave), social security contributions, taxes and other costs included in the **remuneration**, if they arise from national law or the employment contract (or equivalent appointing act).

Beneficiaries that are non-profit legal entities<sup>1</sup> may also declare as personnel costs **additional remuneration** for personnel assigned to the action (including payments on the basis of supplementary contracts regardless of their nature), if:

- (a) it is part of the beneficiary’s usual remuneration practices and is paid in a consistent manner whenever the same kind of work or expertise is required;
- (b) the criteria used to calculate the supplementary payments are objective and generally applied by the beneficiary, regardless of the source of funding used.

‘Additional remuneration’ means any part of the remuneration which exceeds what the person would be paid for time worked in projects funded by national schemes.

Additional remuneration for personnel assigned to the action is eligible up to the following amount:

- (a) if the person works full time and exclusively on the action during the full year: up to EUR 8 000;
- (b) if the person works exclusively on the action but not full-time or not for the full year: up to the corresponding pro-rata amount of EUR 8 000, or
- (c) if the person does not work exclusively on the action: up to a pro-rata amount calculated as follows:
  - {EUR 8 000
  - divided by
  - the number of annual productive hours (see below)},
  - multiplied by
  - the number of hours that the person has worked on the action during the year}.

A.2 The **costs for natural persons working under a direct contract** with the beneficiary other than an employment contract are eligible personnel costs, if:

- (a) the person works under conditions similar to those of an employee (in particular regarding the way the work is organised, the tasks that are performed and the premises where they are performed);
- (b) the result of the work carried out belongs to the beneficiary (unless exceptionally agreed otherwise), and

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<sup>1</sup> For the definition, see Article 2.1(14) of the Rules for Participation Regulation No 1290/2013: **‘non-profit legal entity’** means a legal entity which by its legal form is non-profit-making or which has a legal or statutory obligation not to distribute profits to its shareholders or individual members.

- (c) the costs are not significantly different from those for personnel performing similar tasks under an employment contract with the beneficiary.

A.3 The **costs of personnel seconded by a third party against payment** are eligible personnel costs, if the conditions in Article 11.1 are met.

A.4 **Costs of owners** of beneficiaries that are small and medium-sized enterprises ('**SME owners**') who are working on the action and who do not receive a salary are eligible personnel costs, if they correspond to the amount per unit set out in Annex 2a multiplied by the number of actual hours worked on the action.

A.5 **Costs of 'beneficiaries that are natural persons'** not receiving a salary are eligible personnel costs, if they correspond to the amount per unit set out in Annex 2a multiplied by the number of actual hours worked on the action.

### Calculation

Personnel costs must be calculated by the beneficiaries as follows:

{hourly rate  
multiplied by  
the number of actual hours worked on the action},  
plus  
for non-profit legal entities: additional remuneration to personnel assigned to the action under the conditions set out above (Point A.1)}.

The number of actual hours declared for a person must be identifiable and verifiable (see Article 18).

The total number of hours declared in EU or Euratom grants, for a person for a year, cannot be higher than the annual productive hours used for the calculations of the hourly rate. Therefore, the maximum number of hours that can be declared for the grant are:

{number of annual productive hours for the year (see below)  
minus  
total number of hours declared by the beneficiary, for that person in that year, for other EU or Euratom grants}.

The '**hourly rate**' is one of the following:

- (a) for personnel costs declared as **actual costs** (i.e. budget categories A.1, A.2, A.3): the hourly rate is calculated *per full financial year*, as follows:

{actual annual personnel costs (excluding additional remuneration) for the person  
divided by  
number of annual productive hours}.

using the personnel costs and the number of productive hours for each full financial year covered by the reporting period concerned. If a financial year is not closed at the end of the

reporting period, the beneficiaries must use the hourly rate of the last closed financial year available.

For the ‘number of annual productive hours’, the beneficiaries may choose one of the following:

- (i) ‘fixed number of hours’: 1 720 hours for persons working full time (or corresponding pro-rata for persons not working full time);
- (ii) ‘individual annual productive hours’: the total number of hours worked by the person in the year for the beneficiary, calculated as follows:

{annual workable hours of the person (according to the employment contract, applicable collective labour agreement or national law)

plus

overtime worked

minus

absences (such as sick leave and special leave)}.

‘Annual workable hours’ means the period during which the personnel must be working, at the employer’s disposal and carrying out his/her activity or duties under the employment contract, applicable collective labour agreement or national working time legislation.

If the contract (or applicable collective labour agreement or national working time legislation) does not allow to determine the annual workable hours, this option cannot be used;

- (iii) ‘standard annual productive hours’: the ‘standard number of annual hours’ generally applied by the beneficiary for its personnel in accordance with its usual cost accounting practices. This number must be at least 90% of the ‘standard annual workable hours’.

If there is no applicable reference for the standard annual workable hours, this option cannot be used.

For all options, the actual time spent on **parental leave** by a person assigned to the action may be deducted from the number of annual productive hours.

As an alternative, beneficiaries may calculate the hourly rate *per month*, as follows:

{actual monthly personnel cost (excluding additional remuneration) for the person

divided by

{number of annual productive hours / 12}}

using the personnel costs for each month and (one twelfth of) the annual productive hours calculated according to either option (i) or (iii) above, i.e.:

- fixed number of hours or
- standard annual productive hours.

Time spent on **parental leave** may not be deducted when calculating the hourly rate per month. However, beneficiaries may declare personnel costs incurred in periods of parental leave in proportion to the time the person worked on the action in that financial year.

If parts of a basic remuneration are generated over a period longer than a month, the beneficiaries may include only the share which is generated in the month (irrespective of the amount actually paid for that month).

Each beneficiary must use only one option (per full financial year or per month) for each full financial year;

(b) for personnel costs declared on the basis of **unit costs** (i.e. budget categories A.1, A.2, A.4, A.5): the hourly rate is one of the following:

- (i) for SME owners or beneficiaries that are natural persons: the hourly rate set out in Annex 2a (see Points A.4 and A.5 above), or
- (ii) for personnel costs declared on the basis of the beneficiary's usual cost accounting practices: the hourly rate calculated by the beneficiary in accordance with its usual cost accounting practices, if:
  - the cost accounting practices used are applied in a consistent manner, based on objective criteria, regardless of the source of funding;
  - the hourly rate is calculated using the actual personnel costs recorded in the beneficiary's accounts, excluding any ineligible cost or costs included in other budget categories.

The actual personnel costs may be adjusted by the beneficiary on the basis of budgeted or estimated elements. Those elements must be relevant for calculating the personnel costs, reasonable and correspond to objective and verifiable information;

and

- the hourly rate is calculated using the number of annual productive hours (see above).

**B. Direct costs of subcontracting** (including related duties, taxes and charges such as non-deductible value added tax (VAT) paid by the beneficiary) are eligible if the conditions in Article 13.1.1 are met.

### **C. Direct costs of providing financial support to third parties**

Not applicable

### **D. Other direct costs**

**D.1 Travel costs and related subsistence allowances** (including related duties, taxes and charges such as non-deductible value added tax (VAT) paid by the beneficiary) are eligible if they are in line with the beneficiary's usual practices on travel.

**D.2 The depreciation costs of equipment, infrastructure or other assets** (new or second-hand) as recorded in the beneficiary's accounts are eligible, if they were purchased in accordance with

Article 10.1.1 and written off in accordance with international accounting standards and the beneficiary's usual accounting practices.

The **costs of renting or leasing** equipment, infrastructure or other assets (including related duties, taxes and charges such as non-deductible value added tax (VAT) paid by the beneficiary) are also eligible, if they do not exceed the depreciation costs of similar equipment, infrastructure or assets and do not include any financing fees.

The costs of equipment, infrastructure or other assets **contributed in-kind against payment** are eligible, if they do not exceed the depreciation costs of similar equipment, infrastructure or assets, do not include any financing fees and if the conditions in Article 11.1 are met.

The only portion of the costs that will be taken into account is that which corresponds to the duration of the action and rate of actual use for the purposes of the action.

**D.3 Costs of other goods and services** (including related duties, taxes and charges such as non-deductible value added tax (VAT) paid by the beneficiary) are eligible, if they are:

- (a) purchased specifically for the action and in accordance with Article 10.1.1 or
- (b) contributed in kind against payment and in accordance with Article 11.1.

Such goods and services include, for instance, consumables and supplies, dissemination (including open access), protection of results, certificates on the financial statements (if they are required by the Agreement), certificates on the methodology, translations and publications.

**D.4 Capitalised and operating costs of 'large research infrastructure'**<sup>2</sup> directly used for the action are eligible, if:

- (a) the value of the large research infrastructure represents at least 75% of the total fixed assets (at historical value in its last closed balance sheet before the date of the signature of the Agreement or as determined on the basis of the rental and leasing costs of the research infrastructure<sup>3</sup>);
- (b) the beneficiary's methodology for declaring the costs for large research infrastructure has been positively assessed by the Commission ('**ex-ante assessment**');
- (c) the beneficiary declares as direct eligible costs only the portion which corresponds to the duration of the action and the rate of actual use for the purposes of the action, and
- (d) they comply with the conditions as further detailed in the annotations to the H2020 grant agreements.

<sup>2</sup> '**Large research infrastructure**' means research infrastructure of a total value of at least EUR 20 million, for a beneficiary, calculated as the sum of historical asset values of each individual research infrastructure of that beneficiary, as they appear in its last closed balance sheet before the date of the signature of the Agreement or as determined on the basis of the rental and leasing costs of the research infrastructure.

<sup>3</sup> For the definition, see Article 2(6) of the H2020 Framework Programme Regulation No 1291/2013: '**Research infrastructure**' are facilities, resources and services that are used by the research communities to conduct research and foster innovation in their fields. Where relevant, they may be used beyond research, e.g. for education or public services. They include: major scientific equipment (or sets of instruments); knowledge-based resources such as collections, archives or scientific data; e-infrastructures such as data and computing systems and communication networks; and any other infrastructure of a unique nature essential to achieve excellence in research and innovation. Such infrastructures may be 'single-sited', 'virtual' or 'distributed'.

**D.5 Costs of internally invoiced goods and services** directly used for the action are eligible, if:

- (a) they are declared on the basis of a unit cost calculated in accordance with the beneficiary's usual cost accounting practices;
- (b) the cost accounting practices used are applied in a consistent manner, based on objective criteria, regardless of the source of funding;
- (c) the unit cost is calculated using the actual costs for the good or service recorded in the beneficiary's accounts, excluding any ineligible cost or costs included in other budget categories.

The actual costs may be adjusted by the beneficiary on the basis of budgeted or estimated elements. Those elements must be relevant for calculating the costs, reasonable and correspond to objective and verifiable information;

- (d) the unit cost excludes any costs of items which are not directly linked to the production of the invoiced goods or service.

'Internally invoiced goods and services' means goods or services which are provided by the beneficiary directly for the action and which the beneficiary values on the basis of its usual cost accounting practices.

**E. Indirect costs**

**Indirect costs** are eligible if they are declared on the basis of the flat-rate of 25% of the eligible direct costs (see Article 5.2 and Points A to D above), from which are excluded:

- (a) costs of subcontracting and
- (b) costs of in-kind contributions provided by third parties which are not used on the beneficiary's premises;
- (c) not applicable;
- (d) not applicable.

Beneficiaries receiving an operating grant<sup>4</sup> financed by the EU or Euratom budget cannot declare indirect costs for the period covered by the operating grant, unless they can demonstrate that the operating grant does not cover any costs of the action.

**F. Specific cost category(ies)**

Not applicable

**6.3 Conditions for costs of linked third parties to be eligible**

<sup>4</sup> For the definition, see Article 121(1)(b) of Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, Euratom) No 1605/2002 ('**Financial Regulation No 966/2012**') (OJ L 218, 26.10.2012, p.1): '**operating grant**' means direct financial contribution, by way of donation, from the budget in order to finance the functioning of a body which pursues an aim of general EU interest or has an objective forming part of and supporting an EU policy.

Not applicable

#### **6.4 Conditions for in-kind contributions provided by third parties free of charge to be eligible**

**In-kind contributions provided free of charge** are eligible direct costs (for the beneficiary), if the costs incurred by the third party fulfil — *mutatis mutandis* — the general and specific conditions for eligibility set out in this Article (Article 6.1 and 6.2) and Article 12.1.

#### **6.5 Ineligible costs**

‘**Ineligible costs**’ are:

(a) costs that do not comply with the conditions set out above (Article 6.1 to 6.4), in particular:

- (i) costs related to return on capital;
- (ii) debt and debt service charges;
- (iii) provisions for future losses or debts;
- (iv) interest owed;
- (v) doubtful debts;
- (vi) currency exchange losses;
- (vii) bank costs charged by the beneficiary’s bank for transfers from the Agency;
- (viii) excessive or reckless expenditure;
- (ix) deductible VAT;
- (x) costs incurred during suspension of the implementation of the action (see Article 49);

(b) costs declared under another EU or Euratom grant (including grants awarded by a Member State and financed by the EU or Euratom budget and grants awarded by bodies other than the Agency for the purpose of implementing the EU or Euratom budget); in particular, indirect costs if the beneficiary is already receiving an operating grant financed by the EU or Euratom budget in the same period, unless it can demonstrate that the operating grant does not cover any costs of the action;

(c) Costs for fuel.

#### **6.6 Consequences of declaration of ineligible costs**

Declared costs that are ineligible will be rejected (see Article 42).

This may also lead to any of the other measures described in Chapter 6.

## **CHAPTER 4 RIGHTS AND OBLIGATIONS OF THE PARTIES**

## **SECTION 1 RIGHTS AND OBLIGATIONS RELATED TO IMPLEMENTING THE ACTION**

### **ARTICLE 7 — GENERAL OBLIGATION TO PROPERLY IMPLEMENT THE ACTION**

#### **7.1 General obligation to properly implement the action**

The beneficiaries must implement the action as described in Annex 1 and in compliance with the provisions of the Agreement and all legal obligations under applicable EU, international and national law.

#### **7.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

### **ARTICLE 8 — RESOURCES TO IMPLEMENT THE ACTION — THIRD PARTIES INVOLVED IN THE ACTION**

The beneficiaries must have the appropriate resources to implement the action.

If it is necessary to implement the action, the beneficiaries may:

- purchase goods, works and services (see Article 10);
- use in-kind contributions provided by third parties against payment (see Article 11);
- use in-kind contributions provided by third parties free of charge (see Article 12);
- call upon subcontractors to implement action tasks described in Annex 1 (see Article 13);
- call upon linked third parties to implement action tasks described in Annex 1 (see Article 14);
- call upon international partners to implement action tasks described in Annex 1 (see Article 14a).

In these cases, the beneficiaries retain sole responsibility towards the Agency and the other beneficiaries for implementing the action.

### **ARTICLE 9 — IMPLEMENTATION OF ACTION TASKS BY BENEFICIARIES NOT RECEIVING EU FUNDING**

Not applicable

### **ARTICLE 10 — PURCHASE OF GOODS, WORKS OR SERVICES**

#### **10.1 Rules for purchasing goods, works or services**

10.1.1 If necessary to implement the action, the beneficiaries may purchase goods, works or services.



The beneficiaries must make such purchases ensuring the best value for money or, if appropriate, the lowest price. In doing so, they must avoid any conflict of interests (see Article 35).

The beneficiaries must ensure that the Agency, the Commission, the European Court of Auditors (ECA) and the European Anti-Fraud Office (OLAF) can exercise their rights under Articles 22 and 23 also towards their contractors.

10.1.2 Beneficiaries that are ‘contracting authorities’ within the meaning of Directive 2004/18/EC<sup>5</sup> (or 2014/24/EU<sup>6</sup>) or ‘contracting entities’ within the meaning of Directive 2004/17/EC<sup>7</sup> (or 2014/25/EU<sup>8</sup>) must comply with the applicable national law on public procurement.

## **10.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under Article 10.1.1, the costs related to the contract concerned will be ineligible (see Article 6) and will be rejected (see Article 42).

If a beneficiary breaches any of its obligations under Article 10.1.2, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 11 — USE OF IN-KIND CONTRIBUTIONS PROVIDED BY THIRD PARTIES AGAINST PAYMENT**

### **11.1 Rules for the use of in-kind contributions against payment**

If necessary to implement the action, the beneficiaries may use in-kind contributions provided by third parties against payment.

The beneficiaries may declare costs related to the payment of in-kind contributions as eligible (see Article 6.1 and 6.2), up to the third parties’ costs for the seconded persons, contributed equipment, infrastructure or other assets or other contributed goods and services.

The third parties and their contributions must be set out in Annex 1. The Agency may however approve in-kind contributions not set out in Annex 1 without amendment (see Article 55), if:

- they are specifically justified in the periodic technical report and
- their use does not entail changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

The beneficiaries must ensure that the Agency, the Commission, the European Court of Auditors

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<sup>5</sup> Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public work contracts, public supply contracts and public service contracts (OJ L 134, 30.04.2004, p. 114).

<sup>6</sup> Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC. (OJ L 94, 28.03.2014, p. 65).

<sup>7</sup> Directive 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors (OJ L 134, 30.04.2004, p. 1)

<sup>8</sup> Directive 2014/25/EU of the European Parliament and of the Council of 26 February 2014 on procurement by entities operating in the water, energy, transport and postal services sectors and repealing Directive 2004/17/EC (OJ L 94, 28.03.2014, p. 243).

(ECA) and the European Anti-Fraud Office (OLAF) can exercise their rights under Articles 22 and 23 also towards the third parties.

## **11.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the costs related to the payment of the in-kind contribution will be ineligible (see Article 6) and will be rejected (see Article 42).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 12 — USE OF IN-KIND CONTRIBUTIONS PROVIDED BY THIRD PARTIES FREE OF CHARGE**

### **12.1 Rules for the use of in-kind contributions free of charge**

If necessary to implement the action, the beneficiaries may use in-kind contributions provided by third parties free of charge.

The beneficiaries may declare costs incurred by the third parties for the seconded persons, contributed equipment, infrastructure or other assets or other contributed goods and services as eligible in accordance with Article 6.4.

The third parties and their contributions must be set out in Annex 1. The Agency may however approve in-kind contributions not set out in Annex 1 without amendment (see Article 55), if:

- they are specifically justified in the periodic technical report and
- their use does not entail changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

The beneficiaries must ensure that the Agency, the Commission, the European Court of Auditors (ECA) and the European Anti-Fraud Office (OLAF) can exercise their rights under Articles 22 and 23 also towards the third parties.

### **12.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the costs incurred by the third parties related to the in-kind contribution will be ineligible (see Article 6) and will be rejected (see Article 42).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 13 — IMPLEMENTATION OF ACTION TASKS BY SUBCONTRACTORS**

### **13.1 Rules for subcontracting action tasks**

13.1.1 If necessary to implement the action, the beneficiaries may award subcontracts covering the implementation of certain action tasks described in Annex 1.

Subcontracting may cover only a limited part of the action.

The beneficiaries must award the subcontracts ensuring the best value for money or, if appropriate, the lowest price. In doing so, they must avoid any conflict of interests (see Article 35).

The tasks to be implemented and the estimated cost for each subcontract must be set out in Annex 1 and the total estimated costs of subcontracting per beneficiary must be set out in Annex 2. The Agency may however approve subcontracts not set out in Annex 1 and 2 without amendment (see Article 55), if:

- they are specifically justified in the periodic technical report and
- they do not entail changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

Action tasks involving classified information may be subcontracted only after explicit approval (in writing) from the Agency (see Article 37).

The beneficiaries must ensure that the Agency, the Commission, the European Court of Auditors (ECA) and the European Anti-Fraud Office (OLAF) can exercise their rights under Articles 22 and 23 also towards their subcontractors.

13.1.2 The beneficiaries must ensure that their obligations under Articles 35, 36, 38 and 46 also apply to the subcontractors.

Beneficiaries that are ‘contracting authorities’ within the meaning of Directive 2004/18/EC (or 2014/24/EU) or ‘contracting entities’ within the meaning of Directive 2004/17/EC (or 2014/25/EU) must comply with the applicable national law on public procurement.

### **13.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under Article 13.1.1, the costs related to the subcontract concerned will be ineligible (see Article 6) and will be rejected (see Article 42).

If a beneficiary breaches any of its obligations under Article 13.1.2, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 14 — IMPLEMENTATION OF ACTION TASKS BY LINKED THIRD PARTIES**

Not applicable

## **ARTICLE 14a — IMPLEMENTATION OF ACTION TASKS BY INTERNATIONAL PARTNERS**

Not applicable

## **ARTICLE 15 — FINANCIAL SUPPORT TO THIRD PARTIES**

### **15.1 Rules for providing financial support to third parties**

Not applicable

### **15.2 Financial support in the form of prizes**

Not applicable

### **15.3 Consequences of non-compliance**

Not applicable

## **ARTICLE 16 — PROVISION OF TRANS-NATIONAL OR VIRTUAL ACCESS TO RESEARCH INFRASTRUCTURE**

### **16.1 Rules for providing trans-national access to research infrastructure**

Not applicable

### **16.2 Rules for providing virtual access to research infrastructure**

Not applicable

### **16.3 Consequences of non-compliance**

Not applicable

## **SECTION 2 RIGHTS AND OBLIGATIONS RELATED TO THE GRANT ADMINISTRATION**

### **ARTICLE 17 — GENERAL OBLIGATION TO INFORM**

#### **17.1 General obligation to provide information upon request**

The beneficiaries must provide — during implementation of the action or afterwards and in accordance with Article 41.2 — any information requested in order to verify eligibility of the costs, proper implementation of the action and compliance with any other obligation under the Agreement.

#### **17.2 Obligation to keep information up to date and to inform about events and circumstances likely to affect the Agreement**

Each beneficiary must keep information stored in the Participant Portal Beneficiary Register (via the electronic exchange system; see Article 52) up to date, in particular, its name, address, legal representatives, legal form and organisation type.

Each beneficiary must immediately inform the coordinator — which must immediately inform the Agency and the other beneficiaries — of any of the following:

- (a) **events** which are likely to affect significantly or delay the implementation of the action or the EU's financial interests, in particular:
  - (i) changes in its legal, financial, technical, organisational or ownership situation
- (b) **circumstances** affecting:
  - (i) the decision to award the grant or

- (ii) compliance with requirements under the Agreement.

### 17.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## ARTICLE 18 — KEEPING RECORDS — SUPPORTING DOCUMENTATION

### 18.1 Obligation to keep records and other supporting documentation

The beneficiaries must — for a period of five years after the payment of the balance — keep records and other supporting documentation in order to prove the proper implementation of the action and the costs they declare as eligible.

They must make them available upon request (see Article 17) or in the context of checks, reviews, audits or investigations (see Article 22).

If there are on-going checks, reviews, audits, investigations, litigation or other pursuits of claims under the Agreement (including the extension of findings; see Article 22), the beneficiaries must keep the records and other supporting documentation until the end of these procedures.

The beneficiaries must keep the original documents. Digital and digitalised documents are considered originals if they are authorised by the applicable national law. The Agency may accept non-original documents if it considers that they offer a comparable level of assurance.

#### 18.1.1 Records and other supporting documentation on the scientific and technical implementation

The beneficiaries must keep records and other supporting documentation on scientific and technical implementation of the action in line with the accepted standards in the respective field.

#### 18.1.2 Records and other documentation to support the costs declared

The beneficiaries must keep the records and documentation supporting the costs declared, in particular the following:

- (a) for **actual costs**: adequate records and other supporting documentation to prove the costs declared, such as contracts, subcontracts, invoices and accounting records. In addition, the beneficiaries' usual cost accounting practices and internal control procedures must enable direct reconciliation between the amounts declared, the amounts recorded in their accounts and the amounts stated in the supporting documentation;
- (b) for **unit costs**: adequate records and other supporting documentation to prove the number of units declared. Beneficiaries do not need to identify the actual eligible costs covered or to keep or provide supporting documentation (such as accounting statements) to prove the amount per unit.

In addition, **for unit costs calculated in accordance with the beneficiary's usual cost**

**accounting practices**, the beneficiaries must keep adequate records and documentation to prove that the cost accounting practices used comply with the conditions set out in Article 6.2.

The beneficiaries may submit to the Commission, for approval, a certificate (drawn up in accordance with Annex 6) stating that their usual cost accounting practices comply with these conditions (**‘certificate on the methodology’**). If the certificate is approved, costs declared in line with this methodology will not be challenged subsequently, unless the beneficiaries have concealed information for the purpose of the approval.

- (c) for **flat-rate costs**: adequate records and other supporting documentation to prove the eligibility of the costs to which the flat-rate is applied. The beneficiaries do not need to identify the costs covered or provide supporting documentation (such as accounting statements) to prove the amount declared at a flat-rate.

In addition, for **personnel costs** (declared as actual costs or on the basis of unit costs), the beneficiaries must keep **time records** for the number of hours declared. The time records must be in writing and approved by the persons working on the action and their supervisors, at least monthly. In the absence of reliable time records of the hours worked on the action, the Agency may accept alternative evidence supporting the number of hours declared, if it considers that it offers an adequate level of assurance.

As an exception, for **persons working exclusively on the action**, there is no need to keep time records, if the beneficiary signs a **declaration** confirming that the persons concerned have worked exclusively on the action.

## 18.2 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, costs insufficiently substantiated will be ineligible (see Article 6) and will be rejected (see Article 42), and the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## ARTICLE 19 — SUBMISSION OF DELIVERABLES

### 19.1 Obligation to submit deliverables

The coordinator must submit the **‘deliverables’** identified in Annex 1, in accordance with the timing and conditions set out in it.

### 19.2 Consequences of non-compliance

If the coordinator breaches any of its obligations under this Article, the Agency may apply any of the measures described in Chapter 6.

## ARTICLE 20 — REPORTING — PAYMENT REQUESTS

### 20.1 Obligation to submit reports

The coordinator must submit to the Agency (see Article 52) the technical and financial reports set out in this Article. These reports include requests for payment and must be drawn up using the forms and templates provided in the electronic exchange system (see Article 52).

## 20.2 Reporting periods

The action is divided into the following ‘**reporting periods**’:

- RP1: from month 1 to month 18

## 20.3 Periodic reports — Requests for interim payments

The coordinator must submit a periodic report within 60 days following the end of each reporting period.

The **periodic report** must include the following:

- (a) a ‘**periodic technical report**’ containing:
  - (i) an **explanation of the work carried out** by the beneficiaries;
  - (ii) an **overview of the progress** towards the objectives of the action, including milestones and deliverables identified in Annex 1.

This report must include explanations justifying the differences between work expected to be carried out in accordance with Annex 1 and that actually carried out.

The report must detail the exploitation and dissemination of the results and — if required in Annex 1 — an updated ‘**plan for the exploitation and dissemination of the results**’.

The report must indicate the communication activities;

- (iii) a **summary** for publication by the Agency;
  - (iv) the answers to the ‘**questionnaire**’, covering issues related to the action implementation and the economic and societal impact, notably in the context of the Horizon 2020 key performance indicators and the Horizon 2020 monitoring requirements;
- (b) a ‘**periodic financial report**’ containing:

- (i) an ‘**individual financial statement**’ (see Annex 4) from each beneficiary, for the reporting period concerned.

The individual financial statement must detail the eligible costs (actual costs, unit costs and flat-rate costs; see Article 6) for each budget category (see Annex 2).

The beneficiaries must declare all eligible costs, even if — for actual costs, unit costs and flat-rate costs — they exceed the amounts indicated in the estimated budget (see Annex 2). Amounts which are not declared in the individual financial statement will not be taken into account by the Agency.

If an individual financial statement is not submitted for a reporting period, it may be included in the periodic financial report for the next reporting period.

The individual financial statements of the last reporting period must also detail the **receipts of the action** (see Article 5.3.3).

Each beneficiary must **certify** that:

- the information provided is full, reliable and true;
  - the costs declared are eligible (see Article 6);
  - the costs can be substantiated by adequate records and supporting documentation (see Article 18) that will be produced upon request (see Article 17) or in the context of checks, reviews, audits and investigations (see Article 22), and
  - for the last reporting period: that all the receipts have been declared (see Article 5.3.3);
- (ii) an **explanation of the use of resources** and the information on subcontracting (see Article 13) and in-kind contributions provided by third parties (see Articles 11 and 12) from each beneficiary, for the reporting period concerned;
- (iii) not applicable;
- (iv) a **‘periodic summary financial statement’**, created automatically by the electronic exchange system, consolidating the individual financial statements for the reporting period concerned and including — except for the last reporting period — the **request for interim payment**.

#### **20.4 Final report — Request for payment of the balance**

In addition to the periodic report for the last reporting period, the coordinator must submit the final report within 60 days following the end of the last reporting period.

The **final report** must include the following:

- (a) a **‘final technical report’** with a **summary** for publication containing:
- (i) an overview of the results and their exploitation and dissemination;
  - (ii) the conclusions on the action, and
  - (iii) the socio-economic impact of the action;
- (b) a **‘final financial report’** containing:
- (i) a **‘final summary financial statement’**, created automatically by the electronic exchange system, consolidating the individual financial statements for all reporting periods and including the **request for payment of the balance** and
  - (ii) a **‘certificate on the financial statements’** (drawn up in accordance with Annex 5) for each beneficiary, if it requests a total contribution of EUR 325 000 or more, as reimbursement of actual costs and unit costs calculated on the basis of its usual cost accounting practices (see Article 5.2 and Article 6.2).

#### **20.5 Information on cumulative expenditure incurred**



Not applicable

## 20.6 Currency for financial statements and conversion into euro

Financial statements must be drafted in euro.

Beneficiaries with accounting established in a currency other than the euro must convert the costs recorded in their accounts into euro, at the average of the daily exchange rates published in the C series of the *Official Journal of the European Union*, calculated over the corresponding reporting period.

If no daily euro exchange rate is published in the *Official Journal of the European Union* for the currency in question, they must be converted at the average of the monthly accounting rates published on the Commission's website, calculated over the corresponding reporting period.

Beneficiaries with accounting established in euro must convert costs incurred in another currency into euro according to their usual accounting practices.

## 20.7 Language of reports

All reports (technical and financial reports, including financial statements) must be submitted in the language of the Agreement.

## 20.8 Consequences of non-compliance

If the reports submitted do not comply with this Article, the Agency may suspend the payment deadline (see Article 47) and apply any of the other measures described in Chapter 6.

If the coordinator breaches its obligation to submit the reports and if it fails to comply with this obligation within 30 days following a written reminder, the Agency may terminate the Agreement (see Article 50) or apply any of the other measures described in Chapter 6.

# ARTICLE 21 — PAYMENTS AND PAYMENT ARRANGEMENTS

## 21.1 Payments to be made

The following payments will be made to the coordinator:

- one **pre-financing payment**;
- one or more **interim payments**, on the basis of the request(s) for interim payment (see Article 20), and
- one **payment of the balance**, on the basis of the request for payment of the balance (see Article 20).

## 21.2 Pre-financing payment — Amount — Amount retained for the Guarantee Fund

The aim of the pre-financing is to provide the beneficiaries with a float.

It remains the property of the EU until the payment of the balance.

The amount of the pre-financing payment will be EUR **3 999 662.50** (three million nine hundred and ninety nine thousand six hundred and sixty two EURO and fifty eurocents).

The Agency will — except if Article 48 applies — make the pre-financing payment to the coordinator within 30 days, either from the entry into force of the Agreement (see Article 58) or from 10 days before the starting date of the action (see Article 3), whichever is the latest.

An amount of EUR **249 978.91** (two hundred and forty nine thousand nine hundred and seventy eight EURO and ninety one eurocents), corresponding to 5% of the maximum grant amount (see Article 5.1), is retained by the Agency from the pre-financing payment and transferred into the ‘**Guarantee Fund**’.

### **21.3 Interim payments — Amount — Calculation**

Interim payments reimburse the eligible costs incurred for the implementation of the action during the corresponding reporting periods.

The Agency will pay to the coordinator the amount due as interim payment within 90 days from receiving the periodic report (see Article 20.3), except if Articles 47 or 48 apply.

Payment is subject to the approval of the periodic report. Its approval does not imply recognition of the compliance, authenticity, completeness or correctness of its content.

The **amount due as interim payment** is calculated by the Agency in the following steps:

Step 1 — Application of the reimbursement rates

Step 2 — Limit to 90% of the maximum grant amount

#### **21.3.1 Step 1 — Application of the reimbursement rates**

The reimbursement rate(s) (see Article 5.2) are applied to the eligible costs (actual costs, unit costs and flat-rate costs; see Article 6) declared by the beneficiaries (see Article 20) and approved by the Agency (see above) for the concerned reporting period.

#### **21.3.2 Step 2 — Limit to 90% of the maximum grant amount**

The total amount of pre-financing and interim payments must not exceed 90% of the maximum grant amount set out in Article 5.1. The maximum amount for the interim payment will be calculated as follows:

$$\left\{ \begin{array}{l} 90\% \text{ of the maximum grant amount (see Article 5.1)} \\ \text{minus} \\ \text{\{pre-financing and previous interim payments\}} \end{array} \right\}.$$

### **21.4 Payment of the balance — Amount — Calculation — Release of the amount retained for the Guarantee Fund**

The payment of the balance reimburses the remaining part of the eligible costs incurred by the beneficiaries for the implementation of the action.

If the total amount of earlier payments is greater than the final grant amount (see Article 5.3), the payment of the balance takes the form of a recovery (see Article 44).

If the total amount of earlier payments is lower than the final grant amount, the Agency will pay the balance within 90 days from receiving the final report (see Article 20.4), except if Articles 47 or 48 apply.

Payment is subject to the approval of the final report. Its approval does not imply recognition of the compliance, authenticity, completeness or correctness of its content.

The **amount due as the balance** is calculated by the Agency by deducting the total amount of pre-financing and interim payments (if any) already made, from the final grant amount determined in accordance with Article 5.3:

$$\begin{aligned} & \{\text{final grant amount (see Article 5.3)} \\ & \text{minus} \\ & \{\text{pre-financing and interim payments (if any) made}\}. \end{aligned}$$

At the payment of the balance, the amount retained for the Guarantee Fund (see above) will be released and:

- if the balance is positive: the amount released will be paid in full to the coordinator together with the amount due as the balance;
- if the balance is negative (payment of the balance taking the form of recovery): it will be deducted from the amount released (see Article 44.1.2). If the resulting amount:
  - is positive, it will be paid to the coordinator
  - is negative, it will be recovered.

The amount to be paid may however be offset — without the beneficiaries' consent — against any other amount owed by a beneficiary to the Agency, the Commission or another executive agency (under the EU or Euratom budget), up to the maximum EU contribution indicated, for that beneficiary, in the estimated budget (see Annex 2).

### **21.5 Notification of amounts due**

When making payments, the Agency will formally notify to the coordinator the amount due, specifying whether it concerns an interim payment or the payment of the balance.

For the payment of the balance, the notification will also specify the final grant amount.

In the case of reduction of the grant or recovery of undue amounts, the notification will be preceded by the contradictory procedure set out in Articles 43 and 44.

### **21.6 Currency for payments**

The Agency will make all payments in euro.

### **21.7 Payments to the coordinator — Distribution to the beneficiaries**

Payments will be made to the coordinator.

Payments to the coordinator will discharge the Agency from its payment obligation.

The coordinator must distribute the payments between the beneficiaries without unjustified delay.

Pre-financing may however be distributed only:

- (a) if the minimum number of beneficiaries set out in the call for proposals has acceded to the Agreement (see Article 56) and
- (b) to beneficiaries that have acceded to the Agreement (see Article 56).

### 21.8 Bank account for payments

All payments will be made to the following bank account:

Name of bank: BANK OF GREECE

Full name of the account holder: EU FUNDING PROGR IMPLEMENTED OUTSIDE  
STRUCTURAL AND INVESTMENT FUNDS

### 21.9 Costs of payment transfers

The cost of the payment transfers is borne as follows:

- the Agency bears the cost of transfers charged by its bank;
- the beneficiary bears the cost of transfers charged by its bank;
- the party causing a repetition of a transfer bears all costs of the repeated transfer.

### 21.10 Date of payment

Payments by the Agency are considered to have been carried out on the date when they are debited to its account.

### 21.11 Consequences of non-compliance

21.11.1 If the Agency does not pay within the payment deadlines (see above), the beneficiaries are entitled to **late-payment interest** at the rate applied by the European Central Bank (ECB) for its main refinancing operations in euros ('reference rate'), plus three and a half points. The reference rate is the rate in force on the first day of the month in which the payment deadline expires, as published in the C series of the *Official Journal of the European Union*.

If the late-payment interest is lower than or equal to EUR 200, it will be paid to the coordinator only upon request submitted within two months of receiving the late payment.

Late-payment interest is not due if all beneficiaries are EU Member States (including regional and local government authorities or other public bodies acting on behalf of a Member State for the purpose of this Agreement).

Suspension of the payment deadline or payments (see Articles 47 and 48) will not be considered as late payment.

Late-payment interest covers the period running from the day following the due date for payment (see above), up to and including the date of payment.

Late-payment interest is not considered for the purposes of calculating the final grant amount.

21.11.2 If the coordinator breaches any of its obligations under this Article, the grant may be reduced (see Article 43) and the Agreement or the participation of the coordinator may be terminated (see Article 50).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 22 — CHECKS, REVIEWS, AUDITS AND INVESTIGATIONS — EXTENSION OF FINDINGS**

### **22.1 Checks, reviews and audits by the Agency and the Commission**

#### **22.1.1 Right to carry out checks**

The Agency or the Commission will — during the implementation of the action or afterwards — check the proper implementation of the action and compliance with the obligations under the Agreement, including assessing deliverables and reports.

For this purpose the Agency or the Commission may be assisted by external persons or bodies.

The Agency or the Commission may also request additional information in accordance with Article 17. The Agency or the Commission may request beneficiaries to provide such information to it directly.

Information provided must be accurate, precise and complete and in the format requested, including electronic format.

#### **22.1.2 Right to carry out reviews**

The Agency or the Commission may — during the implementation of the action or afterwards — carry out reviews on the proper implementation of the action (including assessment of deliverables and reports), compliance with the obligations under the Agreement and continued scientific or technological relevance of the action.

Reviews may be started up to two years after the payment of the balance. They will be formally notified to the coordinator or beneficiary concerned and will be considered to have started on the date of the formal notification.

If the review is carried out on a third party (see Articles 10 to 16), the beneficiary concerned must inform the third party.

The Agency or the Commission may carry out reviews directly (using its own staff) or indirectly (using external persons or bodies appointed to do so). It will inform the coordinator or beneficiary concerned of the identity of the external persons or bodies. They have the right to object to the appointment on grounds of commercial confidentiality.

The coordinator or beneficiary concerned must provide — within the deadline requested — any information and data in addition to deliverables and reports already submitted (including information on the use of resources). The Agency or the Commission may request beneficiaries to provide such information to it directly.

The coordinator or beneficiary concerned may be requested to participate in meetings, including with external experts.

For **on-the-spot** reviews, the beneficiaries must allow access to their sites and premises, including to external persons or bodies, and must ensure that information requested is readily available.

Information provided must be accurate, precise and complete and in the format requested, including electronic format.

On the basis of the review findings, a '**review report**' will be drawn up.

The Agency or the Commission will formally notify the review report to the coordinator or beneficiary concerned, which has 30 days to formally notify observations ('**contradictory review procedure**').

Reviews (including review reports) are in the language of the Agreement.

### 22.1.3 Right to carry out audits

The Agency or the Commission may — during the implementation of the action or afterwards — carry out audits on the proper implementation of the action and compliance with the obligations under the Agreement.

Audits may be started up to two years after the payment of the balance. They will be formally notified to the coordinator or beneficiary concerned and will be considered to have started on the date of the formal notification.

If the audit is carried out on a third party (see Articles 10 to 16), the beneficiary concerned must inform the third party.

The Agency or the Commission may carry out audits directly (using its own staff) or indirectly (using external persons or bodies appointed to do so). It will inform the coordinator or beneficiary concerned of the identity of the external persons or bodies. They have the right to object to the appointment on grounds of commercial confidentiality.

The coordinator or beneficiary concerned must provide — within the deadline requested — any information (including complete accounts, individual salary statements or other personal data) to verify compliance with the Agreement. The Agency or the Commission may request beneficiaries to provide such information to it directly.

For **on-the-spot** audits, the beneficiaries must allow access to their sites and premises, including to external persons or bodies, and must ensure that information requested is readily available.

Information provided must be accurate, precise and complete and in the format requested, including electronic format.

On the basis of the audit findings, a '**draft audit report**' will be drawn up.

The Agency or the Commission will formally notify the draft audit report to the coordinator or

beneficiary concerned, which has 30 days to formally notify observations (**‘contradictory audit procedure’**). This period may be extended by the Agency or the Commission in justified cases.

The **‘final audit report’** will take into account observations by the coordinator or beneficiary concerned. The report will be formally notified to it.

Audits (including audit reports) are in the language of the Agreement.

The Agency or the Commission may also access the beneficiaries’ statutory records for the periodical assessment of unit costs or flat-rate amounts.

## **22.2 Investigations by the European Anti-Fraud Office (OLAF)**

Under Regulations No 883/2013<sup>16</sup> and No 2185/96<sup>17</sup> (and in accordance with their provisions and procedures), the European Anti-Fraud Office (OLAF) may — at any moment during implementation of the action or afterwards — carry out investigations, including on-the-spot checks and inspections, to establish whether there has been fraud, corruption or any other illegal activity affecting the financial interests of the EU.

## **22.3 Checks and audits by the European Court of Auditors (ECA)**

Under Article 287 of the Treaty on the Functioning of the European Union (TFEU) and Article 161 of the Financial Regulation No 966/2012<sup>18</sup>, the European Court of Auditors (ECA) may — at any moment during implementation of the action or afterwards — carry out audits.

The ECA has the right of access for the purpose of checks and audits.

## **22.4 Checks, reviews, audits and investigations for international organisations**

Not applicable

## **22.5 Consequences of findings in checks, reviews, audits and investigations — Extension of findings**

### **22.5.1 Findings in this grant**

Findings in checks, reviews, audits or investigations carried out in the context of this grant may lead to the rejection of ineligible costs (see Article 42), reduction of the grant (see Article 43), recovery of undue amounts (see Article 44) or to any of the other measures described in Chapter 6.

Rejection of costs or reduction of the grant after the payment of the balance will lead to a revised final grant amount (see Article 5.4).

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<sup>16</sup> Regulation (EU, Euratom) No 883/2013 of the European Parliament and of the Council of 11 September 2013 concerning investigations conducted by the European Anti-Fraud Office (OLAF) and repealing Regulation (EC) No 1073/1999 of the European Parliament and of the Council and Council Regulation (Euratom) No 1074/1999 (OJ L 248, 18.09.2013, p. 1).

<sup>17</sup> Council Regulation (Euratom, EC) No 2185/1996 of 11 November 1996 concerning on-the-spot checks and inspections carried out by the Commission in order to protect the European Communities’ financial interests against fraud and other irregularities (OJ L 292, 15.11.1996, p. 2).

<sup>18</sup> Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, Euratom) No 1605/2002 (OJ L 298, 26.10.2012, p. 1).

Findings in checks, reviews, audits or investigations may lead to a request for amendment for the modification of Annex 1 (see Article 55).

Checks, reviews, audits or investigations that find systemic or recurrent errors, irregularities, fraud or breach of obligations may also lead to consequences in other EU or Euratom grants awarded under similar conditions (**‘extension of findings from this grant to other grants’**).

Moreover, findings arising from an OLAF investigation may lead to criminal prosecution under national law.

### 22.5.2 Findings in other grants

The Agency or the Commission may extend findings from other grants to this grant (**‘extension of findings from other grants to this grant’**), if:

- (a) the beneficiary concerned is found, in other EU or Euratom grants awarded under similar conditions, to have committed systemic or recurrent errors, irregularities, fraud or breach of obligations that have a material impact on this grant and
- (b) those findings are formally notified to the beneficiary concerned — together with the list of grants affected by the findings — no later than two years after the payment of the balance of this grant.

The extension of findings may lead to the rejection of costs (see Article 42), reduction of the grant (see Article 43), recovery of undue amounts (see Article 44), suspension of payments (see Article 48), suspension of the action implementation (see Article 49) or termination (see Article 50).

### 22.5.3 Procedure

The Agency or the Commission will formally notify the beneficiary concerned the systemic or recurrent errors and its intention to extend these audit findings, together with the list of grants affected.

22.5.3.1 If the findings concern **eligibility of costs**: the formal notification will include:

- (a) an invitation to submit observations on the list of grants affected by the findings;
- (b) the request to submit **revised financial statements** for all grants affected;
- (c) the **correction rate for extrapolation** established by the Agency or the Commission on the basis of the systemic or recurrent errors, to calculate the amounts to be rejected if the beneficiary concerned:
  - (i) considers that the submission of revised financial statements is not possible or practicable or
  - (ii) does not submit revised financial statements.

The beneficiary concerned has 90 days from receiving notification to submit observations, revised financial statements or to propose a duly substantiated **alternative correction method**. This period may be extended by the Agency or the Commission in justified cases.

The Agency or the Commission may then start a rejection procedure in accordance with Article 42, on the basis of:



- the revised financial statements, if approved;
- the proposed alternative correction method, if accepted

or

- the initially notified correction rate for extrapolation, if it does not receive any observations or revised financial statements, does not accept the observations or the proposed alternative correction method or does not approve the revised financial statements.

22.5.3.2 If the findings concern **substantial errors, irregularities or fraud or serious breach of obligations**: the formal notification will include:

- (a) an invitation to submit observations on the list of grants affected by the findings and
- (b) the flat-rate the Agency or the Commission intends to apply according to the principle of proportionality.

The beneficiary concerned has 90 days from receiving notification to submit observations or to propose a duly substantiated alternative flat-rate.

The Agency or the Commission may then start a reduction procedure in accordance with Article 43, on the basis of:

- the proposed alternative flat-rate, if accepted

or

- the initially notified flat-rate, if it does not receive any observations or does not accept the observations or the proposed alternative flat-rate.

## 22.6 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, any insufficiently substantiated costs will be ineligible (see Article 6) and will be rejected (see Article 42).

Such breaches may also lead to any of the other measures described in Chapter 6.

## ARTICLE 23 — EVALUATION OF THE IMPACT OF THE ACTION

### 23.1 Right to evaluate the impact of the action

The Agency or the Commission may carry out interim and final evaluations of the impact of the action measured against the objective of the EU programme.

Evaluations may be started during implementation of the action and up to five years after the payment of the balance. The evaluation is considered to start on the date of the formal notification to the coordinator or beneficiaries.

The Agency or the Commission may make these evaluations directly (using its own staff) or indirectly (using external bodies or persons it has authorised to do so).

The coordinator or beneficiaries must provide any information relevant to evaluate the impact of the action, including information in electronic format.

### **23.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the Agency may apply the measures described in Chapter 6.

## **SECTION 3 RIGHTS AND OBLIGATIONS RELATED TO BACKGROUND AND RESULTS**

### **SUBSECTION 1 GENERAL**

#### **ARTICLE 23a — MANAGEMENT OF INTELLECTUAL PROPERTY**

##### **23a.1 Obligation to take measures to implement the Commission Recommendation on the management of intellectual property in knowledge transfer activities**

Beneficiaries that are universities or other public research organisations must take measures to implement the principles set out in Points 1 and 2 of the Code of Practice annexed to the Commission Recommendation on the management of intellectual property in knowledge transfer activities<sup>19</sup>.

This does not change the obligations set out in Subsections 2 and 3 of this Section.

The beneficiaries must ensure that researchers and third parties involved in the action are aware of them.

##### **23a.2 Consequences of non-compliance**

If a beneficiary breaches its obligations under this Article, the Agency may apply any of the measures described in Chapter 6.

### **SUBSECTION 2 RIGHTS AND OBLIGATIONS RELATED TO BACKGROUND**

#### **ARTICLE 24 — AGREEMENT ON BACKGROUND**

##### **24.1 Agreement on background**

The beneficiaries must identify and agree (in writing) on the background for the action (**‘agreement on background’**).

**‘Background’** means any data, know-how or information — whatever its form or nature (tangible or intangible), including any rights such as intellectual property rights — that:

- (a) is held by the beneficiaries before they acceded to the Agreement, and

<sup>19</sup> Commission Recommendation C(2008) 1329 of 10.4.2008 on the management of intellectual property in knowledge transfer activities and the Code of Practice for universities and other public research institutions attached to this recommendation.

(b) is needed to implement the action or exploit the results.

## **24.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 25 — ACCESS RIGHTS TO BACKGROUND**

### **25.1 Exercise of access rights — Waiving of access rights — No sub-licensing**

To exercise access rights, this must first be requested in writing (**‘request for access’**).

**‘Access rights’** means rights to use results or background under the terms and conditions laid down in this Agreement.

Waivers of access rights are not valid unless in writing.

Unless agreed otherwise, access rights do not include the right to sub-license.

### **25.2 Access rights for other beneficiaries, for implementing their own tasks under the action**

The beneficiaries must give each other access — on a royalty-free basis — to background needed to implement their own tasks under the action, unless the beneficiary that holds the background has — before acceding to the Agreement —:

- (a) informed the other beneficiaries that access to its background is subject to legal restrictions or limits, including those imposed by the rights of third parties (including personnel), or
- (b) agreed with the other beneficiaries that access would not be on a royalty-free basis.

### **25.3 Access rights for other beneficiaries, for exploiting their own results**

The beneficiaries must give each other access — under fair and reasonable conditions — to background needed for exploiting their own results, unless the beneficiary that holds the background has — before acceding to the Agreement — informed the other beneficiaries that access to its background is subject to legal restrictions or limits, including those imposed by the rights of third parties (including personnel).

**‘Fair and reasonable conditions’** means appropriate conditions, including possible financial terms or royalty-free conditions, taking into account the specific circumstances of the request for access, for example the actual or potential value of the results or background to which access is requested and/or the scope, duration or other characteristics of the exploitation envisaged.

Requests for access may be made — unless agreed otherwise — up to one year after the period set out in Article 3.

### **25.4 Access rights for affiliated entities**

Unless otherwise agreed in the consortium agreement, access to background must also be given

— under fair and reasonable conditions (see above; Article 25.3) and unless it is subject to legal restrictions or limits, including those imposed by the rights of third parties (including personnel) — to affiliated entities<sup>20</sup> established in an EU Member State or ‘**associated country**’<sup>21</sup>, if this is needed to exploit the results generated by the beneficiaries to which they are affiliated.

Unless agreed otherwise (see above; Article 25.1), the affiliated entity concerned must make the request directly to the beneficiary that holds the background.

Requests for access may be made — unless agreed otherwise — up to one year after the period set out in Article 3.

### 25.5 Access rights for third parties

Not applicable

### 25.6 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## SUBSECTION 3 RIGHTS AND OBLIGATIONS RELATED TO RESULTS

### ARTICLE 26 — OWNERSHIP OF RESULTS

#### 26.1 Ownership by the beneficiary that generates the results

Results are owned by the beneficiary that generates them.

‘**Results**’ means any (tangible or intangible) output of the action such as data, knowledge or information — whatever its form or nature, whether it can be protected or not — that is generated in the action, as well as any rights attached to it, including intellectual property rights.

<sup>20</sup> For the definition see Article 2.1(2) Rules for Participation Regulation No 1290/2013: ‘**affiliated entity**’ means any legal entity that is:

- under the direct or indirect control of a participant, or
- under the same direct or indirect control as the participant, or
- directly or indirectly controlling a participant.

‘Control’ may take any of the following forms:

- (a) the direct or indirect holding of more than 50% of the nominal value of the issued share capital in the legal entity concerned, or of a majority of the voting rights of the shareholders or associates of that entity;
- (b) the direct or indirect holding, in fact or in law, of decision-making powers in the legal entity concerned.

However the following relationships between legal entities shall not in themselves be deemed to constitute controlling relationships:

- (a) the same public investment corporation, institutional investor or venture-capital company has a direct or indirect holding of more than 50% of the nominal value of the issued share capital or a majority of voting rights of the shareholders or associates;
- (b) the legal entities concerned are owned or supervised by the same public body.

<sup>21</sup> For the definition, see Article 2.1(3) of the Rules for Participation Regulation No 1290/2013: ‘**associated country**’ means a third country which is party to an international agreement with the Union, as identified in Article 7 of Horizon 2020 Framework Programme Regulation No 1291/2013. Article 7 sets out the conditions for association of non-EU countries to Horizon 2020.

## 26.2 Joint ownership by several beneficiaries

Two or more beneficiaries own results jointly if:

- (a) they have jointly generated them and
- (b) it is not possible to:
  - (i) establish the respective contribution of each beneficiary, or
  - (ii) separate them for the purpose of applying for, obtaining or maintaining their protection (see Article 27).

The joint owners must agree (in writing) on the allocation and terms of exercise of their joint ownership ('**joint ownership agreement**'), to ensure compliance with their obligations under this Agreement.

Unless otherwise agreed in the joint ownership agreement, each joint owner may grant non-exclusive licences to third parties to exploit jointly-owned results (without any right to sub-license), if the other joint owners are given:

- (a) at least 45 days advance notice and
- (b) fair and reasonable compensation.

Once the results have been generated, joint owners may agree (in writing) to apply another regime than joint ownership (such as, for instance, transfer to a single owner (see Article 30) with access rights for the others).

## 26.3 Rights of third parties (including personnel)

If third parties (including personnel) may claim rights to the results, the beneficiary concerned must ensure that it complies with its obligations under the Agreement.

If a third party generates results, the beneficiary concerned must obtain all necessary rights (transfer, licences or other) from the third party, in order to be able to respect its obligations as if those results were generated by the beneficiary itself.

If obtaining the rights is impossible, the beneficiary must refrain from using the third party to generate the results.

## 26.4 Agency ownership, to protect results

26.4.1 The Agency may — with the consent of the beneficiary concerned — assume ownership of results to protect them, if a beneficiary intends — up to four years after the period set out in Article 3 — to disseminate its results without protecting them, except in any of the following cases:

- (a) the lack of protection is because protecting the results is not possible, reasonable or justified (given the circumstances);
- (b) the lack of protection is because there is a lack of potential for commercial or industrial exploitation, or

- (c) the beneficiary intends to transfer the results to another beneficiary or third party established in an EU Member State or associated country, which will protect them.

Before the results are disseminated and unless any of the cases above under Points (a), (b) or (c) applies, the beneficiary must formally notify the Agency and at the same time inform it of any reasons for refusing consent. The beneficiary may refuse consent only if it can show that its legitimate interests would suffer significant harm.

If the Agency decides to assume ownership, it will formally notify the beneficiary concerned within 45 days of receiving notification.

No dissemination relating to these results may take place before the end of this period or, if the Agency takes a positive decision, until it has taken the necessary steps to protect the results.

26.4.2 The Agency may — with the consent of the beneficiary concerned — assume ownership of results to protect them, if a beneficiary intends — up to four years after the period set out in Article 3 — to stop protecting them or not to seek an extension of protection, except in any of the following cases:

- (a) the protection is stopped because of a lack of potential for commercial or industrial exploitation;
- (b) an extension would not be justified given the circumstances.

A beneficiary that intends to stop protecting results or not seek an extension must — unless any of the cases above under Points (a) or (b) applies — formally notify the Agency at least 60 days before the protection lapses or its extension is no longer possible and at the same time inform it of any reasons for refusing consent. The beneficiary may refuse consent only if it can show that its legitimate interests would suffer significant harm.

If the Agency decides to assume ownership, it will formally notify the beneficiary concerned within 45 days of receiving notification.

## **26.5 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to the any of the other measures described in Chapter 6.

## **ARTICLE 27 — PROTECTION OF RESULTS — VISIBILITY OF EU FUNDING**

### **27.1 Obligation to protect the results**

Each beneficiary must examine the possibility of protecting its results and must adequately protect them — for an appropriate period and with appropriate territorial coverage — if:

- (a) the results can reasonably be expected to be commercially or industrially exploited and
- (b) protecting them is possible, reasonable and justified (given the circumstances).

When deciding on protection, the beneficiary must consider its own legitimate interests and the legitimate interests (especially commercial) of the other beneficiaries.

## 27.2 Agency ownership, to protect the results

If a beneficiary intends not to protect its results, to stop protecting them or not seek an extension of protection, the Agency may — under certain conditions (see Article 26.4) — assume ownership to ensure their (continued) protection.

## 27.3 Information on EU funding

Applications for protection of results (including patent applications) filed by or on behalf of a beneficiary must — unless the Agency requests or agrees otherwise or unless it is impossible — include the following:

“The project leading to this application has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 101021851”.

## 27.4 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such a breach may also lead to any of the other measures described in Chapter 6.

## ARTICLE 28 — EXPLOITATION OF RESULTS

### 28.1 Obligation to exploit the results

Each beneficiary must — up to four years after the period set out in Article 3 — take measures aiming to ensure ‘**exploitation**’ of its results (either directly or indirectly, in particular through transfer or licensing; see Article 30) by:

- (a) using them in further research activities (outside the action);
- (b) developing, creating or marketing a product or process;
- (c) creating and providing a service, or
- (d) using them in standardisation activities.

This does not change the security obligations in Article 37, which still apply.

### 28.2 Results that could contribute to European or international standards — Information on EU funding

If results are incorporated in a standard, the beneficiary concerned must — unless the Agency requests or agrees otherwise or unless it is impossible — ask the standardisation body to include the following statement in (information related to) the standard:

“Results incorporated in this standard received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 101021851”.

### 28.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced in accordance with Article 43.

Such a breach may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 29 — DISSEMINATION OF RESULTS — OPEN ACCESS — VISIBILITY OF EU FUNDING**

### **29.1 Obligation to disseminate results**

Unless it goes against their legitimate interests, each beneficiary must — as soon as possible — ‘disseminate’ its results by disclosing them to the public by appropriate means (other than those resulting from protecting or exploiting the results), including in scientific publications (in any medium).

This does not change the obligation to protect results in Article 27, the confidentiality obligations in Article 36, the security obligations in Article 37 or the obligations to protect personal data in Article 39, all of which still apply.

A beneficiary that intends to disseminate its results must give advance notice to the other beneficiaries of — unless agreed otherwise — at least 45 days, together with sufficient information on the results it will disseminate.

Any other beneficiary may object within — unless agreed otherwise — 30 days of receiving notification, if it can show that its legitimate interests in relation to the results or background would be significantly harmed. In such cases, the dissemination may not take place unless appropriate steps are taken to safeguard these legitimate interests.

If a beneficiary intends not to protect its results, it may — under certain conditions (see Article 26.4.1) — need to formally notify the Agency before dissemination takes place.

### **29.2 Open access to scientific publications**

Each beneficiary must ensure open access (free of charge online access for any user) to all peer-reviewed scientific publications relating to its results.

In particular, it must:

- (a) as soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications;

Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.

- (b) ensure open access to the deposited publication — via the repository — at the latest:
  - (i) on publication, if an electronic version is available for free via the publisher, or
  - (ii) within six months of publication (twelve months for publications in the social sciences and humanities) in any other case.



- (c) ensure open access — via the repository — to the bibliographic metadata that identify the deposited publication.

The bibliographic metadata must be in a standard format and must include all of the following:

- the terms “European Union (EU)” and “Horizon 2020”;
- the name of the action, acronym and grant number;
- the publication date, and length of embargo period if applicable, and
- a persistent identifier.

### **29.3 Open access to research data**

Not applicable;

### **29.4 Information on EU funding — Obligation and right to use the EU emblem**

Unless the Agency requests or agrees otherwise or unless it is impossible, any dissemination of results (in any form, including electronic) must:

- (a) display the EU emblem and
- (b) include the following text:

“This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 101021851”.

When displayed together with another logo, the EU emblem must have appropriate prominence.

For the purposes of their obligations under this Article, the beneficiaries may use the EU emblem without first obtaining approval from the Agency.

This does not however give them the right to exclusive use.

Moreover, they may not appropriate the EU emblem or any similar trademark or logo, either by registration or by any other means.

### **29.5 Disclaimer excluding Agency responsibility**

Any dissemination of results must indicate that it reflects only the author's view and that the Agency is not responsible for any use that may be made of the information it contains.

### **29.6 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such a breach may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 30 — TRANSFER AND LICENSING OF RESULTS**

### **30.1 Transfer of ownership**

Each beneficiary may transfer ownership of its results.

It must however ensure that its obligations under Articles 26.2, 26.4, 27, 28, 29, 30 and 31 also apply to the new owner and that this owner has the obligation to pass them on in any subsequent transfer.

This does not change the security obligations in Article 37, which still apply.

Unless agreed otherwise (in writing) for specifically-identified third parties or unless impossible under applicable EU and national laws on mergers and acquisitions, a beneficiary that intends to transfer ownership of results must give at least 45 days advance notice (or less if agreed in writing) to the other beneficiaries that still have (or still may request) access rights to the results. This notification must include sufficient information on the new owner to enable any beneficiary concerned to assess the effects on its access rights.

Unless agreed otherwise (in writing) for specifically-identified third parties, any other beneficiary may object within 30 days of receiving notification (or less if agreed in writing), if it can show that the transfer would adversely affect its access rights. In this case, the transfer may not take place until agreement has been reached between the beneficiaries concerned.

### **30.2 Granting licenses**

Each beneficiary may grant licences to its results (or otherwise give the right to exploit them), if:

- (a) this does not impede the access rights under Article 31 and
- (b) not applicable.

In addition to Points (a) and (b), exclusive licences for results may be granted only if all the other beneficiaries concerned have waived their access rights (see Article 31.1).

This does not change the dissemination obligations in Article 29 or security obligations in Article 37, which still apply.

### **30.3 Agency right to object to transfers or licensing**

The Agency may — up to four years after the period set out in Article 3 — object to a transfer of ownership or the exclusive licensing of results, if:

- (a) it is to a third party established in a non-EU country not associated with Horizon 2020 and
- (b) the Agency considers that the transfer or licence is not in line with EU interests regarding competitiveness or is inconsistent with ethical principles or security considerations.

A beneficiary that intends to transfer ownership or grant an exclusive licence must formally notify the Agency before the intended transfer or licensing takes place and:

- identify the specific results concerned;
- describe in detail the new owner or licensee and the planned or potential exploitation of the results, and

- include a reasoned assessment of the likely impact of the transfer or licence on EU competitiveness and its consistency with ethical principles and security considerations.

The Agency may request additional information.

If the Agency decides to object to a transfer or exclusive licence, it must formally notify the beneficiary concerned within 60 days of receiving notification (or any additional information it has requested).

No transfer or licensing may take place in the following cases:

- pending the Agency decision, within the period set out above;
- if the Agency objects;
- until the conditions are complied with, if the Agency objection comes with conditions.

### **30.4 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such a breach may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 31 — ACCESS RIGHTS TO RESULTS**

### **31.1 Exercise of access rights — Waiving of access rights — No sub-licensing**

The conditions set out in Article 25.1 apply.

The obligations set out in this Article do not change the security obligations in Article 37, which still apply.

### **31.2 Access rights for other beneficiaries, for implementing their own tasks under the action**

The beneficiaries must give each other access — on a royalty-free basis — to results needed for implementing their own tasks under the action.

### **31.3 Access rights for other beneficiaries, for exploiting their own results**

The beneficiaries must give each other — under fair and reasonable conditions (see Article 25.3) — access to results needed for exploiting their own results.

Requests for access may be made — unless agreed otherwise — up to one year after the period set out in Article 3.

### **31.4 Access rights of affiliated entities**

Unless agreed otherwise in the consortium agreement, access to results must also be given — under fair and reasonable conditions (Article 25.3) — to affiliated entities established in an EU Member State or associated country, if this is needed for those entities to exploit the results generated by the beneficiaries to which they are affiliated.

Unless agreed otherwise (see above; Article 31.1), the affiliated entity concerned must make any such request directly to the beneficiary that owns the results.

Requests for access may be made — unless agreed otherwise — up to one year after the period set out in Article 3.

### **31.5 Access rights for the EU institutions, bodies, offices or agencies and EU Member States**

The beneficiaries must give access to their results — on a royalty-free basis — to EU institutions, bodies, offices and agencies as well as EU Member States' national authorities, necessary for developing, implementing or monitoring their policies or programmes in this area.

Such access rights are limited to non-commercial and non-competitive use.

Access is conditional on an agreement to define specific conditions ensuring that:

- (a) the access will be used only for the intended purpose and
- (b) appropriate confidentiality obligations are in place.

The requesting EU Member State or EU institution, body, office or agency must inform all other EU Member States of such a request.

This does not change the security obligations in Article 37, which still apply.

### **31.6 Access rights for third parties**

Not applicable

### **31.7 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **SECTION 4 OTHER RIGHTS AND OBLIGATIONS**

### **ARTICLE 32 — RECRUITMENT AND WORKING CONDITIONS FOR RESEARCHERS**

#### **32.1 Obligation to take measures to implement the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers**

The beneficiaries must take all measures to implement the principles set out in the Commission Recommendation on the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers<sup>23</sup>, in particular regarding:

- working conditions;

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<sup>23</sup> Commission Recommendation 2005/251/EC of 11 March 2005 on the European Charter for Researchers and on a Code of Conduct for the Recruitment of Researchers (OJ L 75, 22.3.2005, p. 67).

- transparent recruitment processes based on merit, and
- career development.

The beneficiaries must ensure that researchers and third parties involved in the action are aware of them.

### **32.2 Consequences of non-compliance**

If a beneficiary breaches its obligations under this Article, the Agency may apply any of the measures described in Chapter 6.

## **ARTICLE 33 — GENDER EQUALITY**

### **33.1 Obligation to aim for gender equality**

The beneficiaries must take all measures to promote equal opportunities between men and women in the implementation of the action. They must aim, to the extent possible, for a gender balance at all levels of personnel assigned to the action, including at supervisory and managerial level.

### **33.2 Consequences of non-compliance**

If a beneficiary breaches its obligations under this Article, the Agency may apply any of the measures described in Chapter 6.

## **ARTICLE 34 — ETHICS AND RESEARCH INTEGRITY**

### **34.1 Obligation to comply with ethical and research integrity principles**

The beneficiaries must carry out the action in compliance with:

- (a) ethical principles (including the highest standards of research integrity)

and

- (b) applicable international, EU and national law.

Funding will not be granted for activities carried out outside the EU if they are prohibited in all Member States or for activities which destroy human embryos (for example, for obtaining stem cells).

The beneficiaries must ensure that the activities under the action have an exclusive focus on civil applications.

The beneficiaries must ensure that the activities under the action do not:

- (a) aim at human cloning for reproductive purposes;
- (b) intend to modify the genetic heritage of human beings which could make such changes heritable (with the exception of research relating to cancer treatment of the gonads, which may be financed), or

- (c) intend to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer.

In addition, the beneficiaries must respect the fundamental principle of research integrity — as set out, for instance, in the European Code of Conduct for Research Integrity<sup>24</sup>.

This implies compliance with the following fundamental principles:

- **reliability** in ensuring the quality of research reflected in the design, the methodology, the analysis and the use of resources;
- **honesty** in developing, undertaking, reviewing, reporting and communicating research in a transparent, fair and unbiased way;
- **respect** for colleagues, research participants, society, ecosystems, cultural heritage and the environment;
- **accountability** for the research from idea to publication, for its management and organisation, for training, supervision and mentoring, and for its wider impacts

and means that beneficiaries must ensure that persons carrying out research tasks follow the good research practices and refrain from the research integrity violations described in this Code.

This does not change the other obligations under this Agreement or obligations under applicable international, EU or national law, all of which still apply.

### 34.2 Activities raising ethical issues

Activities raising ethical issues must comply with the ‘**ethics requirements**’ set out as deliverables in Annex 1.

Before the beginning of an activity raising an ethical issue, each beneficiary must have obtained:

- (a) any ethics committee opinion required under national law and
- (b) any notification or authorisation for activities raising ethical issues required under national and/or European law

needed for implementing the action tasks in question.

The documents must be kept on file and be submitted upon request by the coordinator to the Agency (see Article 52). If they are not in English, they must be submitted together with an English summary, which shows that the action tasks in question are covered and includes the conclusions of the committee or authority concerned (if available).

### 34.3 Activities involving human embryos or human embryonic stem cells

Activities involving research on human embryos or human embryonic stem cells may be carried out, in addition to Article 34.1, only if:

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<sup>24</sup> European Code of Conduct for Research Integrity of ALLEA (All European Academies)  
[http://ec.europa.eu/research/participants/data/ref/h2020/other/hi/h2020-ethics\\_code-of-conduct\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/other/hi/h2020-ethics_code-of-conduct_en.pdf)

- they are set out in Annex 1 or
- the coordinator has obtained explicit approval (in writing) from the Agency (see Article 52).

#### **34.4 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43) and the Agreement or participation of the beneficiary may be terminated (see Article 50).

Such breaches may also lead to any of the other measures described in Chapter 6.

### **ARTICLE 35 — CONFLICT OF INTERESTS**

#### **35.1 Obligation to avoid a conflict of interests**

The beneficiaries must take all measures to prevent any situation where the impartial and objective implementation of the action is compromised for reasons involving economic interest, political or national affinity, family or emotional ties or any other shared interest (**'conflict of interests'**).

They must formally notify to the Agency without delay any situation constituting or likely to lead to a conflict of interests and immediately take all the necessary steps to rectify this situation.

The Agency may verify that the measures taken are appropriate and may require additional measures to be taken by a specified deadline.

#### **35.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43) and the Agreement or participation of the beneficiary may be terminated (see Article 50).

Such breaches may also lead to any of the other measures described in Chapter 6.

### **ARTICLE 36 — CONFIDENTIALITY**

#### **36.1 General obligation to maintain confidentiality**

During implementation of the action and for four years after the period set out in Article 3, the parties must keep confidential any data, documents or other material (in any form) that is identified as confidential at the time it is disclosed (**'confidential information'**).

If a beneficiary requests, the Agency may agree to keep such information confidential for an additional period beyond the initial four years.

If information has been identified as confidential only orally, it will be considered to be confidential only if this is confirmed in writing within 15 days of the oral disclosure.

Unless otherwise agreed between the parties, they may use confidential information only to implement the Agreement.

The beneficiaries may disclose confidential information to their personnel or third parties involved in the action only if they:

- (a) need to know to implement the Agreement and
- (b) are bound by an obligation of confidentiality.

This does not change the security obligations in Article 37, which still apply.

The Agency may disclose confidential information to its staff, other EU institutions and bodies. It may disclose confidential information to third parties, if:

- (a) this is necessary to implement the Agreement or safeguard the EU's financial interests and
- (b) the recipients of the information are bound by an obligation of confidentiality.

Under the conditions set out in Article 4 of the Rules for Participation Regulation No 1290/2013<sup>25</sup>, the Commission must moreover make available information on the results to other EU institutions, bodies, offices or agencies as well as Member States or associated countries.

The confidentiality obligations no longer apply if:

- (a) the disclosing party agrees to release the other party;
- (b) the information was already known by the recipient or is given to him without obligation of confidentiality by a third party that was not bound by any obligation of confidentiality;
- (c) the recipient proves that the information was developed without the use of confidential information;
- (d) the information becomes generally and publicly available, without breaching any confidentiality obligation, or
- (e) the disclosure of the information is required by EU or national law.

## **36.2 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 37 — SECURITY-RELATED OBLIGATIONS**

### **37.1 Results with a security recommendation**

The beneficiaries must comply with the 'security recommendation(s)' set out in Annex 1.

For security recommendations restricting disclosure or dissemination, the beneficiaries must — before disclosure or dissemination to a third party (including linked third parties, such as affiliated entities) — inform the coordinator, which must request written approval from the Agency.

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<sup>25</sup> Regulation (EU) No 1290/2013 of the European Parliament and of the Council of 11 December 2013 laying down the rules for participation and dissemination in "Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)" (OJ L 347, 20.12.2013 p.81).



In case of changes to the security context, the beneficiaries must inform the coordinator, which must immediately inform the Agency and, if necessary, request for Annex 1 to be amended (see Article 55).

### **37.2 Classified information**

The beneficiaries must comply with the security classification set out in Annex 1 ('security aspect letter (SAL)' and 'security classification guide (SCG)').

Information that is classified must be treated in accordance with the security aspect letter (SAL) and Decision No 2015/444<sup>26</sup> — until it is declassified.

Action tasks involving classified information may not be subcontracted without prior explicit written approval from the Agency.

In case of changes to the security context, the beneficiaries must inform the coordinator, which must immediately inform the Agency and, if necessary, request for Annex 1 to be amended (see Article 55).

### **37.3 Activities involving dual-use goods or dangerous materials and substances**

Activities involving dual-use goods or dangerous materials and substances must comply with applicable EU, national and international law.

Before the beginning of the activity, the coordinator must submit to the Agency (see Article 52) a copy of any export or transfer licences required under EU, national or international law.

### **37.4 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## **ARTICLE 38 — PROMOTING THE ACTION — VISIBILITY OF EU FUNDING**

### **38.1 Communication activities by beneficiaries**

#### **38.1.1 Obligation to promote the action and its results**

The beneficiaries must promote the action and its results, by providing targeted information to multiple audiences (including the media and the public) in a strategic and effective manner.

This does not change the dissemination obligations in Article 29, the confidentiality obligations in Article 36 or the security obligations in Article 37, all of which still apply.

Before engaging in a communication activity expected to have a major media impact, the beneficiaries must inform the Agency (see Article 52).

#### **38.1.2 Information on EU funding — Obligation and right to use the EU emblem**

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<sup>26</sup> Commission Decision 2015/444/EC, Euratom of 13 March 2015 on the security rules for protecting EU classified information.

Unless the Agency requests or agrees otherwise or unless it is impossible, any communication activity related to the action (including in electronic form, via social media, etc.) and any infrastructure, equipment and major results funded by the grant must:

- (a) display the EU emblem and
- (b) include the following text:

For communication activities:

“This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 101021851”.

For infrastructure, equipment and major results:

“This [*infrastructure*][*equipment*][*insert type of result*] is part of a project that has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 101021851”.

When displayed together with another logo, the EU emblem must have appropriate prominence.

For the purposes of their obligations under this Article, the beneficiaries may use the EU emblem without first obtaining approval from the Agency.

This does not, however, give them the right to exclusive use.

Moreover, they may not appropriate the EU emblem or any similar trademark or logo, either by registration or by any other means.

### **38.1.3 Disclaimer excluding Agency and Commission responsibility**

Any communication activity related to the action must indicate that it reflects only the author's view and that the Agency and the Commission are not responsible for any use that may be made of the information it contains.

## **38.2 Communication activities by the Agency and the Commission**

### **38.2.1 Right to use beneficiaries’ materials, documents or information**

The Agency and the Commission may use, for its communication and publicising activities, information relating to the action, documents notably summaries for publication and public deliverables as well as any other material, such as pictures or audio-visual material received from any beneficiary (including in electronic form).

This does not change the confidentiality obligations in Article 36 and the security obligations in Article 37, all of which still apply.

If the Agency’s or the Commission’s use of these materials, documents or information would risk compromising legitimate interests, the beneficiary concerned may request the Agency or the Commission not to use it (see Article 52).

The right to use a beneficiary’s materials, documents and information includes:

- (a) **use for its own purposes** (in particular, making them available to persons working for the Agency, the Commission or any other EU institution, body, office or agency or body or

institutions in EU Member States; and copying or reproducing them in whole or in part, in unlimited numbers);

- (b) **distribution to the public** (in particular, publication as hard copies and in electronic or digital format, publication on the internet, as a downloadable or non-downloadable file, broadcasting by any channel, public display or presentation, communicating through press information services, or inclusion in widely accessible databases or indexes);
- (c) **editing or redrafting** for communication and publicising activities (including shortening, summarising, inserting other elements (such as meta-data, legends, other graphic, visual, audio or text elements), extracting parts (e.g. audio or video files), dividing into parts, use in a compilation);
- (d) translation;
- (e) giving **access in response to individual requests** under Regulation No 1049/2001<sup>27</sup>, without the right to reproduce or exploit;
- (f) **storage** in paper, electronic or other form;
- (g) **archiving**, in line with applicable document-management rules, and
- (h) the right to authorise **third parties** to act on its behalf or sub-license the modes of use set out in Points (b), (c), (d) and (f) to third parties if needed for the communication and publicising activities of the Agency or the Commission.

If the right of use is subject to rights of a third party (including personnel of the beneficiary), the beneficiary must ensure that it complies with its obligations under this Agreement (in particular, by obtaining the necessary approval from the third parties concerned).

Where applicable (and if provided by the beneficiaries), the Agency or the Commission will insert the following information:

“© – [year] – [name of the copyright owner]. All rights reserved. Licensed to the European Research Executive Agency (REA) and the European Union (EU) under conditions.”

### 38.3 Consequences of non-compliance

If a beneficiary breaches any of its obligations under this Article, the grant may be reduced (see Article 43).

Such breaches may also lead to any of the other measures described in Chapter 6.

## ARTICLE 39 — PROCESSING OF PERSONAL DATA

### 39.1 Processing of personal data by the Agency and the Commission

Any personal data under the Agreement will be processed by the Agency or the Commission under

<sup>27</sup> Regulation (EC) No 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents, OJ L 145, 31.5.2001, p. 43.

Regulation No 45/2001<sup>28</sup> and according to the ‘notifications of the processing operations’ to the Data Protection Officer (DPO) of the Agency or the Commission (publicly accessible in the DPO register).

Such data will be processed by the ‘**data controller**’ of the Agency or the Commission for the purposes of implementing, managing and monitoring the Agreement or protecting the financial interests of the EU or Euratom (including checks, reviews, audits and investigations; see Article 22).

The persons whose personal data are processed have the right to access and correct their own personal data. For this purpose, they must send any queries about the processing of their personal data to the data controller, via the contact point indicated in the privacy statement(s) that are published on the Agency and the Commission websites.

They also have the right to have recourse at any time to the European Data Protection Supervisor (EDPS).

### **39.2 Processing of personal data by the beneficiaries**

The beneficiaries must process personal data under the Agreement in compliance with applicable EU and national law on data protection (including authorisations or notification requirements).

The beneficiaries may grant their personnel access only to data that is strictly necessary for implementing, managing and monitoring the Agreement.

The beneficiaries must inform the personnel whose personal data are collected and processed by the Agency or the Commission. For this purpose, they must provide them with the privacy statement(s) (see above), before transmitting their data to the Agency or the Commission.

### **39.3 Consequences of non-compliance**

If a beneficiary breaches any of its obligations under Article 39.2, the Agency may apply any of the measures described in Chapter 6.

## **ARTICLE 40 — ASSIGNMENTS OF CLAIMS FOR PAYMENT AGAINST THE AGENCY**

The beneficiaries may not assign any of their claims for payment against the Agency to any third party, except if approved by the Agency on the basis of a reasoned, written request by the coordinator (on behalf of the beneficiary concerned).

If the Agency has not accepted the assignment or the terms of it are not observed, the assignment will have no effect on it.

In no circumstances will an assignment release the beneficiaries from their obligations towards the Agency.

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<sup>28</sup> Regulation (EC) No 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data (OJ L 8, 12.01.2001, p. 1).

**CHAPTER 5 DIVISION OF BENEFICIARIES' ROLES AND RESPONSIBILITIES**  
**— RELATIONSHIP WITH COMPLEMENTARY BENEFICIARIES —**  
**RELATIONSHIP WITH PARTNERS OF A JOINT ACTION**

**ARTICLE 41 — DIVISION OF BENEFICIARIES' ROLES AND RESPONSIBILITIES**  
**— RELATIONSHIP WITH COMPLEMENTARY BENEFICIARIES —**  
**RELATIONSHIP WITH PARTNERS OF A JOINT ACTION**

**41.1 Roles and responsibility towards the Agency**

The beneficiaries have full responsibility for implementing the action and complying with the Agreement.

The beneficiaries are jointly and severally liable for the **technical implementation** of the action as described in Annex 1. If a beneficiary fails to implement its part of the action, the other beneficiaries become responsible for implementing this part (without being entitled to any additional EU funding for doing so), unless the Agency expressly relieves them of this obligation.

The **financial responsibility** of each beneficiary is governed by Article 44.

**41.2 Internal division of roles and responsibilities**

The internal roles and responsibilities of the beneficiaries are divided as follows:

(a) Each **beneficiary** must:

- (i) keep information stored in the Participant Portal Beneficiary Register (via the electronic exchange system) up to date (see Article 17);
- (ii) inform the coordinator immediately of any events or circumstances likely to affect significantly or delay the implementation of the action (see Article 17);
- (iii) submit to the coordinator in good time:
  - individual financial statements for itself and, if required, certificates on the financial statements (see Article 20);
  - the data needed to draw up the technical reports (see Article 20);
  - ethics committee opinions and notifications or authorisations for activities raising ethical issues (see Article 34);
  - any other documents or information required by the Agency or the Commission under the Agreement, unless the Agreement requires the beneficiary to submit this information directly to the Agency or the Commission.

(b) The **coordinator** must:

- (i) monitor that the action is implemented properly (see Article 7);
- (ii) act as the intermediary for all communications between the beneficiaries and the Agency

(in particular, providing the Agency with the information described in Article 17), unless the Agreement specifies otherwise;

- (iii) request and review any documents or information required by the Agency and verify their completeness and correctness before passing them on to the Agency;
- (iv) submit the deliverables and reports to the Agency (see Articles 19 and 20);
- (v) ensure that all payments are made to the other beneficiaries without unjustified delay (see Article 21);
- (vi) inform the Agency of the amounts paid to each beneficiary, when required under the Agreement (see Articles 44 and 50) or requested by the Agency.

The coordinator may not delegate or subcontract the above-mentioned tasks to any other beneficiary or third party (including linked third parties).

#### **41.3 Internal arrangements between beneficiaries — Consortium agreement**

The beneficiaries must have internal arrangements regarding their operation and co-ordination to ensure that the action is implemented properly. These internal arrangements must be set out in a written ‘**consortium agreement**’ between the beneficiaries, which may cover:

- internal organisation of the consortium;
- management of access to the electronic exchange system;
- distribution of EU funding;
- additional rules on rights and obligations related to background and results (including whether access rights remain or not, if a beneficiary is in breach of its obligations) (see Section 3 of Chapter 4);
- settlement of internal disputes;
- liability, indemnification and confidentiality arrangements between the beneficiaries.

The consortium agreement must not contain any provision contrary to the Agreement.

#### **41.4 Relationship with complementary beneficiaries — Collaboration agreement**

Not applicable

#### **41.5 Relationship with partners of a joint action — Coordination agreement**

Not applicable

### **CHAPTER 6 REJECTION OF COSTS — REDUCTION OF THE GRANT — RECOVERY — SANCTIONS — DAMAGES — SUSPENSION — TERMINATION — FORCE MAJEURE**

## **SECTION 1 REJECTION OF COSTS — REDUCTION OF THE GRANT — RECOVERY — SANCTIONS**

### **ARTICLE 42 — REJECTION OF INELIGIBLE COSTS**

#### **42.1 Conditions**

The Agency will — after **termination of the participation of a beneficiary**, at the time of an **interim payment, at the payment of the balance or afterwards** — reject any costs which are ineligible (see Article 6), in particular following checks, reviews, audits or investigations (see Article 22).

The rejection may also be based on the **extension of findings from other grants to this grant** (see Article 22.5.2).

#### **42.2 Ineligible costs to be rejected — Calculation — Procedure**

Ineligible costs will be rejected in full.

If the rejection of costs does not lead to a recovery (see Article 44), the Agency will formally notify the coordinator or beneficiary concerned of the rejection of costs, the amounts and the reasons why (if applicable, together with the notification of amounts due; see Article 21.5). The coordinator or beneficiary concerned may — within 30 days of receiving notification — formally notify the Agency of its disagreement and the reasons why.

If the rejection of costs leads to a recovery, the Agency will follow the contradictory procedure with pre-information letter set out in Article 44.

#### **42.3 Effects**

If the Agency rejects costs at the time of an **interim payment or the payment of the balance**, it will deduct them from the total eligible costs declared, for the action, in the periodic or final summary financial statement (see Articles 20.3 and 20.4). It will then calculate the interim payment or payment of the balance as set out in Articles 21.3 or 21.4.

If the Agency rejects costs **after termination of the participation of a beneficiary**, it will deduct them from the costs declared by the beneficiary in the termination report and include the rejection in the calculation after termination (see Article 50.2 and 50.3).

If the Agency — **after an interim payment but before the payment of the balance** — rejects costs declared in a periodic summary financial statement, it will deduct them from the total eligible costs declared, for the action, in the next periodic summary financial statement or in the final summary financial statement. It will then calculate the interim payment or payment of the balance as set out in Articles 21.3 or 21.4.

If the Agency rejects costs **after the payment of the balance**, it will deduct the amount rejected from the total eligible costs declared, by the beneficiary, in the final summary financial statement. It will then calculate the revised final grant amount as set out in Article 5.4.

### **ARTICLE 43 — REDUCTION OF THE GRANT**

#### **43.1 Conditions**

The Agency may — **after termination of the participation of a beneficiary, at the payment of the balance or afterwards** — reduce the grant amount (see Article 5.1), if :

- (a) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has committed:
  - (i) substantial errors, irregularities or fraud or
  - (ii) serious breach of obligations under the Agreement or during the award procedure (including improper implementation of the action, submission of false information, failure to provide required information, breach of ethical principles) or
- (b) a beneficiary (or a natural person who has the power to represent or take decision on its behalf) has committed — in other EU or Euratom grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant (**extension of findings from other grants to this grant**; see Article 22.5.2).

#### 43.2 Amount to be reduced — Calculation — Procedure

The amount of the reduction will be proportionate to the seriousness of the errors, irregularities or fraud or breach of obligations.

Before reduction of the grant, the Agency will formally notify a ‘**pre-information letter**’ to the coordinator or beneficiary concerned:

- informing it of its intention to reduce the grant, the amount it intends to reduce and the reasons why and
- inviting it to submit observations within 30 days of receiving notification.

If the Agency does not receive any observations or decides to pursue reduction despite the observations it has received, it will formally notify **confirmation** of the reduction (if applicable, together with the notification of amounts due; see Article 21).

#### 43.3 Effects

If the Agency reduces the grant **after termination of the participation of a beneficiary**, it will calculate the reduced grant amount for that beneficiary and then determine the amount due to that beneficiary (see Article 50.2 and 50.3).

If the Agency reduces the grant **at the payment of the balance**, it will calculate the reduced grant amount for the action and then determine the amount due as payment of the balance (see Articles 5.3.4 and 21.4).

If the Agency reduces the grant **after the payment of the balance**, it will calculate the revised final grant amount for the beneficiary concerned (see Article 5.4). If the revised final grant amount for the beneficiary concerned is lower than its share of the final grant amount, the Agency will recover the difference (see Article 44).

### ARTICLE 44 — RECOVERY OF UNDUE AMOUNTS



#### 44.1 Amount to be recovered — Calculation — Procedure

The Agency will — after **termination of the participation of a beneficiary, at the payment of the balance or afterwards** — claim back any amount that was paid, but is not due under the Agreement.

Each beneficiary's financial responsibility in case of recovery is limited to its own debt, except for the amount retained for the Guarantee Fund (see Article 21.4).

##### 44.1.1 Recovery after termination of a beneficiary's participation

If recovery takes place after termination of a beneficiary's participation (including the coordinator), the Agency will claim back the undue amount from the beneficiary concerned, by formally notifying it a debit note (see Article 50.2 and 50.3). This note will specify the amount to be recovered, the terms and the date for payment.

If payment is not made by the date specified in the debit note, the Agency or the Commission will **recover** the amount:

- (a) by '**offsetting**' it — without the beneficiary's consent — against any amounts owed to the beneficiary concerned by the Agency, the Commission or another executive agency (from the EU or Euratom budget).

In exceptional circumstances, to safeguard the EU's financial interests, the Agency or the Commission may offset before the payment date specified in the debit note;

- (b) not applicable;

- (c) by **taking legal action** (see Article 57) or by **adopting an enforceable decision** under Article 299 of the Treaty on the Functioning of the EU (TFEU) and Article 79(2) of the Financial Regulation No 966/2012.

If payment is not made by the date specified in the debit note, the amount to be recovered (see above) will be increased by **late-payment interest** at the rate set out in Article 21.11, from the day following the payment date in the debit note, up to and including the date the Agency or the Commission receives full payment of the amount.

Partial payments will be first credited against expenses, charges and late-payment interest and then against the principal.

Bank charges incurred in the recovery process will be borne by the beneficiary, unless Directive 2007/64/EC<sup>29</sup> applies.

##### 44.1.2 Recovery at payment of the balance

If the payment of the balance takes the form of a recovery (see Article 21.4), the Agency will formally notify a '**pre-information letter**' to the coordinator:

- informing it of its intention to recover, the amount due as the balance and the reasons why;

<sup>29</sup> Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 on payment services in the internal market amending Directives 97/7/EC, 2002/65/EC, 2005/60/EC and 2006/48/EC and repealing Directive 97/5/EC (OJ L 319, 05.12.2007, p. 1).

- specifying that it intends to deduct the amount to be recovered from the amount retained for the Guarantee Fund;
- requesting the coordinator to submit a report on the distribution of payments to the beneficiaries within 30 days of receiving notification, and
- inviting the coordinator to submit observations within 30 days of receiving notification.

If no observations are submitted or the Agency decides to pursue recovery despite the observations it has received, it will **confirm recovery** (together with the notification of amounts due; see Article 21.5) and:

- pay the difference between the amount to be recovered and the amount retained for the Guarantee Fund, **if the difference is positive** or
- formally notify to the coordinator a **debit note** for the difference between the amount to be recovered and the amount retained for the Guarantee Fund, **if the difference is negative**. This note will also specify the terms and the date for payment.

If the coordinator does not repay the Agency by the date in the debit note and has not submitted the report on the distribution of payments: the Agency or the Commission will **recover** the amount set out in the debit note from the coordinator (see below).

If the coordinator does not repay the Agency by the date in the debit note, but has submitted the report on the distribution of payments: the Agency will:

- (a) identify the beneficiaries for which the amount calculated as follows is negative:

$\{ \{ \{ \text{beneficiary's costs declared in the final summary financial statement and approved by the Agency multiplied by the reimbursement rate set out in Article 5.2 for the beneficiary concerned} \}$

divided by

the EU contribution for the action calculated according to Article 5.3.1}

multiplied by

the final grant amount (see Article 5.3)},

minus

{pre-financing and interim payments received by the beneficiary} }.

- (b) formally notify to each beneficiary identified according to point (a) a **debit note** specifying the terms and date for payment. The amount of the debit note is calculated as follows:

{ amount calculated according to point (a) for the beneficiary concerned

divided by

the sum of the amounts calculated according to point (a) for all the beneficiaries identified according to point (a)}

multiplied by

the amount set out in the debit note formally notified to the coordinator}.

If payment is not made by the date specified in the debit note, the Agency or the Commission will **recover** the amount:

- (a) by **offsetting** it — without the beneficiary's consent — against any amounts owed to the beneficiary concerned by the Agency, the Commission or another executive agency (from the EU or Euratom budget).

In exceptional circumstances, to safeguard the EU's financial interests, the Agency or the Commission may offset before the payment date specified in the debit note;

- (b) by **drawing on the Guarantee Fund**. The Agency or the Commission will formally notify the beneficiary concerned the debit note on behalf of the Guarantee Fund and recover the amount:
- (i) not applicable;
- (ii) by **taking legal action** (see Article 57) or by **adopting an enforceable decision** under Article 299 of the Treaty on the Functioning of the EU (TFEU) and Article 79(2) of the Financial Regulation No 966/2012.

If payment is not made by the date in the debit note, the amount to be recovered (see above) will be increased by **late-payment interest** at the rate set out in Article 21.11, from the day following the payment date in the debit note, up to and including the date the Agency or the Commission receives full payment of the amount.

Partial payments will be first credited against expenses, charges and late-payment interest and then against the principal.

Bank charges incurred in the recovery process will be borne by the beneficiary, unless Directive 2007/64/EC applies.

#### 44.1.3 Recovery of amounts after payment of the balance

If, for a beneficiary, the revised final grant amount (see Article 5.4) is lower than its share of the final grant amount, it must repay the difference to the Agency.

The beneficiary's share of the final grant amount is calculated as follows:

$$\left\{ \left\{ \begin{array}{l} \text{beneficiary's costs declared in the final summary financial statement and approved by the Agency} \\ \text{multiplied by the reimbursement rate set out in Article 5.2 for the beneficiary concerned} \end{array} \right\} \right.$$

divided by

$$\left. \left\{ \begin{array}{l} \text{the EU contribution for the action calculated according to Article 5.3.1} \end{array} \right\} \right.$$

multiplied by

$$\left. \left\{ \begin{array}{l} \text{the final grant amount (see Article 5.3)} \end{array} \right\} \right\}.$$

If the coordinator has not distributed amounts received (see Article 21.7), the Agency will also recover these amounts.

The Agency will formally notify a **pre-information letter** to the beneficiary concerned:

- informing it of its intention to recover, the due amount and the reasons why and

- inviting it to submit observations within 30 days of receiving notification.

If no observations are submitted or the Agency decides to pursue recovery despite the observations it has received, it will **confirm** the amount to be recovered and formally notify to the beneficiary concerned a **debit note**. This note will also specify the terms and the date for payment.

If payment is not made by the date specified in the debit note, the Agency or the Commission will **recover** the amount:

- (a) by **offsetting** it — without the beneficiary's consent — against any amounts owed to the beneficiary concerned by the Agency, the Commission or another executive agency (from the EU or Euratom budget).

In exceptional circumstances, to safeguard the EU's financial interests, the Agency or the Commission may offset before the payment date specified in the debit note;

- (b) by **drawing on the Guarantee Fund**. The Agency or the Commission will formally notify the beneficiary concerned the debit note on behalf of the Guarantee Fund and recover the amount:

- (i) not applicable;
- (ii) by **taking legal action** (see Article 57) or by **adopting an enforceable decision** under Article 299 of the Treaty on the Functioning of the EU (TFEU) and Article 79(2) of the Financial Regulation No 966/2012.

If payment is not made by the date in the debit note, the amount to be recovered (see above) will be increased by **late-payment interest** at the rate set out in Article 21.11, from the day following the date for payment in the debit note, up to and including the date the Agency or the Commission receives full payment of the amount.

Partial payments will be first credited against expenses, charges and late-payment interest and then against the principal.

Bank charges incurred in the recovery process will be borne by the beneficiary, unless Directive 2007/64/EC applies.

## **ARTICLE 45 — ADMINISTRATIVE SANCTIONS**

In addition to contractual measures, the Agency or the Commission may also adopt administrative sanctions under Articles 106 and 131(4) of the Financial Regulation No 966/2012 (i.e. exclusion from future procurement contracts, grants, prizes and expert contracts and/or financial penalties).

## **SECTION 2 LIABILITY FOR DAMAGES**

### **ARTICLE 46 — LIABILITY FOR DAMAGES**

#### **46.1 Liability of the Agency**

The Agency cannot be held liable for any damage caused to the beneficiaries or to third parties as a consequence of implementing the Agreement, including for gross negligence.

The Agency cannot be held liable for any damage caused by any of the beneficiaries or third parties involved in the action, as a consequence of implementing the Agreement.

#### **46.2 Liability of the beneficiaries**

Except in case of force majeure (see Article 51), the beneficiaries must compensate the Agency for any damage it sustains as a result of the implementation of the action or because the action was not implemented in full compliance with the Agreement.

### **SECTION 3 SUSPENSION AND TERMINATION**

#### **ARTICLE 47 — SUSPENSION OF PAYMENT DEADLINE**

##### **47.1 Conditions**

The Agency may — at any moment — suspend the payment deadline (see Article 21.2 to 21.4) if a request for payment (see Article 20) cannot be approved because:

- (a) it does not comply with the provisions of the Agreement (see Article 20);
- (b) the technical or financial reports have not been submitted or are not complete or additional information is needed, or
- (c) there is doubt about the eligibility of the costs declared in the financial statements and additional checks, reviews, audits or investigations are necessary.

##### **47.2 Procedure**

The Agency will formally notify the coordinator of the suspension and the reasons why.

The suspension will **take effect** the day notification is sent by the Agency (see Article 52).

If the conditions for suspending the payment deadline are no longer met, the suspension will be **lifted** — and the remaining period will resume.

If the suspension exceeds two months, the coordinator may request the Agency if the suspension will continue.

If the payment deadline has been suspended due to the non-compliance of the technical or financial reports (see Article 20) and the revised report or statement is not submitted or was submitted but is also rejected, the Agency may also terminate the Agreement or the participation of the beneficiary (see Article 50.3.1(l)).

#### **ARTICLE 48 — SUSPENSION OF PAYMENTS**

##### **48.1 Conditions**

The Agency may — at any moment — suspend payments, in whole or in part and interim payments or the payment of the balance for one or more beneficiaries, if:

- (a) a beneficiary (or a natural person who has the power to represent or take decision on its behalf) has committed or is suspected of having committed:
- (i) substantial errors, irregularities or fraud or
  - (ii) serious breach of obligations under the Agreement or during the award procedure (including improper implementation of the action, submission of false information, failure to provide required information, breach of ethical principles) or
- (b) a beneficiary (or a natural person who has the power to represent or take decision on its behalf) has committed — in other EU or Euratom grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant (**extension of findings from other grants to this grant**; see Article 22.5.2).

If payments are suspended for one or more beneficiaries, the Agency will make partial payment(s) for the part(s) not suspended. If suspension concerns the payment of the balance, — once suspension is lifted — the payment or the recovery of the amount(s) concerned will be considered the payment of the balance that closes the action.

## 48.2 Procedure

Before suspending payments, the Agency will formally notify the coordinator or beneficiary concerned:

- informing it of its intention to suspend payments and the reasons why and
- inviting it to submit observations within 30 days of receiving notification.

If the Agency does not receive observations or decides to pursue the procedure despite the observations it has received, it will formally notify **confirmation** of the suspension. Otherwise, it will formally notify that the suspension procedure is not continued.

The suspension will **take effect** the day the confirmation notification is sent by the Agency.

If the conditions for resuming payments are met, the suspension will be **lifted**. The Agency will formally notify the coordinator or beneficiary concerned.

During the suspension, the periodic report(s) for all reporting periods except the last one (see Article 20.3), must not contain any individual financial statements from the beneficiary concerned. The coordinator must include them in the next periodic report after the suspension is lifted or — if suspension is not lifted before the end of the action — in the last periodic report.

The beneficiaries may suspend implementation of the action (see Article 49.1) or terminate the Agreement or the participation of the beneficiary concerned (see Article 50.1 and 50.2).

## ARTICLE 49 — SUSPENSION OF THE ACTION IMPLEMENTATION

### 49.1 Suspension of the action implementation, by the beneficiaries

#### 49.1.1 Conditions

The beneficiaries may suspend implementation of the action or any part of it, if exceptional circumstances — in particular *force majeure* (see Article 51) — make implementation impossible or excessively difficult.

#### 49.1.2 Procedure

The coordinator must immediately formally notify to the Agency the suspension (see Article 52), stating:

- the reasons why and
- the expected date of resumption.

The suspension will **take effect** the day this notification is received by the Agency.

Once circumstances allow for implementation to resume, the coordinator must immediately formally notify the Agency and request an **amendment** of the Agreement to set the date on which the action will be resumed, extend the duration of the action and make other changes necessary to adapt the action to the new situation (see Article 55) — unless the Agreement or the participation of a beneficiary has been terminated (see Article 50).

The suspension will be **lifted** with effect from the resumption date set out in the amendment. This date may be before the date on which the amendment enters into force.

Costs incurred during suspension of the action implementation are not eligible (see Article 6).

### 49.2 Suspension of the action implementation, by the Agency

#### 49.2.1 Conditions

The Agency may suspend implementation of the action or any part of it, if:

- (a) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has committed or is suspected of having committed:
  - (i) substantial errors, irregularities or fraud or
  - (ii) serious breach of obligations under the Agreement or during the award procedure (including improper implementation of the action, submission of false information, failure to provide required information, breach of ethical principles);
- (b) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has committed — in other EU or Euratom grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant (**extension of findings from other grants to this grant**; see Article 22.5.2), or
- (c) the action is suspected of having lost its scientific or technological relevance.

#### 49.2.2 Procedure

Before suspending implementation of the action, the Agency will formally notify the coordinator or beneficiary concerned:

- informing it of its intention to suspend the implementation and the reasons why and
- inviting it to submit observations within 30 days of receiving notification.

If the Agency does not receive observations or decides to pursue the procedure despite the observations it has received, it will formally notify **confirmation** of the suspension. Otherwise, it will formally notify that the procedure is not continued.

The suspension will **take effect** five days after confirmation notification is received (or on a later date specified in the notification).

It will be **lifted** if the conditions for resuming implementation of the action are met.

The coordinator or beneficiary concerned will be formally notified of the lifting and the Agreement will be **amended** to set the date on which the action will be resumed, extend the duration of the action and make other changes necessary to adapt the action to the new situation (see Article 55) — unless the Agreement has already been terminated (see Article 50).

The suspension will be lifted with effect from the resumption date set out in the amendment. This date may be before the date on which the amendment enters into force.

Costs incurred during suspension are not eligible (see Article 6).

The beneficiaries may not claim damages due to suspension by the Agency (see Article 46).

Suspension of the action implementation does not affect the Agency's right to terminate the Agreement or participation of a beneficiary (see Article 50), reduce the grant or recover amounts unduly paid (see Articles 43 and 44).

## **ARTICLE 50 — TERMINATION OF THE AGREEMENT OR OF THE PARTICIPATION OF ONE OR MORE BENEFICIARIES**

### **50.1 Termination of the Agreement, by the beneficiaries**

#### **50.1.1 Conditions and procedure**

The beneficiaries may terminate the Agreement.

The coordinator must formally notify termination to the Agency (see Article 52), stating:

- the reasons why and
- the date the termination will take effect. This date must be after the notification.

If no reasons are given or if the Agency considers the reasons do not justify termination, the Agreement will be considered to have been '**terminated improperly**'.

The termination will **take effect** on the day specified in the notification.

#### **50.1.2 Effects**

The coordinator must — within 60 days from when termination takes effect — submit:



- (i) a periodic report (for the open reporting period until termination; see Article 20.3) and
- (ii) the final report (see Article 20.4).

If the Agency does not receive the reports within the deadline (see above), only costs which are included in an approved periodic report will be taken into account.

The Agency will **calculate** the final grant amount (see Article 5.3) and the balance (see Article 21.4) on the basis of the reports submitted. Only costs incurred until termination are eligible (see Article 6). Costs relating to contracts due for execution only after termination are not eligible.

Improper termination may lead to a reduction of the grant (see Article 43).

After termination, the beneficiaries' obligations (in particular Articles 20, 22, 23, Section 3 of Chapter 4, 36, 37, 38, 40, 42, 43 and 44) continue to apply.

## **50.2 Termination of the participation of one or more beneficiaries, by the beneficiaries**

### **50.2.1 Conditions and procedure**

The participation of one or more beneficiaries may be terminated by the coordinator, on request of the beneficiary concerned or on behalf of the other beneficiaries.

The coordinator must formally notify termination to the Agency (see Article 52) and inform the beneficiary concerned.

If the coordinator's participation is terminated without its agreement, the formal notification must be done by another beneficiary (acting on behalf of the other beneficiaries).

The notification must include:

- the reasons why;
- the opinion of the beneficiary concerned (or proof that this opinion has been requested in writing);
- the date the termination takes effect. This date must be after the notification, and
- a request for amendment (see Article 55), with a proposal for reallocation of the tasks and the estimated budget of the beneficiary concerned (see Annexes 1 and 2) and, if necessary, the addition of one or more new beneficiaries (see Article 56). If termination takes effect after the period set out in Article 3, no request for amendment must be included unless the beneficiary concerned is the coordinator. In this case, the request for amendment must propose a new coordinator.

If this information is not given or if the Agency considers that the reasons do not justify termination, the participation will be considered to have been **terminated improperly**.

The termination will **take effect** on the day specified in the notification.

### **50.2.2 Effects**

The coordinator must — within 30 days from when termination takes effect — submit:

- (i) a report on the distribution of payments to the beneficiary concerned and
- (ii) if termination takes effect during the period set out in Article 3, a ‘**termination report**’ from the beneficiary concerned, for the open reporting period until termination, containing an overview of the progress of the work, an overview of the use of resources, the individual financial statement and, if applicable, the certificate on the financial statement (see Articles 20.3 and 20.4).

The information in the termination report must also be included in the periodic report for the next reporting period (see Article 20.3).

If the request for amendment is rejected by the Agency (because it calls into question the decision awarding the grant or breaches the principle of equal treatment of applicants), the Agreement may be terminated according to Article 50.3.1(c).

If the request for amendment is accepted by the Agency, the Agreement is **amended** to introduce the necessary changes (see Article 55).

The Agency will — on the basis of the periodic reports, the termination report and the report on the distribution of payments — **calculate** the amount which is due to the beneficiary and if the (pre-financing and interim) payments received by the beneficiary exceed this amount.

The **amount which is due** is calculated in the following steps:

Step 1 — Application of the reimbursement rate to the eligible costs

The grant amount for the beneficiary is calculated by applying the reimbursement rate(s) to the total eligible costs declared by the beneficiary in the termination report and approved by the Agency.

Only costs incurred by the beneficiary concerned until termination takes effect are eligible (see Article 6). Costs relating to contracts due for execution only after termination are not eligible.

Step 2 — Reduction due to substantial errors, irregularities or fraud or serious breach of obligations

In case of a reduction (see Article 43), the Agency will calculate the reduced grant amount for the beneficiary by deducting the amount of the reduction (calculated in proportion to the seriousness of the errors, irregularities or fraud or breach of obligations, in accordance with Article 43.2) from the grant amount for the beneficiary.

If the payments received **exceed the amounts due**:

- if termination takes effect during the period set out in Article 3 and the request for amendment is accepted, the beneficiary concerned must repay to the coordinator the amount unduly received. The Agency will formally notify the amount unduly received and request the beneficiary concerned to repay it to the coordinator within 30 days of receiving notification. If it does not repay the coordinator, the Agency will draw upon the Guarantee Fund to pay the coordinator and then notify a **debit note** on behalf of the Guarantee Fund to the beneficiary concerned (see Article 44);

- in all other cases, in particular if termination takes effect after the period set out in Article 3, the Agency will formally notify a **debit note** to the beneficiary concerned. If payment is not made by the date in the debit note, the Guarantee Fund will pay to the Agency the amount due and the Agency will notify a debit note on behalf of the Guarantee Fund to the beneficiary concerned (see Article 44);
- if the beneficiary concerned is the former coordinator, it must repay the new coordinator according to the procedure above, unless:
  - termination takes effect after an interim payment and
  - the former coordinator has not distributed amounts received as pre-financing or interim payments (see Article 21.7).

In this case, the Agency will formally notify a **debit note** to the former coordinator. If payment is not made by the date in the debit note, the Guarantee Fund will pay to the Agency the amount due. The Agency will then pay the new coordinator and notify a debit note on behalf of the Guarantee Fund to the former coordinator (see Article 44).

If the payments received **do not exceed the amounts due**: amounts owed to the beneficiary concerned will be included in the next interim or final payment.

If the Agency does not receive the termination report within the deadline (see above), only costs included in an approved periodic report will be taken into account.

If the Agency does not receive the report on the distribution of payments within the deadline (see above), it will consider that:

- the coordinator did not distribute any payment to the beneficiary concerned and that
- the beneficiary concerned must not repay any amount to the coordinator.

Improper termination may lead to a reduction of the grant (see Article 43) or termination of the Agreement (see Article 50).

After termination, the concerned beneficiary's obligations (in particular Articles 20, 22, 23, Section 3 of Chapter 4, 36, 37, 38, 40, 42, 43 and 44) continue to apply.

### **50.3 Termination of the Agreement or the participation of one or more beneficiaries, by the Agency**

#### **50.3.1 Conditions**

The Agency may terminate the Agreement or the participation of one or more beneficiaries, if:

- (a) one or more beneficiaries do not accede to the Agreement (see Article 56);
- (b) a change to their legal, financial, technical, organisational or ownership situation is likely to substantially affect or delay the implementation of the action or calls into question the decision to award the grant;
- (c) following termination of participation for one or more beneficiaries (see above), the necessary

changes to the Agreement would call into question the decision awarding the grant or breach the principle of equal treatment of applicants (see Article 55);

- (d) implementation of the action is prevented by force majeure (see Article 51) or suspended by the coordinator (see Article 49.1) and either:
  - (i) resumption is impossible, or
  - (ii) the necessary changes to the Agreement would call into question the decision awarding the grant or breach the principle of equal treatment of applicants;
- (e) a beneficiary is declared bankrupt, being wound up, having its affairs administered by the courts, has entered into an arrangement with creditors, has suspended business activities, or is subject to any other similar proceedings or procedures under national law;
- (f) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has been found guilty of professional misconduct, proven by any means;
- (g) a beneficiary does not comply with the applicable national law on taxes and social security;
- (h) the action has lost scientific or technological relevance;
- (i) not applicable;
- (j) not applicable;
- (k) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has committed fraud, corruption, or is involved in a criminal organisation, money laundering or any other illegal activity;
- (l) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has committed:
  - (i) substantial errors, irregularities or fraud or
  - (ii) serious breach of obligations under the Agreement or during the award procedure (including improper implementation of the action, submission of false information, failure to provide required information, breach of ethical principles);
- (m) a beneficiary (or a natural person who has the power to represent or take decisions on its behalf) has committed — in other EU or Euratom grants awarded to it under similar conditions — systemic or recurrent errors, irregularities, fraud or serious breach of obligations that have a material impact on this grant (**extension of findings from other grants to this grant**; see Article 22.5.2);
- (n) not applicable.

### 50.3.2 Procedure

Before terminating the Agreement or participation of one or more beneficiaries, the Agency will formally notify the coordinator or beneficiary concerned:

- informing it of its intention to terminate and the reasons why and

- inviting it, within 30 days of receiving notification, to submit observations and — in case of Point (l.ii) above — to inform the Agency of the measures to ensure compliance with the obligations under the Agreement.

If the Agency does not receive observations or decides to pursue the procedure despite the observations it has received, it will formally notify to the coordinator or beneficiary concerned **confirmation** of the termination and the date it will take effect. Otherwise, it will formally notify that the procedure is not continued.

The termination will **take effect**:

- for terminations under Points (b), (c), (e), (g), (h), (j), (l.ii) and (n) above: on the day specified in the notification of the confirmation (see above);
- for terminations under Points (a), (d), (f), (i), (k), (l.i) and (m) above: on the day after the notification of the confirmation is received.

### 50.3.3 Effects

#### (a) for **termination of the Agreement**:

The coordinator must — within 60 days from when termination takes effect — submit:

- (i) a periodic report (for the last open reporting period until termination; see Article 20.3) and
- (ii) a final report (see Article 20.4).

If the Agreement is terminated for breach of the obligation to submit reports (see Articles 20.8 and 50.3.1(l)), the coordinator may not submit any reports after termination.

If the Agency does not receive the reports within the deadline (see above), only costs which are included in an approved periodic report will be taken into account.

The Agency will **calculate** the final grant amount (see Article 5.3) and the balance (see Article 21.4) on the basis of the reports submitted. Only costs incurred until termination takes effect are eligible (see Article 6). Costs relating to contracts due for execution only after termination are not eligible.

This does not affect the Agency's right to reduce the grant (see Article 43) or to impose administrative sanctions (Article 45).

The beneficiaries may not claim damages due to termination by the Agency (see Article 46).

After termination, the beneficiaries' obligations (in particular Articles 20, 22, 23, Section 3 of Chapter 4, 36, 37, 38, 40, 42, 43 and 44) continue to apply.

#### (b) for **termination of the participation of one or more beneficiaries**:

The coordinator must — within 60 days from when termination takes effect — submit:

- (i) a report on the distribution of payments to the beneficiary concerned;

- (ii) a request for amendment (see Article 55), with a proposal for reallocation of the tasks and estimated budget of the beneficiary concerned (see Annexes 1 and 2) and, if necessary, the addition of one or more new beneficiaries (see Article 56). If termination is notified after the period set out in Article 3, no request for amendment must be submitted unless the beneficiary concerned is the coordinator. In this case the request for amendment must propose a new coordinator, and
- (iii) if termination takes effect during the period set out in Article 3, a **termination report** from the beneficiary concerned, for the open reporting period until termination, containing an overview of the progress of the work, an overview of the use of resources, the individual financial statement and, if applicable, the certificate on the financial statement (see Article 20).

The information in the termination report must also be included in the periodic report for the next reporting period (see Article 20.3).

If the request for amendment is rejected by the Agency (because it calls into question the decision awarding the grant or breaches the principle of equal treatment of applicants), the Agreement may be terminated according to Article 50.3.1(c).

If the request for amendment is accepted by the Agency, the Agreement is **amended** to introduce the necessary changes (see Article 55).

The Agency will — on the basis of the periodic reports, the termination report and the report on the distribution of payments — **calculate** the amount which is due to the beneficiary and if the (pre-financing and interim) payments received by the beneficiary exceed this amount.

The **amount which is due** is calculated in the following steps:

Step 1 — Application of the reimbursement rate to the eligible costs

The grant amount for the beneficiary is calculated by applying the reimbursement rate(s) to the total eligible costs declared by the beneficiary in the termination report and approved by the Agency.

Only costs incurred by the beneficiary concerned until termination takes effect are eligible (see Article 6). Costs relating to contracts due for execution only after termination are not eligible.

Step 2 — Reduction due to substantial errors, irregularities or fraud or serious breach of obligations

In case of a reduction (see Article 43), the Agency will calculate the reduced grant amount for the beneficiary by deducting the amount of the reduction (calculated in proportion to the seriousness of the errors, irregularities or fraud or breach of obligations, in accordance with Article 43.2) from the grant amount for the beneficiary.

If the payments received **exceed the amounts due**:

- if termination takes effect during the period set out in Article 3 and the request for

amendment is accepted, the beneficiary concerned must repay to the coordinator the amount unduly received. The Agency will formally notify the amount unduly received and request the beneficiary concerned to repay it to the coordinator within 30 days of receiving notification. If it does not repay the coordinator, the Agency will draw upon the Guarantee Fund to pay the coordinator and then notify a **debit note** on behalf of the Guarantee Fund to the beneficiary concerned (see Article 44);

- in all other cases, in particular if termination takes effect after the period set out in Article 3, the Agency will formally notify a **debit note** to the beneficiary concerned. If payment is not made by the date in the debit note, the Guarantee Fund will pay to the Agency the amount due and the Agency will notify a debit note on behalf of the Guarantee Fund to the beneficiary concerned (see Article 44);
- if the beneficiary concerned is the former coordinator, it must repay the new coordinator according to the procedure above, unless:
  - termination takes effect after an interim payment and
  - the former coordinator has not distributed amounts received as pre-financing or interim payments (see Article 21.7).

In this case, the Agency will formally notify a **debit note** to the former coordinator. If payment is not made by the date in the debit note, the Guarantee Fund will pay to the Agency the amount due. The Agency will then pay the new coordinator and notify a debit note on behalf of the Guarantee Fund to the former coordinator (see Article 44).

If the payments received **do not exceed the amounts due**: amounts owed to the beneficiary concerned will be included in the next interim or final payment.

If the Agency does not receive the termination report within the deadline (see above), only costs included in an approved periodic report will be taken into account.

If the Agency does not receive the report on the distribution of payments within the deadline (see above), it will consider that:

- the coordinator did not distribute any payment to the beneficiary concerned and that
- the beneficiary concerned must not repay any amount to the coordinator.

After termination, the concerned beneficiary's obligations (in particular Articles 20, 22, 23, Section 3 of Chapter 4, 36, 37, 38, 40, 42, 43 and 44) continue to apply.

## **SECTION 4 FORCE MAJEURE**

### **ARTICLE 51 — FORCE MAJEURE**

'Force majeure' means any situation or event that:

- prevents either party from fulfilling their obligations under the Agreement,
- was unforeseeable, exceptional situation and beyond the parties' control,

- was not due to error or negligence on their part (or on the part of third parties involved in the action), and
- proves to be inevitable in spite of exercising all due diligence.

The following cannot be invoked as force majeure:

- any default of a service, defect in equipment or material or delays in making them available, unless they stem directly from a relevant case of force majeure,
- labour disputes or strikes, or
- financial difficulties.

Any situation constituting force majeure must be formally notified to the other party without delay, stating the nature, likely duration and foreseeable effects.

The parties must immediately take all the necessary steps to limit any damage due to force majeure and do their best to resume implementation of the action as soon as possible.

The party prevented by force majeure from fulfilling its obligations under the Agreement cannot be considered in breach of them.

## **CHAPTER 7 FINAL PROVISIONS**

### **ARTICLE 52 — COMMUNICATION BETWEEN THE PARTIES**

#### **52.1 Form and means of communication**

Communication under the Agreement (information, requests, submissions, ‘formal notifications’, etc.) must:

- be made in writing and
- bear the number of the Agreement.

All communication must be made through the Participant Portal **electronic** exchange system and using the forms and templates provided there.

If — after the payment of the balance — the Agency finds that a formal notification was not accessed, a second formal notification will be made by registered post with proof of delivery (‘formal notification on **paper**’). Deadlines will be calculated from the moment of the second notification.

Communications in the electronic exchange system must be made by persons authorised according to the Participant Portal Terms & Conditions. For naming the authorised persons, each beneficiary must have designated — before the signature of this Agreement — a ‘legal entity appointed representative (LEAR)’. The role and tasks of the LEAR are stipulated in his/her appointment letter (see Participant Portal Terms & Conditions).

If the electronic exchange system is temporarily unavailable, instructions will be given on the Agency and Commission websites.



## 52.2 Date of communication

**Communications** are considered to have been made when they are sent by the sending party (i.e. on the date and time they are sent through the electronic exchange system).

**Formal notifications** through the **electronic** exchange system are considered to have been made when they are received by the receiving party (i.e. on the date and time of acceptance by the receiving party, as indicated by the time stamp). A formal notification that has not been accepted within 10 days after sending is considered to have been accepted.

Formal notifications **on paper** sent by **registered post** with proof of delivery (only after the payment of the balance) are considered to have been made on either:

- the delivery date registered by the postal service or
- the deadline for collection at the post office.

If the electronic exchange system is temporarily unavailable, the sending party cannot be considered in breach of its obligation to send a communication within a specified deadline.

## 52.3 Addresses for communication

The **electronic** exchange system must be accessed via the following URL:

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/myarea/projects>

The Agency will formally notify the coordinator and beneficiaries in advance any changes to this URL.

**Formal notifications on paper** (only after the payment of the balance) addressed **to the Agency** must be sent to the official mailing address indicated on the Agency's website.

Formal notifications on paper (only after the payment of the balance) addressed **to the beneficiaries** must be sent to their legal address as specified in the Participant Portal Beneficiary Register.

## ARTICLE 53 — INTERPRETATION OF THE AGREEMENT

### 53.1 Precedence of the Terms and Conditions over the Annexes

The provisions in the Terms and Conditions of the Agreement take precedence over its Annexes.

Annex 2 takes precedence over Annex 1.

### 53.2 Privileges and immunities

Not applicable

## ARTICLE 54 — CALCULATION OF PERIODS, DATES AND DEADLINES

In accordance with Regulation No 1182/71<sup>30</sup>, periods expressed in days, months or years are calculated from the moment the triggering event occurs.

The day during which that event occurs is not considered as falling within the period.

## ARTICLE 55 — AMENDMENTS TO THE AGREEMENT

### 55.1 Conditions

The Agreement may be amended, unless the amendment entails changes to the Agreement which would call into question the decision awarding the grant or breach the principle of equal treatment of applicants.

Amendments may be requested by any of the parties.

### 55.2 Procedure

The party requesting an amendment must submit a request for amendment signed in the electronic exchange system (see Article 52).

The coordinator submits and receives requests for amendment on behalf of the beneficiaries (see Annex 3).

If a change of coordinator is requested without its agreement, the submission must be done by another beneficiary (acting on behalf of the other beneficiaries).

The request for amendment must include:

- the reasons why;
- the appropriate supporting documents, and
- for a change of coordinator without its agreement: the opinion of the coordinator (or proof that this opinion has been requested in writing).

The Agency may request additional information.

If the party receiving the request agrees, it must sign the amendment in the electronic exchange system within 45 days of receiving notification (or any additional information the Agency has requested). If it does not agree, it must formally notify its disagreement within the same deadline. The deadline may be extended, if necessary for the assessment of the request. If no notification is received within the deadline, the request is considered to have been rejected.

An amendment **enters into force** on the day of the signature of the receiving party.

An amendment **takes effect** on the date agreed by the parties or, in the absence of such an agreement, on the date on which the amendment enters into force.

## ARTICLE 56 — ACCESSION TO THE AGREEMENT

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<sup>30</sup> Regulation (EEC, Euratom) No 1182/71 of the Council of 3 June 1971 determining the rules applicable to periods, dates and time-limits (OJ L 124, 8.6.1971, p. 1).

### **56.1 Accession of the beneficiaries mentioned in the Preamble**

The other beneficiaries must accede to the Agreement by signing the Accession Form (see Annex 3) in the electronic exchange system (see Article 52) within 30 days after its entry into force (see Article 58).

They will assume the rights and obligations under the Agreement with effect from the date of its entry into force (see Article 58).

If a beneficiary does not accede to the Agreement within the above deadline, the coordinator must — within 30 days — request an amendment to make any changes necessary to ensure proper implementation of the action. This does not affect the Agency's right to terminate the Agreement (see Article 50).

### **56.2 Addition of new beneficiaries**

In justified cases, the beneficiaries may request the addition of a new beneficiary.

For this purpose, the coordinator must submit a request for amendment in accordance with Article 55. It must include an Accession Form (see Annex 3) signed by the new beneficiary in the electronic exchange system (see Article 52).

New beneficiaries must assume the rights and obligations under the Agreement with effect from the date of their accession specified in the Accession Form (see Annex 3).

## **ARTICLE 57 — APPLICABLE LAW AND SETTLEMENT OF DISPUTES**

### **57.1 Applicable law**

The Agreement is governed by the applicable EU law, supplemented if necessary by the law of Belgium.

### **57.2 Dispute settlement**

If a dispute concerning the interpretation, application or validity of the Agreement cannot be settled amicably, the General Court — or, on appeal, the Court of Justice of the European Union — has sole jurisdiction. Such actions must be brought under Article 272 of the Treaty on the Functioning of the EU (TFEU).

As an exception, if such a dispute is between the Agency and ADMINISTRATION OF THE STATE BORDER GUARD SERVICE OF UKRAINE, MINISTRY OF INTERIOR OF THE REPUBLIC OF NORTH MACEDONIA, DECODIO AG, the competent Belgian courts have sole jurisdiction.

If a dispute concerns administrative sanctions, offsetting or an enforceable decision under Article 299 TFEU (see Articles 44, 45 and 46), the beneficiaries must bring action before the General Court — or, on appeal, the Court of Justice of the European Union — under Article 263 TFEU. Actions against offsetting and enforceable decisions must be brought against the Commission (not against the Agency).

**ARTICLE 58 — ENTRY INTO FORCE OF THE AGREEMENT**

The Agreement will enter into force on the day of signature by the Agency or the coordinator, depending on which is later.

**SIGNATURES**

For the coordinator

For the Agency





EUROPEAN RESEARCH EXECUTIVE AGENCY (REA)

REA.C – Future Society  
C.2 – Secure Society

**ANNEX 1 (part A)**

**Innovation action**

**NUMBER — 101021851 — NESTOR**

## Table of Contents

1.1. The project summary.....	3
1.2. The list of beneficiaries.....	4
1.3. Workplan Tables - Detailed implementation.....	5
1.3.1. WT1 List of work packages.....	5
1.3.2. WT2 List of deliverables.....	6
1.3.3. WT3 Work package descriptions.....	12
Work package 1.....	12
Work package 2.....	16
Work package 3.....	19
Work package 4.....	22
Work package 5.....	26
Work package 6.....	31
Work package 7.....	34
Work package 8.....	37
1.3.4. WT4 List of milestones.....	40
1.3.5. WT5 Critical Implementation risks and mitigation actions.....	41
1.3.6. WT6 Summary of project effort in person-months.....	43
1.3.7. WT7 Tentative schedule of project reviews.....	44

# 1.1. The project summary

Project Number <sup>1</sup>	101021851	Project Acronym <sup>2</sup>	NESTOR
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**One form per project**

**General information**

Project title <sup>3</sup>	aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders
Starting date <sup>4</sup>	01/11/2021
Duration in months <sup>5</sup>	18
Call (part) identifier <sup>6</sup>	H2020-SU-SEC-2020
Topic	SU-BES03-2018-2019-2020 Demonstration of applied solutions to enhance border and external security
Fixed EC Keywords	Detection, identification and authentication, Border surveillance
Free keywords	Pre-frontier intelligence picture, 360 Wide area surveillance, Radio-frequency analysis & localisation, Unmanned vehicles, Social media, AR/VR, EUROSUR, CISE

**Abstract <sup>7</sup>**

For the past few years, Europe has experienced some major changes at its surrounding territories and in adjacent countries which provoked serious issues at different levels. The European Community faces a number of challenges both at a political and at a tactical level. Irregular migration flows exerting significant pressure to the relevant authorities and agencies that operate at border territories. Armed conflicts, climate pressure and unpredictable factors occurring at the EU external borders, have increased the number of the reported transnational crimes. Smuggling activity is a major concern for Eastern EU Borders particularly, as monitoring the routes used by smugglers is being hindered by mountainous, densely forested areas and rough lands aside with sea or river areas. Due to the severity and the abrupt emergence of events, the relevant authorities operate for a long-time interval, under harsh conditions, 24 hours a day. NESTOR aims to demonstrate a fully functional next generation holistic border surveillance system providing pre-frontier situational awareness beyond maritime and land border areas following the concept of the European Integrated Border Management. NESTOR long-range and wide area surveillance capabilities for detection, recognition classification and tracking of moving targets (e.g. persons, vessels, vehicles, drones etc.) is based on optical, thermal imaging and Radio Frequency (RF) spectrum analysis technologies fed by an interoperable sensors network including stationary installations and mobile manned or unmanned vehicles (aerial, ground, water, underwater) capable of functioning both as standalone, tethered and in swarms. NESTOR BC3i system will fuse in real-time border surveillance data combined with web and social media information, creating and sharing a pre-frontier intelligent picture to local, regional and national command centers in AR environment being interoperable with CISE and EUROSUR.

## 1.2. List of Beneficiaries

Associated with document Ref. Ares(2021)6427459 - 20/10/2021

Project Number <sup>1</sup>	101021851	Project Acronym <sup>2</sup>	NESTOR
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### List of Beneficiaries

No	Name	Short name	Country	Project entry month <sup>8</sup>	Project exit month
1	HELLENIC POLICE	HP	Greece	1	18
2	ADMINISTRATION OF THE STATE BORDER GUARD SERVICE OF UKRAINE	SBGS	Ukraine	1	18
3	GLAVNA DIREKTSIA GRANICHNA POLITSIA	CDBP-MOI	Bulgaria	1	18
4	MINISTRY OF INTERIOR OF THE REPUBLIC OF NORTH MACEDONIA	DBAM	Republic of North Macedonia	1	18
5	MINISTRY OF TRANSPORT, COMMUNICATIONS AND WORKS	JRCC	Cyprus	1	18
6	VALSTYBES SIENOS APSAUGOS TARNYBA PRIE VIDAUS REIKALU MINISTERIJOS	SBGSLT	Lithuania	1	18
7	MINISTERIO DEL INTERIOR	GUCI	Spain	1	18
8	WOITSCH CONSULTING OY	WCO	Finland	1	18
9	KENTRO MELETON ASFALIAS	KEMEA	Greece	1	18
10	ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS	CERTH	Greece	1	18
11	SATWAYS - PROIONTA KAI YPIRESIES TILEMATIKIS DIKTYAKON KAI TILEPIKINONIAKON EFARMOGON ETAIRIA PERIORISMENIS EFTHINIS EPE	STWS	Greece	1	18
12	DECODIO AG	DCD	Switzerland	1	18
13	NARDA SAFETY TEST SOLUTIONS GMBH	NARDA	Germany	1	18
14	MILTECH HELLAS BIOMICHANIA EMPORIOANTIPROSOPEIES ILEKTRONIKON OPTIKON KAI MICHA NOLOGIKON EIDON AE	MILTECH	Greece	1	18
15	MAGGIOLI SPA	MAG	Italy	1	18
16	ELISTAIR	ELI	France	1	18
17	OCEANSCAN - MARINE SYSTEMS & TECHNOLOGY LDA	OMST	Portugal	1	18
18	ROBOTNIK AUTOMATION SLL	ROB	Spain	1	18
19	OULUN YLIOPISTO	UOULU	Finland	1	18
20	SHEFFIELD HALLAM UNIVERSITY	CENTRIC	United Kingdom	1	18
21	HENSOLDT SENSORS GMBH	HEN	Germany	1	18
22	INGENIERIA DE SISTEMAS PARA LA DEFENSA DE ESPANA SA-SME MP	ISDEFE	Spain	1	18



# 1.3. Workplan Tables - Detailed Implementation

## 1.3.1. WT1 List of work packages

WP Number <sup>9</sup>	WP Title	Lead beneficiary <sup>10</sup>	Per - mo s <sup>11</sup>	Start month <sup>12</sup>	End month <sup>13</sup>
WP1	Project coordination and management	1 - HP		1	18
WP2	User requirements analysis and operational scenarios	22 - ISDEFE		1	5
WP3	NESTOR advanced detection capabilities	21 - HEN		5	13
WP4	Increased situation awareness and automated navigation functionalities	10 - CERTH		5	14
WP5	System development and integration	11 - STWS		4	18
WP6	Demonstration pilots and assessment	9 - KEMEA		5	17
WP7	Dissemination and exploitation activities	15 - MAG		1	18
WP8	Ethics requirements	1 - HP		1	18
		<b>Total</b>			

### 1.3.2. WT2 list of deliverables

Deliverable Number <sup>14</sup>	Deliverable Title	WP number <sup>9</sup>	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D1.1	Project management, quality assurance and risk plan	WP1	1 - HP	Report	Confidential, only for members of the consortium (including the Commission Services)	4
D1.2	Project initial report	WP1	1 - HP	Report	Confidential, only for members of the consortium (including the Commission Services)	6
D1.3	Project intermediate report	WP1	1 - HP	Report	Confidential, only for members of the consortium (including the Commission Services)	12
D1.4	Project final report	WP1	1 - HP	Report	Confidential, only for members of the consortium (including the Commission Services)	18
D1.5	Ethics and societal issues management initial report	WP1	9 - KEMEA	Report	Confidential, only for members of the consortium (including the Commission Services)	10
D1.6	Ethics and societal issues management final report	WP1	9 - KEMEA	Report	Confidential, only for members of the consortium (including the Commission Services)	18
D2.1	Use cases and requirements for the innovative technologies	WP2	22 - ISDEFE	Report	Classified Information: RESTREINT UE (Commission Decision 2015/444/EC)	4
D2.2	Report on the legal, and security requirements for border security	WP2	20 - CENTRIC	Report	Public	5
D2.3	Metrics and KPIs	WP2	9 - KEMEA	Report	Classified Information: RESTREINT UE	5

<b>Deliverable Number<sup>14</sup></b>	<b>Deliverable Title</b>	<b>WP number<sup>9</sup></b>	<b>Lead beneficiary</b>	<b>Type<sup>15</sup></b>	<b>Dissemination level<sup>16</sup></b>	<b>Due Date (in months)<sup>17</sup></b>
					(Commission Decision 2015/444/EC)	
D2.4	Scenarios and trials description	WP2	1 - HP	Report	Classified Information: RESTREINT UE (Commission Decision 2015/444/EC)	5
D3.1	Visual cognition algorithms for optimal surveillance	WP3	10 - CERTH	Report	Confidential, only for members of the consortium (including the Commission Services)	13
D3.2	RF spectrum monitoring network	WP3	12 - DCD	Report	Confidential, only for members of the consortium (including the Commission Services)	13
D3.3	Radar deployment, track and identification data	WP3	21 - HEN	Report	Confidential, only for members of the consortium (including the Commission Services)	13
D3.4	Web and social media monitoring services	WP3	20 - CENTRIC	Report	Confidential, only for members of the consortium (including the Commission Services)	13
D4.1	ARTS final prototype	WP4	19 - UOULU	Report	Confidential, only for members of the consortium (including the Commission Services)	14
D4.2	Path planning for heterogenous swarm of UxVs	WP4	10 - CERTH	Report	Confidential, only for members of the consortium (including the Commission Services)	14
D4.3	Data fusion methods	WP4	10 - CERTH	Report	Confidential, only for members of the consortium (including the	14

<b>Deliverable Number<sup>14</sup></b>	<b>Deliverable Title</b>	<b>WP number<sup>9</sup></b>	<b>Lead beneficiary</b>	<b>Type<sup>15</sup></b>	<b>Dissemination level<sup>16</sup></b>	<b>Due Date (in months)<sup>17</sup></b>
					Commission Services)	
D4.4	Visual analytics and decision support system.	WP4	20 - CENTRIC	Report	Confidential, only for members of the consortium (including the Commission Services)	14
D4.5	Fixed and deployable BC3i system.	WP4	11 - STWS	Report	Confidential, only for members of the consortium (including the Commission Services)	14
D5.1	Technical requirements and platform development roadmap	WP5	15 - MAG	Report	Confidential, only for members of the consortium (including the Commission Services)	7
D5.2	NESTOR sensors and platforms definition	WP5	15 - MAG	Report	Confidential, only for members of the consortium (including the Commission Services)	7
D5.3	NESTOR communication interfaces	WP5	15 - MAG	Report	Classified Information: RESTREINT UE (Commission Decision 2015/444/EC)	12
D5.4	Interoperable and secure communications	WP5	15 - MAG	Report	Classified Information: RESTREINT UE (Commission Decision 2015/444/EC)	12
D5.5	Data flows and interoperability layer	WP5	11 - STWS	Report	Confidential, only for members of the consortium (including the Commission Services)	12
D5.6	Factory Integration and Testing	WP5	11 - STWS	Report	Confidential, only for members of the consortium (including the Commission Services)	11

<b>Deliverable Number<sup>14</sup></b>	<b>Deliverable Title</b>	<b>WP number<sup>9</sup></b>	<b>Lead beneficiary</b>	<b>Type<sup>15</sup></b>	<b>Dissemination level<sup>16</sup></b>	<b>Due Date (in months)<sup>17</sup></b>
D5.7	Field Deployment and Maintenance	WP5	11 - STWS	Report	Confidential, only for members of the consortium (including the Commission Services)	18
D6.1	Validation methodology and planning	WP6	9 - KEMEA	Report	Classified Information: RESTREINT UE (Commission Decision 2015/444/EC)	10
D6.2	NESTOR training program	WP6	11 - STWS	Report	Confidential, only for members of the consortium (including the Commission Services)	16
D6.3	Operational trials results: Report and Validations	WP6	1 - HP	Report	Classified Information: RESTREINT UE (Commission Decision 2015/444/EC)	17
D7.1	NESTOR stakeholder community	WP7	22 - ISDEFE	Report	Public	18
D7.2	Dissemination and communication plan	WP7	15 - MAG	Report	Public	3
D7.3	Dissemination and communication activities	WP7	15 - MAG	Report	Public	18
D7.4	Exploitation plan and first IPR report	WP7	15 - MAG	Report	Public	18
D7.5	Business plan and large uptake assessment	WP7	15 - MAG	Report	Confidential, only for members of the consortium (including the Commission Services)	18
D7.6	Standardization and collaboration with other projects	WP7	8 - WCO	Report	Confidential, only for members of the consortium (including the Commission Services)	18
D8.1	H - Requirement No. 1	WP8	1 - HP	Ethics	Confidential, only for members of the consortium	3

<b>Deliverable Number<sup>14</sup></b>	<b>Deliverable Title</b>	<b>WP number<sup>9</sup></b>	<b>Lead beneficiary</b>	<b>Type<sup>15</sup></b>	<b>Dissemination level<sup>16</sup></b>	<b>Due Date (in months)<sup>17</sup></b>
					(including the Commission Services)	
D8.2	H - Requirement No. 2	WP8	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	9
D8.3	POPD - Requirement No. 3	WP8	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	5
D8.4	NEC - Requirement No. 4	WP8	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	5
D8.5	EPQ - Requirement No. 5	WP8	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	5
D8.6	DU - Requirement No. 6	WP8	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	9
D8.7	M - Requirement No. 7	WP8	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	9
D8.8	GEN - Requirement No. 8	WP8	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	12
D8.9	GEN - Requirement No. 9	WP8	1 - HP	Ethics	Confidential, only for members of the consortium (including the	18

<b>Deliverable Number<sup>14</sup></b>	<b>Deliverable Title</b>	<b>WP number<sup>9</sup></b>	<b>Lead beneficiary</b>	<b>Type<sup>15</sup></b>	<b>Dissemination level<sup>16</sup></b>	<b>Due Date (in months)<sup>17</sup></b>
					Commission Services)	

### 1.3.3. WT3 Work package descriptions

<b>Work package number</b> <sup>9</sup>	WP1	<b>Lead beneficiary</b> <sup>10</sup>	1 - HP
<b>Work package title</b>	Project coordination and management		
<b>Start month</b>	1	<b>End month</b>	18

#### Objectives

Objectives: The scope of WP1 is to identify the project management structure as well as the guidelines that will ensure the coordination and management of the NESTOR initiative, the quality assurance and the risk management. Moreover, activities are foreseen to ensure the coordination of the consortium efforts including Project Management Board (PMB), Security Advisory Board (SAB) and Ethics Advisory Board (ETAB) to grant effective operations, efficient delivery of the expected outcomes, and the optimal quality of the project output. In addition, it will monitor and establish the required connection of the project with the EC in terms of financial, legal and contractual activities. The main objectives of WP1 are:

- Coordination of all management activities including contractual, financial and legal activities
- Perform activities for quality assurance and risk mitigation
- Collaboration with the EU Commission and the H2020 community
- Monitor the progress of the technical developments
- Handle legal, ethical and social issues

#### Description of work and role of partners

##### **WP1 - Project coordination and management** [Months: 1-18]

**HP, SBGS, CDBP-MOI, DBAM, JRCC, SBGSLT, GUCI, WCO, KEMEA, CERTH, STWS, DCD, NARDA, MILTECH, MAG, ELI, OMST, ROB, UOULU, CENTRIC, HEN, ISDEFE**

##### Description of Work

T1.1.: Project administration and reporting to the Commission (M1-M18); Leader: HP (11 PMs), Contribution: ALL, Reports: D1.1, D1.2, D1.3

This task undertakes the overall project administrative issues. In this frame this task is responsible for coordinating internal reporting and project reviews, EC related contractual reporting activities, organization of meetings (i.e. kick-off and follow-up meetings, Executive, Technical and Advisory Board meetings etc) as well as monitoring of the work being carried out, adjusting the workplan in needed. Procedures, project management methods and related tools for adequate internal information exchange and collaboration will be established also within this task.

T1.2.: Project coordination and financial management (M1-M18); Leader: HP (12 PMs), Contribution: KEMEA, Reports: D1.1, D1.2, D1.3

This task regards the overall project coordination as well as the handling of financial issues. Within this task the General Assembly and Executive Board meetings will be chaired, the Security advisory Board will be coordinated, the work plan and project progress will be monitored, and potential organizational problems will be identified and solved. The project achievements will be supervised and any needed refinements of the overall project strategy will be proposed and submitted to the General Assembly (GA) for their decision. The EC financial contribution will be administered through this task as well as the consecutive distribution of shares to the members of the consortium following the relevant rules of the Consortium Agreement and the Grant Agreement. The foreseen guidelines and procedures will be followed as set in order to resolve any conflicts and close cooperation with the technical manager of NESTOR is also anticipated through this task. Acting as unique interface this task will perform all related activities in order to maintain contacts with external organizations.

T1.3.: Project management, quality assurance and risk management (M1-M18); Leader: KEMEA (12 PMs), Contribution: HP, Reports: D1.1, D1.2, D1.3

Working along with the Project Coordination team and providing continuous planning, this task will manage the activities of the overall project during its entire lifecycle. By defining the quality and risk control procedures to be used during the project, this task will carry out the following: monitoring of deadlines on time and budget; provision of early warnings in case certain limits are reached; preparation of meeting agendas, schedules as well as proposing of locations; safeguarding that the Quality Assurance and Risk Management principles and procedures are followed continuously; ensuring that the defined technical goals and expected excellence level while identifying technical problems. This task



will also support synergies and embrace collaborations within Consortium members. This task will be including a Data Management Plan.

T1.4.: Scientific and technical management (M1-M18); Leader: CERTH (11 PMs), Reports: D1.1

The aim of this task is to (i) ensure that the project meets the requisite scientific and technical quality standards; (ii) monitor the quality of the scientific and technological outcomes; (iii) address potential deviations from the plan; While CERTH will coordinate and act as a leader of the task, representatives from the consortium will have the roles the Innovation Manager to ensure that the innovative impacts are maximized. All beneficiaries will be responsible for ensuring that all research undertaken is consistent with the accepted quality, risk and ethical/security standards.

T1.5.: Ethics and societal issues management (M1-M18); Leader: KEMEA (7 PMs), Reports: D1.5, D1.6

This task is going to identify, map and advise on the ethics and societal issues related to the research activities to be conducted under NESTOR. The ethics experts will be in close cooperation with the PMT, to provide guidance and steering on ethical and societal issues of the proposed solutions and how to implement H2020 ethics requirements. All partners are contributing to this task to the extent that they shall provide ethics-related documentation and demonstrate their compliance with the H2020 ethics standards. Additionally, there will be a strong collaboration and policy alignment with the External Ethics Advisor which will be consulted upon the arisal of any ethics and societal-related questions.

**Participation per Partner**

Partner number and short name	WP1 effort
1 - HP	
2 - SBGS	
3 - CDBP-MOI	
4 - DBAM	
5 - JRCC	
6 - SBGSLT	
7 - GUCI	
8 - WCO	
9 - KEMEA	
10 - CERTH	
11 - STWS	
12 - DCD	
13 - NARDA	
14 - MILTECH	
15 - MAG	
16 - ELI	
17 - OMST	
18 - ROB	
19 - UOULU	
20 - CENTRIC	
21 - HEN	
22 - ISDEFE	
<b>Total</b>	

List of deliverables

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D1.1	Project management, quality assurance and risk plan	1 - HP	Report	Confidential, only for members of the consortium (including the Commission Services)	4
D1.2	Project initial report	1 - HP	Report	Confidential, only for members of the consortium (including the Commission Services)	6
D1.3	Project intermediate report	1 - HP	Report	Confidential, only for members of the consortium (including the Commission Services)	12
D1.4	Project final report	1 - HP	Report	Confidential, only for members of the consortium (including the Commission Services)	18
D1.5	Ethics and societal issues management initial report	9 - KEMEA	Report	Confidential, only for members of the consortium (including the Commission Services)	10
D1.6	Ethics and societal issues management final report	9 - KEMEA	Report	Confidential, only for members of the consortium (including the Commission Services)	18

Description of deliverables

D1.1 : Project management, quality assurance and risk plan [4]  
 The deliverable will define (i) the guidelines followed by partners to ensure high quality research, development and reporting, (ii) quality assurance responsibilities, (iii) measures for quality flaws.

D1.2 : Project initial report [6]  
 The deliverable will include all required reports on project and risk status, highlight accomplishments and plans for the next period.

D1.3 : Project intermediate report [12]  
 The deliverable will include all required reports on project and risk status, highlight accomplishments and plans for the next period.

D1.4 : Project final report [18]  
 The deliverable will include all required reports on project and risk status, highlight accomplishments and plans upon the completion of the project.

D1.5 : Ethics and societal issues management initial report [10]

Initial report on providing analysis and assessment of ethical and societal aspects of the NESTOR project.  
 D1.6 : Ethics and societal issues management final report [18]  
 Final report on providing analysis and assessment of ethical and societal aspects of the NESTOR project.

**Schedule of relevant Milestones**

<b>Milestone number<sup>18</sup></b>	<b>Milestone title</b>	<b>Lead beneficiary</b>	<b>Due Date (in months)</b>	<b>Means of verification</b>
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<b>Work package number</b> <sup>9</sup>	WP2	<b>Lead beneficiary</b> <sup>10</sup>	22 - ISDEFE
<b>Work package title</b>	User requirements analysis and operational scenarios		
<b>Start month</b>	1	<b>End month</b>	5

**Objectives**

Objectives: The main objective of the WP is to identify the operational, security, ethical and legal requirements of the border authorities and agencies concerning the defined use cases. At first, three use cases will be specified by the practitioners of the Consortium, considering also jointly agreed standard formats and common operational activities. Based on the performed analysis, a set of operational, security, ethical and legal requirements will be defined and refined after the assessment of the first trial. Therefore, the main objectives of this WP include:

- Perform an extensive survey on the existing technologies for border surveillance in order to identify the main aspects of the architecture
- Define common functional and non-functional specifications for all the related scenarios
- Identify in detail the end-user requirements according to the defined use cases
- Define the metrics and KPIs for evaluating the systems performance and justify the resulted TRL values
- Describe all operational scenarios and the corresponding three trials

**Description of work and role of partners**

**WP2 - User requirements analysis and operational scenarios** [Months: 1-5]  
**ISDEFE, HP, SBGS, CDBP-MOI, DBAM, JRCC, SBGSLT, GUCI, WCO, KEMEA, CERTH, STWS, DCD, NARDA, MILTECH, MAG, ELI, OMST, ROB, UOULU, CENTRIC, HEN**

**Description of Work**

T2.1.: Use cases and user requirements definition (M1-M4); Leader: ISDEFE (8.5 PMs), Contributors: ALL, Reports: D2.1

This task has two main goals by promoting the end-users' involvement: (i) definition of the different uses cases to be considered in the trials that will be executed in the scope of WP6; and (ii) identifying functional and non-functional requirements for the technologies that will be developed in WP3 and WP4. Three different use cases will be developed and considered to identify the user requirements and evaluate the NESTOR components. ISDEFE will lead the task and perform iterative interactions with the rest of the Consortium members in order to identify operational scenarios faced border authorities.

T2.2.: Legal and security requirements for border security (M1-M5); Leader: CENTRIC (4 PMs); Contributors: KEMEA, CDBP, Reports: D2.2 This task will define the legal, ethical and security needs, restrictions and requirements for the implementation of the NESTOR system. The suggested platform is designed to collect, analyze and interpret data with the purpose of enhancing security and awareness level in border areas and supporting in parallel the decision-making procedures. Thus, it is mandatory to look into the associated ethical and legal considerations of privacy and security perspectives, as being addressed in the context of EU Law. This task is particularly focused on how NESTOR would be implemented in an operational environment. To this end, the work to be performed will focus on the nature of data collected or used; how and where these data will be stored; who will have access to these data; how the data will be accessed and distributed if needed; how the access credentials will be protected and the obligations allot on stakeholders and the General Data Protection Regulation (GDPR). The final work will provide conclusive proof of compliance with current data privacy and security legislation, of the platform design and operation.

T2.3.: Definition of metrics and KPIs (M2-M5); Leader: KEMEA (4 PMs); Contributors: ALL, Reports: D2.3 This task will define the complete set of KPAs, KPIs and metrics to be used during the evaluation of the NESTOR integrated system. By transforming the users' needs into technical specifications and in close cooperation with the Technical Partners, a list of criteria will be determined in order to measure the performance of both the system as a whole but also each separate component's.

T2.4.: Operational scenarios and trials definitions (M2-M5); Leader: HP (5 PMs); Contributors: SBGS, CDBP, DBAM, JRCC, SBGSLT, GUCI, KEMEA, CERTH, STWS, ISDEFE; Reports: D2.4

The core activities of this task will be initially to promote the border community in order to ensure the effectiveness of the extracted operational scenarios for covering the use cases developed under T2.1. Considering the validation process (the metrics and the performance indicators) as well as the initial definition of the trials, the end-user partners will define

the operational scenarios and the trials which will be modified following the implementation V-model, to facilitate different working practises. As such, the final outcome of the task will be the definition of the trials considering various operational aspects in order to execute the trials in the scope of WP6.

**Participation per Partner**

Partner number and short name	WP2 effort
1 - HP	
2 - SBGS	
3 - CDBP-MOI	
4 - DBAM	
5 - JRCC	
6 - SBGSLT	
7 - GUCI	
8 - WCO	
9 - KEMEA	
10 - CERTH	
11 - STWS	
12 - DCD	
13 - NARDA	
14 - MILTECH	
15 - MAG	
16 - ELI	
17 - OMST	
18 - ROB	
19 - UOULU	
20 - CENTRIC	
21 - HEN	
22 - ISDEFE	
<b>Total</b>	

**List of deliverables**

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D2.1	Use cases and requirements for the innovative technologies	22 - ISDEFE	Report	Classified Information: RESTREINT UE (Commission)	4

**List of deliverables**

<b>Deliverable Number<sup>14</sup></b>	<b>Deliverable Title</b>	<b>Lead beneficiary</b>	<b>Type<sup>15</sup></b>	<b>Dissemination level<sup>16</sup></b>	<b>Due Date (in months)<sup>17</sup></b>
				Decision 2015/444/EC)	
D2.2	Report on the legal, and security requirements for border security	20 - CENTRIC	Report	Public	5
D2.3	Metrics and KPIs	9 - KEMEA	Report	Classified Information: RESTREINT UE (Commission Decision 2015/444/EC)	5
D2.4	Scenarios and trials description	1 - HP	Report	Classified Information: RESTREINT UE (Commission Decision 2015/444/EC)	5

**Description of deliverables**

D2.1 : Use cases and requirements for the innovative technologies [4]  
 It will describe the use cases and functional & non-functional requirements of the innovative technologies that will enhance the new automated long-range surveillance and protection system.

D2.2 : Report on the legal, and security requirements for border security [5]  
 A detailed overview of the legal, ethical and security considerations focusing specifically on the NESTOR platform and envisioned use cases.

D2.3 : Metrics and KPIs [5]  
 The deliverable will report all KPIs and required metrics for proper evaluation of the acquired results after the trials.

D2.4 : Scenarios and trials description [5]  
 This deliverable will describe the identified use cases/operational scenarios of the trials.

**Schedule of relevant Milestones**

<b>Milestone number<sup>18</sup></b>	<b>Milestone title</b>	<b>Lead beneficiary</b>	<b>Due Date (in months)</b>	<b>Means of verification</b>
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<b>Work package number</b> <sup>9</sup>	WP3	<b>Lead beneficiary</b> <sup>10</sup>	21 - HEN
<b>Work package title</b>	NESTOR advanced detection capabilities		
<b>Start month</b>	5	<b>End month</b>	13

**Objectives**

Objectives: WP3 aims at identifying and developing the required NESTOR enhanced functionalities for accurate detections and improved sensing. Considering that the WP comprises the lowest implementation level, all corresponding components will process raw data acquired from the sensor systems deployed on the operational field. Therefore, the core objectives of the WP are as follows:

- Specify and develop highly accurate visual detectors
- Design and implement improved RF-based models to identify the existence of abnormal signals
- Implement improved detection models for radar systems
- Identify specialized events and activities by monitoring social media platforms

**Description of work and role of partners**

**WP3 - NESTOR advanced detection capabilities** [Months: 5-13]

**HEN, HP, SBGS, CDBP-MOI, DBAM, JRCC, SBGSLT, GUCI, KEMEA, CERTH, STWS, DCD, NARDA, MILTECH, ELI, ROB, CENTRIC, ISDEFE**

Description of Work

T3.1.: Advanced cognition capabilities for border surveillance (M5-M13); Leader: MILTECH (15 PMs); Contributors: HP, SBGS, CDBP, DBAM, JRCC, SBGSLT, GUCI, CERTH, ELI, ROB, ISDEFE; Reports: D3.1

Within the scope of this task, all corresponding activities will target on deploying and evaluating the appropriate computer vision and deep learning algorithms to analyse the acquired video streams. As the NESTOR assets involves cameras mounted on UxVs as well as improved surveillance cameras, the object detection model can process different types of optronic data including visual, MWIR and 360o. The performed detection techniques will rely on SoA approaches for object recognition

approaches will be advanced to identify the objects of interests within the territory under surveillance. For increasing the awareness and the information displayed to the operator and in accordance with the system's requirements, both bounding box and semantic segmentation approaches will be investigated.

T3.2.: RF-based detections of suspicious signals (M5-M13); Leader: DCD (6 PMs); Contributors: KEMEA, NARDA; Reports: D3.2

The delivered network of RF sensors will provide information about detected emitters. This contains meta-data as well as content and position information – if possible. This information will be forwarded to a C2/C3 system to be combined with the information provided by other sensors. Further analysis of the provided data (content, meta-information like signal duration and position) can be used to identify smugglers and maybe also provide information about possible activities of them.

T3.3.: Radar data collection and threat identification (M5-M13); Leader: HEN (7 PMs); Contributors: STWS; Reports: D3.3

will be used using electronic beam control, Due to the flexible electronic beam scanning and the multi-beam capability, the radars are able to conduct several reconnaissance tasks in parallel and, in doing so, achieve a much higher level of reconnaissance efficiency and situational awareness than conventional mechanically scanning radars

T3.4.: Web and social media monitoring (M5-M13); Leader: CENTRIC (6 PMs); Contributors: CERTH, HEN; Reports: D3.4

This task will take input from social media (either through APIs or by real-time investigator driven methods) using keywords profiles and domain specific indicators as a reference for streaming social media data, as well as a web crawler component using specific URLs as a starting point for web crawling the surface, deep and dark web. Information from the web and social media will aim to identify content related to illegal border activities including suspicious adverts,

groups, sale of goods, potential trafficking routes as well as information posted by bystanders. Raw web and social media data will be transformed to an entity-link model to allow Natural Language Processing, Social Network Analysis and Indicators to be relations to specific scenarios, such as drug trafficking or illegal activities and a rule-based expert system used to determine the influence each indicator has on the outcome of the analysis. The task will aim to support reverse geocoding, entity, date and other keyword extraction, indicator detection as well as analysis of networks and trends.

**Participation per Partner**

Partner number and short name	WP3 effort
1 - HP	
2 - SBGS	
3 - CDBP-MOI	
4 - DBAM	
5 - JRCC	
6 - SBGSLT	
7 - GUCI	
9 - KEMEA	
10 - CERTH	
11 - STWS	
12 - DCD	
13 - NARDA	
14 - MILTECH	
16 - ELI	
18 - ROB	
20 - CENTRIC	
21 - HEN	
22 - ISDEFE	
<b>Total</b>	

**List of deliverables**

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	D D months <sup>17</sup>
D3.1	Visual cognition algorithms for optimal surveillance	10 - CERTH	Report	Confidential, only for members of the consortium (including the Commission Services)	13
D3.2	RF spectrum monitoring network	12 - DCD	Report	Confidential, only for members of the consortium (including	13



**List of deliverables**

<b>Deliverable Number<sup>14</sup></b>	<b>Deliverable Title</b>	<b>Lead beneficiary</b>	<b>Type<sup>15</sup></b>	<b>Dissemination level<sup>16</sup></b>	<b>Due Date (in months)<sup>17</sup></b>
				the Commission Services)	
D3.3	Radar deployment, track and identification data	21 - HEN	Report	Confidential, only for members of the consortium (including the Commission Services)	13
D3.4	Web and social media monitoring services	20 - CENTRIC	Report	Confidential, only for members of the consortium (including the Commission Services)	13

**Description of deliverables**

D3.1 : Visual cognition algorithms for optimal surveillance [13]  
 The deliverable will report the validated models along with the final component for object recognition in surveillance applications.

D3.2 : RF spectrum monitoring network [13]  
 The deliverable will report the design and the activities for installing the sensor as well as the configuration of the RF sensor system which will provide signal meta-data, and positioning information of the RF emitters along with the detection schemes.

D3.3 : Radar deployment, track and identification data [13]  
 The deliverable will report all activities to be performed by HEN personnel to identify the models for the radar-based detections.

D3.4 : Web and social media monitoring services [13]  
 The deliverable describes the methodology and development of the component for extracting and analysis information from the web and social media.

**Schedule of relevant Milestones**

<b>Milestone number<sup>18</sup></b>	<b>Milestone title</b>	<b>Lead beneficiary</b>	<b>Due Date (in months)</b>	<b>Means of verification</b>
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<b>Work package number</b> <sup>9</sup>	WP4	<b>Lead beneficiary</b> <sup>10</sup>	10 - CERTH
<b>Work package title</b>	Increased situation awareness and automated navigation functionalities		
<b>Start month</b>	5	<b>End month</b>	14

**Objectives**

Objectives: The goal of WP4 is to develop the envisaged capacities for increased situation awareness of the operator. To this end, the WP involves activities to expand the feature portfolio of existing infrastructures and inform the operator with a more concise and comprehensive framework. To this end, WP4 includes the following main objectives:

- Expand the interaction capabilities by incorporating mixed reality functionalities
- Provide autonomous navigation for the robotic platforms and swarm functionalities
- Develop fusion techniques for enhanced and more reliable representations
- Implement visual analytics and decision support frameworks
- Increase the capacities of an existing C2/C3 framework

**Description of work and role of partners**

**WP4 - Increased situation awareness and automated navigation functionalities** [Months: 5-14]  
**CERTH**, HP, SBGS, CDBP-MOI, DBAM, JRCC, SBGSLT, GUCI, STWS, MILTECH, MAG, OMST, ROB, UOULU, CENTRIC, HEN, ISDEFE

Description of Work

T4.1.: Mixed reality using cutting edge technologies (M05-M14); Leader: OULU (10 PMs); Contributors: STWS, MILTECH, ROB; Reports: D4.1

The objective of T4.1 is to develop an Augmented Reality Tactical Sandbox (ARTS) for projecting mixed reality data. To this objective, the task will carry out the following activities: (i) Develop the required server-side and client-side scripts, and enable the AR head-mounted display. The service will be able to consume and visualise in near-real time data and video streams. The set-up will consist of a Unity game engine workstation communicating with the off-grid server system over secure protocol and will use the publish/subscribe model for data communication. (ii) Develop the required parts of the networking solution to support the multiplayer gaming experience in the dedicated off-grid server. (iii) Design realistic visualisations of the theatre of operations (and theatre assets) based on user requirements elicited in T2.1. This activity will also develop the key components of the simulation, including user-friendly holographic user interface (HUI), avatar movement, Unity scenes, and capabilities for interactions. ARTS will provide “instinctual interaction” that can leverage fully articulated hand tracking, eye tracking and spatial awareness in a human way, that increase learning performance by offering multimodal feedback.

T4.2.: Collective intelligence for swarm robotics (M05-M14); Leader: CERTH (16.5 PMs); Contributors: OMST, ROB, ISDEFE; Reports: D4.2

This task will provide an AI-based service for autonomous designing of missions for a swarm of UxVs to cooperatively cover large off-shore areas. This service will be triggered by the area to be covered that might include obstacles/no-fly-zones, and the number of UxVs that are operational and ready to participate in the mission. This service will design the paths for all the UxVs so as i) the overall area is covered, ii) all UxVs are efficiently utilized, iii) without any unwanted overlap, iv) with the minimum possible number of turns, and, iv) to produce the required visual information in the minimum possible time. Such an energy-aware design of paths can be of paramount importance in the time-critical applications of NESTOR, where a complete mission awareness is required. Additionally, the service will not provide “blindly” equal paths for all the UxVs, but it will incorporate each UxV’s characteristics to produce paths tailored to their operational capabilities. Finally, the paths will be designed for executing multiple times, in cases where just a “snapshot” of the operational area is required, but also in a continuous manner.

T4.3.: Multi-modal data fusion (M5-M14); Leader: CERTH (13 PMs), Contributors: STWS, MILTECH, MAGG; Reports: D4.3

The main outcome of the task will be the development of the necessary algorithms to process and fuse detection information from multiple sources and from different services, each with different physical and sensing capabilities. At the outset, the task will be concerned with integrating different surveillance data sources allowing for the fusion of distinct detection outcomes that rely on different technologies meaning optronic, radar and RF detections acquired from surveillance cameras, cameras mounted on UxVs, static radars, hand-held RF sensors etc. Then state-of-the-art data fusion algorithms will be considered including Bayesian data association techniques (Extended/Unscented

Kalman Filter, Particle Filter, Random Finite Sets, etc.) and belief propagation algorithms. Based on the available data, a classification procedure will be employed to extend the link with the high-level data fusion in order to deliver a JDL Level-1 and/or Level-2 fusion scheme. All data fusion methods developed in this task will be integrated with the NESTOR system in close collaboration with developed services of WP3.

T4.4.: Visual analytics and decision support (M5-M14); Leader: CENTRIC (6 PMs); Contributors: CERTH, MILTECH, HEN; Reports: D4.4

This task will provide a visual analytics dashboard that brings together all the data inputs in the NESTOR system. Components will include trending keywords/entities/indicators, time-based geospatial visualizations as well as heatmaps of drone/mission coverage and associated patterns of activity. The dashboard will support timelines to replay missions and events as well providing input to support the planning of missions, prioritization of information and alerting to support decision making.

T4.5.: Fixed and deployable Command and Control System (M5-M14); Leader: STWS (8 PMs); Contributors: HP, SBGS, CDBP, DBAM, JRCC, SBGSLT, MILTECH, OMST, ROB, UOULU, CENTRIC, HEN, ISDEFE; Reports: D4.5  
 In this task the development of the fixed and deployable BC3i system will be realised. The development of the Land and Maritime editions of the BC3i will be based on common generic capabilities (surveillance, mission planning, tasking orders, reconnaissance, exploitation, Reporting) and specific ones for Maritime that refers to maritime domain (Maritime Situational Awareness, recognized maritime picture, nautical charts, weather/sea state data, dedicated decision support tools). Both editions will support an innovative collaboration environment for information exchange with mobile data terminals and the various connection services with the interoperability layer.

**Participation per Partner**

Partner number and short name	WP4 effort
1 - HP	
2 - SBGS	
3 - CDBP-MOI	
4 - DBAM	
5 - JRCC	
6 - SBGSLT	
7 - GUCI	
10 - CERTH	
11 - STWS	
14 - MILTECH	
15 - MAG	
17 - OMST	
18 - ROB	
19 - UOULU	
20 - CENTRIC	
21 - HEN	
22 - ISDEFE	
<b>Total</b>	

List of deliverables

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D4.1	ARTS final prototype	19 - UOULU	Report	Confidential, only for members of the consortium (including the Commission Services)	14
D4.2	Path planning for heterogenous swarm of UxVs	10 - CERTH	Report	Confidential, only for members of the consortium (including the Commission Services)	14
D4.3	Data fusion methods	10 - CERTH	Report	Confidential, only for members of the consortium (including the Commission Services)	14
D4.4	Visual analytics and decision support system.	20 - CENTRIC	Report	Confidential, only for members of the consortium (including the Commission Services)	14
D4.5	Fixed and deployable BC3i system.	11 - STWS	Report	Confidential, only for members of the consortium (including the Commission Services)	14

Description of deliverables

D4.1 : ARTS final prototype [14]

The deliverable describes the design and the integration of the ARTS module as well as its specifications and functionalities.

D4.2 : Path planning for heterogenous swarm of UxVs [14]

The deliverable will describe the specifications and functionalities of the AI-based, path-planning module for heterogenous UxVs.

D4.3 : Data fusion methods [14]

The deliverable will describe the results of Task 4.3 describing the required data fusion mechanism to combine different detection results.

D4.4 : Visual analytics and decision support system. [14]

This deliverable describes the visual analytics dashboard and the decision support system as implemented within the NESTOR system.

D4.5 : Fixed and deployable BC3i system. [14]

The document will describe the modules and the capabilities of the BC3i software suite.

**Schedule of relevant Milestones**

<b>Milestone number<sup>18</sup></b>	<b>Milestone title</b>	<b>Lead beneficiary</b>	<b>Due Date (in months)</b>	<b>Means of verification</b>
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<b>Work package number</b> <sup>9</sup>	WP5	<b>Lead beneficiary</b> <sup>10</sup>	11 - STWS
<b>Work package title</b>	System development and integration		
<b>Start month</b>	4	<b>End month</b>	18

**Objectives**

Objectives: WP5 in NESTOR aims at the integration of all the components and services implemented in other WPs into one compact solution deployable in relevant border territories. All software components will be deployed and integrated following the architecture that will be identified based on the WP2 outcomes. In addition, all sensors, platforms, and communication infrastructure will be identified. The first integrated prototype will be thoroughly validated and comprise the base for the final prototype. Those dedicated validation scenarios and metrics will target an appropriate valuation of the platform’s and each component’s resiliency. Therefore, the main WP5 objectives include:

- Design the core architecture of the NESTOR surveillance system
- Define the sensors, platforms and legacy systems to be utilized in the trials
- Identify the required communication infrastructure to increase the operational distance
- Integrate all software and hardware components through the implementation of the required communication interfaces.
- Planning of verification and validation steps.

**Description of work and role of partners**

**WP5 - System development and integration** [Months: 4-18]  
**STWS, HP, SBGS, CDBP-MOI, DBAM, JRCC, SBGSLT, GUCI, KEMEA, CERTH, DCD, NARDA, MILTECH, MAG, ELI, OMST, ROB, UOULU, CENTRIC, HEN, ISDEFE**

**Description of Work**

T5.1.: Technical specifications and architecture (M4-M7); Leader: MAGG (7.5 PMs); Contributors: HP, SBGS, CDBP, DBAM, JRCC, SBGSLT, GUCI, KEMEA, CERTH, STWS, NARDA, MILTECH, ELI, OMST, ROB, UOULU, CENTRIC, ISDEFE; Reports: D5.1

This task aims at designing the NESTOR Architecture based on the results from WP2 User requirements analysis and operational scenarios. The NESTOR Architecture will identify the component responsible for implementing methods, algorithms, solutions for the smooth and interoperable operation or the several components, sensors and devices. Moreover, the purpose of this task is to identify the data sources and existing involved systems to clear identify different interfaces and system boundaries. STWS will support the definition of the NESTOR architecture to represent methods and tools for time-awareness, fault and attack tolerance, monitoring for failure and attack detection, and visual design tools for system modelling and fast prototyping, through the utilization of formal modelling solutions generally used for System-of-Systems design

T5.2.: Definition of sensors and platforms (M4-M7); Leader: MAGG (5 PMs); Contributors: STWS, NARDA, MILTECH, ELI, OMST, ROB, HEN, ISDEFE; Reports: D5.2

In this task we are aiming to the define and design sensing elements and the corresponding subsystems on the basis of requirements defined in the previous Task 5.1. This will include the specification of latest hardware of the selected sensors in a wireless, stand-alone and modular system, software integration in the project platform including the development or implementation of proper communication protocol and energy requirement study for adequate stand-alone operation. The design and integration of novel sensors will allow NESTOR sensing infrastructure system to progress from TRL 3-4 to reach TRL 7-8 at the end of the project.

T5.3.: Integration of communication services at component level (M4-M12); Leader: MAGG (10 PMs); Contributors: CERTH, STWS, DCD, NARDA, MILTECH, ELI, OMST, ROB, UOULU, HEN, ISDEFE; Reports: D5.3

This task will be responsible for interconnecting the various NESTOR devices. It will develop all modules relevant to the communication and reliable data exchange. Moreover, it will implement mechanisms for the data aggregation and homogenization of based on a uniform NESTOR semantic vocabulary, through the implementation of Common Data Management Environment. Equally important with the raw data generated within the system, it is the management of metadata and their integrity as it can be used as a secondary source of information. Thus, Task 5.3 will handle holistically the exchange of both raw data and metadata. All communication modules will be developed as services that can be consumed by external modules based on given SLA and security requirements.

T5.4.: Long-range communications (M5-M12); Leader: KEMEA (10.5 PMs); Contributors: STWS, MILTECH, MAGG; Reports: D5.4

This task will implement the communication interconnection of NESTOR at the border sites by introducing the NESTOR Gateway (GW) that will act as the local communication hub offering secure interconnections to the locally deployed tactical assets, facilitating the secure data exchange amongst these assets and the command and control deployed services and modules. To this extent, the GW will utilise numerous communication interfaces spanning from the physical to the [redacted] in order to collect data from local sites.

[redacted] In addition, authentication and authorisation of the connected NESTOR components will be supported by utilising and adapting to the project's needs, offering well known frameworks and/or by employing methods utilizing authentication and authorisation tokens or certificates; [redacted]

Moreover, the GW will offer the capability to encrypt, supporting both symmetric and asymmetric encryption approaches, the data prior to transmission adding as such an extra layer of protection. Finally, the GW will support the local fusion and accelerated processing of sensor data by providing the necessary data exchange interfaces between the processing and programmable GW's subsystems. [redacted]

T5.5.: Interoperability layer and legacy systems connection (M5-M12); Leader: STWS (8 PMs); Contributors: CERTH, DCD, NARDA, MILTECH, ELI, OMST, ROB; Reports: D5.5

This task will design and develop the interoperability layer in the form of a DataFlow engine supporting powerful and scalable directed graphs of data routing, transformation, and system mediation logic. This layer will allow seamless integration and interoperability of the various NESTOR assets (robotic platforms and sensors) by supporting different data formats, communication protocols and data exchange mechanisms. At the same time this layer will provide the adaptation layer for CISE/EUROSUR interconnection.

T5.6.: Full system integration and operational testing (M4-M14); Leader: STWS (8 PMs); Contributors: DCD, NARDA, MILTECH, ELI, OMST, ROB, UOULU, CENTRIC, HEN; Reports: D5.6

In this task the factory integration will be performed, to implement and apply the different configuration for each trial configuration. The task will integrate all components developed in WP3 and WP4 into the whole chain, physically in a first step and functionally in a second step. The system configurations will be qualified through the test files and validated on the basis of the specifications prepared in WP2. This integration will use the system logical decomposition developed in T5.1 to realize the final deployment.

T5.7.: System deployment and maintenance in testing environments (M7-M18); Leader: STWS (4 PMs); Contributors: DCD, NARDA, MILTECH, MAGG, ELI, OMST, ROB, UOULU, CENTRIC, HEN; Reports: D5.7

In this task and for each trial set the deployment of the hardware and software systems will take place. Components and system design will make sure that a modular approach will be followed as much as possible in order to facilitate the system's deployment and maintenance in the most cost-efficient way. Different field configurations based on the trial operational scenarios will be integrated onsite and tested against the test specification. It must be noted that NE aims to test the deployed systems in real operational conditions for long time periods. Thus, this task involves th and remote user support and system maintenance.

**Participation per Partner**

Partner number and short name	WP5 effort
1 - HP	
2 - SBGS	
3 - CDBP-MOI	
4 - DBAM	
5 - JRCC	
6 - SBGSLT	

Partner number and short name	WP5 effort
7 - GUCI	
9 - KEMEA	
10 - CERTH	
11 - STWS	
12 - DCD	
13 - NARDA	
14 - MILTECH	
15 - MAG	
16 - ELI	
17 - OMST	
18 - ROB	
19 - UOULU	
20 - CENTRIC	
21 - HEN	
22 - ISDEFE	
<b>Total</b>	

List of deliverables

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D5.1	Technical requirements and platform development roadmap	15 - MAG	Report	Confidential, only for members of the consortium (including the Commission Services)	7
D5.2	NESTOR sensors and platforms definition	15 - MAG	Report	Confidential, only for members of the consortium (including the Commission Services)	7
D5.3	NESTOR communication interfaces	15 - MAG	Report	Classified Information: RESTREINT UE (Commission Decision 2015/444/EC)	12
D5.4	Interoperable and secure communications	15 - MAG	Report	Classified Information: RESTREINT UE (Commission	12



**List of deliverables**

<b>Deliverable Number<sup>14</sup></b>	<b>Deliverable Title</b>	<b>Lead beneficiary</b>	<b>Type<sup>15</sup></b>	<b>Dissemination level<sup>16</sup></b>	<b>Due Date (in months)<sup>17</sup></b>
				Decision 2015/444/EC)	
D5.5	Data flows and interoperability layer	11 - STWS	Report	Confidential, only for members of the consortium (including the Commission Services)	12
D5.6	Factory Integration and Testing	11 - STWS	Report	Confidential, only for members of the consortium (including the Commission Services)	11
D5.7	Field Deployment and Maintenance	11 - STWS	Report	Confidential, only for members of the consortium (including the Commission Services)	18

**Description of deliverables**

D5.1 : Technical requirements and platform development roadmap [7]  
 This deliverable will detail the technical requirements that will be considered during the implementation of the NESTOR platform. It will describe the functionalities that will be supported by the platform.

D5.2 : NESTOR sensors and platforms definition [7]  
 This deliverable will encompass all technical aspects to of NESTOR sensing and platform elements, as well as a description of the primary and secondary functionalities to be supported.

D5.3 : NESTOR communication interfaces [12]  
 This deliverable will detail the technical requirements of communication and data exchange services at device level.

D5.4 : Interoperable and secure communications [12]  
 This deliverable will report all the features that NESTOR will implement concerning the network and the communication links.

D5.5 : Data flows and interoperability layer [12]  
 This deliverable will describe the interoperability platform architecture, all the data flow processors implemented as well as the CISE/EUROSUR adaptors.

D5.6 : Factory Integration and Testing [11]  
 The deliverable will describe the factory test setup as well as unit and integration tests and results.

D5.7 : Field Deployment and Maintenance [18]  
 The deliverable will describe the logistics per trial, the integration setup, testing and maintenance during the whole operational period. It also reports on possible H/W and S/W updates and upgrades based on user feedback and evolution of user/operational requirements.

Schedule of relevant Milestones

<b>Milestone number<sup>18</sup></b>	<b>Milestone title</b>	<b>Lead beneficiary</b>	<b>Due Date (in months)</b>	<b>Means of verification</b>
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<b>Work package number</b> <sup>9</sup>	WP6	<b>Lead beneficiary</b> <sup>10</sup>	9 - KEMEA
<b>Work package title</b>	Demonstration pilots and assessment		
<b>Start month</b>	5	<b>End month</b>	17

**Objectives**

Objectives: WP6 will give a proof of concept and evaluate the proposed surveillance system in terms of usability and effectiveness under real conditions. A set of pilots will be performed involving real installations. The overall aim is to reveal the performance of the platform and validate its behaviour certifying that the prototype meets the defined specifications. Therefore, the main WP6 objectives are:

- Deploy and configure the system to be operable during the trials
- Develop a set of training courses to familiarize potential operators with the NESTOR technologies
- Execute the pilots and received feedback from the involved practitioners
- Identify minor modifications of the system to drive the developments for the final prototype
- Validate the performance of the entire system, through acceptance tests.

**Description of work and role of partners**

**WP6 - Demonstration pilots and assessment** [Months: 5-17]  
**KEMEA, HP, SBGS, CDBP-MOI, DBAM, JRCC, SBGSLT, GUCI, CERTH, STWS, DCD, NARDA, MILTECH, MAG, ELI, OMST, ROB, UOULU, CENTRIC, HEN, ISDEFE**  
 Description of Work

**T6.1.:** Evaluation methodology based on human factors (M5-M10); Leader: KEMEA (5 PMs); Contributors: ALL; Reports: D6.1  
 This task involves the planning of the operational trials as well as setting the overall context. In this respect this task will define the details of evaluation methodology to be followed during the trials considering also the metrics and the KPIs that will be defined in T2.3.

**T6.2.:** Training courses (M7-M16); Leader: STWS (6 PMs); Contributors: HP, SBGS, CDBP, DBAM, SBGSLT, DCD, NARDA, MILTECH, MAGG, ELI, OMST, ROB, UOULU, CENTRIC, HEN; Reports: D6.2  
 The envisioned NESTOR system complexity calls for a comprehensive training program prior and during trials execution. Training courses will include a theoretical background on technologies used by NESTOR components, software operation and administration and robotic platforms and sensors installation, deployment and operation. Finally, an on-the-job training for different user roles (BC3i operators, remote pilots in command, administrators), will also take place that will also provide a more effective training and user experience.

**T6.3.:** Lithuanian maritime trial (M12-M13); Leader: SGBSLT (5 PMs); Contributors: HP, SBGS, CDBP, DBAM, JRCC, GUCI, CERTH, STWS, NARDA, MILTECH, MAGG, ELI, ISDEFE; Reports: D6.3  
 This task includes activities for the detailed organization, logistics, setting-up and execution of the Lithuanian Maritime border Trial. This trial deals with smuggling activities in maritime border areas.

**T6.4.:** Cypriot maritime trial (M14-M15); Leader: JRCC (5 PMs); Contributors: HP, SBGS, CDBP, DBAM, GUCI, CERTH, STWS, NARDA, MILTECH, MAGG, ELI, OMSTM, ISDEFE; Reports: D6.3  
 This task includes activities for the detailed organization, logistics, setting-up and execution of the Cyprus Maritime Trial. This trial deals with Search and Rescue activities in maritime border environment.

**T6.5.:** Greek-Bulgarian land and maritime trial (M11-M17); Leader: HP (9 PMs); Contributors: ALL; Reports: D6.3  
 This task regards the extended Greek Land/Maritime Border Trial where the overall evaluation of the system’s capabilities and attributes will be performed. This task includes activities for the detailed organization, logistics, setting-up and execution of the trial. The trial deals with irregular migration, both in maritime and land border areas.

**T6.6.:** System evaluation based on pilot demonstrators (M9-M17); Leader: KEMEA (5 PMs); Contributors: HP, SBGS, CDBP, DBAM, JRCC, SBGSLT, GUCI, ISDEFE; Reports: D6.3  
 Trials’ results and feedback reports will be collected in this task. In this frame, the NESTOR system will be validated by comparing the results of each trial against the objectives, verifying the KPIs defined and provide feedback and recommendations.

**Participation per Partner**

Partner number and short name	WP6 effort
1 - HP	
2 - SBGS	
3 - CDBP-MOI	
4 - DBAM	
5 - JRCC	
6 - SBGSLT	
7 - GUCI	
9 - KEMEA	
10 - CERTH	
11 - STWS	
12 - DCD	
13 - NARDA	
14 - MILTECH	
15 - MAG	
16 - ELI	
17 - OMST	
18 - ROB	
19 - UOULU	
20 - CENTRIC	
21 - HEN	
22 - ISDEFE	
<b>Total</b>	

**List of deliverables**

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D6.1	Validation methodology and planning	9 - KEMEA	Report	Classified Information: RESTREINT UE (Commission Decision 2015/444/EC)	10
D6.2	NESTOR training program	11 - STWS	Report	Confidential, only for members of the consortium (including	16

## List of deliverables

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
				the Commission Services)	
D6.3	Operational trials results: Report and Validations	1 - HP	Report	Classified Information: RESTREINT UE (Commission Decision 2015/444/EC)	17

## Description of deliverables

D6.1 : Validation methodology and planning [10]

The deliverable will report the evaluation process that will be followed after the trials to validate the system's and each integrated service.

D6.2 : NESTOR training program [16]

The deliverable will report on the training material produced and the user/administrator/pilot training activities throughout the project.

D6.3 : Operational trials results: Report and Validations [17]

The deliverable will analyse the trial results considering their objectives, the defined KPIs and will provide recommendations for a more sustainable system after the project's completion.

## Schedule of relevant Milestones

Milestone number <sup>18</sup>	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
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<b>Work package number</b> <sup>9</sup>	WP7	<b>Lead beneficiary</b> <sup>10</sup>	15 - MAG
<b>Work package title</b>	Dissemination and exploitation activities		
<b>Start month</b>	1	<b>End month</b>	18

**Objectives**

Objectives: WP7 comprises the core means of dissemination, communication and impact creation in general. The involved tasks will ensure global community interaction and viability and sustainability of the integrated system. As such, the WP aims at establishing and motivating a stakeholders’ community, and contributing to relevant conferences, workshops and publications. Along with a business analysis, this will assist the consortium to achieve highly measurable impacts of the project results. Therefore, WP7 has the following main objectives:

- Disseminate the project’s outcomes and results in interested audiences
- Report and expand existing standards by providing support and guidelines for integrating them within existing systems
- Maximise the internal exploitation of the platform within the consortium
- Develop individual and one unified exploitation plans along with the foreseen business model to maximise the total impact

**Description of work and role of partners**

**WP7 - Dissemination and exploitation activities** [Months: 1-18]  
**MAG, HP, SBGS, CDBP-MOI, DBAM, JRCC, SBGSLT, GUCI, WCO, KEMEA, CERTH, STWS, DCD, NARDA, MILTECH, ELI, OMST, ROB, UOULU, CENTRIC, HEN, ISDEFE**  
 Description of Work

T7.1.: Development of stakeholder community (M1-M18); Leader: ISDEFE (9 PMs); Contributors: HP, SBGS, CDBP, DBAM, JRCC, SBGSLT, GUCI, KEMEA; Reports: D7.1  
 The task involves all required activities to establish a stakeholders’ network, entitled as NESTOR community, in order to disseminate the project’s results and determine potential collaborations with relevant beneficiaries. The community will be comprised by the NESTOR end-users and expand its synthesis by exploiting all existing contacts and network that every partner possesses. Such contacts may involve project organizations, representatives of international agencies and other national or local stakeholders that will be interested in the NESTOR project. As such, the consortium ensures to maximize the impact of the final prototype.

T7.2.: Dissemination and communication (M1-M18); Leader: MAGG (6 PMs); Contributors: ALL; Reports: D7.2, D7.3  
 This task will disseminate the concept, progress, and outcomes of the NESTOR project according to a multidimensional plan. Dissemination channels and activities include a project identity, brochures, Web presence presentations, participation in international events, conferences and workshops, and publications in scientific and business context. For this objective, a communication kit, including a leaflet, poster, and an overview presentation of the project, will be prepared as the main dissemination means. In addition, a website will be implemented and maintained after the completion of the project and contain non-sensitive information such as objectives, outcomes etc.

T7.3.: Standardization activities and collaboration with existing initiatives (M1-M18); Leader: WCO (2.5 PMs); Contributors: HP, SBGS, CDBP, DBAM, CERTH, STWS; Reports: D7.6  
 This task will coordinate the standardisation activities and contributions to the standardisation bodies dealing with NESTOR’s objectives. A list of targeted bodies and planned contributions will be defined and updated during the project’s lifetime. In addition, it will target collaboration activities with ongoing projects at European and national level in related fields. These activities include focused concentration actions, themed seminars or special interest groups and strong collaboration with the NESTOR community identified in T7.1.

T7.4.: Exploitation plan and business model (M1-M18); Leader: MAGG (4 PMs); Contributors: CERTH, STWS, DCD, NARDA, MILTECH, ELI, OMST, ROB, UOULU, CENTRIC, HEN; Reports: D7.4, D7.5  
 This task will address all issues related to the exploitation strategy of the project’s results. It will identify the KRIs, formulate the exploitation strategy both individually to each partner and jointly for the consortium. This task will also analyse and explore different technological and business paradigms in relevance to context markets, which will be turned into particular exploitation plans viable for commercialising NESTOR results after the project’s completion. In addition, business models will be identified considering possible different modality of NESTOR services offering to end users

and related adoption and pricing models. Feedback on such business models will be requested through direct interviews, and feedback gathered during events will be used to fine-tune them and define the best approach to the market.

**Participation per Partner**

Partner number and short name	WP7 effort
1 - HP	
2 - SBGS	
3 - CDBP-MOI	
4 - DBAM	
5 - JRCC	
6 - SBGSLT	
7 - GUCI	
8 - WCO	
9 - KEMEA	
10 - CERTH	
11 - STWS	
12 - DCD	
13 - NARDA	
14 - MILTECH	
15 - MAG	
16 - ELI	
17 - OMST	
18 - ROB	
19 - UOULU	
20 - CENTRIC	
21 - HEN	
22 - ISDEFE	
<b>Total</b>	

**List of deliverables**

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D7.1	NESTOR stakeholder community	22 - ISDEFE	Report	Public	18
D7.2	Dissemination and communication plan	15 - MAG	Report	Public	3

**List of deliverables**

<b>Deliverable Number<sup>14</sup></b>	<b>Deliverable Title</b>	<b>Lead beneficiary</b>	<b>Type<sup>15</sup></b>	<b>Dissemination level<sup>16</sup></b>	<b>Due Date (in months)<sup>17</sup></b>
D7.3	Dissemination and communication activities	15 - MAG	Report	Public	18
D7.4	Exploitation plan and first IPR report	15 - MAG	Report	Public	18
D7.5	Business plan and large uptake assessment	15 - MAG	Report	Confidential, only for members of the consortium (including the Commission Services)	18
D7.6	Standardization and collaboration with other projects	8 - WCO	Report	Confidential, only for members of the consortium (including the Commission Services)	18

**Description of deliverables**

D7.1 : NESTOR stakeholder community [18]  
 The deliverable will report all activities performed to establish the NESTOR community as well as the plan followed to increase the desired impact.

D7.2 : Dissemination and communication plan [3]  
 The deliverable will report the initial dissemination and communication plan.

D7.3 : Dissemination and communication activities [18]  
 The deliverable will report the final dissemination and communication plan.

D7.4 : Exploitation plan and first IPR report [18]  
 The deliverable will report the NESTOR exploitation plan and IPR

D7.5 : Business plan and large uptake assessment [18]  
 The deliverable will describe the NESTOR business plan.

D7.6 : Standardization and collaboration with other projects [18]  
 The deliverable will report all the activities performed to ensure collaborations with other projects and standardisation.

**Schedule of relevant Milestones**

<b>Milestone number<sup>18</sup></b>	<b>Milestone title</b>	<b>Lead beneficiary</b>	<b>Due Date (in months)</b>	<b>Means of verification</b>
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<b>Work package number</b> <sup>9</sup>	WP8	<b>Lead beneficiary</b> <sup>10</sup>	1 - HP
<b>Work package title</b>	Ethics requirements		
<b>Start month</b>	1	<b>End month</b>	18

**Objectives**

The objective is to ensure compliance with the 'ethics requirements' set out in this work package.

**Description of work and role of partners**

**WP8 - Ethics requirements** [Months: 1-18]  
**HP**  
 This work package sets out the 'ethics requirements' that the project must comply with.

**List of deliverables**

<b>Deliverable Number</b> <sup>14</sup>	<b>Deliverable Title</b>	<b>Lead beneficiary</b>	<b>Type</b> <sup>15</sup>	<b>Dissemination level</b> <sup>16</sup>	<b>Due Date (in months)</b> <sup>17</sup>
D8.1	H - Requirement No. 1	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	3
D8.2	H - Requirement No. 2	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	9
D8.3	POPD - Requirement No. 3	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	5
D8.4	NEC - Requirement No. 4	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	5
D8.5	EPQ - Requirement No. 5	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	5
D8.6	DU - Requirement No. 6	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	9

## List of deliverables

Deliverable Number <sup>14</sup>	Deliverable Title	Lead beneficiary	Type <sup>15</sup>	Dissemination level <sup>16</sup>	Due Date (in months) <sup>17</sup>
D8.7	M - Requirement No. 7	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	9
D8.8	GEN - Requirement No. 8	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	12
D8.9	GEN - Requirement No. 9	1 - HP	Ethics	Confidential, only for members of the consortium (including the Commission Services)	18

## Description of deliverables

The 'ethics requirements' that the project must comply with are included as deliverables in this work package.

D8.1 : H - Requirement No. 1 [3]

The beneficiary must submit a deliverable including: - The procedures and criteria that will be used to identify/recruit research participants. - The informed consent procedures including personal data processing that will be implemented for the participation of humans. - Templates of the informed consent/assent forms and information sheets (in language and terms intelligible to the participants) including personal data processing. - Clarification of whether children and/or adults unable to give informed consent will be involved and, if so, justification for their participation. - In case children and/or adults unable to give informed consent are involved, details on how the consent of the legal representatives (and assent, when applicable) will be acquired. - Clarification of the measures to protect vulnerable individuals/groups and minimise the risk of their stigmatisation. - Details on an incidental findings policy.

D8.2 : H - Requirement No. 2 [9]

Copies of opinions/approvals by ethics committees and/or competent authorities for the research with humans must be submitted as a deliverable.

D8.3 : POPD - Requirement No. 3 [5]

The beneficiary must submit a deliverable including: - Confirmation that the host institution has appointed a Data Protection Officer (DPO) and that the contact details of the DPO are made available to all data subjects involved in the research. For host institutions not required to appoint a DPO under the GDPR a detailed data protection policy for the project. - A description of the security measures that will be implemented to prevent unauthorised access to personal data or the equipment used for processing. - Description of the anonymisation/pseudonymisation techniques that will be implemented. - In case personal data are transferred from the EU to a non-EU country or international organisation, confirmation that such transfers are in accordance with Chapter V of the General Data Protection Regulation 2016/679, must be submitted as a deliverable. - In case personal data are transferred from a non-EU country to the EU (or another third state), confirmation that such transfers comply with the laws of the country in which the data was collected. - In case of further processing of previously collected personal data, an explicit confirmation that the beneficiary has lawful basis for the data processing and that the appropriate technical and organisational measures are in place to safeguard the rights of the data subjects. - In case the research involves profiling, an explanation of how the data subjects will be informed of the existence of the profiling, its possible consequences and how their fundamental rights will be safeguarded. - An explicit confirmation that the data used in the project is publicly available and can be freely used for the purposes of the project. - An evaluation of the ethics risks related to the data processing activities of the project. This includes also an opinion if data protection impact

assessment should be conducted under art.35 General Data Protection Regulation 2016/679. The risk evaluation and the opinion must be submitted.

**D8.4 : NEC - Requirement No. 4 [5]**

The beneficiary must submit a deliverable including: - Detailed information to demonstrate that fair benefit-sharing arrangements with stakeholders from low and lower-middle income countries are ensured. - Details on the materials (including personal data) which will be imported to/exported from the EU. - If relevant, copies of import/export authorisations, as required by national/EU legislation.

**D8.5 : EPQ - Requirement No. 5 [5]**

The beneficiary must submit a deliverable including: - Demonstration of the applicant that appropriate health and safety procedures conforming to relevant local/national guidelines/legislation are followed for staff involved in this project. - A report with the appropriate physical safety and security measures, guaranteeing the safety and integrity of all research participants.

**D8.6 : DU - Requirement No. 6 [9]**

The beneficiary must submit a deliverable including: - Details on the dual-use items in the sense of Regulation (EC) 428/2009, or other items for which an authorization. - Details on potential dual use implications of the project and risk-mitigation strategies. - If relevant, copies of export licenses.

**D8.7 : M - Requirement No. 7 [9]**

Risk assessment and details on measures to prevent misuse of research findings must be submitted as a deliverable.

**D8.8 : GEN - Requirement No. 8 [12]**

Due to the severity of the ethics issues raised by the proposed research, a report by the Ethics Board must be submitted as a deliverable at M12.

**D8.9 : GEN - Requirement No. 9 [18]**

A report by the Ethics Board must be submitted as a deliverable in month 24.

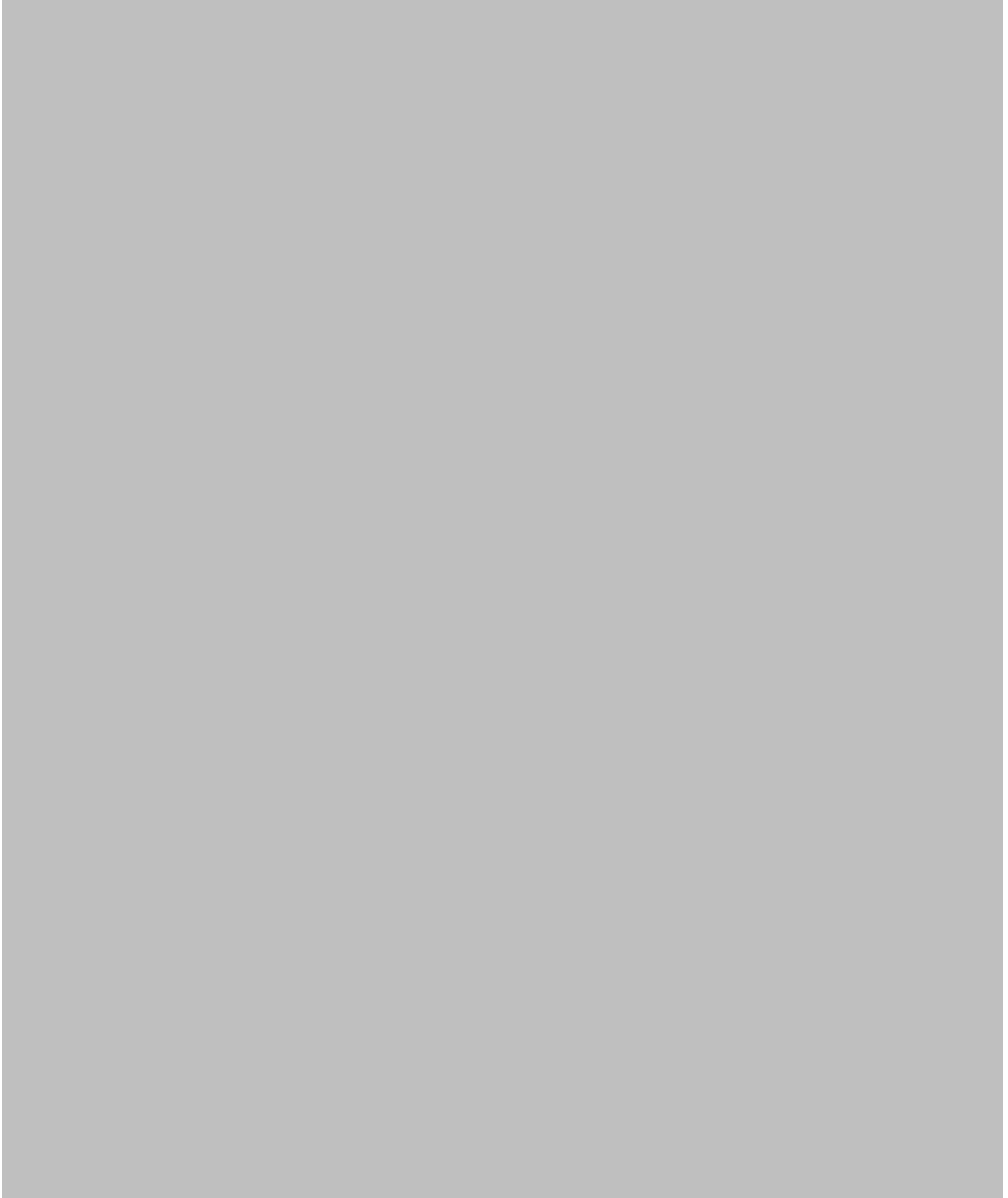
**Schedule of relevant Milestones**

<b>Milestone number<sup>18</sup></b>	<b>Milestone title</b>	<b>Lead beneficiary</b>	<b>Due Date (in months)</b>	<b>Means of verification</b>
--------------------------------------	------------------------	-------------------------	-----------------------------	------------------------------

### 1.3.4. WT4 List of milestones

<b>Milestone number<sup>18</sup></b>	<b>Milestone title</b>	<b>WP number<sup>9</sup></b>	<b>Lead beneficiary</b>	<b>Due Date (in months)<sup>17</sup></b>	<b>Means of verification</b>
MS1	End-user requirements and trial descriptions		22 - ISDEFE	4	D1.1, D2.1
MS2	Initial design		11 - STWS	7	D2.2, D2.3, D2.4, D5.1,
MS3	1st operational test		11 - STWS	10	D5.2, D5.3, D5.4, D5.5, D7.2
MS4	Mid-term review		1 - HP	12	D1.2, D1.4, D6.1, D5.6
MS5	Final system		11 - STWS	16	D3.1-D3.4, D4.1-D4.5, D6.2
MS6	Project completion		11 - STWS	18	D1.3, D1.5, D5.7, D6.3, D7.1, D7.3, D7.4

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### 1.3.6. WT6 Summary of project effort in person-months



1 - HP
2 - SBGS
3 - CDBP-MOI
4 - DBAM
5 - JRCC
6 - SBGSLT
7 - GUCI
8 - WCO
9 - KEMEA
10 - CERTH
11 - STWS
12 - DCD
13 - NARDA
14 - MILTECH
15 - MAG
16 - ELI
17 - OMST
18 - ROB
19 - UOULU
20 - CENTRIC
21 - HEN
22 - ISDEFE
<b>Total Person/Months</b>

**1.3.7. WT7 Tentative schedule of project reviews**

<b>Review number <sup>19</sup></b>	<b>Tentative timing</b>	<b>Planned venue of review</b>	<b>Comments, if any</b>
RV1	10	Athens	
RV2	18	Athens	



### 1. Project number

The project number has been assigned by the Commission as the unique identifier for your project. It cannot be changed. The project number **should appear on each page of the grant agreement preparation documents (part A and part B)** to prevent errors during its handling.

### 2. Project acronym

Use the project acronym as given in the submitted proposal. It can generally not be changed. The same acronym **should appear on each page of the grant agreement preparation documents (part A and part B)** to prevent errors during its handling.

### 3. Project title

Use the title (preferably no longer than 200 characters) as indicated in the submitted proposal. Minor corrections are possible if agreed during the preparation of the grant agreement.

### 4. Starting date

Unless a specific (fixed) starting date is duly justified and agreed upon during the preparation of the Grant Agreement, the project will start on the first day of the month following the entry into force of the Grant Agreement (NB : entry into force = signature by the Agency). Please note that if a fixed starting date is used, you will be required to provide a written justification.

### 5. Duration

Insert the duration of the project in full months.

### 6. Call (part) identifier

The Call (part) identifier is the reference number given in the call or part of the call you were addressing, as indicated in the publication of the call in the Official Journal of the European Union. You have to use the identifier given by the Commission in the letter inviting to prepare the grant agreement.

### 7. Abstract

### 8. Project Entry Month

The month at which the participant joined the consortium, month 1 marking the start date of the project, and all other start dates being relative to this start date.

### 9. Work Package number

Work package number: WP1, WP2, WP3, ..., WPn

### 10. Lead beneficiary

This must be one of the beneficiaries in the grant (not a third party) - Number of the beneficiary leading the work in this work package

### 11. Person-months per work package

The total number of person-months allocated to each work package.

### 12. Start month

Relative start date for the work in the specific work packages, month 1 marking the start date of the project, and all other start dates being relative to this start date.

### 13. End month

Relative end date, month 1 marking the start date of the project, and all end dates being relative to this start date.

### 14. Deliverable number

Deliverable numbers: D1 - Dn

### 15. Type

Please indicate the type of the deliverable using one of the following codes:

R	Document, report
DEM	Demonstrator, pilot, prototype
DEC	Websites, patent filings, videos, etc.
OTHER	
ETHICS	Ethics requirement
ORDP	Open Research Data Pilot
DATA	data sets, microdata, etc.

#### 16. Dissemination level

Please indicate the dissemination level using one of the following codes:

- PU Public
- CO Confidential, only for members of the consortium (including the Commission Services)
- EU-RES Classified Information: RESTREINT UE (Commission Decision 2005/444/EC)
- EU-CON Classified Information: CONFIDENTIEL UE (Commission Decision 2005/444/EC)
- EU-SEC Classified Information: SECRET UE (Commission Decision 2005/444/EC)

#### 17. Delivery date for Deliverable

Month in which the deliverables will be available, month 1 marking the start date of the project, and all delivery dates being relative to this start date.

#### 18. Milestone number

Milestone number: MS1, MS2, ..., MSn

#### 19. Review number

Review number: RV1, RV2, ..., RVn

#### 20. Installation Number

Number progressively the installations of a same infrastructure. An installation is a part of an infrastructure that could be used independently from the rest.

#### 21. Installation country

Code of the country where the installation is located or IO if the access provider (the beneficiary or linked third party) is an international organization, an ERIC or a similar legal entity.

#### 22. Type of access

- TA-uc if trans-national access with access costs declared on the basis of unit cost,
- TA-ac if trans-national access with access costs declared as actual costs, and
- TA-cb if trans-national access with access costs declared as a combination of actual costs and costs on the basis of unit cost,
- VA-uc if virtual access with access costs declared on the basis of unit cost,
- VA-ac if virtual access with access costs declared as actual costs, and
- VA-cb if virtual access with access costs declared as a combination of actual costs and costs on the basis of unit cost.

#### 23. Access costs

Cost of the access provided under the project. For virtual access fill only the second column. For trans-national access fill one of the two columns or both according to the way access costs are declared. Trans-national access costs on the basis of unit cost will result from the unit cost by the quantity of access to be provided.

## History of Changes

Version	Sections	Changes made	Organisation	Date
V0.1	1-3	Removed: cover page, of Part B of the NESTOR proposal, list of participants Additions: the current table to register the changes that will be made.	KEMEA	26/1/2021
V0.1	1-3	Table of Figures and Table of Tables were inserted	KEMEA	26/1/2021
V0.1	1-2	Sections 1 and 2 were updated according to the shortcomings identified by the experts in the ESR i.e. on the elaboration of the innovation potential of sub-systems	KEMEA; ROB	26/1/2021
V0.1	3	Table 18: List of work packages (Table 3.1a of the template) removed; Section “3.1.3 Work packages description” the WP tables for WP1, WP2, WP3, WP4, WP5, WP6 and WP7 (Table 3.1b of the template) deleted; Table 19: List of Deliverables (Table 3.1c of the template) removed; Table 21 – List of Milestones (Table 3.2a of the template) removed; Table 22 – Project risks & mitigation measures (Table 3.2b of the template) removed; Table 24 - Summary of staff effort (Table 3.4a of the template) removed	KEMEA	26/1/2021
V0.1	1-3	Addition of footer with proposal number, acronym, Part B indication and page no of total pages.	KEMEA	4/2/2021
V0.1	1-3	Abbreviations were moved to the beginning of Part B	KEMEA	4/2/2021
V0.1	4-6	Sections 4,5,6 were inserted	KEMEA	4/2/2021
V0.1	5	Section 5 was updated according to the Ethics Summary report regarding mainly the accidental involvement of vulnerable groups, GDPR issues and Non-EU Countries framework of involvement.	KEMEA	4/2/2021
V0.1	6	Section 6 was updated according to the security scrutiny report especially on the EU-RE deliverables, the Security Aspects Letter and Table 27 on the Use of Classified Foreground Information	KEMEA	4/2/2021
V0.1	6	The PSO was replaced.	KEMEA	4/2/2021
V0.2	1	“Table 12 Relevant Projects”, column “Possible uptake”, was updated.	CERTH, STWS, KEMEA	12/2/2021
V0.2	3	Subsection 3.4, SBC’s equipment justification was updated.	KEMEA	12/2/2021
V0.2	4	Section 4 was updated with regards to the “Key Role(s) in the Project”	JRCC; ROB; UOULU; WCO; DBAM	12/2/2021

V0.2	6	Table 26 “Deliverables with limited dissemination” was added in Section 6	KEMEA	12/2/2021
V0.3	3	Feedback provided from the EC, implemented in sub-section 3.4	KEMEA	24/3/2021
V0.3	4	Section 4 was updated with regards to the “Key Role(s) in the Project”	KEMEA	24/3/2021
V0.4	3	Subsection 3.4, MILTECH’s Other goods and services justification was updated.	KEMEA	28/4/2021
V0.5	1	SBC was removed from sections 1.2 and 1.3	KEMEA	3/9/2021
V0.5	3	SBC was removed from sections 3.3 and 3.4	KEMEA	3/9/2021
V0.5	3	Table in section 3.4 updated with DBAM and SBGSLT information	KEMEA	3/9/2021
V0.5	4	SBC was removed from section 4	KEMEA	3/9/2021
V0.5	5	SBC was removed from section 5.1	KEMEA	3/9/2021
V0.5	6	SBC was removed from sections 6.1 and 6.2	KEMEA	3/9/2021
V0.6	3	Corrections were implemented at the amounts referred in section 3.4	KEMEA	15/9/2021

#### Table of Contents

<b>1. Excellence</b> .....	7
1.1. Objectives.....	8
1.1.1. Technological Objectives (TO) and Activities (TA).....	8
1.1.2. User-oriented Objectives (UO) and Activities (UA).....	11
1.1.3. Impact-Making Objectives (IMO) and Activities (IMA).....	12
1.2. Relation to the work programme.....	13
1.3. Concept and methodology.....	14
1.3.1. Background.....	14
1.3.2. The NESTOR concept.....	15
1.3.3. Application and validation.....	18
1.3.4. Positioning of NESTOR project (Technology Readiness Level-TRL).....	22
1.3.5. Links with research and innovation activities.....	24
1.3.6. Overall approach and methodology.....	26
1.3.7. Sex and gender analysis.....	31
1.4. Ambition.....	31
1.4.1. Technological advances.....	31
1.4.2. Innovation potential of NESTOR.....	37
<b>2. Impact</b> .....	37
2.1. Expected impacts.....	37
2.1.1. Contribution towards expected impacts listed in the work programme.....	37
2.1.2. Other impacts of the project beyond the call.....	41
2.1.2.1. Alignment with Current Strategic EU Priorities - Strategic Impacts.....	41
2.1.2.2. Social – Economic Impacts.....	41
2.1.2.3. Financial Impact and Enhancement of Innovation Capacity.....	42
2.1.2.4. Impacts derived from the involvement of Practitioners and Stakeholders.....	42
2.1.2.5. Barriers/obstacles and how NESTOR will mitigate them.....	42

- 2.2. Measures to maximise impact ..... 43
  - 2.2.1. Exploitation ..... 43
    - 2.2.1.1. Identification of NESTOR portfolio: Results and products, management of intellectual property  
43
- 3. **Implementation**..... 52
  - 3.1. Work Plan-Work packages, deliverables..... 52
    - 3.1.1. Work Plan Structure ..... 52
    - 3.1.2. Gantt Diagram ..... 53
    - 3.1.3. Pert Chart..... 53
  - 3.2. Management structure, milestones and procedures ..... 54
    - 3.2.1. Organisational structure and decision making..... 54
    - 3.2.2. Critical risks related to implementation..... 59
  - 3.3. Consortium as a whole ..... 59
  - 3.4. Resources to be committed..... 60
- 4. **Members of the consortium** ..... 62
  - 4.1. Participants (applicants) ..... 62
  - 4.2. Third parties involved in the project (including use of third party resources) ..... 154
- 5. **Ethics and Societal Impact** ..... 155
  - 5.1. Ethics ..... 155
    - Introductory remarks – Ethics self-assessment ..... 155
    - Ethical Considerations in the context of NESTOR activities..... 157
  - 5.2. Societal Impact ..... 162
- 6. **Security**..... 165
  - 6.1. Limited Dissemination ..... 165
  - 6.2. Classified Information ..... 167
    - Security Aspects Letter (SAL) ..... 167
    - Security Classification Guide (SCG)..... 169
  - 6.3. Security Staff..... 173
    - Project Security Officer (PSO)..... 173
    - Security Advisory Board (SAB)..... 173
  - 6.4. Other project-specific security measures..... 175
- ANNEX A: Letters Of Support ..... 176

**Table of Figures**

- Figure 1-1.** Nestor Technological Objectives Diagram ..... 8
- Figure 1-2.** Number of illegal entries at borders of the European Union 2009-2019 (in 1,000 people)..... 14
- Figure 1-3.** NESTOR concept for land use cases ..... 16
- Figure 1-4** NESTOR concept for maritime use cases..... 16
- Figure 1-5.** High Level Architecture of NESTOR..... 17
- Figure 1-6.** NESTOR implementation and validation plan ..... 18
- Figure 1-7.** Whole cycle-based development procedure mapped to the TOs schematic ..... 26
- Figure 3-1.** The V-Model..... 52
- Figure 3-2.** NESTOR Gantt diagram. .... 53
- Figure 3-3.** NESTOR Pert Chart..... 54

**Figure 3-4.** Organizational structure of the NESTOR consortium. .... 54  
**Figure 3-5.** NESTOR geographical coverage. .... 59

**Table of Tables**

**Table 1** Enhanced sensing and robotic technologies for border surveillance KPIs ..... 9  
**Table 2** Advances on situation awareness for border surveillance KPIs ..... 10  
**Table 3** Platform development and legacy systems integration KPIs ..... 11  
**Table 4** User-oriented Objectives (UO) and Activities (UA) KPIs ..... 11  
**Table 5** End user evaluation and training KPIs..... 12  
**Table 6** Impact-Making Objectives (IMO) and Activities (IMA) KPIs ..... 12  
**Table 7** Dissemination, collaboration, and standardization KPIs ..... 12  
**Table 8** Lithuanian maritime trial – Illegal good trafficking ..... 19  
**Table 9** Cypriot maritime trial – Search & Rescue..... 20  
**Table 10** Greek-Bulgarian land and maritime trial – Human trafficking & irregular migration ..... 22  
**Table 11** Technology Readiness Levels (TRL) ..... 24  
**Table 12** Relevant Projects ..... 26  
**Table 13** Stakeholders mapping..... 47  
**Table 14** Events and workshops ..... 49  
**Table 15** Journals and Conference Publications ..... 49  
**Table 16** Key Performance Indicators for dissemination and communication activities..... 50  
**Table 17** IPRs rules for the usage of project data ..... 51  
**Table 18** NESTOR WP Leaders ..... 58  
**Table 19** List of NESTOR's milestones..... 59  
**Table 20** Characteristics per NESTOR partner..... 60  
**Table 21** "Other direct cost" items..... 62  
**Table 22: Ethics issues table** ..... 155  
**Table 23: Societal impact table**..... 162  
**Table 24: Results raising security issues**..... 165  
**Table 25: NESTOR's Deliverables per WP** ..... 165  
**Table 26: Deliverables with limited dissemination** ..... 166  
**Table 26: EU-RE Deliverables**..... 167  
**Table 27: Use of classified Foreground information** ..... 169

## Abbreviations

<b>AESA</b>	Active Electronically Scanned Array	<b>HUI</b>	Holographic User Interface	<b>PUC</b>	Pilot Use Case
<b>API</b>	Application Programming Interfaces	<b>IAMSAR</b>	International Aeronautical and Maritime Search and Rescue	<b>QA</b>	Quality Assurance
<b>AR</b>	Artificial Intelligence	<b>IM</b>	Innovation Manager	<b>R&amp;D</b>	Research and Development
<b>AR</b>	Augmented Reality	<b>IMA</b>	Impact-Making Activity	<b>RF</b>	Radio Frequency
<b>ARES</b>	Augmented Reality Sandtable	<b>IMB</b>	Implementation Management Board	<b>RFID</b>	Radio-frequency identification
<b>ARL</b>	Army Research Laboratory	<b>IMO</b>	Impact-Making Objective	<b>ROI</b>	region-of-interest
<b>ARTS</b>	Augmented Reality Tactical Sandbox	<b>IoT</b>	Internet of Things	<b>SAR</b>	Search and Rescue
<b>AUC</b>	Area under ROC	<b>IP</b>	Internet Protocol	<b>SCAAN</b>	Security Communications and Analysis Network
<b>AVs</b>	Autonomous Vehicles	<b>IR</b>	Infrared	<b>SO</b>	Support Office
<b>BCP</b>	Border Control Post	<b>JDL</b>	Joint Director of the Labs	<b>SOA</b>	Service-Oriented Architecture
<b>CA</b>	Consortium Agreement	<b>JOA</b>	Joint Ownership agreement	<b>SoA</b>	State of the Art
<b>CAGR</b>	Compound Annual Growth Rate	<b>KM</b>	Knowledge Management	<b>SOCTA</b>	Serious and Organized Crime Threat Assessment
<b>CAT</b>	Content Acquisition Tool	<b>KPI</b>	Key Performance Indicators	<b>SSL</b>	Secure Sockets Layer
<b>CFAP</b>	Collection, Fusion, Analysis and Planning	<b>KR</b>	Key results	<b>ST</b>	Support Team
<b>CISE</b>	Common Information Sharing Environment	<b>LEAs</b>	Law Enforcement Agencies	<b>STC</b>	Spanning-Tree Coverage
<b>CONOPS</b>	COnccept of OPerations	<b>LRF</b>	Laser Range Finder	<b>STM</b>	Scientific & Technical Manager

<b>COP</b>	CENTRIC OSINT Platform	<b>M&amp;S</b>	Modelling and simulation	<b>SWOT</b>	Strengthens , Weaknesses, Opportunities, Threats
<b>CPP</b>	Coverage path Planning	<b>MLP</b>	predictors	<b>TA</b>	Technological Activities
<b>CSS</b>	Continuous Surveillance Service	<b>MRTK</b>	Mixed Reality Toolkit	<b>TO</b>	Technological Objectives
<b>DARP</b>	Divide Areas based on Robot's initial Positions algorithm	<b>MT</b>	Management Team	<b>TRL</b>	Technology readiness levels
<b>DCNN</b>	Deep Convolutional Neural Networks	<b>MWIR</b>	Medium-Wave Infrared	<b>UA</b>	User oriented activity
<b>DPO</b>	Data Protection Officer	<b>OCG</b>	Organized Crime Groups	<b>UAV</b>	Unmanned Aerial Vehicle
<b>EB</b>	Executive Board	<b>OECD</b>	Organisation for Economic Co-operation and Development	<b>UGV</b>	Unmanned Ground Vehicle
<b>EC</b>	European Commission	<b>OHMD</b>	Optical Head-mounted Display	<b>UO</b>	User oriented objective
<b>EER</b>	Equal error rate	<b>OSINT</b>	Open-source intelligence	<b>URL</b>	Uniform Resource Locator
<b>ETAB</b>	Ethics Advisory Board	<b>OTS</b>	Opportunity To See	<b>USV</b>	Unmanned surface vehicles
<b>EU</b>	European Union	<b>PC</b>	Project Coordinator	<b>UUV</b>	Unmanned underwater vehicles
<b>EUROSUR</b>	European Border Surveillance system	<b>PEO</b>	Project Ethics Officer	<b>UHF</b>	Ultra High Frequency
<b>FoV</b>	Field-Of-View	<b>PM</b>	Project Manager	<b>WLAN</b>	Wireless Local Area Network
<b>FPS</b>	frames per second	<b>PMR</b>	Private Mobile Radio	<b>WP</b>	Work Package
<b>G.M.G.A</b>	General Model Grant Agreement,	<b>PMs</b>	Person Months	<b>WSN</b>	Wireless sensor network
<b>GA</b>	Grant Agreement	<b>POI</b>	Points of Interest	<b>XML</b>	eXtensible Markup Language
<b>GPS</b>	Global Positioning System	<b>PSO</b>	Project Security Officer	<b>XR</b>	Extended reality



## 1. Excellence

For the past few years, Europe has experienced some major changes at its surrounding territories and in adjacent countries which provoked serious issues at different levels. The European Commission at political level had to encounter challenges close to its external borders. At a tactical level, irregular migration flows exerted significant pressure to the relevant authorities and agencies that operated at border territories. For example, in February 2020, Greece was faced with the challenge of keeping European Union (EU) borders safe, while always respecting fundamental rights. In addition, political instabilities that have been observed in eastern countries<sup>1,2</sup> might result to major surges of irregular border crossings at the Eastern Mediterranean route.

Another big challenge for the European Commission is the transnational crimes, occurring at the External European borders. Armed conflicts, climate pressure and other unpredictable factors that have occurred during the last period at the external EU borders, have increased the number of the reported transnational crimes. According to Frontex, smugglers have gained more than €330 million from their criminal operations on the Western and Central Mediterranean migratory routes over the past three years<sup>3</sup>. In addition, except the irregular migration, weapon, drugs, excise goods and stolen vehicles smuggling are also of major concern in Eastern EU Borderlines where border authorities from countries like Poland, Romania, Estonia and Ukraine must operate towards the identification of such outlaw activities. The routes used by smugglers for their illegal activities (Eastern Borders, Eastern Mediterranean and Western Balkan) are particularly problematic to monitor as they include large mountainous, forested areas as well as rough lands aside with sea or river areas. Considering the complexity of the cross-border crime threats, effective operational responses are required.

Due to the severity and the abrupt emergence of events, the relevant authorities have to operate for a long-time interval as well as under harsh conditions during the entire 24h period. Such abrupt events deter the personnel to exploit cutting edge surveillance equipment that may possess due to either the lack of expertise or the poignancy of the circumstances that eventually may cause misinformation.

NESTOR aims to demonstrate a fully functional next generation holistic border surveillance system providing pre-frontier situational awareness beyond **maritime** and **land border** following the concept of the European Integrated Border Management. NESTOR long-range, wide area surveillance capabilities for **detection, recognition classification** and **tracking** of moving targets (e.g. persons, vehicles, drones etc.) is based on optical, thermal image and **Radio Frequency (RF) spectrum** analysis fed by an interoperable long range IP-based network of sensors including stationary installations and mobile **manned or unmanned** aerial, water surface, underwater and ground vehicles, capable of functioning both as standalone, tethered and in swarms (UAV, USV, UUV and UGV) platforms. NESTOR Border Command Control and Coordination intelligence (BC3i) system using cutting-edge Artificial Intelligence and Risk Assessment technologies fuses in real-time the surveillance data in combination with analysis of **web and social media data**, sharing a pre-frontier intelligent picture to local, regional and national command center operators in **AR** environment.

Towards motivating the border agencies to capitalize on state-of-the-art technologies, **NESTOR** will aim at exploiting existing solutions that could significantly assist their daily operational activities and mitigate any risk that is involved in their operations, expanding with cutting edge technologies and innovative solutions. To succeed in the implementation of an holistic operational framework, a number of supplementary technologies will also be incorporated enabling the establishment of robust wide coverage communication network between the core command and control center, the individual surveillance sensors and the heterogeneous robotic platforms. On top of this, detection and tracking capabilities for early identification of illegal activities will be developed and integrated. This information will be forwarded to a command, control and coordination system that will enable the integration of large volumes of heterogeneous sensor data and the provision of a quick overview of the situation at a glance to the operators, supporting them in their decisions.

**NESTOR** will validate and demonstrate the applied solutions in real operational scenario trials together with national Law Enforcement Agencies, Border authorities and practitioners to certify the efficiency of the applied solutions in border surveillance tasks. In addition, provisioning compliance with the existing regulatory

<sup>1</sup> <https://www.schengenvisainfo.com/news/frontex-expects-new-influx-of-migrants-at-turkish-greek-border/>

<sup>2</sup> <https://www.schengenvisainfo.com/news/greece-accuses-turkey-of-pushing-thousands-of-migrants-to-border-again/>

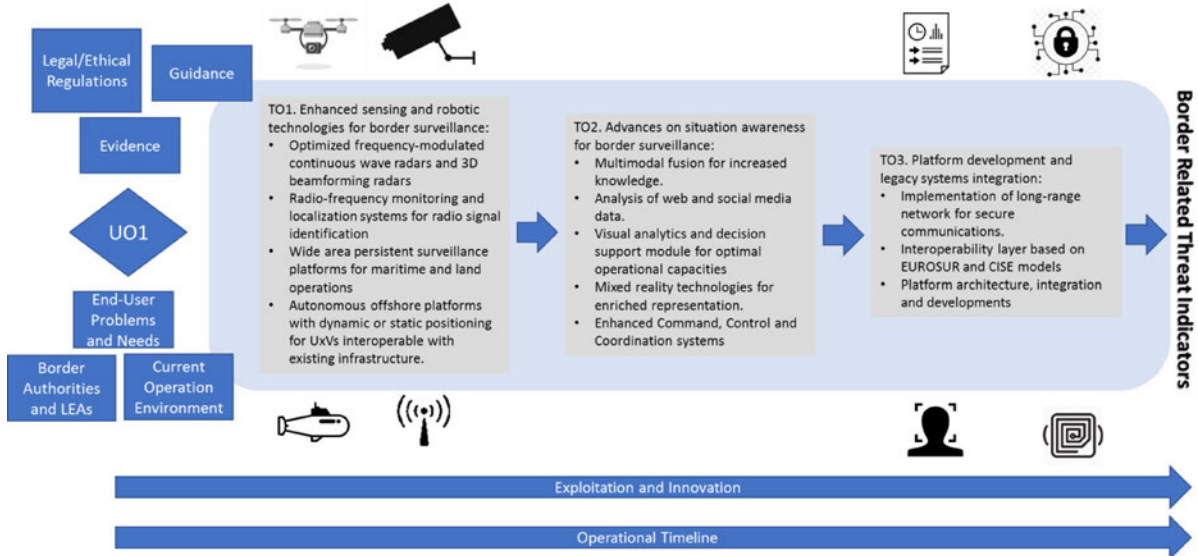
<sup>3</sup> <https://www.schengenvisainfo.com/news/frontex-criminals-smuggling-people-to-eu-pocketed-over-330-million-within-three-years/>

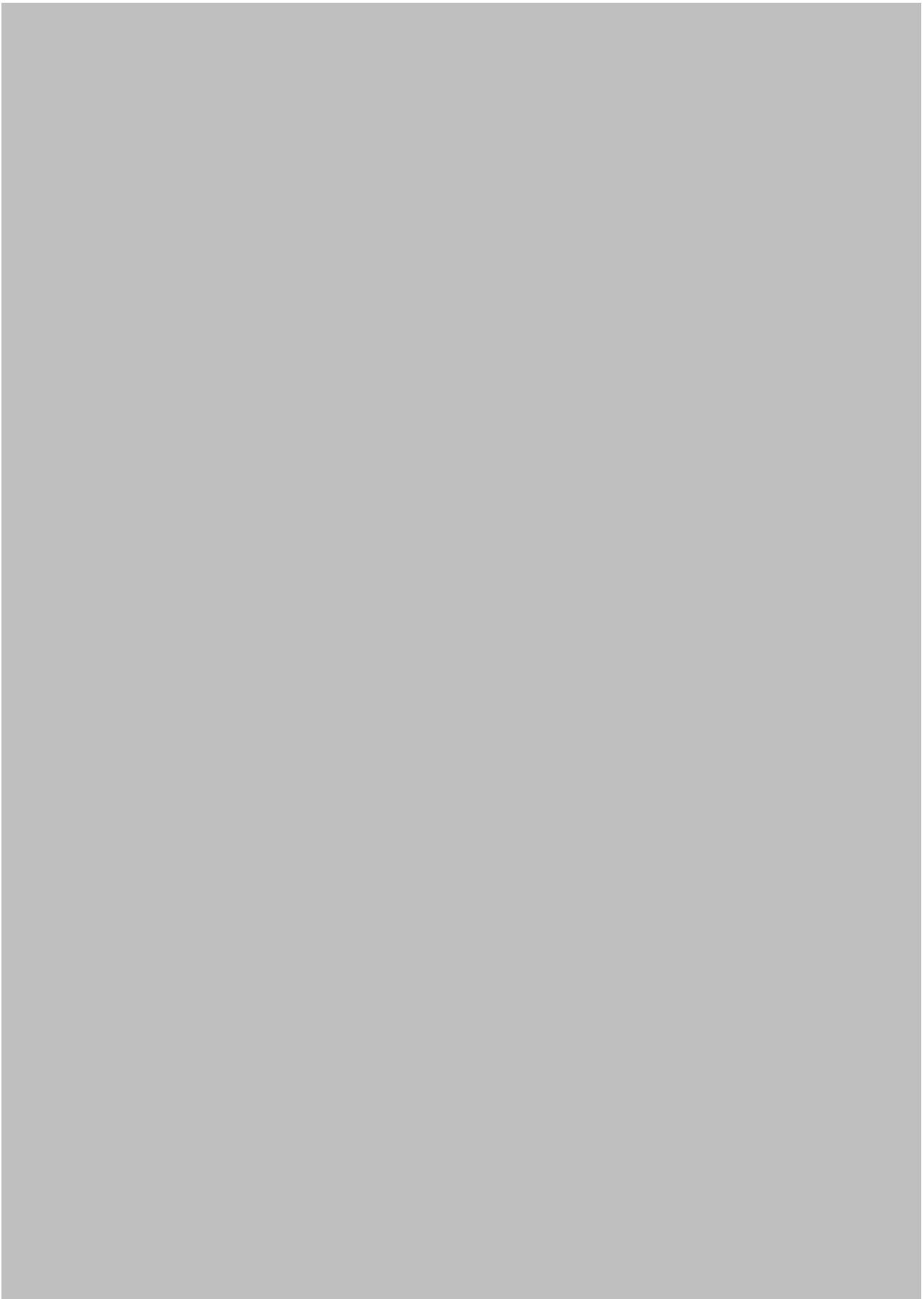
framework, the performed trials will ensure the application personal data protection and privacy respect.

## 1.1. Objectives

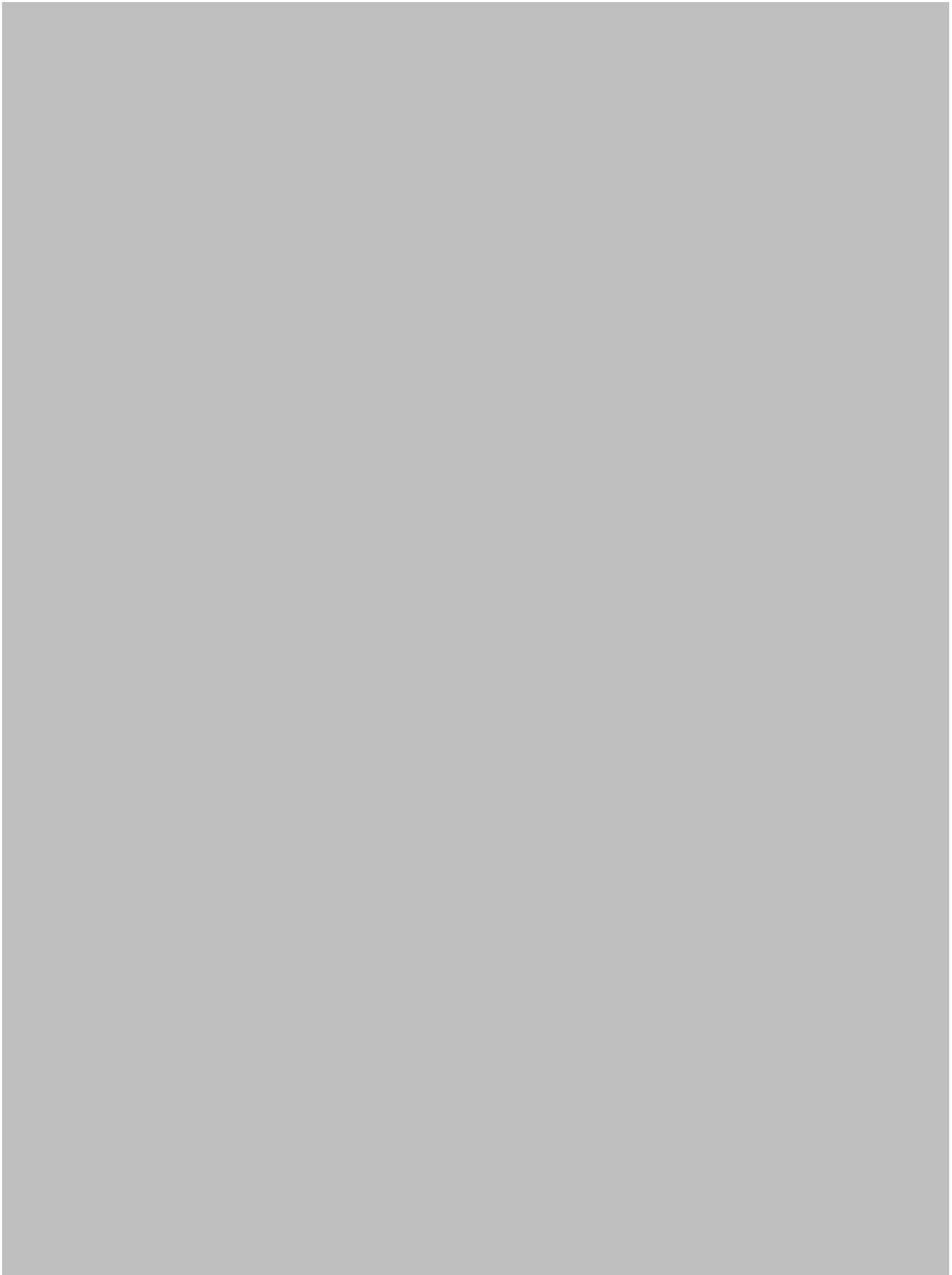
### 1.1.1. Technological Objectives (TO) and Activities (TA)

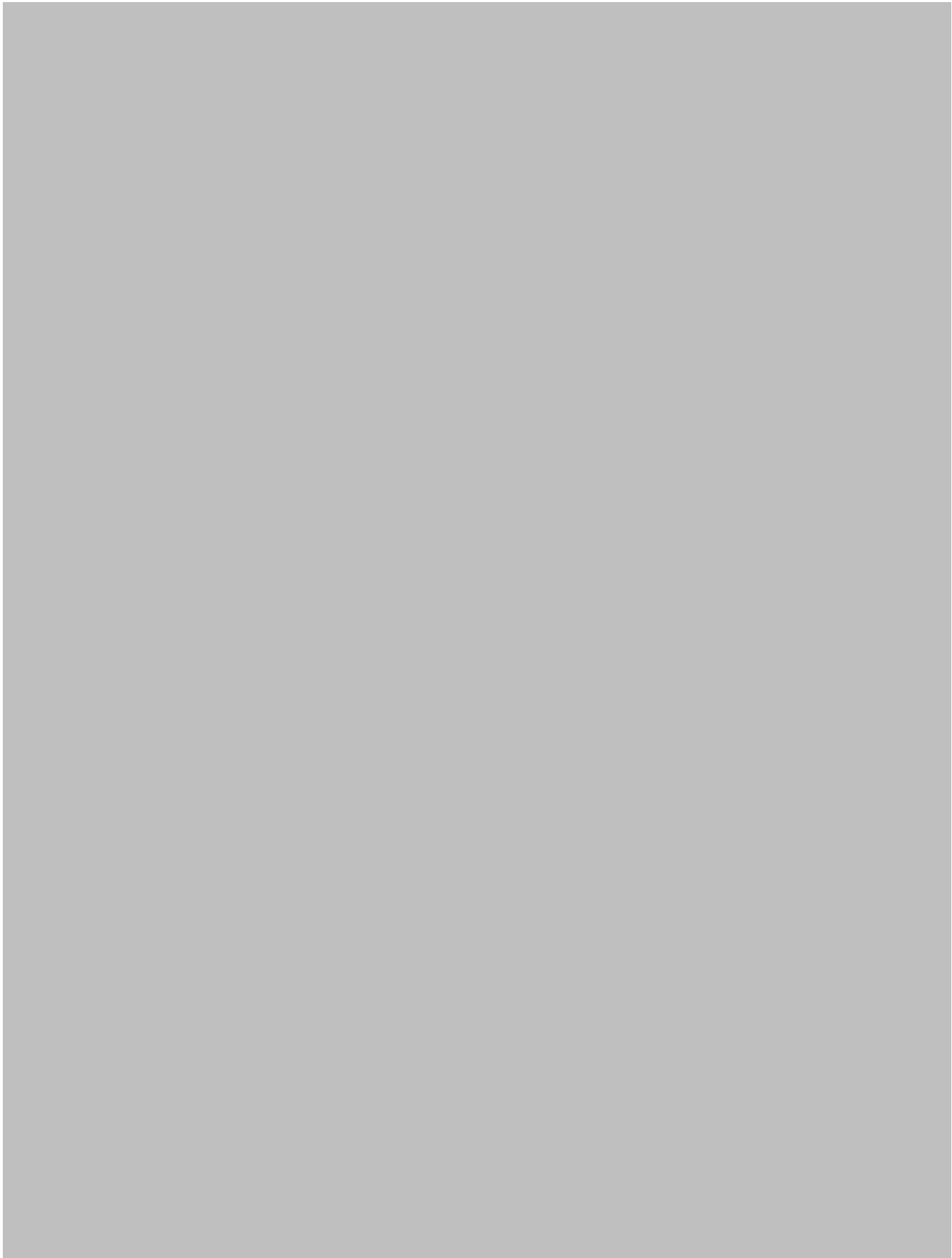
NESTOR will utilize and advance existing state-of-the-art breakthroughs and market products in sensing, robotics and information technologies to develop a series of innovative border control tools that will complement the operations to enhance border authorities and security officers' capabilities in detecting, assessing and responding to critical situations at the EU borders, at sea and in land areas (unpopulated or scarcely populated). To this end, NESTOR addresses a number of multidisciplinary Technological Objectives (TO) which were derived and driven by the operational needs of the end-users for the identified real scenarios (PUCs). Towards a more effective approach, Technological Activities (TA) will synthesize the corresponding TOs having the same overall objective (e.g. enhanced detection capabilities) nonetheless, with different and complementary technologies. Each technology objective concerns a specific challenge defined by the border authorities' current and foreseen needs. To accomplish its objectives, NESTOR will develop upon the results of previous EU projects (Section 1.3.5) in border surveillance, robotic applications, enhanced AI capabilities where its constituent partners have been actively involved. In the following sections, each TO is described and provides details on the respective Technological Activities (TA). Figure 1-1 provides a higher level of representation of the NESTOR objectives along with their correlations.









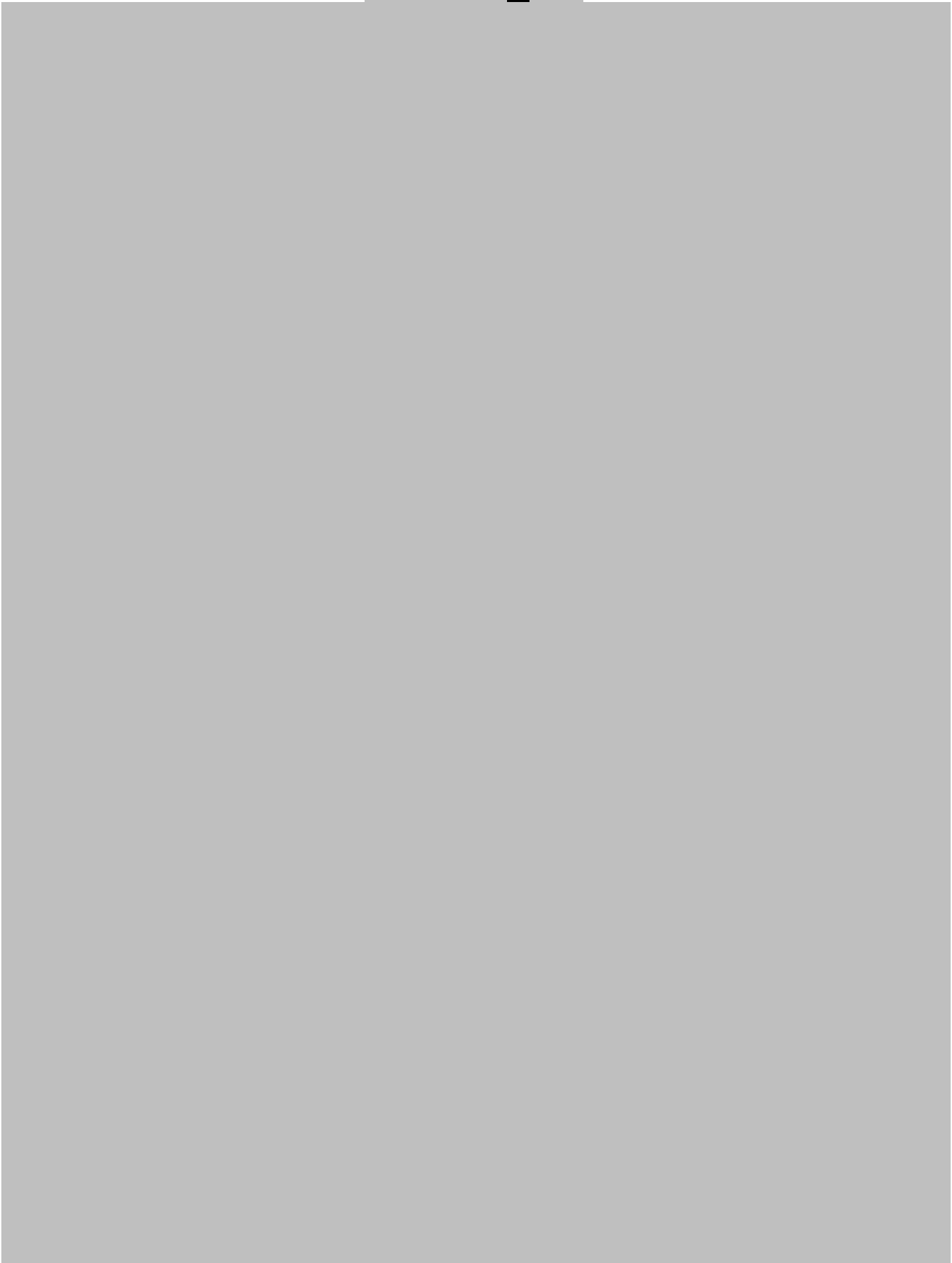






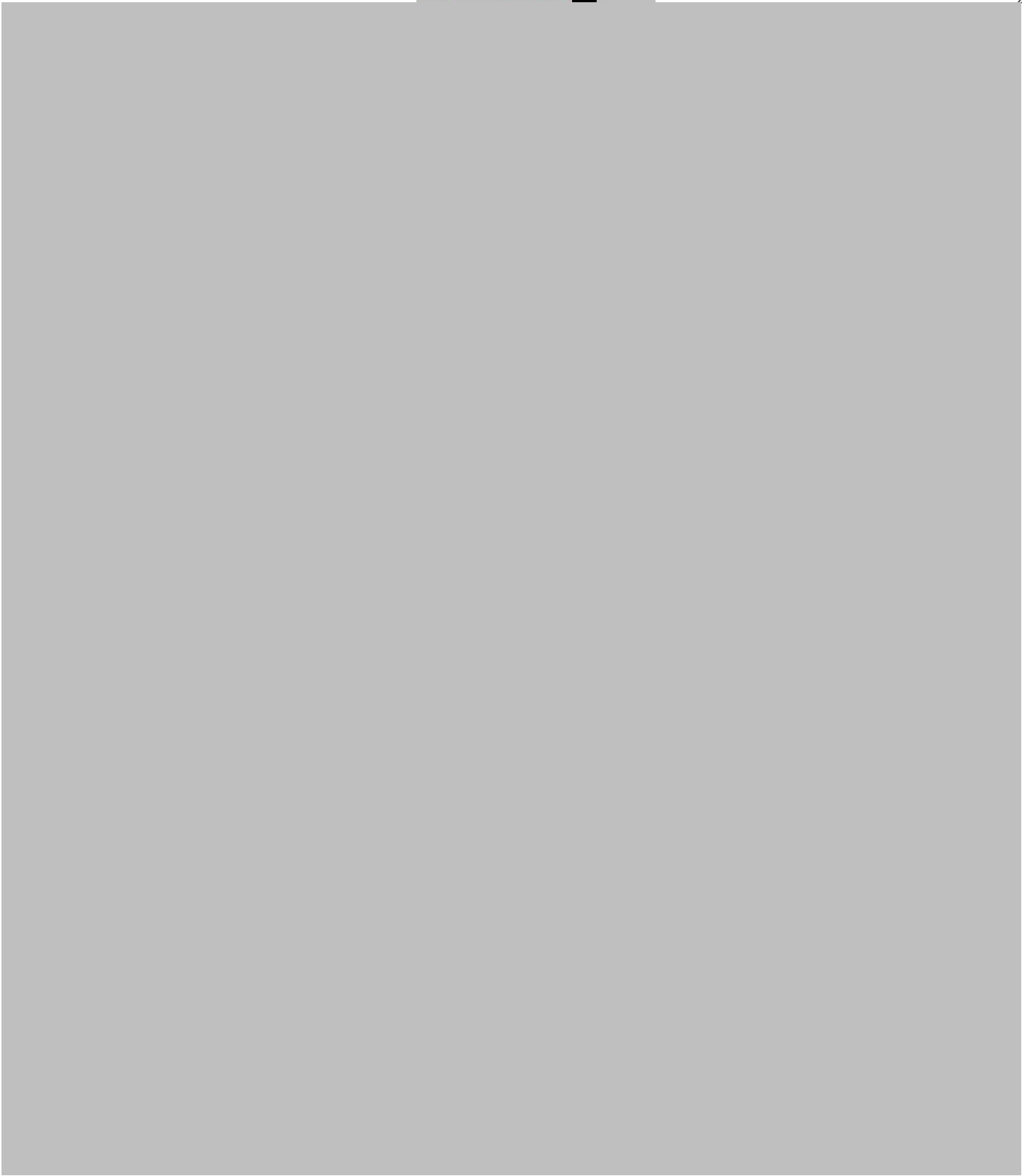


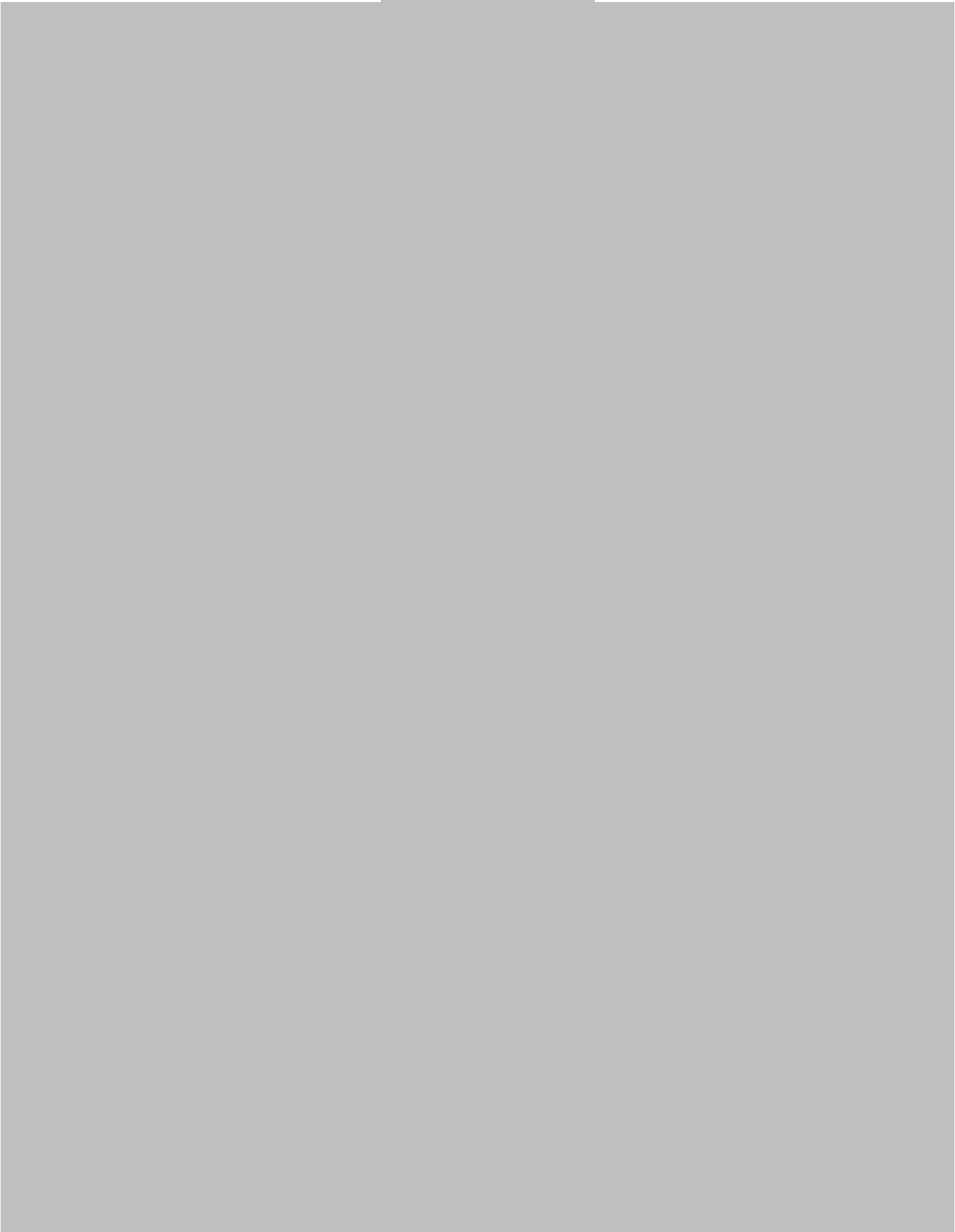


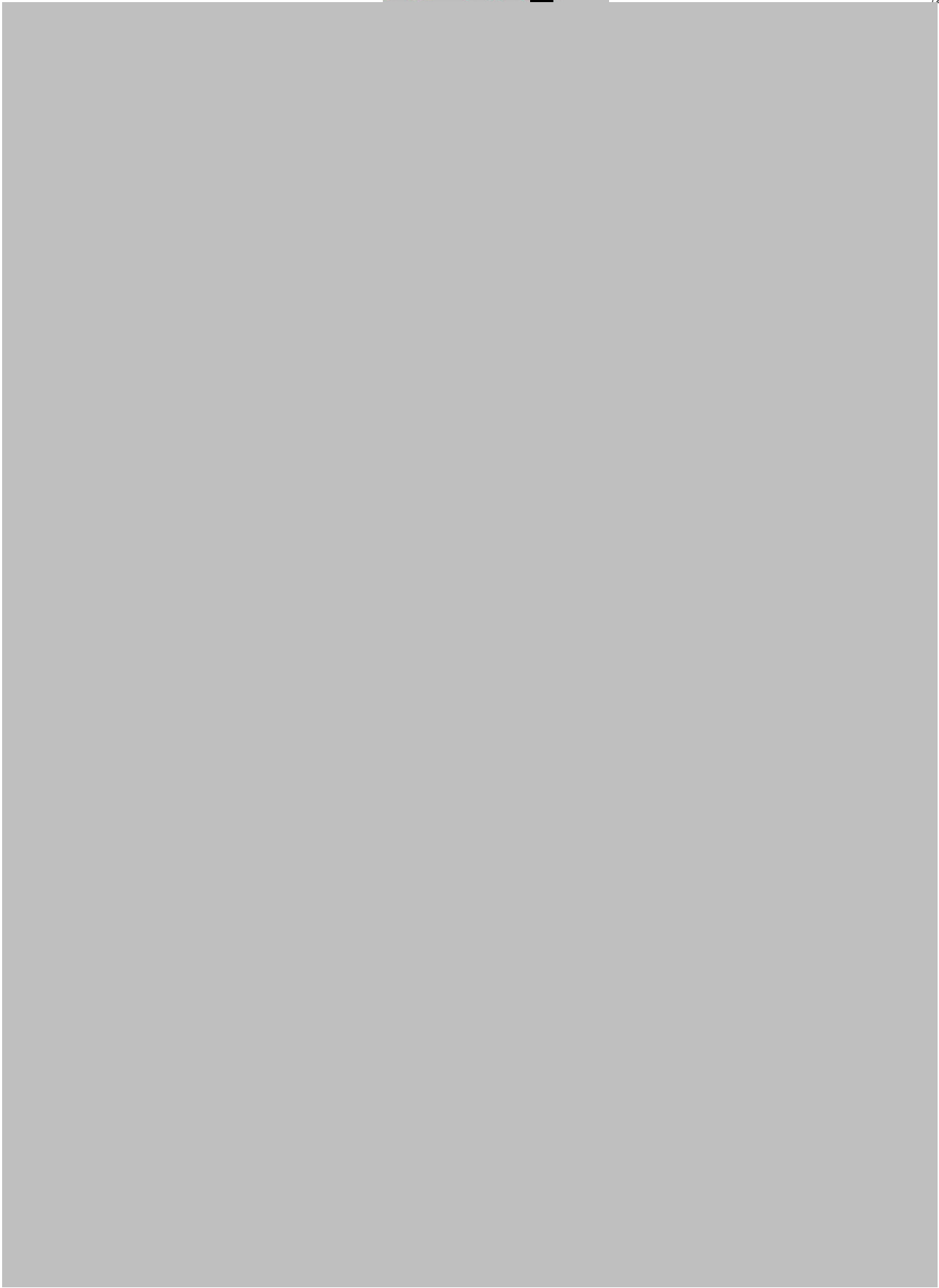








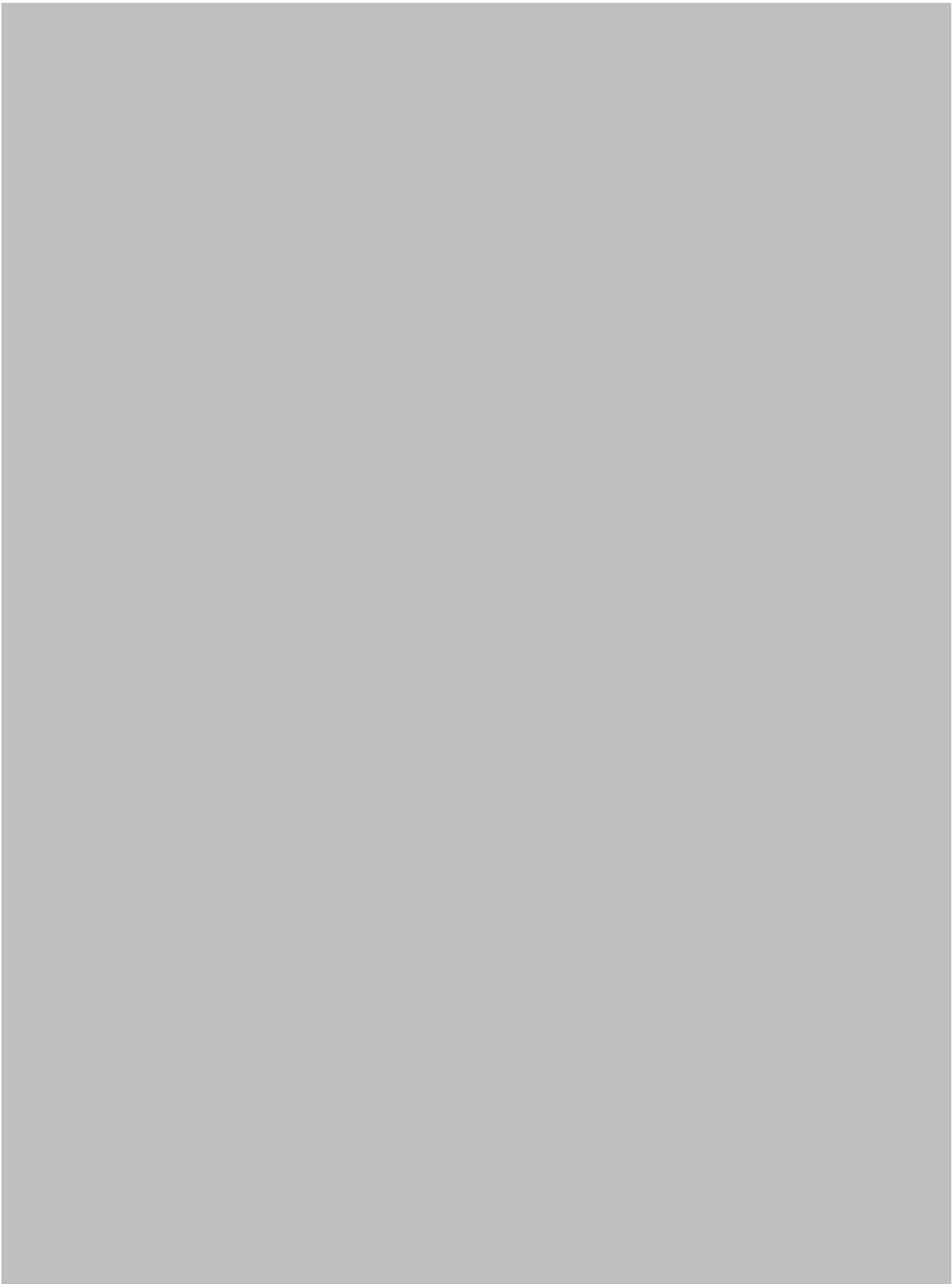






















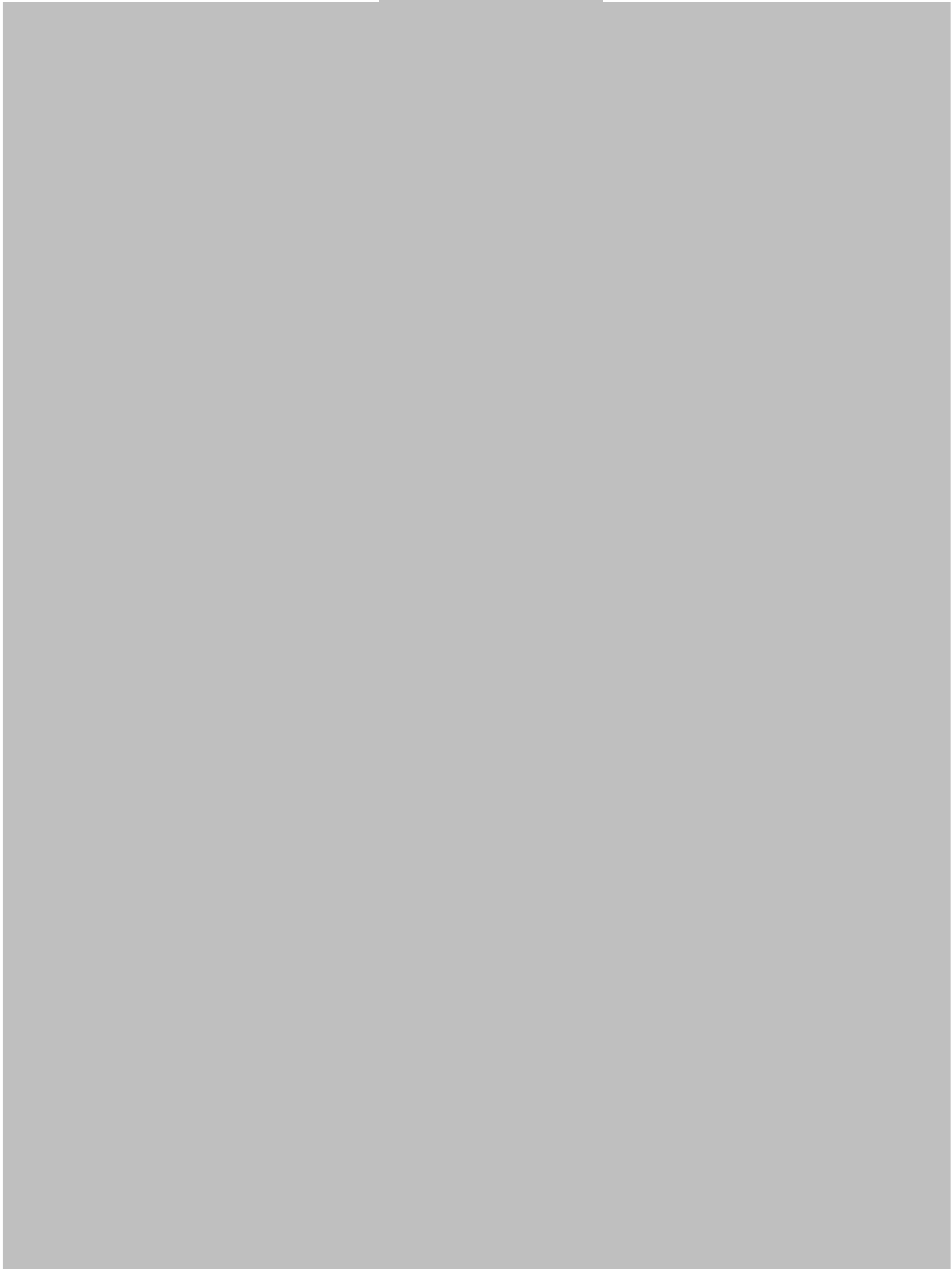




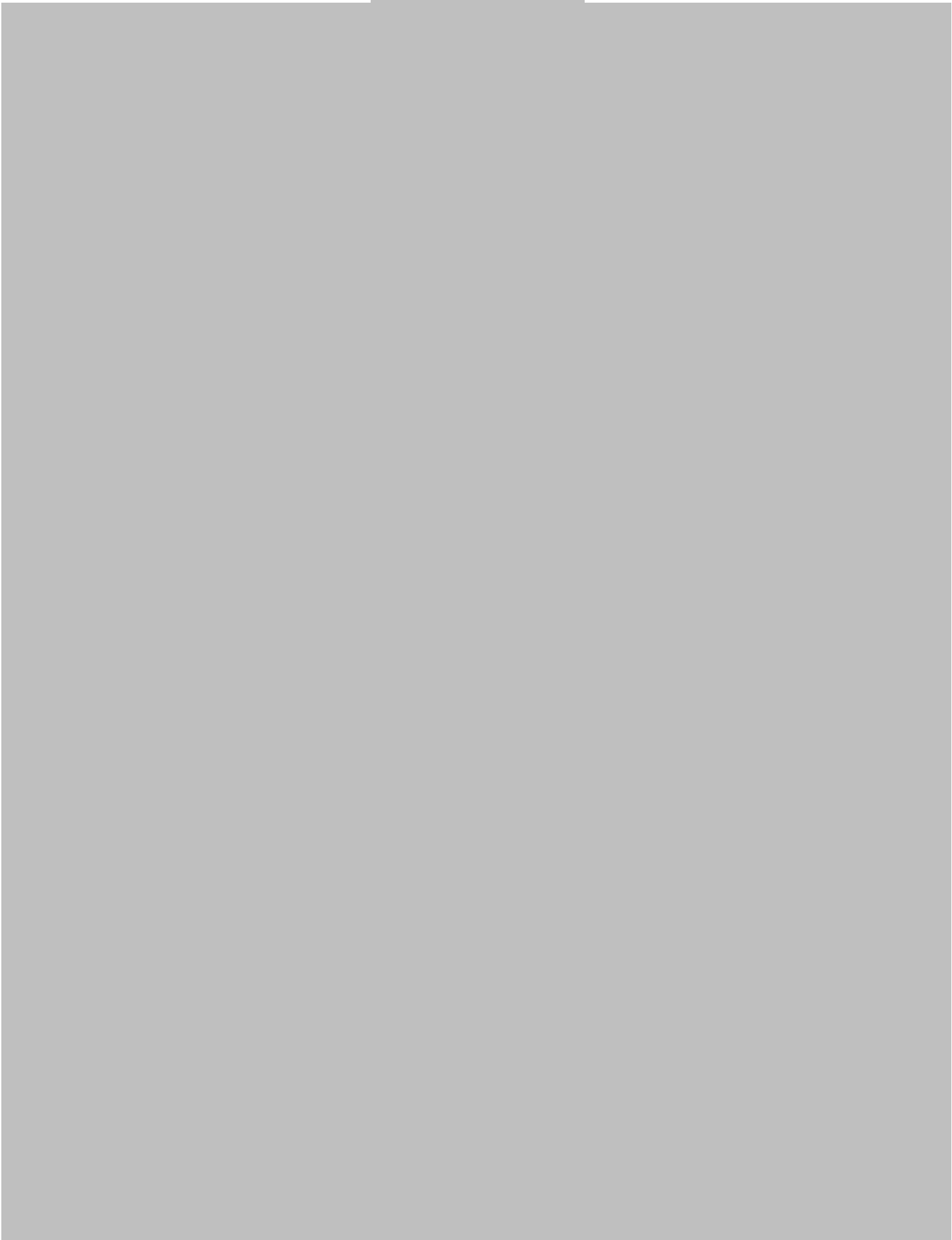










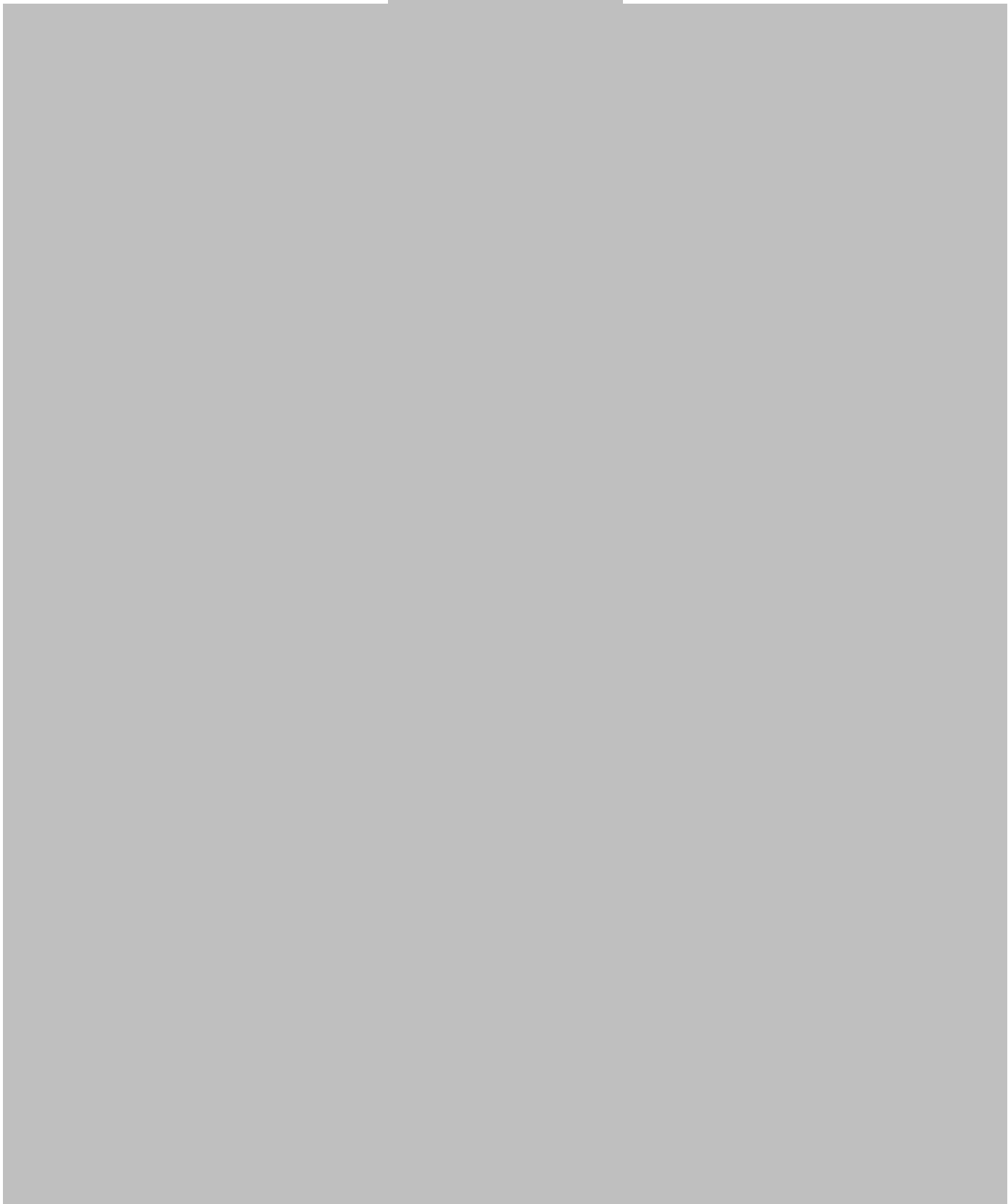










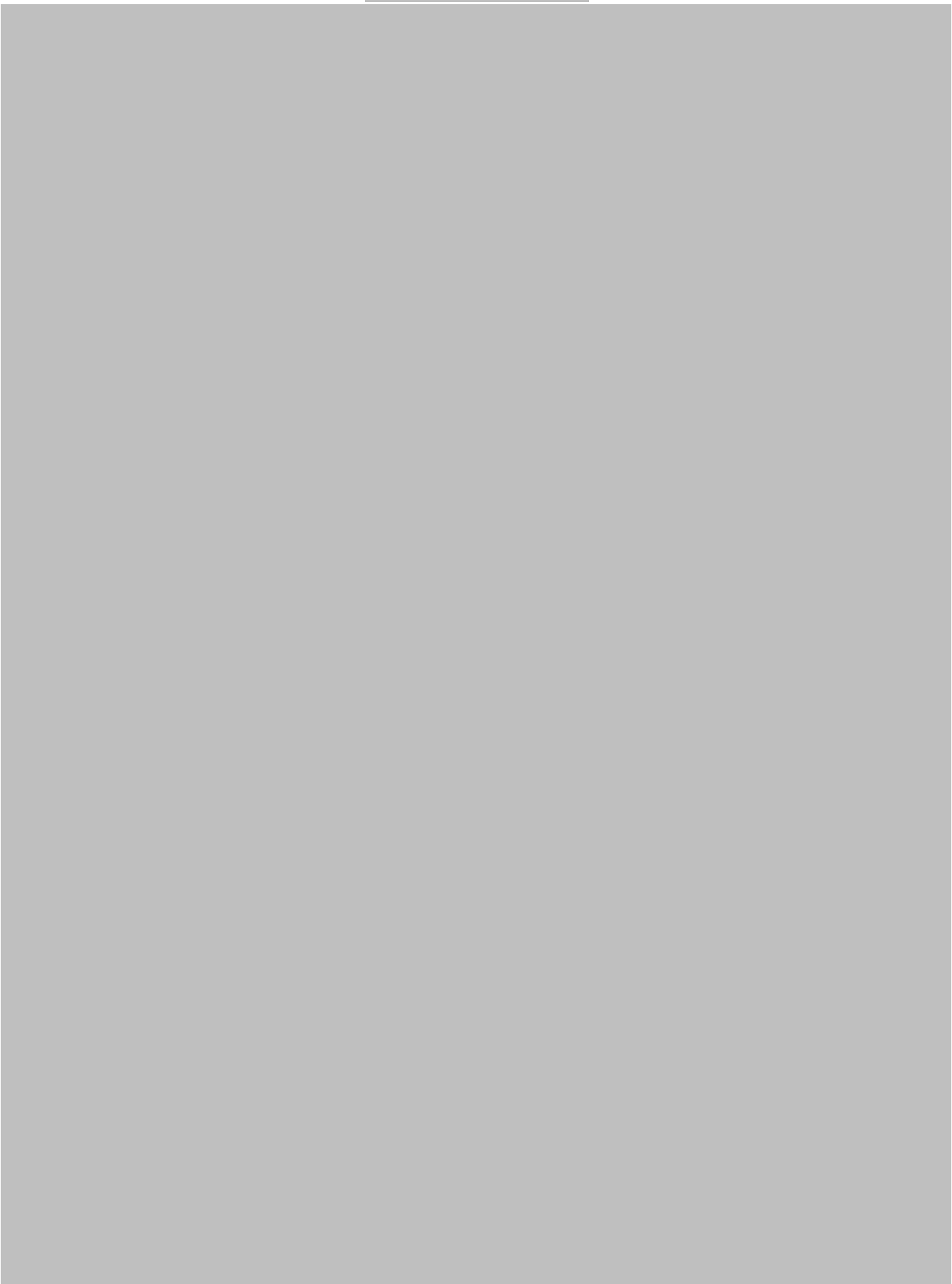








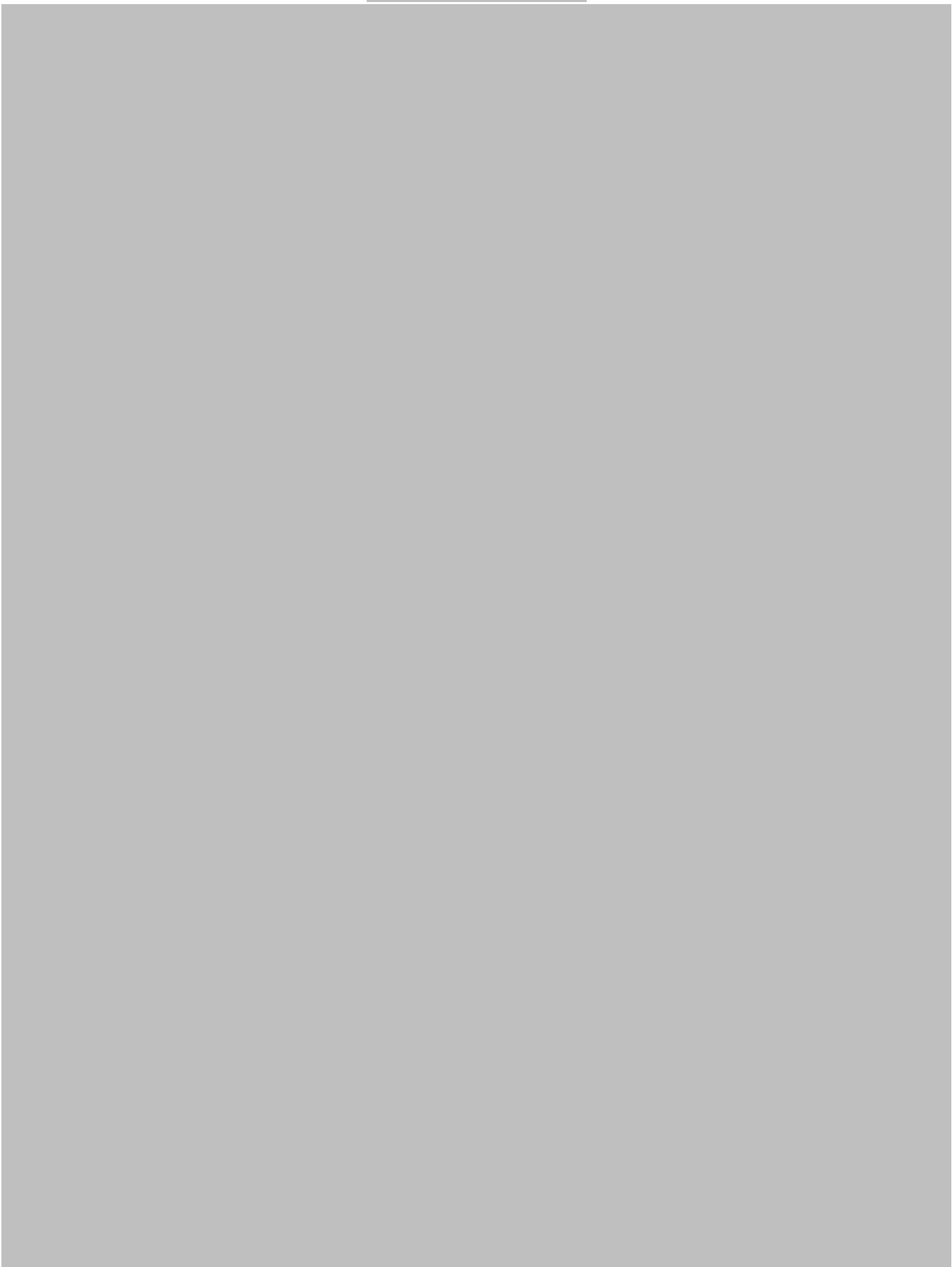




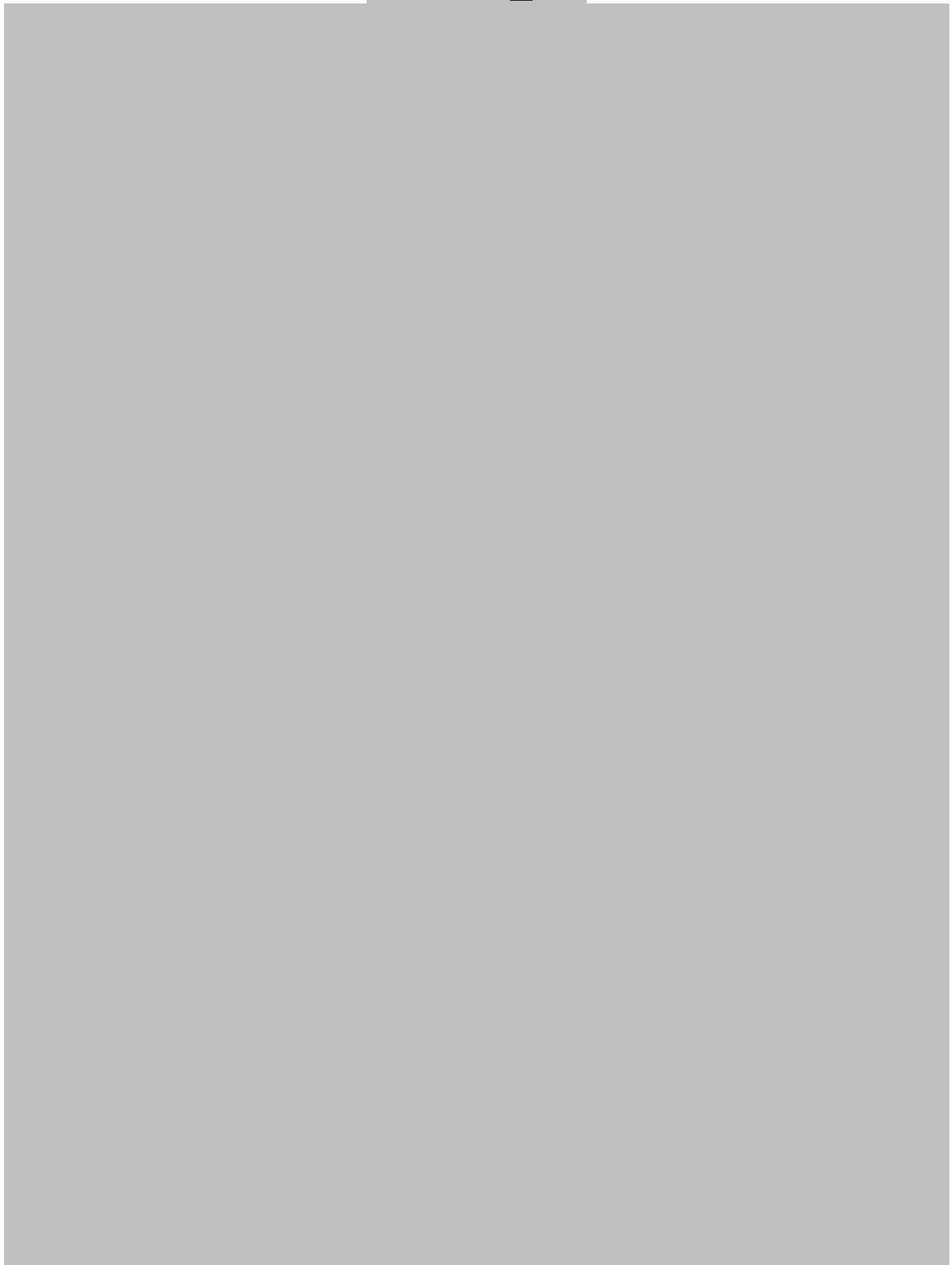












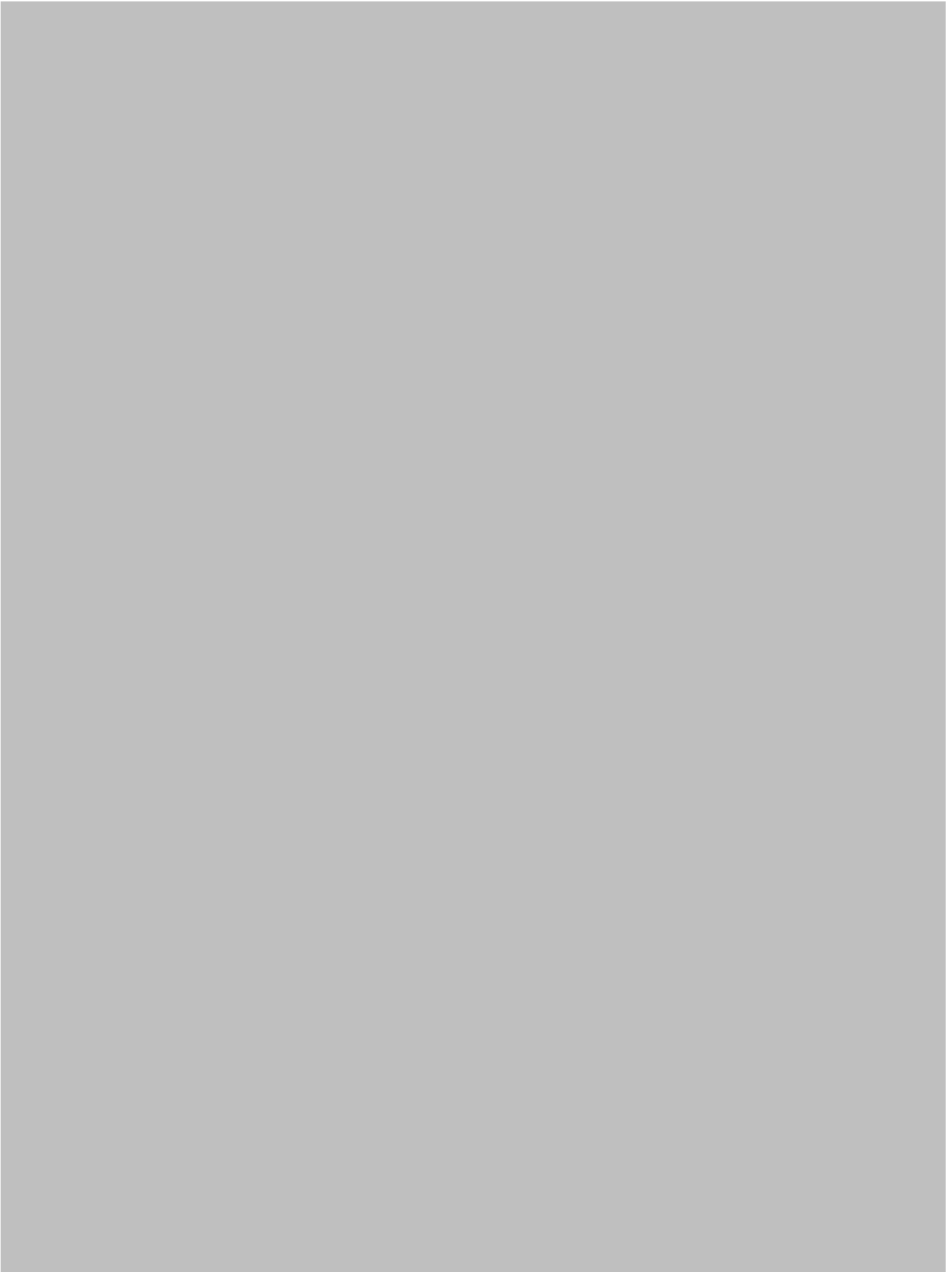




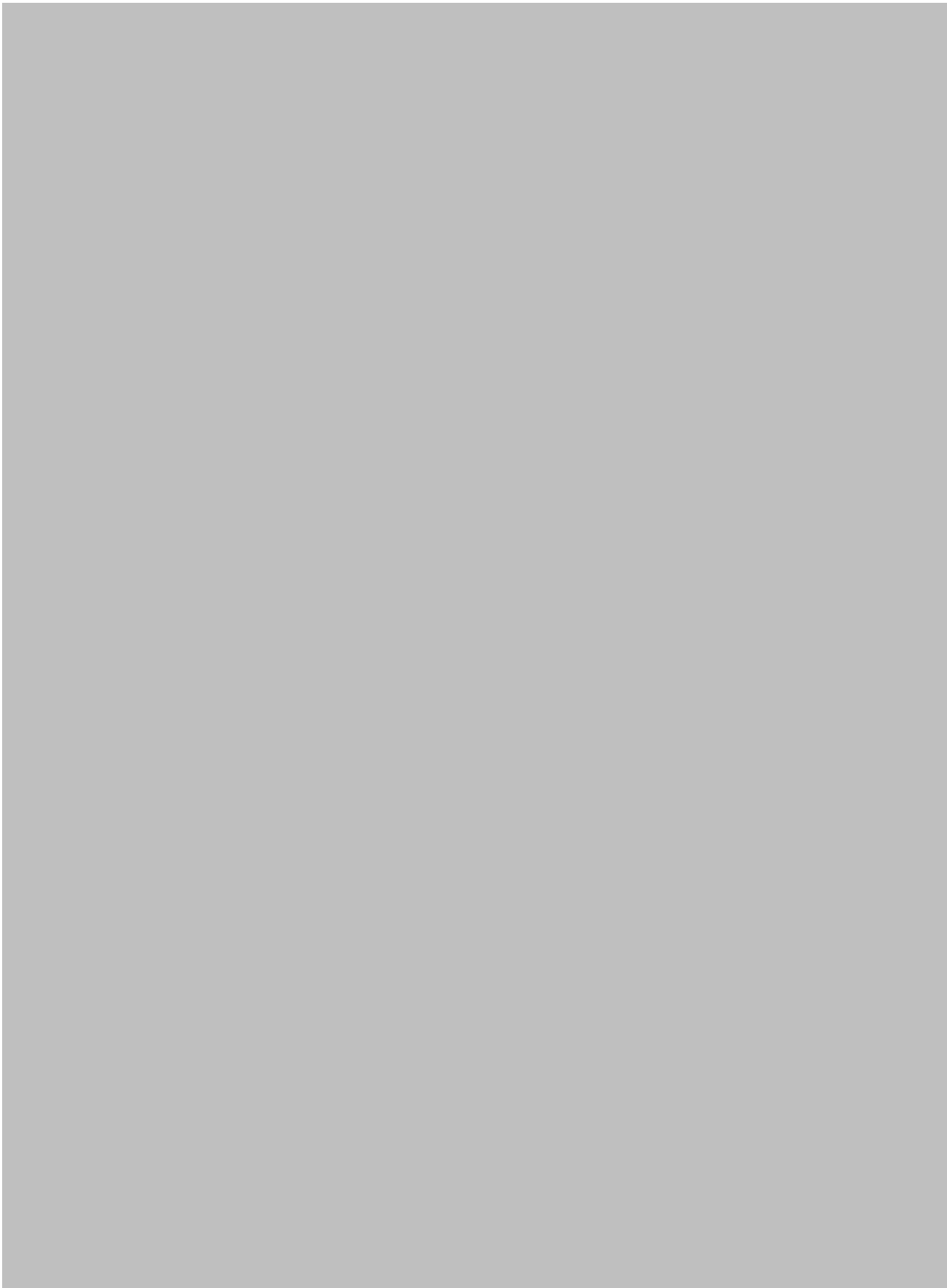






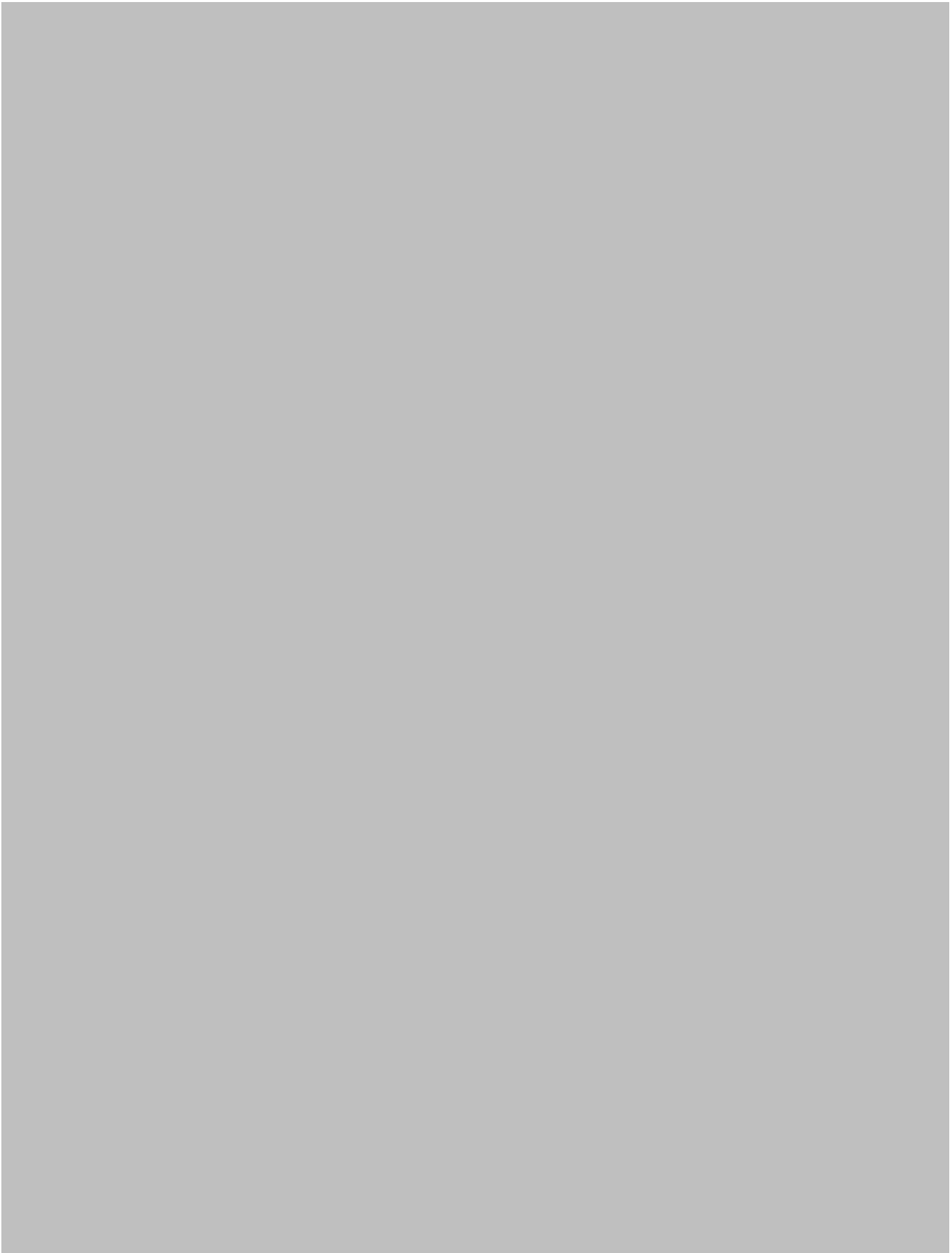


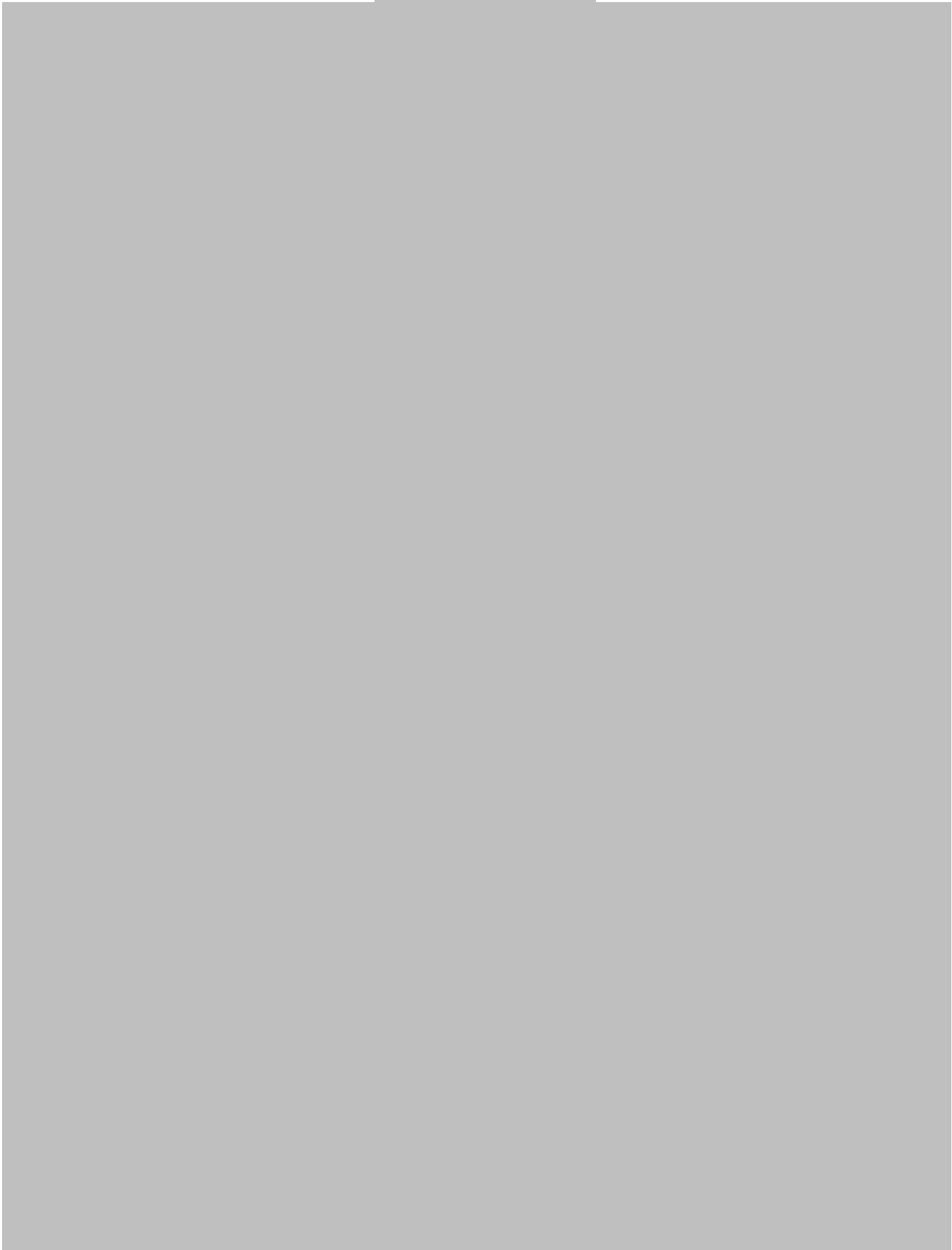














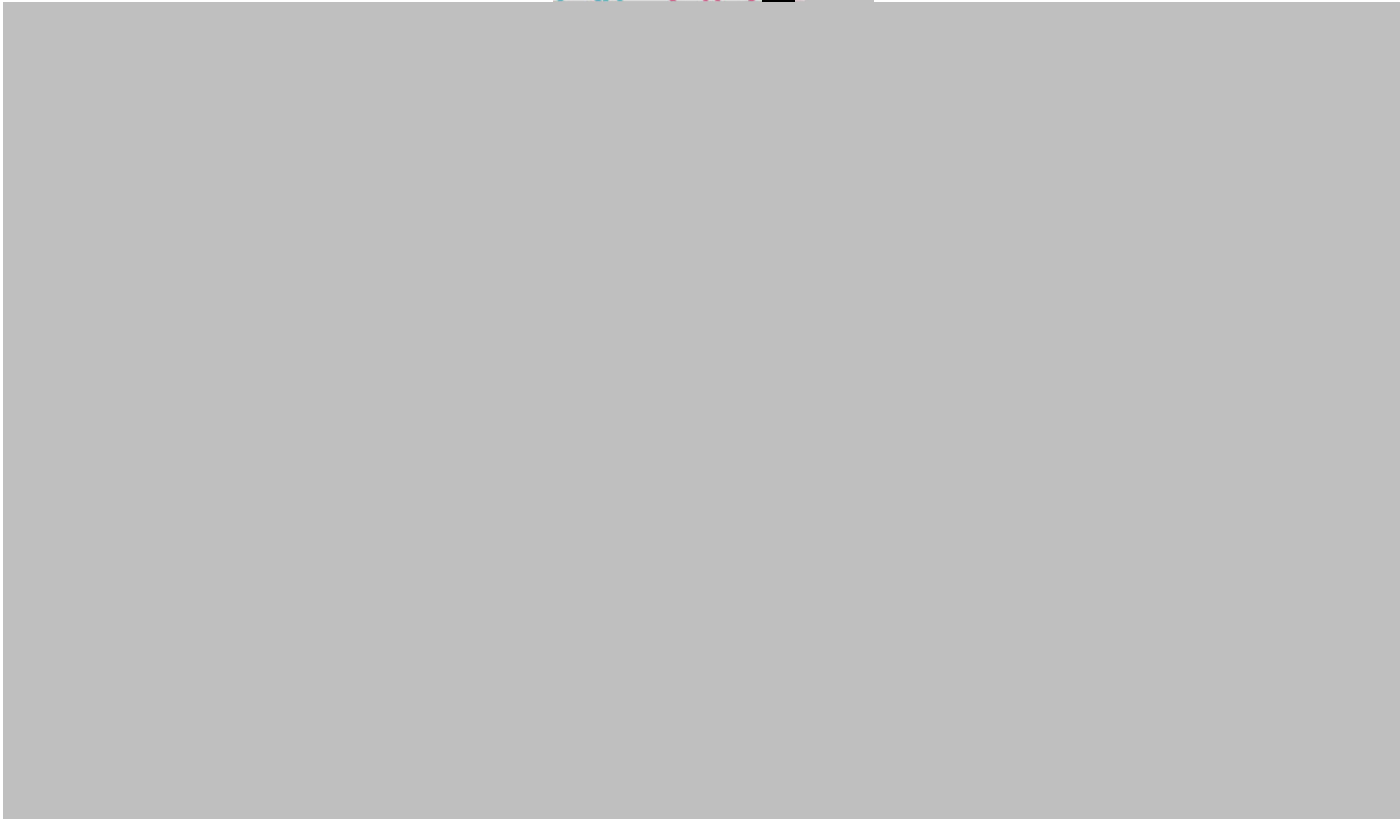


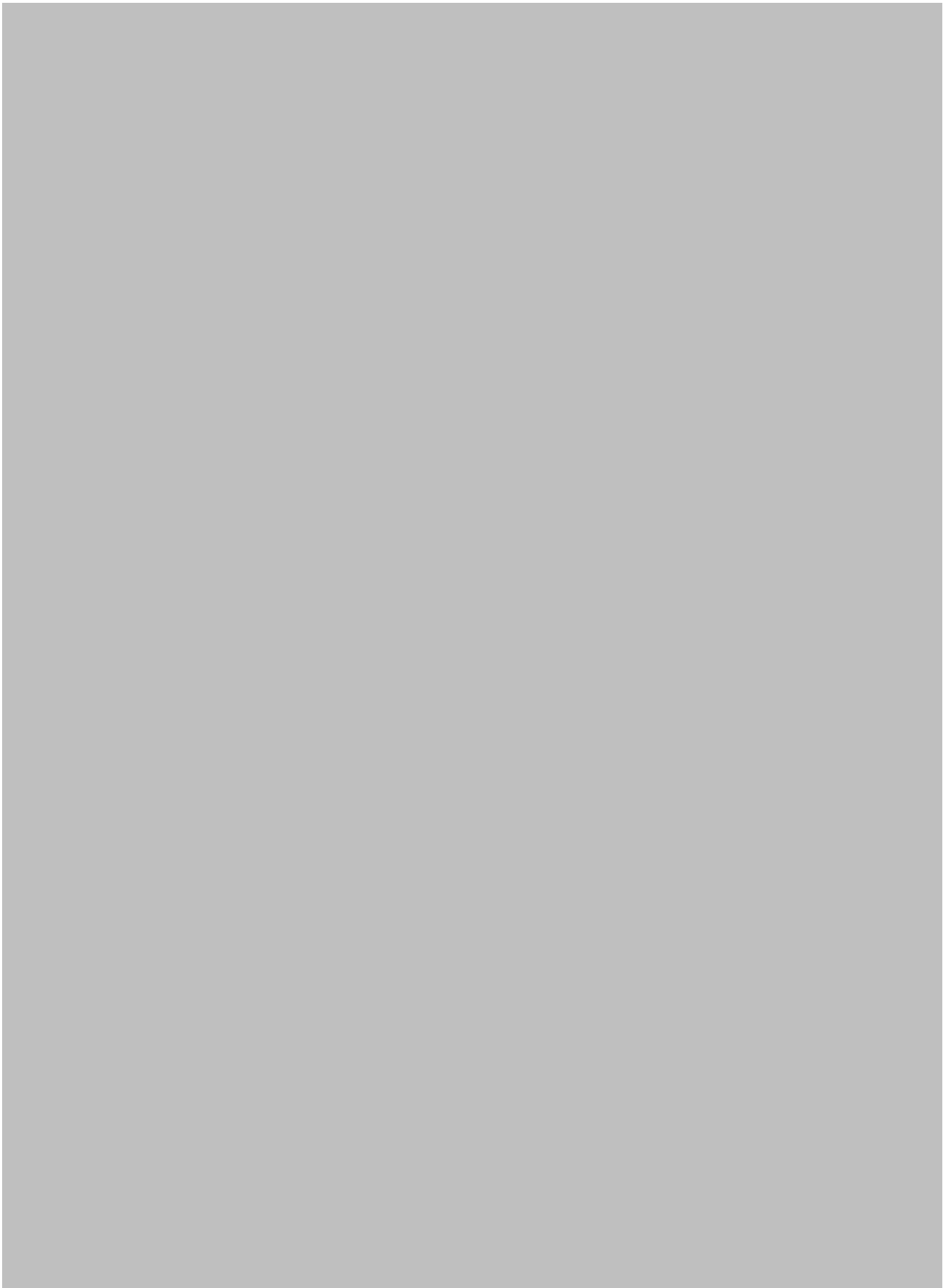










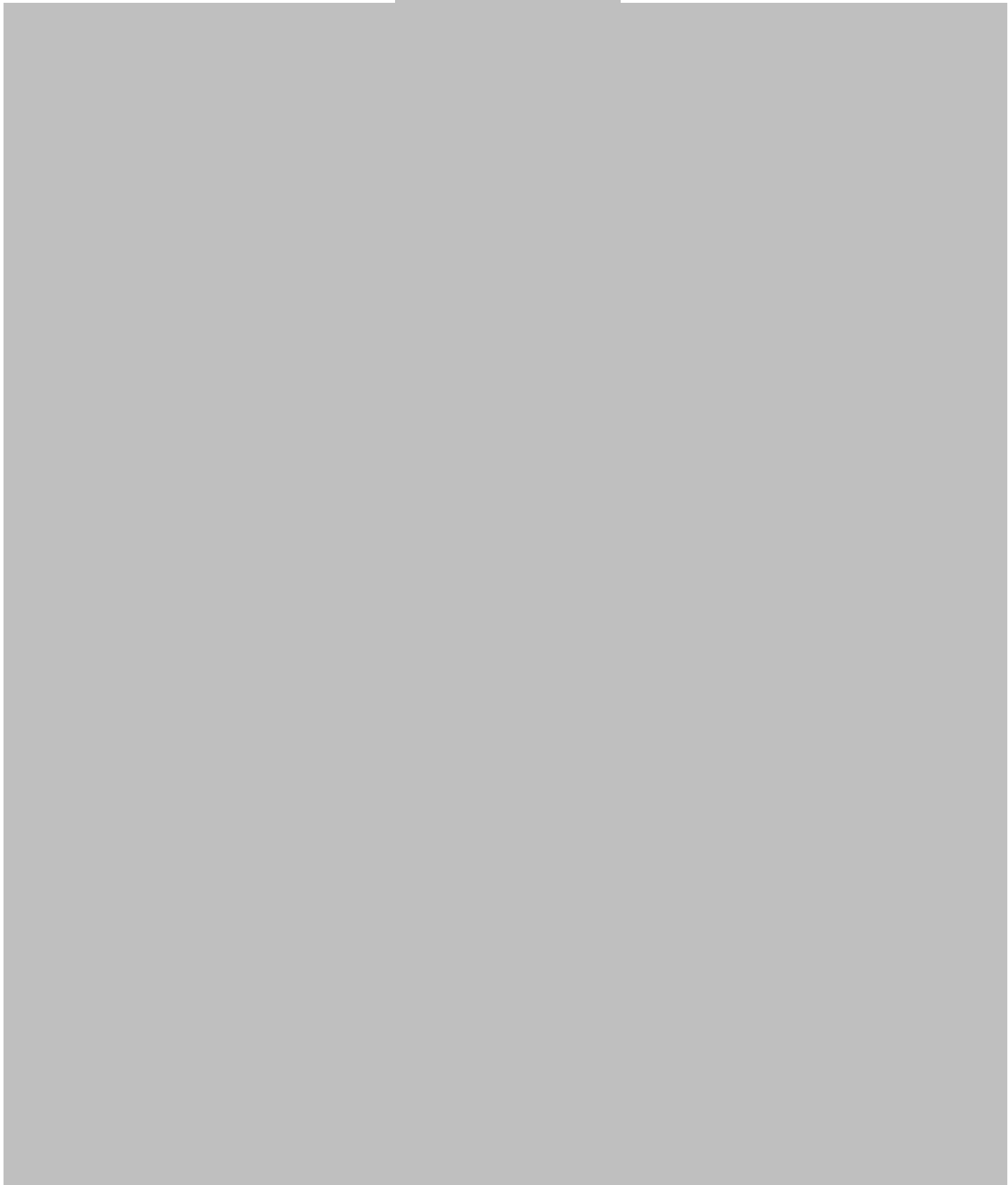








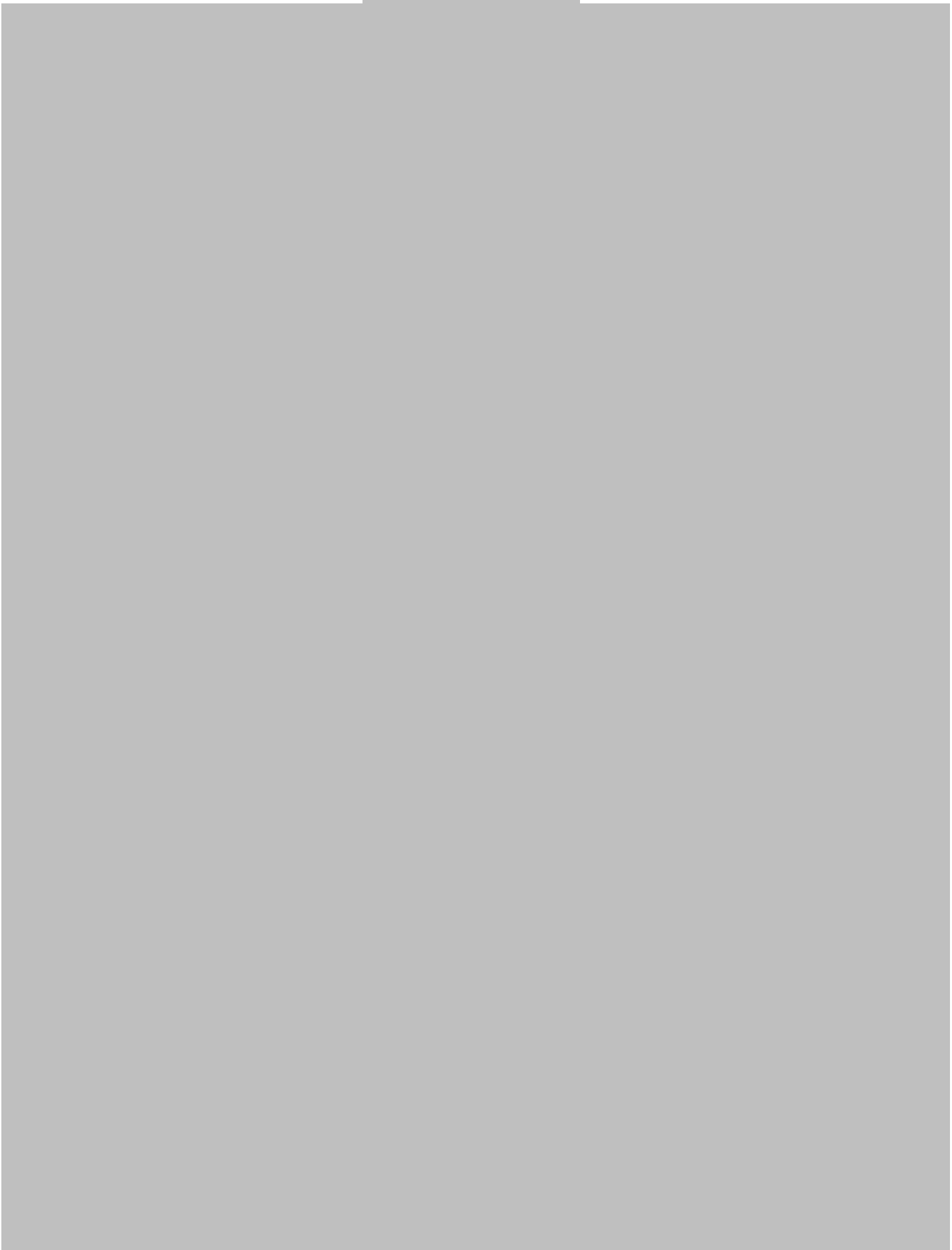










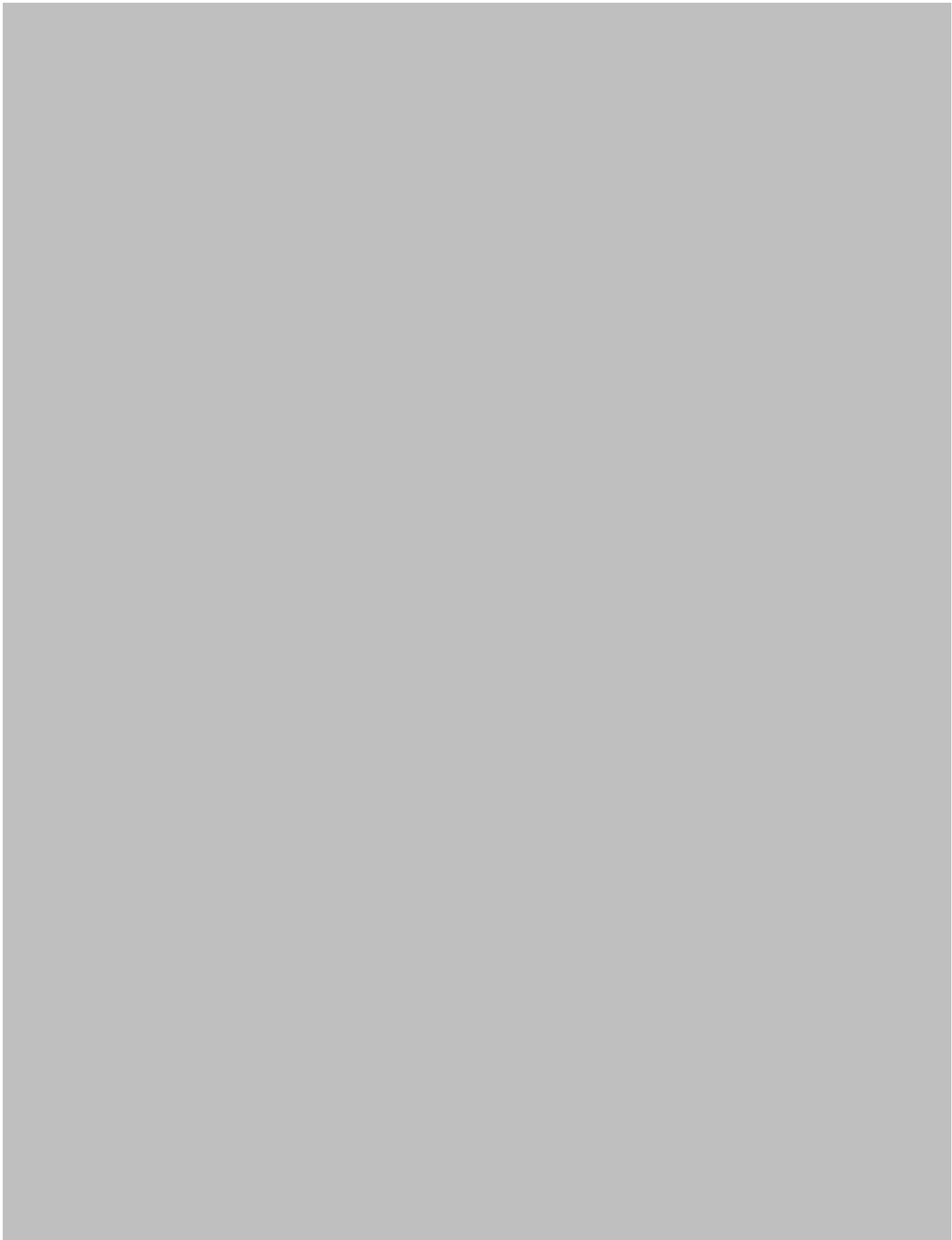




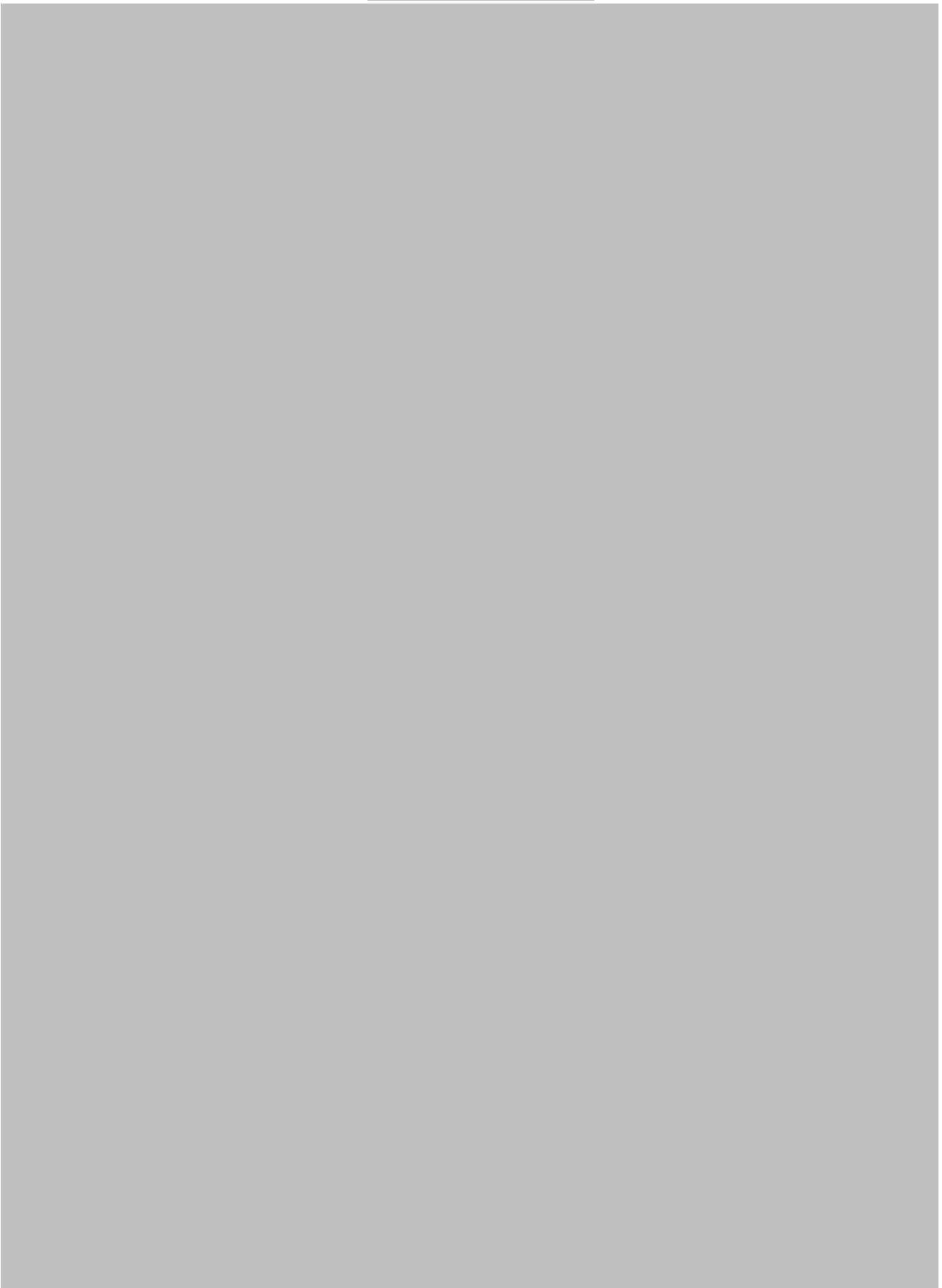














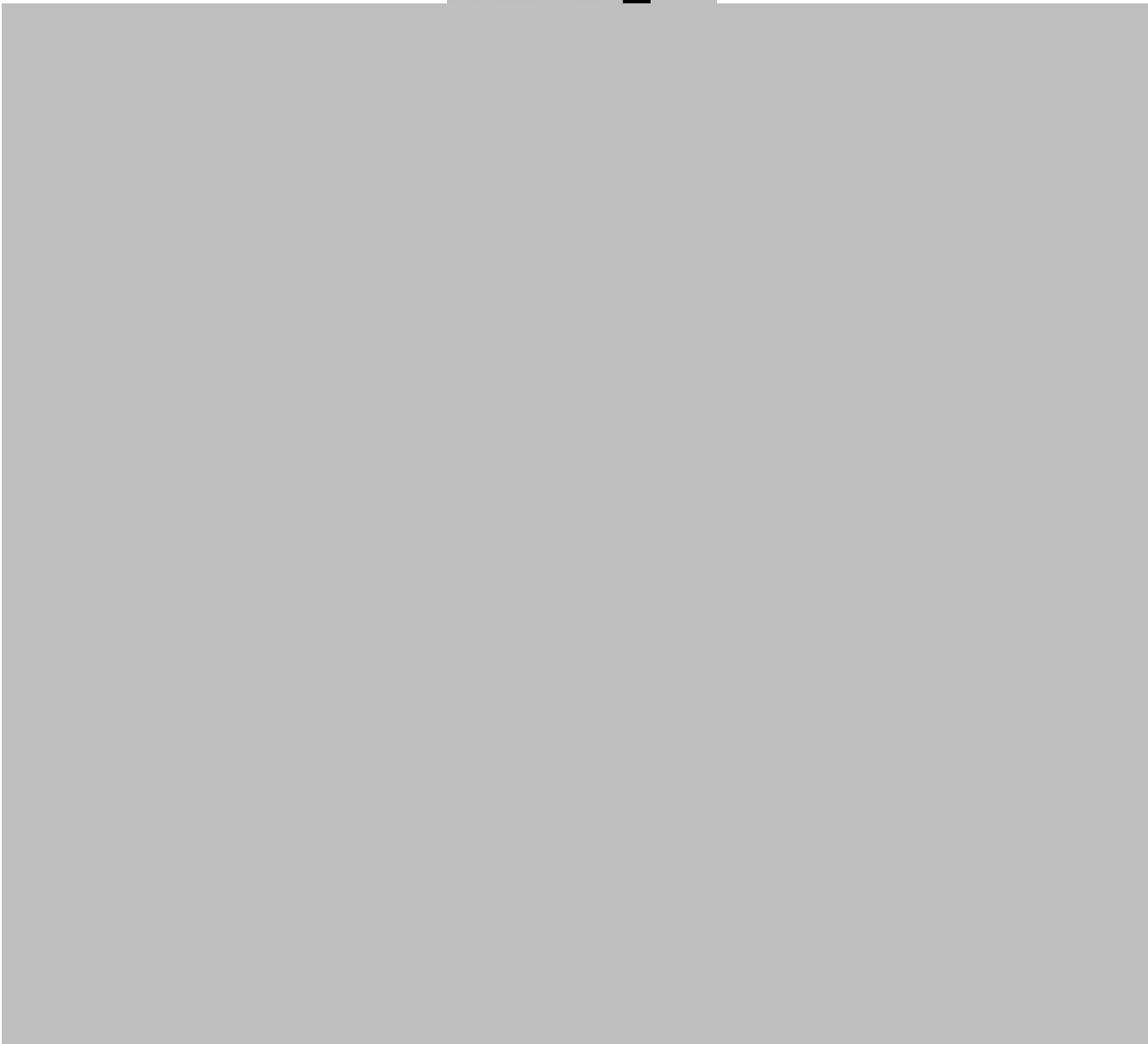




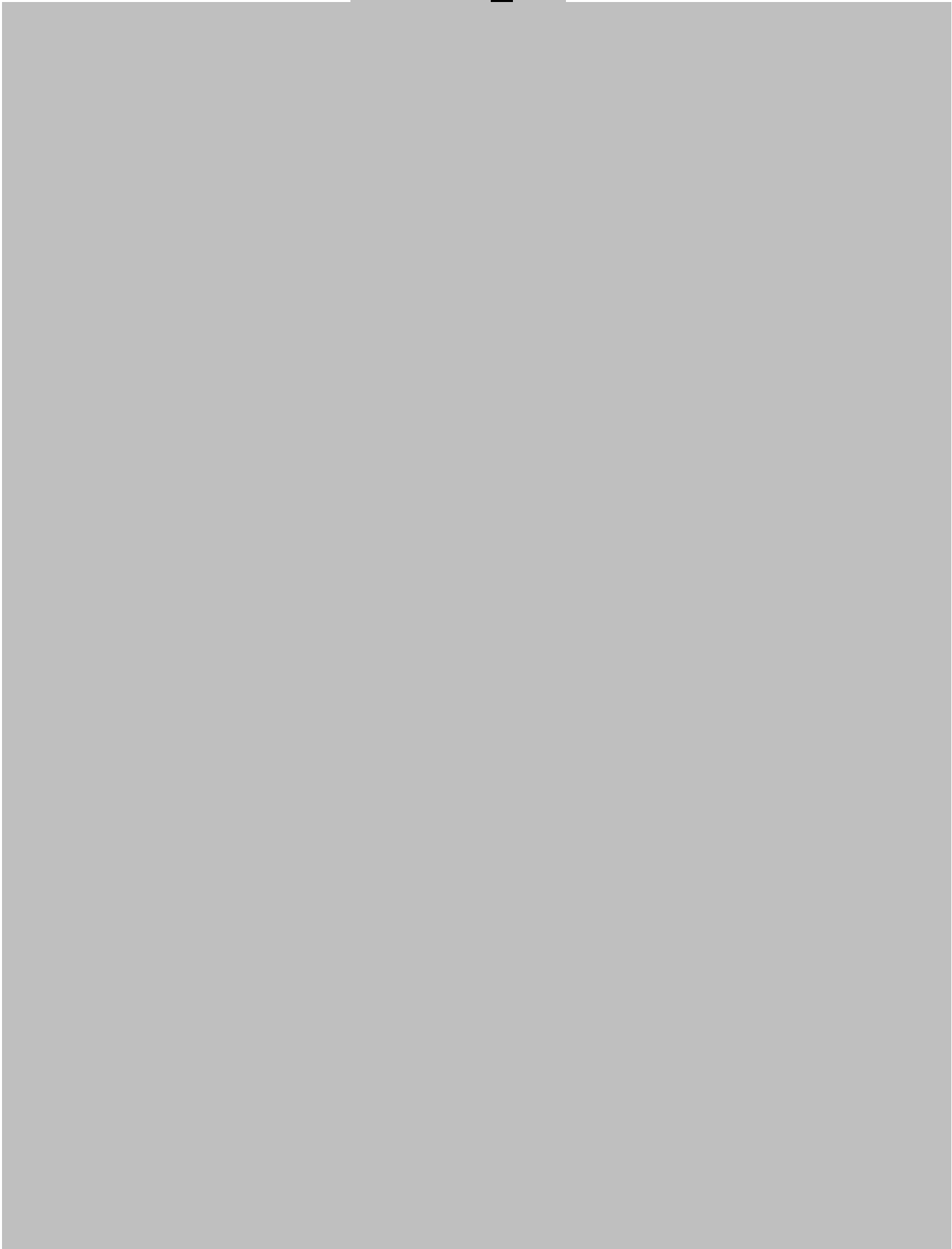








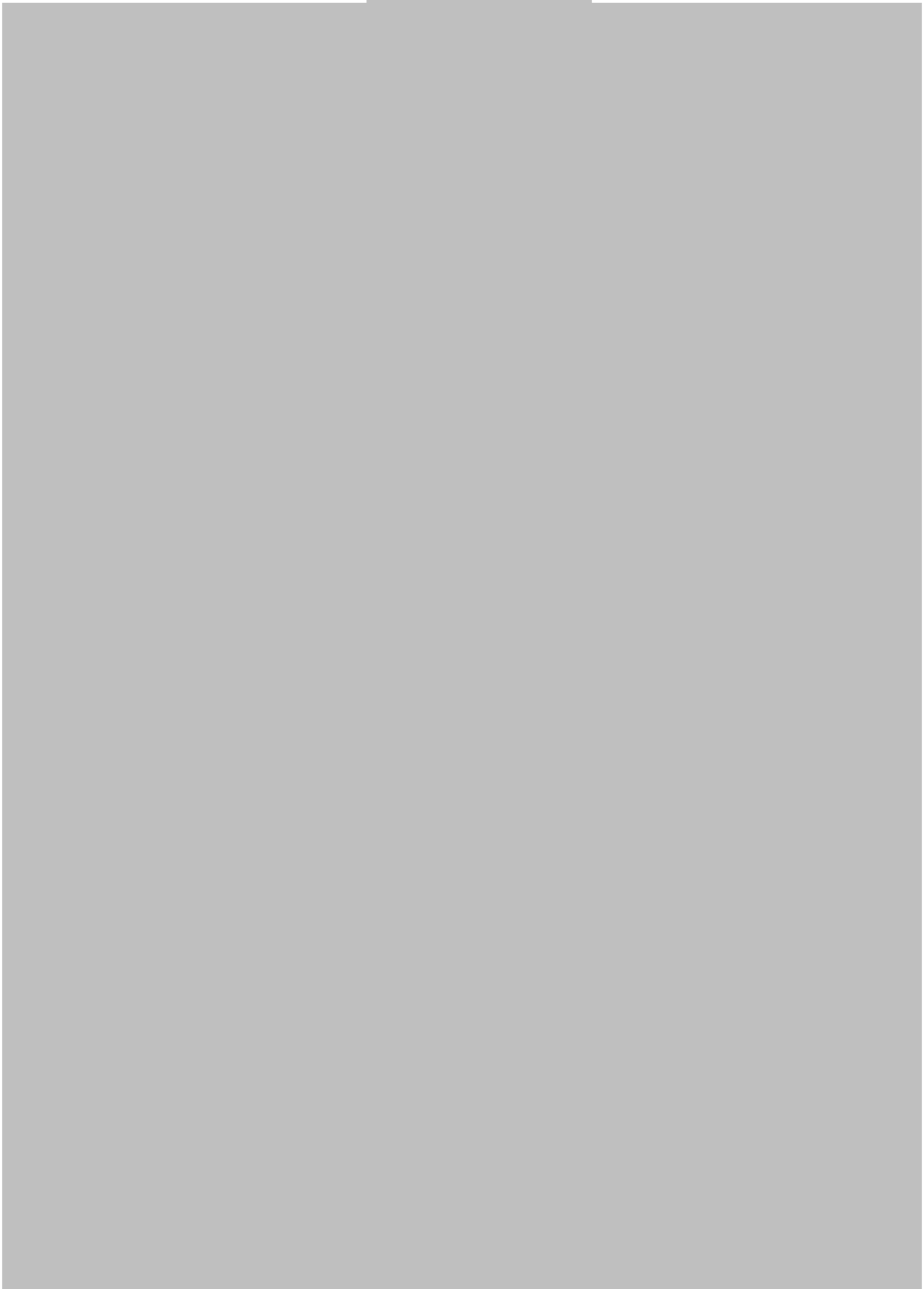




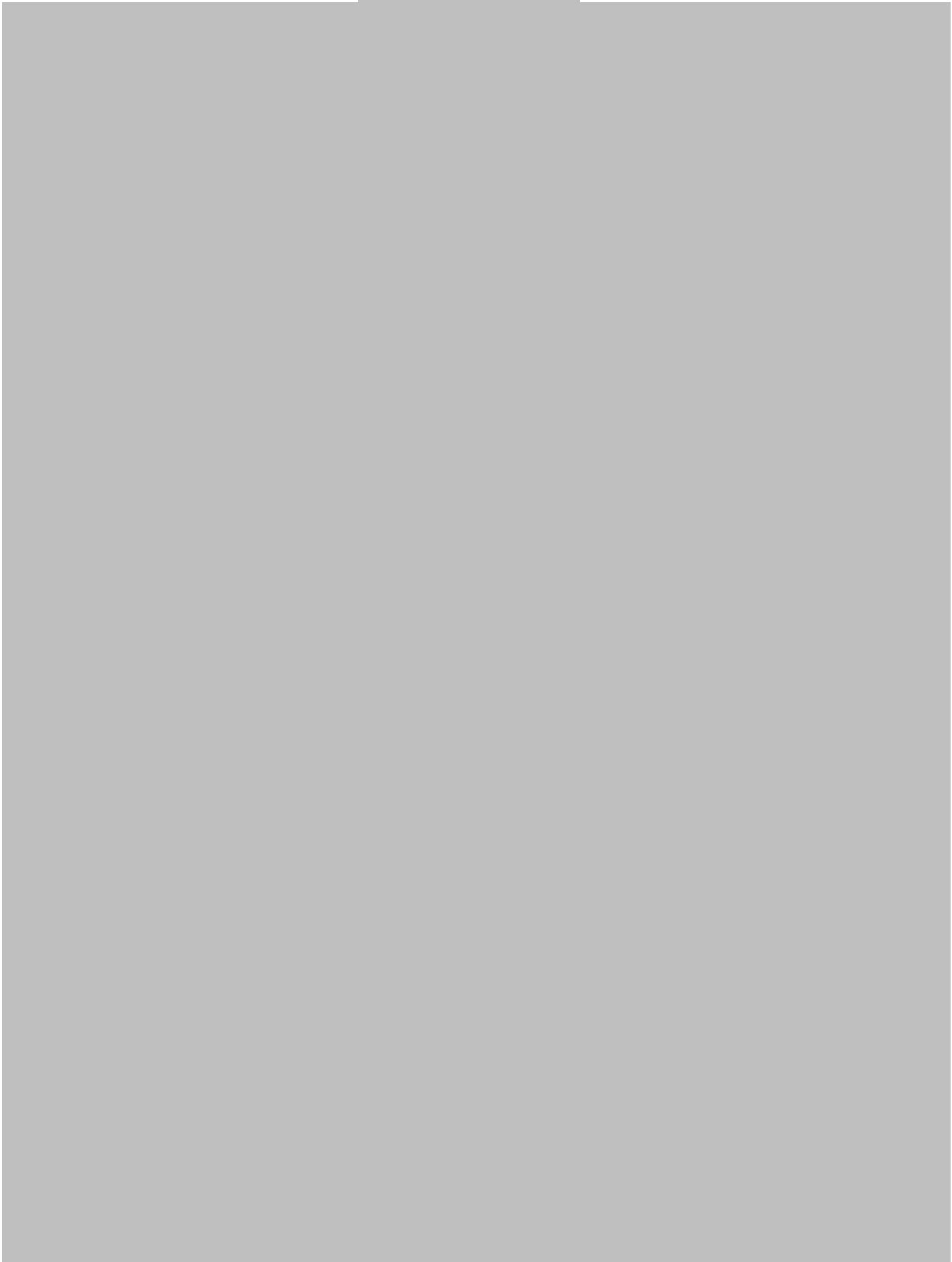




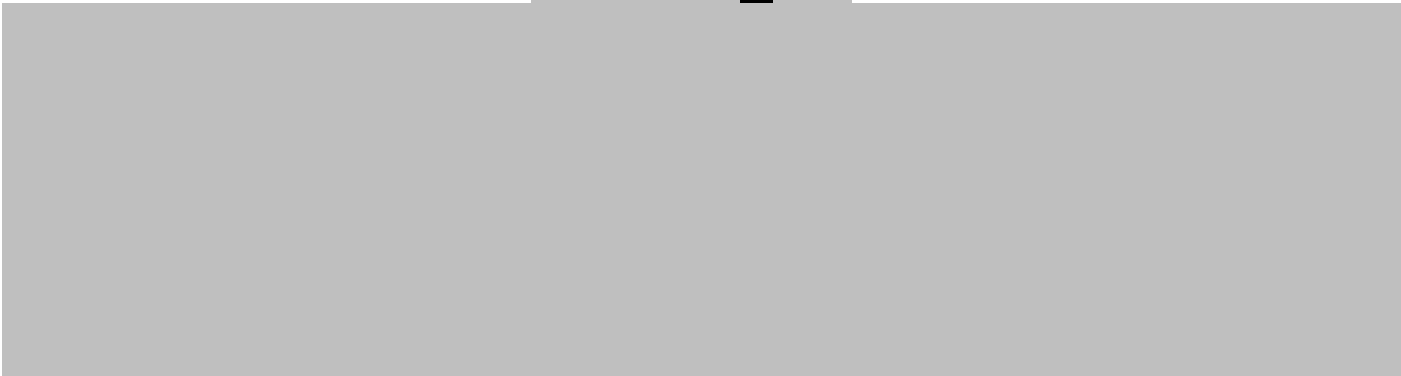




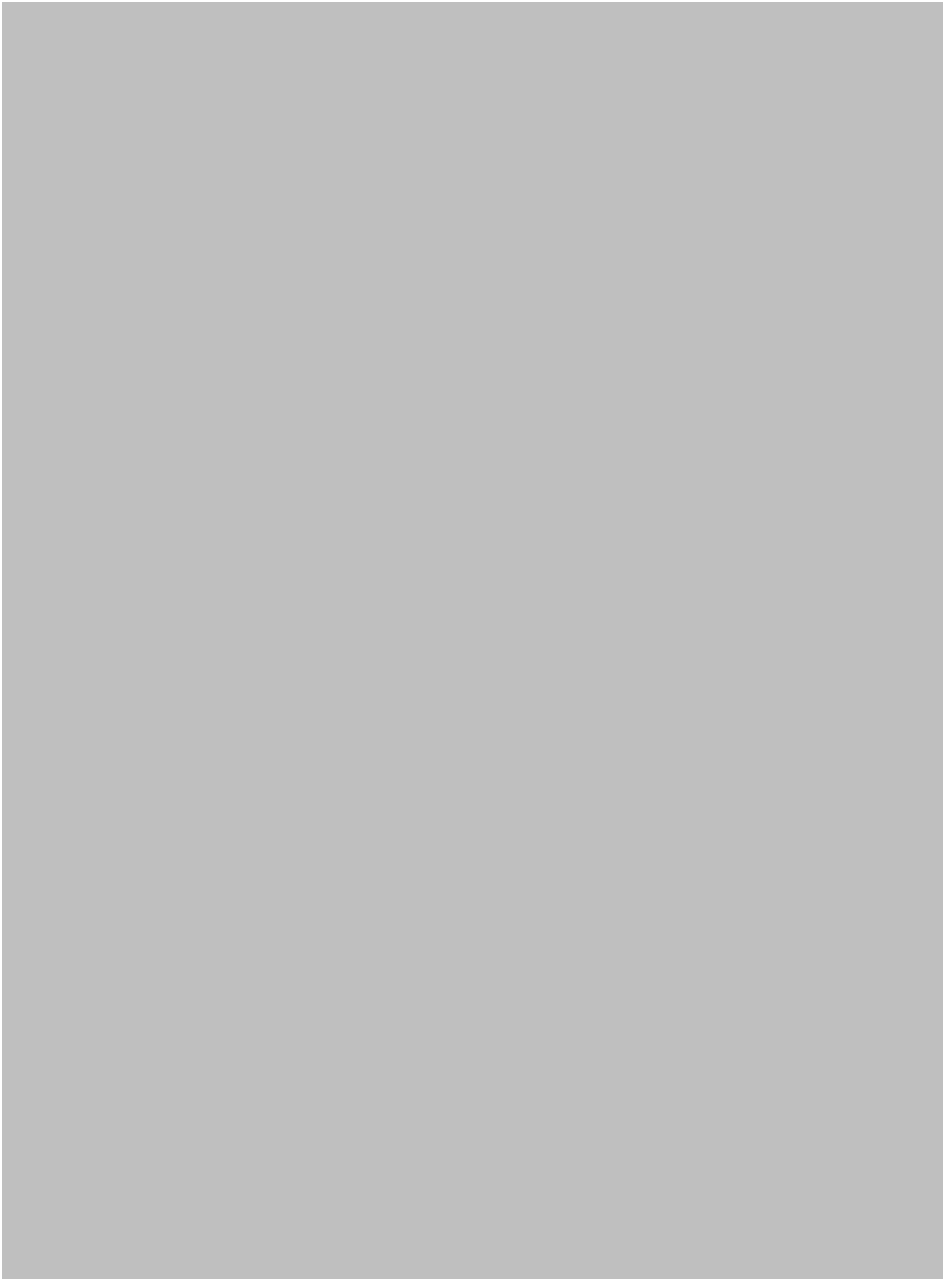


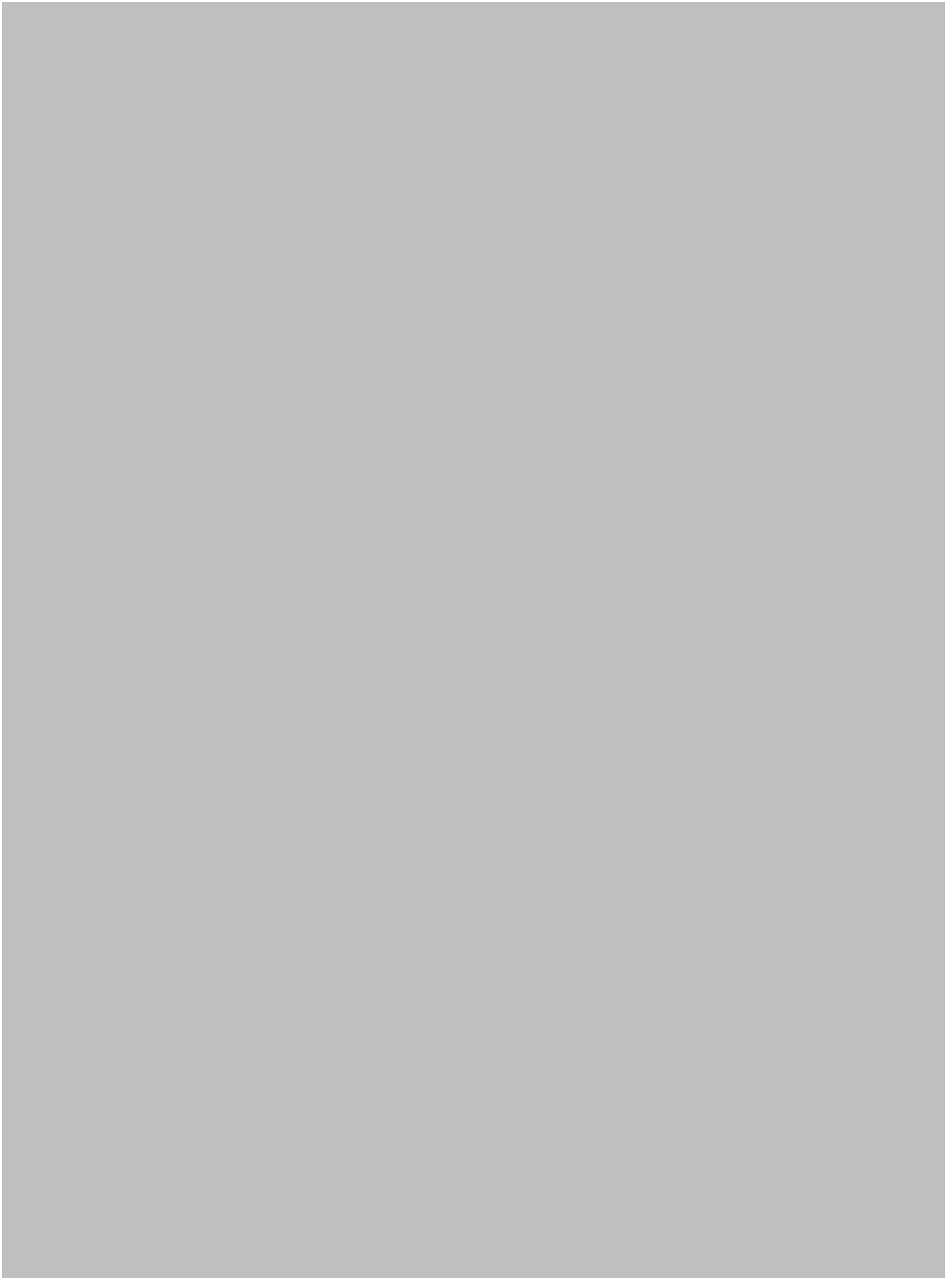








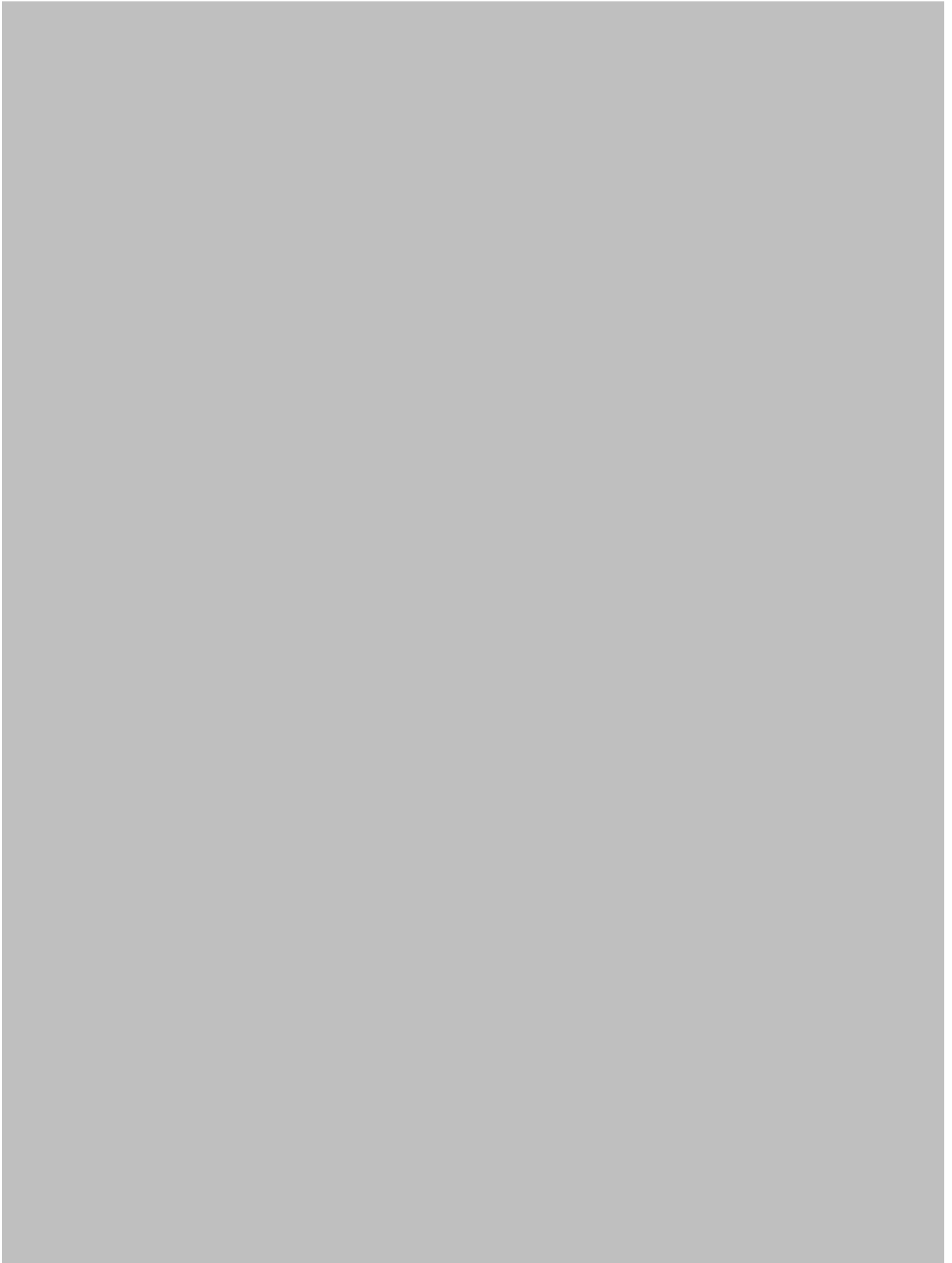




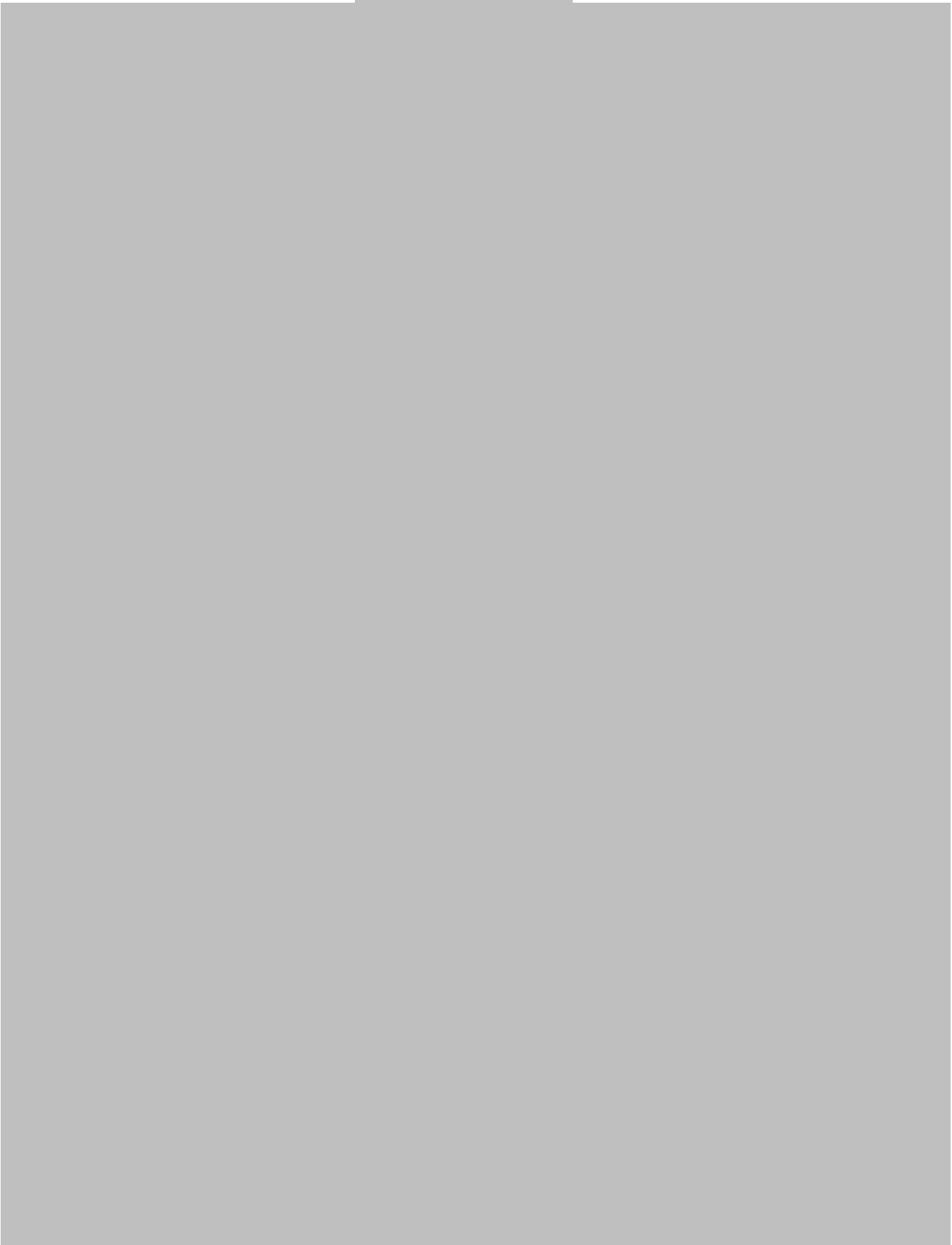




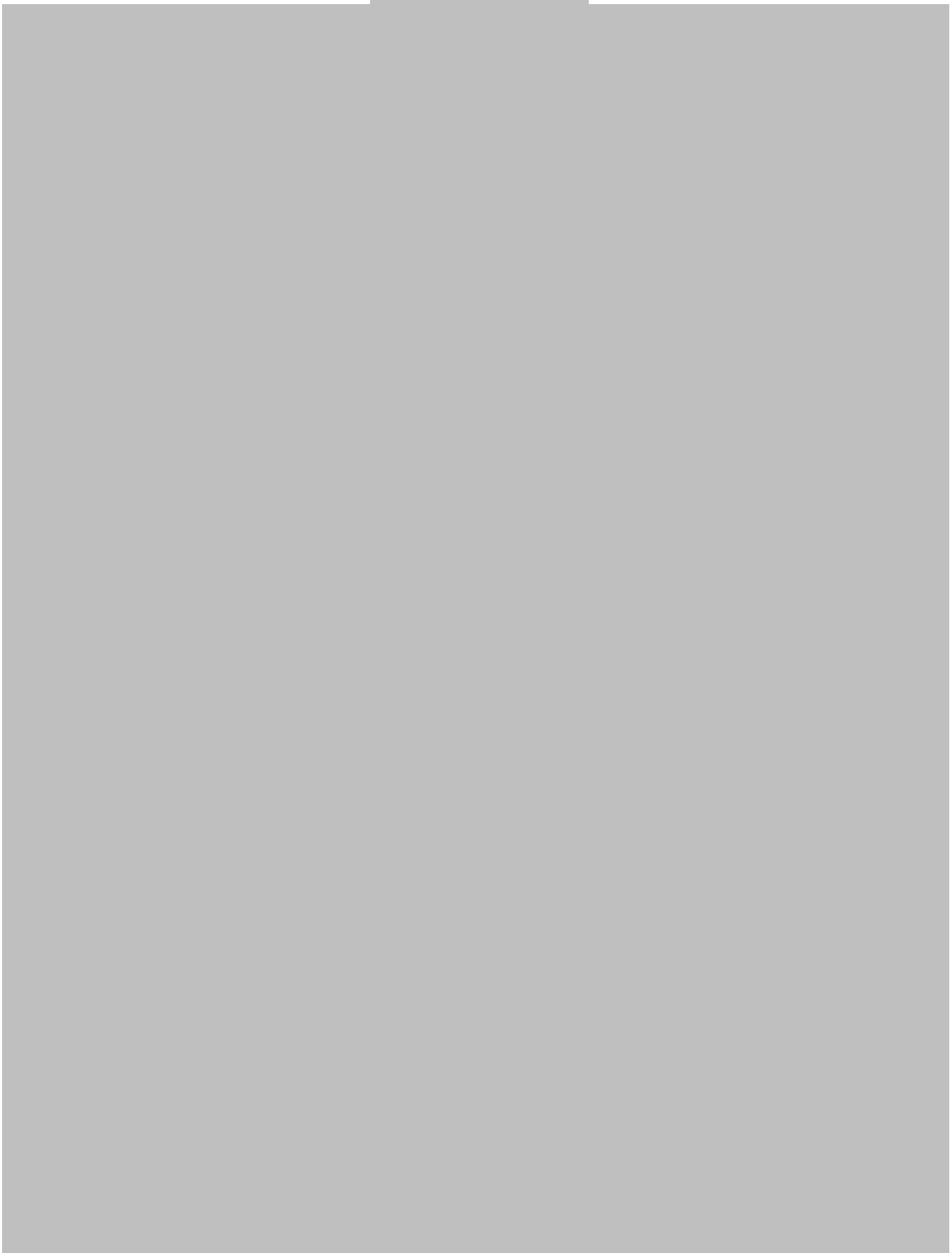






















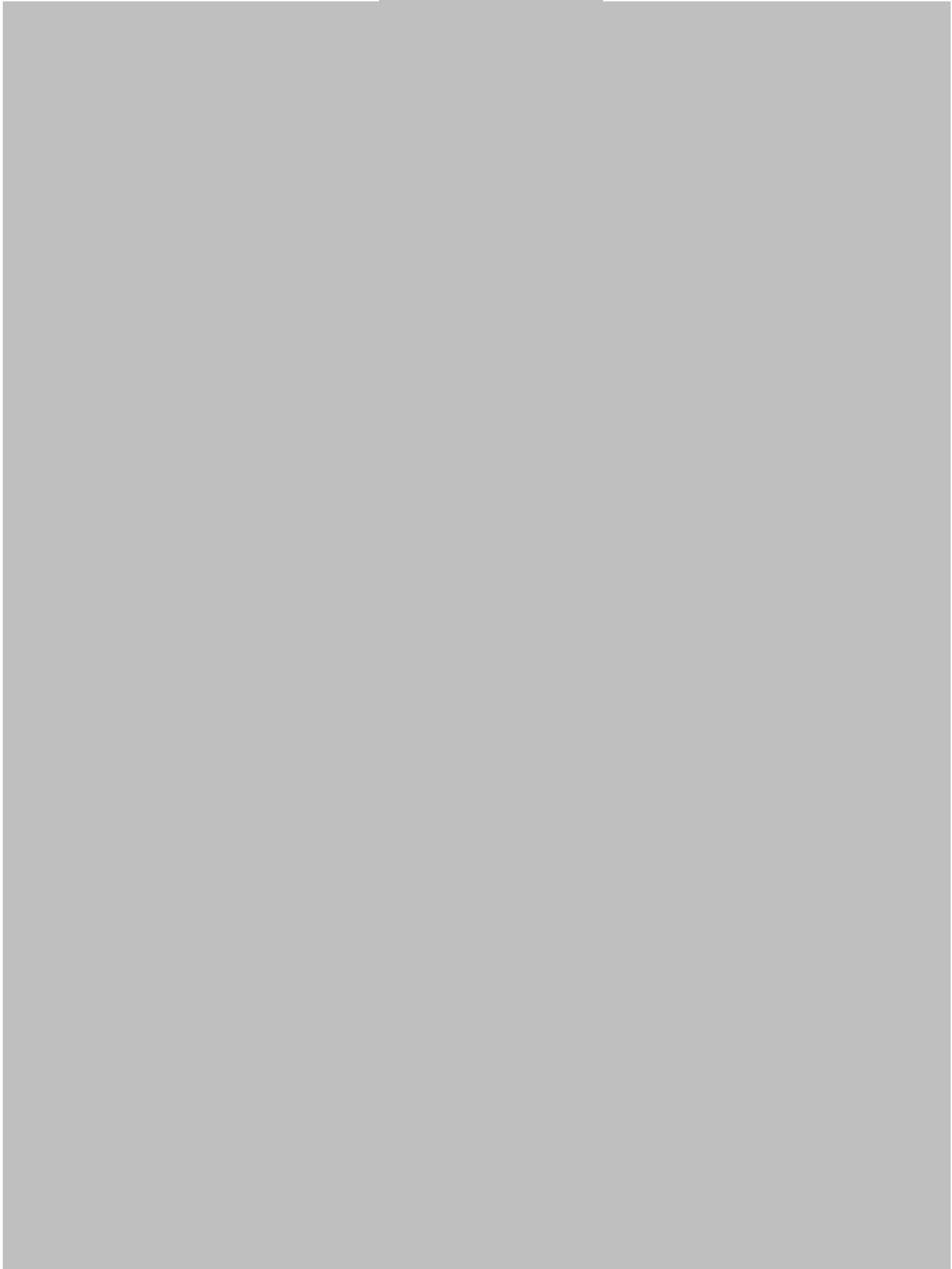






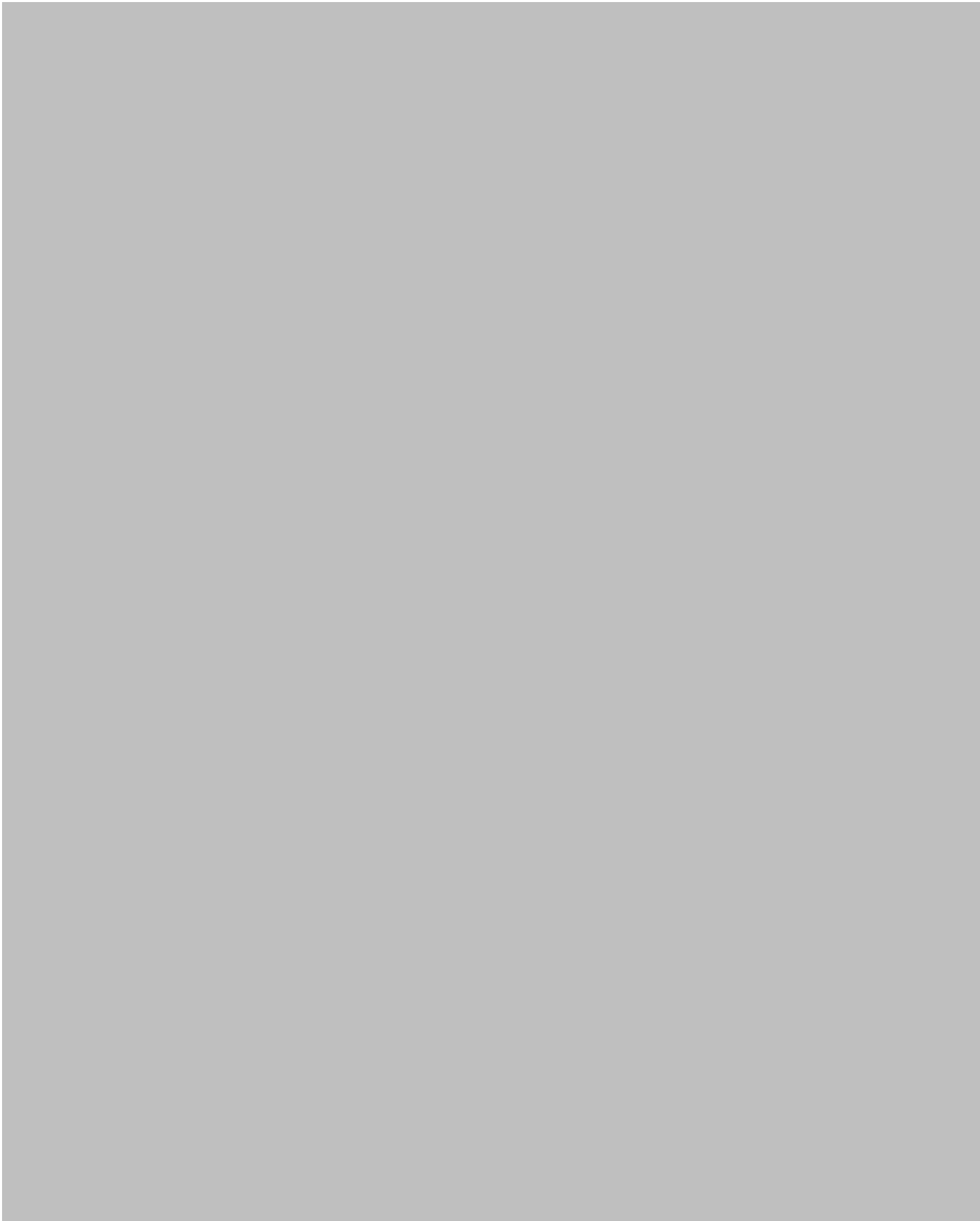




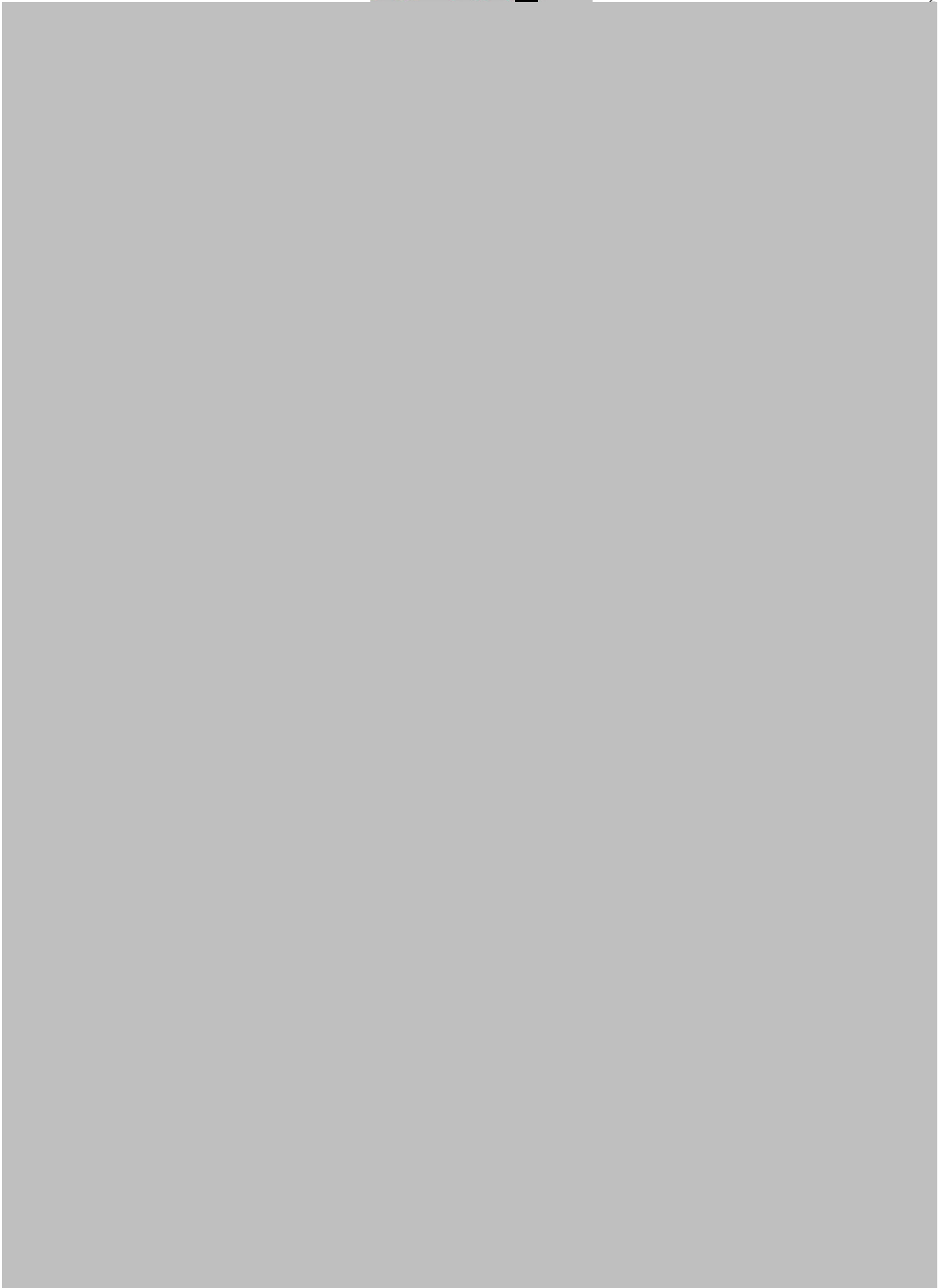


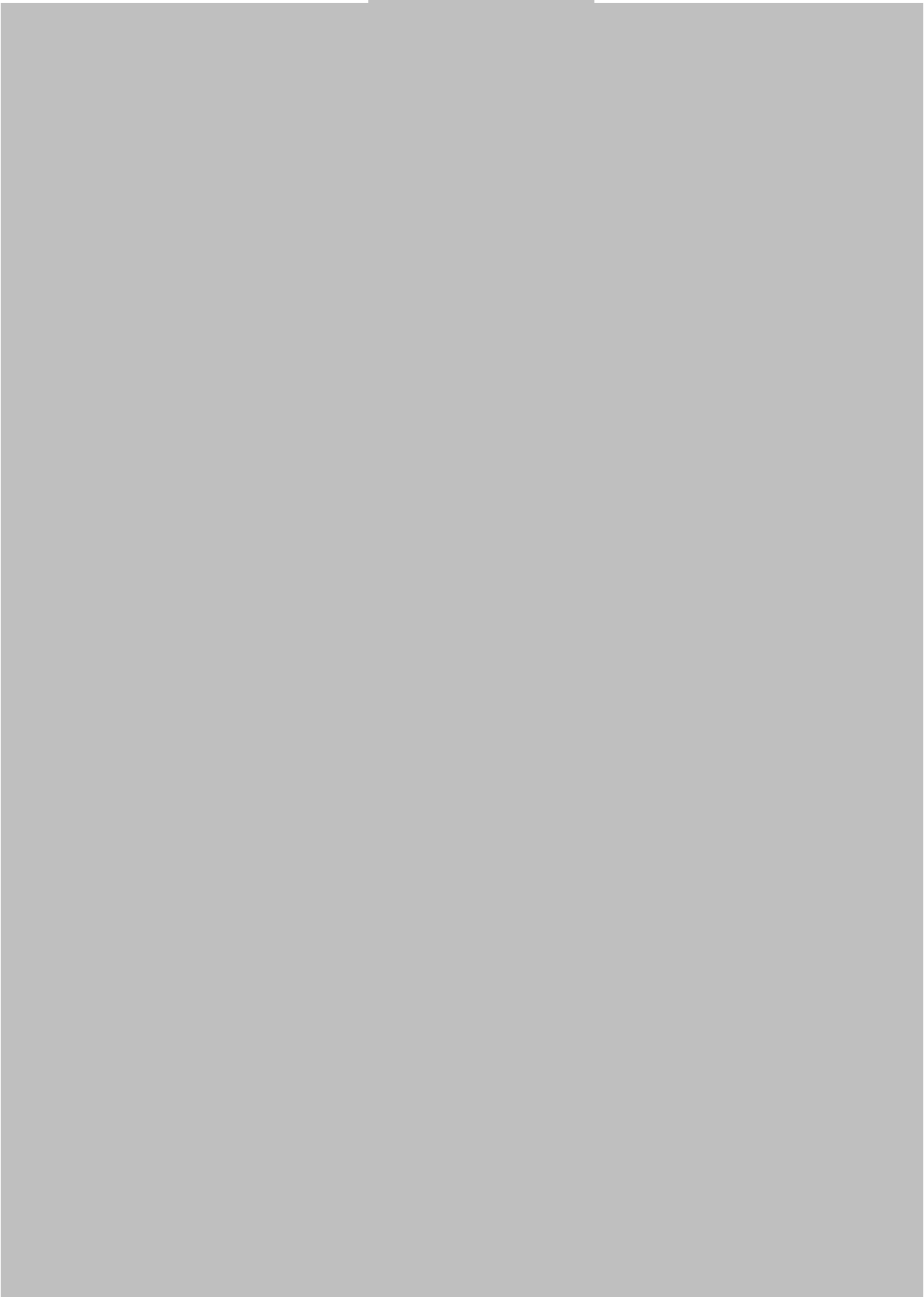








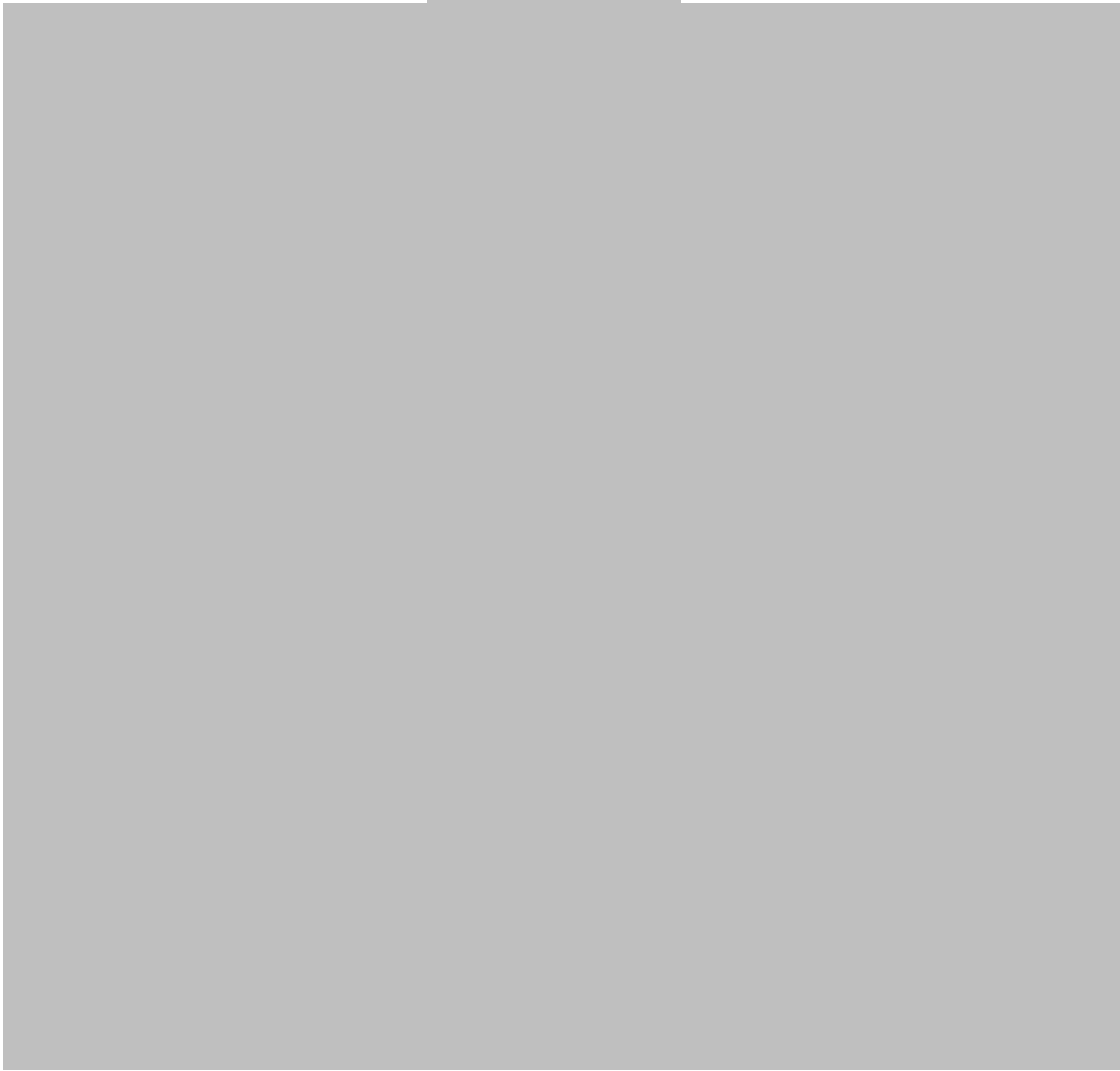






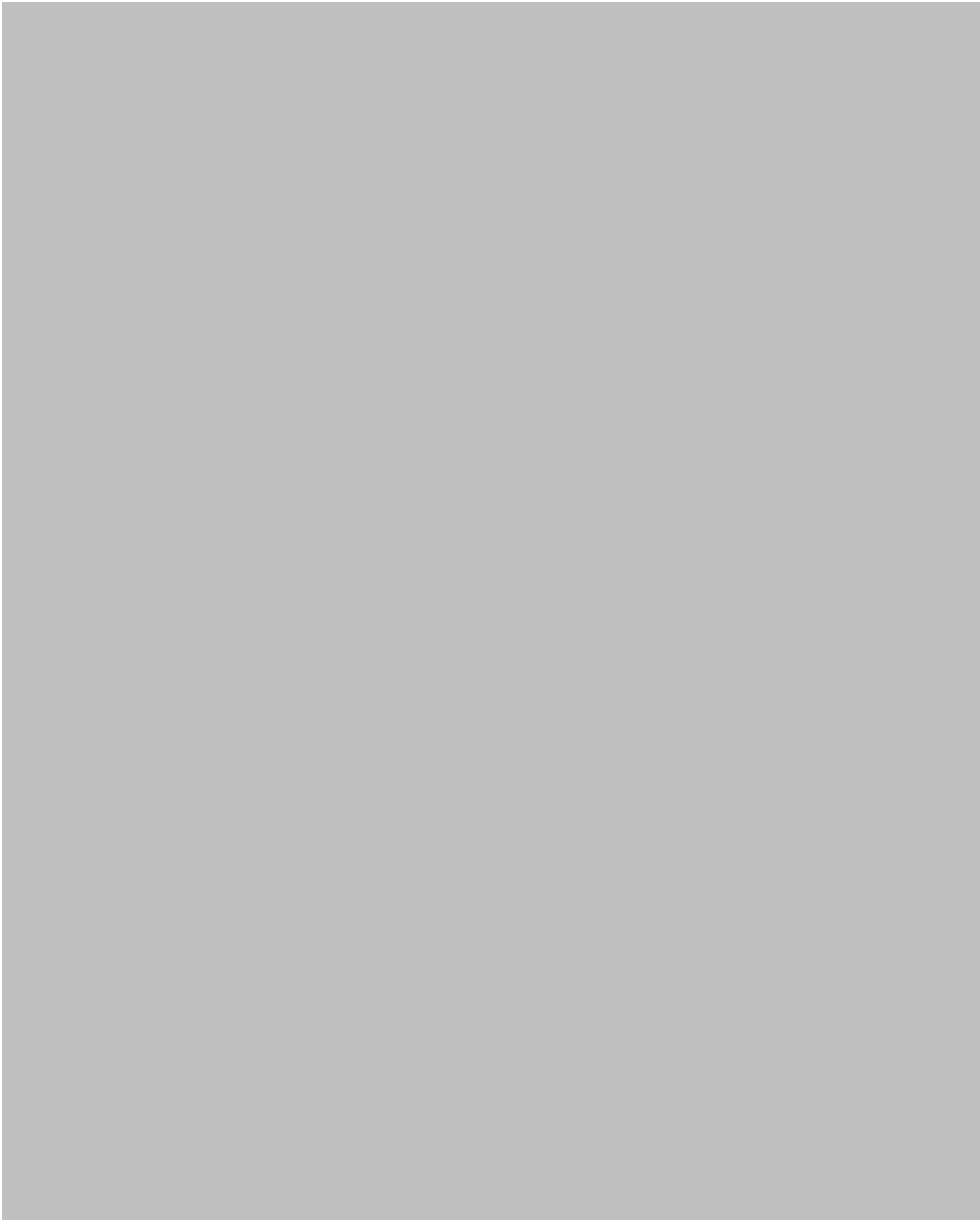




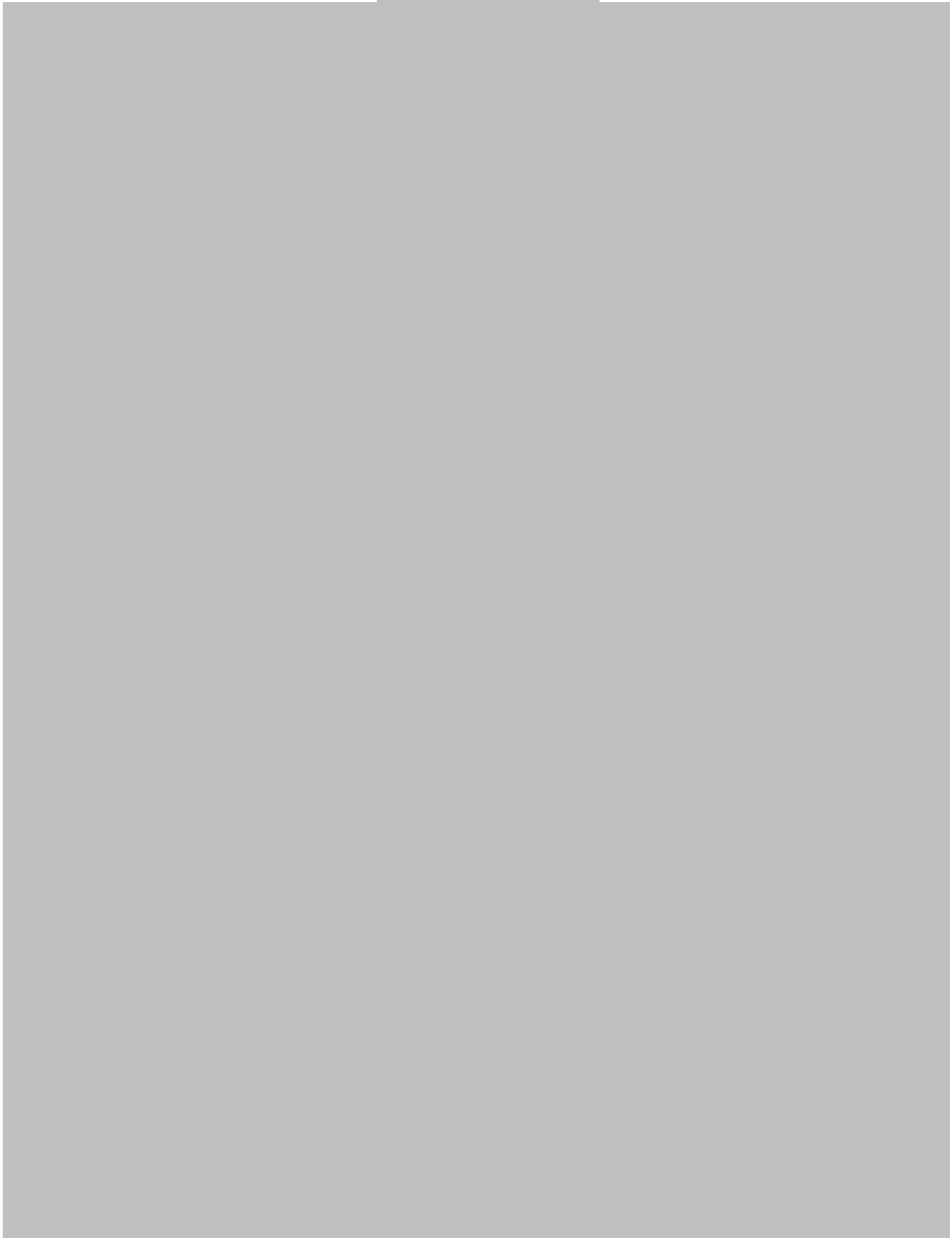


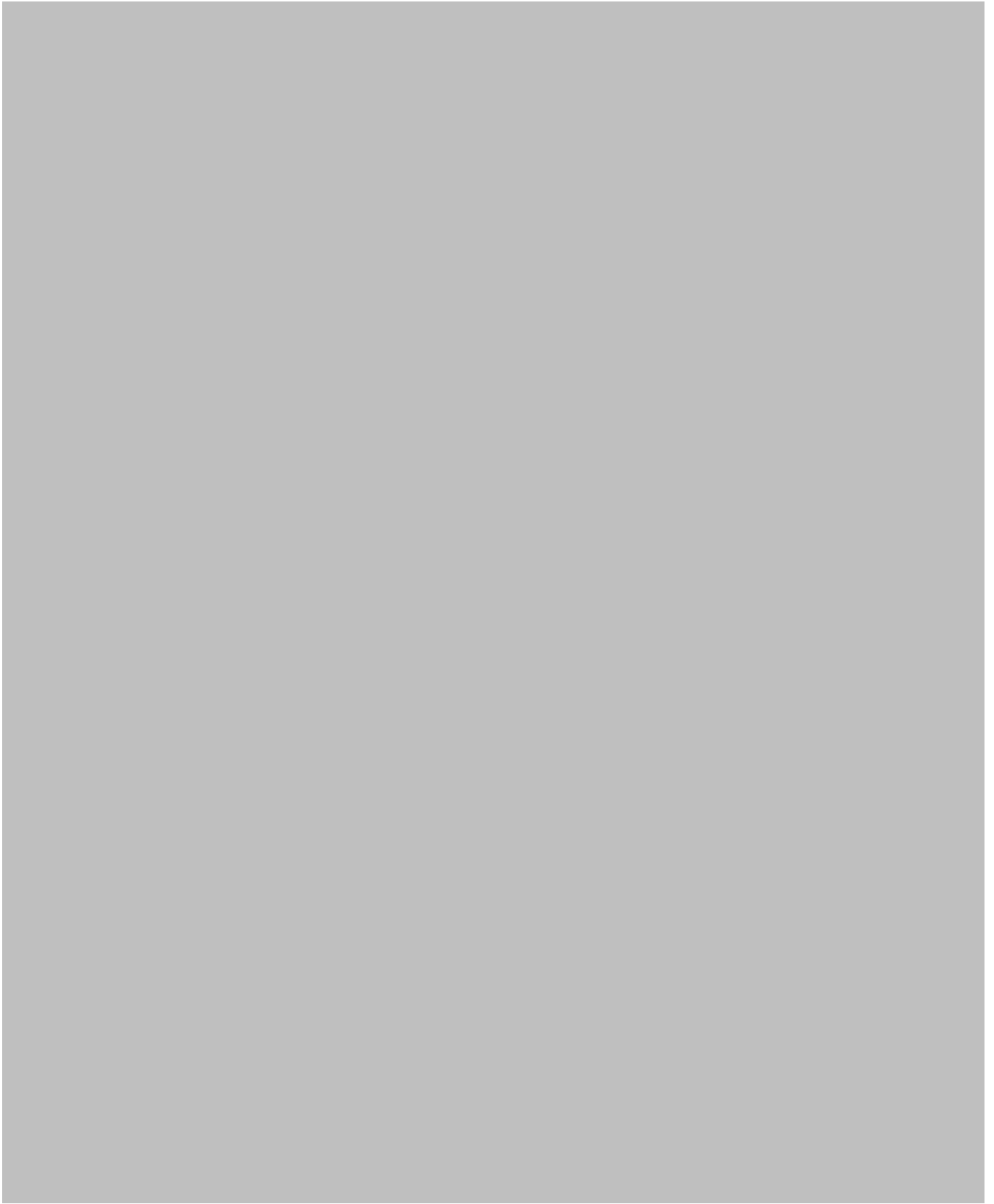






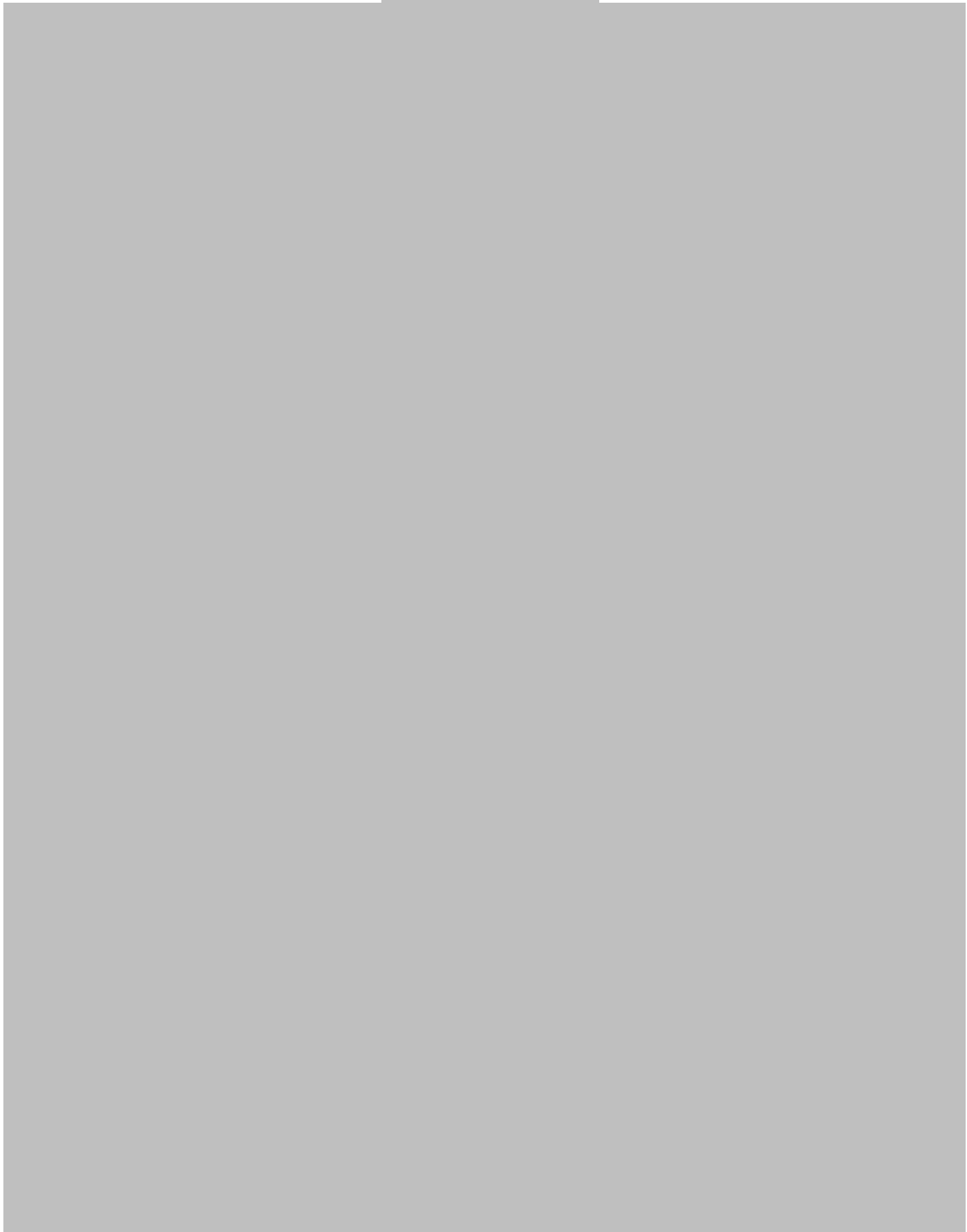










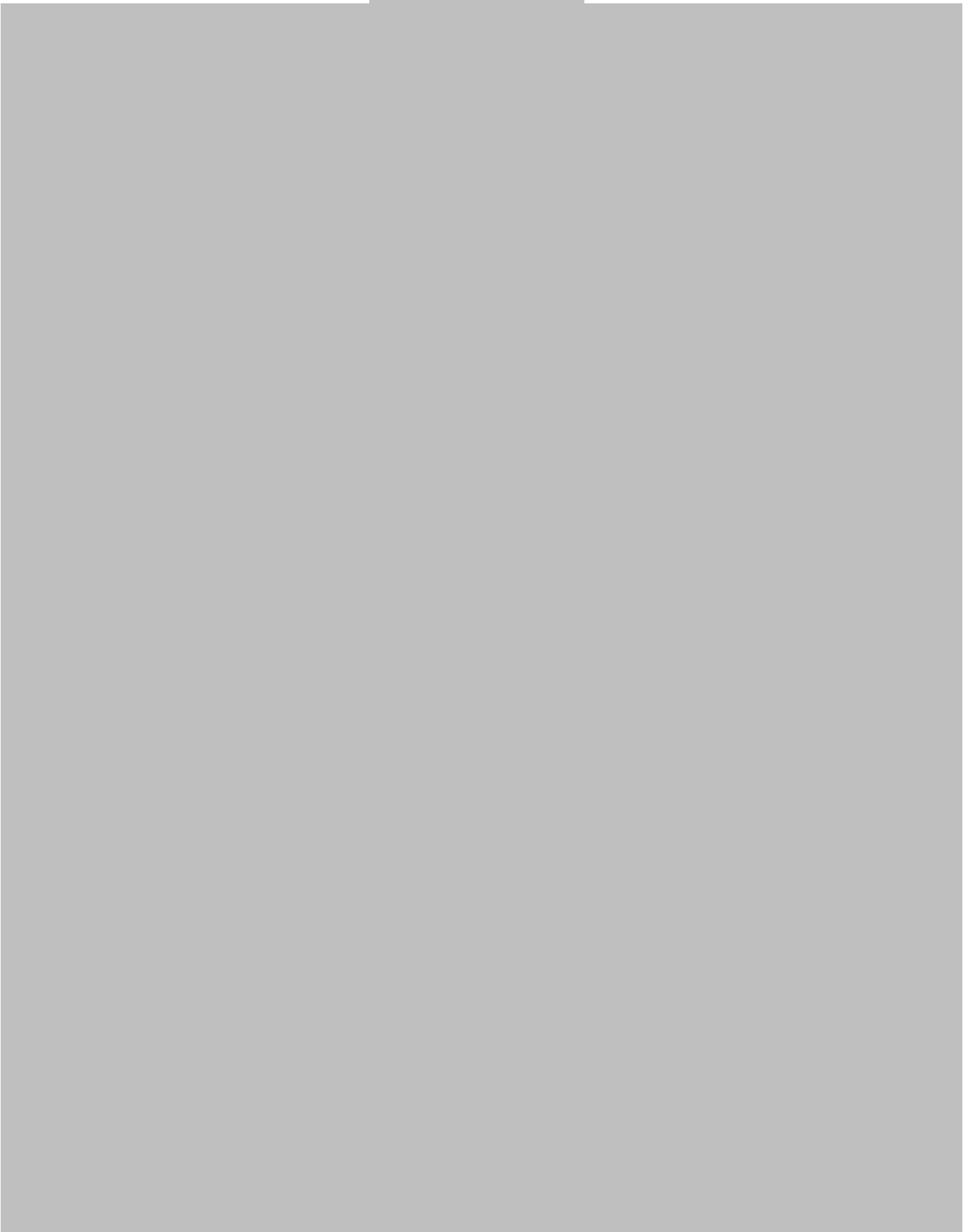


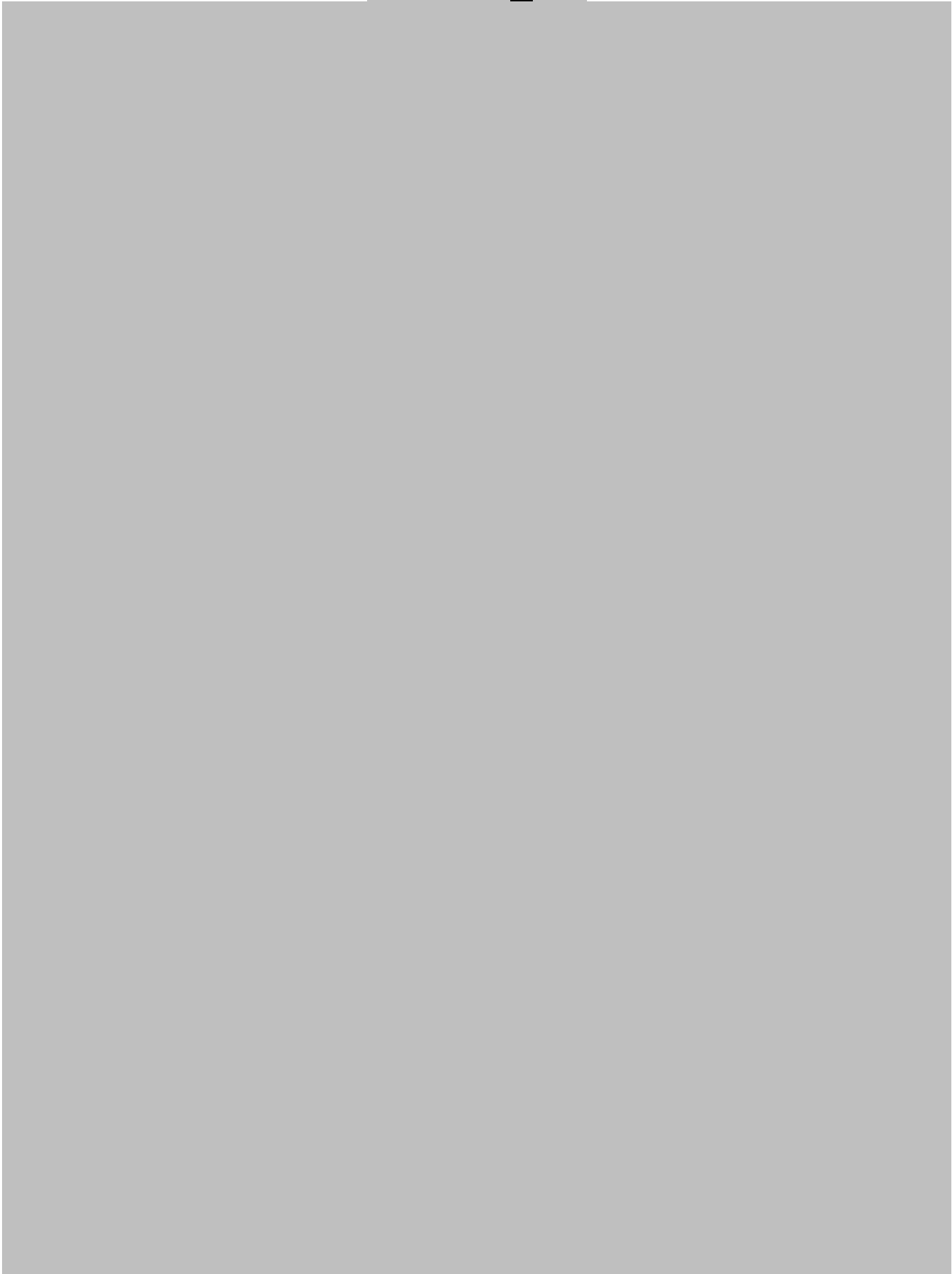




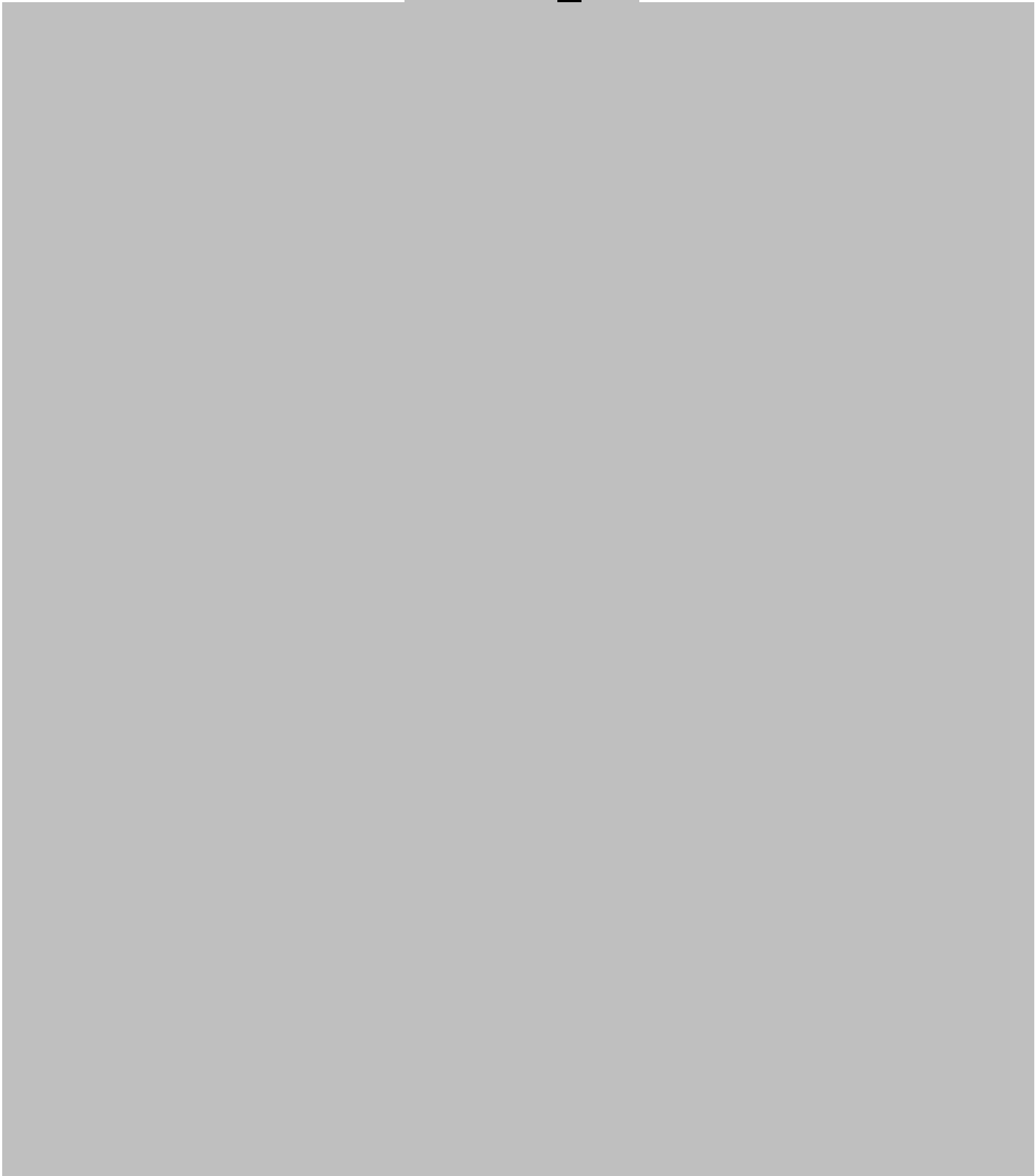










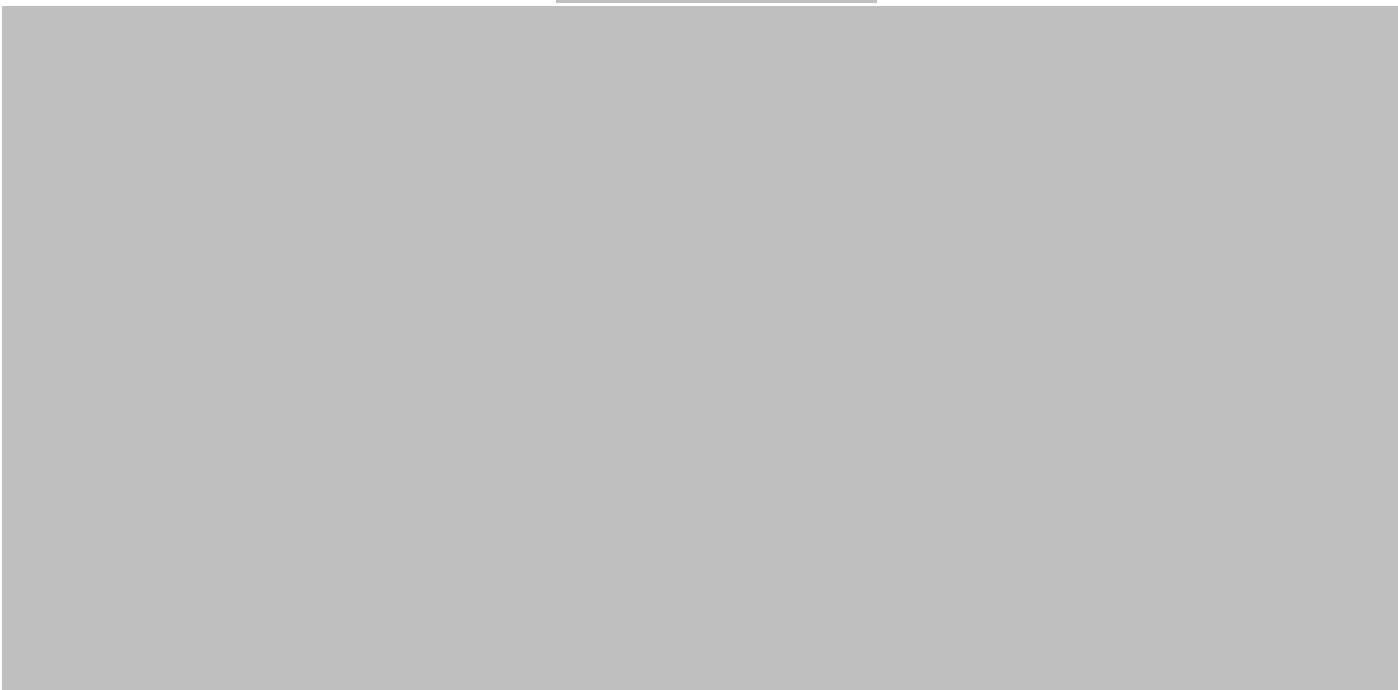


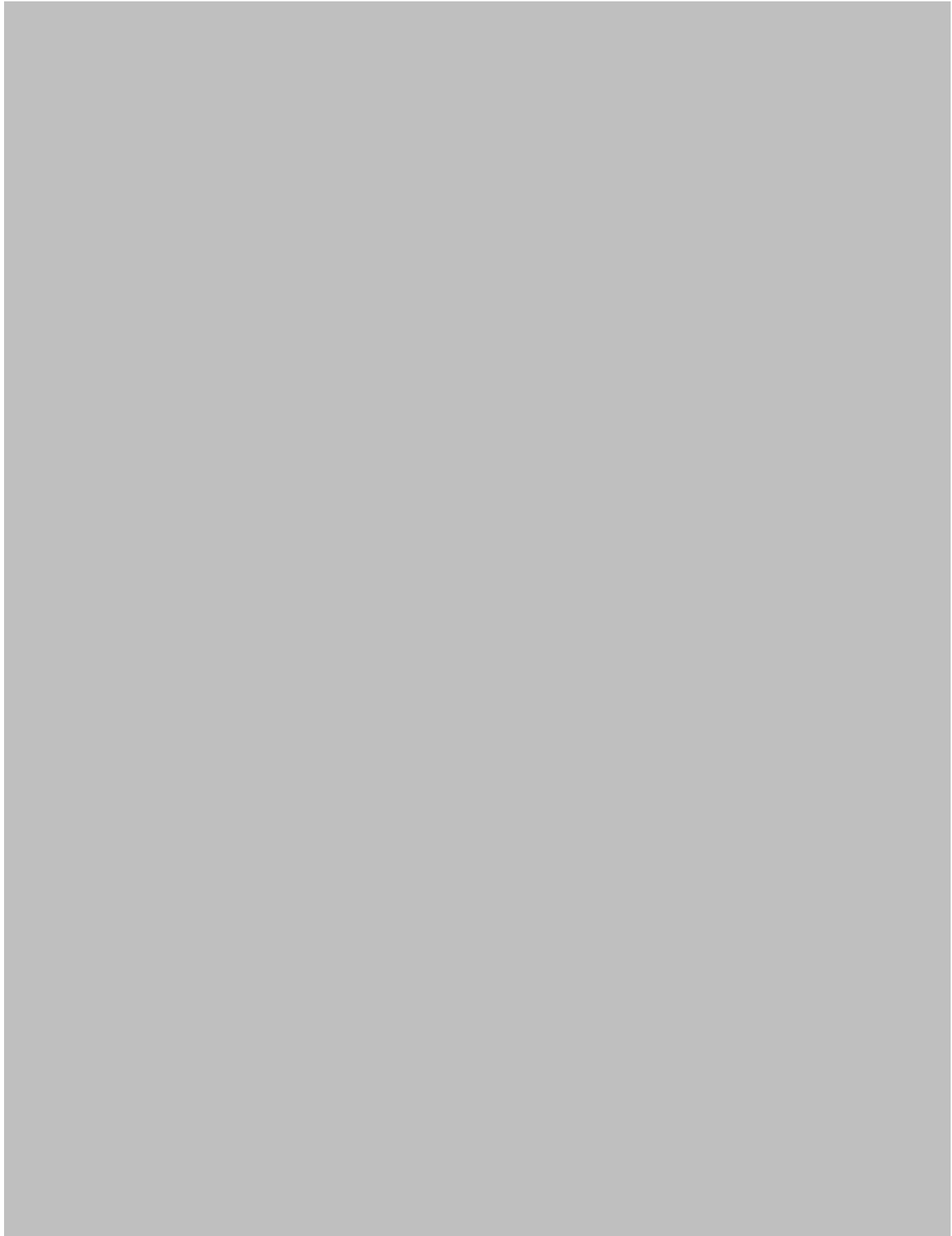


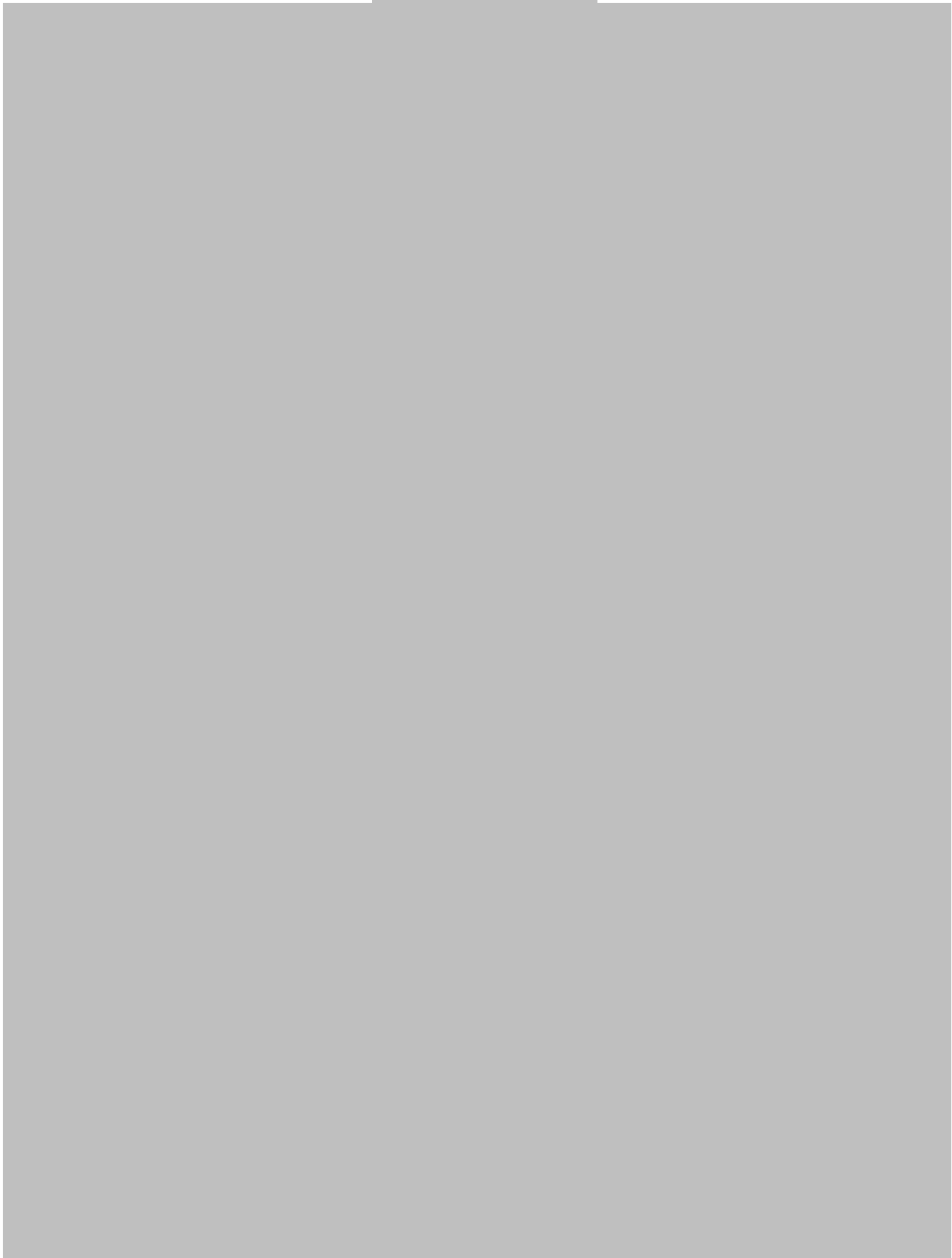


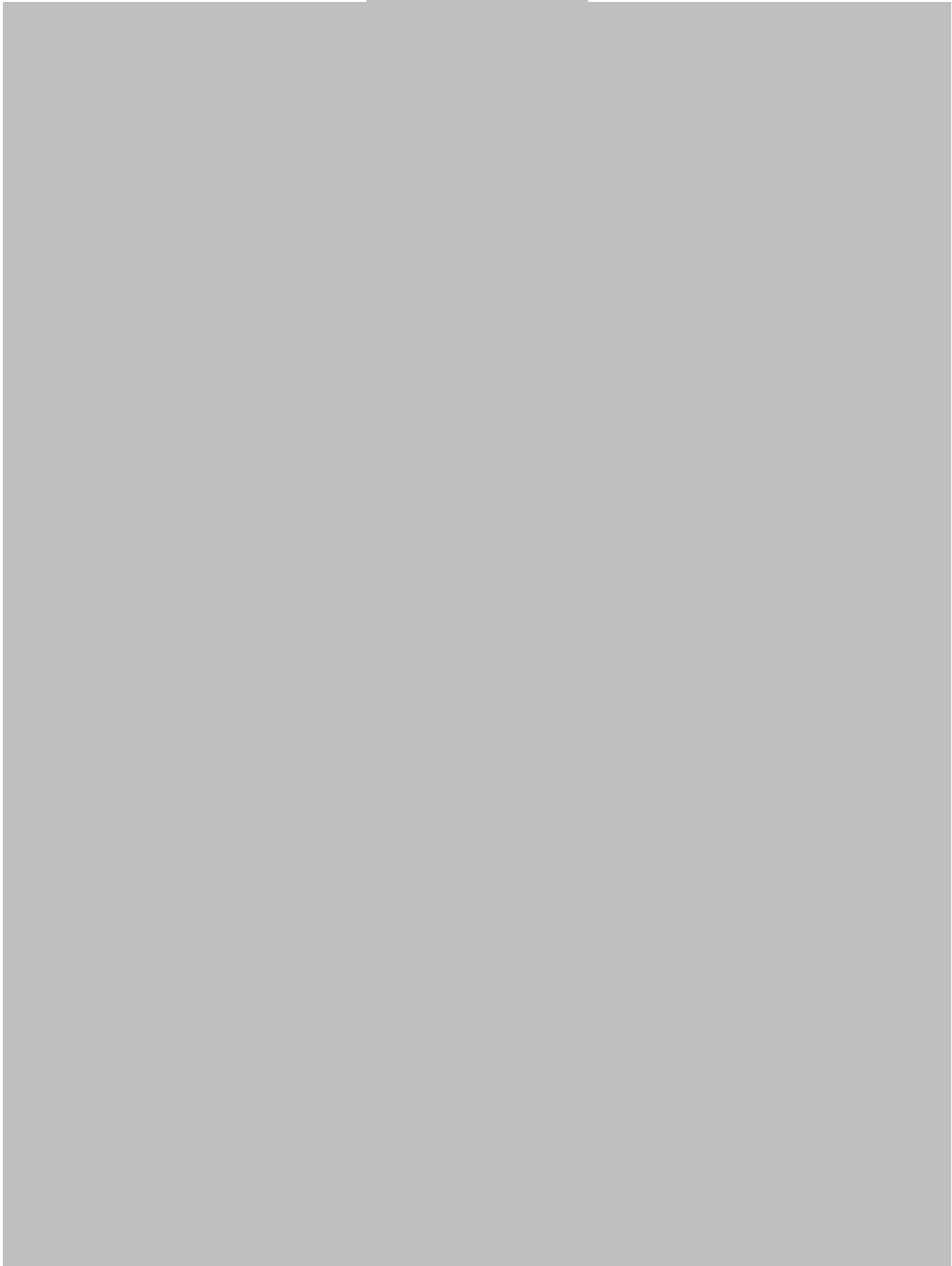


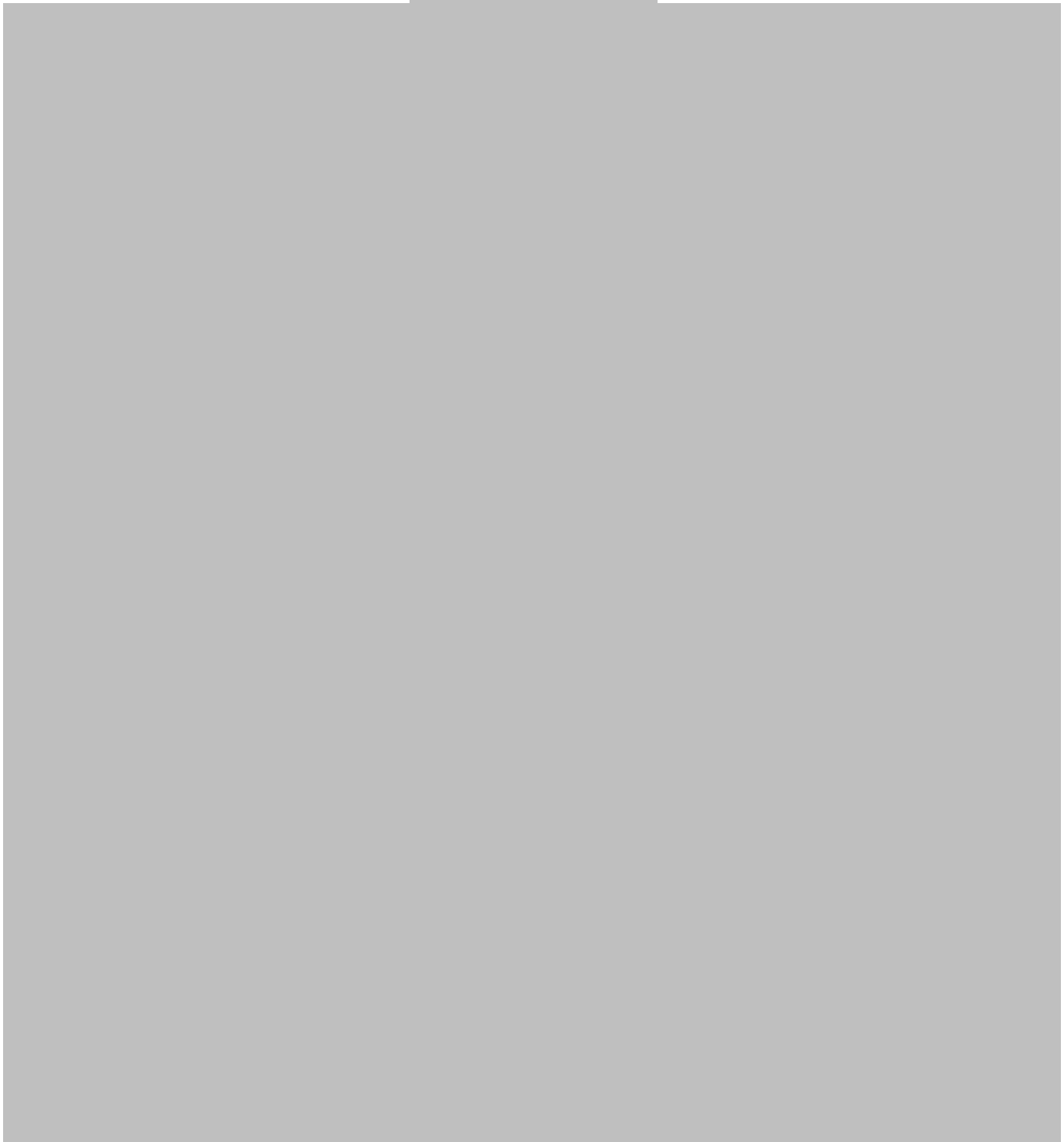










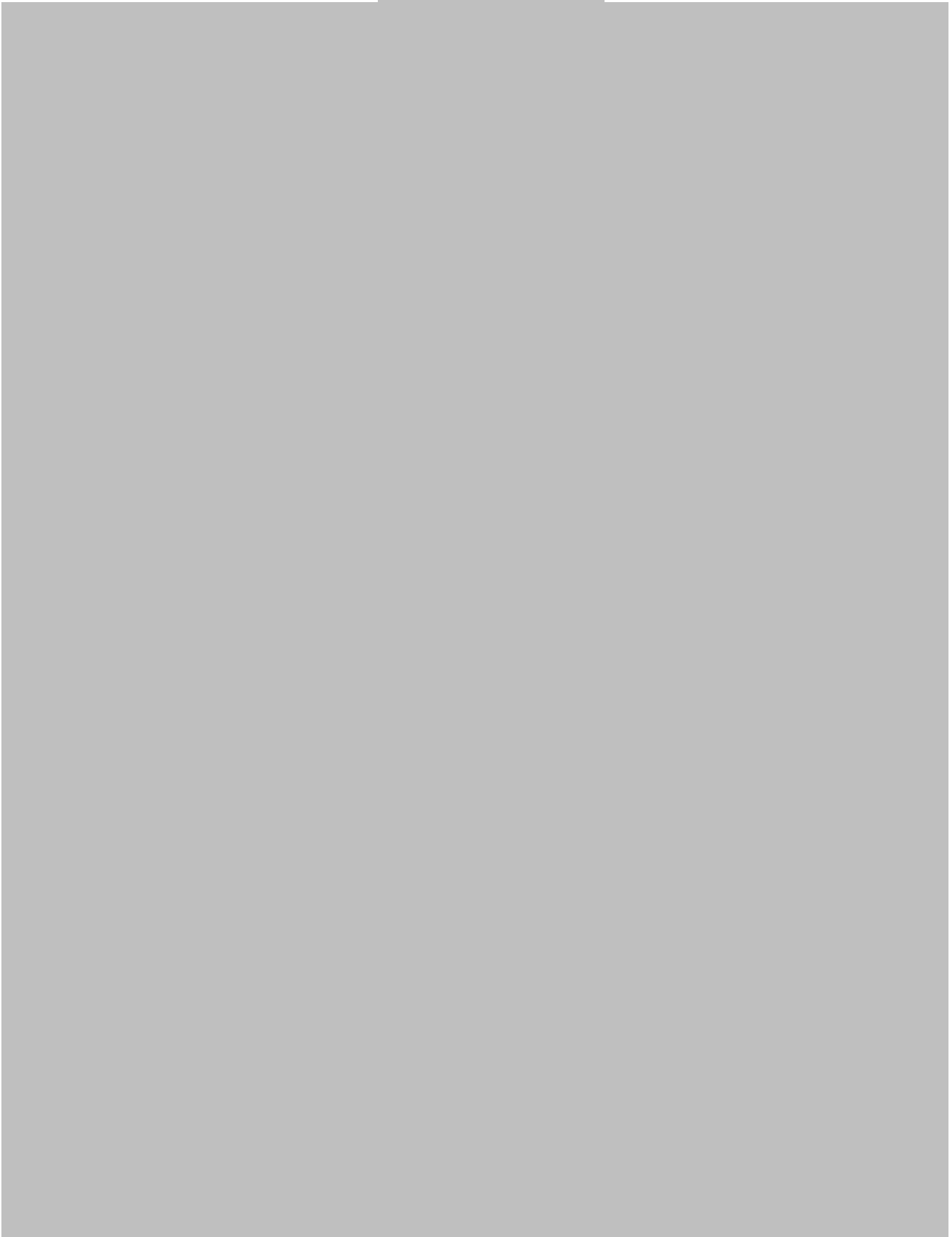










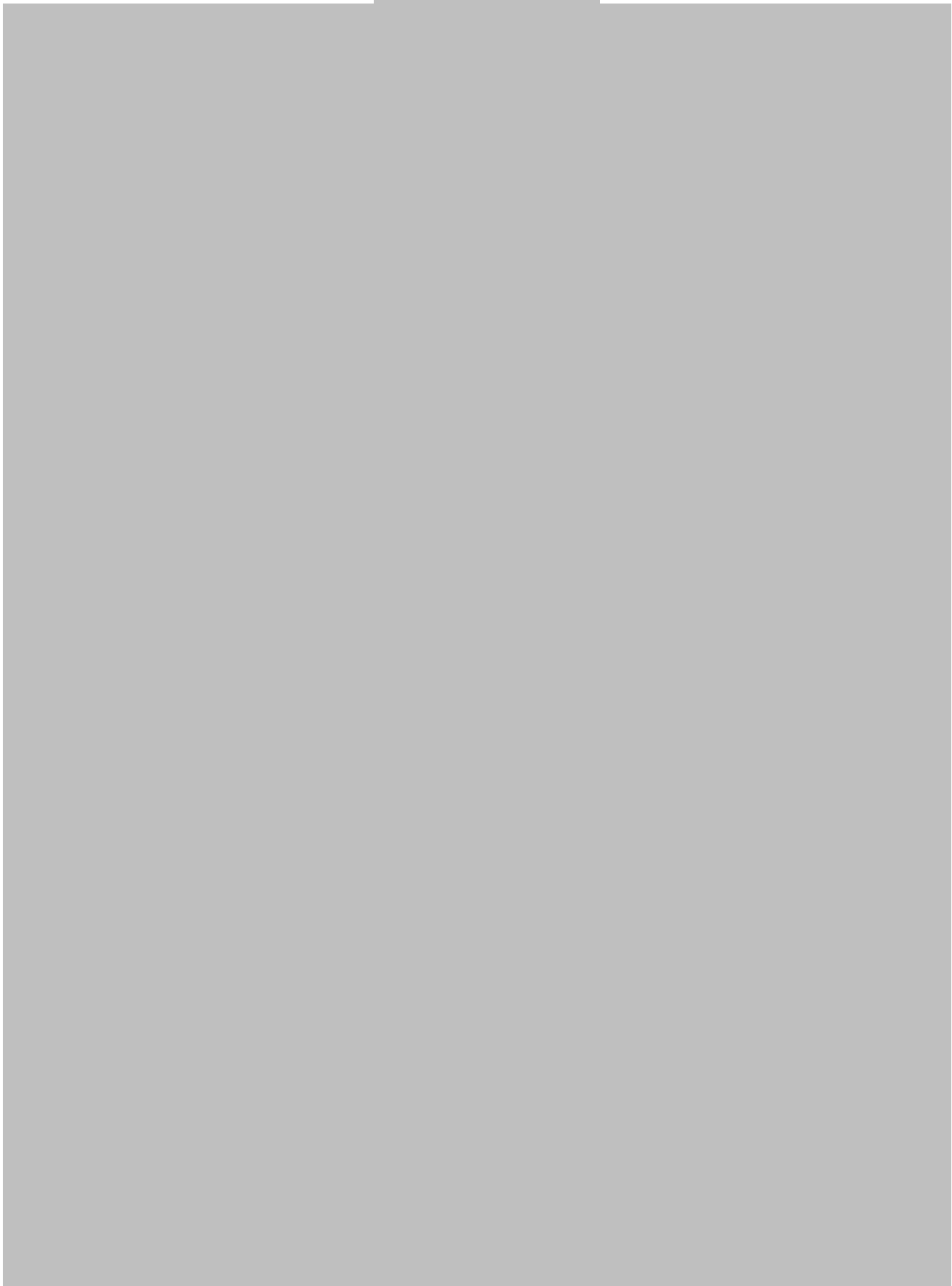












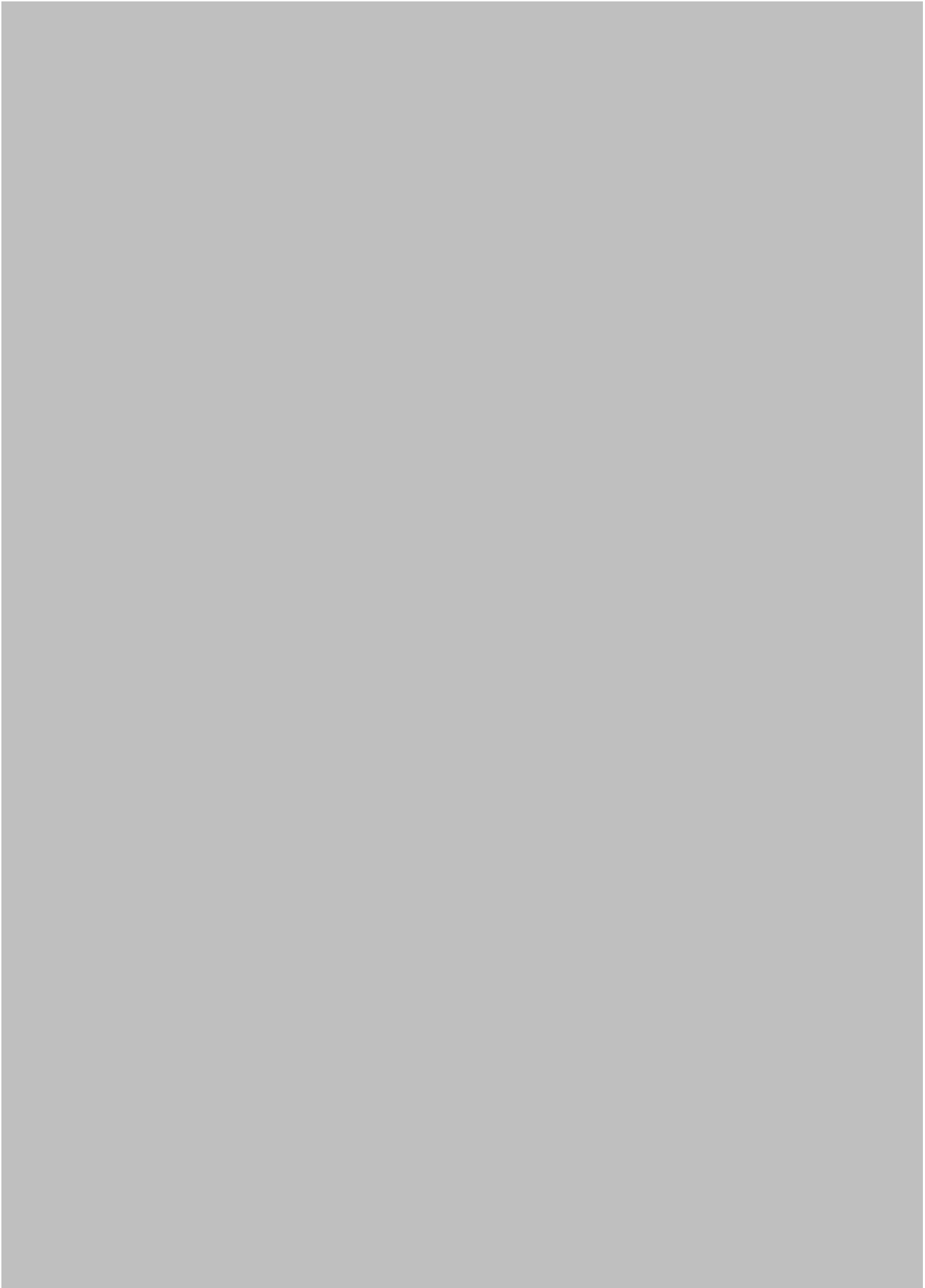










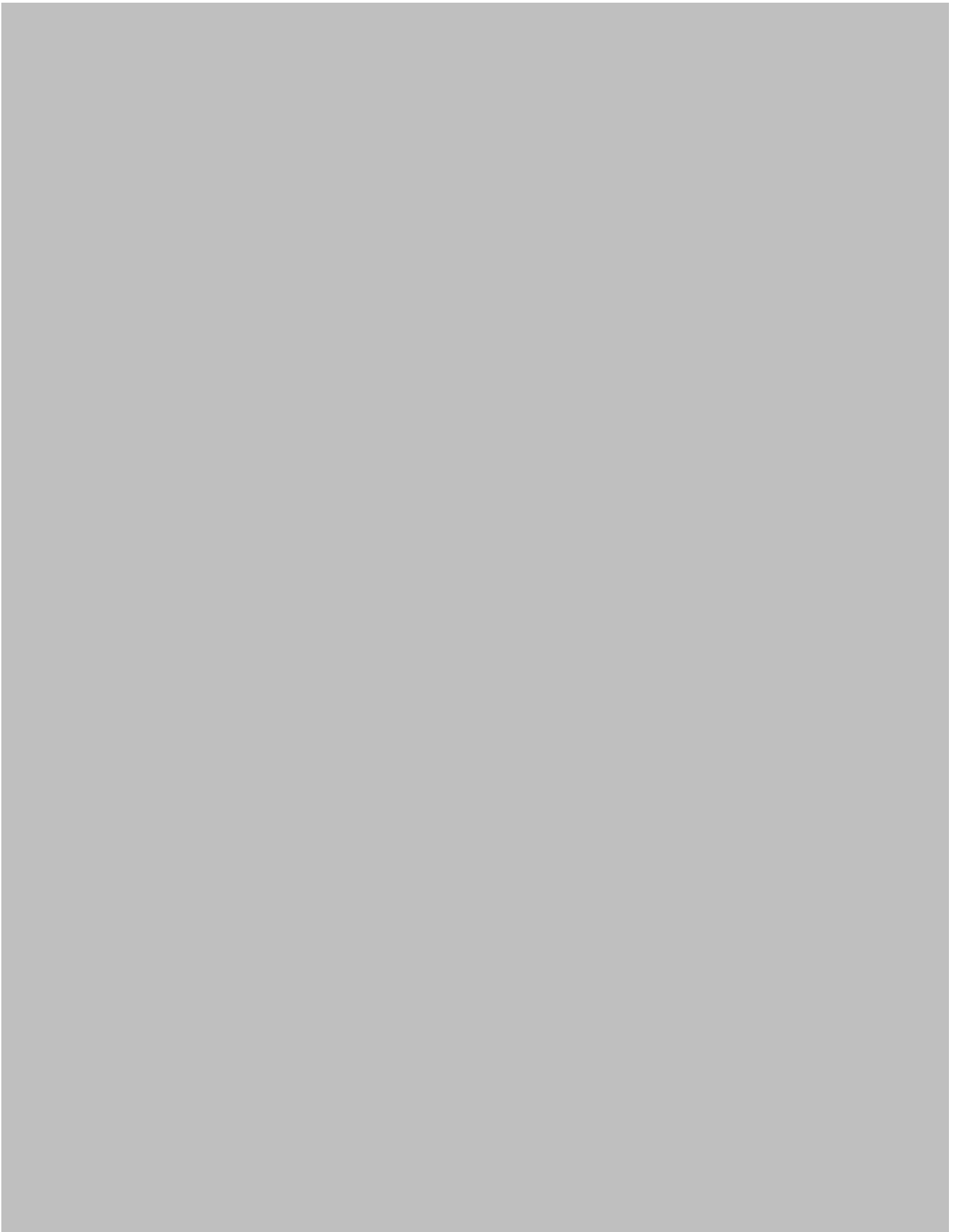




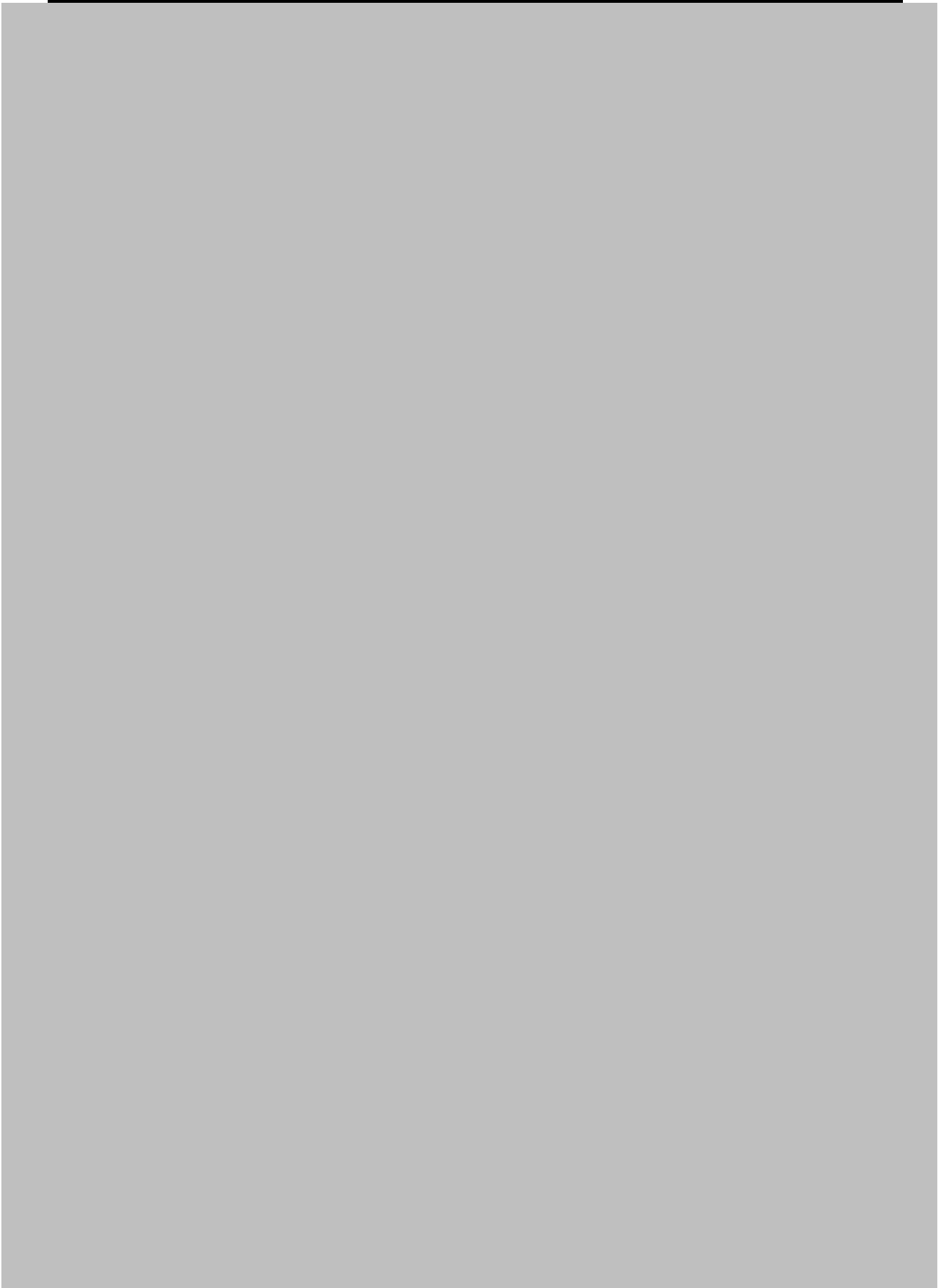


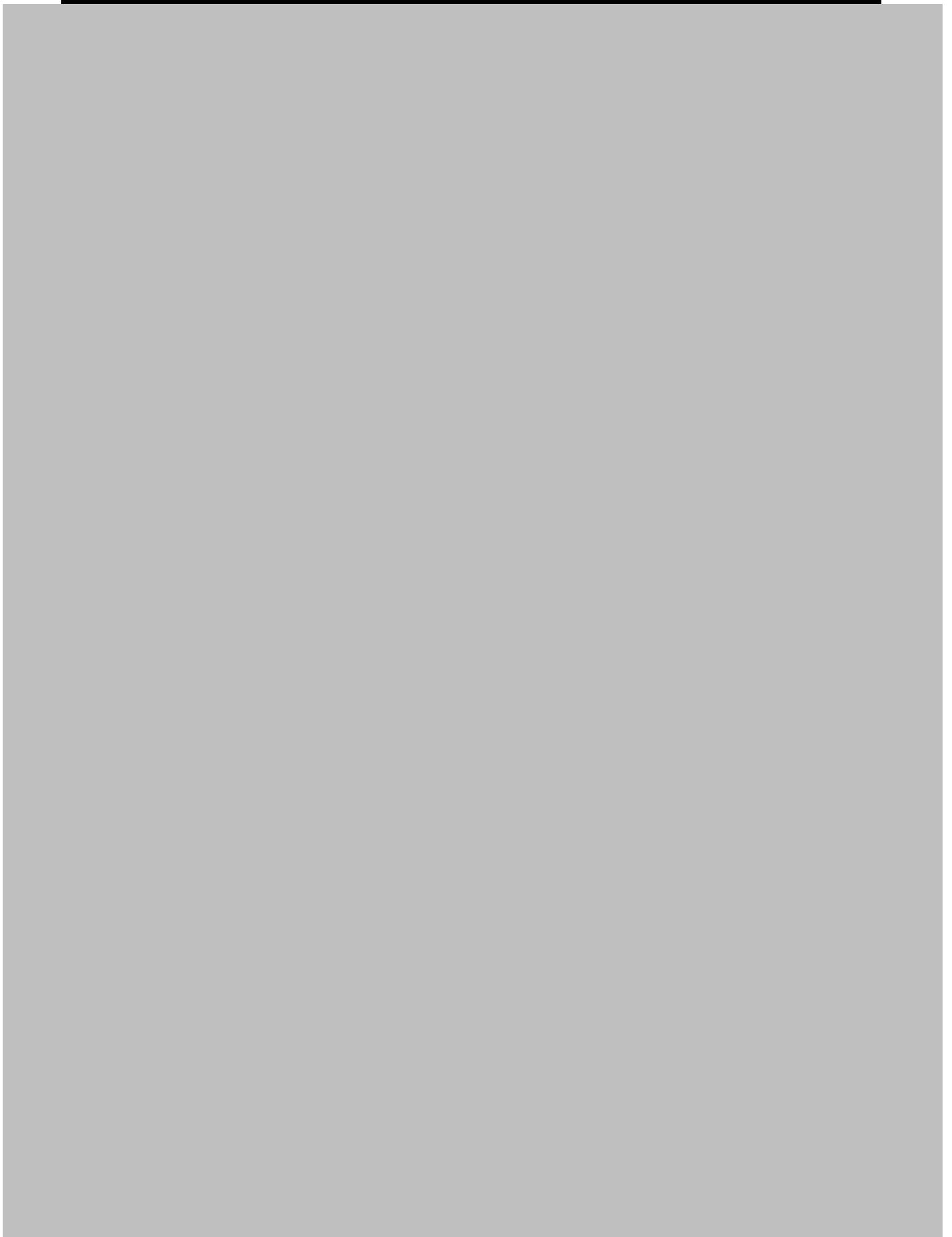


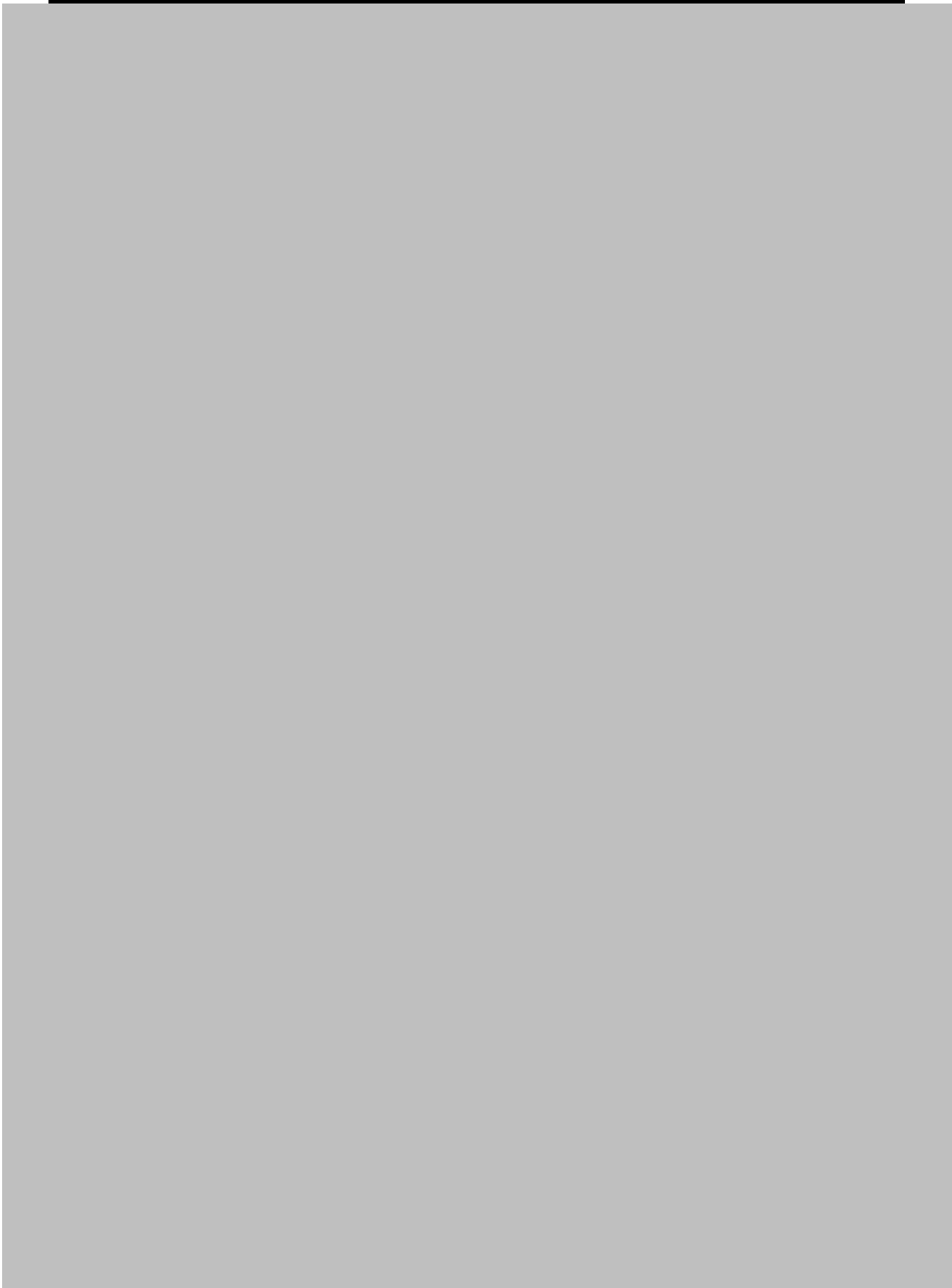


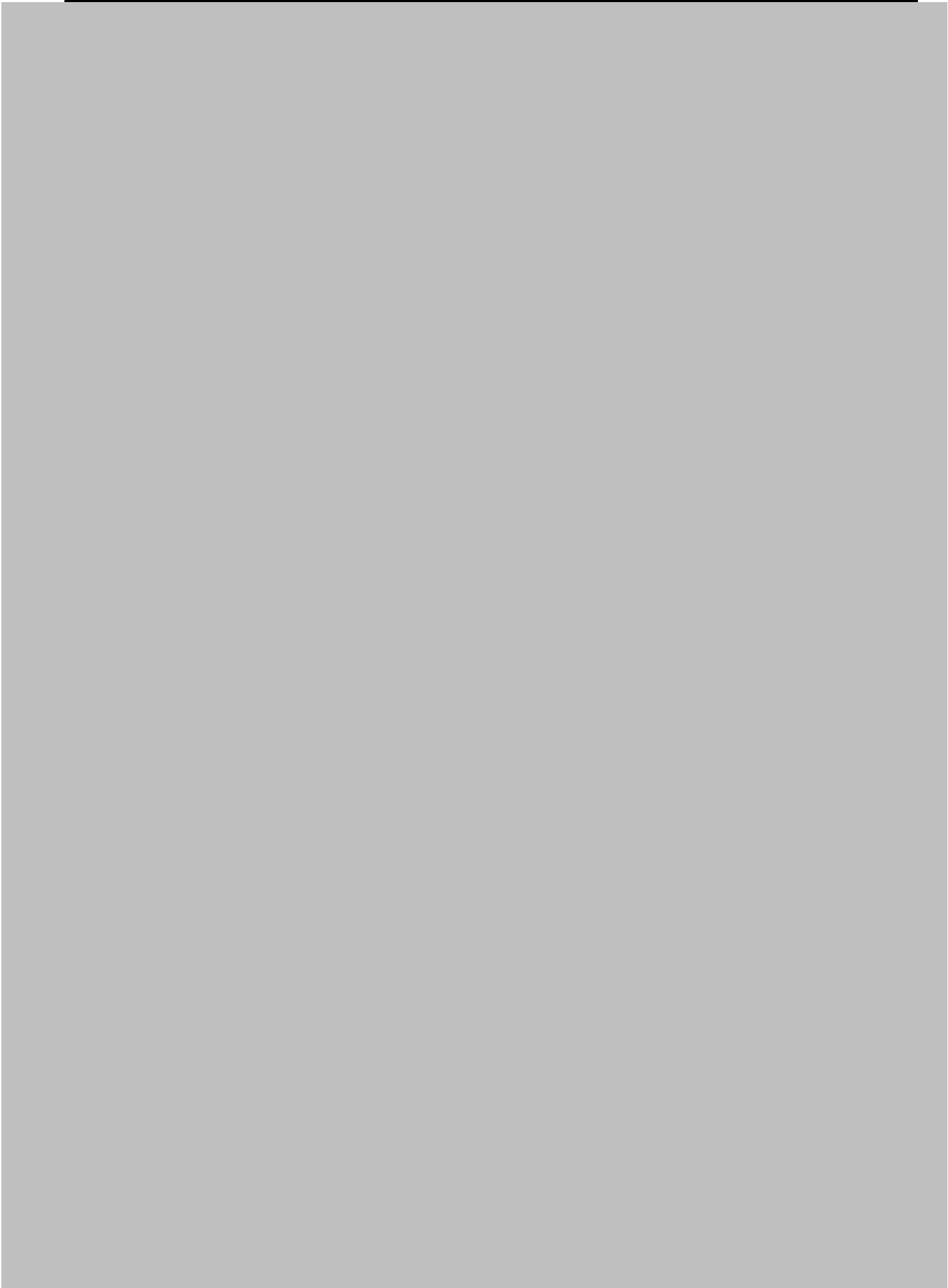


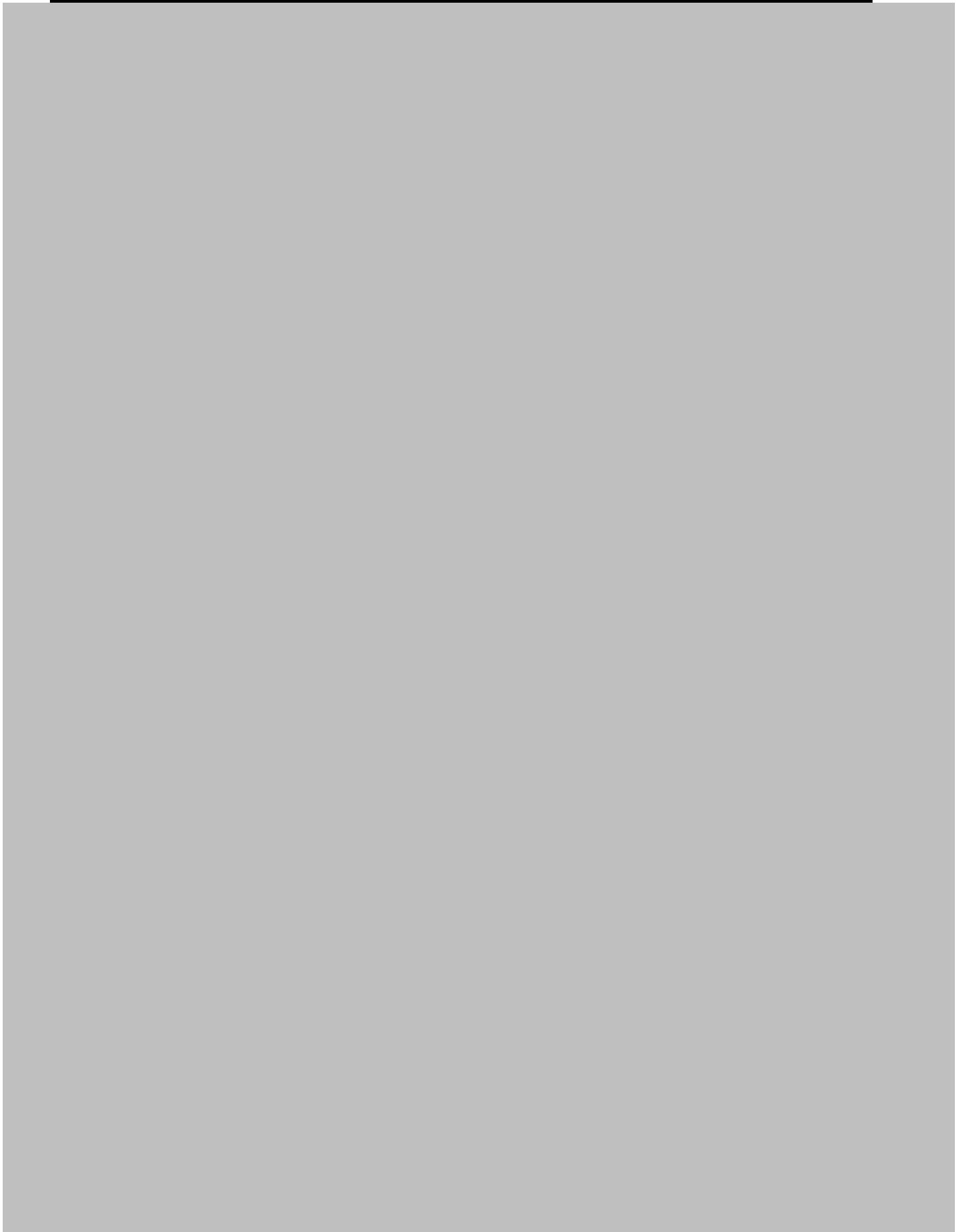


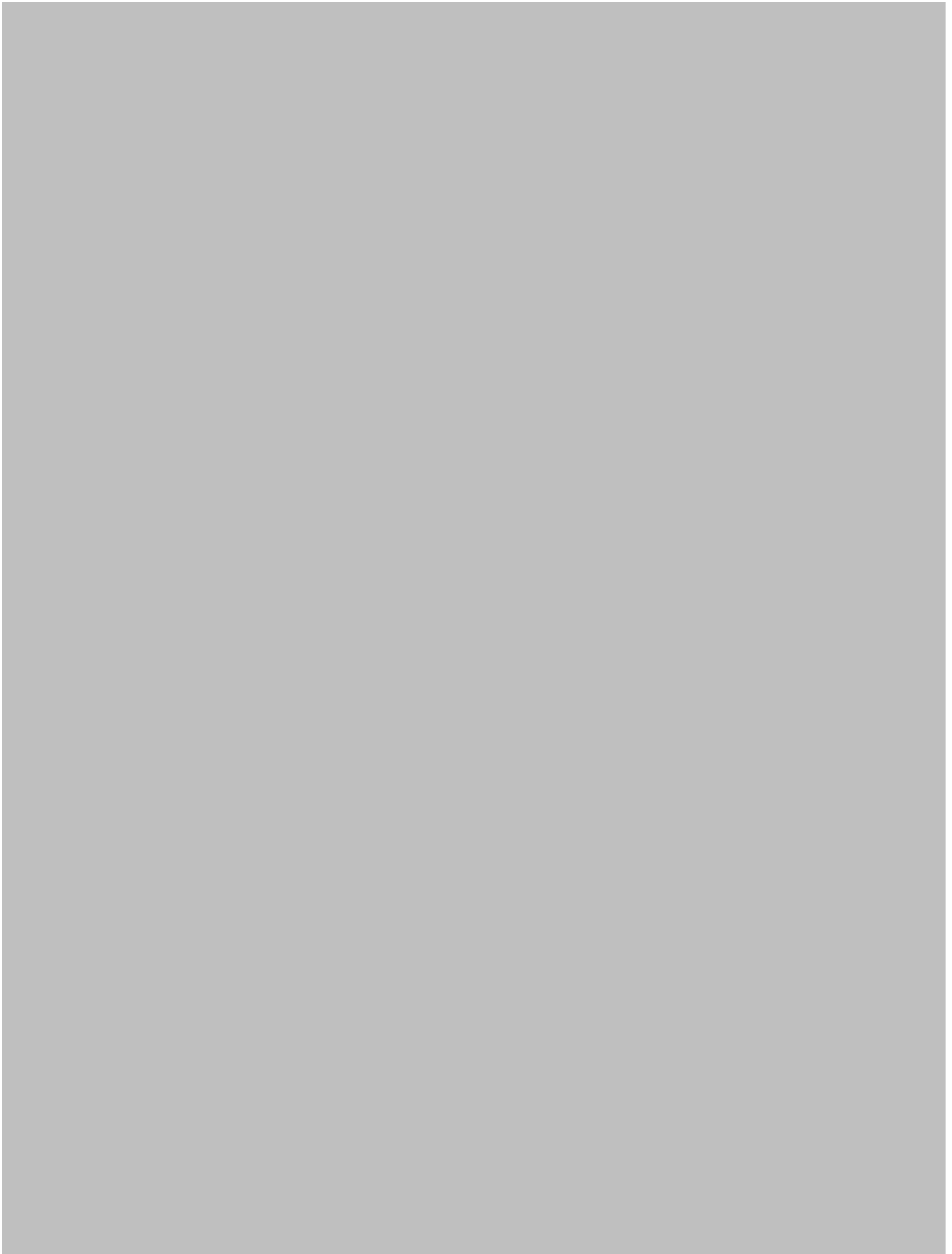




















Form of costs <sup>6</sup>
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1. HP
2. SBGS
3. CDBP-MOI
4. DBAM
5. JRCC
6. SBGSLT
7. GUCI
8. WCO
9. KEMEA
10. CERTH
11. STWS
12. DCD
13. NARDA
14. MILTECH
15. MAG
16. ELI
17. OMST
18. ROB
19. UOULU
20. CENTRIC
21. HEN
22. ISDEFE
Total consortium

	EU contribution		
	Reimbursement rate %	Maximum EU contribution <sup>3</sup>	Maximum grant amount <sup>4</sup>
k		l	m
	100.00	281 250.00	281 250.00
	100.00	55 000.00	55 000.00
	100.00	51 875.00	51 875.00
	100.00	47 562.50	47 562.50
	100.00	145 000.00	145 000.00
	100.00	113 437.50	113 437.50
	100.00	81 250.00	81 250.00
	70.00	47 468.75	47 468.75
	100.00	556 875.00	556 875.00
	100.00	550 625.00	550 625.00
	70.00	466 375.00	466 375.00
	70.00	228 900.00	228 900.00
	70.00	280 000.00	280 000.00
	70.00	271 250.00	271 250.00
	70.00	175 000.00	175 000.00
	70.00	194 884.38	194 884.38
	70.00	174 825.00	174 825.00
	70.00	195 125.00	195 125.00
	100.00	240 000.00	240 000.00
	100.00	289 000.00	289 000.00
	70.00	256 375.00	256 375.00
	70.00	297 500.00	297 500.00
		4 999 578.13	4 999 578.13

<sup>1</sup> See Article 6 fo

<sup>2</sup> Indirect costs al

<sup>3</sup> This is the theoretical amount of EU contribution that the system calculates automatically (by multiplying all the budgeted costs by the reimbursement rate). This theoretical amount is capped by the 'maximum grant amount' (that the Agency decided to grant for the action) (see Article 5.1).

<sup>4</sup> The 'maximum grant amount' is the maximum grant amount decided by the Agency. It normally corresponds to the requested grant, but may be lower.

<sup>5</sup> Depending on its type, this specific cost category will or will not cover indirect costs. Specific unit costs that include indirect costs are: costs for energy efficiency measures in buildings, access costs for providing trans-national access to research infrastructure and costs for clinical studies.

<sup>6</sup> See Article 5 for the forms of costs.

<sup>7</sup> Unit : hours worked on the action; costs per unit (hourly rate) : calculated according to the beneficiary's usual accounting practice.

<sup>8</sup> See Annex 2a 'Additional information on the estimated budget' for the details (costs per hour (hourly rate)).

<sup>9</sup> Unit and costs per unit : calculated according to the beneficiary's usual accounting practices.

<sup>10</sup> Flat rate : 25% of eligible direct costs, from which are excluded direct costs of subcontracting.

<sup>11</sup> See Annex 2a 'Additional information on the estimated budget' for the details (units, costs per unit).

operating grant during the action's duration cannot declare indi

## ESTIMATED BUDGET FOR THE ACTION

 Associated with document Ref. Ares(2021)6427459 - 20/10/2021

<sup>12</sup> See Annex 2a 'Additional information on the estimated budget' for the details (units, costs per unit, estimated number of units, etc).

<sup>13</sup> Only specific unit costs that do not include indirect costs.

<sup>14</sup> See Article 9 for beneficiaries not receiving funding.

<sup>15</sup> Only for linked third parties that receive funding.

## ANNEX 2a

### ADDITIONAL INFORMATION ON THE ESTIMATED BUDGET

- Instructions and footnotes in blue will not appear in the text generated by the IT system (since they are internal instructions only).
- For options [in square brackets]: the applicable option will be chosen by the IT system. Options not chosen will automatically not appear.
- For fields in [grey in square brackets] (even if they are part of an option as specified in the previous item): IT system will enter the appropriate data.

**⚠ Transitory period:** Until SyGMA fully supports Annex 2a, you must prepare it manually (using this template by choosing and deleting the options/entering the appropriate data). For the 'unit cost tables': either fill them out manually or use currently existing tables from Annex 1 or the proposal. The document can then be uploaded in SyGMA and attached to the grant agreement.

#### Unit cost for SME owners/natural beneficiaries without salary

##### **1. Costs for a [SME owner]/beneficiary that is a natural person/ not receiving a salary**

Units: hours worked on the action

Amount per unit ('hourly rate'): calculated according to the following formula:

{the monthly living allowance for researchers in MSCA-IF actions / 143 hours}  
multiplied by  
{country-specific correction coefficient of the country where the beneficiary is established}

The monthly living allowance and the country-specific correction coefficients are set out in the Work Programme (section 3 MSCA) in force at the time of the call:

- for calls *before* Work Programme 2018-2020:
  - for the monthly living allowance: **EUR 4 650**
  - for the country-specific correction coefficients: see Work Programme 2014-2015 and Work Programme 2016-2017 (available on the [Participant Portal Reference Documents](#) page)
- for calls *under* Work Programme 2018-2020:
  - for the monthly living allowance: **EUR 4 880**
  - for the country-specific correction coefficients: see Work Programme 2018-2020 (available on the [Participant Portal Reference Documents](#) page)

**[additional OPTION for beneficiaries/linked third parties that have opted to use the unit cost (in the proposal/with an amendment):** For the following beneficiaries/linked third parties, the amounts per unit (hourly rate) are fixed as follows:

- beneficiary/linked third party [short name]: EUR [insert amount]
  - beneficiary/linked third party [short name]: EUR [insert amount]
- [same for other beneficiaries/linked third parties, if necessary] /

Estimated number of units: see Annex 2

## **Energy efficiency measures unit cost**

### **2. Costs for energy efficiency measures in buildings**

Unit: m<sup>2</sup> of eligible 'conditioned' (i.e. built or refurbished) floor area

Amount per unit\*: see (for each beneficiary/linked third party and BEST table) the 'unit cost table' attached

\* Amount calculated as follows:  
{EUR 0.1 x estimated total kWh saved per m<sup>2</sup> per year x 10}

Estimated number of units: see (for each beneficiary/linked third party and BEST table) the 'unit cost table' attached

Unit cost table (energy efficiency measures unit cost)<sup>1</sup>

<b>Short name beneficiary/linked third party</b>	<b>BEST No</b>	<b>Amount per unit</b>	<b>Estimated No of units</b>	<b>Total unit cost (cost per unit x estimated no of units)</b>

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<sup>1</sup> Data from the 'building energy specification table (BEST)' that is part of the proposal and Annex 1.

**Research infrastructure unit cost**

**3. Access costs for providing trans-national access to research infrastructure**

Units<sup>2</sup>: see (for each access provider and installation) the ‘unit cost table’ attached

Amount per unit<sup>\*</sup>: see (for each access provider and installation) the ‘unit cost table’ attached

\* Amount calculated as follows:

$$\frac{\text{average annual total access cost to the installation (over past two years}^3)}{\text{average annual total quantity of access to the installation (over past two years}^4)}$$

Estimated number of units: see (for each access provider and installation) the ‘unit cost table’ attached

Unit cost table (access to research infrastructure unit cost)<sup>5</sup>

Short name access provider	Short name infrastructure	Installation		Unit of access	Amount per unit	Estimated No of units	Total unit cost (cost per unit x estimated no of units)
		No	Short name				

**Clinical studies unit cost**

**4. Costs for clinical studies**

Units: patients/subjects that participate in the clinical study

Amount per unit<sup>\*</sup>: see (for each sequence (if any), clinical study and beneficiary/linked third party) the ‘unit cost table’ attached

\* Amount calculated, for the cost components of each task, as follows:

For **personnel costs**:

For personnel costs of doctors: ‘average hourly cost for doctors’, i.e.:

$$\frac{\text{\{certified or auditable total personnel costs for doctors for year N-1\}}}{\text{\{1720 * number of full-time-equivalent for doctors for year N-1\}}}$$

multiplied by  
estimated number of hours to be worked by doctors for the task (per participant)}

For personnel costs of other medical personnel: ‘average hourly cost for other medical personnel’, i.e.:

$$\frac{\text{\{certified or auditable total personnel costs for other medical personnel for year N-1\}}}{\text{\{1720 * number of full-time-equivalent for other medical personnel for year N-1\}}}$$

<sup>2</sup> Unit of access (e.g. beam hours, weeks of access, sample analysis) fixed by the access provider in proposal.

<sup>3</sup> In exceptional and duly justified cases, the Commission/Agency may agree to a different reference period.

<sup>4</sup> In exceptional and duly justified cases, the Commission/Agency may agree to a different reference period.

<sup>5</sup> Data from the ‘table on estimated costs/quantity of access to be provided’ that is part of the proposal and Annex 1.



[H2020 Templates: Annex 2a \(Additional information on the estimated budget\)](#)

multiplied by  
estimated number of hours to be worked by other medical personnel for the task (per participant)}

For personnel costs of technical personnel: 'average hourly cost for technical personnel', i.e.:

{certified or auditable total personnel costs for technical personnel for year N-1

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{1720 \* number of full-time-equivalent for technical personnel for year N-1}

multiplied by  
estimated number of hours to be worked by technical personnel for the task (per participant)}

'total personnel costs' means actual salaries + actual social security contributions + actual taxes and other costs included in the remuneration, provided they arise from national law or the employment contract/equivalent appointing act

For **consumables**:

For each cost item: 'average price of the consumable', i.e.:

{{certified or auditable total costs of purchase of the consumable in year N-1

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total number of items purchased in year N-1}

multiplied by  
estimated number of items to be used for the task (per participant)}

'total costs of purchase of the consumable' means total value of the supply contracts (including related duties, taxes and charges such as non-deductible VAT) concluded by the beneficiary for the consumable delivered in year N-1, provided the contracts were awarded according to the principle of best value- for-money and without any conflict of interests

For **medical equipment**:

For each cost item: 'average cost of depreciation and directly related services per unit of use', i.e.:

{{ certified or auditable total depreciation costs in year N-1 + certified or auditable total costs of purchase of services in year N-1 for the category of equipment concerned}

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total capacity in year N-1

multiplied by  
estimated number of units of use of the equipment for the task (per participant)}

'total depreciation costs' means total depreciation allowances as recorded in the beneficiary's accounts of year N-1 for the category of equipment concerned, provided the equipment was purchased according to the principle of best value for money and without any conflict of interests + total costs of renting or leasing contracts (including related duties, taxes and charges such as non-deductible VAT) in year N-1 for the category of equipment concerned, provided they do not exceed the depreciation costs of similar equipment and do not include finance fees

For **services**:

For each cost item: 'average cost of the service per study participant', i.e.:

{certified or auditable total costs of purchase of the service in year N-1

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total number of patients or subjects included in the clinical studies for which the service was delivered in year N-1}

'total costs of purchase of the service' means total value of the contracts concluded by the beneficiary (including related duties, taxes and charges such as non-deductible VAT) for the specific service delivered in year N-1 for the conduct of clinical studies, provided the contracts were awarded according to the principle of best value for money and without any conflict of interests

For **indirect costs**:

{{{cost component 'personnel costs' + cost component 'consumables' + cost component 'medical equipment'}}

minus

{costs of in-kind contributions provided by third parties which are not used on the beneficiary's premises + costs of providing financial support to third parties (if any)}

multiplied by

25%}

H2020 Templates: Annex 2a (Additional information on the estimated budget)

The estimation of the resources to be used must be done on the basis of the study protocol and must be the same for all beneficiaries/linked third parties/third parties involved.

The year N-1 to be used is the last closed financial year at the time of submission of the grant application.

Estimated number of units: see (for each clinical study and beneficiary/linked third party) the ‘unit cost table’ attached

Unit cost table: clinical studies unit cost<sup>6</sup>

Task, Direct cost categories	Resource per patient	Costs year N-1 Beneficiary 1 [short name]	Costs year N-1 Linked third party 1a [short name]	Costs year N-1 Beneficiary 2 [short name]	Costs year N-1 Linked third party 2a [short name]	Costs year N-1 Third party giving in-kind contributions 1 [short name]
<b>Sequence No. 1</b>						
<b>Task No. 1</b> Blood sample						
(a) Personnel costs:						
- Doctors	n/a					
- Other Medical Personnel	Phlebotomy (nurse), 10 minutes	8,33 EUR	11,59 EUR	10,30 EUR	11,00 EUR	9,49 EUR
- Technical Personnel	Sample Processing (lab technician), 15 minutes	9,51 EUR	15,68 EUR	14,60 EUR	15,23 EUR	10,78 EUR
(b) Costs of consumables:	Syringe	XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
	Cannula	XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
	Blood container	XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
(c) Costs of medical equipment:	Use of -80° deep freezer, 60 days	XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
	Use of centrifuge, 15 minutes	XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
(d) Costs of services	Cleaning of XXX	XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
(e) Indirect costs (25% flat-rate)		XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
<b>Task No. 2</b>						
...						
<b>Amount per unit (unit cost sequence 1):</b>		<b>XX EUR</b>	<b>XX EUR</b>	<b>XX EUR</b>	<b>XX EUR</b>	<b>XX EUR</b>
<b>Sequence No. 2</b>						
<b>Task No. 1</b>						

<sup>6</sup> Same table as in proposal and Annex 1.

H2020 Templates: Annex 2a (Additional information on the estimated budget)

XXX						
<b>(a) Personnel costs:</b>						
- Doctors	XXX	XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
- Other Medical Personnel	XXX	XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
- Technical Personnel	XXX	XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
<b>(b) Costs of consumables:</b>	XXX	XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
	XXX	XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
	XXX	XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
<b>(c) Costs of medical equipment:</b>	XXX	XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
	XXX	XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
<b>(d) Costs of services</b>	XXX	XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
<b>(e) Indirect costs (25% flat-rate)</b>		XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
<b>Task No. 2</b>						
...						
<b>Amount per unit (unit cost sequence 2):</b>		XX EUR	XX EUR	XX EUR	XX EUR	XX EUR
...						
<b>Amount per unit (unit cost entire study):</b>		XX EUR	XX EUR	XX EUR	XX EUR	XX EUR

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**ANNEX 3**

**ACCESSION FORM FOR BENEFICIARIES**

**GLAVNA DIREKTSIA GRANICHNA POLITSIA (CDBP-MOI)**, established in KNYAGINYA MARIA LOUISA 46, SOFIA 1202, Bulgaria, VAT number: BG129010125, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('3')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



**ANNEX 3**

**ACCESSION FORM FOR BENEFICIARIES**

**MINISTRY OF INTERIOR OF THE REPUBLIC OF NORTH MACEDONIA (DBAM)**, established in DIMCE MIRCEV NR.9, SKOPJE 1000, Republic of North Macedonia, VAT number: MK4030990270610, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('4')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



### ANNEX 3

#### ACCESSION FORM FOR BENEFICIARIES

**MINISTRY OF TRANSPORT, COMMUNICATIONS AND WORKS (JRCC)**, established in Acheon 28, NICOSIA 1424, Cyprus, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('5')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**VALSTYBES SIENOS APSAUGOS TARNYBA PRIE VIDAUS REIKALU MINISTERIJOS (SBGSLT)**, established in SAVANORIU PROSPEKTAS 2, VILNIUS 03116, Lithuania, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('6')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary





**ANNEX 3**

**ACCESSION FORM FOR BENEFICIARIES**

**MINISTERIO DEL INTERIOR (GUCI)**, established in CALLE AMADOR DE LOS RIOS 7, MADRID 28071, Spain, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('7')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



**ANNEX 3**

**ACCESSION FORM FOR BENEFICIARIES**

**WOITSCH CONSULTING OY (WCO)**, established in WILLEBRANDINTIE 1 B 5, HELSINKI 00840, Finland, VAT number: FI29484416, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('8')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



**ANNEX 3**

**ACCESSION FORM FOR BENEFICIARIES**

**KENTRO MELETON ASFALEIAS (KEMEA)**, established in P KANELLOPOULOU 4 ST, ATHINA 10177, Greece, VAT number: EL999333507, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('9')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.  
boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



## ANNEX 3

### ACCESSION FORM FOR BENEFICIARIES

**ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS (CERTH)**, established in CHARILAOU THERMI ROAD 6 KM, THERMI THESSALONIKI 57001, Greece, VAT number: EL099785242, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('10')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.  
boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



### ANNEX 3

#### ACCESSION FORM FOR BENEFICIARIES

**SATWAYS - PROIONTA KAI YPIRESIES TILEMATIKIS DIKTYAKON KAI TILEPIKINONIAKON EFARMOGON ETAIRIA PERIORISMENIS EFTHINIS EPE (STWS)**, established in CHRISTOU LADA STREET 3, HALANDRI 15233, Greece, VAT number: EL998870653, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('11')

**in Grant Agreement** No 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



**ANNEX 3**

**ACCESSION FORM FOR BENEFICIARIES**

**DECODIO AG (DCD)**, established in TECHNOPARKSTRASSE 1, ZURICH 8005, Switzerland, VAT number: CHE420161200MWST, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('12')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



### ANNEX 3

#### ACCESSION FORM FOR BENEFICIARIES

**NARDA SAFETY TEST SOLUTIONS GMBH (NARDA)**, established in SANDWIESENSTR 7, PFULLINGEN 72793, Germany, VAT number: DE813024704, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('13')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



**ANNEX 3**

**ACCESSION FORM FOR BENEFICIARIES**

**MILTECH HELLAS BIOMICHANIA EMPORIOANTIPROSOPEIES ILEKTRONIKON OPTIKON KAI MICHANOLOGIKON EIDON AE (MILTECH)**, established in METAXA STREET 90, PAGKRATI PAIANIA 19002, Greece, VAT number: EL094457792, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('14')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary





### ANNEX 3

#### ACCESSION FORM FOR BENEFICIARIES

**MAGGIOLI SPA (MAG)**, established in VIA DEL CARPINO 8, SANTARCANGELO DI ROMAGNA 47822, Italy, VAT number: IT02066400405, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('15')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



**ANNEX 3**

**ACCESSION FORM FOR BENEFICIARIES**

**ELISTAIR (ELI)**, established in 12 CHEMIN DES HIRONDELLES, DARDILLY 69570, France, VAT number: FR22805271855, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('16')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



**ANNEX 3**

**ACCESSION FORM FOR BENEFICIARIES**

**OCEANSCAN - MARINE SYSTEMS & TECHNOLOGY LDA (OMST)**, established in AVENIDA DA LIBERDADE POLO DO MAR DO UPTEC, MATOSINHOS PORTO 4450 718, Portugal, VAT number: PT508459761, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('17')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.  
boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



### ANNEX 3

#### ACCESSION FORM FOR BENEFICIARIES

**ROBOTNIK AUTOMATION SLL (ROB)**, established in CARRER DE BARCELONA, 3-A. P.I. FUENTE DEL JARRO, PATERNA 46988, Spain, VAT number: ESB97223630, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('18')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



**ANNEX 3**

**ACCESSION FORM FOR BENEFICIARIES**

**OULUN YLIOPISTO (UOULU)**, established in PENTTI KAITERAN KATU 1, OULU 90014, Finland, VAT number: FI02458955, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('19')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



**ANNEX 3**

**ACCESSION FORM FOR BENEFICIARIES**

**SHEFFIELD HALLAM UNIVERSITY (CENTRIC)**, established in HOWARD STREET CITY CAMPUS, SHEFFIELD S1 1WB, United Kingdom, VAT number: GB599947542, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('20')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.  
'

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



**ANNEX 3**

**ACCESSION FORM FOR BENEFICIARIES**

**HENSOLDT SENSORS GMBH (HEN)**, established in WILLY MESSERSCHMITT STRASSE 3, TAUFKIRCHEN 82024, Germany, VAT number: DE301675630, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('21')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary



**ANNEX 3**

**ACCESSION FORM FOR BENEFICIARIES**

**INGENIERIA DE SISTEMAS PARA LA DEFENSA DE ESPANA SA-SME MP (ISDEFE)**, established in CALLE BEATRIZ DE BOBADILLA 3, MADRID 28040, Spain, VAT number: ESA78085719, ('the beneficiary'), represented for the purpose of signing this Accession Form by the undersigned,

**hereby agrees**

**to become beneficiary** No ('22')

**in Grant Agreement No** 101021851 ('the Agreement')

**between** HELLENIC POLICE **and** the European Research Executive Agency (REA) ('the Agency'), under the powers delegated by the European Commission ('the Commission'),

**for the action entitled** 'aN Enhanced pre-frontier intelligence picture to Safeguard The EurOpean boRders (NESTOR)'.

**and mandates**

**the coordinator** to submit and sign in its name and on its behalf any **amendments** to the Agreement, in accordance with Article 55.

By signing this Accession Form, the beneficiary accepts the grant and agrees to implement it in accordance with the Agreement, with all the obligations and conditions it sets out.

SIGNATURE

For the beneficiary





FINANCIAL STATEMENT FOR /BENEFICIARY [name]/ LINKED THIRD PARTY [name] FOR REPORTING PERIOD [reporting period]

Eligible <sup>1</sup> costs (per budget category)										Receipts		EU contribution		Additional information	
A. Direct personnel costs		B. Direct costs of subcontracting	[C. Direct costs of fin. support]	D. Other direct costs			E. Indirect costs <sup>2</sup>	[F. Costs of ... ]	Total costs	Receipts	Reimbursement rate %	Maximum EU contribution <sup>3</sup>	Requested EU contribution	Information for indirect costs :	
A.1 Employees (or equivalent)	A.4 SME owners without salary	A.5 Beneficiaries that are natural persons without salary	[C.1 Financial support]	D.1 Travel	[D.4 Costs of large research infrastructure]	D.5 Costs of internally invoiced goods and services	[F.1 Costs of ... ]	[F.2 Costs of ... ]	Receipts of the action, to be reported in the last reporting period, according to Article 5.3.3					Costs of in-kind contributions not used on premises	
A.2 Natural persons under direct contract			[C.2 Prizes]	D.2 Equipment											
A.3 Seconded persons				D.3 Other goods and services			Flat-rate <sup>5</sup>								
[A.6 Personnel for providing access to research infrastructures]							25%								
Actual	Unit	Actual	Actual	Actual	Actual	Unit		Unit							
a	Total b	No hours	Total c	f	[g]	Total h	i=0,25 x (a+b+c+h)/[g] + h/[f] - p/[j]	Total [j1]	Total [j2]	k = a+b+c+d+e)/f + (g)/h + i/[j1] + [j2]	l	m	n	o	
[short name beneficiary/linked third party]															

The beneficiary/linked third party hereby confirms that:  
 The information provided is complete, reliable and true.  
 The costs declared are eligible (see Article 6).  
 The costs can be substantiated by adequate records and supporting documentation that will be produced upon request or in the context of checks, reviews, audits and investigations (see Articles 17, 18 and 22).  
 For the last reporting period: that all the receipts have been declared (see Article 5.3.3).

① Please declare all eligible costs, even if they exceed the amounts indicated in the estimated budget (see Annex 2). Only amounts that were declared in your individual financial statements can be taken into account later on, in order to replace other costs that are found to be ineligible.

1 See Article 6 for the eligibility conditions  
 2 The indirect costs claimed must be free of any amounts covered by an operating grant (received under any EU or Euratom funding programme; see Article 6.2.E). If you have received an operating grant during this reporting period, you cannot claim indirect costs unless you can demonstrate that the operating grant does not cover any costs of the action.  
 3 This is the theoretical amount of EU contribution that the system calculates automatically (by multiplying the reimbursement rate by the total costs declared). The amount you request (in the column 'requested EU contribution') may be less.  
 4 See Article 5 for the forms of costs  
 5 Flat rate : 25% of eligible direct costs, from which are excluded: direct costs of subcontracting, costs of in-kind contributions not used on premises, direct costs of financial support, and unit costs declared under budget category F if they include indirect costs (see Article 6.2.E)  
 6 Only specific unit costs that do not include indirect costs

## ANNEX 5

### MODEL FOR THE CERTIFICATE ON THE FINANCIAL STATEMENTS

- For options [*in italics in square brackets*]: choose the applicable option. Options not chosen should be deleted.
- For fields in [grey in square brackets]: enter the appropriate data

#### TABLE OF CONTENTS

TERMS OF REFERENCE FOR AN INDEPENDENT REPORT OF FACTUAL FINDINGS ON COSTS DECLARED UNDER A GRANT AGREEMENT FINANCED UNDER THE HORIZON 2020 RESEARCH FRAMEWORK PROGRAMME

INDEPENDENT REPORT OF FACTUAL FINDINGS ON COSTS DECLARED UNDER A GRANT AGREEMENT FINANCED UNDER THE HORIZON 2020 RESEARCH FRAMEWORK PROGRAMME

## **Terms of Reference for an Independent Report of Factual Findings on costs declared under a Grant Agreement financed under the Horizon 2020 Research and Innovation Framework Programme**

This document sets out the ‘**Terms of Reference (ToR)**’ under which

[*OPTION 1: [insert name of the beneficiary] ('the Beneficiary')*] [*OPTION 2: [insert name of the linked third party] ('the Linked Third Party'), third party linked to the Beneficiary [insert name of the beneficiary] ('the Beneficiary')*]

agrees to engage

**[insert legal name of the auditor]** ('the Auditor')

to produce an independent report of factual findings ('the Report') concerning the Financial Statement(s)<sup>1</sup> drawn up by the [*Beneficiary*] [*Linked Third Party*] for the Horizon 2020 grant agreement [insert number of the grant agreement, title of the action, acronym and duration from/to] ('the Agreement'), and

to issue a Certificate on the Financial Statements' ('CFS') referred to in Article 20.4 of the Agreement based on the compulsory reporting template stipulated by the Commission.

The Agreement has been concluded under the Horizon 2020 Research and Innovation Framework Programme (H2020) between the Beneficiary and [*OPTION 1: the European Union, represented by the European Commission ('the Commission')*][*OPTION 2: the European Atomic Energy Community (Euratom,) represented by the European Commission ('the Commission')*][*OPTION 3: the [Research Executive Agency (REA)] [European Research Council Executive Agency (ERCEA)] [Innovation and Networks Executive Agency (INEA)] [Executive Agency for Small and Medium-sized Enterprises (EASME)] ('the Agency'), under the powers delegated by the European Commission ('the Commission').*]

The [*Commission*] [*Agency*] is mentioned as a signatory of the Agreement with the Beneficiary only. The [*European Union*][*Euratom*][*Agency*] is not a party to this engagement.

### **1.1 Subject of the engagement**

The coordinator must submit to the [*Commission*][*Agency*] the final report within 60 days following the end of the last reporting period which should include, amongst other documents, a CFS for each beneficiary and for each linked third party that requests a total contribution of EUR 325 000 or more, as reimbursement of actual costs and unit costs calculated on the basis of its usual cost accounting practices (see Article 20.4 of the Agreement). The CFS must cover all reporting periods of the beneficiary or linked third party indicated above.

The Beneficiary must submit to the coordinator the CFS for itself and for its linked third party(ies), if the CFS must be included in the final report according to Article 20.4 of the Agreement.

The CFS is composed of two separate documents:

- The Terms of Reference ('the ToR') to be signed by the [*Beneficiary*] [*Linked Third Party*] and the Auditor;

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<sup>1</sup> By which costs under the Agreement are declared (see template 'Model Financial Statements' in Annex 4 to the Grant Agreement).

- The Auditor's Independent Report of Factual Findings ('the Report') to be issued on the Auditor's letterhead, dated, stamped and signed by the Auditor (or the competent public officer) which includes the agreed-upon procedures ('the Procedures') to be performed by the Auditor, and the standard factual findings ('the Findings') to be confirmed by the Auditor.

If the CFS must be included in the final report according to Article 20.4 of the Agreement, the request for payment of the balance relating to the Agreement cannot be made without the CFS. However, the payment for reimbursement of costs covered by the CFS does not preclude the Commission [ Agency,] the European Anti-Fraud Office and the European Court of Auditors from carrying out checks, reviews, audits and investigations in accordance with Article 22 of the Agreement.

## 1.2 Responsibilities

The [Beneficiary] [Linked Third Party]:

- must draw up the Financial Statement(s) for the action financed by the Agreement in compliance with the obligations under the Agreement. The Financial Statement(s) must be drawn up according to the [Beneficiary's] [Linked Third Party's] accounting and book-keeping system and the underlying accounts and records;
- must send the Financial Statement(s) to the Auditor;
- is responsible and liable for the accuracy of the Financial Statement(s);
- is responsible for the completeness and accuracy of the information provided to enable the Auditor to carry out the Procedures. It must provide the Auditor with a written representation letter supporting these statements. The written representation letter must state the period covered by the statements and must be dated;
- accepts that the Auditor cannot carry out the Procedures unless it is given full access to the [Beneficiary's] [Linked Third Party's] staff and accounting as well as any other relevant records and documentation.

The Auditor:

- [Option 1 by default: is qualified to carry out statutory audits of accounting documents in accordance with Directive 2006/43/EC of the European Parliament and of the Council of 17 May 2006 on statutory audits of annual accounts and consolidated accounts, amending Council Directives 78/660/EEC and 83/349/EEC and repealing Council Directive 84/253/EEC or similar national regulations].
- [Option 2 if the Beneficiary or Linked Third Party has an independent Public Officer: is a competent and independent Public Officer for which the relevant national authorities have established the legal capacity to audit the Beneficiary].
- [Option 3 if the Beneficiary or Linked Third Party is an international organisation: is an [internal] [external] auditor in accordance with the internal financial regulations and procedures of the international organisation].

The Auditor:

- must be independent from the Beneficiary [and the Linked Third Party], in particular, it must not have been involved in preparing the [Beneficiary's] [Linked Third Party's] Financial Statement(s);
- must plan work so that the Procedures may be carried out and the Findings may be assessed;
- must adhere to the Procedures laid down and the compulsory report format;
- must carry out the engagement in accordance with this ToR;
- must document matters which are important to support the Report;
- must base its Report on the evidence gathered;
- must submit the Report to the [Beneficiary] [Linked Third Party].

H2020 Model Grant Agreements: H2020 General MGA — Multi: v5.0 – dd.mm.2017

The Commission sets out the Procedures to be carried out by the Auditor. The Auditor is not responsible for their suitability or pertinence. As this engagement is not an assurance engagement, the Auditor does not provide an audit opinion or a statement of assurance.

### 1.3 Applicable Standards

The Auditor must comply with these Terms of Reference and with<sup>2</sup>:

- the International Standard on Related Services ('ISRS') 4400 *Engagements to perform Agreed-upon Procedures regarding Financial Information* as issued by the International Auditing and Assurance Standards Board (IAASB);
- the *Code of Ethics for Professional Accountants* issued by the International Ethics Standards Board for Accountants (IESBA). Although ISRS 4400 states that independence is not a requirement for engagements to carry out agreed-upon procedures, the [Commission][Agency] requires that the Auditor also complies with the Code's independence requirements.

The Auditor's Report must state that there is no conflict of interests in establishing this Report between the Auditor and the Beneficiary [and the Linked Third Party], and must specify - if the service is invoiced - the total fee paid to the Auditor for providing the Report.

### 1.4 Reporting

The Report must be written in the language of the Agreement (see Article 20.7).

Under Article 22 of the Agreement, the Commission[, the Agency], the European Anti-Fraud Office and the Court of Auditors have the right to audit any work that is carried out under the action and for which costs are declared from [the European Union] [Euratom] budget. This includes work related to this engagement. The Auditor must provide access to all working papers (e.g. recalculation of hourly rates, verification of the time declared for the action) related to this assignment if the Commission [, the Agency], the European Anti-Fraud Office or the European Court of Auditors requests them.

### 1.5 Timing

The Report must be provided by [dd Month yyyy].

### 1.6 Other terms

[The [Beneficiary] [Linked Third Party] and the Auditor can use this section to agree other specific terms, such as the Auditor's fees, liability, applicable law, etc. Those specific terms must not contradict the terms specified above.]

[legal name of the Auditor]

[legal name of the [Beneficiary][Linked Third Party]]

[name & function of authorised representative]

[name & function of authorised representative]

[dd Month yyyy]

[dd Month yyyy]

Signature of the Auditor

Signature of the [Beneficiary][Linked Third Party]

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<sup>2</sup> Supreme Audit Institutions applying INTOSAI-standards may carry out the Procedures according to the corresponding International Standards of Supreme Audit Institutions and code of ethics issued by INTOSAI instead of the International Standard on Related Services ('ISRS') 4400 and the Code of Ethics for Professional Accountants issued by the IAASB and the IESBA.

**Independent Report of Factual Findings on costs declared  
under Horizon 2020 Research and Innovation Framework Programme**

*(To be printed on the Auditor's letterhead)*

To  
[ name of contact person(s)], [Position]  
[ [Beneficiary's] [Linked Third Party's] name ]  
[ Address]  
[ dd Month yyyy]

Dear [Name of contact person(s)],

As agreed under the terms of reference dated [dd Month yyyy]

with [OPTION 1: [insert name of the beneficiary] ('the Beneficiary')] [OPTION 2: [insert name of the linked third party] ('the Linked Third Party'), third party linked to the Beneficiary [insert name of the beneficiary] ('the Beneficiary')],

we

[name of the auditor] ('the Auditor'),

established at

[full address/city/state/province/country],

represented by

[name and function of an authorised representative],

have carried out the procedures agreed with you regarding the costs declared in the Financial Statement(s)<sup>3</sup> of the [Beneficiary] [Linked Third Party] concerning the grant agreement [insert grant agreement reference: number, title of the action and acronym] ('the Agreement'),

with a total cost declared of  
[total amount] EUR,

and a total of actual costs and unit costs calculated in accordance with the [Beneficiary's] [Linked Third Party's] usual cost accounting practices' declared of

[sum of total actual costs and total direct personnel costs declared as unit costs calculated in accordance with the [Beneficiary's] [Linked Third Party's] usual cost accounting practices] EUR

and **hereby provide our Independent Report of Factual Findings ('the Report')** using the compulsory report format agreed with you.

**The Report**

Our engagement was carried out in accordance with the terms of reference ('the ToR') appended to this Report. The Report includes the agreed-upon procedures ('the Procedures') carried out and the standard factual findings ('the Findings') examined.

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<sup>3</sup> By which the Beneficiary declares costs under the Agreement (see template 'Model Financial Statement' in Annex 4 to the Agreement).

H2020 Model Grant Agreements: H2020 General MGA — Multi: v5.0 – dd.mm.2017

The Procedures were carried out solely to assist the [Commission] [Agency] in evaluating whether the [Beneficiary's] [Linked Third Party's] costs in the accompanying Financial Statement(s) were declared in accordance with the Agreement. The [Commission] [Agency] draws its own conclusions from the Report and any additional information it may require.

The scope of the Procedures was defined by the Commission. Therefore, the Auditor is not responsible for their suitability or pertinence. Since the Procedures carried out constitute neither an audit nor a review made in accordance with International Standards on Auditing or International Standards on Review Engagements, the Auditor does not give a statement of assurance on the Financial Statements.

Had the Auditor carried out additional procedures or an audit of the [Beneficiary's] [Linked Third Party's] Financial Statements in accordance with International Standards on Auditing or International Standards on Review Engagements, other matters might have come to its attention and would have been included in the Report.

**Not applicable Findings**

We examined the Financial Statement(s) stated above and considered the following Findings not applicable:

*Explanation (to be removed from the Report):*

*If a Finding was not applicable, it must be marked as 'N.A.' ('Not applicable') in the corresponding row on the right-hand column of the table and means that the Finding did not have to be corroborated by the Auditor and the related Procedure(s) did not have to be carried out.*

*The reasons of the non-application of a certain Finding must be obvious i.e.*

- i) if no cost was declared under a certain category then the related Finding(s) and Procedure(s) are not applicable;*
- ii) if the condition set to apply certain Procedure(s) are not met the related Finding(s) and those Procedure(s) are not applicable. For instance, for 'beneficiaries with accounts established in a currency other than euro' the Procedure and Finding related to 'beneficiaries with accounts established in euro' are not applicable. Similarly, if no additional remuneration is paid, the related Finding(s) and Procedure(s) for additional remuneration are not applicable.*

**List here all Findings considered not applicable for the present engagement and explain the reasons of the non-applicability.**

....

**Exceptions**

Apart from the exceptions listed below, the [Beneficiary] [Linked Third Party] provided the Auditor all the documentation and accounting information needed by the Auditor to carry out the requested Procedures and evaluate the Findings.

*Explanation (to be removed from the Report):*

- If the Auditor was not able to successfully complete a procedure requested, it must be marked as 'E' ('Exception') in the corresponding row on the right-hand column of the table. The reason such as the inability to reconcile key information or the unavailability of data that prevents the Auditor from carrying out the Procedure must be indicated below.*
- If the Auditor cannot corroborate a standard finding after having carried out the corresponding procedure, it must also be marked as 'E' ('Exception') and, where possible, the reasons why the Finding was not fulfilled and its possible impact must be explained here below.*

**List here any exceptions and add any information on the cause and possible consequences of each exception, if known. If the exception is quantifiable, include the corresponding amount.**

....

H2020 Model Grant Agreements: H2020 General MGA — Multi: v5.0 – dd.mm.2017

*Example (to be removed from the Report):*

1. *The Beneficiary was unable to substantiate the Finding number 1 on ... because ....*
2. *Finding number 30 was not fulfilled because the methodology used by the Beneficiary to calculate unit costs was different from the one approved by the Commission. The differences were as follows: ...*
3. *After carrying out the agreed procedures to confirm the Finding number 31, the Auditor found a difference of \_\_\_\_\_ EUR. The difference can be explained by ...*

### **Further Remarks**

In addition to reporting on the results of the specific procedures carried out, the Auditor would like to make the following general remarks:

*Example (to be removed from the Report):*

1. *Regarding Finding number 8 the conditions for additional remuneration were considered as fulfilled because ...*
2. *In order to be able to confirm the Finding number 15 we carried out the following additional procedures: .....*

### **Use of this Report**

This Report may be used only for the purpose described in the above objective. It was prepared solely for the confidential use of the [Beneficiary] [Linked Third Party] and the [Commission] [Agency], and only to be submitted to the [Commission] [Agency] in connection with the requirements set out in Article 20.4 of the Agreement. The Report may not be used by the [Beneficiary] [Linked Third Party] or by the [Commission] [Agency] for any other purpose, nor may it be distributed to any other parties. The [Commission] [Agency] may only disclose the Report to authorised parties, in particular to the European Anti-Fraud Office (OLAF) and the European Court of Auditors.

This Report relates only to the Financial Statement(s) submitted to the [Commission] [Agency] by the [Beneficiary] [Linked Third Party] for the Agreement. Therefore, it does not extend to any other of the [Beneficiary's] [Linked Third Party's] Financial Statement(s).

There was no conflict of interest<sup>4</sup> between the Auditor and the Beneficiary [and Linked Third Party] in establishing this Report. The total fee paid to the Auditor for providing the Report was EUR [ ] (including EUR [ ] of deductible VAT).

We look forward to discussing our Report with you and would be pleased to provide any further information or assistance.

[legal name of the Auditor]

[name and function of an authorised representative]

[dd Month yyyy]

Signature of the Auditor

<sup>4</sup> A conflict of interest arises when the Auditor's objectivity to establish the certificate is compromised in fact or in appearance when the Auditor for instance:

- was involved in the preparation of the Financial Statements;
- stands to benefit directly should the certificate be accepted;
- has a close relationship with any person representing the beneficiary;
- is a director, trustee or partner of the beneficiary; or
- is in any other situation that compromises his or her independence or ability to establish the certificate impartially.



**Agreed-upon procedures to be performed and standard factual findings to be confirmed by the Auditor**

The European Commission reserves the right to i) provide the auditor with additional guidance regarding the procedures to be followed or the facts to be ascertained and the way in which to present them (this may include sample coverage and findings) or to ii) change the procedures, by notifying the Beneficiary in writing. The procedures carried out by the auditor to confirm the standard factual finding are listed in the table below.

If this certificate relates to a Linked Third Party, any reference here below to ‘the Beneficiary’ is to be considered as a reference to ‘the Linked Third Party’.

The ‘result’ column has three different options: ‘C’, ‘E’ and ‘N.A.’:

- ‘C’ stands for ‘confirmed’ and means that the auditor can confirm the ‘standard factual finding’ and, therefore, there is no exception to be reported.
- ‘E’ stands for ‘exception’ and means that the Auditor carried out the procedures but cannot confirm the ‘standard factual finding’, or that the Auditor was not able to carry out a specific procedure (e.g. because it was impossible to reconcile key information or data were unavailable),
- ‘N.A.’ stands for ‘not applicable’ and means that the Finding did not have to be examined by the Auditor and the related Procedure(s) did not have to be carried out. The reasons of the non-application of a certain Finding must be obvious i.e. i) if no cost was declared under a certain category then the related Finding(s) and Procedure(s) are not applicable; ii) if the condition set to apply certain Procedure(s) are not met then the related Finding(s) and Procedure(s) are not applicable. For instance, for ‘beneficiaries with accounts established in a currency other than the euro’ the Procedure related to ‘beneficiaries with accounts established in euro’ is not applicable. Similarly, if no additional remuneration is paid, the related Finding(s) and Procedure(s) for additional remuneration are not applicable.

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
A	<b>ACTUAL PERSONNEL COSTS AND UNIT COSTS CALCULATED BY THE BENEFICIARY IN ACCORDANCE WITH ITS USUAL COST ACCOUNTING PRACTICE</b>		
	The Auditor draws a sample of persons whose costs were declared in the Financial Statement(s) to carry out the procedures indicated in the consecutive points of this section A.  <i>(The sample should be selected randomly so that it is representative. Full coverage is required if there are fewer than 10 people (including employees, natural persons working under a direct contract and personnel seconded by a third party), otherwise the sample should have a minimum of 10 people, or 10% of the total, whichever number is the highest)</i>  The Auditor sampled [ ] people out of the total of [ ] people.		

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
A.1	<p><b>PERSONNEL COSTS</b></p> <p><u>For the persons included in the sample and working under an employment contract or equivalent act (general procedures for individual actual personnel costs and personnel costs declared as unit costs)</u></p> <p>To confirm standard factual findings 1-5 listed in the next column, the Auditor reviewed following information/documents provided by the Beneficiary:</p> <ul style="list-style-type: none"> <li>○ a list of the persons included in the sample indicating the period(s) during which they worked for the action, their position (classification or category) and type of contract;</li> <li>○ the payslips of the employees included in the sample;</li> <li>○ reconciliation of the personnel costs declared in the Financial Statement(s) with the accounting system (project accounting and general ledger) and payroll system;</li> <li>○ information concerning the employment status and employment conditions of personnel included in the sample, in particular their employment contracts or equivalent;</li> <li>○ the Beneficiary’s usual policy regarding payroll matters (e.g. salary policy, overtime policy, variable pay);</li> <li>○ applicable national law on taxes, labour and social security and</li> <li>○ any other document that supports the personnel costs declared.</li> </ul> <p>The Auditor also verified the eligibility of all components of the retribution (see Article 6 GA) and recalculated the personnel costs for employees included in the sample.</p>	<p>1) The employees were i) directly hired by the Beneficiary in accordance with its national legislation, ii) under the Beneficiary’s sole technical supervision and responsibility and iii) remunerated in accordance with the Beneficiary’s usual practices.</p> <p>2) Personnel costs were recorded in the Beneficiary’s accounts/payroll system.</p> <p>3) Costs were adequately supported and reconciled with the accounts and payroll records.</p> <p>4) Personnel costs did not contain any ineligible elements.</p> <p>5) There were no discrepancies between the personnel costs charged to the action and the costs recalculated by the Auditor.</p> <p>6) The Beneficiary paying “additional remuneration” was a non-profit legal entity.</p>	
	<p><i>Further procedures if ‘additional remuneration’ is paid</i></p> <p>To confirm standard factual findings 6-9 listed in the next column, the Auditor:</p> <ul style="list-style-type: none"> <li>○ reviewed relevant documents provided by the Beneficiary (legal form, legal/statutory</li> </ul>		

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<p>obligations, the Beneficiary's usual policy on additional remuneration, criteria used for its calculation, the Beneficiary's usual remuneration practice for projects funded under national funding schemes...);</p> <ul style="list-style-type: none"> <li>o recalculated the amount of additional remuneration eligible for the action based on the supporting documents received (full-time or part-time work, exclusive or non-exclusive dedication to the action, usual remuneration paid for projects funded by national schemes) to arrive at the applicable FTE/year and pro-rata rate (see data collected in the course of carrying out the procedures under A.2 'Productive hours' and A.4 'Time recording system').</li> </ul> <p><i>'ADDITIONAL REMUNERATION' MEANS ANY PART OF THE REMUNERATION WHICH EXCEEDS WHAT THE PERSON WOULD BE PAID FOR TIME WORKED IN PROJECTS FUNDED BY NATIONAL SCHEMES.</i></p> <p><i>IF ANY PART OF THE REMUNERATION PAID TO THE EMPLOYEE QUALIFIES AS "ADDITIONAL REMUNERATION" AND IS ELIGIBLE UNDER THE PROVISIONS OF ARTICLE 6.2.A.1, THIS CAN BE CHARGED AS ELIGIBLE COST TO THE ACTION UP TO THE FOLLOWING AMOUNT:</i></p> <p><i>(A) IF THE PERSON WORKS FULL TIME AND EXCLUSIVELY ON THE ACTION DURING THE FULL YEAR: UP TO EUR 8 000/YEAR;</i></p> <p><i>(B) IF THE PERSON WORKS EXCLUSIVELY ON THE ACTION BUT NOT FULL-TIME OR NOT FOR THE FULL YEAR: UP TO THE CORRESPONDING PRO-RATA AMOUNT OF EUR 8 000, OR</i></p> <p><i>(C) IF THE PERSON DOES NOT WORK EXCLUSIVELY ON THE ACTION: UP TO A PRO-RATA AMOUNT CALCULATED IN ACCORDANCE TO ARTICLE 6.2.A.1.</i></p> <p><i>Additional procedures in case "unit costs calculated by the Beneficiary in accordance with its usual cost accounting practices" is applied:</i></p> <p>Apart from carrying out the procedures indicated above to confirm standard factual findings 1-5 and, if applicable, also 6-9, the Auditor carried out following procedures to confirm standard</p>	<p>7) The amount of additional remuneration paid corresponded to the Beneficiary's usual remuneration practices and was consistently paid whenever the same kind of work or expertise was required.</p> <p>8) The criteria used to calculate the additional remuneration were objective and generally applied by the Beneficiary regardless of the source of funding used.</p> <p>9) The amount of additional remuneration included in the personnel costs charged to the action was capped at EUR 8,000 per FTE/year (up to the equivalent pro-rata amount if the person did not work on the action full-time during the year or did not work exclusively on the action).</p> <p>10) The personnel costs included in the Financial Statement were calculated in accordance with the Beneficiary's usual cost accounting practice. This methodology was consistently</p>	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<p>factual findings 10-13 listed in the next column:</p> <ul style="list-style-type: none"> <li>o obtained a description of the Beneficiary's usual cost accounting practice to calculate unit costs;</li> <li>o reviewed whether the Beneficiary's usual cost accounting practice was applied for the Financial Statements subject of the present CFS;</li> <li>o verified the employees included in the sample were charged under the correct category (in accordance with the criteria used by the Beneficiary to establish personnel categories) by reviewing the contract/HR-record or analytical accounting records;</li> <li>o verified that there is no difference between the total amount of personnel costs used in calculating the cost per unit and the total amount of personnel costs recorded in the statutory accounts;</li> <li>o verified whether actual personnel costs were adjusted on the basis of budgeted or estimated elements and, if so, verified whether those elements used are actually relevant for the calculation, objective and supported by documents.</li> </ul>	<p>used in all H2020 actions.</p> <p>11) The employees were charged under the correct category.</p> <p>12) Total personnel costs used in calculating the unit costs were consistent with the expenses recorded in the statutory accounts.</p> <p>13) Any estimated or budgeted element used by the Beneficiary in its unit-cost calculation were relevant for calculating personnel costs and corresponded to objective and verifiable information.</p>	
	<p><u>For natural persons included in the sample and working with the Beneficiary under a direct contract other than an employment contract, such as consultants (no subcontractors).</u></p> <p>To confirm standard factual findings 14-17 listed in the next column the Auditor reviewed following information/documents provided by the Beneficiary:</p> <ul style="list-style-type: none"> <li>o the contracts, especially the cost, contract duration, work description, place of work, ownership of the results and reporting obligations to the Beneficiary;</li> <li>o the employment conditions of staff in the same category to compare costs and;</li> <li>o any other document that supports the costs declared and its registration (e.g. invoices, accounting records, etc.).</li> </ul>	<p>14) The natural persons worked under conditions similar to those of an employee, in particular regarding the way the work is organised, the tasks that are performed and the premises where they are performed.</p> <p>15) The results of work carried out belong to the Beneficiary, or, if not, the Beneficiary has obtained all necessary rights to fulfil its obligations as if those</p>	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<p>results were generated by itself.</p> <p>16) Their costs were not significantly different from those for staff who performed similar tasks under an employment contract with the Beneficiary.</p> <p>17) The costs were supported by audit evidence and registered in the accounts.</p> <p>18) Seconded personnel reported to the Beneficiary and worked on the Beneficiary's premises (unless otherwise agreed with the Beneficiary).</p> <p>19) The results of work carried out belong to the Beneficiary, or, if not, the Beneficiary has obtained all necessary rights to fulfil its obligations as if those results were generated by itself..</p> <p><i>If personnel is seconded against payment:</i></p> <p>20) The costs declared were supported with documentation and recorded in the</p>		
	<p><u>For personnel seconded by a third party and included in the sample (not subcontractors)</u></p> <p>To confirm standard factual findings 18-21 listed in the next column, the Auditor reviewed following information/documents provided by the Beneficiary:</p> <ul style="list-style-type: none"> <li>○ their secondment contract(s) notably regarding costs, duration, work description, place of work and ownership of the results;</li> <li>○ if there is reimbursement by the Beneficiary to the third party for the resource made available (in-kind contribution against payment): any documentation that supports the costs declared (e.g. contract, invoice, bank payment, and proof of registration in its accounting/payroll, etc.) and reconciliation of the Financial Statement(s) with the accounting system (project accounting and general ledger) as well as any proof that the amount invoiced by the third party did not include any profit;</li> <li>○ if there is no reimbursement by the Beneficiary to the third party for the resource made available (in-kind contribution free of charge): a proof of the actual cost borne by the Third Party for the resource made available free of charge to the Beneficiary such as a statement of costs incurred by the Third Party and proof of the registration in the Third Party's accounting/payroll;</li> </ul>		

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<ul style="list-style-type: none"> <li>○ any other document that supports the costs declared (e.g. invoices, etc.).</li> </ul>	<p>Beneficiary's accounts. The third party did not include any profit.</p>	
		<p><i>If personnel is seconded free of charge:</i></p> <p>21) The costs declared did not exceed the third party's cost as recorded in the accounts of the third party and were supported with documentation.</p>	
<p><b>A.2</b></p>	<p><b>PRODUCTIVE HOURS</b></p> <p>To confirm standard factual findings 22-27 listed in the next column, the Auditor reviewed relevant documents, especially national legislation, labour agreements and contracts and time records of the persons included in the sample, to verify that:</p> <ul style="list-style-type: none"> <li>○ the annual productive hours applied were calculated in accordance with one of the methods described below,</li> <li>○ the full-time equivalent (FTEs) ratios for employees not working full-time were correctly calculated.</li> </ul> <p>If the Beneficiary applied method B, the auditor verified that the correctness in which the total number of hours worked was calculated and that the contracts specified the annual workable hours.</p> <p>If the Beneficiary applied method C, the auditor verified that the 'annual productive hours' applied when calculating the hourly rate were equivalent to at least 90 % of the 'standard annual workable hours'. The Auditor can only do this if the calculation of the standard annual workable</p>	<p>22) The Beneficiary applied method [<i>choose one option and delete the others</i>] [A: 1720 hours] [B: the 'total number of hours worked'] [C: 'standard annual productive hours' used correspond to usual accounting practices]</p> <p>23) Productive hours were calculated annually.</p> <p>24) For employees not working full-time the full-time equivalent (FTE) ratio was correctly applied.</p>	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<p>hours can be supported by records, such as national legislation, labour agreements, and contracts.</p> <p><i>BENEFICIARY'S PRODUCTIVE HOURS' FOR PERSONS WORKING FULL TIME SHALL BE ONE OF THE FOLLOWING METHODS:</i></p> <p><b>A. 1720 ANNUAL PRODUCTIVE HOURS (PRO-RATA FOR PERSONS NOT WORKING FULL-TIME)</b></p> <p><b>B. THE TOTAL NUMBER OF HOURS WORKED BY THE PERSON FOR THE BENEFICIARY IN THE YEAR (THIS METHOD IS ALSO REFERRED TO AS 'TOTAL NUMBER OF HOURS WORKED' IN THE NEXT COLUMN). THE CALCULATION OF THE TOTAL NUMBER OF HOURS WORKED WAS DONE AS FOLLOWS: ANNUAL WORKABLE HOURS OF THE PERSON ACCORDING TO THE EMPLOYMENT CONTRACT, APPLICABLE LABOUR AGREEMENT OR NATIONAL LAW PLUS OVERTIME WORKED MINUS ABSENCES (SUCH AS SICK LEAVE OR SPECIAL LEAVE).</b></p> <p><b>C. THE STANDARD NUMBER OF ANNUAL HOURS GENERALLY APPLIED BY THE BENEFICIARY FOR ITS PERSONNEL IN ACCORDANCE WITH ITS USUAL COST ACCOUNTING PRACTICES (THIS METHOD IS ALSO REFERRED TO AS 'STANDARD ANNUAL PRODUCTIVE HOURS' IN THE NEXT COLUMN). THIS NUMBER MUST BE AT LEAST 90% OF THE STANDARD ANNUAL WORKABLE HOURS.</b></p> <p><b>'ANNUAL WORKABLE HOURS' MEANS THE PERIOD DURING WHICH THE PERSONNEL MUST BE WORKING, AT THE EMPLOYER'S DISPOSAL AND CARRYING OUT HIS/HER ACTIVITY OR DUTIES UNDER THE EMPLOYMENT CONTRACT, APPLICABLE COLLECTIVE LABOUR AGREEMENT OR NATIONAL WORKING TIME LEGISLATION.</b></p>	<p><i>If the Beneficiary applied method B.</i></p> <p>25) The calculation of the number of 'annual workable hours', overtime and absences was verifiable based on the documents provided by the Beneficiary.</p> <p>25.1) The Beneficiary calculates the hourly rates per full financial year following procedure A.3 (method B is not allowed for beneficiaries calculating hourly rates per month).</p>	
		<p><i>If the Beneficiary applied method C.</i></p> <p>26) The calculation of the number of 'standard annual workable hours' was verifiable based on the documents provided by the Beneficiary.</p>	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
		<p>27) The 'annual productive hours' used for calculating the hourly rate were consistent with the usual cost accounting practices of the Beneficiary and were equivalent to at least 90 % of the 'annual workable hours'.</p>	
<p><b>A.3</b></p>	<p><b><u>HOURLY PERSONNEL RATES</u></b></p> <p>D) For unit costs calculated in accordance to the Beneficiary's usual cost accounting practice (unit costs):</p> <p>If the Beneficiary has a "Certificate on Methodology to calculate unit costs" (CoMUC) approved by the Commission, the Beneficiary provides the Auditor with a description of the approved methodology and the Commission's letter of acceptance. The Auditor verified that the Beneficiary has indeed used the methodology approved. If so, no further verification is necessary.</p> <p>If the Beneficiary does not have a "Certificate on Methodology" (CoMUC) approved by the Commission, or if the methodology approved was not applied, then the Auditor:</p> <ul style="list-style-type: none"> <li>o reviewed the documentation provided by the Beneficiary, including manuals and internal guidelines that explain how to calculate hourly rates;</li> <li>o recalculated the unit costs (hourly rates) of staff included in the sample following the results of the procedures carried out in A.1 and A.2.</li> </ul> <p><b><u>ID) For individual hourly rates:</u></b></p> <p>The Auditor:</p> <ul style="list-style-type: none"> <li>o reviewed the documentation provided by the Beneficiary, including manuals and internal guidelines that explain how to calculate hourly rates;</li> </ul>	<p>28) The Beneficiary applied [choose one option and delete the other]:</p> <p>[Option I: "Unit costs (hourly rates) were calculated in accordance with the Beneficiary's usual cost accounting practices"]</p> <p>[Option II: Individual hourly rates were applied]</p> <p><i>For option I concerning unit costs and if the Beneficiary applies the methodology approved by the Commission (CoMUC):</i></p> <p>29) The Beneficiary used the Commission-approved methodology to calculate hourly rates. It corresponded to the organisation's usual cost accounting practices and was applied consistently for all</p>	



Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<p>o recalculated the hourly rates of staff included in the sample (recalculation of all hourly rates if the Beneficiary uses annual rates, recalculation of three months selected randomly for every year and person if the Beneficiary uses monthly rates) following the results of the procedures carried out in A.1 and A.2;</p> <p>o (only in case of monthly rates) confirmed that the time spent on parental leave is not deducted, and that, if parts of the basic remuneration are generated over a period longer than a month, the Beneficiary has included only the share which is generated in the month.</p> <p><u>“UNIT COSTS CALCULATED BY THE BENEFICIARY IN ACCORDANCE WITH ITS USUAL COST ACCOUNTING PRACTICES”:</u>  <b>IT IS CALCULATED BY DIVIDING THE TOTAL AMOUNT OF PERSONNEL COSTS OF THE CATEGORY TO WHICH THE EMPLOYEE BELONGS VERIFIED IN LINE WITH PROCEDURE A.1 BY THE NUMBER OF FTE AND THE ANNUAL TOTAL PRODUCTIVE HOURS OF THE SAME CATEGORY CALCULATED BY THE BENEFICIARY IN ACCORDANCE WITH PROCEDURE A.2.</b></p> <p><b>HOURLY RATE FOR INDIVIDUAL ACTUAL PERSONAL COSTS:</b>  <b>IT IS CALCULATED FOLLOWING ONE OF THE TWO OPTIONS BELOW:</b></p> <p><b>A) [OPTION BY DEFAULT] BY DIVIDING THE ACTUAL ANNUAL AMOUNT OF PERSONNEL COSTS OF AN EMPLOYEE VERIFIED IN LINE WITH PROCEDURE A.1 BY THE NUMBER OF ANNUAL PRODUCTIVE HOURS VERIFIED IN LINE WITH PROCEDURE A.2 (FULL FINANCIAL YEAR HOURLY RATE);</b></p> <p><b>B) BY DIVIDING THE ACTUAL MONTHLY AMOUNT OF PERSONNEL COSTS OF AN EMPLOYEE VERIFIED IN LINE WITH PROCEDURE A.1 BY 1/12 OF THE NUMBER OF ANNUAL PRODUCTIVE HOURS VERIFIED IN LINE WITH PROCEDURE A.2.(MONTHLY HOURLY RATE).</b></p>	<p>activities irrespective of the source of funding.</p> <p><i>For option I concerning unit costs and if the Beneficiary applies a methodology not approved by the Commission:</i></p> <p>30) The unit costs re-calculated by the Auditor were the same as the rates applied by the Beneficiary.</p> <p><i>For option II concerning individual hourly rates:</i></p> <p>31) The individual rates re-calculated by the Auditor were the same as the rates applied by the Beneficiary.</p> <p>31.1) The Beneficiary used only one option (per full financial year or per month) throughout each financial year examined.</p> <p>31.2) The hourly rates do not include additional remuneration.</p>	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
A.4	<p><b>TIME RECORDING SYSTEM</b></p> <p>To verify that the time recording system ensures the fulfilment of all minimum requirements and that the hours declared for the action were correct, accurate and properly authorised and supported by documentation, the Auditor made the following checks for the persons included in the sample that declare time as worked for the action on the basis of time records:</p> <ul style="list-style-type: none"> <li>o description of the time recording system provided by the Beneficiary (registration, authorisation, processing in the HR-system);</li> <li>o its actual implementation;</li> <li>o time records were signed at least monthly by the employees (on paper or electronically) and authorised by the project manager or another manager;</li> <li>o the hours declared were worked within the project period;</li> <li>o there were no hours declared as worked for the action if HR-records showed absence due to holidays or sickness (further cross-checks with travels are carried out in B.1 below) ;</li> <li>o the hours charged to the action matched those in the time recording system.</li> </ul> <p><i>ONLY THE HOURS WORKED ON THE ACTION CAN BE CHARGED. ALL WORKING TIME TO BE CHARGED SHOULD BE RECORDED THROUGHOUT THE DURATION OF THE PROJECT, ADEQUATELY SUPPORTED BY EVIDENCE OF THEIR REALITY AND RELIABILITY (SEE SPECIFIC PROVISIONS BELOW FOR PERSONS WORKING EXCLUSIVELY FOR THE ACTION WITHOUT TIME RECORDS).</i></p> <p><u>If the persons are working exclusively for the action and without time records</u></p> <p>For the persons selected that worked exclusively for the action without time records, the Auditor verified evidence available demonstrating that they were in reality exclusively dedicated to the action and that the Beneficiary signed a declaration confirming that they have worked exclusively for the action.</p>	<p>32) All persons recorded their time dedicated to the action on a <b>daily/ weekly/ monthly</b> basis using a <b>paper/computer-based</b> system. <i>(delete the answers that are not applicable)</i></p> <p>33) Their time-records were authorised at least monthly by the project manager or other superior.</p> <p>34) Hours declared were worked within the project period and were consistent with the presences/absences recorded in HR-records.</p> <p>35) There were no discrepancies between the number of hours charged to the action and the number of hours recorded.</p> <p>36) The exclusive dedication is supported by a declaration signed by the Beneficiary and by any other evidence gathered.</p>	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
<b>B</b>	<b>COSTS OF SUBCONTRACTING</b>		
<b>B.1</b>	<p><b>The Auditor obtained the detail/breakdown of subcontracting costs and sampled cost items selected randomly (full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 items, or 10% of the total, whichever number is highest).</b></p> <p>To confirm standard factual findings 37-41 listed in the next column, the Auditor reviewed the following for the items included in the sample:</p> <ul style="list-style-type: none"> <li>○ the use of subcontractors was foreseen in Annex 1;</li> <li>○ subcontracting costs were declared in the subcontracting category of the Financial Statement;</li> <li>○ supporting documents on the selection and award procedure were followed;</li> <li>○ the Beneficiary ensured best value for money (key elements to appreciate the respect of this principle are the award of the subcontract to the bid offering best price-quality ratio, under conditions of transparency and equal treatment. In case an existing framework contract was used the Beneficiary ensured it was established on the basis of the principle of best value for money under conditions of transparency and equal treatment).</li> </ul> <p>In particular,</p> <ul style="list-style-type: none"> <li>i. if the Beneficiary acted as a contracting authority within the meaning of Directive 2004/18/EC (or 2014/24/EU) or of Directive 2004/17/EC (or 2014/25/EU), the Auditor verified that the applicable national law on public procurement was followed and that the subcontracting complied with the Terms and Conditions of the Agreement.</li> <li>ii. if the Beneficiary did not fall under the above-mentioned category the Auditor verified that the Beneficiary followed their usual procurement rules and respected the Terms and Conditions of the Agreement..</li> </ul>	<p>37) The use of claimed subcontracting costs was foreseen in Annex 1 and costs were declared in the Financial Statements under the subcontracting category.</p> <p>38) There were documents of requests to different providers, different offers and assessment of the offers before selection of the provider in line with internal procedures and procurement rules. Subcontracts were awarded in accordance with the principle of best value for money. <i>(When different offers were not collected the Auditor explains the reasons provided by the Beneficiary under the caption “Exceptions” of the Report. The Commission will analyse this information to evaluate whether these costs might be accepted as eligible)</i></p> <p>39) The subcontracts were not awarded to other Beneficiaries</p>	

Ref	Procedures	Standard factual finding	Result (C / E / N.A.)
	<p>For the items included in the sample the Auditor also verified that:</p> <ul style="list-style-type: none"> <li>o the subcontracts were not awarded to other Beneficiaries in the consortium;</li> <li>o there were signed agreements between the Beneficiary and the subcontractor;</li> <li>o there was evidence that the services were provided by subcontractor;</li> </ul>	<p>of the consortium.</p> <p>40) All subcontracts supported by agreements between Beneficiary and subcontractor. were signed the the</p> <p>41) There was evidence that the services were provided by the subcontractors.</p>	
<b>C</b>	<b>COSTS OF PROVIDING FINANCIAL SUPPORT TO THIRD PARTIES</b>		
C.1	<p>The Auditor obtained the detail/breakdown of the costs of providing financial support to third parties and sampled [redacted] cost items selected randomly (full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 items, or 10% of the total, whichever number is highest).</p> <p>The Auditor verified that the following minimum conditions were met:</p> <ul style="list-style-type: none"> <li>a) the maximum amount of financial support for each third party did not exceed EUR 60 000, unless explicitly mentioned in Annex 1;</li> <li>b) the financial support to third parties was agreed in Annex 1 of the Agreement and the other provisions on financial support to third parties included in Annex 1 were respected.</li> </ul>	<p>42) All minimum conditions were met</p>	

OTHER ACTUAL DIRECT COSTS	
<b>D</b>	<b>COSTS OF TRAVEL AND RELATED SUBSISTENCE ALLOWANCES</b>
<b>D.1</b>	<p><b>The Auditor sampled [ ] cost items selected randomly (full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 items, or 10% of the total, whichever number is the highest).</b></p> <p>The Auditor inspected the sample and verified that:</p> <ul style="list-style-type: none"> <li>o travel and subsistence costs were consistent with the Beneficiary's usual policy for travel. In this context, the Beneficiary provided evidence of its normal policy for travel costs (e.g. use of first class tickets, reimbursement by the Beneficiary on the basis of actual costs, a lump sum or per diem) to enable the Auditor to compare the travel costs charged with this policy;</li> <li>o travel costs are correctly identified and allocated to the action (e.g. trips are directly linked to the action) by reviewing relevant supporting documents such as minutes of meetings, workshops or conferences, their registration in the correct project account, their consistency with time records or with the dates/duration of the workshop/conference;</li> <li>o no ineligible costs or excessive or reckless expenditure was declared (see Article 6.5 MGA).</li> </ul>
<b>D.2</b>	<p><b>DEPRECIATION COSTS FOR EQUIPMENT, INFRASTRUCTURE OR OTHER ASSETS</b></p> <p><b>The Auditor sampled [ ] cost items selected randomly (full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 items, or 10% of the total, whichever number is the highest).</b></p> <p>For “equipment, infrastructure or other assets” [from now on called “asset(s)”] selected in the sample the Auditor verified that:</p> <ul style="list-style-type: none"> <li>o the assets were acquired in conformity with the Beneficiary's internal guidelines and procedures;</li> </ul>
	<p>43) Costs were incurred, approved and reimbursed in line with the Beneficiary's usual policy for travels.</p> <p>44) There was a link between the trip and the action.</p> <p>45) The supporting documents were consistent with each other regarding subject of the trip, dates, duration and reconciled with time records and accounting.</p> <p>46) No ineligible costs or excessive or reckless expenditure was declared.</p> <p>47) Procurement rules, principles and guides were followed.</p> <p>48) There was a link between the grant agreement and the asset charged to the action.</p> <p>49) The asset charged to the action was traceable to the accounting records and the underlying documents.</p>

	<ul style="list-style-type: none"> <li>o they were correctly allocated to the action (with supporting documents such as delivery note invoice or any other proof demonstrating the link to the action)</li> <li>o they were entered in the accounting system;</li> <li>o the extent to which the assets were used for the action (as a percentage) was supported by reliable documentation (e.g. usage overview table);</li> </ul> <p>The Auditor recalculated the depreciation costs and verified that they were in line with the applicable rules in the Beneficiary’s country and with the Beneficiary’s usual accounting policy (e.g. depreciation calculated on the acquisition value).</p> <p>The Auditor verified that no ineligible costs such as deductible VAT, exchange rate losses, excessive or reckless expenditure were declared (see Article 6.5 GA).</p>	
<p><b>D.3</b></p>	<p><b>COSTS OF OTHER GOODS AND SERVICES</b></p> <p><b>The Auditor sampled [redacted] cost items selected randomly (full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 items, or 10% of the total, whichever number is highest).</b></p> <p>For the purchase of goods, works or services included in the sample the Auditor verified that:</p> <ul style="list-style-type: none"> <li>o the contracts did not cover tasks described in Annex 1;</li> <li>o they were correctly identified, allocated to the proper action, entered in the accounting system (traceable to underlying documents such as purchase orders, invoices and accounting);</li> <li>o the goods were not placed in the inventory of durable equipment;</li> <li>o the costs charged to the action were accounted in line with the Beneficiary’s usual accounting practices;</li> <li>o no ineligible costs or excessive or reckless expenditure were declared (see Article 6 GA).</li> </ul> <p>In addition, the Auditor verified that these goods and services were acquired in conformity with</p>	<p>50) The depreciation method used to charge the asset to the action was in line with the applicable rules of the Beneficiary’s country and the Beneficiary’s usual accounting policy.</p> <p>51) The amount charged corresponded to the actual usage for the action.</p> <p>52) No ineligible costs or excessive or reckless expenditure were declared.</p> <p>53) Contracts for works or services did not cover tasks described in Annex 1.</p> <p>54) Costs were allocated to the correct action and the goods were not placed in the inventory of durable equipment.</p> <p>55) The costs were charged in line with the Beneficiary’s accounting policy and were adequately supported.</p> <p>56) No ineligible costs or excessive or reckless expenditure were declared. For internal invoices/charges only the cost element was charged, without any mark-ups.</p>

	<p>the Beneficiary's internal guidelines and procedures, in particular:</p> <ul style="list-style-type: none"> <li>o if Beneficiary acted as a contracting authority within the meaning of Directive 2004/18/EC (or 2014/24/EU) or of Directive 2004/17/EC (or 2014/25/EU), the Auditor verified that the applicable national law on public procurement was followed and that the procurement contract complied with the Terms and Conditions of the Agreement.</li> <li>o if the Beneficiary did not fall into the category above, the Auditor verified that the Beneficiary followed their usual procurement rules and respected the Terms and Conditions of the Agreement.</li> </ul> <p>For the items included in the sample the Auditor also verified that:</p> <ul style="list-style-type: none"> <li>o the Beneficiary ensured best value for money (key elements to appreciate the respect of this principle are the award of the contract to the bid offering best price-quality ratio, under conditions of transparency and equal treatment. In case an existing framework contract was used the Auditor also verified that the Beneficiary ensured it was established on the basis of the principle of best value for money under conditions of transparency and equal treatment);</li> </ul> <p><i>SUCH GOODS AND SERVICES INCLUDE, FOR INSTANCE, CONSUMABLES AND SUPPLIES, DISSEMINATION (INCLUDING OPEN ACCESS), PROTECTION OF RESULTS, SPECIFIC EVALUATION OF THE ACTION IF IT IS REQUIRED BY THE AGREEMENT, CERTIFICATES ON THE FINANCIAL STATEMENTS IF THEY ARE REQUIRED BY THE AGREEMENT AND CERTIFICATES ON THE METHODOLOGY, TRANSLATIONS, REPRODUCTION.</i></p>	
<p><b>D.4 AGGREGATED CAPITALISED AND OPERATING COSTS OF RESEARCH INFRASTRUCTURE</b></p>	<p>The Auditor ensured the existence of a positive ex-ante assessment (issued by the EC Services) of the cost accounting methodology of the Beneficiary allowing it to apply the guidelines on direct costing for large research infrastructures in Horizon 2020.</p>	<p>57) Procurement rules, principles and guides were followed. There were documents of requests to different providers, different offers and assessment of the offers before selection of the provider in line with internal procedures and procurement rules. The purchases were made in accordance with the principle of best value for money. <i>(When different offers were not collected the Auditor explains the reasons provided by the Beneficiary under the caption “Exceptions” of the Report. The Commission will analyse this information to evaluate whether these costs might be accepted as eligible)</i></p> <p>58) The costs declared as direct costs for Large Research Infrastructures (in the appropriate line of the Financial Statement) comply with the methodology described in the positive ex-ante assessment report.</p>

	<p><b>In the cases that a positive ex-ante assessment has been issued</b> (see the standard factual findings 58-59 on the next column), The Auditor ensured that the beneficiary has applied consistently the methodology that is explained and approved in the positive ex ante assessment;</p> <p><b>In the cases that a positive ex-ante assessment has NOT been issued</b> (see the standard factual findings 60 on the next column), The Auditor verified that no costs of Large Research Infrastructure have been charged as direct costs in any costs category;</p> <p><b>In the cases that a draft ex-ante assessment report has been issued with recommendation for further changes</b> (see the standard factual findings 60 on the next column),</p> <ul style="list-style-type: none"> <li>The Auditor followed the same procedure as above (when a positive ex-ante assessment has NOT yet been issued) and paid particular attention (testing reinforced) to the cost items for which the draft ex-ante assessment either rejected the inclusion as direct costs for Large Research Infrastructures or issued recommendations.</li> </ul>	<p>59) Any difference between the methodology applied and the one positively assessed was extensively described and adjusted accordingly.</p>	
		<p>60) The direct costs declared were free from any indirect costs items related to the Large Research Infrastructure.</p>	
<p><b>D.5</b></p>	<p><b>Costs of internally invoiced goods and services</b></p> <p><b>The Auditor sampled cost items selected randomly</b> (full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 items, or 10% of the total, whichever number is highest).</p> <p>To confirm standard factual findings 61-65 listed in the next column, the Auditor:</p> <ul style="list-style-type: none"> <li>obtained a description of the Beneficiary's usual cost accounting practice to calculate costs of internally invoiced goods and services (unit costs);</li> <li>reviewed whether the Beneficiary's usual cost accounting practice was applied for the Financial Statements subject of the present CFS;</li> <li>ensured that the methodology to calculate unit costs is being used in a consistent manner, based on objective criteria, regardless of the source of funding;</li> <li>verified that any ineligible items or any costs claimed under other budget categories, in particular indirect costs, have not been taken into account when calculating the costs of</li> </ul>	<p>61) The costs of internally invoiced goods and services included in the Financial Statement were calculated in accordance with the Beneficiary's usual cost accounting practice.</p> <p>62) The cost accounting practices used to calculate the costs of internally invoiced goods and services were applied by the Beneficiary in a consistent manner based on objective criteria regardless of the source of funding.</p> <p>63) The unit cost is calculated using the actual costs for the good or service recorded in the Beneficiary's accounts, excluding any ineligible cost or costs included in other</p>	



	<p>internally invoiced goods and services (see Article 6 GA);</p> <ul style="list-style-type: none"> <li>o verified whether actual costs of internally invoiced goods and services were adjusted on the basis of budgeted or estimated elements and, if so, verified whether those elements used are actually relevant for the calculation, and correspond to objective and verifiable information.</li> <li>o verified that any costs of items which are not directly linked to the production of the invoiced goods or service (e.g. supporting services like cleaning, general accountancy, administrative support, etc. not directly used for production of the good or service) have not been taken into account when calculating the costs of internally invoiced goods and services.</li> <li>o verified that any costs of items used for calculating the costs internally invoiced goods and services are supported by audit evidence and registered in the accounts.</li> </ul>	<p>budget categories.</p> <p>64) The unit cost excludes any costs of items which are not directly linked to the production of the invoiced goods or service.</p> <p>65) The costs items used for calculating the actual costs of internally invoiced goods and services were relevant, reasonable and correspond to objective and verifiable information.</p>	
<b>E</b>	<b>USE OF EXCHANGE RATES</b>		
<b>E.1</b>	<p>a) For Beneficiaries with accounts established in a currency other than euros</p> <p><b>The Auditor sampled [redacted] cost items selected randomly and verified that the exchange rates used for converting other currencies into euros were in accordance with the following rules established in the Agreement (full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 items, or 10% of the total, whichever number is highest):</b></p> <p><i>COSTS RECORDED IN THE ACCOUNTS IN A CURRENCY OTHER THAN EURO SHALL BE CONVERTED INTO EURO AT THE AVERAGE OF THE DAILY EXCHANGE RATES PUBLISHED IN THE C SERIES OF OFFICIAL JOURNAL OF THE EUROPEAN UNION (<a href="https://www.ecb.int/stats/exchange/eurofxref/html/index.en.html">https://www.ecb.int/stats/exchange/eurofxref/html/index.en.html</a>), DETERMINED OVER THE CORRESPONDING REPORTING PERIOD.</i></p> <p><i>IF NO DAILY EURO EXCHANGE RATE IS PUBLISHED IN THE OFFICIAL JOURNAL OF THE EUROPEAN UNION FOR THE CURRENCY IN QUESTION, CONVERSION SHALL BE MADE AT THE AVERAGE OF THE MONTHLY ACCOUNTING RATES ESTABLISHED BY THE COMMISSION AND PUBLISHED ON ITS WEBSITE (<a href="http://ec.europa.eu/budget/contracts_grants/info_contracts/infoforeuro/infoforeuro_en.cfm">http://ec.europa.eu/budget/contracts_grants/info_contracts/infoforeuro/infoforeuro_en.cfm</a>),</i></p>	<p>66) The exchange rates used to convert other currencies into Euros were in accordance with the rules established of the Grant Agreement and there was no difference in the final figures.</p>	

Grant Agreement number: [insert number] [insert acronym] [insert call identifier]

H2020 Model Grant Agreements: H2020 General MGA — Multi: v5.0 – dd.mm.2017

	<p><i>DETERMINED OVER THE CORRESPONDING REPORTING PERIOD.</i></p> <p>b) For Beneficiaries with accounts established in euros</p> <p><b>The Auditor sampled [redacted] cost items selected randomly and verified that the exchange rates used for converting other currencies into euros were in accordance with the following rules established in the Agreement (full coverage is required if there are fewer than 10 items, otherwise the sample should have a minimum of 10 items, or 10% of the total, whichever number is highest):</b></p> <p><i>COSTS INCURRED IN ANOTHER CURRENCY SHALL BE CONVERTED INTO EURO BY APPLYING THE BENEFICIARY'S USUAL ACCOUNTING PRACTICES.</i></p>	<p>67) The Beneficiary applied its usual accounting practices.</p>	
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[legal name of the audit firm]  
[name and function of an authorised representative]  
[dd Month yyyy]  
<Signature of the Auditor>

## ANNEX 6

### MODEL FOR THE CERTIFICATE ON THE METHODOLOGY

- For options [*in italics in square brackets*]: choose the applicable option. Options not chosen should be deleted.
- For fields in [grey in square brackets]: enter the appropriate data.

#### TABLE OF CONTENTS

TERMS OF REFERENCE FOR AN AUDIT ENGAGEMENT FOR A METHODOLOGY CERTIFICATE IN CONNECTION WITH ONE OR MORE GRANT AGREEMENTS FINANCED UNDER THE HORIZON 2020 RESEARCH AND INNOVATION FRAMEWORK PROGRAMME

INDEPENDENT REPORT OF FACTUAL FINDINGS ON THE METHODOLOGY CONCERNING GRANT AGREEMENTS FINANCED UNDER THE HORIZON 2020 RESEARCH AND INNOVATION FRAMEWORK PROGRAMME

**Terms of reference for an audit engagement for a methodology certificate  
in connection with one or more grant agreements financed  
under the Horizon 2020 Research and Innovation Framework Programme**

This document sets out the ‘**Terms of Reference (ToR)**’ under which

[OPTION 1: [insert name of the beneficiary] (*‘the Beneficiary’*)] [OPTION 2: [insert name of the linked third party] (*‘the Linked Third Party’*), third party linked to the Beneficiary [insert name of the beneficiary] (*‘the Beneficiary’*)]

agrees to engage

[insert legal name of the auditor] (*‘the Auditor’*)

to produce an independent report of factual findings (*‘the Report’*) concerning the [Beneficiary’s] [Linked Third Party’s] usual accounting practices for calculating and claiming direct personnel costs declared as unit costs (*‘the Methodology’*) in connection with grant agreements financed under the Horizon 2020 Research and Innovation Framework Programme.

The procedures to be carried out for the assessment of the methodology will be based on the grant agreement(s) detailed below:

[title and number of the grant agreement(s)] (*‘the Agreement(s)’*)

The Agreement(s) has(have) been concluded between the Beneficiary and [OPTION 1: *the European Union, represented by the European Commission (‘the Commission’)*][ OPTION 2: *the European Atomic Energy Community (Euratom,) represented by the European Commission (‘the Commission’)*][OPTION 3: *the [Research Executive Agency (REA)] [European Research Council Executive Agency (ERCEA)] [Innovation and Networks Executive Agency (INEA)] [Executive Agency for Small and Medium-sized Enterprises (EASME)] (‘the Agency’), under the powers delegated by the European Commission (‘the Commission’).*].

The [Commission] [Agency] is mentioned as a signatory of the Agreement with the Beneficiary only. The [European Union] [Euratom] [Agency] is not a party to this engagement.

### **1.1 Subject of the engagement**

According to Article 18.1.2 of the Agreement, beneficiaries [and linked third parties] that declare direct personnel costs as unit costs calculated in accordance with their usual cost accounting practices may submit to the [Commission] [Agency], for approval, a certificate on the methodology (*‘CoMUC’*) stating that there are adequate records and documentation to prove that their cost accounting practices used comply with the conditions set out in Point A of Article 6.2.

The subject of this engagement is the CoMUC which is composed of two separate documents:

- the Terms of Reference (*‘the ToR’*) to be signed by the [Beneficiary] [Linked Third Party] and the Auditor;
- the Auditor’s Independent Report of Factual Findings (*‘the Report’*) issued on the Auditor’s letterhead, dated, stamped and signed by the Auditor which includes; the standard statements (*‘the Statements’*) evaluated and signed by the [Beneficiary] [Linked Third Party], the agreed-upon procedures (*‘the Procedures’*) performed by the Auditor and the standard factual findings

(‘the Findings’) assessed by the Auditor. The Statements, Procedures and Findings are summarised in the table that forms part of the Report.

The information provided through the Statements, the Procedures and the Findings will enable the Commission to draw conclusions regarding the existence of the *[Beneficiary’s] [Linked Third Party’s]* usual cost accounting practice and its suitability to ensure that direct personnel costs claimed on that basis comply with the provisions of the Agreement. The Commission draws its own conclusions from the Report and any additional information it may require.

## 1.2 Responsibilities

The parties to this agreement are the *[Beneficiary] [Linked Third Party]* and the Auditor.

The *[Beneficiary] [Linked Third Party]*:

- is responsible for preparing financial statements for the Agreement(s) (‘the Financial Statements’) in compliance with those Agreements;
- is responsible for providing the Financial Statement(s) to the Auditor and enabling the Auditor to reconcile them with the *[Beneficiary’s] [Linked Third Party’s]* accounting and bookkeeping system and the underlying accounts and records. The Financial Statement(s) will be used as a basis for the procedures which the Auditor will carry out under this ToR;
- is responsible for its Methodology and liable for the accuracy of the Financial Statement(s);
- is responsible for endorsing or refuting the Statements indicated under the heading ‘Statements to be made by the Beneficiary/ Linked Third Party’ in the first column of the table that forms part of the Report;
- must provide the Auditor with a signed and dated representation letter;
- accepts that the ability of the Auditor to carry out the Procedures effectively depends upon the *[Beneficiary] [Linked Third Party]* providing full and free access to the *[Beneficiary’s] [Linked Third Party’s]* staff and to its accounting and other relevant records.

The Auditor:

- *[Option 1 by default: is qualified to carry out statutory audits of accounting documents in accordance with Directive 2006/43/EC of the European Parliament and of the Council of 17 May 2006 on statutory audits of annual accounts and consolidated accounts, amending Council Directives 78/660/EEC and 83/349/EEC and repealing Council Directive 84/253/EEC or similar national regulations].*
- *[Option 2 if the Beneficiary or Linked Third Party has an independent Public Officer: is a competent and independent Public Officer for which the relevant national authorities have established the legal capacity to audit the Beneficiary].*
- *[Option 3 if the Beneficiary or Linked Third Party is an international organisation: is an [internal] [external] auditor in accordance with the internal financial regulations and procedures of the international organisation].*

The Auditor:

- must be independent from the Beneficiary *[and the Linked Third Party]*, in particular, it must not have been involved in preparing the Beneficiary’s *[and Linked Third Party’s]* Financial Statement(s);
- must plan work so that the Procedures may be carried out and the Findings may be assessed;
- must adhere to the Procedures laid down and the compulsory report format;
- must carry out the engagement in accordance with these ToR;
- must document matters which are important to support the Report;
- must base its Report on the evidence gathered;
- must submit the Report to the *[Beneficiary] [Linked Third Party]*.

The Commission sets out the Procedures to be carried out and the Findings to be endorsed by the Auditor. The Auditor is not responsible for their suitability or pertinence. As this engagement is not an assurance engagement the Auditor does not provide an audit opinion or a statement of assurance.

### 1.3 Applicable Standards

The Auditor must comply with these Terms of Reference and with<sup>1</sup>:

- the International Standard on Related Services ('ISRS') 4400 *Engagements to perform Agreed-upon Procedures regarding Financial Information* as issued by the International Auditing and Assurance Standards Board (IAASB);
- the *Code of Ethics for Professional Accountants* issued by the International Ethics Standards Board for Accountants (IESBA). Although ISRS 4400 states that independence is not a requirement for engagements to carry out agreed-upon procedures, the Commission requires that the Auditor also complies with the Code's independence requirements.

The Auditor's Report must state that there was no conflict of interests in establishing this Report between the Auditor and the Beneficiary [*and the Linked Third Party*] that could have a bearing on the Report, and must specify – if the service is invoiced - the total fee paid to the Auditor for providing the Report.

### 1.4 Reporting

The Report must be written in the language of the Agreement (see Article 20.7 of the Agreement).

Under Article 22 of the Agreement, the Commission, [*the Agency*], the European Anti-Fraud Office and the Court of Auditors have the right to audit any work that is carried out under the action and for which costs are declared from [*the European Union*] [*Euratom*] budget. This includes work related to this engagement. The Auditor must provide access to all working papers related to this assignment if the Commission[, *the Agency*], the European Anti-Fraud Office or the European Court of Auditors requests them.

### 1.5 Timing

The Report must be provided by [dd Month yyyy].

### 1.6 Other Terms

[*The [Beneficiary] [Linked Third Party] and the Auditor can use this section to agree other specific terms, such as the Auditor's fees, liability, applicable law, etc. Those specific terms must not contradict the terms specified above.*]

[legal name of the Auditor]  
[name & title of authorised representative]  
[dd Month yyyy]  
Signature of the Auditor

[legal name of the [Beneficiary] [Linked Third Party]]  
[name & title of authorised representative]  
[dd Month yyyy]  
Signature of the [*Beneficiary*] [*Linked Third Party*]

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<sup>1</sup> Supreme Audit Institutions applying INTOSAI-standards may carry out the Procedures according to the corresponding International Standards of Supreme Audit Institutions and code of ethics issued by INTOSAI instead of the International Standard on Related Services ('ISRS') 4400 and the Code of Ethics for Professional Accountants issued by the IAASB and the IESBA.

**Independent report of factual findings on the methodology concerning grant agreements financed under the Horizon 2020 Research and Innovation Framework Programme**

*(To be printed on letterhead paper of the auditor)*

To

[ name of contact person(s)], [Position]  
[[Beneficiary's] [Linked Third Party's] name]  
[ Address]  
[ dd Month yyyy]

Dear [Name of contact person(s)],

As agreed under the terms of reference dated [dd Month yyyy]

with [OPTION 1: [insert name of the beneficiary] ('the Beneficiary')] [OPTION 2: [insert name of the linked third party] ('the Linked Third Party'), third party linked to the Beneficiary [insert name of the beneficiary] ('the Beneficiary')],

we

[ name of the auditor] ('the Auditor'),  
established at  
[full address/city/state/province/country],  
represented by  
[name and function of an authorised representative],

have carried out the agreed-upon procedures ('the Procedures') and provide hereby our Independent Report of Factual Findings ('the Report'), concerning the [Beneficiary's] [Linked Third Party's] usual accounting practices for calculating and declaring direct personnel costs declared as unit costs ('the Methodology').

You requested certain procedures to be carried out in connection with the grant(s)

[title and number of the grant agreement(s)] ('the Agreement(s)').

**The Report**

Our engagement was carried out in accordance with the terms of reference ('the ToR') appended to this Report. The Report includes: the standard statements ('the Statements') made by the [Beneficiary] [Linked Third Party], the agreed-upon procedures ('the Procedures') carried out and the standard factual findings ('the Findings') confirmed by us.

The engagement involved carrying out the Procedures and assessing the Findings and the documentation requested appended to this Report, the results of which the Commission uses to draw conclusions regarding the acceptability of the Methodology applied by the [Beneficiary] [Linked Third Party].

H2020 Model Grant Agreements: H2020 General MGA — Multi: v5.0 – dd.mm.2017

The Report covers the methodology used from [dd Month yyyy]. In the event that the [Beneficiary] [Linked Third Party] changes this methodology, the Report will not be applicable to any Financial Statement<sup>1</sup> submitted thereafter.

The scope of the Procedures and the definition of the standard statements and findings were determined solely by the Commission. Therefore, the Auditor is not responsible for their suitability or pertinence.

Since the Procedures carried out constitute neither an audit nor a review made in accordance with International Standards on Auditing or International Standards on Review Engagements, we do not give a statement of assurance on the costs declared on the basis of the [Beneficiary's] [Linked Third Party's] Methodology. Had we carried out additional procedures or had we performed an audit or review in accordance with these standards, other matters might have come to its attention and would have been included in the Report.

### Exceptions

Apart from the exceptions listed below, the [Beneficiary] [Linked Third Party] agreed with the standard Statements and provided the Auditor all the documentation and accounting information needed by the Auditor to carry out the requested Procedures and corroborate the standard Findings.

**List here any exception and add any information on the cause and possible consequences of each exception, if known. If the exception is quantifiable, also indicate the corresponding amount.**

.....

*Explanation of possible exceptions in the form of examples (to be removed from the Report):*

- i. the [Beneficiary] [Linked Third Party] did not agree with the standard Statement number ... because...;*
- ii. the Auditor could not carry out the procedure ... established because .... (e.g. due to the inability to reconcile key information or the unavailability or inconsistency of data);*
- iii. the Auditor could not confirm or corroborate the standard Finding number ... because ....*

### Remarks

We would like to add the following remarks relevant for the proper understanding of the Methodology applied by the [Beneficiary] [Linked Third Party] or the results reported:

*Example (to be removed from the Report):*

*Regarding the methodology applied to calculate hourly rates ...*

*Regarding standard Finding 15 it has to be noted that ...*

*The [Beneficiary] [Linked Third Party] explained the deviation from the benchmark statement XXIV concerning time recording for personnel with no exclusive dedication to the action in the following manner:*

...

### Annexes

Please provide the following documents to the auditor and annex them to the report when submitting this CoMUC to the Commission:

<sup>1</sup> Financial Statement in this context refers solely to Annex 4 of the Agreement by which the Beneficiary declares costs under the Agreement.



H2020 Model Grant Agreements: H2020 General MGA — Multi: v5.0 – dd.mm.2017

1. Brief description of the methodology for calculating personnel costs, productive hours and hourly rates;
2. Brief description of the time recording system in place;
3. An example of the time records used by the [Beneficiary] [Linked Third Party];
4. Description of any budgeted or estimated elements applied, together with an explanation as to why they are relevant for calculating the personnel costs and how they are based on objective and verifiable information;
5. A summary sheet with the hourly rate for direct personnel declared by the [Beneficiary] [Linked Third Party] and recalculated by the Auditor for each staff member included in the sample (the names do not need to be reported);
6. A comparative table summarising for each person selected in the sample a) the time claimed by the [Beneficiary] [Linked Third Party] in the Financial Statement(s) and b) the time according to the time record verified by the Auditor;
7. A copy of the letter of representation provided to the Auditor.

### Use of this Report

This Report has been drawn up solely for the purpose given under Point 1.1 Reasons for the engagement.

The Report:

- is confidential and is intended to be submitted to the Commission by the [Beneficiary] [Linked Third Party] in connection with Article 18.1.2 of the Agreement;
- may not be used by the [Beneficiary] [Linked Third Party] or by the Commission for any other purpose, nor distributed to any other parties;
- may be disclosed by the Commission only to authorised parties, in particular the European Anti-Fraud Office (OLAF) and the European Court of Auditors.
- relates only to the usual cost accounting practices specified above and does not constitute a report on the Financial Statements of the [Beneficiary] [Linked Third Party].

No conflict of interest<sup>2</sup> exists between the Auditor and the Beneficiary [and the Linked Third Party] that could have a bearing on the Report. The total fee paid to the Auditor for producing the Report was EUR [ ] (including EUR [ ] of deductible VAT).

We look forward to discussing our Report with you and would be pleased to provide any further information or assistance which may be required.

Yours sincerely

[legal name of the Auditor]  
[name and title of the authorised representative]  
[dd Month yyyy]  
Signature of the Auditor

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<sup>2</sup> A conflict of interest arises when the Auditor's objectivity to establish the certificate is compromised in fact or in appearance when the Auditor for instance:

- was involved in the preparation of the Financial Statements;
- stands to benefit directly should the certificate be accepted;
- has a close relationship with any person representing the beneficiary;
- is a director, trustee or partner of the beneficiary; or
- is in any other situation that compromises his or her independence or ability to establish the certificate impartially.

Grant Agreement number: [insert number] [insert acronym] [insert call identifier]

**Statements to be made by the Beneficiary/Linked Third Party ('the Statements') and Procedures to be carried out by the Auditor ('the Procedures') and standard factual findings ('the Findings') to be confirmed by the Auditor**

The Commission reserves the right to provide the auditor with guidance regarding the Statements to be made, the Procedures to be carried out or the Findings to be ascertained and the way in which to present them. The Commission reserves the right to vary the Statements, Procedures or Findings by written notification to the Beneficiary/Linked Third Party to adapt the procedures to changes in the grant agreement(s) or to any other circumstances.

If this methodology certificate relates to the Linked Third Party's usual accounting practices for calculating and claiming direct personnel costs declared as unit costs any reference here below to 'the Beneficiary' is to be considered as a reference to 'the Linked Third Party'.

<i>Please explain any discrepancies in the body of the Report.</i>	
<b>Statements to be made by Beneficiary</b>	
<p><b>A. Use of the Methodology</b></p> <p>I. The cost accounting practice described below has been in use since [dd Month yyyy]/.</p> <p>II. The next planned alteration to the methodology used by the Beneficiary will be from [dd Month yyyy]/.</p>	<p><b>Procedures to be carried out and Findings to be confirmed by the Auditor</b></p> <p><b>Procedure:</b></p> <p>✓ The Auditor checked these dates against the documentation the Beneficiary has provided.</p> <p><b>Factual finding:</b></p> <p>1. The dates provided by the Beneficiary were consistent with the documentation.</p>
<p><b>B. Description of the Methodology</b></p> <p>III. The methodology to calculate unit costs is being used in a consistent manner and is reflected in the relevant procedures.</p> <p><i>[Please describe the methodology your entity uses to calculate personnel costs, productive hours and hourly rates, present your description to the Auditor and annex it to this certificate]</i></p> <p><i>[If the statement of section "B. Description of the methodology" cannot be endorsed by the Beneficiary or there is no written methodology to calculate unit costs it should be listed here below and reported as exception by the Auditor in the main Report of Factual Findings.]</i></p> <p>- ...]</p>	<p><b>Procedure:</b></p> <p>✓ The Auditor reviewed the description, the relevant manuals and/or internal guidance documents describing the methodology.</p> <p><b>Factual finding:</b></p> <p>2. The brief description was consistent with the relevant manuals, internal guidance and/or other documentary evidence the Auditor has reviewed.</p> <p>3. The methodology was generally applied by the Beneficiary as part of its usual costs accounting practices.</p>

<i>Please explain any discrepancies in the body of the Report.</i>	
<b>Statements to be made by Beneficiary</b>	
<p><b>C. Personnel costs</b></p> <p><b>General</b></p> <p>IV. The unit costs (hourly rates) are limited to salaries including during parental leave, social security contributions, taxes and other costs included in the remuneration required under national law and the employment contract or equivalent appointing act;</p> <p>V. Employees are hired directly by the Beneficiary in accordance with national law, and work under its sole supervision and responsibility;</p> <p>VI. The Beneficiary remunerates its employees in accordance with its usual practices. This means that personnel costs are charged in line with the Beneficiary's usual payroll policy (e.g. salary policy, overtime policy, variable pay) and no special conditions exist for employees assigned to tasks relating to the European Union or Euratom, unless explicitly provided for in the grant agreement(s);</p> <p>VII. The Beneficiary allocates its employees to the relevant group/category/cost centre for the purpose of the unit cost calculation in line with the usual cost accounting practice;</p> <p>VIII. Personnel costs are based on the payroll system and accounting system.</p> <p>IX. Any exceptional adjustments of actual personnel costs resulted from relevant budgeted or estimated elements and were based on objective and verifiable information. <i>Please describe the 'budgeted or estimated elements' and their relevance to personnel costs, and explain how they were reasonable and based on objective and verifiable information, present your explanation to the Auditor and annex it to this certificate).</i></p> <p>X. Personnel costs claimed do not contain any of the following ineligible costs: costs related to return on capital; debt and debt service charges; provisions for future losses or debts; interest owed; doubtful debts; currency exchange losses; bank costs charged by the Beneficiary's bank for transfers from the Commission/Agency; excessive or reckless expenditure; deductible VAT or costs incurred during suspension of the implementation of the action.</p> <p>XI. Personnel costs were not declared under another EU or Euratom grant</p>	<p><b>Procedures to be carried out and Findings to be confirmed by the Auditor</b></p> <p><b>Procedure:</b></p> <p><i>The Auditor draws a sample of employees to carry out the procedures indicated in this section C and the following sections D to F.</i></p> <p><i>[The Auditor has drawn a random sample of 10 employees assigned to Horizon 2020 action(s). If fewer than 10 employees are assigned to the Horizon 2020 action(s), the Auditor has selected all employees assigned to the Horizon 2020 action(s) complemented by other employees irrespective of their assignments until he has reached 10 employees.].</i> For this sample:</p> <ul style="list-style-type: none"> <li>✓ the Auditor reviewed all documents relating to personnel costs such as employment contracts, payslips, payroll policy (e.g. salary policy, overtime policy, variable pay policy), accounting and payroll records, applicable national tax , labour and social security law and any other documents corroborating the personnel costs claimed;</li> <li>✓ in particular, the Auditor reviewed the employment contracts of the employees in the sample to verify that:             <ul style="list-style-type: none"> <li>i. they were employed directly by the Beneficiary in accordance with applicable national legislation;</li> <li>ii. they were working under the sole technical supervision and responsibility of the latter;</li> <li>iii. they were remunerated in accordance with the Beneficiary's usual practices;</li> <li>iv. they were allocated to the correct group/category/cost centre for the purposes of calculating the unit cost in line with the Beneficiary's usual cost accounting practices;</li> </ul> </li> <li>✓ the Auditor verified that any ineligible items or any costs claimed under other costs categories or costs covered by other types of grant or by other grants financed from the European Union budget have not been taken into account when calculating the personnel costs;</li> <li>✓ the Auditor numerically reconciled the total amount of personnel costs used to calculate the unit cost with the total amount of personnel costs recorded in the statutory accounts and the payroll system.</li> </ul>

<b>Please explain any discrepancies in the body of the Report.</b>	
<b>Statements to be made by Beneficiary</b>	<b>Procedures to be carried out and Findings to be confirmed by the Auditor</b>
<p>(including grants awarded by a Member State and financed by the EU budget and grants awarded by bodies other than the Commission/Agency for the purpose of implementing the EU or Euratom budget in the same period, unless the Beneficiary can demonstrate that the operating grant does not cover any costs of the action).</p> <p>If additional remuneration as referred to in the grant agreement(s) is paid</p> <p>XII. The Beneficiary is a non-profit legal entity;</p> <p>XIII. The additional remuneration is part of the beneficiary's usual remuneration practices and paid consistently whenever the relevant work or expertise is required;</p> <p>XIV. The criteria used to calculate the additional remuneration are objective and generally applied regardless of the source of funding;</p> <p>XV. The additional remuneration included in the personnel costs used to calculate the hourly rates for the grant agreement(s) is capped at EUR 8 000 per full-time equivalent (reduced proportionately if the employee is not assigned exclusively to the action).</p> <p>[If certain statement(s) of section "C. Personnel costs" cannot be endorsed by the Beneficiary they should be listed here below and reported as exception by the Auditor in the main Report of Factual Findings: - ...]</p>	<ul style="list-style-type: none"> <li>✓ to the extent that actual personnel costs were adjusted on the basis of budgeted or estimated elements, the Auditor carefully examined those elements and checked the information source to confirm that they correspond to objective and verifiable information;</li> <li>✓ if additional remuneration has been claimed, the Auditor verified that the Beneficiary was a non-profit legal entity, that the amount was capped at EUR 8000 per full-time equivalent and that it was reduced proportionately for employees not assigned exclusively to the action(s).</li> <li>✓ the Auditor recalculated the personnel costs for the employees in the sample.</li> </ul> <p><b>Factual finding:</b></p> <ol style="list-style-type: none"> <li>4. All the components of the remuneration that have been claimed as personnel costs are supported by underlying documentation.</li> <li>5. The employees in the sample were employed directly by the Beneficiary in accordance with applicable national law and were working under its sole supervision and responsibility.</li> <li>6. Their employment contracts were in line with the Beneficiary's usual policy;</li> <li>7. Personnel costs were duly documented and consisted solely of salaries, social security contributions (pension contributions, health insurance, unemployment fund contributions, etc.), taxes and other statutory costs included in the remuneration (holiday pay, thirteenth month's pay, etc.);</li> <li>8. The totals used to calculate the personnel unit costs are consistent with those registered in the payroll and accounting records;</li> <li>9. To the extent that actual personnel costs were adjusted on the basis of budgeted or estimated elements, those elements were relevant for calculating the personnel costs and correspond to objective and verifiable information. The budgeted or estimated elements used are: — (indicate the elements and their values).</li> <li>10. Personnel costs contained no ineligible elements;</li> <li>11. Specific conditions for eligibility were fulfilled when additional</li> </ol>

<b>Please explain any discrepancies in the body of the Report. Statements to be made by Beneficiary</b>	
<p><b>D. Productive hours</b></p> <p>XVI. The number of productive hours per full-time employee applied is <i>[delete as appropriate]</i>:</p> <p>A. 1720 productive hours per year for a person working full-time (corresponding pro-rata for persons not working full time).</p> <p>B. the total number of hours worked in the year by a person for the Beneficiary</p> <p>C. the standard number of annual hours generally applied by the beneficiary for its personnel in accordance with its usual cost accounting practices. This number must be at least 90% of the standard annual workable hours.</p> <p><u>If method B is applied</u></p> <p>XVII. The calculation of the total number of hours worked was done as follows: annual workable hours of the person according to the employment contract, applicable labour agreement or national law plus overtime worked minus absences (such as sick leave and special leave).</p> <p>XVIII. ‘Annual workable hours’ are hours during which the personnel must be working, at the employer’s disposal and carrying out his/her activity or duties under the employment contract, applicable collective labour agreement or national working time legislation.</p> <p>XIX. The contract (applicable collective labour agreement or national working time legislation) do specify the working time enabling to calculate the annual workable hours.</p>	<p>remuneration was paid: a) the Beneficiary is registered in the grant agreements as a non-profit legal entity; b) it was paid according to objective criteria generally applied regardless of the source of funding used and c) remuneration was capped at EUR 8000 per full-time equivalent (or up to up to the equivalent pro-rata amount if the person did not work on the action full-time during the year or did not work exclusively on the action).</p> <p><b>Procedures to be carried out and Findings to be confirmed by the Auditor</b></p> <p>✓ The Auditor verified that the number of productive hours applied is in accordance with method A, B or C.</p> <p>✓ The Auditor checked that the number of productive hours per full-time employee is correct.</p> <p>✓ If method B is applied the Auditor verified i) the manner in which the total number of hours worked was done and ii) that the contract specified the annual workable hours by inspecting all the relevant documents, national legislation, labour agreements and contracts.</p> <p>✓ If method C is applied the Auditor reviewed the manner in which the standard number of working hours per year has been calculated by inspecting all the relevant documents, national legislation, labour agreements and contracts and verified that the number of productive hours per year used for these calculations was at least 90% of the standard number of working hours per year.</p> <p><b>Factual finding:</b></p> <p><u>General</u></p> <p>12. The Beneficiary applied a number of productive hours consistent with method A, B or C detailed in the left-hand column.</p> <p>13. The number of productive hours per year per full-time employee was accurate.</p> <p><u>If method B is applied</u></p> <p>14. The number of ‘annual workable hours’, overtime and absences was</p>

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<p>If method C is applied</p> <p>XX. The standard number of productive hours per year is that of a full-time equivalent.</p> <p>XXI. The number of productive hours per year on which the hourly rate is based i) corresponds to the Beneficiary’s usual accounting practices; ii) is at least 90% of the standard number of workable (working) hours per year.</p> <p>XXII. Standard workable (working) hours are hours during which personnel are at the Beneficiary’s disposal performing the duties described in the relevant employment contract, collective labour agreement or national labour legislation. The number of standard annual workable (working) hours that the Beneficiary claims is supported by labour contracts, national legislation and other documentary evidence.</p> <p><i>[If certain statement(s) of section “D. Productive hours” cannot be endorsed by the Beneficiary they should be listed here below and reported as exception by the Auditor: ...]</i></p> <p><b>E. Hourly rates</b></p> <p>The hourly rates are correct because:</p> <p>XXIII. Hourly rates are correctly calculated since they result from dividing annual personnel costs by the productive hours of a given year and group (e.g. staff category or department or cost centre depending on the methodology applied) and they are in line with the statements made in section C. and D. above.</p> <p><i>[If the statement of section ‘E. Hourly rates’ cannot be endorsed by the Beneficiary they should be listed here below and reported as exception by the Auditor: ...]</i></p>	<p>verifiable based on the documents provided by the Beneficiary and the calculation of the total number of hours worked was accurate.</p> <p>15. The contract specified the working time enabling to calculate the annual workable hours.</p> <p><u>If method C is applied</u></p> <p>16. The calculation of the number of productive hours per year corresponded to the usual costs accounting practice of the Beneficiary.</p> <p>17. The calculation of the standard number of workable (working) hours per year was corroborated by the documents presented by the Beneficiary.</p> <p>18. The number of productive hours per year used for the calculation of the hourly rate was at least 90% of the number of workable (working) hours per year.</p> <p><b>Procedure</b></p> <ul style="list-style-type: none"> <li>✓ The Auditor has obtained a list of all personnel rates calculated by the Beneficiary in accordance with the methodology used.</li> <li>✓ The Auditor has obtained a list of all the relevant employees, based on which the personnel rate(s) are calculated.</li> </ul> <p>For 10 employees selected at random (same sample basis as Section C: Personnel costs):</p> <ul style="list-style-type: none"> <li>✓ The Auditor recalculated the hourly rates.</li> <li>✓ The Auditor verified that the methodology applied corresponds to the usual accounting practices of the organisation and is applied consistently for all activities of the organisation on the basis of objective criteria irrespective of the source of funding.</li> </ul> <p><b>Factual finding:</b></p>

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<b>Statements to be made by Beneficiary</b>	<b>Procedures to be carried out and Findings to be confirmed by the Auditor</b>
<p><b>F. Time recording</b></p> <p>XXXIV. Time recording is in place for all persons with no exclusive dedication to one Horizon 2020 action. At least all hours worked in connection with the grant agreement(s) are registered on a <b>daily/weekly/monthly</b> basis <i>[delete as appropriate]</i> using a <b>paper/computer-based system</b> <i>[delete as appropriate]</i>;</p> <p>XXXV. For persons exclusively assigned to one Horizon 2020 activity the Beneficiary has either signed a declaration to that effect or has put arrangements in place to record their working time;</p> <p>XXXVI. Records of time worked have been signed by the person concerned (on paper or electronically) and approved by the action manager or line manager at least monthly;</p> <p>XXXVII. Measures are in place to prevent staff from:</p> <ol style="list-style-type: none"> <li>i. recording the same hours twice,</li> <li>ii. recording working hours during absence periods (e.g. holidays, sick leave),</li> <li>iii. recording more than the number of productive hours per year used to calculate the hourly rates, and</li> <li>iv. recording hours worked outside the action period.</li> </ol> <p>XXXVIII. No working time was recorded outside the action period;</p> <p>XXXIX. No more hours were claimed than the productive hours used to calculate the hourly personnel rates.</p> <p><i>[Please provide a brief description of the time recording system in place together with the measures applied to ensure its reliability to the Auditor and annex it to the</i></p>	<p>19. No differences arose from the recalculation of the hourly rate for the employees included in the sample.</p> <p><b>Procedure</b></p> <ul style="list-style-type: none"> <li>✓ The Auditor reviewed the brief description, all relevant manuals and/or internal guidance describing the methodology used to record time.</li> </ul> <p>The Auditor reviewed the time records of the random sample of 10 employees referred to under Section C: Personnel costs, and verified in particular:</p> <ul style="list-style-type: none"> <li>✓ that time records were available for all persons with not exclusive assignment to the action;</li> <li>✓ that time records were available for persons working exclusively for a Horizon 2020 action, or, alternatively, that a declaration signed by the Beneficiary was available for them certifying that they were working exclusively for a Horizon 2020 action;</li> <li>✓ that time records were signed and approved in due time and that all minimum requirements were fulfilled;</li> <li>✓ that the persons worked for the action in the periods claimed;</li> <li>✓ that no more hours were claimed than the productive hours used to calculate the hourly personnel rates;</li> <li>✓ that internal controls were in place to prevent that time is recorded twice, during absences for holidays or sick leave; that more hours are claimed per person per year for Horizon 2020 actions than the number of productive hours per year used to calculate the hourly rates; that working time is recorded outside the action period;</li> <li>✓ the Auditor cross-checked the information with human-resources records to verify consistency and to ensure that the internal controls have been effective. In addition, the Auditor has verified that no more hours were charged to Horizon 2020 actions per person per year than the number of productive hours per year used to calculate the hourly rates, and verified that</li> </ul>

<p><i>Please explain any discrepancies in the body of the Report. Statements to be made by Beneficiary present certificate</i><sup>1</sup>.</p>	<p><b>Procedures to be carried out and Findings to be confirmed by the Auditor</b></p>
<p><i>[If certain statement(s) of section “F. Time recording” cannot be endorsed by the Beneficiary they should be listed here below and reported as exception by the Auditor: - ...]</i></p>	<p>no time worked outside the action period was charged to the action.</p> <p><b>Factual finding:</b></p> <p>20. The brief description, manuals and/or internal guidance on time recording provided by the Beneficiary were consistent with management reports/records and other documents reviewed and were generally applied by the Beneficiary to produce the financial statements.</p> <p>21. For the random sample time was recorded or, in the case of employees working exclusively for the action, either a signed declaration or time records were available;</p> <p>22. For the random sample the time records were signed by the employee and the action manager/line manager, at least monthly.</p> <p>23. Working time claimed for the action occurred in the periods claimed;</p> <p>24. No more hours were claimed than the number productive hours used to calculate the hourly personnel rates;</p> <p>25. There is proof that the Beneficiary has checked that working time has not been claimed twice, that it is consistent with absence records and the number of productive hours per year, and that no working time has been claimed outside the action period.</p> <p>26. Working time claimed is consistent with that on record at the human-resources department.</p>

<sup>1</sup> The description of the time recording system must state among others information on the content of the time records, its coverage (full or action time-recording, for all personnel or only for personnel involved in H2020 actions), its degree of detail (whether there is a reference to the particular tasks accomplished), its form, periodicity of the time registration and authorisation (paper or a computer-based system; on a daily, weekly or monthly basis; signed and countersigned by whom), controls applied to prevent double-charging of time or ensure consistency with HR-records such as absences and travels as well as it information flow up to its use for the preparation of the Financial Statements.



Grant Agreement number: [insert number] [insert acronym] [insert call identifier]

<p><i>Please explain any discrepancies in the body of the Report. Statements to be made by Beneficiary</i></p>	<p><b>Procedures to be carried out and Findings to be confirmed by the Auditor</b></p>
<p><i>[official name of the [Beneficiary] [Linked Third Party]] [name and title of authorised representative] [dd Month yyyy]</i></p>	<p><i>[official name of the Auditor] [name and title of authorised representative] [dd Month yyyy]</i></p>
<p><i>&lt;Signature of the [Beneficiary] [Linked Third Party]&gt;</i></p>	<p><i>&lt;Signature of the Auditor&gt;</i></p>



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