



## INTRAW DELIVERABLE D3.2

### BUSINESS PLAN OF THE INTERNATIONAL RAW MATERIALS OBSERVATORY

#### Summary:

The INTRAW project includes the design, development and launch of the European Union's International Observatory for Raw Materials as a definitive raw materials intelligence infrastructure, operating internationally. This report describes the Business Plan of the International Observatory for Raw Materials, detailing the business model that best serves its mission. The report also details the services mix, operations, organisational structure and financials, hence contributing to the implementation of the competitive strategy of the Observatory.

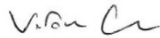
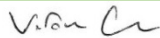
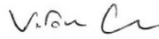
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## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	7
1 INTRODUCTION .....	9
2 VISION, MISSION, FOCUS AREA AND VALUES.....	10
3 STRATEGIC POSITION .....	11
3.1 Goals.....	11
3.2 Core competences .....	11
3.3 Strategic position.....	12
4 SEGMENTATION, TARGETING, POSITIONING AND UNIQUE SELLING PROPOSITION.....	13
4.1 Business context.....	13
4.2 Assessment of market needs.....	17
4.3 Segmentation and targeting.....	20
4.4 Positioning.....	23
4.5 Unique Selling Proposition.....	24
5 MARKETING MIX.....	25
5.1 Services to members.....	25
5.1.1 Access to key individuals.....	25
5.1.2 Economic barometers and foresight reports.....	26
5.2 Services to the marketplace .....	27
5.2.1 Diplomacy support .....	27
5.2.2 Match-making .....	28
5.2.3 Foresight consulting.....	29
5.3 Launch strategy .....	31
6 OPERATIONS .....	32
6.1 Value Discipline.....	32
6.1.1 Operational flexibility .....	32
6.1.2 Key staff.....	33
6.1.3 Innovation.....	33
6.1.4 Alliances and networking.....	34
6.2 Service-delivery infrastructure .....	35
6.3 Resources required .....	37
6.3.1 People .....	37
6.3.2 Capital.....	38
7 ORGANISATIONAL STRUCTURE .....	39
7.1 Organisational chart.....	39
7.2 Corporate culture .....	40
7.3 Training and incentives system .....	41
8 FINANCIAL ANALYSIS .....	42
8.1 Sales forecast.....	42
8.2 Cost structure .....	45
8.3 Financing model .....	46

8.4	Investment appraisal.....	47
8.5	Sensitivity analysis .....	47
9	KEY PERFORMANCE INDICATORS.....	49
10	CONCLUSIONS .....	52
11	BIBLIOGRAPHY .....	53
	APPENDIX 1 – ANALYSIS OF COMPETITION.....	54
	APPENDIX 2 – STATUTES OF THE INTERNATIONAL RAW MATERIALS OBSERVATORY .....	61
	APPENDIX 3 – ESTIMATIONS OF FINANCIAL APPRAISAL .....	71
	APPENDIX 4 – BUSINESS CANVAS (SERVICES TO THE MARKETPLACE, COMMON EXPLOITATION BOOSTER). .....	73

## TABLE OF FIGURES

Figure 1 – Complexity of the buying process among market segments of the Observatory (crossing type of organisation and geographical scope).	20
Figure 2 – Organisational structure of the International Observatory for Raw Materials, and corresponding drivers and management responsibilities of each hierarchic level.	40
Figure 3 – KPIs, by business dimension, of the International Observatory for Raw Materials.	50
Table 1 – Summary of Strengths and Weaknesses underpinned by the contextual analysis of the International Raw Materials Observatory.	13
Table 2 – Summary of Opportunities and Threats that arise from the contextual analysis of the International Observatory for Raw Materials.	14
Table 3 – Identification of existing market needs and wants and corresponding stakeholders.	18
Table 4 – Perceived importance of services of the Observatory for different market segments.	21
Table 5 – Identification of services to be provided by the Observatory (marketplace) and corresponding target segments.	22
Table 9 – Rational and marketing mix for <i>Access to key individuals</i> .	25
Table 10 – Rational and marketing mix for <i>Economic barometers and foresight reports</i> .	26
Table 6 – Rational and marketing mix for <i>Diplomacy Support</i> .	27
Table 7 – Rational and marketing mix for <i>Match-making</i> .	29
Table 8 – Rational and marketing mix for <i>Foresight consulting</i> .	30
Table 11 – Definition of infrastructure requirements, by services, of the International Raw Materials Observatory.	36
Table 12 – Overview of commitments submitted to European Innovation Partnership (EIP) on Raw Materials in the period 2013-2015.	42
Table 13 – Structure and value of membership fees of the Observatory.	44
Table 14 – Outlook of revenues from membership fees (first 3 years).	45
Table 15 – Outlook of revenues from membership fees (first 3 years).	46
Table 16 – Sensitivity analysis on costs and revenues of the Observatory.	48
Table 17 – Definition of KPIs of the International Raw Materials Observatory.	49
Table 18 – Ratios and objectives of the Observatory KPIs.	50
Table 19 – Characteristics and core competences and detriments of existing incumbents of the Observatory.	54

## EXECUTIVE SUMMARY

The overall aim of INTRA is to map best practices and to develop new cooperation opportunities related to mineral raw materials between the EU and technologically advanced non-EU countries (Australia, Canada, Japan, South Africa and the United States) in response to shared global challenges on raw materials supply. The project includes the design, development and launch of the International Raw Materials Observatory, as a definitive raw materials intelligence infrastructure, operating internationally.

This report details the business model, governance and structure necessary to implement the Strategic Plan of the Observatory after the project completion, placing the Observatory as a permanent body active in the establishment and maintenance of strong long-term relationships between the European Union (EU) and the world's key players in raw materials technology and scientific developments.

The mission of the International Raw Materials Observatory is *to support international cooperation on mineral raw materials' research & innovation, education & outreach, industry & trade and recycling, management & substitution of strategic raw materials*. The Observatory will position itself as an independent, non profit "honest broker", supporting dialogues and international cooperation on research, education, industry, trade, recycling and substitution of mineral raw materials.

The International Raw Materials Observatory will formally be an international non-profit association, registered in Belgium, having the following bodies: 1) General Assembly; 2) Advisory Council; and 3) Board of Directors. The General Assembly will be composed by all Full Members of the Association. The Advisory Council will be composed by senior representatives of International Intergovernmental Organisations. The Board of Directors, elected by the General Assembly, will execute the policy defined by that body, with the support of a management team (Secretary General and Office manager). The management team will have the charisma, know-how, working capacity and interpersonal skills required to motivate team members (including external consultants) and will embody the internal values of the Observatory in their actions and deliverables, hence contributing to build up a solid, consistent reputation. To ensure a proper alignment with the strategy and value discipline the organisational structure of the Observatory will guarantee a single point of accountability across each group of services. Key decision-making authority will happen at the interface with clients, hence facilitating an effective management of customer relationships.

The distinctive competences of the International Raw Materials Observatory are: 1) independent, politically neutral, not for profit, science based organisation; 2) in depth knowledge of the raw materials industry; 3) unique access to a wide range of qualified experienced specialists; and 4) access to a global network encompassing research centres, universities, companies and policy makers. The strategic discipline of the Observatory embraces specialisation around: 1) in-depth knowledge of the materials value chain; 2) access to policy-makers; and 3) high-quality reputation and credibility.

The Observatory will offer services to members and services to the marketplace. The services that will be offered in exclusive to members are: 1) Access to key individuals from intergovernmental organisations; and 2) Barometers and foresight reports on mineral raw materials provision. The services to be provided to the marketplace are: 1) Diplomacy support; 2) Match-making (for cooperation schemes); and 3) Foresight consulting. The Unique Selling Proposition of the Observatory is: *The International Raw Materials Observatory is a not for profit independent, honest broker, providing authoritative specialised support on raw materials cooperation, diplomacy and foresight*.

To maximise its operational flexibility, the Observatory will rely on employee's versatility and on the use of task teams. These teams will be managed by objectives, jointly defined by members and the Observatory management. Team objectives will be translated into personal goals and evaluation procedures for team members. Close collaboration with consultants, framed by a flexibility contract ensuring knowledge transfer and revenues above the market, will maximise the Observatory operational flexibility and capacity to deliver in short notice.

The estimation of the market size took as indicator the number of organisations active in the European Innovation Partnership Raw Materials (978) and assumed a market penetration of 10%. This is a conservative outlook, given that the geographical scope of the Observatory is global. The annual membership fee considers 3 classes, according with the size of the organisations: 3.000€ for organisations with 10-49 persons employed; 6.000€ for organisations with 50-249 persons employed; and 12.000€ for organisations having 250 employees or more.

The operational investment necessary to launch the Observatory (100% of costs of year 1) is 209.800€. The financing model of the Observatory considers own equity, using as start-up capital the membership fees of the founding members, topped up by sponsorship. The investment appraisal confirmed that the forecasted levels of costs and revenues are adjusted. In the base scenario the Net Present Value (NPV) of the Observatory is 1.861.738€, the Internal Rate of Return (IRR) is 59% and the Payback period is 4,5 years. This appraisal is conservative, because it considers only revenues from membership fees, calculated using a Pareto distribution.

The performance of the Observatory will be monitored by key performance indicators (KPIs) addressing strategy implementation, internal processes and results. The KPIs dashboard includes financial ratios, marketing indicators and administrative markers.

The launch of the Observatory is paramount to attract new members, and must be made alongside with a high level international conference on mineral raw materials, such as the International EU-advanced mining countries Conference, that will be held during the European Innovation Partnership Raw Materials Week. The launch event must display the full potential of the Observatory, and offer to the audience a flavour of the services that will be provided by the Observatory.



## 1 INTRODUCTION

The aim of INTRA is to map best practices and to develop new cooperation opportunities related to mineral raw materials between the EU and technologically advanced non-EU countries (Australia, Canada, Japan, South Africa and the United States) in response to shared global challenges on raw materials supply.

INTRA is being developed by a Consortium of 15 organisations, with the support of 24 third parties. The project includes the design, development and launch of the International Raw Materials Observatory as a definitive raw materials intelligence infrastructure, operating internationally.

According to INTRA's Grant Agreement "the Observatory will not only continuously monitor cooperation possibilities but will also actively promote these via the establishment of dedicated bilateral and multilateral funding schemes and incentives for raw materials cooperation between the EU and technologically advanced countries outside the EU". In addition, the Observatory shall "contribute to the harmonization of mineral policies all over the EU, by providing data that enables evidence-based policies and appropriate, cost effective management, planning and adaptation decisions by the public sector". And "The Observatory will also provide to policy makers in the EU and its Member States the data they need to facilitate discussion in multilateral fora" and "enable a better alignment of the R&I activities among the individual EU members and international cooperation countries and between the European Union and international cooperation countries by boosting synergies with international research and innovation programmes".

This Business Plan of the International Observatory for Raw Materials (D3.1) is the outcome of INTRA Work Package 3.2, detailing the business model and the governance model and structure necessary to implement the Strategic Plan of the Observatory after the project completion, as a permanent body aiming for the establishment and maintenance of strong long-term relationships between the European Union (EU) and the world's key players in raw materials technology and scientific developments.

The business model is aligned with the Observatory strategic decisions on targeting and positioning, and the comprehensive analysis made in this document ensures the coherence and robustness needed to develop and launch the services (to members and to the marketplace) that will be provided by the Observatory. Details on service mix (benefits, price and delivery), operations, organisational structure, financials (including a financial sensitivity analysis) and key performance indicators ensure a viable fit between the Observatory objectives, skills and resources.

The International Raw Materials Observatory will be a non-profit international association, based in Belgium, open for membership from all types of organisations interested in mineral raw materials, and it will benefit from the advice of the intergovernmental organisations represented in its Advisory Council.

The statutes and corresponding governance and organisational structure advanced for the Observatory were designed carefully, to ensure the biggest possible consensus and adhesion to this new organisation since its formal creation (see section 8).

The Observatory will position itself as an independent, non profit "honest broker", supporting dialogues and international cooperation on research, education, industry, trade, recycling and substitution of mineral raw materials. The action of the Observatory will impact positively policy making and global governance of raw materials.

## 2 VISION, MISSION, FOCUS AREA AND VALUES

The purpose, vision and mission of the International Raw Materials Observatory were defined (by the Consortium that is implementing INTRA) in its Strategic Plan. The purpose of an organization is the fundamental reason why the organization exists. The International Raw Materials Observatory will be a result of the H2020 funded project INTRA. As established in the Grant Agreement of INTRA, “The Observatory will be a permanent body that will remain operational after the project completion, with a clear strategy and management approach, aiming for the establishment and maintenance of strong long-term relationships with the world’s key players in raw materials technology and scientific developments”. The vision statement corresponds to an aspirational description of what an organization would like to achieve or accomplish in the mid-term or long-term future (BusinessDictionary, n.d.), and it is intended to serve as a clear guide for choosing current and future courses of action, in line with its mission, focus area and set of values. The mission statement is a written declaration of an organization's core purpose and focus that normally remains unchanged over time.

The **vision** of the International Raw Materials Observatory is *to be the organisation of reference in the world on the diffusion of best practices along the mineral raw materials value chain.*

The **mission** of the International Raw Materials Observatory is *to support international cooperation on mineral raw materials’ research & innovation, education & outreach, industry & trade and recycling, management & substitution of strategic raw materials.*

Mineral raw materials are the **focus area** of the International Raw Materials Observatory, and diplomacy, dialogues, independent expert analysis and foresight are the main tools that will be used to *advance international cooperation, informed policy making and better governance of mineral raw materials.*

The set of **values** of the International Raw Materials Observatory are built around the concept of *honest broker*, acting as an impartial international mediator specialised in the minerals value chain to support international cooperation, and explain the decision of becoming a *non-profit, independent, international association.*

To ensure the perfect alignment between the purpose, vision, mission, focus area and values of the International Raw Materials Observatory, the INTRA Consortium decided the organisation will have the legal status of not for profit international association (see section 8), based in Brussels, specialised in the value chain of mineral raw materials.

To ensure its economic independency, the Observatory must combine a set of exclusive services to members with an attractive offer of services to the marketplace.

## 3 STRATEGIC POSITION

The strategy of the International Raw Materials Observatory was defined in its Strategic Plan (see INTRA D3.1). The corresponding goals, core competence and strategic position are summarised in this section.

### 3.1 Goals

The **strategic goals** of the International Raw Materials Observatory, having in consideration its vision and mission, are:

1. To promote international cooperation on mineral raw materials research & innovation, education & outreach, industry & trade and recycling, management & substitution of strategic raw materials;
2. To expand raw materials diplomacy and disseminate best practice on mineral raw materials supply;
3. To provide to policy makers independent comprehensive research and analysis on raw materials that is authoritative, confidential and objective;
4. To help organizations along the minerals value chain improving their sustainability, through the analysis of existing problems and the development of plans for improvement.

In 10 years the International Raw Materials Observatory aims to:

5. Become the European organisation of reference on international cooperation on mineral raw materials related topics;
6. Become an indisputable authority on sustainable practices on mineral raw materials provisioning.

### 3.2 Core competences

Core competencies are the main strengths or strategic advantages of a business, including the combination of pooled knowledge and technical capacities that allow a business to be competitive in the marketplace (Core competences, 2015). The core competencies of the International Raw Materials Observatory, listed by organisational dimension/function, are:

Marketing / commercial

- Brand name and possible association with EU flag;
- Independent not for profit science based organisation;
- Nearness to policy makers;

Production

- Access to a wide base of specialists with experience and competence;
- Access to updated and reliable information;

Organisation

- Access to a wide base of mineral raw materials' organisations globally;
- In-house small team, with expandable structure through the EurGeol network.

### 3.3 Strategic position

A *Focus* generic competitive strategy (Porter, 1985), associated with a *Customer Intimacy* value discipline (Customer Intimacy, 2017) is the best way forward to occupy and secure a winning strategic position for the International Observatory of Raw Materials. Hence, the strategic prescription for the International Raw Materials Observatory embraces specialisation around:

- 1) In-depth knowledge of the materials value chain;
- 2) Access to European policy-makers; and
- 3) High-quality reputation and credibility (built on the image) of the INTRAW Consortium.

The implementation of this strategy will require operational flexibility, which can only be supplied by highly skilled and competent personnel, combined with innovative approaches.

## 4 SEGMENTATION, TARGETING, POSITIONING AND UNIQUE SELLING PROPOSITION

### 4.1 Business context

The implementation of the strategy requires trade-offs and an aligned organisation to achieve it. The most relevant trade-offs are:

- Selecting and targeting specific market segments – customers are different and it is necessary to decide how the customer base will be segmented;
- Positioning services to match requirements of the most attractive market segments.

The identification of market segments requires a contextual analysis of the International Raw Materials Observatory, following a structured method known as SWOT analysis (Humphrey, 2005), summarised in Table 1 and Table 2<sup>1</sup>. The analysis of the external context includes generic dimensions (such as demographics, political, legal and social systems, environment and climate change and technology) and business-specific dimensions (market and competition). The analysis of the internal context encompasses four dimensions: marketing and commercial, finance, production and organisation.

**Table 1** – Summary of Strengths and Weaknesses underpinned by the contextual analysis of the International Raw Materials Observatory.

Strengths	Weaknesses
<b>Marketing / Commercial</b>	
Good and strong brand name (with the words “observatory” and “International”). Independent, politically neutral, not for profit (NFP) organisation, based in Europe. Easy to develop reputation and credibility, built on the image of the INTRA Consortium. Extensive and in-deep knowledge of the raw materials value chain. First-class network among geoscience global community. Good knowledge of European Commission’s and Parliament organisation. Capacity to ensure worldwide geographic coverage.	Service quality unknown / never proved. Distribution effectiveness unknown. Sensitivity to price unknown. Promotion effectiveness unknown. Innovation effectiveness unknown.
<b>Finance</b>	
Medium-long term feasibility.	Provision of equity / initial budgeting. Set up investment need. Cash flow needs.
<b>Production</b>	
Availability of highly skilled, specialised work force.	Constraints on capacity.

<sup>1</sup> This analysis was advanced in INTRA’s D3.1, Strategic Plan of the International Observatory for Raw Materials.

Strengths	Weaknesses
Telecommuting / network jobs.	Limited economies of scale. Effectiveness of on time production is unknown.
<b>Organisation</b>	
NFP international organisation with entrepreneurial orientation. Flexible response. Low level of structure (fixed) costs.	Need of establishing all systems and procedures. Effort required recruiting and building a strong core team.

**Table 2** – Summary of Opportunities and Threats that arise from the contextual analysis of the International Observatory for Raw Materials.

Opportunities	Threats
<b>Demographics</b>	
Increasing global demand for raw materials. Increasing socio-economic differences in Europe (between countries, and in the same country, between citizens), triggering political efforts to promote economical growth and the creation of jobs.	
<b>Political / Legal / Social systems</b>	
Increasing economical and political influence of China in world trade. Increasing resources nationalism. New free-trade partnerships of EU with rest of the world. European “values”: valorisation of diplomacy and dialogue over conflict. Coordinated decision-making for EU raw materials’ international action. Difficulties in evaluating the impact of mineral policies/systems.	Increasing economical and political influence of China in world trade. Social unrest in Europe and the USA triggering nationalism. Increasing opposition to international free-trade partnerships / movement towards bilateral trade agreements. Debt crisis/ fiscal austerity (in EU). Erosion of the EU influence/voice. Possible collapse of the Euro. Terrorism.
<b>Environment / Climate change</b>	
Increasing demand for natural resources (including rare earths and exotic metals to be used in renewable technologies). Implementation of UN Sustainable Development Goals with favourable legislation and policy at European level. Lack of harmonisation of the Member States’ environmental policies. Valorisation of “clean” production processes.	Social unrest due to: <ul style="list-style-type: none"> <li>• Economic impact of environmental measures on jobs,</li> <li>• Economic impact of environmental measures on living costs,</li> <li>• Water conflicts, and</li> <li>• Climate migrants.</li> </ul>

Opportunities	Threats
<p>Social and political influence of “green” movements and opposition to mining.</p> <p>Perceived need of aggressive goals for environmental issues.</p>	
<b>Technology</b>	
<p>Technology driven demand for new materials/elements used in scientific advances on:</p> <ul style="list-style-type: none"> <li>• Medicine,</li> <li>• Artificial intelligence,</li> <li>• Robots,</li> <li>• Energy storage, and</li> <li>• Energy production.</li> </ul> <p>Data availability (big data / open source), linked to GIS.</p> <p>Advances on extraction technologies from low-grade ores.</p> <p>Advances on substitution.</p> <p>Advances on recycling.</p> <p>Advances on circular economy.</p>	<p>Advances on substitution.</p> <p>Advances on recycling.</p> <p>Advances on circular economy.</p>
<b>Market</b>	
<p>Increasing global demand of mineral raw materials.</p> <p>Increasing sophistication of demand of mineral raw materials.</p> <p>Maintaining the high standard of living.</p> <p>Size of EU marketplace (3<sup>rd</sup> in the world).</p> <p>Increasing international research on materials sciences and substitution.</p> <p>Lack of coordination and exchange of best practices in technical networks on raw materials.</p> <p>Bad reputation of mining industry.</p> <p>Restrictions to mining due to:</p> <ul style="list-style-type: none"> <li>• Social opposition,</li> <li>• Environmental constraints, and</li> <li>• Long permitting times.</li> </ul> <p>Absence of widely accepted social and environmental standards /industry certification schemes for the raw materials industry (including material’s efficient recycling).</p> <p>Japanese and European companies are leading research on recycling.</p> <p>Strong EU and Japan dependency on imports of raw materials.</p>	<p>Advances in research and innovation in mining are driven by Australian. Canadian. USA and South African mining companies and their suppliers.</p> <p>Japanese and American research centres are better positioned to bring advances in materials science to market and don’t need to rely on EU based research organisations.</p> <p>The USA and Japan could become more attractive than Europe for getting innovative ideas into products.</p> <p>Difficulties in evaluating the long term impact of research projects on geosciences.</p> <p>Difficulties in addressing the wide range of stakeholders involved in raw materials supply (including mining and recycling).</p> <p>Some EU countries already have advanced mineral resources policies and are well placed in international rankings addressing mining investments (e.g. Finland’s National Mineral Resources Strategy, Sweden’s Mineral Strategy).</p> <p>Conflicting market interests between individual Member States or Groups of Member States.</p>

Opportunities	Threats
<p>Loose or absence of coordination between the EU, Australia, Canada, Japan, South Africa and USA on international R&amp;D programmes and policies on raw materials supply.</p> <p>Loose or absent coordination between European and national or regional R&amp;D programmes and policies on raw materials supply.</p> <p>Existing transnational cooperation on research and innovation within the EU.</p> <p>EU industrial policy and efforts to expand international cooperation on raw materials supply (including recycling and substitution), covering trade (Trade for All Communication) and research and innovation (H2020. European Innovation Partnership-Raw Materials. EU Raw Materials Scoreboard).</p> <p>Scarcity or absence of structured information (intelligence) on raw materials science and sourcing for European policy makers at:</p> <ul style="list-style-type: none"> <li>• EU level,</li> <li>• Country level,</li> <li>• Regional level.</li> </ul> <p>Lack of intelligence on raw materials key supply chains and related criticality issues for European policy makers at:</p> <ul style="list-style-type: none"> <li>• EU level,</li> <li>• Country level,</li> <li>• Regional level.</li> </ul> <p>Scarce or dispersed information on raw materials businesses and investments (for investors) covering mining and recycling (including capital expenditures and operating costs) in Europe at:</p> <ul style="list-style-type: none"> <li>• EU level,</li> <li>• Country level,</li> <li>• Regional level.</li> </ul> <p>Difficulties in evaluating the long term impact of EU research projects on geosciences.</p> <p>Emphasis given to corporate responsibility.</p> <p>EU regulation against conflict minerals, and mandatory due diligence checks for importers, smelters and refiners.</p>	
<b>Competition</b>	
<p>Loose or absent interconnection/linkage/coordination between intergovernmental organisations (UN, World Bank, OECD) and initiatives related to raw materials supply.</p>	<p>Intergovernmental organisations and initiatives linking natural resources and its governance towards better governance of natural resources, such as UN, OECD, World Bank and WTO.</p>



Opportunities	Threats
<p>Overlaps and loose interconnection/linkage/coordination between EU organisations and initiatives related to raw materials supply.</p> <p>Existing open access databases and cooperative platforms covering raw materials.</p> <p>Lack of integration among existing European research networks (country based or theme based).</p> <p>Weak integration (sometimes rivalry) among existing industry networks (country based or commodity based).</p> <p>Low acceptance, among industry, of existing standards addressing raw materials supply such as the Extractive Industries Transparency Initiative (EITI) and the Initiative for Responsible Mining Assurance (IRMA).</p> <p>Absence of public recognition of existing standards addressing raw materials supply.</p> <p>Joint Research Centre (JRC), building up and handling the EU Raw Materials Knowledge Base as an open repository of EU data.</p> <p>Several scientific and professional associations lobbying for geoscience and professionals.</p> <p>Lack of coordination of Member State initiatives/organisations addressing raw materials sourcing at country level.</p>	<p>Banking and investment houses with departments/sectors active in the mining business.</p> <p>EU Directorates-General diplomacy actions (meetings, conferences) towards better cooperation on raw materials supply.</p> <p>Existing specialised management and consultancy companies.</p> <p>Existing research networks (country based or theme based).</p> <p>Existing industry networks (country based or commodity based).</p> <p>Existing industrial lobbying associations, active in the EU-level (Euromines, UEPG, IMA).</p> <p>Existing standards addressing raw materials supply alongside with generic industry standards (ISO, OHSAS).</p> <p>Organisations with large sets of global data on geology and raw materials, which already provide reports and organise events on raw materials' provisioning (e.g. USGS).</p> <p>Organisations with the potential to collect, treat and aggregate data on geological potential and mining at the European level (EuroGeoSurveys, the geological surveys of Europe).</p> <p>Country based initiatives/state organisations addressing raw materials sourcing at country level (Morawiecki Plan in Poland, Mineral Resources Agency DERA in Germany, Homeland Security in the USA) and promoting bilateral trade agreements.</p>

## 4.2 Assessment of market needs

The ontology of stakeholders groups related to the minerals industry considers definitive, dominant and dependent stakeholders (Erdmann et al, 2017). Definitive stakeholders have power and legitimacy in the mineral raw materials discourse and policy. They include geological surveys, other public research institutes, universities, research & technology organizations, intelligence institutes, professional organizations, mining and extraction industry, material production industry, recycling and material recovery industry, innovation initiatives, project management agencies, ministries of economic affairs and ministries of education & research. Dominant stakeholders also have legitimacy and power in the mineral raw materials discourse, and they include the manufacturing industry as a user of materials and the re-manufacturing industry, alongside with investors, intergovernmental organisations and international groups affecting raw material policies. Dependent stakeholders have less power but equal legitimacy compared to dominant stakeholders, and they include industry sectors potentially affected by mineral raw materials (e.g. the bio-based industry) and civil society organizations (e.g. environmental NGOs).

All these groups of stakeholders are affected by the following fundamental facts on mineral raw materials provision:

1. Mineral resources are finite, scarce, and depend on geological endowments;
2. No country has all the mineral resources necessary to support a developed society, and international trade is paramount to the supply chains of modern industry;
3. Resource nationalism can be a cause of war;
4. Technological developments require the use a wider variety of mineral raw materials to the production of goods;
5. As a result of imbalances and weak governance, the exploitation of mineral resources in many countries does not support, as it should, social and economical development;
6. The mining industry has a bad reputation, as a consequence of a track record of poor environmental and social performance;
7. To ensure resources for future generations, the governance of mineral resources needs to be improved;
8. Research effectiveness on raw materials' exploration, exploitation, beneficiation, uses, recycling and substitution is damaged by secrecy, lack of international cooperation and competition;
9. Policy makers' access to qualified, independent, apolitical international experts is difficult;
10. There is a lack of structured information, knowledge and foresight on mineral raw materials.

Despite this, dialogue between these groups of stakeholders is uncommon and concertation between clusters on each group is rare.

The ten facts listed sustain the list of existing problems / market needs that were identified through personal interviews and surveys with prospective customers (see INTRAW D3.1 - Strategic Plan of the International Raw Materials Observatory). The needs were categorised in five groups, and the corresponding stakeholders were associated to each group of needs (Table 3).

**Table 3** – Identification of existing market needs and wants and corresponding stakeholders.

Market needs / wants	Stakeholders
Match making for research units/industry; Dissemination of research results from raw materials research; (Meta) data services to data generated by raw materials research globally; Observe raw materials research globally: 1-(first) Monitoring existing calls ; 2- (later) Facilitation of joint calls and bilateral agreements on mobility/research/education.	<b>Definitive stakeholders and Dependent stakeholders</b> Individual and/or independent researchers; Research centres/councils; Universities; Industry.
Conferences and industry exhibitions (e.g. European Mining Fair); Match making for investors/prospectors/suppliers of equipment and services (mainly SMEs); Business information centre (permitting, compliance, initiatives to attract Foreign Direct Investment, country guides for investors); Inward and outward mineral industry trade missions; Global award for best environmental and social practices.	<b>Definitive stakeholders and Dependent stakeholders</b> Juniors, investors, business angels, capital funds; SMEs along the minerals supply chain (including consultancy firms); Equipment Manufacturers; Industry associations; Mining companies.
Mutual recognition of qualifications' schemes;	<b>Definitive, Dominant and Dependent</b>

Market needs / wants	Stakeholders
Accreditation of professional and vocational training.	<b>stakeholders</b> Universities; Professional associations; Training companies; Industry; Lawyers; Legislators; Governments.
Think Tank (advocacy power); Policy and diplomacy support (policy advice, peer reviews, consultancy to EU and governments) Diplomacy events (conferences, workshops); Accredited “Raw Materials Diplomat” title / in collaboration with EFG and training institutions; Expert brokerage; Decision-makers’ education and outreach.	<b>Definitive stakeholders and Dominant stakeholders</b> Intergovernmental international organisations; Transnational not for profit organisations (from Europe and abroad); Governments and Regional Governments; Geological surveys and national investment/trade agencies.
Foresight consulting; Sustainability audit; Sustainability rating; Readers panel to Stock Exchange; Expert brokerage.	<b>Dominant stakeholders</b> Investors and banks; Traders; Major mining companies; Mining analysts and fund managers; Lawyers.

Having considered market needs and the Observatory capacity, and crossing existing offers and competition (see Table of Competitors included in Appendix 1 and INTRA D3.1 - Strategic Plan of the International Raw Materials Observatory), the **offer of services of the Observatory to the marketplace** is built around three families of services that will be created and developed using existing skills, and facing limited or weak competition. These families of services are:

1. **Diplomacy support;**
2. **Match-making (for cooperation schemes); and**
3. **Foresight consulting.**

Exclusive services to members respond to challenges that arise from the fundamental facts on raw materials provision mentioned above, and will counter the existing silo mentality between definitive, dominant and dependent stakeholders. These services will boost dialogue and will create conditions for the development of a holistic approach to face the challenges of mineral raw materials provision. The **services of the Observatory that will be exclusive to full members** are:

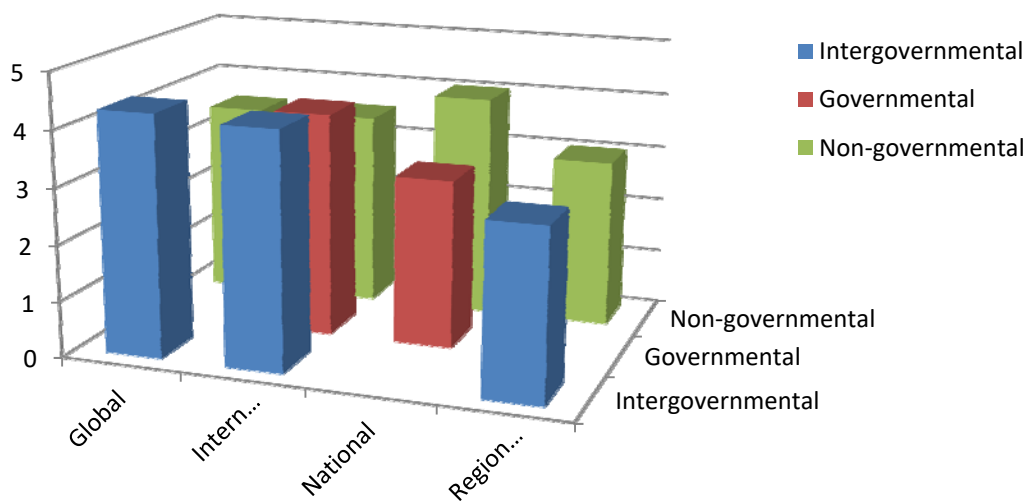
1. **Access to key individuals** (influencers and opinion makers) active on raw materials policies, industry, trade, education, outreach, research and education;
2. **Economic barometers and foresight reports** on mineral raw materials provision.

### 4.3 Segmentation and targeting

The approach to the definition of market segments, starting from the definition of the raw materials stakeholders' ontology (Erdmann *et al.*, 2017), considers the:

1. Organisation type (intergovernmental, governmental, non-governmental);
2. Regional scope of activity (global, international, national and regional);
3. Buying situation (new buy, modified rebuy and straight rebuy); and
4. Activity focus (e.g. education, consulting, banking, industry, research).

The number of all possible combinations of these factors exceeds 100 and Figure 1 illustrates how market segments are compared and selected. In this example numbers in the Y axis represent the complexity of the buying process, corresponding to higher numbers a more multifarious buying process, requiring additional time and effort. In this case, the most attractive segments are global and international intergovernmental organisations, alongside with all international organisations.



**Figure 1** – Complexity of the buying process among market segments of the Observatory (crossing type of organisation and geographical scope).

It must be pointed out that new buys are easier when prospective customers face challenges provoked by global events they cannot control, having direct impact on their activity, such as technological impulses (new materials, new processes), political and social conflicts (resource nationalism, strikes, regional wars) and environmental constraints (shortage of resources, adverse climate events).

Taking this into consideration, Table 4 compares, for 22 relevant segments, the added value/perceived importance of the services that the Observatory will be offering to the marketplace and (exclusively) to its full members.

**Table 4** – Perceived importance of services of the Observatory for different market segments.

Market Segments	Services to Marketplace			Services to Members	
	Diplomacy support	Match-making	Foresight consulting	Access to key individuals	Economic barometers and foresight reports
Intergovernmental org.	Orange	White	White	White	Red
European Union (DGs)	Orange	White	White	White	Red
Governments	Orange	Yellow	Orange	White	Orange
Regional Governments	Orange	Yellow	Orange	Orange	Yellow
NGOs	White	Yellow	White	Orange	White
Audit & consulting comp.	White	Yellow	White	Orange	Orange
Miners (large companies)	Yellow	White	Red	Orange	Red
Miners (juniors and SMEs)	Yellow	Orange	Yellow	Orange	Orange
Recycling industry, inc. providers secondary RM	Orange	Yellow	Yellow	Orange	Orange
SMEs (service providers)	Red	Orange	Yellow	Orange	Orange
SMEs (equipment providers)	Orange	Orange	Yellow	Orange	Orange
Traders	Orange	Yellow	Red	Orange	Orange
Industrial buyers of RM	White	Yellow	White	Orange	Yellow
Bankers	White	White	Red	Orange	Red
Lawyers	Yellow	White	White	Orange	Orange
Investors	Yellow	White	Red	Orange	Red
R&T organizations	White	Red	White	Orange	Orange
Universities	White	Red	White	Orange	Yellow
Research networks	Yellow	Orange	Yellow	Orange	Yellow
Industry associations	Yellow	Yellow	Yellow	Orange	Orange
Professional associations	Yellow	Yellow	White	Orange	Yellow
Geological surveys	White	White	White	Orange	Yellow

Legend (added value/importance perceived):



The market segments where the balance between the complexity of the buying process, the perceived value of the services of the Observatory and the number of competitors is more favourable (crossing segmentation factors and the intensity of competition) are:

1. Global/international intergovernmental organisations (EU institutions, G7), preferentially as members;
2. National governments (looking for governance advice), preferentially as customers;
3. Universities and research centres, as customers or members;
4. Mining companies (SMEs and major miners), as customers or members; and
5. Commodities traders and investors, preferentially as members.

Table 5 provides an overview of the matching between services to be provided by the Observatory and target segments.

**Table 5** – Identification of services to be provided by the Observatory and corresponding target segments.

Services	Target segments
<b>Diplomacy support</b> (marketplace) Diplomacy events (conferences, workshops); Training for policy makers.	Governments looking for governance advice; EU and MS institutions; SMEs; Traders. <b>Early buyers:</b> DGs EU; Middle-Eastern and African countries wishing to diversify into minerals.
<b>Match-making</b> (marketplace) Specialised international match-making events (research-research, research-industry, industry-industry cooperation) encompassing the raw materials value chain.	Industry (specially SMEs and recycling); Universities; Research centres. <b>Early buyers:</b> Junior companies; SMEs; Smaller universities (or departments from larger universities) and research centres.
<b>Foresight consulting</b> (marketplace) Tailored trend analysis reports.	Policy makers; Major miners; Traders; Bankers; Investors. <b>Early buyers:</b> Trade policy officers; Managers of strategic stockpiles; Commodity investors.
<b>Access to key individuals</b> (members) Exclusive access to neutral platform for international dialogues on mineral raw materials	Industry, education and research networks; Investors; Traders; SMEs.

Services	Target segments
	<b>Early buyers:</b> SMEs; Recycling industry.
<b>Economic barometers and foresight reports</b> (members) Specialised insight on the short term evolution of the mineral raw materials industry	Big miners; Investors; Bankers. <b>Early buyers:</b> Traders; SMEs.

#### 4.4 Positioning

The **distinctive competences** (that cannot be easily copied or bought) of the International Raw Materials Observatory are:

1. Independent, politically neutral, not for profit, science based organisation;
2. In depth knowledge of the raw materials industry;
3. Unique access to a wide range of qualified experienced specialists;
4. Global network encompassing research centres, universities, companies and policy makers.

Considering the vision and mission of the International Raw Materials Observatory, the previous scrutiny of existing competitors and their core competences (see section 4.3), the **strategic discipline** of the Observatory embraces **specialisation around**:

1. In-depth knowledge of the materials value chain;
2. Access to policy-makers; and
3. High-quality reputation and credibility.

The critical success factors for the successful implementation of this strategy include (by business functions of the Observatory):

##### *Marketing / commercial*

- Quality / personnel competence;
- External image (reputation, dependability, accountability, confidentiality);
- Customer knowledge;

##### *Finance*

- Cost leadership;

##### *Production*

- In-house distribution of knowledge;
- Access to updated and reliable information;
- Innovation / adoption of latest developments;

### *Organisation*

- Networks / alliances;
- Experience and knowhow of key staff.

The approach to define the positioning of the International Raw Materials Observatory includes the analysis of the organisation's distinctive competences that correspond to market needs and that competition cannot duplicate. Hence, the **positioning of the International Raw Materials Observatory** is expressed by the notion of **"honest broker" for win-win solutions**. The factors that frame this positioning are:

- High specialization on raw materials;
- Independent expertise;
- Accountability;
- Strong networks/alliances.

These factors can/must be adjusted for tailored messages to the different market segments.

The fit between market, target segments, positioning and the consequent revenue streams and cost structure was evaluated jointly by the INTRAW consortium, in a dedicated workshop organised with the support of the Common Exploitation Booster support services offered by the European Commission H2020 Common Support Centre. The Business Canvas produced in this workshop are presented in Appendix 4. The analysis of needs, competition and marketplace confirmed the strength of the rationale of the segmentation, targeting and positioning analysis described in this document.

## **4.5 Unique Selling Proposition**

Combining, in a single sentence, the benefits the Observatory will offer to members and to the marketplace is not easy. Considering market needs, target segments, positioning, and also the distinctive competences and services that will be provided by the Observatory, its Unique Selling Proposition (USP; Kotler, 2000) is:

**The International Raw Materials Observatory is a not for profit independent, honest broker, providing authoritative specialised support on raw materials cooperation, diplomacy and foresight.**



## 5 MARKETING MIX

The marketing mix refers to the alignment of the components of the services that will be provided by the Observatory to ensure they will meet the needs of the target segments. The following tables detail the rational and the components of the services that will be provided by the International Raw Materials Observatory. The positioning and the USP of the Observatory are, naturally, the same for all services.

### 5.1 Services to members

#### 5.1.1 Access to key individuals

Communication between players of the mineral raw materials industry and policy makers is often difficult, and affected by the bad reputation of the industry. Advocacy efforts of industry associations are normally frustrated, and often countered by policy decisions that force strict environmental regulations. In this context, establishing a neutral international platform on raw materials, where policy makers and the raw materials value chain are represented, fosters dialogue, knowledge sharing and peer-learning on how to best harness natural resources for more inclusive and sustainable development. Policy makers from major international intergovernmental organisations (e.g. OECD, UN, EU, World Bank, G7) will be represented in the Advisory Board of the International Observatory for Raw Materials (see section 7.1.4 and section 8). The possibility of participating in dialogues with these organisations will attract membership from industry, academia and research. These dialogues will be organised back to back with the annual meeting of the Advisory Council and the General Assembly of the Observatory (with exclusive access to members), and positioned as an exclusive high level summit dedicated to mineral raw materials. The background and marketing mix for this service is summarised in Table 6.

**Table 6** – Rational and marketing mix for *Access to key individuals*.

<b>Needs / problems (top 3):</b>	Lack of communication channels between the mineral raw materials industry and policy makers Social (and political) distrust on the mineral raw materials industry Biased / misaligned industrial and environmental policies
<b>Service / solution:</b>	Dialogues platform: exclusive high level summit dedicated to mineral raw materials with members of the Advisory Council of the Observatory
<b>Top feature of service proposed:</b>	<b>Neutral international platform for dialogues on mineral raw materials</b>
<b>Components of Unique Selling Proposition:</b>	Exclusive access Open, straight communication between regulators, influencers and industry agents Multilateral interaction Non discriminatory dialogues
<b>Advantages that cannot be easily copied:</b>	Access to policy makers from international intergovernmental organisations Politically neutral Non-profit
<b>Target customers:</b>	Industry, education and research networks

	Investors, traders, SMEs
<b>Early adopters:</b>	SMEs, recycling industry
<b>Distribution:</b>	Network of the Observatory, members and consultants
<b>Process:</b>	Structured organization and responsibilities Multiple modes of producing and delivering Strong marketing abilities
<b>Price:</b>	Membership fees
<b>Physical evidence:</b>	Office representation in Brussels and investment to build up reputation
<b>People:</b>	Intensive supervision of labour
<b>Promotion:</b>	Public relations Endorsements
<b>Key metrics:</b>	Nr. of members of the International Observatory for Raw Materials Nr. of international intergovernmental organisations represented in the Advisory Council of the International Observatory for Raw Materials

### 5.1.2 Economic barometers and foresight reports

Accurate predictions on the minerals industry performance in the (near) future provides the basis for better decision making to governments and to industry players. The full members of the Observatory will participate, on an annual basis, on simulations on possible futures and expected impacts on raw materials demand, technology and investments. The results of the simulations will be compiled and distributed to members in a foresight report that will include composite indicators and details on the implications of key risks to industry and to the economy. Given the current uncertainty in global politics, these foresight reports will provide valuable insight to identify likely opportunities and threats to the mineral raw materials industry, and to react accordingly. The background and marketing mix for this service is summarised in Table 7.

**Table 7** – Rational and marketing mix for *Economic barometers and foresight reports*.

<b>Needs / problems (top 3):</b>	Resources nationalism Political and social unrest Instability of mineral supply chains
<b>Service / solution:</b>	Production of exclusive specialized foresight reports
<b>Top feature of service proposed:</b>	<b>Specialised insight to identify likely opportunities and threats to the mineral raw materials industry</b>
<b>Components of Unique Selling Proposition:</b>	Exclusive access Specialised and science based insight Value-chain expertise
<b>Advantages that cannot be easily copied:</b>	Insight from competent professionals Deep knowledge of the mineral raw materials industry Politically neutral

	Non-profit
<b>Target customers:</b>	Big miners Investors, bankers, traders SMEs
<b>Early adopters:</b>	SMEs, Traders
<b>Distribution:</b>	Network of the Observatory, members and consultants
<b>Process:</b>	Structured organization and responsibilities Strong coordination among functions in R&D, product development, and marketing
<b>Price:</b>	Membership fees
<b>Physical evidence:</b>	Office representation in Brussels and investment to build up reputation
<b>People:</b>	Creative talent to build up/develop holistic foresight analysis, using qualitative and quantitative methods
<b>Promotion:</b>	Public relations Endorsements
<b>Key metrics:</b>	Nr. of members of the International Observatory for Raw Materials

## 5.2 Services to the marketplace

### 5.2.1 Diplomacy support

Despite rising anti-globalisation policies, no country has all the raw materials needed to support a developed industry. In this context, bilateral trade agreements will probably replace global trade agreements or partnerships, and diplomatic efforts will be backed by sophisticated analyses, encompassing political, economical and technical dimensions. This will push up the demand for holistic approaches when developing and negotiating raw materials trade agreements, taking in considerations products' life cycles, the corresponding (increasingly sophisticated) material flows and the expected (technological) demand. Cooperation with EU bodies and Members States and with international organisations such as OECD or UN should be advanced and cherished. The background and marketing mix for this service is summarised in Table 8.

**Table 8** – Rational and marketing mix for *Diplomacy Support*.

<b>Needs / problems (top 3):</b>	Resources Nationalism / Competition among states for raw materials provision Lack of structured information and insight on raw materials for policy making Difficult access to expertise on raw materials specifics
<b>Service / solution:</b>	Diplomacy events (conferences, workshops) Training for policy makers Consultancy

<b>Top feature of service proposed:</b>	<b>“Honest broker” for win-win solutions</b>
<b>Components of Unique Selling Proposition:</b>	Independence Specialised Value-chain expertise Unique access to wide range of qualified experienced specialists
<b>Advantages that cannot be easily copied:</b>	Politically neutral Non-profit
<b>Target customers:</b>	EU institutions and MS Governments looking for governance advice SMEs
<b>Early adopters:</b>	Directorate Generals of the European Commission (e.g. Trade, Grow, Aid) Middle-Eastern and African countries wishing to diversify into minerals
<b>Distribution:</b>	Peer to peer / direct sales (professional network of INTRA Consortium, Observatory members and consultants)
<b>Process:</b>	Access to updated and reliable information Structured organization and responsibilities Strong coordination among functions in product development and marketing
<b>Price:</b>	Skimming strategy, with price benefits to the members of the Observatory
<b>Physical evidence:</b>	Office representation in Brussels and investment to build up reputation
<b>People:</b>	Use of qualified experts, intensive supervision of labour
<b>Promotion:</b>	Public relations Endorsements
<b>Key metrics:</b>	Nr. of international diplomacy events organised or co-organised / year

### 5.2.2 Match-making

The demand for this service will be driven by a combination of national research funding constraints, pressure to focus on results (more innovation and less fundamental research), increasing need of cross-fertilisation with other research fields (e.g. artificial intelligence, biosystems, advanced materials) and new emerging research players (focused /specialised research centres, in INTRA’s reference countries and also in emerging countries such as India or Brazil)<sup>2</sup>. Cooperation with existing European research networks (e.g. EIT-Raw Materials, ERA-NETs) and organisations (e.g. EC Joint Research Centre) focused on raw materials should be fostered. The background and marketing mix for this service is summarised in Table 9.

<sup>2</sup> Strong recognised capacity (public image) on raw materials diplomacy will leverage the success of match-making cooperation schemes.

**Table 9** – Rational and marketing mix for *Match-making*.

<b>Needs / problems (top 3):</b>	Competition for research effectiveness Secrecy Data overload
<b>Service / solution:</b>	Match making events for the raw materials value chain
<b>Top feature of service proposed:</b>	<b>Network contacts with research centres, universities, companies and policy makers: “one stop shop”</b>
<b>Components of Unique Selling Proposition:</b>	Straight / prompt finding of international raw materials research / industry partners Specialists who help specialists targeting and choosing research partners
<b>Advantages that cannot be easily copied:</b>	Existing access to professional networks Non-profit
<b>Target customers:</b>	Industry (specially SMEs) Universities, research centres Policy makers, consultants
<b>Early adopters:</b>	Junior miners, SMEs, smaller universities and research centres
<b>Distribution:</b>	Multi-channel / direct sales (organisation of events back to back with relevant raw materials conferences / fairs)
<b>Process:</b>	Strong marketing abilities Use of alliances / networks Structured organization and responsibilities
<b>Price:</b>	Penetration strategy, with benefits to the members of the Observatory
<b>Physical evidence:</b>	Office representation in Brussels and investment to build up reputation
<b>People:</b>	Subcontracting, supervision of delivery and results
<b>Promotion:</b>	User trials Special offers Endorsements
<b>Key metrics:</b>	Nr. of international match-making events / year Nr. of people attending the match-making events / year

### 5.2.3 Foresight consulting

The main drivers of today’s change, technology, globalisation and climate change, have a huge impact on the mineral raw materials supply chain. Technological developments require the use of an increasing diversity of mineral raw materials, many of them rare or only available as by-products of the exploitation and transformation of other elements. Globalisation (first) and economic nationalism (now), as a response to globalisation, are shaping the social, political and economic conditions in many countries and, because of the many interdependences of mineral raw materials, the industry financial and operational conditions are being affected. A surge of nationalism is already causing supply disruptions, and motivating the relocation of some companies. Droughts and water insecurity, tropical cyclones and storms, rising tides and other

consequences of climate change are also affecting the mineral raw materials industry, hampering operations and disturbing the supply chains.

Despite huge amounts of data and many sources of information, holistic knowledge and foresight on the impact of these drivers of change on the raw materials industry is scarce. This will push demand for predictions and scenarios on the industry, legal, regulatory and judicial environment in raw materials producing countries and in major consumers. The background and marketing mix for this service is summarised in Table 10.

**Table 10** – Rational and marketing mix for *Foresight consulting*.

<b>Needs / problems (top 3):</b>	Continuing changing policies Bad (mining) reputation Societal opposition to mining
<b>Service / solution:</b>	Consultancy services specialised in foresight on the raw materials value chain
<b>Top feature of service proposed:</b>	<b>Holistic knowledge and foresight on the impacts of change in the raw materials industry</b>
<b>Components of Unique Selling Proposition:</b>	Independence Specialised and science based Value-chain expertise
<b>Advantages that cannot be easily copied:</b>	Access to independent and competent professionals Deep knowledge of the mineral raw materials industry Politically neutral Non-profit
<b>Target customers:</b>	Big miners Investors Bankers Traders Policy makers
<b>Early adopters:</b>	Managers of strategic stockpiles Commodity investors
<b>Distribution:</b>	Peer to peer / direct sales (network of the Observatory, members and consultants) Endorsement from influencers, such as CRIRSCO, UN, EU agencies, financial regulatory institutions (e.g. European Securities and Markets Authority)
<b>Process:</b>	Access to updated and reliable information Innovation / adoption of latest developments Structured organization and responsibilities
<b>Price:</b>	Skimming strategy, with benefits to the members of the Observatory
<b>Physical evidence:</b>	Office representation in Brussels and investment to build up reputation

<b>People:</b>	Highly skilled labour, in-house distribution of knowledge
<b>Promotion:</b>	Public relations Joint ventures Endorsements
<b>Key metrics:</b>	Nr. of service sales / year Value of service sales / year

### 5.3 Launch strategy

To maximise the impact, the launch of the International Raw Materials Observatory must be made alongside with a high level international conference on mineral raw materials. Examples of possibilities to be considered are:

- The International EU-advanced mining countries Conference, that will be held in November in Brussels, during the European Innovation Partnership Raw Materials Week;
- The G7 industry and science’s ministerial meetings that will happen in Turin in November.

The launch event must display the full potential of the Observatory, and provide to viewers a taste of the services that will be provided by the Observatory. A possible materialisation of this approach could be built by organising, back to back with the main (hosting) event:

- a workshop / panel of discussion on future scenarios of raw materials provision (having top speakers presenting provocative ideas);
- a match-making event for researchers and industry; and
- a brokerage event on international funding for research and innovation in the raw materials sector.

These events must have the support and participation of high level policy makers and influencers from different origins and backgrounds. Endorsement from opinion leaders is paramount for the success of the launch of the Observatory, maximising its visibility (share of voice) and boosting the market attention. If possible, the endorsement must start before the launch event. Social media and pre launch side events could be used for this purpose. The endorsements must highlight the Observatory independency and positioning as honest broker, providing authoritative specialised support on raw materials cooperation, diplomacy and foresight.

Participation in the activities of the launch event must be free, and open upon registration. The event itself and the activities organised by the Observatory will provide occasions to use public relations, advertising and direct selling tools. The communication axis will focus on benefits to stakeholders (instead of the features of the Observatory).

The network of the INTRAW Consortium and its Panels of Experts must be mobilised in advance, to start promoting the Observatory launch in social media. The use of the INTRAW dissemination channels must be maximised, to leverage the impact of the launch.

Post launch communication must be made using visual aids and testimonies in social media channels, and should disseminate on weekly basis news from the Observatory.

## 6 OPERATIONS

### 6.1 Value Discipline

Successful organisations create breakthroughs in value and performance. They do it by redefining value for customers in their respective markets, supported by powerful, cohesive business systems that deliver more of that value than competitors. In the case of the International Raw Materials Observatory, the whole organization must be configured to consistently deliver authoritative specialized insight on raw materials. Meaning operations will require:

- Strong cooperation from channels;
- Innovative approaches;
- IT platform; and
- Structured organization and responsibilities.

To differentiate from existing competition and reinforce customer knowledge and market specialisation the Observatory will excel in the following factors:

- Operational flexibility;
- Reputation of key staff;
- Innovation;
- Alliances and networking.

#### 6.1.1 Operational flexibility

Operational flexibility is the ability to simultaneously meet changing customer demand and controlling costs. To maximise its operational flexibility, the Observatory will rely on its employee's versatility, and on the use of task teams.

High levels of operational flexibility will provide the following benefits:

- Faster reaction times;
- Lower costs;
- High dependability.

This will require a strong control of personnel skills and its usage. To ensure a consistent high quality service the Observatory will provide appropriate training to a pool of consultants, to be selected among the list of EurGeols or similar listings, alongside a proper structuring of information, defining multi-skilling matrices for its collaborators. The use of IT productivity collaboration tools will be stimulated, covering the administrative, planning, work and reporting activities.

Forward planning on skills needs and provision will be made, in line with the scheduling of services launches and market forecasts. The use of task teams of highly skilled and competent personnel will facilitate in-house sharing of knowledge, and will minimise the risks of weak performance. These teams will be managed by objectives / task, and this means that task members and the Observatory management staff will jointly define goals and will plan tasks, setting tracking and reporting systems. The team objectives will be translated into personal goals and evaluation procedures for team members.

Close collaboration with consultants, framed by a flexibility contract that ensures knowledge transfer and revenues above the market, will maximise the Observatory operational flexibility and capacity to deliver in short notice.



### 6.1.2 Key staff

The positioning of the International Raw Materials Observatory (“honest broker” for win-win situations) must be reflected in the internal values of the organisation. Hence, truth, honesty, integrity, reliability, discretion, responsibility and trustworthiness must be communicated as internal values, and the selection and recruitment processes, alongside with rewarding schemes, must recognise and promote these values and matching behaviours.

The reputation of the Observatory must be built around its internal values, and is essential to its survival. Trust and confidence are paramount to engage with the marketplace and, above all, with members. The offer of services (e.g. diplomacy support, match making, access to key individuals) rely on the integrity, truthfulness and good judgment of the Observatory teams, and management must lead by example and hold to these values.

The management team of the Observatory (Secretary General and Office manager) must have charisma, know-how, working capacity and interpersonal skills to motivate team members (including external consultants) and to ensure the internal values of the Observatory will be embodied in their actions and deliverables. This will reinforce positioning, and will contribute to build up a solid, consistent reputation.

A good track record and reputation of these elements (Secretary General and Office manager) is critical for a good start of the Observatory. This will attract talented people, fostering the creation of motivated teams, committed to customers, delivering high quality services.

### 6.1.3 Innovation

Innovation is paramount to create and sustain a competitive leading position. And this ensures the market share and revenue needed to invest in further development and expansion. The Observatory will rely on two mechanisms to strengthen the flow of ideas and opportunities for innovation (see INTRA D 5.4 Plan on Innovation Management<sup>3</sup>):

1. External environment analysis;
2. Leveraging in-house sources of innovation.

Updates of the external environment analysis will be carried out yearly, and will include the contextual assessment, with particular emphasis on data from surveillance of direct and indirect competition, as well as cooperation and technological foresight.

Considering the organisational structure of the International Observatory for Raw Materials (see section 9), and the correspondent communication exchanges, the major in-house sources of innovation are:

1. The external consultants (and the Secretary General and Observatory staff), dealing with complex tasks and solving problems in real context, being faced with customers needs and expectations, with competitors offers and solutions and with legal constraints;
2. The Board of Directors and the Advisory Council, conveying unstructured information on background and geoscience social and political contexts, challenges and problems affecting diverse stakeholders.

Formal evaluations of ideas and opportunities for innovation from in-house sources will take place at least twice per year, and will be preceded by the formal announcement of calls for ideas (see INTRA D 5.4 Plan on Innovation Management). The ideas and opportunities flagged by any of the in-house sources of

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<sup>3</sup> Available for download at <http://intra.eu/publications/>

innovation will be described in a short paragraph, with details on corresponding associated benefits, outreach tools and critical success factors.

The evaluation process of ideas that may become successful innovations will follow a structured process that includes: a) the identification of ideas and opportunities for innovation; and b) the comparison of the improved ideas with the following set of criteria:

1. Consistency with the mission of the Observatory;
2. Market potential;
3. Economical feasibility;
4. Legal, technological and financial requirements;
5. Risk factors (capacity to deliver, sustainable activity, ethically compliant).

The evaluation will be made by a team that will include any combination of 5 members of the organisational structure of the International Observatory for Raw Materials, chosen and headed by the Secretary General. The evaluators will rank how well the idea meets each criterion. The ideas/opportunities for innovation selected will be tested in an “idea development” stage, developed by a small team (2-3 people), including whenever possible the responsible for the idea. This stage will include:

1. Benchmarking;
2. Profitability analysis;
3. Market test; and
4. Idea enhancement.

Whenever possible, these ideas will be compared and framed by business standards, such as the management system for collaborative business relationships, to facilitate future interoperability with different aspects of data exchange and operations.

#### **6.1.4 Alliances and networking**

The services to be delivered by the Observatory can be expanded by cooperation with existing initiatives and organisations. An example of this is the G7 Connex Initiative, officially initiated with the G7 Brussels Declaration in 2014. The objective of CONNEX is to improve the quality of advisory support provided to low income country governments in their negotiation of complex commercial contracts on raw materials supply, and this has clear linkages with the Diplomacy support and Match-making services of the Observatory.

Another example is the EIT RawMaterials, initiated by the European Institute of Innovation and Technology (EIT) and funded by the European Commission. This is the largest and strongest consortium (more than 100 partners) in the raw materials sector worldwide. Its vision is to develop a European Union where raw materials are a major strength, boosting competitiveness, growth and attractiveness of the European raw materials sector. In this case, Match making and Foresight services, provided by the Observatory, can reinforce the action and impact of the EIT RawMaterials, bringing to the European context the international perspective.

By transforming data and information provided by organisations such as OECD (e.g. OECD Trade in Raw Materials database<sup>4</sup>) into knowledge and foresight, the Observatory will build insight that will contribute for better policy making and governance of mineral raw materials. In this context, partnerships with OECD, the International Metals Study Groups, the EU Joint Research Center, who is developing the Raw Materials

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<sup>4</sup> Available at <http://www.compareyourcountry.org/trade-in-raw-materials?cr=oeed&lg=en&page=0>

Information System, or Infomine, the Canadian based organisation who collects and disseminates news on the mining sector, will expand the capacity of the Observatory and must be promoted and cherished.

Organisations with a narrower, specialised focus, such as CRIRSCO, who defines reporting guidelines for the evaluation of mineral deposits, Prometia and the WEE Forum, specialised in recycling, Geological Surveys and European Technology Platforms must also be part of the network of the Observatory, alongside with professional associations of geoscientists.

Finally but not least, financial and political/governmental groups and organisations active in the raw materials field (e.g. the World Bank, the European Investment Bank, the European Securities and Markets Authority, the specialised commissions of the European Parliament, the World Economic Forum) must also be target and invited to join the Observatory.

To ensure participation of key partners in the Observatory, the statutes consider the creation of an advisory body (Advisory Council), where International Intergovernmental Organisations, International Committees, International Forums, Think tanks and Regional Alliances will be represented. The involvement of these organisations in the activity of the Observatory is paramount to increase the perceived value of membership, namely the service of Access to key individuals, to be provided exclusively to members.

One of the deliverables of INTRA is the Observatory Network Plan (D3.3). This plan will include a list and contact details of EU and non-EU stakeholders pertinent for the International Observatory for Raw Materials, defining target organisations for the establishment of Memorandums of Understanding (MoUs) or joint international cooperation activities, facilitators/catalysts of the MoUs, and a timeline for the establishment of MoUs. This deliverable will also indicate how the Observatory should liaise with representatives of existing EU and global bodies and initiatives, and will accelerate the signature of the first batch of MoUs by the official launch of the Observatory.

## 6.2 Service-delivery infrastructure

The service-delivery infrastructure of the Observatory encompasses four elements:

- Process— Degree of workflow standardization and simplification, quality, end-to-end perspective, policies, compliance and performance measurement;
- Organisation— Reporting lines, spans of control, work groups, centralized versus decentralized structures, shared services and outsourcing;
- People— Recruiting, coaching, training and development, clear definition of roles and responsibilities, performance appraisals, job rotation and career paths that include opportunities for leadership and management responsibilities;
- Technology— Data, applications, infrastructure, development and support.

Table 11 details, by type of services, the specific infrastructure elements of the Observatory. The creation of this infrastructure will be build step-by-step, starting with a review/update of service-delivery requirements, and reassessment of methodologies that have a better fit with the core competencies in place. This will require the preparation of documentation, diagnostics and training before the first service is provided.

**Table 11** – Definition of infrastructure requirements, by services, of the International Raw Materials Observatory.

		Infrastructure requirements			
Infrastructure Service group	Most valued characteristics	Process	Organisation	People	Technology
Diplomacy support	Honest brokerage Authoritative, specialised and independent advice Proactive assistance Customised service	Customized reporting and analysis Flexible planning and analysis	Organised “by customer” Integrated with specialty services to provide single contact	Highly skilled Deep knowledge of sector and business Strong interpersonal and teaming skills	Supports <i>ad hoc</i> analysis Automated standard reporting
Match-making	Simple, effective (one stop shop) specialised support Global networking Low cost	Standardized Continuously improved	Organised “by area/activity” Centralised, to provide control and economies of scale Subcontracting / outsourcing is desirable if control is not sacrificed	Continuing improvement mindset Possible high span of control Highly cross-trained	Automated, processes and built-in controls Self-service functionality
Foresight consulting	Holistic knowledge and specialised foresight advice Customised service	Expert interactive consultation and brainstorming Integration of research and knowledge and production of diagnosis and prognosis Cross validation	Collaborative mind-set, encouraging appropriate risk-taking Aligned by sector/ business to reinforce functional knowledge	Deep functional knowledge and technical skills required Ongoing training to reinforce specialization	Future-Oriented Technology Analysis, mixing qualitative and quantitative methods Automated standard reporting
Access to key individuals	Neutral international dialogues platform Multilateral specialised interaction	Standardized Continuously improved	Centralised, back to back with relevant events, to ensure control and economies of scale	Deep knowledge of sector and business actors Strong interpersonal skills	Automated, processes

		Infrastructure requirements			
Infrastructure Service group	Most valued characteristics	Process	Organisation	People	Technology
Economic barometers and foresight reports	Specialised intelligence and foresight advice for decision making	Interviews and surveys Expert consultation and brainstorming Integration of research and knowledge and production of short term prognosis	Aligned by sector/ business to reinforce functional knowledge	Deep functional knowledge and technical skills	Future-Oriented Technology Analysis, mixing qualitative and quantitative methods  Automated standard reporting

### 6.3 Resources required

#### 6.3.1 People

The Observatory will be an international not for profit Association and, according with its statutes (see Appendix 2) will have the following bodies:

- General Assembly;
- Advisory Council;
- Board of Directors.

The General Assembly is the ultimate decisional body of the Observatory. It is composed by the representatives of the Full Partners of the Association. The number of representatives will depend on the number of associates, who will gather at least once per year. The General Assembly won't have relevant impacts on the cost structure of the Observatory, and it can be a source of talented people to the activities of the Observatory.

The Advisory Council is the advisory body of the Observatory. It is composed by the representatives of International Intergovernmental Organisations invited to join the Association. Linkages between the General Assembly and the Advisory Council will be formally created (a dialogue platform, materialised in an exclusive yearly meeting between members of these bodies), and this will give Full Members the opportunity to exchange ideas with policy makers and influencers. Like the General Assembly, the Advisory Council can also be a source of talent to the activities of the Observatory.

The Board of Directors will be in charge of ordinary financial management of the Observatory, including legal proceedings. It will have between 5 to 14 members, elected by the General Assembly, including a President, two Vice-Presidents and a Treasurer. These officers must have a deep knowledge of the mineral raw materials sector and, whenever possible, diplomatic, public service or /and management experience. The Board of Directors will execute the policy defined by the General Assembly, detailed in annual plans of activities, and will help establishing links to potential members, clients, and/or other stakeholders.

Alongside these bodies, the International Raw Materials Observatory will have an executive management team, composed by a Secretary General and an Office Manager. This executive team will deal with the day-to-day tasks of managing the Observatory. The Board of Directors of the Observatory will define the job description and selection criteria for the Secretary General and Office manager, and will be responsible for the recruitment of these officers.

Leadership skills and vision are paramount for the Secretary General position. The Secretary General must be capable of developing the business of the Observatory, while constructing effective teams and seeking clients.

The Office manager must have organisational skills covering financial control, accountability and reporting. The capacity to organise and follow up teams and their work is critical for this position, alongside with an extensive knowledge and use of productivity tools. The Office manager will also coordinate the office team, composed by office assistants.

The executive management team of the Observatory will recruit, select and coordinate the external consultants of the Observatory, who will provide specific tasks / services for the Observatory. Some of those external consultants might become key-partners of the Observatory, i.e. responsible for delivering and developing specific business offers or working with specific market segments. The external consultants of the Observatory must have the necessary talent, knowledge and interpersonal skills (good at planning and delivering, communicating and relationship-building, innovating and decision making) to ensure the internal values of the Observatory will be embodied in their actions. The external consultants of the Observatory will act under the direct supervision of the Secretary General, who will be single point of accountability for the people and services provided by the Observatory.

This approach requires the creation of two fixed job positions for the start-up, minimising initial investments and fixed costs, while ensuring a proper alignment with the strategy and value discipline of the Observatory.

### 6.3.2 Capital

The development, launch and operation of the International Raw Materials will require fixed capital, for the office installation and equipment (furniture, computers, software, printers, internet access and phone line, initial office inventory), and working capital, to support the start of the operations of the Observatory. Working capital will cover fixed operational costs, such as salaries, office rents, insurance and office inventory and cash reserves for one year. The costs of external consultants (direct labour and expenses) and suppliers (of catering or rooms for events) will depend on the output (sales) of the services of the Observatory and will be, therefore, directly coupled with the sales volume. These revenues and corresponding costs were not considered in the calculation of capital needs for the launch of the Observatory.

The **working capital necessary to fund the first year of operations is 209.800€**. This includes salaries and associated social benefits of two people (the Secretary General and the Office Manager), and other fixed costs, such as office rents and insurance (see section 9). **An amount of 140.800€ is necessary to top up membership fees on year one**, as cash reserves for the first year of operation.

Funding for the Observatory will come from membership fees, sales of services and sponsorship (although only membership fees are considered in the investment appraisal). The sources and value of sponsorships will be published yearly in the annual financial report of the Observatory, hence ensuring a transparent register of the interest groups active in the Observatory.

## 7 ORGANISATIONAL STRUCTURE

The Observatory will formally be an international non-profit association, registered in Belgium and governed by Belgian law on non-profit associations, taking the denomination *International Raw Materials Observatory AISBL* (“Association Internationale Sans But Lucratif”). The international non-profit association organisational format was chosen to ensure a perfect alignment with the values of the Observatory (*honest broker*, acting as an impartial international mediator specialised in the minerals value chain to support international cooperation) and to strengthen its mission (*to support international cooperation on mineral raw materials’ research & innovation, education & outreach, industry & trade and recycling, management & substitution of strategic raw materials*).

The draft statutes of the International Raw Materials Observatory are included in Appendix 2. Membership of the Observatory will include Full Members and Honorary Members, both abided to a code of ethics. Full members will be organizations whose activities have links with the provision or use of mineral raw materials such as governments, international organizations, public companies or institutes, non-governmental organizations, not-for-profit organizations, private companies, platforms, cooperatives, research and educational institutions. Full Members will have voting rights. Honorary Members are natural individuals or organisations who contribute (or contributed) to foster dialogues and international cooperation in the mineral raw materials field, proposed by Full Members to join the Association. Honorary Members won’t have voting rights. Full Members will pay a membership fee, variable according with their size, measured by the number of persons employed in the organisation (using the classes defined by Eurostat<sup>5</sup>).

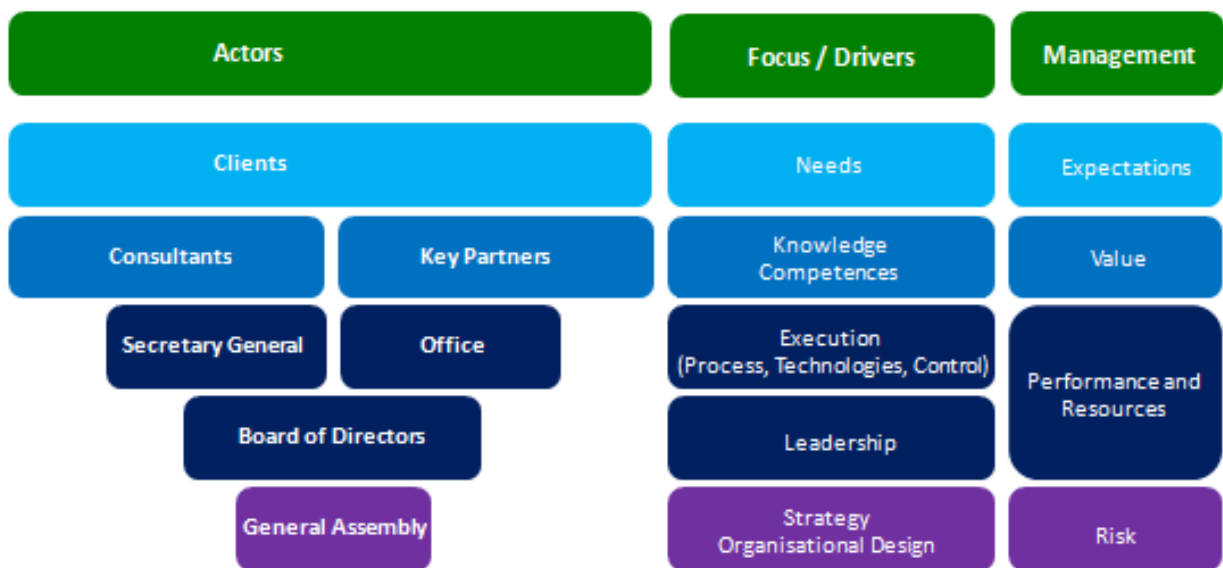
### 7.1 Organisational chart

The Observatory will be supervised by a Board of Directors that will implement the policies and the plans of activities adopted by the General Assembly. The General Assembly will comprise all members with voting rights and it will be the ultimate decisional body of the Observatory. The Board of Directors will be assisted by a Secretary General, responsible for managing the operations of the Observatory. The Secretary General will be assisted by the Office Manager and staff, who carry out the administrative activities. In addition, the Observatory will also have an Advisory Council, where international intergovernmental organisations (e.g. UN, World Bank, OECD, G7, World Trade Organisation) will have a seat.

The structure of the Observatory will be as light as possible, relying on a strong set of external consultants and key partners to provide specific services, under the direct supervision of the Secretary General (Figure 2). To ensure a proper alignment with the strategy and value discipline, the organisational structure of the Observatory will guarantee a single point of accountability across each group of services. Key decision-making authority will happen at the interface with clients, hence facilitating an effective management of customer relationships.

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<sup>5</sup> <http://ec.europa.eu/eurostat/web/structural-business-statistics/structural-business-statistics/sme>



**Figure 2** – Organisational structure of the International Observatory for Raw Materials, and corresponding drivers and management responsibilities of each hierarchic level.

Figure 2 also details the focal point of management at each hierarchic level, and how the corresponding drivers are interconnected across the organisation structure. In the organisational structure of the Observatory clients are at the top of the organisation, and their needs and expectations are satisfied by consultants and key partners who have adequate knowledge and competences to deliver high value services. The Secretary General and the Office Manager and his/her staff support the execution and delivery of services provided to clients by consultants and key partners, ensuring that the processes used are in conformity with internal rules and the results are aligned with the expectations of customers and in line with the core values of the Observatory. The Board of Directors support the activities of the Secretary General and the Office, assessing performance and resources used, to ensure implementation of the strategy designed by the General Assembly with the best possible effectiveness. The General Assembly guarantees the value discipline and strategy of the Observatory are aligned with its vision, values and mission, as outlined in this document, and supervise its implementation and the corresponding risks and liabilities.

## 7.2 Corporate culture

Attitudes and behaviours of staff (encompassing consultants, the office, key-partners and the Secretary General) are critical to implement the Observatory strategy and deliver its value discipline. The Secretary General and the Office Manager, with the support of the Board of Directors, will act as role models, promoting truth, honesty, integrity, reliability, discretion, responsibility and trustworthiness, and will endeavour to create a working environment sensitive and responsive to the wants and needs of customers, staff, consultants and key partners.

Recruitment of staff and selection of consultants and key partners will favour professionals with propensity to help customers, having risk tolerance and willing to pursuit service excellence. Staff, consultants and key partners will receive periodic training to learn (and reinforce) that clients are their most valued assets, who must be acknowledged, cherished and appreciated for choosing the Observatory as their provider.



### 7.3 Training and incentives system

The goal of establishing, since the start, an aligned training and incentives system is to augment motivation of staff and consultants to developing and learning new competences. This system will address individual training needs, and the evaluation of results will consider the impact on individual and team performance.

The variables of carrier development at the Observatory will include: function design; work conditions; personal development opportunities; remuneration and benefits; training; and participation in management.

Performance evaluation systems will encompass individual and team performance. The individual performance will be based on two vectors: the annual evolution of the level of skills of the consultant/collaborator; and his/her behaviour. The results of the individual evaluation will define:

1. Career progression;
2. Salary increases;
3. Vocational training needs.

The evaluation of team performance will depend on the degree of fulfilment of the objectives defined for specific projects or key performance indicators. The evaluation of teams aims to:

1. Stimulate cohesion and team spirit among consultants/staff;
2. Stimulate creativity;
3. Stimulate continuous improvement.

The rewarding system will be designed to attract, retain and motivate talented consultants, and to stimulate behaviours conform to the values of the Observatory. The rewarding system will include salary bonus to be given to consultants or teams as a way of rewarding exceptional performance, aside with non-pecuniary benefits and recognition mechanisms such as awards, tuition or access to education programs.

Training will be the favoured path to fill skill gaps. Training and incentives will be aligned to inspire consultants/staff and reward best practice, and will be linked to explicitly to the key performance indicators (see section 10). Consultants will be considered co-responsible in the management and development of their careers.

## 8 FINANCIAL ANALYSIS

### 8.1 Sales forecast

The European Commission organises, since 2013, the European Innovation Partnership (EIP) on Raw Materials Annual Conference in Brussels. To attract attention to this conference and the raw materials topics, the EIP launched in 2013 a call for raw materials commitments, and replicates that procedure since then. Commitments are joint undertakings by several partners, who commit themselves to carrying out activities that contribute to achieving actions and targets of the EIP raw materials. Between 2013 and 2015 978 organisations, including 84 from non-EU countries, developed and submitted raw materials commitments (Table 12).

**Table 12** – Overview of commitments submitted to European Innovation Partnership (EIP) on Raw Materials in the period 2013-2015.

Indicator	2013 Call for Commitments	2014 update on Commitments from 2013	Call for Commitments 2015	Total
Number of commitments	80	- 4	+ 47	123
Number of unique partners	699	+ 56	+ 223	978
Total indicative budget	€1744 million	- €58.4 million	+ €294 million	€1979 million
Budget secured	€268 million	+ €123 million	n.a.	€391 million

Source: European Innovation Partnership on Raw Materials Annual Monitoring Report 2015<sup>6</sup>.

This growth is also noticeable from the dimension of the EIP on Raw Materials Annual Conference. From a single day event, the concept evolved to a combination of events and, in 2016, the EIP on Raw Materials organised the first Raw Materials Week, combining 3 full day Conferences and 15 satellite events organised by external stakeholders active in the raw materials field. This mobilised a specialised audience of more than 1.500 people, representing nearly 1.000 organisations from the full range of stakeholders mentioned in section 5.2.

Another event organised every year that attracts European stakeholders interested in mineral raw materials is the Mines and Money London cycle of conferences, organised since 2005. This is Europe's largest mining investment conference and exhibition, having an average number of 2500 attendees from 75 countries. The audience includes institutional investors, mining developers (major, mid-tier and junior), merge and acquisitions experts and industry experts for comprehensive coverage of opportunities in the mining finance landscape.

According with the 2016 Conference Post Show Report<sup>7</sup>, last year conference had more than 2000 attendees and more than 2500 onsite meetings making the event the largest gathering of resource investors in Europe. The 4 days conference includes an industry exhibition (with more than 100 sponsors and exhibitors in 2016) and a social programme. A delegate 3 days pass to attend this conference in 2017 costs £1.895 (2.190€) and a 4 days pass costs £2.295 (2.652€). This does not include attendance to the social programme. Early bird (up to 5 months in advance) rates have a discount of 20 to 25%.

<sup>6</sup> Available at <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52014SC0171>

<sup>7</sup> Available at <http://london.minesandmoney.com/>

The three International Study Groups (of Copper and Zinc, Nickel, and Lead), a set of intergovernmental organisations based in Lisbon, also organises periodic conferences bringing together industry and governments to discuss matters of concern in basic metals sectors. The International Study Groups produce a continuous flow of information on base metals supply and demand developments, through the publication of statistics, market research and economic studies. They group 28 governmental members (including the European Union), from 6 continents<sup>8</sup>. The April 2017 meeting of the International Study Groups was organised back to back with the 2 days International Nickel Conference, organised by the Metal Bulletin<sup>9</sup>. The early bird cost of registration to this conference was 1.799€. According with the organisers, the conference had the participation of representatives from 77 organisations, including governments, miners, consultants and investors. These numbers surpassed those of the 2016 Metal Bulletin conference (held in London), attended by representatives from 75 organisations.

A recent player in the European raw materials field, with a strong focus on fostering innovation is the EIT RawMaterials. The mission of EIT RawMaterials is to boost the competitiveness, growth and attractiveness of the European raw materials sector through innovation and entrepreneurship. This network-type organisation was created in 2015, under the patronage of the European Institute of Innovation and Technology (EIT), an independent EU body. The EIT RawMaterials has more than 100 partners of leading businesses, universities and research institutes. These partners work together to develop research and innovation projects, receiving a financial support of about 25% of costs from the European Commission. Major companies who are partners of the EIT RawMaterials pay an annual fee of 100.000€. Public institutes, Universities and smaller companies pay 30.000€ for membership. Part of this money is given back to members when they participate in EIT RawMaterials' research and innovation projects.

There are also two recycling specialised organisations active in the Europe that must be mentioned: the WEEE Forum and Prometia. The WEEE Forum is a not-for-profit association of 31 WEEE (waste electrical and electronic equipment) producer responsibility organisations. It was founded in April 2002 and it provides a platform for members to share ideas and best practices whilst optimising environmental performance through a proper management of WEEE. According with the 2012 Annual Report of the WEEE Forum, the operating income surpassed 800.000€. This corresponds to an average membership fee of over 30.000€. Prometia is an international non-profit association created in 2014, promoting innovation in mineral processing and extractive metallurgy for mining and recycling of raw materials. It aims to strengthen European technical skills and industrial know-how in raw materials processing and support industrial and economic development. It has over 30 members, from industry, research and academia. Annual membership fees range from 10.000€ (for big companies) to 2.000€ (to academia and small companies).

These figures provide an approach to definition of the market size and membership fee of the Observatory. Presuming the target segments of the Observatory are well represented in the EIP Raw Materials and in Mines and Money conferences, the number of organisations with an active interest in the raw materials universe in Europe is approximately 1.000. Hence, assuming a market penetration of 10% for the Observatory, the number of prospective members to be achieved in cruise year is 100. This is a conservative outlook, since the geographical scope of the Observatory is global and not centered in Europe. In addition, and according with the UN, consumption worldwide of raw materials will grow by 3% per annum until 2050 (UNEP, 2011). The growth of global production and consumption of raw materials is determined by a combination of population growth and GDP per capita increase, and the estimations took in consideration, the offset from increasing material efficiency and recycling. This justifies an equivalent 3% growth in the number of members of the Observatory, transposed to the sales forecast.

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<sup>8</sup> According to unconfirmed information the annual membership fee for each of the 3 Study Groups ranges from 10.000€ to 20.000€.

<sup>9</sup> <http://www.metalbulletin.com/events/international-nickel-conference/details.html>

The annual membership fee of the Observatory will range from 3.000€ to 12.000€. The definition of this fee took into consideration four indications:

1. A participant in the Mines and Money or in the Metal Bulletin conferences pays around 2.000€ for specialised insight as well as a networking with investors and industry players;
2. Governmental members of the International Study Groups pay 10.000€ to 20.000€ for membership on each of the three existing Study Groups (total up to 60.000€) for statistics and short-term outlooks;
3. Major members of the EIT RawMaterials pay an annual membership fee of 100.000€ to participate in a research and innovation network that launches projects. Public institutes, universities and smaller companies pay 30.000€;
4. Recycling companies pay membership fees to sectoral organisations ranging from 10.000€ to 30.000€ (major companies). SMEs and Academia pay lower annual fees, of about 2.000€.

The exclusive services to be provided by the Observatory to its members expand the value of the examples above: the networking opportunities provided by the access to key individuals/dialogues platform include representatives of major intergovernmental organisations that are normally difficult to track; and the barometers and foresight reports are, for many policy makers and investors more important than statistics. Taking into account the market intelligence and the offer of services to be provided by the Observatory, the structure of membership fees was built using the classes for enterprises defined by Eurostat and the European Commission<sup>10</sup>, hence depending on the number of employees and turnover, as defined in Table 13.

**Table 13** – Structure and value of membership fees of the Observatory.

Size of the organisation	Membership fee
Micro and small organisations: with 10-49 persons employed and turnover ≤ €10 million or balance sheet total ≤ €10 million	3.000€
Medium-sized organisations: with 50-249 persons employed and turnover ≤ €50 million or balance sheet total ≤ €43 million	6.000€
Large organisations: with 250 or more persons employed or turnover > €50 million or balance sheet total > €43 million	12.000€

The sales forecast of the Observatory (Table 14) assumes: 1) that all the 14 organisations forming the INTRA Consortium will be founding partners; 2) the distribution of member organisations by member classes will follow a Pareto distribution; 3) a 10% market penetration will be obtained by year 3; and 4) the number of members, and the corresponding membership revenues, will grow 3% /year after the third year - cruise year.

<sup>10</sup> *What is an SME? - Small and medium sized enterprises (SME)* available at [https://web.archive.org/web/20150208090338/http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index\\_en.htm](https://web.archive.org/web/20150208090338/http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index_en.htm)

The Pareto distribution, used to calculate the fees revenue is expressed as:

$$F(x) = 1 - (k/x)^\alpha$$

Where:

- x is the random variable;
- k is the lower bound of the data;
- $\alpha$  is the shape parameter.

Assuming  $\alpha=2$ , the distribution (in percentage) of the member organisations among the 3 classes is the following:

$\alpha=2$		40 organisations		100 organisations	
		fees		fees	
x					
3.000€	100%	32,4	97.200€	81	243.000€
6.000€	25%	7,6	45.600€	19	114.000€
12.000€	6%	2,4	28.800	6	72.000€
		sum	171.600€	sum	429.000€

The forecast on the total of membership fees, obtained using this Pareto distribution, is expressed in Table 14.

**Table 14** – Outlook of revenues from membership fees (first 3 years).

	Year 1	Year 2	Year 3 (cruise year)
Number of members	14	40	100
Membership fees	69.000€	171.600€	429.000€
Revenues from sales	0€	0€	0€
Sponsorships/other revenues	0€	0€	0€

Considering only a 10% market penetration and only revenues from membership (net profit from sales of services to the marketplace or other sources of funds are not considered) boosts the robustness of the financial analysis.

## 8.2 Cost structure

The fixed costs of the Observatory include the costs of structure (office rent, IT platform and communications, board expenses, salaries, insurance and social costs of staff). The forecasted cost raise at the third year happens because of the increase of staff and office costs, reflecting the augment on the number of workers necessary to assist a larger number of members.

The variable costs are associated to the costs of providing services to members (Access to key individuals/Dialogue platform and Economic barometers/foresight reports) and to the marketplace. The

variable costs described in Table 15 encompass only the organisation of venues, catering and expenses with consultants linked to the provision of services to Members. The variable costs associated to the provision of services to the marketplace are not addressed by this analysis. This does not influence the accuracy of the scrutiny, because the provision of services to the marketplace (revenues also ignored) will be based on accepted offers, and the design and delivery of the services will be externalised (made by consultants/key partners) and topped with a profit margin. This also strengthens the robustness of the financial analysis.

**Table 15** – Outlook of revenues from membership fees (first 3 years).

	Year 1	Year 2	Year 3 (cruise year)
<b>Fixed Costs</b>	<b>192.300€</b>	<b>222.540€</b>	<b>296.220€</b>
Office rent and insurance	26.400€	26.400€	36.000€
IT platform and communications	26.400€	26.400€	27.600€
Salary Secretary General	56.000€	56.000€	56.000€
Salary Office Manager	42.000€	42.000€	42.000€
Salary Office Staff		22.400€	67.200€
Social security taxes	34.300€	42.140€	57.820€
Travel	7.200€	7.200€	9.600€
<b>Variable Costs</b>	<b>17.500€</b>	<b>22.500€</b>	<b>43.000€</b>
Venues	2.500€	2.500€	5.000€
Catering	3.000€	8.000€	20.000€
Consultants (barometers and foresight reports)	12.000€	12.000€	18.000€

### 8.3 Financing model

Financing models normally combine own equity, equity financing and leasing/loans. In the case of the Observatory, equity financing cannot be considered because the Observatory will have the legal status of an international not for profit Association, and sale of ownership interest is not possible. Loans and finance lease are possible sources of funds for investment, but banks and leasing companies normally ask for guarantees, and this is something the Observatory cannot provide.

In this context, the only possible alternative is to use own equity, using as start-up capital the sum of the membership fees to be paid by the founding members that will constitute the International Raw Materials Observatory. After the foundation of the organisation, this equity might be topped up by third parties sponsorship, coming from the European Strategy Forum on Research Infrastructures (ESFRI) or from the Partnership Instrument of the European Union.

To ensure appropriate funds to cover the operating expenses for the first year, the payment of the annual membership fees of the Observatory will be made in advance.

## 8.4 Investment appraisal

The aim of the investment appraisal is to check if the forecasted levels of costs and revenues are adjusted, hence ensuring the long term economic and financial viability and sustainable development of the International Raw Materials Observatory. The Observatory is a not for profit organisation. However, since it will not be publically funded, it is paramount to access if the funds generated are adequate to the development of the foreseen activities. For the purpose of this assessment it was considered a 20 years period, and it was assumed that the level of revenues and costs will stabilise after the initial 3 years.

The appraisal is made using the methodologies used in business, hence defining the Net Present Value (NPV), Internal Rate of Return (IRR) and the payback period. The following assumptions are made:

- Operational investment (100% of costs of year 1): 209.800€;
- Investment amortisation: 10 years;
- Market size: 1.000 organisations;
- Market penetration in cruise year (year 3 onwards, 10%);
- Revenues annual growth (after year 3): 3%;
- Inflation: 1%;
- Days of Sales Outstanding: 60;
- Days of Payables Outstanding: 30;
- Market risk premium: 4%;
- Beta factor: 0,932;
- Analysis period: 20 years.

Considering these assumptions, the **NPV** of the Observatory is **1.861.738€**. The **IRR** is **59%** and the **Payback period** is **4,5 years**.

These results show that the International Raw Materials Observatory is viable (a project is considered to be viable when the NPV above zero), having an economic and financial outlook comparable to best performing businesses.

Appendix 3 details the investment appraisal calculations.

## 8.5 Sensitivity analysis

The sensitivity analysis considered the following adverse changes in the base-case:

1. 20% increase on operational costs and initial investment;
2. 20% decrease in revenues (membership fees) since the project start;
3. 30% decrease in revenues (membership fees) since the project start.

The results of the sensitivity analysis are summarized in Table 16.

**Table 16** – Sensitivity analysis on costs and revenues of the Observatory.

	Operational investment	Number of members	NPV	IRR	Payback period (years)
Base scenario	209.800€	100	1.861.738€	59%	4,5
20% increase on operational costs and initial investment	230.760€	100	1.075.197€	30%	6,5
20% decrease in revenues	209.800€	80	770.189€	26%	7,0
30% decrease on revenues	230.760€	70	204.595€	14%	13,5

The results of the sensitivity analysis show that the project is more sensitive to revenues loss than to costs increase. The NPV remains positive in all situations, even considering a loss of a 30% in revenues. Having in consideration the initial assumptions on market penetration (only Europe) and sources of revenues (membership fees only), the project feasibility is robust.



## 9 KEY PERFORMANCE INDICATORS

The key performance indicators (KPIs) that will be used for measuring the performance of the Observatory will cover four areas:

- 1) Finance;
- 2) Customer relationship;
- 3) Internal Processes;
- 4) Innovation.

Table 17 links the strategic priorities of the Observatory to the KPIs that should be considered to monitor the implementation of its strategy, processes and results.

**Table 17** – Definition of KPIs of the International Raw Materials Observatory.

Strategic Priorities	Strategy	Process	Results
<b>Financial</b> Sustained capital investment and access to capital	Operating margin	Cash Flow Net Margin	Return on assets
<b>Customer relationship</b> Customer intimacy Access to EU policy makers Independency	Number of alliances	Number of customised services offers Project completion with success	Reputation and credibility Growth in number of members
<b>Internal processes</b> Standardized and flexible planning and analysis Standardized performance metrics and reporting	Operational flexibility	Meeting of deadlines	Best in class teams
<b>Innovation</b>	Services launches arising from innovative ideas	Suggestions received from clients	Innovation Sales Rate

The KPIs described are organised by business dimensions in Figure 3.

The ratios, objectives, data sources and periodicity of analysis of the above mentioned KPIs are detailed in Table 18.

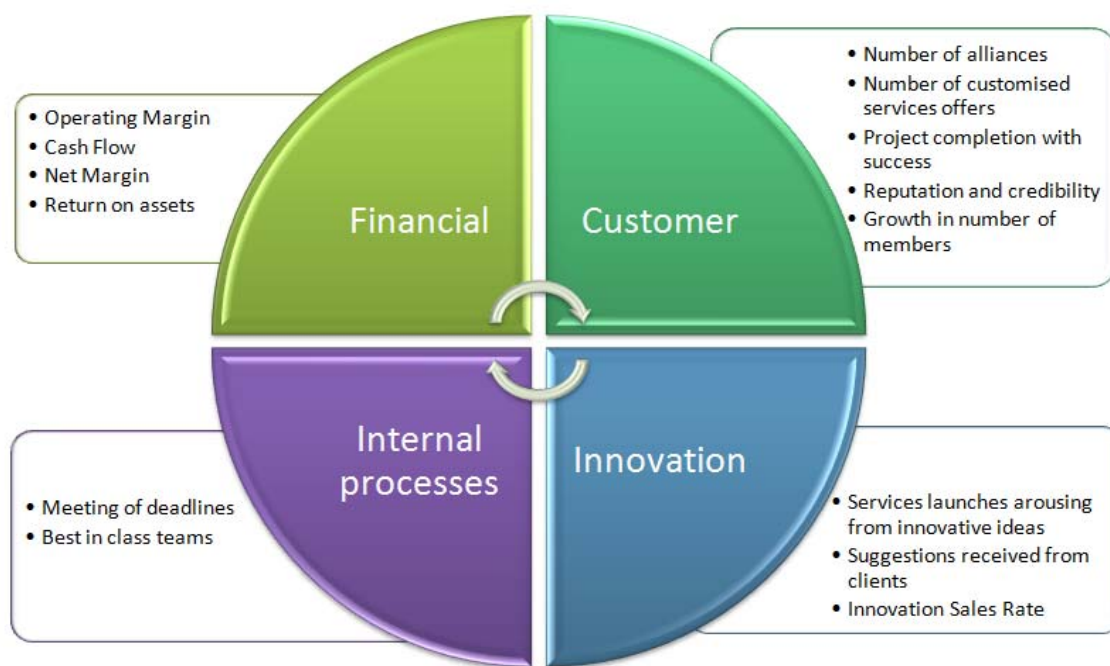


Figure 3 – KPIs, by business dimension, of the International Raw Materials Observatory.

Table 18 – Ratios and objectives of the Observatory KPIs.

KPI	Indicator or Ratio	Data source	Objective (Year 3)	Periodicity of analysis
<b>Financial</b>				
Operating margin	Operating income/Net sales	Accounting system	15%	Annual
Cash flow	Free cash flow/Operating cash flow	Accounting system	10%	Biannual
Net margin	Net profit/Revenue	Accounting system	20%	Biannual
Return on assets	Net income/Total assets	Accounting system	25%	Annual
<b>Customer relationship</b>				
Number of alliances	Number of MoU in place	Marketing information system	25	Annual
Number of customised services offers	Number of offers made for the marketplace	Marketing information system	12	Biannual
Project completion with success	Number of reports accepted/Number of reports made	Marketing information system	100%	Annual
Reputation and credibility	Number of members attending the Annual General Assembly/Total number of members	Marketing information system	85%	Annual

KPI	Indicator or Ratio	Data source	Objective (Year 3)	Periodicity of analysis
Growth in number of members	(Number of members year n/ Number of members year n-1)-1	Marketing information system	5%	Annual
<b>Internal processes</b>				
Operational flexibility	Number of consultants enrolled/Potential number of consultants	Marketing information system	5%	Annual
Meeting of deadlines	Number of reports completed on time/Number or reports made	Marketing information system	95%	Annual
Best in class teams	(Total number of CPD points of consultants enrolled/ Minimum number of CPD points of consultants enrolled)-1	Human resources management system	15%	Annual
<b>Innovation</b>				
Number of new services launches arising from innovative ideas	Number of new innovative services launches/Total number of services launches	Marketing information system	25%	Triennial
Suggestions received from clients	Feedback given to suggestions/Total number of suggestions received	Marketing information system	95%	Annual
Innovation Sales Rate	Sales of new products/Total sales	Marketing information system	25%	Annual

## 10 CONCLUSIONS

There is no organisation, specialised in the raw materials sector, providing for the existing needs of different groups of customers seeking more and better international cooperation, diplomatic support and/or specialised foresight. But there are strong competitors in the marketplace, many with access to updated and detailed information, good reputation and capacity to offer global services.

The International Raw Materials Observatory will formally be registered an international not-for-profit organisation, open to membership of organisations active in the raw materials sector. The structure of the Observatory will be light, relying on a strong set of key-partners and using independent consultants to develop and provide specific services to members and to the marketplace, under the direct supervision of a Secretary General and a Office Manager. To ensure a proper alignment with the strategy and value discipline, the organisational structure of the Observatory will have a single point of accountability across each group of services. Key decision-making authority will happen at the interface with clients, hence facilitating an effective management of customer relationships.

The services that will be offered in exclusive to members (*Access to key individuals and Barometers and foresight reports*) will provide contacts with key players and policy makers and collection of specialised insight and foresight. The presence of relevant intergovernmental organisations in the Advisory Council of the Observatory is critical to enhance the value of these services. The success of services to be delivered to the marketplace (*Diplomacy support, Match-making and Foresight consulting*) will rely on the perceived value and effectiveness of the Unique Selling Proposition of the Observatory (*The International Raw Materials Observatory is a not for profit independent, honest broker, providing authoritative specialized support on raw materials cooperation, diplomacy and foresight*).

The specialization of the Observatory and its capacity to successfully develop and deliver tailored services will rely on: 1) in-depth knowledge of the materials value chain and access to updated information; 2) access to policy-makers and capacity to inform policy-making; and 3) a reputation of independence, built on superior credibility. The reputation of the Observatory is essential to its survival. Trust and confidence are paramount to engage with the marketplace and, above all, with members. The offer of services relies on the integrity, truthfulness and good judgment of the Observatory teams, and management must lead by example and hold to these values. The management team of the Observatory must have charisma, know-how, working capacity and interpersonal skills to motivate team members (including external consultants) and to ensure the internal values of the Observatory will be embodied in their actions and deliverables.

The operational investment necessary to launch the Observatory (100% of costs of year 1) is 209.800€. To support this investment it is critical to gather own equity, provided by the founding members of the Observatory, topped up by sponsorship. A conservative investment appraisal (considering only revenues from membership fees and a limited market size) confirmed that the forecasted levels of costs and revenues are adjusted. In the base scenario the Net Present Value (NPV) of the Observatory is 1.861.738€, the Internal Rate of Return (IRR) is 59% and the Payback period is 4,5 years. The performance of the Observatory will be monitored by key performance indicators (KPIs) addressing strategy implementation, internal processes and results. The KPIs dashboard includes financial ratios, marketing indicators and administrative markers.

The launch of the Observatory is paramount to attract new members, and must be made alongside with a high level international conference on mineral raw materials, such as the International EU-advanced mining countries Conference, that will be held during the European Innovation Partnership Raw Materials Week. The launch event must display the full potential of the Observatory, and provide to viewers a flavour of the services that will be provided by the Observatory. The launch event must have the support and participation of high level policy makers and influencers. Endorsement from opinion leaders is paramount for the success of the launch of the Observatory, maximising its visibility (share of voice) and boosting the market attention. The network of the INTRAW Consortium and its Panels of Experts must be mobilised in advance, to start promoting the Observatory launch in social media. The use of the INTRAW dissemination channels must be maximised, to leverage the impact of the launch.

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## APPENDIX 1 – ANALYSIS OF COMPETITION

The analysis of competing organizations, either providing similar services (direct competition) or serving the same markets (indirect competition) is fundamental to draft a competitive strategy. Insight on what makes a customer choose a service over another and on the different ways of segmenting the market and developing unique offers can be derived from the analysis of competition. In addition, competitors that are already active (incumbents) have several advantages (e.g. a marketing intelligence system and an existing business offer) that need to be carefully considered, to limit the development and implementation of actions designed to counter the emergence of new competitors (MacMillan & Selden, 2008).

For those reasons, an overview of the most relevant incumbents of the International Observatory for Raw Materials is presented in Table 19. The description includes the identification of the organisation (except for international intergovernmental organisations, banking houses and directorates of the European Commission that are grouped and generically analysed), their commercial offer, the number of employees, revenue and a list of core competences.

**Table 19** – Characteristics and core competences and detriments of existing incumbents of the Observatory.

Incumbent	Type	Services	No. employees	Revenue	Core competencies and detriments
Intergovernmental organisations (e.g. UN, OECD, WTO, World Bank)	Political, economic and financial organisations	Stimulation of economical and social progress, dispute resolution, support to developing countries.	N/A	N/A	International global recognition, high level political leverage, access to funds, access to a large pool of experts, reputation.
EU Directorates-General	Administrative bodies of the EU.	Diplomatic initiatives dedicated to creating an environment in which European firms can thrive. The improvement of the business environment aims to enhance productivity and create jobs and wealth in the EU.	N/A	N/A	Legitimacy, political leverage, access to funds, reputation.
Banking / investment houses (e.g. Goldman Sachs, Citigroup, BNP Paribas, Deutsche Bank)	Global investment banking and financial services.	Provision of funds and cross-selling between investment banking, finance and insurance, asset management, securities, wealth management and private banking.	N/A	N/A	Funding, access to key investors and intelligence, lobbying, cross-selling.
Deloitte	UK Private company, limited by guarantee.	Audit, tax, management consulting (enterprise applications, technology integration, strategy & operations, human capital, and short-term	244,400 (2016).	USD 36.8 billion (2016).	One of the "Big Four" accounting firms and the largest professional services company in the world by revenue and number of professionals. Aside audit and management consulting, it includes since 2011 sustainability

Incumbent	Type	Services	No. employees	Revenue	Core competencies and detriments
		outsourcing), enterprise risk and financial advisory services.			service offerings.
PWC	Member firms have different legal structures; both UK and US firms are actually limited liability partnerships	Assurance, tax and advisory services (strategy, performance improvement, transactions services, business recovery services, corporate finance, business valuation, sustainability, crisis management).	223,468 (2016).	USD 35.9 billion (2016).	One of the "Big Four" accounting firms, it is the second largest professional services firm in the world, ranked as the most prestigious accounting firm in the world for seven consecutive years. Involved in several tax avoidance controversies, including the Luxembourg Leaks.
Ernst & Young	Member firms with different legal structures.	Assurance, advisory, transaction advisory services, tax, legal.	231,000 (2016) in over 700 offices around 150 countries in the world.	USD 29.6 billion (2016).	One of the "Big Four" accounting firms, operates as a network of member firms which are separate legal entities in individual countries. Involved in several accounting scandals, including Lehman Brothers and the Luxembourg Leaks, and accused of malpractice and fined for ethical breaches.
KPMG	Swiss Cooperative.	Audit (actuarial, assurance), advisory (management consulting) and tax (financial/legal advice).	188,982 (2016).	USD 25.42 billion (2016).	One of the "Big Four" accounting firms, ranked nr. 2 in 2011 as Best Outsourcing Advisors in recognition of the firm's depth of experience, global reach and holistic approach. Also involved in accounting improprieties and scandals, such as the Luxembourg Leaks.
IBM Global Business Services	US Public company.	Business transformation and strategy consulting systems integration, and application management services (integrated IT services, IT maintenance).	190,000 people across more than 160 countries (2012).	USD 58.8 million (2012).	A division of IBM, the world's largest business and technology services provider, focused in helping companies manage their IT operations and resources.
McKinsey & Company	US Incorporated partnership.	Management consulting, organisation, operations and IT).	11,000 employees (2015) in 110 offices.	USD \$8.4 billion (2015).	Widely considered the most prestigious management consultancy, McKinsey's clientele includes 80% of the world's largest corporations, and an extensive list of governments and non-profit organisations. McKinsey has authored many influential books on management, and its practices of confidentiality, influence on business practices, and corporate culture ("up or out" policy, where consultants who are not promoted are asked to leave) are renowned.
Boston Consulting	US Private company.	Management consulting (corporate development,	12,000 people	USD 5 billion	One of the most prestigious management consulting firms, with in-



Incumbent	Type	Services	No. employees	Revenue	Core competencies and detriments
Group		growth and innovation).	worldwide (2015).	(2015).	house developed concepts that became accepted worldwide (growth-share matrix, experience curve, advantage matrix).
S&P Global	US Public company.	Financial services (financial information and analytics, including benchmark price assessments, multi-asset class and real-time data).	17,000 (2013).	USD 4.9 billion (2013).	It is the parent company of Standard & Poor's Financial Services, S&P Global Market Intelligence, and S&P Global Platts, and is the majority owner of the S&P Dow Jones Indices joint venture. Standard & Poor's Financial Services is considered one of the Big Three credit-rating agencies. These companies provide financial information covering commodities, energy, petrochemicals, metals, and agriculture markets to institutional investors, investment and commercial banks, investment advisors and wealth managers and corporations
SNL Financial	N/A	Global information and analysis on the metals and mining sector, including tenement ownership, company evaluations, M&A, risk management, due diligence, competitor intelligence and project pipeline evaluation.	N/A	N/A	SNL Financial acquired in 2012 the Canadian company Metals Economics Group, who had 30 years of asset-level information and data history in the metals and mining sector, and in 2014 IntierraRMG, another specialized Canadian company built from the acquisition of Sweden-based Raw Materials Group in 2011 by Perth based Intierra. Intierra and Raw Materials Group were the mining industry's preferred sources of data, mapping, analysis and reporting. SNL Financial is, since 2015, a division of S&P Global.
Strategic Sustainability Consulting	Small US based private company	Specialised consulting company, offering a range of services that includes developing sustainability strategies, measuring impacts over time and communicating with stakeholders.	12 (2016)	N/A	SSC developed a methodology called SSC Green Audit, for companies who are trying to adopt/enhance sustainable practices. SSC is active in supply chain management, working with Walmart suppliers.
Fraser Institute	Not-for-profit (NFP) Canadian registered charity.	The stated mission is "to measure, study, and communicate the impact of competitive markets and government intervention on the welfare of individuals". It periodically publishes reports, studies and indexes on several economic and educational activities.	Around 50 employees, in offices in Calgary, Montreal, Toronto, and Vancouver	CAD\$10.8 million (2010).	In 2014 the Fraser Institute was rated number 1 (of 30) in the "Top Think Tanks in Mexico and Canada". It ties to a global network of 80 think-tanks through the Economic Freedom Network. In the same year, a United Nations agency criticized the methodology of the Fraser economic freedom index for "cherry picking".



Incumbent	Type	Services	No. employees	Revenue	Core competencies and detriments
		It publishes every year the global Survey of Mining Companies, ranking investment climates of mining jurisdictions around the world, based on the opinions of industry executives and managers.			
Materials Knowledge Transfer Network	UK Company limited by guarantee.	KTN provides to members events, webinars, online meeting tools, signposting to funding, assisting with applications for financial support, and helping to set up consortia for R&D projects. The aim is to enable the exchange of knowledge and the stimulation of business innovation in the UK.	N/A	N/A KTN expenditure in 2015-2016 totals £15.7million.	The Materials KTN has sectors that cover polymers, particulate engineering, packaging, materials and design, technical textiles, smart materials, composites, and metals and alloys. Its website includes dedicated portals for each class of material. It is run by the Institute of Materials, Minerals and Mining and funded by the UK's innovation agency. Membership of the KTN is free.
WEEE Forum	NFP European based association of producers and recyclers of waste of electrical and electronic equipment (WEEE)	Statistics on e-waste flows in Europe. Analytics, including benchmark on the management of electrical and electronic waste.	5	N/A	Know-how on the technical aspects of collection, logistics and processing of WEEE.
ERA-MIN	European public-public partnership of research funding agencies.	Network of European organisations owning and/or managing research programs on raw materials, funding transnational research projects.	N/A	N/A	Establishment of networking structures, design, implementation and coordination of joint activities as well as financial topping up of single joint calls and of actions of a transnational nature.
EIT Raw Materials	European consortium in the raw materials sector.	Match-making and networking, shared research infra-structures, financial support to up-scaling projects, training.	N/A	N/A Co-funded by the European Commission	The consortium includes over 100 organisations from academia, research institutes and business, cooperating to finding new, innovative solutions to secure the supplies and improve the raw materials sector along its value chain.
Federation of Earth Science Information Partners (ESIP)	US based NFP organization.	Platform dedicated to networking and data dissemination needs of the global Earth science data community.	N/A	N/A	ESIP was founded by NASA in 1989 and links the functional sectors of observation, research, application, education and use of Earth science. It connects around 180 partner organisations.
National Council for Science and	U.S. based NFP organization	Cooperation programmes on environmental knowledge, addressing	N/A	N/A	NCSE works with government agencies to advance research schemes, organizes conferences, and

Incumbent	Type	Services	No. employees	Revenue	Core competencies and detriments
the Environment		research, education, environmental, and business organizations.			supports environmental coalitions and lobbying.
ICMM	Industry association of 23 big mining and metals companies.	Voluntary benchmarking of performance against 10 sustainable development principles, evaluated by independent external public reporting and assurance.	15	N/A	ICMM was established to provide guidelines for member companies so they could work toward sustainable development, countering significant problems in reputation, sustaining profits, access to new assets and maintaining investor and employee confidence. Even so, many of the companies have been implicated in social and environmental scandals since the council's inception.
MAC	Canadian industry association of 39 mining and metals companies.	MAC developed and runs the voluntary Towards Sustainable Mining (TSM) initiative, promoting the adoption of environmental and social commitments. Participation in the TSM initiative is mandatory for all MAC members for their Canadian operations.	11 (2016).	N/A	MAC efficiently promotes the Canadian mining industry nationally and internationally, works with governments on policies and educates the public on the value of mining.
Euromines	European industry association of 40 mining and quarrying companies.	Euromines disseminates to its members information on EU policy and serves as a network for cooperation throughout the sector within Europe.	6 (2015).	N/A	Euromines provides early warnings on EU policy change to its members. The association is active in EU fora and seeks to protect the industry's reputation. In 2015 the association relaunched a 2013 public awareness campaign backed by the website, a new set of posters and a new image.
IMA-Europe	Association of 10 industry associations specific to individual minerals representing over 500 companies in 28 European countries.	IMA provides sector-based representation for industrial minerals at the EU institutional level and coordinates contacts with national and international authorities. It promotes best practice on safety, innovation, public acceptance and biodiversity in the quarrying and mining industry among its members.	12 (2016)	N/A	IMA-Europe is active in EU fora, promotes debate on EU legislation and seeks to protect the industry's reputation. It is a effective industry lobbyist, and it was the initiator of the European Minerals Day, a open-doors public outreach initiative that brings together more than 100 sites all over Europe. It also has connections with IMA-NA, the association counterpart in the US.
European Technology Platform for Sustainable Mineral	Association of 40 European stakeholders from academia, geological surveys and	The platform is involved in EU funded research projects, policy contribution to the EU and networking across the platform.	N/A	N/A	The ETP SMR aim was to act as think-tank to EU policy on mineral resources. It is an independent and self-financing entity, recognised by the European Commission (as the other 50 ETPs) as key actor. It evolved to an

Incumbent	Type	Services	No. employees	Revenue	Core competencies and detriments
Resources	minerals' industry.				association (AISBL) in January 2017, headquartered at the EuroGeoSurveys office.
International Organization for Standardization (ISO)	Non-governmental international standard-setting body composed by 163 national standards organizations	ISO sets and promotes worldwide proprietary, industrial and commercial standards. ISO's main products are international standards. Also publishes technical reports, technical specifications, publicly available specifications and guides.	N/A	N/A	ISO is a voluntary organization whose members are recognized authorities on standards, each one representing one country. A standard published by ISO/IEC is the last stage of a long process that takes years, commonly starting with the proposal of new work within a committee. ISO has general consultative status with the United Nations Economic and Social Council.
European Committee for Standardization (CEN)	European standards body	CEN was founded in 1961. Its thirty three national members work together to develop European Standards (ENs) in various sectors to build a European internal market for goods and services.	N/A	N/A	60.000 technical experts as well as business federations, consumer and other societal interest organisations are involved in the CEN network, which reaches over 460 million people.
Extractive Industries Transparency Initiative (EITI)	Non-profit association under Norwegian law funded by supporting governments and companies.	Government / country standard on financial transparency and improved governance in the extractive industry (oil, gas, minerals), implemented in 51 countries. Country members disclose information on: contracts and licenses, production, revenue collection, revenue allocation, and social and economic spending.	N/A	N/A	The EITI has a relevant political leverage. The Chair of the EITI is Fredrik Reinfeldt, former Prime Minister of Sweden. The previous Chair was Clare Short (2011-2016), former UK Secretary of State for International Development. The EITI International Secretariat is located in Norway and is headed by former Swedish diplomat Jonas Moberg.
Initiative for Responsible Mining Assurance (IRMA)	Coalition of NGOs, businesses purchasing minerals and metals for resale in other products, affected communities, mining companies, and trade unions.	The IRMA standard aims to improve the social and environmental performance of industrial mining operations. Mine sites may become IRMA certified if they demonstrate, through a third-party independent audit, that they meet the requirements of the IRMA standard. IRMA expects to launch and begin testing its certification system in 2017.	N/A	N/A	The standard is applicable to all kinds of industrial mining, worldwide and requirements are auditable at the mine site level. IRMA is funded through financial contributions of its private sector participants. Organisations such as Anglo American, ArcelorMittal, Tiffany & Co, Microsoft or Jewelers of America are in the Steering Committee of IRMA. IRMA aims to become the multi-stakeholder certification and assurance reporting reference for the mining industry.
European Recycling Platform	Association of producers of electrical and electronic	Pan European provider of compliance solutions for WEEE. ERP has a "WEEE market share" in Europe of	100 (2016).	N/A	ERP was founded in 2002 by Braun, Electrolux, HP and Sony. ERP members share resources on lobbying to influence national

Incumbent	Type	Services	No. employees	Revenue	Core competencies and detriments
	products, packaging and batteries to implement the EU WEEE Directive.	around 15%. ERP provides a platform for its members to exchanges information about legislative developments in EU 25 countries.			legislation. ERP provides strong joint voice in negotiations with all kinds of stakeholders in the “product take back development” and is seen as a competent partner. ERP is expanding to Brazil, Canada, Israel and Turkey.
USGS NMIC	US governmental organisation.	Provider of global data on mineral production, consumption, recycling, stocks, and shipments. It produces also recycling and material flows studies, alongside with International mining and investment laws, ownership, and country infrastructure.	N/A	USD 48.7 million (2017, Mineral Resources Program).	It offers for free hundreds of reports with International data on minerals production and trade for more than 150 countries. Data collection and analyses are made by commodity specialists, country specialists, materials flow specialists and resource specialists. It has a strong reputation of objectivity and science excellence.
Minerals4EU Foundation	European NFP foundation.	A spin-off of a H2020 project, this foundation aims to set a one stop-shop to official and verified data, information and knowledge on mineral resources in the EU.	N/A	N/A.	The Foundation was conceived to maintain and update, on an early basis, the EU minerals yearbook, the outcome of a H2020 funded project developed by EuroGeoSurveys and several EU geological surveys. Probable funding will be made through Geo-ERA, an ERA-NET composed by Geological Surveys, launched in 2017. The Foundation is headquartered at the EuroGeoSurveys premises.
EuroGeoSurveys	NFP European organisation representing 37 National Geological Surveys.	EGS provides sector-based representation for geological surveys at the EU institutional level. The EGS is involved in EU funded research projects, policy contribution to the EU and networking.	9 (2016).	N/A	EGS act as representative of the National Geological Surveys to the European Commission. It develops effective lobbying at the EU level, aiming to highlight the importance of geological knowledge (and geological surveys) in policy making.
Mineral Resources Agency DERA in Germany	German governmental agency.	Provider of information on: global availability and supply of mineral raw materials; criticality of mineral resources; price trends and price volatility; material and raw material efficiency; mineral resources in Germany and worldwide; potential price and supply risks of primary raw materials and intermediates; assessment of minerals’ demand for future technologies.	N/A	N/A	Born as a spin-off of the German Geological Survey, DERA has expertise in risk analysis and evaluation of mineral resources. It is focused on German industry, and reports made freely available are in Germany only. It organises also workshops and networking events focused on the needs of the German industry.

## APPENDIX 2 – STATUTES OF THE INTERNATIONAL RAW MATERIALS OBSERVATORY

The present statutes are those of a not-for-profit association (Association Internationale Sans But Lucratif - AISBL) founded in accordance with the Belgian law dated 27th June 1921 on nonprofit-making associations, international non-profit-making associations and foundations.

List of organizations that are founding members

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- 

Promoters of the idea and authors of its concept, the above-mentioned are called below Founding Members of the Association.

### STATUTES

#### 1. LEGAL STATUS, NAME AND HEAD OFFICE

1.1. The Association is governed by Belgian law on non-profit associations, AISBL (*Association Internationale Sans But Lucratif*, meaning “international non-profit association”) and foundations of 27 June 1921, as amended and updated from time to time (e.g. Law of 2 May 2002).

1.2. The AISBL is named ‘International Raw Materials Observatory AISBL’ (hereafter ‘the Association’).

1.3. The registered seat of the association is located at Rue Jenner, 13, Bruxelles-ville (1000 Brussels). The office of the Association can be transferred to any other address in Europe following a corresponding decision of the General Assembly (see Article 10). The address change shall be published in the annexes of the *Moniteur Belge* and submitted to the registered file at the competent commercial court within a month from the date of the decision.

#### 2. DURATION

2.1. The Association is established for an unlimited period of time. It can be dissolved at any time as defined in Article 19.

#### 3. OBJECTIVES

3.1. The objectives of the Association (hereafter the ‘Objectives’) are to enhance international cooperation on mineral raw materials’ intelligence within and beyond Europe. This shall be achieved by supporting efforts of the European Union, national governments, national and international institutions and organisations aiming to develop and implement international cooperation actions regarding research, innovation, education, outreach, industry, trade, recycling, management and substitution of mineral raw materials. The Association will contribute in the widest possible sense to policy development, education and knowledge transfer in the raw materials field addressing ethical, legal and societal issues within the European Union and in third countries.

3.2. In order to achieve its objectives, the Association may engage in any activity to the realization of its purpose and may become member in international institutions and partner of business organizations.

3.3. The Association is a non-profit-making organization.

#### 4. ETHICAL CONDUCT

4.1. Each Member of the Association is committed to integrity and to respect the confidentiality of the Associations' internal documents.

4.2. Each Member shall maintain and enforce adherence to lawful business practice and shall act in good faith and transparently with respect to other Members.

4.3. The Association and its Members shall operate in full compliance with European Competition Law.

4.4. To allow proper scrutiny and to ensure that the Association is accountable, the Association shall be registered in the Transparency Register of the European Union, operated by the European Parliament and the European Commission, and its record will be kept updated.

#### 5. MEMBERSHIP

5.1. Members shall be entities that can be formally represented by a duly empowered natural person. Membership shall not be possible for natural persons.

5.2. There are two types of Membership, Full Members and Honorary Members:

(a) Full members are the Founding Members and organizations whose activities have links with the provision or use of mineral raw materials such as governments, public organizations, international organizations, non-governmental organizations, not-for-profit corporations, partnerships, cooperatives, companies and educational institutions. Full Members can be admitted upon their written demand and enjoy voting rights as granted by law and the present statutes;

(b) Honorary Members are organisations with interests in the mineral raw materials field who choose not to have the right to participate fully in the proceedings of the Association. Observer Members can be admitted upon their written demand and do not have voting rights.

5.3. Full Members enjoy the following rights:

(a) Attending, also through a representative duly empowered by proxy, the meetings of the General Assembly;

(b) Voting at the General Assembly;

(c) Calling for an extraordinary General Assembly as provided for by Article 10.3;

(d) Being excluded from Membership only after having been able to present in person their defense before the General Assembly;

(e) Resigning from the Association after having notified this decision to the Secretary-General of the Association by registered letter to the registered office of the Association;

(f) Participating in the activities of the Association;

(g) Electing the Board of Directors;

(h) Being elected to the Board of Directors.

5.4. Honorary Members enjoy the following rights:

(a) Participating in the General Assembly as observers without voting rights;

(b) Resigning from the Association after having notified this decision to the Secretary-General of the Association by registered letter to the registered office of the Association.

5.5. Membership includes the following obligations, but is not limited to:

- (a) Paying a financial contribution as determined in Article 8;
- (b) Notifying the Secretary-General of any changes regarding the status of Membership, in particular the Membership criteria as defined in this Article 5 and matters affecting any Membership fees due.

## 6. APPLICATION FOR MEMBERSHIP

6.1. Applications for Membership shall be addressed in writing to the Association's Secretary-General.

6.2. Every application for Membership implies complete adherence to the Statutes of the Association, to all its rules and Bylaws and to all decisions of its governing bodies and an undertaking to actively participate in activities.

6.3. The Secretary-General of the Association shall be entitled to request additional information from an applicant.

6.4. Membership is granted by the General Assembly upon the proposal of the Board of Directors.

## 7. TERMINATION OF MEMBERSHIP

7.1. Membership can be terminated by resignation, by exclusion of the Member or by the liquidation of the Member.

7.2. Any Member, which ceases to possess the qualification required under Article 5, shall *ipso facto* cease to be a Member of the Association.

7.3. Resignation from Membership must be notified to the Secretary-General by registered letter three months before the end of the financial year; otherwise the full financial contribution for the following financial year shall be due. During the notice period the rights and obligations attached to being a Member and the obligation to the financial contribution remain unchanged.

7.4. The Board of Directors may suspend Membership and recommend to the General Assembly exclusion of any Member:

- (a) In case of default of payment of the financial contribution;
- (b) For contravention of the Statutes, the Bylaws, or a resolution of the General Assembly;
- (c) For acting in a manner gravely injurious to the reputation of the Association or the interests of the Members.

7.5. The Member whose exclusion has been requested shall be allowed to present its defense in person in the following General Assembly regularly convened. The exclusion of a Member may be decided by a simple majority in the General Assembly.

7.6. Any Member shall be deemed to have resigned if it has not paid its annual financial contribution in full within sixty days of the reminder received by registered letter with acknowledgment of receipt.

7.7. The Member who sees its Membership terminated by resignation, exclusion or liquidation has no right whatsoever to the assets of the Association or to the financial contribution and other contributions already paid.

## 8. FINANCIAL CONTRIBUTION

8.1. In order to pursue the Objectives and to carry out the activities of the Association as described in Article 3, the Members will be required to pay a financial contribution, which is the Membership fee.

8.2. The amount of the Membership fee as well as the payment terms thereof are decided annually by the General Assembly upon proposal from the Board of Directors. The



detailed calculation methods are established in the Bylaws.

8.3. The Association may receive grants, donations and any transfer not prohibited by law.

8.4. The Association may offer services to other organizations and charge a price for its services.

## 9. ORGANISATION STRUCTURE

9.1. The Association's management is ensured by the following bodies:

- (a) General Assembly;
- (b) Advisory Council;
- (c) Board of Directors.

9.2. The Association also employs or subcontracts a Secretary-General who ensures the operational implementation of the decisions taken by the managing bodies and who is in charge of the Association's day-to-day operations. The Secretary-General may be assisted by Office staff.

9.3. The Association may create working groups such as topic groups, task forces and committees within the 'Objectives' of the Association in various forms. They are established under the authority of the Board of Directors and may be defined and further detailed in the Bylaws.

## 10. GENERAL ASSEMBLY

10.1. The General Assembly is composed of all Members with voting rights. Members without voting rights may participate as Observers (see Article 5.4.a).

10.2. The General Assembly of the Association shall be convened by its President or named substitute (see Article 10.10) and shall meet at least once a year at the place and on the date fixed by the President after deliberation with the Board of Directors. A convening notice together with an agenda, in the form of a letter or electronic mail, shall be sent at least four weeks before the date fixed for the meeting. The venue of the General Assembly is by default the registered seat of the association unless otherwise indicated in the convening notice.

10.3. An extraordinary General Assembly shall be convened whenever the President or the Board of Directors judges it necessary or when at least one fifth of the Members inform both the President and the Secretary-General that they demand an extraordinary General Assembly.

10.4. Each Member with voting rights is represented at the General Assembly by one delegate with full powers. Each Member with voting rights has one vote. The President (see Article 14) has a casting vote in case of equality of votes.

10.5. The voting procedures and required quorum for the meetings of the General Assembly shall be stipulated in the Bylaws.

10.6. The General Assembly is the ultimate decisional body of the Association. The General Assembly approves the general policy of the Association on the basis of proposals of the Board of Directors and gives recommendations to the Board of Directors for its application.

10.7. The General Assembly shall have exclusive competences which cannot be delegated on the following matters:

- (a) Admitting and excluding Members;
- (b) Amending the Statutes of the Association and changing the registered office;
- (c) Electing and dismissing the members of the Board of Directors;
- (d) Approving the designation of the President upon proposal of the Board of Directors;
- (e) Appointing and dismissing the Auditor(s), if any, upon proposal of the Board of



Directors;

(f) Receiving and approving reports on the activities in the past year from the Board of Directors;

(g) Approving the main policy lines to be followed by the Association on the basis of recommendations of the Board of Directors;

(h) Approving proposals for resolutions and plans of activities proposed by the Board of Directors;

(i) Approving the annual financial reports and the budget proposed by the Board of Directors;

(j) Approving internal rules for the calculation of the Members' financial contributions and the payment terms thereof, upon proposal of the Board of Directors;

(k) The dissolution and liquidation of the Association;

(l) The Association's membership of any other international organization or its withdrawal from any such organization.

10.8. A General Assembly is always competent to pass resolutions. A resolution shall be adopted if it receives a:

(a) Simple majority of votes of the Members with voting rights present in the case of regular resolutions;

(b) Two-third majority of votes of the Members with voting rights present in the case of an amendment of the Statutes or dissolution and liquidation resolutions.

10.9. Resolutions adopted are binding for all Members of the Association. They are communicated to the members via mail, email or published on the website of the Association.

10.10. The General Assembly resolves only on the points in the agenda.

10.11. At all meetings of the General Assembly, the President (see Article 14.3) acts as a chairperson. In the President's absence the meeting is chaired by a Vice-President or, in case they are unavailable, by the eldest member of the Board of Directors.

10.12. The minutes of the General Assembly are established by the Secretary-General and are signed by the Chairperson and one Member with voting rights participating at the meeting and shall be circulated to all Members within one month. The minutes shall be electronically archived and shall be accessible to all Members through the website of the Association.

## 11. ADVISORY COUNCIL

11.1. The Advisory Council is the advisory body of the Association. It consists of Chairpersons (or their appointed representatives) of International Intergovernmental Organisations, International Committees, International Forums and Regional Alliances.

11.2. The Advisory Council advises the Board of Directors and the General Assembly on matters concerning the activities, programmes and procedures of the Association. It advises on matters and activities in the general interest of the Association, by its initiative or by request of the General Assembly or the Board of Directors. The activities of the Advisory Council shall be reported to the General Assembly for approval at its next meeting.

11.3. The Chairperson and Vice-Chairperson of the Advisory Council shall be elected by the General Assembly for a three year term of office. The Advisory Council Chairperson and Vice-Chairperson may serve two consecutive terms.

11.4. The Chairperson of the Advisory Council shall prepare, convene and chair the meetings of the Advisory Council, and may serve as an ex officio member of the Board of Directors.

11.5. The Vice Chairperson carries out the functions and tasks assigned to him/her by the

Chairperson; he/she provides any assistance required by the latter and, in his/her absence, convenes and chairs meetings.

11.6. If the office of Chairperson or Vice-Chairperson becomes vacant, during its next meeting, the Advisory Council shall elect one of its members to be Chairperson or Vice-Chairperson to deputise the former Chairperson or Vice-Chairperson for the duration of his or her remaining term of office.

11.7. The Advisory Council meets at least once (1) a year within the scope of an ordinary session, held on the same date and at the same venue as the General Assembly.

11.8. The Advisory Council quorum and deliberation rules will be defined and further detailed in the Bylaws.

## 12. BOARD OF DIRECTORS

12.1. The Association is managed by the Board of Directors whose members are individuals of Members with voting rights and are elected by the General Assembly.

12.2. The minimum number of Directors on the Board of Directors is five. The number of Directors shall not be higher than fourteen, or the number of Members of the Association less one, whichever is least.

12.3. If the total number of Directors, due to resignation, death or dismissal by the General Assembly, falls under the minimum of five members, the remaining Directors shall call a General Assembly in order to secure the requested appointment(s). The Board of Directors may decide to replace the missing Director temporarily with a delegate from the missing Director's organization or with a new individual from a Member with voting rights who is able to fulfill the missing Director's tasks including representation, until a newly elected Director can take office.

12.4. According to rules defined in the Bylaws, the Board shall nominate the following candidates, who shall be proposed to the General Assembly for approval:

- (a) A Chairperson of the Board of Directors and of the General Assembly, who will be called the 'President' of the International Raw Materials Observatory AISBL;
- (b) Two Vice-Presidents of the Association;
- (c) A Treasurer of the Association.

12.5. The Vice-Presidents and the Treasurer are elected from among the members of the Board of Directors on a collegial basis.

12.6. One third of the Board of Directors is elected each year by the General Assembly for a renewable period of three years on a first-in-first-out basis.

12.7. The Directors shall continue to act until reelection or until new Directors take office. When, in the course of his or her mandate, a Director ceases the functions occupied within his or her company or association - which were deemed a requirement at the time of election - the Board shall consider whether the Director can continue to fulfill his or her mandate until the end of this mandate and, if not, the Director shall be deemed to have resigned from his or her function on the Board of Directors.

12.8. Except by lawful resignation resulting from the application of the Statutes, the resignation of a Director must be notified by registered letter with acknowledgement of receipt to the President. The resignation is deemed to be effective at the date of the registered receipt. The dismissal of a Director in case of serious offence shall be decided by the General Assembly.

12.9. Further persons can be invited to the Board of Directors in an advisory capacity. These persons will however not have any voting rights.

12.10. The Board of Directors follows the resolutions, instructions and recommendations adopted by the General Assembly and implements the policies and the plans of activities adopted by the General Assembly.

12.11. The Board of Directors shall have exclusive competence on the following matters:

- (a) Preparing the consolidated annual plan of activities and the long term strategic vision of the Association for approval by the General Assembly, on the basis of input from the Members, preferably consolidated through discussions with a wide range of stakeholders;
- (b) Setting up and dissolving Working Groups;
- (c) Drafting, approving and amending Bylaws;
- (d) Employing and dismissing the Secretary-General of the Association;
- (e) Proposing the agenda of the General Assembly;
- (f) Proposing internal rules determining the calculation of the Members' financial contributions to the General Assembly;
- (g) Providing recommendations to the General Assembly on applications for Membership or exclusion of Members;
- (h) Inviting advisers to meetings of the Board of Directors, as stipulated in Article 11.9;
- (i) Having the power of ordinary management, including the right to perform all administrative acts and other necessary arrangements including legal proceedings;
- (j) Being in charge of the financial management, preparing of budgets, including subscriptions for approval of the General Assembly, budgets and the control of expenditure;
- (k) Proposing amendments to the Statutes of the Association in accordance with Article 18;
- (l) Representing the Association at external events, promoting the Associations' visibility, public relations work and identity.

12.12. The Board of Directors shall meet according to rules defined in the Bylaws. The calling notice shall be notified by mail or email.

12.13. Except for resolutions requiring a certified document, meetings of the Board of Directors may be held virtually, without the members physically attending the meeting in the same place, by conference call or video conference or by any other relevant communication means.

12.14. Resolutions of the Board of Directors are adopted by the simple majority of the votes of the Directors present. In the event of a tie, the President has a casting vote.

12.15. Resolutions of the Board of Directors shall be distributed to all members of the Board of Directors within two weeks. They shall be electronically archived and be accessible to all Members of the Association via the website of the Association.

12.16. Bylaws can be drafted and they shall be adopted by a two-thirds majority of members of the Board of Directors present (see Article 20). Changes to the Bylaws will be announced to all Members together with a list of differences with respect to the previously valid version.

### 13. OFFICE

13.1. The Office operates under the authority of the Secretary-General and executes the daily management of the Association as described in the Bylaws.

### 14. SECRETARY-GENERAL

14.1. The Secretary-General is responsible for the day-to-day management of the Association. He/she shall, *inter alia*, prepare, coordinate and follow-up the meetings of the Board of Directors and the General Assembly in coordination with the President of the Association. The Secretary-General operates in accordance with the general guidelines he/she receives from the President and from the Board of Directors of the Association

and under the supervision and authority of the Board of Directors.

14.2. The Secretary-General may negotiate and manage subcontracts with organizations or natural individuals needed to execute tasks and deliver services provided by the Association.

14.3. The Secretary-General is appointed and dismissed by the Board of Directors.

14.4. The duties of the Secretary-General and the outline of the organisation of the Office are specified in the Bylaws.

## 15. PRESIDENT AND VICE-PRESIDENTS

15.1. Each year, the General Assembly elects, following the suggestion of the Board of Directors, one of the following positions in turn: the Vice-Presidents and the Treasurer. The Vice-President and Treasurer shall continue to act until the new Vice-President or Treasurer takes office.

15.2. Every third year, the General Assembly elects, following the suggestion of the Board of Directors, a President for a renewable period of three years. The President shall continue to act until the new President takes office.

15.3. The President and the Vice-Presidents are respectively the President and Vice-Presidents of the General Assembly and the President and Vice-Presidents of the Board of Directors.

15.4. The President is in charge of representing the Association vis-à-vis political institutions and other stakeholders at high level and on important occasions and important matters.

15.5. The President is expected to be a respected member of the European raw materials community with an affiliation to a Full Member.

## 16. TREASURER AND AUDITORS

16.1. The Treasurer is elected pursuant to Article 11.5 above and is responsible for:

- (a) Revising the annual budget of the Association;
- (b) Revising the financial reports and maintaining the Association's accounts;
- (c) Proposing the financial contribution, if necessary.

16.2. The Auditors are either appointed/dismissed pursuant to Article 10.6.e) among Members with voting rights or, if necessary, appointed from the Belgium Institute of Auditors, *l'Institut des Réviseurs d'Entreprises*.

## 17. REPRESENTATION

17.1. All acts binding the Association as approved by the Board of Directors, other than those of day-to-day business as described in the Bylaws, are valid only if signed either by one member of the Board of Directors or by the Secretary-General.

17.2. Any commitment, contract, investment, bank transfer or payment or any other obligation of the Association that was not foreseen in the annual budget of the Association will require the joint signature of the President or a Vice-President, and the Secretary-General or the Treasurer.

17.3. All legal proceedings, whether as plaintiff or as defendant, are conducted, in the name of the Association, by the Board of Directors represented by its President, or by a Vice-President or by the Secretary-General or by any other person appointed for this purpose by the Board of Directors.

17.4. Members of the Board of Directors, the Secretary-General, the President, the Vice-Presidents and the Treasurer do not enter into any personal obligation due to their function and are only responsible for the execution of their mandate.

## 18. ACCOUNTS, BUDGET, AND COST

18.1. The financial year of the Association starts on 1 January and ends on 31 December of each year.

18.2. During the start-up phase of the Association the financial year will start at the registering date of the Association and will end on 31 December 2017.

18.3. The Board of Directors shall submit for approval by the Annual General Assembly accounts for the past financial year and a budget for the next year.

18.4. Any costs and expenses sustained by the Board of Directors, the Secretary-General and the Office in the performance of their duties will be borne by the Association.

18.5. Travel, subsistence and accommodation costs of Members (or their employees) in the performance of their activities for the Association may be reimbursed by the Association as determined by the Board of Directors. The rates and allowances of such reimbursement shall not exceed the rates and allowances paid at the time to Experts engaged by the European Commission.

18.6. The Board may resolve to make payments to Members (or their employees) for Association work where such work involves an unusually high commitment of time to the Association. Such payments shall be made at rates less than or equal to the rates paid at the time to Experts engaged by the European Commission.

## 19. CHANGES TO THESE STATUTES

19.1. Subject to the provisions of Article 10.7.b), on a proposal from the Board of Directors, the General Assembly may vary the Statutes of the Association.

19.2. The Board must bring any proposals for the variation of the Statutes to the attention of the Members of the Association at least four weeks prior to the date of the General Assembly that will resolve thereon.

## 20. DISSOLUTION

20.1. In case of dissolution of the Association, the General Assembly establishes the method, designates the liquidators and determines their powers and fees.

20.2. The liquidators shall distribute the net assets of the Association, if any, to a European non-profit organization with similar or closely related objectives to that of the Association.

20.3. No Member of the Association shall be held liable for any remaining debts and liabilities of the Association after the dissolution procedure. The President and the Directors of the Association are not liable if they have acted within their powers. Should the President and/or the Directors have exceeded their powers or neglected their obligations they may be held personally liable.

## 21. BYLAWS

21.1. The Board of Directors shall adopt the Bylaws, which implement and specify the provisions of these Statutes and also regulate the daily activities of the Association.

21.2. In case of discrepancies between the Bylaws and these Statutes, the latter shall prevail.

## 22. LANGUAGE

22.1. The official working language of the Association is English.

22.2. The French version of these Statutes is the official version.

## 23. APPLICABLE LAW

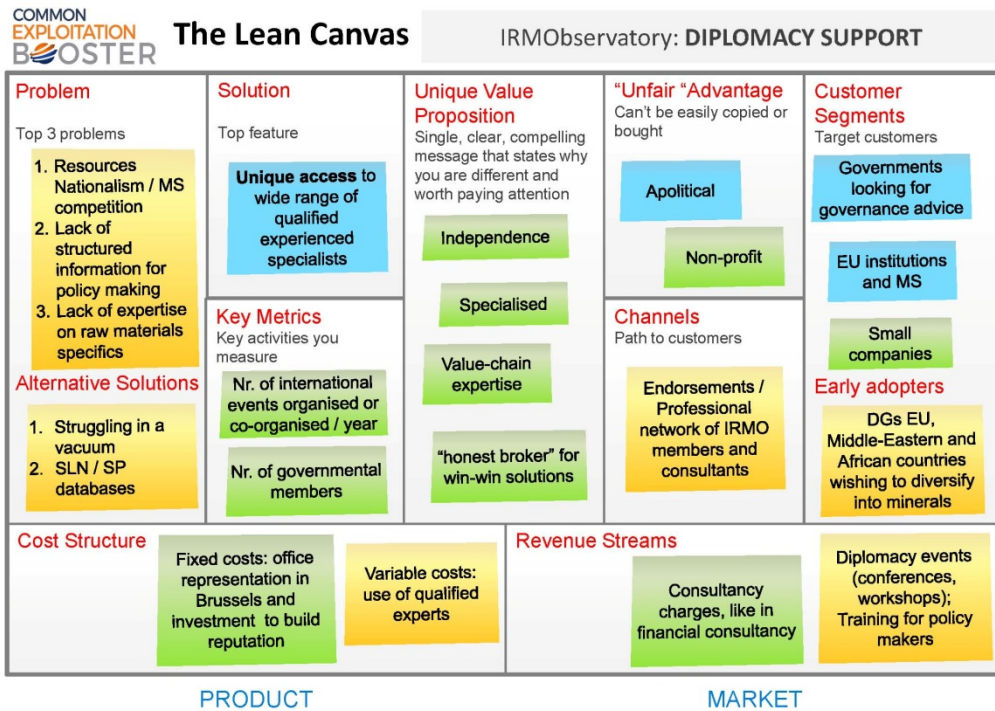
22.3. All questions not covered by these Statutes or by any regulations made for their application shall be settled in accordance with Belgian law.

## APPENDIX 3 – ESTIMATIONS OF FINANCIAL APPRAISAL

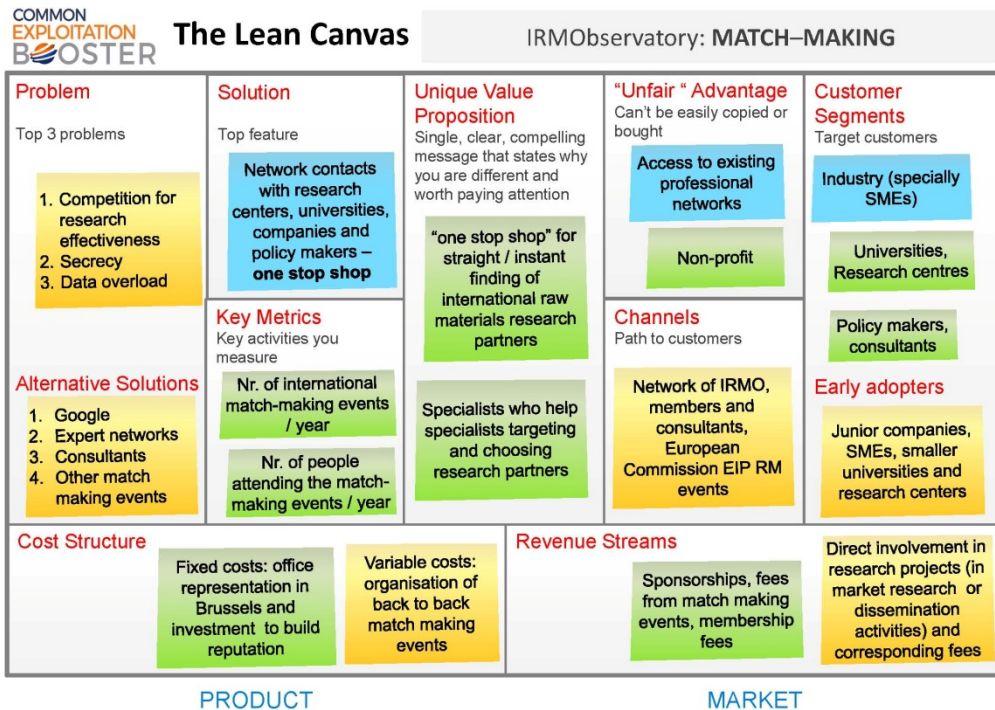
REVENUES				COSTS				cruise year		quant.	cost/unit	months	total																	
				FIXED COSTS																										
Year 1				Personal				Sec. Gen.		1	4.000 €	14	56.000 €																	
members				Office manager						1	3.000 €	14	42.000 €																	
consultancy foresight, diplomacy; average net profit				Office staff						3	1.600 €	14	67.200 €																	
				Social security taxes						35%			57.820 €																	
Year 2				Total personal									223.020 €																	
members				Travel				Sec. Gen.		8	600 €		4.800 €																	
consultancy (audits; average net profit/audit)				Board						8	1	600 €	4.800 €																	
				Total travel									9.600 €																	
year 3 / cruise year				Office rent + insurance							3000	12	36000																	
members				Communications and IT							2300	12	27600																	
consultancy (audits; average net profit/audit)				total fixed costs / year									296.220 €																	
total revenue cruising year				VARIABLE COSTS																										
				Venues						1	5000		5.000 €																	
				Catering						200	100		20.000 €																	
				total variable costs / year									25.000 €																	
Breakeven				total costs / year									321.220 €																	
<b>Assumptions:</b>																														
inflation		1,0%																												
operational investment (100% fixed costs year 1)		209.800 €																												
annual growing of sales (value)		3%																												
100% investment amortisation in		10 years																												
payments made in		60 days																												
invoices received in		60 days																												
<b>Income statement</b>																														
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038									
Revenue	69.000 €	171.600 €	429.000 €	446.160 €	464.006 €	482.567 €	501.869 €	521.944 €	542.822 €	564.535 €	587.116 €	610.601 €	635.025 €	660.426 €	686.843 €	714.317 €	742.889 €	772.605 €	803.509 €	835.649 €	869.075 €									
Operational costs	209.800 €	245.040 €	339.220 €	342.612 €	346.038 €	349.499 €	352.994 €	356.524 €	360.089 €	363.690 €	367.327 €	371.000 €	374.710 €	378.457 €	382.242 €	386.064 €	389.925 €	393.824 €	397.762 €	401.740 €	405.757 €									
Profit before depreciation, impairment losses, etc.	-140.800 €	-73.440 €	89.780 €	103.548 €	117.968 €	133.068 €	148.876 €	165.420 €	182.733 €	200.845 €	219.789 €	239.601 €	260.315 €	281.969 €	304.601 €	328.253 €	352.965 €	378.781 €	405.747 €	433.910 €	463.318 €									
Exceptional revenues	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €									
Exceptional losses	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €									
Profit/loss before financial items	-140.800 €	-73.440 €	89.780 €	103.548 €	117.968 €	133.068 €	148.876 €	165.420 €	182.733 €	200.845 €	219.789 €	239.601 €	260.315 €	281.969 €	304.601 €	328.253 €	352.965 €	378.781 €	405.747 €	433.910 €	463.318 €									
Financial income	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €									
Financial expenses	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €									
Profit/loss before tax	-140.800 €	-73.440 €	89.780 €	103.548 €	117.968 €	133.068 €	148.876 €	165.420 €	182.733 €	200.845 €	219.789 €	239.601 €	260.315 €	281.969 €	304.601 €	328.253 €	352.965 €	378.781 €	405.747 €	433.910 €	463.318 €									
Tax	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €									
Net income	-140.800 €	-73.440 €	89.780 €	103.548 €	117.968 €	133.068 €	148.876 €	165.420 €	182.733 €	200.845 €	219.789 €	239.601 €	260.315 €	281.969 €	304.601 €	328.253 €	352.965 €	378.781 €	405.747 €	433.910 €	463.318 €									
<b>Amortization</b>																														
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038									
Depreciation year-end	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €									
<b>Working Capital</b>																														
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038									
<b>Current assets</b>																														
Accounts receivable	11.500 €	28.600 €	71.500 €	74.360 €	77.334 €	80.428 €	83.645 €	86.991 €	90.470 €	94.089 €	97.853 €	101.767 €	105.837 €	110.071 €	114.474 €	119.053 €	123.815 €	128.767 €	133.918 €	139.275 €	144.846 €									
<b>Current liabilities</b>																														
Accounts payable	17.483 €	20.420 €	28.268 €	28.551 €	28.837 €	29.125 €	29.416 €	29.710 €	30.007 €	30.307 €	30.611 €	30.917 €	31.226 €	31.538 €	31.853 €	32.172 €	32.494 €	32.819 €	33.147 €	33.478 €	33.813 €									
VAT	2.185 €	5.434 €	13.585 €	14.128 €	14.694 €	15.281 €	15.893 €	16.528 €	17.189 €	17.877 €	18.592 €	19.336 €	20.109 €	20.913 €	21.750 €	22.620 €	23.525 €	24.466 €	25.444 €	26.462 €	27.521 €									
Working capital required	-8.168 €	2.746 €	29.647 €	31.681 €	33.804 €	36.022 €	38.336 €	40.752 €	43.274 €	45.905 €	48.650 €	51.514 €	54.503 €	57.619 €	60.870 €	64.261 €	67.796 €	71.483 €	75.327 €	79.334 €	83.512 €									
Net working capital	8.168 €	10.914 €	26.901 €	2.034 €	2.124 €	2.217 €	2.315 €	2.416 €	2.521 €	2.631 €	2.745 €	2.864 €	2.988 €	3.117 €	3.251 €	3.390 €	3.536 €	3.687 €	3.844 €	4.007 €	4.178 €									
<b>Free cash flow</b>																														
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038									
Net income	-140.800 €	-73.440 €	89.780 €	103.548 €	117.968 €	133.068 €	148.876 €	165.420 €	182.733 €	200.845 €	219.789 €	239.601 €	260.315 €	281.969 €	304.601 €	328.253 €	352.965 €	378.781 €	405.747 €	433.910 €	463.318 €									
Depreciation on fixed assets (+)	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €	20.980 €									
Investment working capital (-)	-8.168 €	-10.914 €	-26.901 €	-2.034 €	-2.124 €	-2.217 €	-2.315 €	-2.416 €	-2.521 €	-2.631 €	-2.745 €	-2.864 €	-2.988 €	-3.117 €	-3.251 €	-3.390 €	-3.536 €	-3.687 €	-3.844 €	-4.007 €	-4.178 €									
Net cash used in investment activities (-)	17.500 €																													
Net cash flow	-129.152 €	-41.546 €	137.661 €	126.562 €	141.072 €	156.265 €	172.170 €	188.816 €	206.234 €	224.456 €	243.515 €	263.445 €	284.283 €	306.066 €	328.832 €	352.623 €	377.480 €	403.448 €	430.571 €	458.897 €	488.476 €									
<b>Discount factor</b>																														
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038									
Interest rate	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%									
Market risk premium	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%									
Beta factor	0,932	0,932	0,932	0,932	0,932	0,932	0,932	0,932	0,932	0,932	0,932	1,932	2,932	3,932	4,932	5,932	6,932	7,932	8,932	9,932	10,932									
Effective interest rate	5,2%	5,2%	5,2%	5,2%	5,2%	5,2%	5,2%	5,2%	5,2%	5,2%	5,2%	9,2%	13,2%	17,2%	21,2%	25,2%	29,2%	33,2%	37,2%	41,2%	45,2%									
Present value factor	1,00	0,95	0,90	0,86	0,82	0,78	0,74	0,70	0,67	0,63	0,60	0,55	0,49	0,41	0,34	0,27	0,21	0,16	0,12	0,08	0,06									
<b>Investment appraisal</b>																														
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038									
Net cash flow	-129.152 €	-41.546 €	137.661 €	126.562 €	141.072 €	156.265 €	172.170 €	188.816 €	206.234 €	224.456 €	243.515 €	263.445 €	284.283 €	306.066 €	328.832 €	352.623 €	377.480 €	403.448 €	430.571 €	458.897 €	488.476 €									
Present value factor	1,00	0,95	0,90	0,86	0,82	0,78	0,74	0,70	0,67	0,63	0,60	0,55	0,49	0,41	0,34	0,27	0,21	0,16	0,12	0,08	0,06									
Present value	-129.152 €	-39.482 €	124.322 €	108.620 €	115.058 €	121.117 €	126.815 €	132.166 €	137.184 €	141.889 €	146.289 €	144.892 €	138.086 €	126.818 €	112.393 €	96.244 €	79.726 €	63.958 €	49.741 €	37.537 €	27.513 €									
<b>Net Present Value</b>	<b>1.861.738 €</b>																													
<b>Pay Back period</b>	<b>4,5 years</b>																													
<b>Internal Rate of Return</b>	<b>59%</b>																													



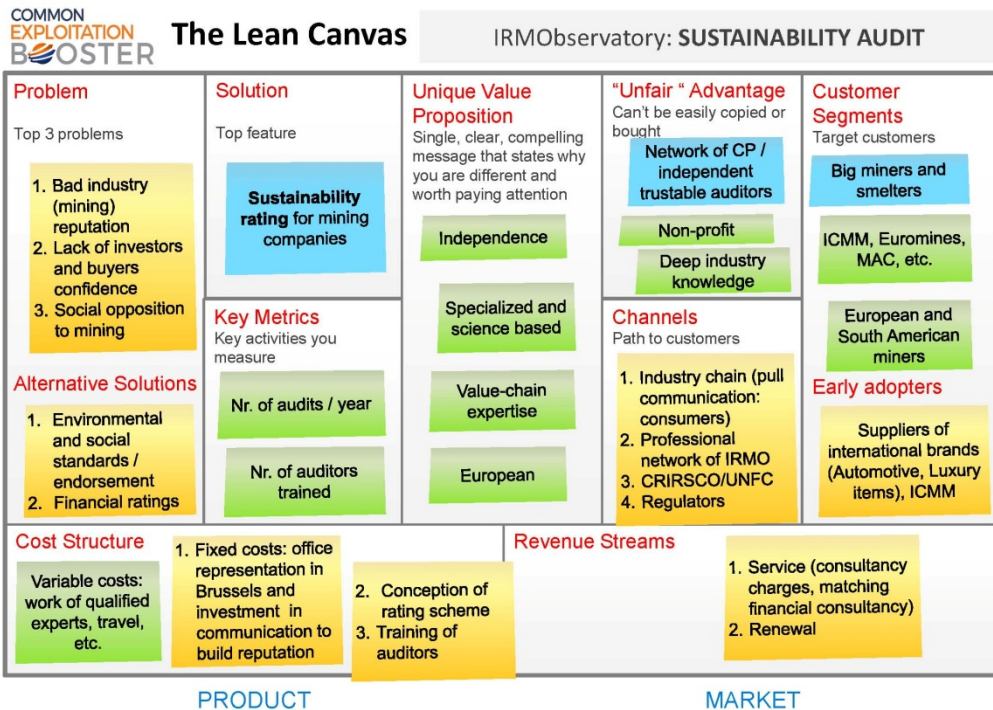
APPENDIX 4 – BUSINESS CANVAS (SERVICES TO THE MARKETPLACE, COMMON EXPLOITATION BOOSTER)



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