INTRAW DELIVERABLE D3.1

STRATEGIC PLAN OF THE INTERNATIONAL OBSERVATORY FOR RAW MATERIALS

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 Strategic Plan of the International Observatory for Raw Materials, detailing the competitive strategy that best ensures the attainment of its mission. The report also outlines the organisational structure and performance indicators that shall be considered in the implementation of the competitive strategy of the Observatory.

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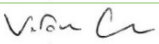
Project leader	Vitor Correia	31 January 2017	

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1 EXECUTIVE SUMMARY

The overall aim of INTRAW 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.

INTRAW 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 European Union's International Observatory for Raw Materials as a definitive raw materials intelligence infrastructure, operating internationally. 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. This report corresponds to deliverable D3.1, and it describes the Strategic Plan of the International Observatory for Raw Materials.

The Observatory aims to become the organisation of reference in the world on the definition of social and environmental best practices along the mineral raw materials value chain. Its mission is to support international cooperation on mineral raw materials research & innovation, education & outreach, industry & trade and recycling, management & substitution of strategic raw materials.

The SWOT analysis shows that existing competition is developed around four categories of factors: 1) knowledge and knowledge management; 2) reputation and (perceived) quality of services; 3) innovation; and 4) existing alliances and networks. Taking into consideration the categorisation of needs of prospective consumers, the prospective offer of the International Observatory for Raw Materials includes three main groups: 1) cooperation schemes; 2) raw materials' diplomacy; and 3) sustainability audit and consulting. The Critical Success Factors of the Observatory were categorised around four main areas: 1) marketing / commercial (quality / personnel competence, external image, customer knowledge); 2) finance (cost leadership); 3) production (in house distribution of knowledge, access to updated and reliable information, innovation / adoption of latest developments); and 4) organisation (networks / alliances, experience and knowhow of key staff).

The generic competitive strategy prescribed for the Observatory is *Focus* (Porter, 1985), anchored in a value discipline that matches specific demands of target markets (*Customer Intimacy*, Treacy & Wiersema 1993). The services to be offered will be differentiated and tailored to segments of the raw materials community that are not (entirely) covered by existing competition. The implementation of the strategy will rely on augmented levels of operational flexibility, provided by highly skilled and competent personnel, and on innovative approaches, taking the most of alliances and networks.

The Observatory will formally be an international non-profit association, registered in Belgium. The Observatory will be supervised by a Board of Directors, assisted by a Secretary General, who will be responsible for the daily management of the Observatory. 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 assessment of the Observatory includes three management dimensions: 1) strategy; 2) processes; and 3) results, and the indicators that were selected as key performance indicators cover four main areas: 1) finance; 2) customer relationship; 3) internal processes; and 4) innovation.

The service-mix and corresponding operations and financials will be detailed in the Business Plan of the International Observatory for Raw Materials (deliverable D3.2).

2 INTRODUCTION

This Strategic Plan of the International Observatory for Raw Materials (D3.1) is the outcome of INTRAW Work Package 3.1, detailing the strategy and management approach that are necessary to safeguarding the full operation 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 strategic planning process is the managerial method of developing and maintaining a viable fit between the organisation's objectives, skills and resources and its changing market opportunities (Kotler, 2000). Strategic planning assumes that certain aspects of the future can be created or influenced by the organization, and it requires self-examination, the confrontation of difficult choices, and the establishment of priorities (Pfeiffer et al., 1985). Bryan Barry (1997) states that strategic planning requires "charting a course that you believe is wise, then adjusting that course as you gain more information and experience". The strategic planning process starts with the definition of a vision for the organization's future and the consequent definition and alignment of priorities, activities and structures needed to achieve that vision. Included are measurable goals which are realistic and attainable, but also challenging (Abell, 1980).

This comprehensive report describes the organisational purpose and vision of the International Observatory for Raw Materials, and details how that vision can be attained, considering a competitive environment and a set of constraints and limited resources. The report also provides an analysis of the external environment of the International Observatory for Raw Materials, including a detailed assessment of the existing competition and the definition of critical success factors, crossed with the prospective operating environment of the Observatory.

The strategic position of the Observatory was established having in consideration the appraisal of market needs, the factors of competition and the Observatory's core competences. The steps towards the implementation of the strategy, including the definition of service components (benefits, price and delivery) and the corresponding infrastructure (processes, organisation, people and technology) were also considered.

Furthermore, this Strategic Plan includes relevant metrics (key performance indicators) necessary to evaluate the implementation process and outlines the organisational structure necessary to put into operation the International Observatory for Raw Materials.

3 PURPOSE, VISION AND MISSION OF THE INTERNATIONAL OBSERVATORY FOR RAW MATERIALS

3.1 Organisational purpose

The purpose of an organization is the fundamental reason why the organization exists. The International Observatory for Raw Materials will be a result of the H2020 funded project INTRAW. As established in the Grant Agreement of INTRAW, "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".

According to INTRAW'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".

In this framework, having in consideration the benchmarking of international best practices on raw materials management and the EU circumstances, the Consortium that is implementing INTRAW agreed that the organisational purpose of the International Observatory for Raw Materials will be:

> **To foster international cooperation on mineral raw materials intelligence within and beyond Europe and to advance international best practices along the mineral raw materials value chain, contributing to the sustainable supply of raw materials to the European industry.**

3.2 Vision

The vision statement is the anchor point of the strategic planning process. 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. It is intended to serves as a clear guide for choosing current and future courses of action (BusinessDictionary, n.d.), and it must be aligned with a mission, a set of values, clear focus areas and broad goals.

The vision statement of the International Observatory for Raw Materials is:

> **To be the organisation of reference in the world on the diffusion of social and environmental best practices along the mineral raw materials value chain.**

3.3 Mission

A mission statement is a written declaration of an organization's core purpose and focus that normally remains unchanged over time. Properly crafted mission statements serve as filters to separate what is important from what is not (BusinessDictionary, n.d.). The mission statement communicates the purpose of the organisation. The mission statement of the International Observatory for Raw Materials is:

> **To support international cooperation on mineral raw materials' research & innovation, education & outreach, industry & trade and recycling, management & substitution of strategic raw materials.**

4 CONTEXTUAL ANALYSIS

The contextual analysis of the International Observatory for Raw Materials considers its strengths, weaknesses, opportunities and threats, following a structured method known as SWOT analysis (Humphrey, 2005). The SWOT analysis considers the mission and vision of the Observatory, and classifies the internal and external factors that are favorable and unfavorable to achieve its generic aims.

The external factors are classified as opportunities or threats. An opportunity is a favorable external factor that an organization can use it its advantage. A threat is a factor that has the potential to negatively impact an organization (SWOT Analysis, 2015). It is possible that a factor might be simultaneously considered an opportunity and a threat (.e.g. nationalism). It will depend, basically, on specific framing factors. It is also relevant to stress that the analysis is made on the perspective of the Observatory, i.e. factors that area classified as opportunities to the Observatory don't necessary represent opportunities to Europe or to EU policy making.

The internal factors are classified as strengths or weaknesses. Strengths describe what the Observatory will excel at, allowing decisions on how to gain a competitive advantage. Weaknesses prevent the Observatory from performing at its optimum level. They have the potential to reduce progress or to give a competitive edge to the competition. Weaknesses need to be minimized and improved (SWOT Analysis, 2015).

4.1 SWOT analysis

4.1.1 External environment

The external analysis includes generic dimensions, such as demographics, political, legal and social systems, environment and climate change and technology. It includes also business-specific dimensions, namely market and competition.

4.1.1.1 Opportunities

Demographics

1. Increasing global demand for raw materials, and
2. 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.

Political / Legal / Social systems

3. Increasing economical and political influence of China in world trade,
4. Increasing resources nationalism,
5. New free-trade partnerships of EU with rest of the world,
6. European "values": valorisation of diplomacy and dialogue over conflict,
7. Centralised decision-making for EU raw materials' international action,
8. Political / administrative differences among European countries / regions,
9. Lack of coherence of raw materials policies between EU Member States and between regions,

10. Raw materials' policy is a competence of each EU Member State,
11. Growing political importance of European regions / autonomic powers, and
12. Difficulties in evaluating the impact of EU mineral policies/systems.

Environment / Climate change

13. Increasing demand for natural resources (including rare earths and exotic metals to be used in renewable technologies),
14. Implementation of Sustainable Development Goals with favourable legislation and policy at European level,
15. Lack of harmonisation of the Member States' environmental policies and regulatory frameworks,
16. Valorisation of "clean" production processes,
17. Social and political influence of "green" movements and opposition to mining, and
18. Perceived need of aggressive goals for environmental issues.

Technology

19. Technology driven demand for new materials/elements used in scientific advances on:
    a. Medicine,
    b. artificial intelligence,
    c. robots,
    d. energy storage, and
    e. energy production,
20. Data availability (big data / open source), linked to GIS, and
21. Advances on extraction technologies from low-grade ores
22. Advances on substitution,
23. Advances on recycling, and
24. Advances on circular economy.

Market

25. Increasing global demand of mineral raw materials,
26. Increasing sophistication of demand of mineral raw materials,
27. Maintaining the high standard of living,
28. Size of EU marketplace (3rd in the world),
29. Increasing international research on materials sciences and substitution,
30. Lack of coordination and exchange of best practices in technical networks on raw materials,
31. Bad reputation of mining industry,
32. Restrictions to mining due to:
    a. social opposition,
    b. environmental constraints,
    c. long permitting times,

33. Absence of widely accepted social and environmental standards /industry certification schemes for the raw materials industry (including material's efficient recycling),
34. Japanese and European companies are leading research on recycling,
35. Strong EU dependency on imports of raw materials,
36. Loose or absence of coordination between the EU and the Reference Countries on international R&D programmes and policies on raw materials supply,
37. Loose or absent coordination between European and national or regional R&D programmes and policies on raw materials supply,
38. Existing transnational cooperation on research and innovation within the EU,
39. 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),
40. Scarcity or absence of structured information (intelligence) on raw materials science and sourcing for European policy makers at:
    a. EU level,
    b. country level,
    c. regional level,
41. Lack of intelligence on raw materials key supply chains and related criticality issues for European policy makers at:
    a. EU level,
    b. country level,
    c. regional level,
42. 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:
    a. EU level,
    b. country level,
    c. regional level,
43. Difficulties in evaluating the long term impact of EU research projects on geosciences,
44. Emphasis given to corporate responsibility, and
45. EU regulation against conflict minerals, and mandatory due diligence checks for importers, smelters and refiners.

Competition

46. Loose or absent interconnection/linkage/coordination between intergovernmental organisations (UN, World Bank, OECD) and initiatives related to raw materials supply,
47. Overlaps and loose interconnection/linkage/coordination between EU organisations and initiatives related to raw materials supply,
48. Existing open access databases and cooperative platforms covering raw materials (e.g. http://atlas.media.mit.edu/en/, http://www.compareyourcountry.org/,

https://www.mapx.io/, http://minerals4eu.brgm-rec.fr/, http://www.bgs.ac.uk/mineralsuk/, http://www.kinglobal.org/mining-catalyst.html),

49. Lack of integration among existing European research networks (country based or theme based – e.g. Knowledge Transfer Network in the UK, WEEE Forum, ERA-NET and EIT Raw Materials),
50. Weak integration (sometimes rivalry) among existing industry networks (country based or commodity based – e.g. ICMM, Mining Association of Canada, Chamber of Mines of South Africa, Euromines, IMA-Europe),
51. 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),
52. Absence of public recognition of existing standards addressing raw materials supply,
53. Joint Research Centre (JRC), building up and handling the EU Raw Materials Knowledge Base as a open repository of EU data,
54. Several scientific and professional associations lobbying for geoscience and professionals (e.g. IUGS, EGU, EAGE, AIG, AGI, GSSA, IOM3, EFG), and
55. Lack of coordination of Member State initiatives/organisations addressing raw materials sourcing at country level.

4.1.1.2 Threats

Demographics

1. Long-term demographic changes in Europe (aging population).

Political / Legal / Social systems

2. Increasing economical and political influence of China in world trade,
3. Social unrest in Europe triggering nationalism,
4. Increasing opposition to international free-trade partnerships / movement towards bilateral trade agreements,
5. Debt crisis/ fiscal austerity (in EU),
6. Financial instability affecting the Euro fuelling Euro scepticism,
7. Erosion of the EU influence/voice,
8. Possible collapse of the Euro,
9. Possible collapse of the EU, and
10. Terrorism.

Environment / Climate change

11. Social unrest due to:
    a. economic impact of environmental measures on jobs,
    b. economic impact of environmental measures on living costs,
    c. water conflicts, and
    d. climate migrants.

Technology

12. Advances on substitution,
13. Advances on recycling, and
14. Advances on circular economy.

Market

15. Advances in research and innovation in mining are driven by Australian, Canadian, USA and South African mining companies and their suppliers,
16. 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,
17. The USA and Japan could become more attractive than Europe for getting innovative ideas into products,
18. Difficulties in evaluating the long term impact of research projects on geosciences,
19. Difficulties in addressing the wide range of stakeholders involved in raw materials supply (including mining and recycling),
20. 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), and
21. Conflicting market interests between individual Member States or Groups of Member States.

Competition

22. Intergovernmental organisations and initiatives linking natural resources and its governance towards better governance of natural resources, such as UN (UNEP, UNDP's ACP-EU Development Minerals Programme, UN-Habitats, International Metals Study Group), OECD (Policy Dialogue on Natural Resource-based Development), World Bank (Connex and International Finance Corporation), and WTO,
23. Banking and investment houses with departments/sectors active in the mining business (Goldman Sachs, Citigroup, BNP Paribas, Deutsche Bank),
24. EU Directorates-General diplomacy actions (meetings, conferences) towards better cooperation on raw materials supply (promoted by Directorates-General and supported by the Joint Research Center),
25. Existing specialised management and consultancy companies (SNL, S&P Global, PWC, Deloitte, BCG, Fraser Institute),
26. Existing research networks (country based or theme based – e.g. Materials Knowledge Network in the UK, WEEE Forum, ERA-MIN, EIT, ESIP, NCSE),
27. Existing industry networks (country based or commodity based – e.g. ICMM, Mining Association of Canada, Chamber of Mines of South Africa, Euromines, IMA-Europe),
28. Existing standards addressing raw materials supply alongside with generic industry standards (ISO, OHSAS),
29. Organisations with large sets of global data on geology and raw materials, who already provide reports and organise events on raw materials' provisioning (USGS and its National Minerals Information Center-NMIC),

30. 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),
31. 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.

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 1. 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 1 – Characteristics and core competences of existing incumbents of the Observatory.

Incumbent	Type	Services	No. employees	Revenue	Core competencies
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.

Incumbent	Type	Services	No. employees	Revenue	Core competencies
Deloitte	UK Private company, limited by guarantee.	Audit, tax, management consulting (enterprise applications, technology integration, strategy & operations, human capital, and short-term outsourcing), enterprise risk and financial advisory services.	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 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,

Incumbent	Type	Services	No. employees	Revenue	Core competencies
					where consultants who are not promoted are asked to leave) are renowned.
Boston Consulting Group	US Private company.	Management consulting (corporate development, growth and innovation).	12,000 people worldwide (2015).	USD 5 billion (2015).	One of the most prestigious management consulting firms, with in-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	Around 50 employees, in offices in Calgary, Montreal,	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

Incumbent	Type	Services	No. employees	Revenue	Core competencies
		intervention on the welfare of individuals". It periodically publishes reports, studies and indexes on several economic and educational activities. 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.	Toronto, and Vancouver.		Network. In the same year, a United Nations agency called criticized the methodology of the Fraser economic freedom index for "cherry picking".
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 50 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	US based NFP	Platform dedicated to	N/A	N/A	ESIP was founded by NASA in 1989

Incumbent	Type	Services	No. employees	Revenue	Core competencies
Earth Science Information Partners (ESIP)	organization.	networking and data dissemination needs of the global Earth science data community.			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 the Environment	U.S. based NFP organization	Cooperation programmes on environmental knowledge, addressing research, education, environmental, and business organizations.	N/A	N/A	NCSE works with government agencies to advance research schemes, organizes conferences, and 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	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.

Incumbent	Type	Services	No. employees	Revenue	Core competencies
		quarrying and mining industry among its members.			
European Technology Platform for Sustainable Mineral Resources	Association of 40 European stakeholders from academia, geological surveys and minerals' industry.	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-thank 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 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.
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	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.

Incumbent	Type	Services	No. employees	Revenue	Core competencies
		2017.			
European Recycling Platform	Association of producers of electrical and electronic products, packaging and batteries to implement the EU WEEE Directive.	Pan European provider of compliance solutions for WEEE. ERP has a "WEEE market share" in Europe of around 15%. ERP provides a platform for its members to exchanges information about legislative developments in EU 25 countries.	100 (2016).	N/A	ERP was founded in 2002 by Braun, Electrolux, HP and Sony. ERP members share resources on lobbying to influence national 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; technical and	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.

Incumbent	Type	Services	No. employees	Revenue	Core competencies
		economic evaluation of exploration and mining projects; potential price and supply risks of primary raw materials and intermediates; assessment of minerals' demand for future technologies.			

4.1.2 Assessment of market needs

Understanding the changing marketplace, assessing consumers' needs and providing value are fundamental features to sustain the success of any organisation in a competitive environment. The determination of market needs and interests assists the development of services that should be delivered to a group of consumers more effectively and efficiently than competitors, in a way that preserves or enhances the society's well-being (Kotler, 1990).

Table 2 lists existing market needs that were identified through personal interviews and surveys with prospective customers. The needs are categorised in five groups. Prospective market segments are associated to each group of needs.

Table 2 – Identification of existing market needs and wants and corresponding prospective customers.

Market needs	Prospective customers
Research cooperation schemes 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.	Individual and/or independent researchers; Research centres/councils; Universities; Industry.
Industry cooperation schemes 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 FDI, country guides for investors); Inward and outward mineral industry trade missions; Global award for best environmental and social practices.	Juniors, investors, business angels, capital funds; SMEs along the minerals supply chain (including consultancy firms); Equipment Manufacturers; Industry associations; Mining companies.
Educational programs Mutual recognition of qualifications' schemes; Accreditation of professional and vocational training;	Universities; EFG, IOM3 and other professional associations;

Market needs	Prospective customers
Decision-maker education and outreach (e.g. Minerals Council of Australia).	Training companies; Industry; Lawyers; Legislators; Governments.
Raw Materials Diplomacy Think Tank (advocacy power); Policy 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.	Transnational not for profit organisations (from Europe and abroad); Governments and Regional Governments; Geological surveys and national investment/trade agencies.
Sustainability audit and consulting Sustainability rating; Readers panel to Stock Exchange; Expert brokerage.	Investors and banks; Traders; Mining companies; Mining analysts and fund managers Lawyers.

The definition, from the list above of needs/wants, of specific services to be developed and provided by the Observatory will require further consideration, and will be made after the formulation of the Strategic Plan. For the purpose of this Plan, the generic description and grouping of prospective services made in Table 2 is adequate and satisfactory.

4.1.3 Internal environment

Since the International Observatory for Raw Materials doesn't exist yet, the functional evaluation considered in the SWOT analysis considers the expected performance of the Observatory (including the fact of being a new, to-be-launched organisation). The dimensions/functions considered in this analysis are marketing and commercial, finance, production and organisation.

4.1.3.1 Strengths

Marketing / Commercial

1. Good and strong brand name (with the words "observatory" and "International",
2. Independent, not for profit (NFP) organisation, based in Europe,
3. Easy to develop reputation and credibility, built on the image of the Consortium,
4. Extensive and in-deep knowledge of the raw materials value chain,
5. Good network among geoscience global community,
6. Good knowledge of European Commission's and Parliament organisation, and
7. Capacity to ensure worldwide geographic coverage.

Production

8. Availability of skilled work force and
9. Telecommuting / network jobs.

Organisation

10. NFP international organisation with entrepreneurial orientation,
11. Flexible response, and
12. Low level of structure (fixed) costs.

4.1.3.2 Weaknesses

Marketing / Commercial

13. Service quality unknown / never proved,
14. Distribution effectiveness unknown,
15. Sensitivity to price unknown,
16. Promotion effectiveness unknown, and
17. Innovation effectiveness unknown.

Finance

18. Provision of equity / initial budgeting,
19. Set up investment need, and
20. Cash flow needs.

Production

21. Limited capacity,
22. Limited economies of scale, and
23. Effectiveness of on time production is unknown.

Organisation

24. Need of establishing all systems and procedures and
25. Effort required recruiting and building a strong core team.

4.2 Competitive Factors

Competitive factors are the benefits or service attributes valued by costumers around which existing competitors (incumbents) develop their services' offer, adjusting benefits, price and delivery to underline differences and reach specific market segments.

Consumers' needs and expectations change over time, and competitors fight a boundless battle to beat each other in a specific attribute or set of attributes. Therefore, the basis of competition is dynamic, and a powerful driver of innovation, generating a vast diversity of services. Many of the services generated will flop. But others will have benefits that match accurately consumers' needs, propelling successful organisations.

Considering the vision and mission of the International Observatory for Raw Materials and the previous scrutiny of existing incumbents and their core competences, the competitive factors around which incumbents develop their offers were grouped in four clusters:

1. Knowledge and knowledge management;
2. Reputation and (perceived) quality of services;
3. Innovation;
4. Existing alliances and networks.

Table 3 includes a comparative analysis of the performance of existing incumbents (grouped in seven classes) on relevant attributes associated to each of the aforementioned clusters.

The relative (and qualitative) performance analysis summarised in Table 3 was used for building up a representation of the (generic) competitive profiles of the incumbents. The profile matrix obtained is represented in Figure 1.

Table 3 – Characteristics and core competences of the existing categories of incumbents.

	Categories of incumbents						
Factors of competition	Intergovernmental organisations	Banking businesses	Specialised management and auditing companies	Research networks	Industry Networks	Standards and certification providers	Government agencies
Knowledge and knowledge management							
Customer knowledge / market specialisation	★	★★	★★★	★★★	★★★★★	★★★★	★★★
Operational flexibility		★★	★★★	★★	★★	★★	
IT platforms (knowledge management systems)	★★	★★★	★★★★★	★★	★★	★★	★★
Reputation/quality							
Reputation of key staff (partners)	★	★★	★★★★★	★★	★★	★★★	★
Personnel skills and competence	★	★★	★★★★	★★	★★	★★★	★
Dependability	★	★★★	★★★★	★★★	★★★	★★★	★★
Price	★★★★★	★★	★	★★★★	★★★	★★★	★★★★
Innovation							
Size of services' offer	★	★★★	★★★★	★★	★★★	★	★
Use of standards	★	★★	★★★★	★	★★★	★★	★
Convenience	★★	★★	★★	★★	★★★	★	★
Network/alliances							
Facilitation/ lobbying capacity	★★	★★★	★★★	★★★	★★★★	★★★★	★★
Networking	★★	★	★	★★	★★★	★	★

Main categories of incumbents rated on a scale of 0-5 stars, 5 stars being the best, 1 star being the worst and 0 stars being non-existent.

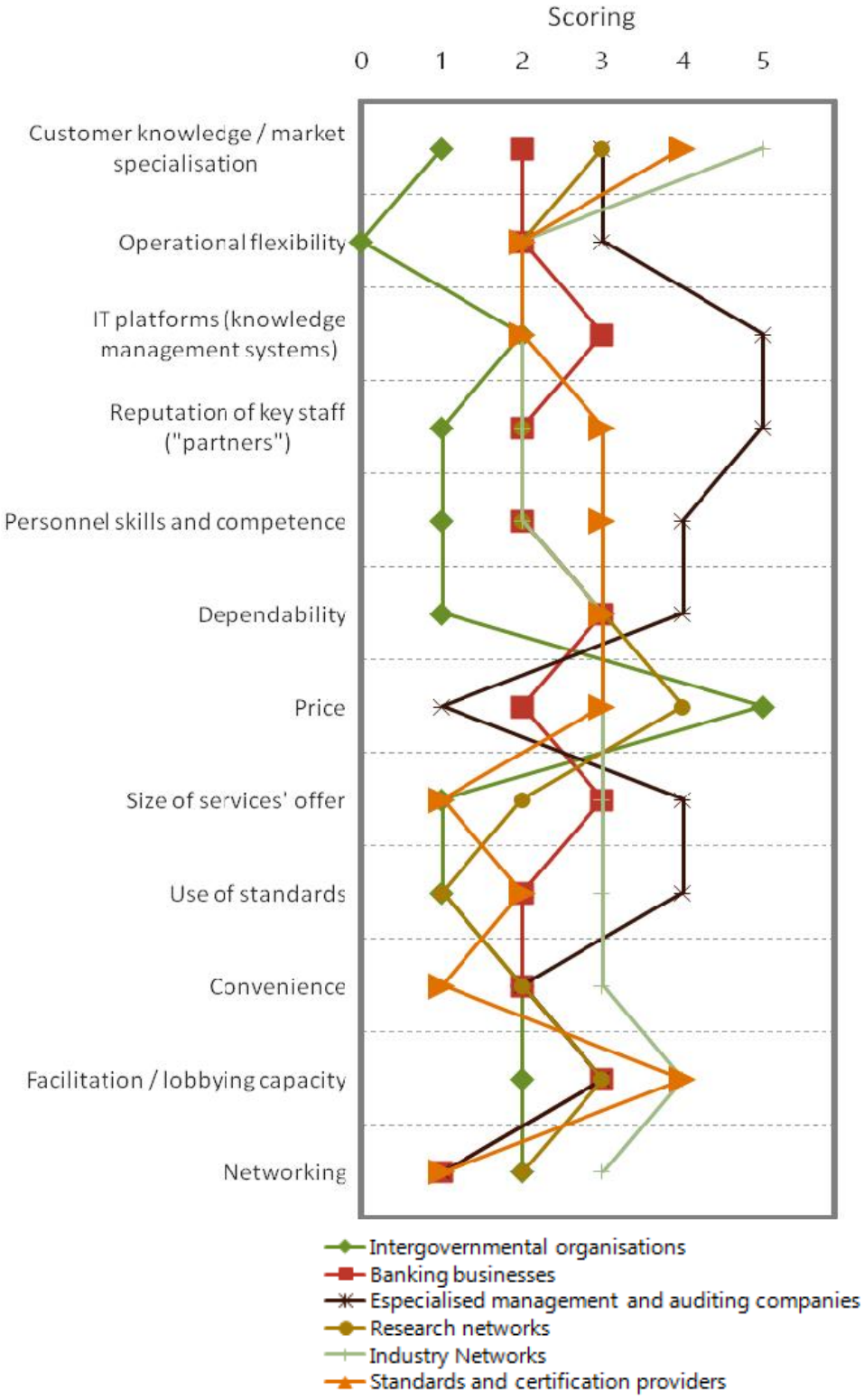


Figure 1 - Competitive profile of the relevant groups of incumbents of the Observatory.

This analysis is relevant to understand how the basis of competition could be manipulated or changed. By predicting the future basis of competition, i.e. the collection of benefits that are or will become the most important determinants of a customer's choice between different competing products or services, the

Observatory can build up a competitive advantage and untapped a new market space. This approach is called value innovation (Reimann, 1995).

Value innovation is distinctively different from the competitive strategic approach that takes an industry structure as given and seeks to build a defensible position within the existing industry order (Kim & Mauborgne, 1995). Rather than focus on differences between customers, value innovators look for things that customers value in common and reconstruct key factors across market boundaries/services attributes, thereby creating a leap in value for customers (Kim & Mauborgne, 1995).

The analysis of the competitive profile of existing incumbents reveals that the attributes with less dispersion are convenience, facilitation and lobbying capacity, and networking. The attributes with more dispersion are price and reputation of key staff/partners. The definition of the strategic position of the Observatory will consider these competitive profiles.

4.3 Critical success factors

The definition of elements that are vital for the successful development and implementation of a strategy includes the identification of critical success factors. Critical success factors are those factors within an organisation that requires to be performed well, and define pathways that organisations should follow to be successful (Freund, 1988).

Figure 2 – Mission of the International Observatory for Raw Materials and corresponding critical success factors.

The definition of critical success factors emerges from the SWOT analysis, by combining pertinent data on consumers' expectations and needs with intelligence on competitors' performance. Critical success factors include issues vital to an organization's current operating activities and to its future success. (Boynton & Zmud, 1984)

Normally, the most successful competitors master the critical success factors of a business. This explains why organisations with stronger critical success factors outperform their competition (De Vasconcellos & Hambrick, 1989). The critical success factors listed below were selected after a careful evaluation of the market of the Observatory, crossed with strengths and core competences of the most successful incumbents. The critical succeeds factors for accomplishing the mission of the International Observatory for Raw Materials, listed by organisational dimension/function, are represented in Figure 2.

5 STRATEGIC POSITION

A strategic position is the sum of a organisation's answers to the following questions (Drucker, 1954):

- What is the organization's business?
- Who is the target customer for the organization's products and services?
- Where are the customers and how do they buy? What is considered "value" to the customer?
- Which businesses, products and services should be included or excluded from the portfolio of offerings?
- What is the geographic scope of the business?
- What differentiates the company from its competitors in the eyes of customers and other stakeholders?
- Which skills and capabilities should be developed within the firm?
- What are the important opportunities and risks for the organization?
- How can the firm grow, through both its base business and new business?
- How can the firm generate more value for investors?
- The answers to these and many other strategic questions result in the organization's strategy and a series of specific short-term and long-term goals or objectives and related measures.

However, the questions listed may have different answers, and for this reason, in every industry, there are several viable strategic positions that companies can occupy. Therefore, the essence of strategy is selecting one position that a organisation can claim as its own (Markides, 2000).

The following sections describe the answers to the above questions, organised in a deliberated way that aims to generate breakthroughs in value and performance for the International Observatory for Raw Materials.

5.1 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.

5.2 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 represented in Figure 3.

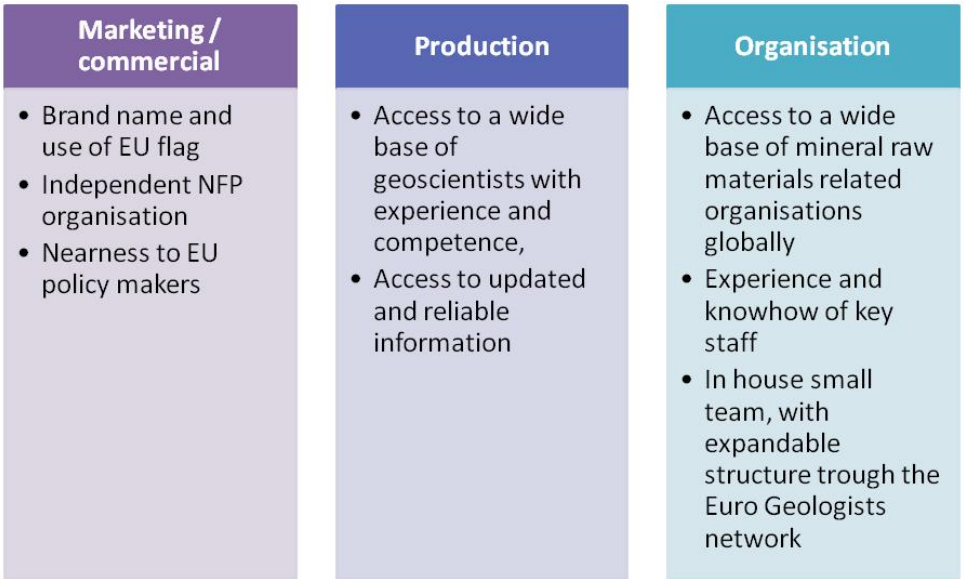


Figure 3 – Core competences of the International Observatory for Raw Materials.

The identified core competences of the Observatory will support its development and expansion, around attributes that are highly valued be customers. The defence of the strategic position of the Observatory will be entrenched in competencies that are difficult to replicate by competitors.

The screening and evaluation of potential services of the International Observatory of Raw Materials will be drafted in its Business Plan (deliverable D3.2). The process of selecting the most adequate services, the service features and the launching plan will consider the following attributes or characteristics, associated to each prospective offer:

- Expected demand;
- Intensity of existing competition;
- Time to market;
- Visibility (attractiveness/outreach/impact on reputation);
- Easiness of delivery (how complicated is the management process of the service; aim to high quality services);
- Degree of customization required (cost/quality perceived); and
- Financial considerations (cash flow, profitability/impact on portfolio and overall profitability, investment required/development costs).

5.3 Strategic position

As mentioned before, there are several viable strategic positions that companies can occupy. To evaluate the range of possible options and assist the selection of the best one companies use several business strategy tools, conceived to helping identifying and sustaining competitive advantages.

A simplified matrix that is commonly used to define the possible ways of gaining competitive advantages was developed by Michael Porter (Porter, 1985). According with this classification, there are only three possible generic strategic options (generic because they can be applied to all types of organisations and products/services). Porter called these generic strategies "Cost Leadership", "Differentiation" and "Focus". The Focus strategy is subdivided into two parts: "Cost Focus" and "Differentiation Focus" (Porter's Generic Strategies, n.d.). The terms "Cost Focus" and "Differentiation Focus" can be confusing, as they could be interpreted as meaning "a focus on cost" or "a focus on differentiation". Cost Focus means emphasizing cost-minimization within a focused market, and Differentiation Focus means pursuing strategic differentiation within a focused market (Porter's Generic Strategies, n.d.).

In the case of the Observatory, the services' offer will be specific and developed around precise needs and wants of the minerals' industry. The core competences of the Observatory are embedded in highly specialised factors, and its size and productive capacity will be limited. Therefore, according with Michael Porter's competitive strategies matrix, and having in consideration the Observatory core competences, the critical success factors required to attain its mission and the existing competition, the generic strategy that ensures the best service/market fit for the Observatory is **Focus** (Figure 4).

The Focus strategy requires a concentration on particular market segments/niches. By having a superior understanding of the specific needs, competitive offerings and attributes' value, organisations that follow the Focus strategy develop unique / tailored offerings that match customers' expectations. Because they serve customers in a unique distinctive way these organisations tend to build strong brand loyalty amongst their customers. This loyalty is a barrier for competitors wishing to enter into those specific market segments/niches.

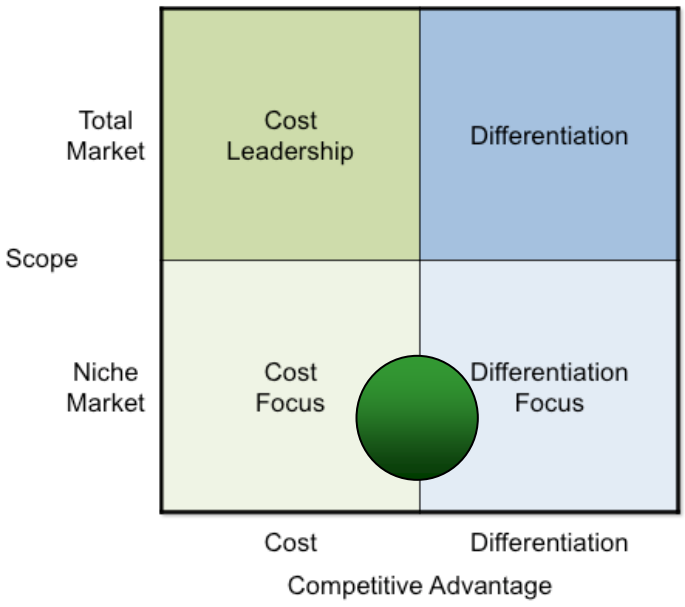


Figure 4 – Representation (green circle) of the best competitive position for the International Observatory for Raw Materials in the Michael Porter's Competitive Advantage matrix (adapted from Porter, 1985).

A successful Focus strategy requires the development of tailored offers to specific narrow market segments, comprising innovative attributes that are valued by that segment. These innovative attributes don't necessary mean extra features; in some case, innovation can correspond to unbundled offers (striped from features that are not valued by consumers) with a better price (thus having more value). Firms pursing a Focus strategy normally try to enhance their competitive advantages trough innovation or brand marketing rather than efficiency.

In the case of the Observatory, the choice of the Focus strategy is in line with its vision and mission, and will mobilise commitment at all levels, aligning values, structures and systems.

Another matrix commonly used to help identifying and sustaining competitive advantages is the GE-McKinsey nine-box matrix. This matrix was developed by Mckinsey for General Electric in the 1970s, and organises in two-dimensions the market attractiveness and the business/organisation's strengths (GE Approach, n.d.).

The attractiveness of a market is demonstrated by how beneficial it is for a company to enter and compete within this market. It is based on various factors: the size of the market and the rate at which it is growing, the possibility of profit, the number of competitors within the industry and their weaknesses (GE Approach, n.d.). The business strengths are determined by factors within the company itself such as its assets, the position in the market of its brand and the loyalty of customers.

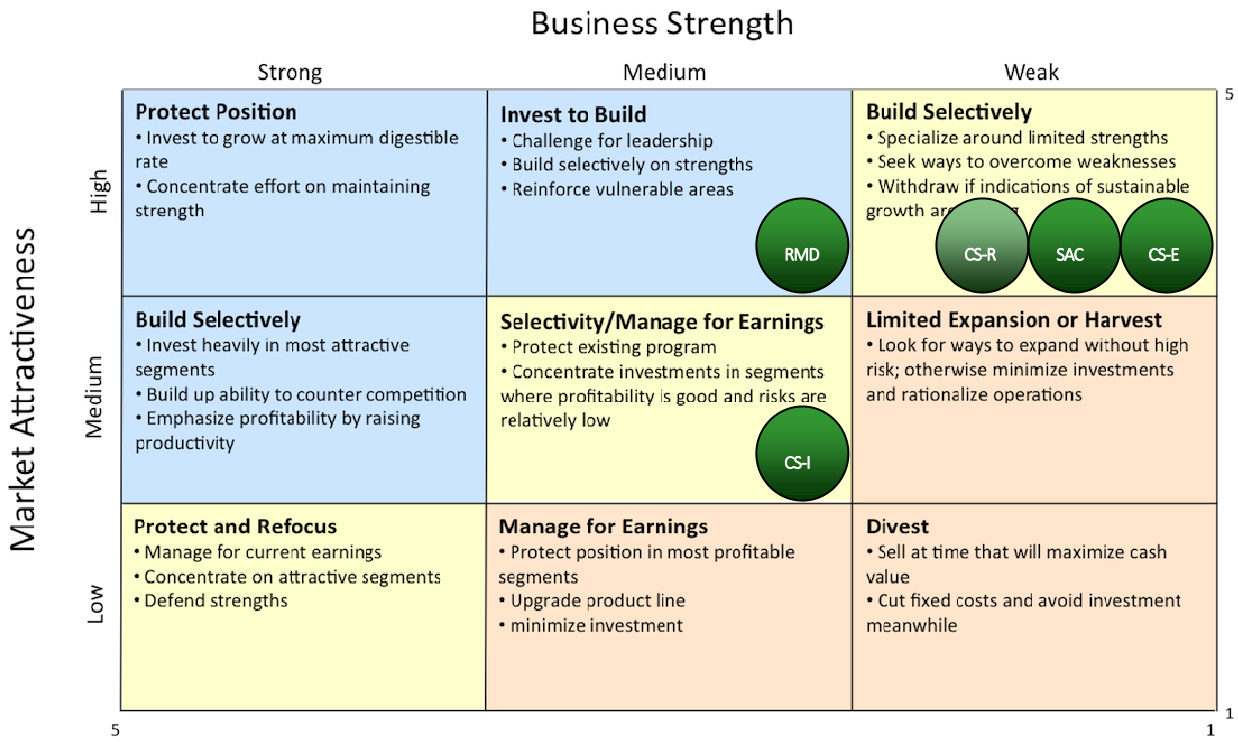
The GE-McKinsey matrix is useful, in the current stage of drafting the strategic plan for the International Raw Materials Observatory, to help prioritising efforts and investments necessary for developing and launching the services portfolio of the Observatory. Because the Observatory is not yet operational, the analysis made is simplified, and it takes in consideration the Observatory strengths and core competences, assuming they exist and were successfully developed, and the groups of services outlined in section 5.3. The rates and measurements of market attractiveness and business strength are merely qualitative, and the analysis made is relative. The result of this assessment is depicted in Figure 5. The groups of services are represented in the circles. The generic strategic prescriptions of the GE-McKinsey matrix (grow, select and harvest) are outlined in the boxes in the matrix.

The GE-McKinsey nine-box matrix can be divided in three areas, corresponding to three strategic prescriptions: *Grow* (blue boxes), *Select* (light pink boxes) and *Harvest* (dark pink boxes) (Figure 5).

The single group of services of the International Raw Materials Observatory that falls in the ***Growth*** area is "Raw Materials Diplomacy", benefiting from higher market attractiveness (reduced number of specialised competitors, bigger market). The generic prescription for this group of services is "Invest to Build".

The groups of services "Cooperating Schemes Education", "Cooperating Schemes Research" and "Sustainability Audit and Consulting" all fall in the high potential quadrant of the ***Select*** area. These services benefit from higher market attractiveness, despite the existence of powerful competitors. The generic prescription is "Build Selectively", calling for the creation of breakthroughs in value and performance.

The group of services "Cooperating Schemes Industry" falls alone in the middle of the matrix, in a *Select* area. These services face strong competitors (hence less market attractiveness) and the generic prescription is "Manage for Earnings", requiring close monitoring and follow up.



Groups of services: RMD (Raw Materials Diplomacy); CS-I (Cooperating Schemes Industry); CS-E (Cooperating Schemes Education); CS-R (Cooperating Schemes Research); SAC (Sustainability Audit and Consulting).

Figure 5 – Strategic evaluation of the portfolio of the International Observatory for Raw Materials in the GE-McKinsey matrix (adapted from Moxon, 1970).

It is important to underline that this analysis is necessarily limited because the International Raw Materials Observatory hasn't been yet created and it isn't operating. But the classification of a large majority of the groups of prospective services of the portfolio of the Observatory in the *Select* areas of the GE-McKinsey matrix draws attention to the importance of having strong competencies in managerial and corporate capabilities to quickly improve the business strength of the International Raw Materials Observatory.

Another strategic perspective, that offers insight on the sources of competitive advantage, was developed by Treacy and Wiersema (1993), building on Michael Porters' Competitive Advantage model. According with these authors there are three types of value disciplines, and the value position of an organization is not only determined by price or product characteristics, but also by other factors such as the effort customers have to make to purchase the service. These disciplines are: 1) Operational Excellence; 2) Product Leadership; and 3) Customer Intimacy.

Organisations who choose operational excellence normally act in markets where customers value cost over choice, which is often the case for mature, commoditized markets where cost leadership provides a vehicle for continued growth.

Organisations that follow customer intimacy provide a unique range of services to target consumers, enhancing personalization of service and customization of products to meet customer's needs. Often companies who pursue this strategy bundle services and products into "solutions" designed specifically for the individual customer.

Finally, product leaders continuously develop and launch superior products to market, achieving premium prices because of advanced features that ensure a superior experience for customers.

Considering the previous analysis, framed by Michael Porter's Competitive Advantage model and the GE-McKinsey portfolio matrix, and the Observatory core competences, critical success factors required to attain

its mission and existing competition, the value discipline that provides the best fit is **Customer Intimacy**. This value disciple requires:

1. Strong customer focus;
2. Relationship driven;
3. Quick movement in developing markets;
4. Efficient operations in mature markets.

The three value disciplines, and a fourth that is a combination of them, can be depicted in a matrix (Figure **6**).

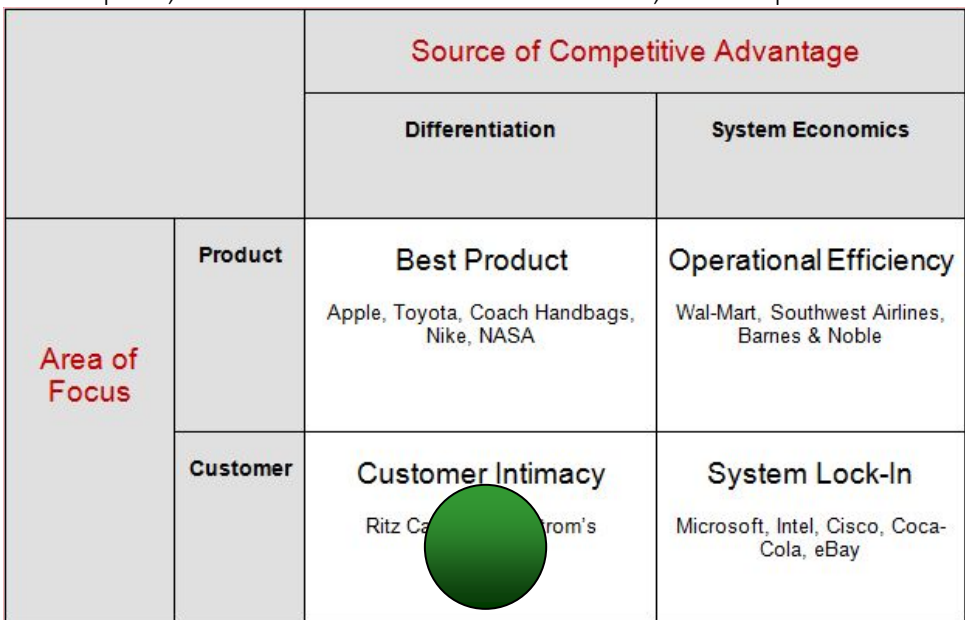


Figure 6 – Competitive advantage strategies, value disciples and best fit position (green circle) for the Observatory (adapted from Seizing Competitive Advantage, (n.d).

In this representation, developed by Seizing Competitive Advantage (n.d.), the two columns reflect Michel Porter's view that companies must compete through one of two options: on price or by differentiation. And differentiation may be sustained by either by focusing on a best product strategy, or by focusing on customer service. The second column represents strategies based on cost leadership (system economics). These strategies involve either a product focus, aiming to keep costs low, or a focus on the customer's complete experience, locking in loyalty by a balanced mix of the elements of the system.

This representation confirms the robustness of choosing Customer Intimacy as value discipline for the International Raw Materials Observatory. A consistent application of this value discipline demands a continuous effort to improve the value proposition offered and to deliver a consistent quality and experience to individual clients.

Table 4 summarises the outcome of the analysis made using different strategy matrices to the prospective portfolio of services of the International Raw Materials Observatory.

Table 4 – Strategic prescriptions and prospective portfolio of services of the International Raw Materials Observatory.

Service group / Strategic prescriptions	Cooperation schemes (research)	Cooperation schemes (education)	Cooperation schemes (industry)	Raw materials diplomacy	Sustainability audit and consulting
Michael Porter's Competitive Advantages	Focus	Focus	Focus	Focus	Focus
GE/McKinsey Multifactor Portfolio	Build selectively	Build selectively	Selectivity	Invest to build	Build selectively
Treacy and Wiersema Value Discipline	Customer intimacy	Customer intimacy	Customer intimacy	Customer intimacy	Customer intimacy

Considering the strategy matrices above, the goals and the environment analysis, the International Raw Materials Observatory will provide superior value by matching specific demands of target markets, combining detailed customer knowledge with the ability and flexibility required to provide tailored services.

Therefore, 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) Reputation and credibility (built on the image) of the Consortium.

The services to be offered will be differentiated and tailored to segments of the raw materials community that are not (entirely) covered by existing competition. This requires focus on customers' needs, as detailed below by group of services.

5.3.1 Cooperation schemes

Cooperation schemes should be developed by area of expertise, crossed with field of application, all tailored to specific needs of knowledge fields/areas. The dispersion of needs affects the attractiveness of this service, hence there is no need of raising entry barriers to potential competition (e.g. ESIP, MAC or IMA-Europe); therefore the investment in promotion will be small and the price will be medium-low.

Differentiation will be built on top of name, convenience and access to global raw materials networks. The choice of this strategy requires:

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

5.3.2 Raw materials diplomacy

The services will be designed for public bodies and large international organisations from the European Union and its Member States. To win over existing competition these services will have a value proposition tailored to specific needs of customers. To raise an entry barrier to potential competition (e.g. DERA or EuroGeoSurveys), the price will be medium and the investment in promotion will be large, to ensure a large market share in a small time interval.

Differentiation will be built on top of name, independency, specialised advocating capacity and Europe based attributes. The choice of this strategy requires:

- Strong coordination among functions in R&D, product development, and marketing,
- Strong marketing abilities,
- Structured organization and responsibilities,
- Multiple modes of producing and delivering,
- Intensive supervision of labour, and
- Access to updated and reliable information.

5.3.3 Sustainability audit and consulting

This offer will be targeted to companies and investors of the minerals industry. To cope with existing competition the services will have a different (from competition) value proposition. Because of limitations arousing from the combination of tailored services with limited capacity, it is paramount to build selectively and to deliver consistent quality and experience. The price will be high and the investment in promotion will be limited.

Differentiation will be built on high specialisation, independency, name and Europe based attributes. The choice of this strategy requires:

- Sustained capital investment and access to capital,
- Creative talent to build up/develop a sustainability referential for the raw materials sector, and
- Highly skilled labour.

6 IMPLEMENTATION

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. Finally, these organisations raise customers' expectations beyond the competition's reach (Treacy & Wiersema, 1993).

A successful implementation of the selected value discipline demands a redefinition of the value for customers (to change the value perceived by customers) and a powerful cohesive business system (how value is delivered), and value innovation assumes, in the implementation stage, a critical importance.

The implementation of the Customer Intimacy value discipline requires trade-offs and an aligned organisation to achieve it (Customer Intimacy, 2017). 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 – intimacy requires higher levels of investment in understanding customers and designing innovative solutions that match what customers expect.

The alignment of the organization is also paramount. The whole organization must be configured to consistently deliver the value discipline. Meaning the functions of the organization need to be specifically designed in such a way that (Customer Intimacy, 2017):

- Value creating processes simplify the customer experience as well as deliver consistent quality and experience;
- Power is placed in the organization to ensure customer needs and the customer's voice is front and center;
- Data and information about customers, their experience, and business environment is systematically gathered, analysed and synthesised into organizational responses;
- Solutions, processes and services can be innovated, tested and deployed rapidly;
- Employees are highly engaged.

In this discipline it is important to ensure efficient operations; it is too easy for costs to run away with higher and higher levels of service and customization. The answer is to be lean as possible – ruthlessly drive out things that are not to do with creating value or insight. The combination of an intimate 'front end' with a lean 'back end' operation is key to provide to customers experiences with the benefits of the intimacy strategy as well as the efficiencies of a lean operation.

Having in consideration the strategic prescription, the factors of competition, the prospective services and corresponding market segments, the Observatory will redefine the value for customers by:

- Offering augmented levels of operational flexibility, provided by highly skilled and competent personnel (changing what customers value); and
- Develop innovative approaches taking the most of its alliances and networks (changing how value is delivered).

The strategic profile (Chan & Mauborgne, 2004) of the Observatory, considering the implementation of the customer intimacy value discipline is contrasted against existing competitors in Figure 7.

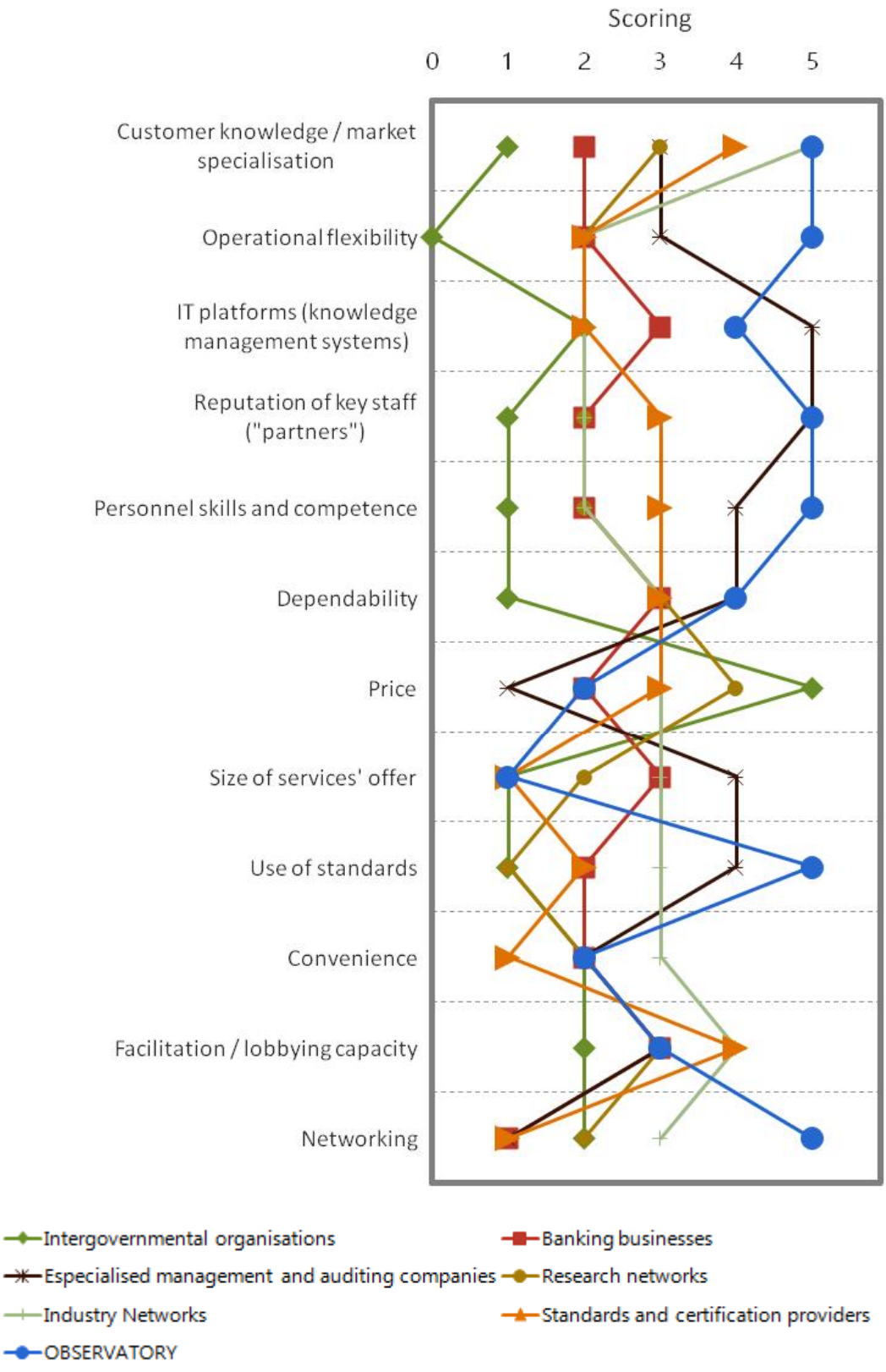


Figure 7 - Competitive profile (considering the factors of competition) of the International Observatory for Raw Materials (blue line) against existing competition (adapted from Chan & Mauborgne, 2004).

As depicted in Figure 7, to differentiate from existing competition (incumbents) and reinforce the selected value discipline and competitive strategy, the Observatory will excel in the following factors:

- Customer knowledge and market specialisation;
- Operational flexibility;
- Reputation of key staff;
- Innovation and use of standards;
- Fostering alliances and networking.

The less valued factor of competition will be the size of the services' offer. By definition, the International Observatory of Raw Materials will be a highly specialised organisation, and a well defined limited set of services is consistent with that image.

To precisely tailor offers that match the needs of selected customers, the implementation of the selected strategy shall consider the aspects detailed below, by group of services.

6.1 Cooperation schemes

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 the reference countries and also in emerging countries like India or Brazil)[1]. Cooperation with existing European research networks (e.g. EIT-Raw Materials, ERA-NETs) and organisations (e.g. EU Joint Research Center) focused on raw materials should be fostered.

Segmentation/Targeting:

- Researchers and Heads of Departments from Research Centres;
- Researchers and Heads of Departments from Universities;
- Managers of regional /country based research networks;
- Companies willing to develop/sell products to the raw materials industry;
- Companies, specially SMEs, from the raw materials industry seeking competitive advantages built on specific research areas/advances;
- Research policy officers from developed countries (reference countries, EU) and from emerging economies / regions.

Positioning

Factors of positioning:

- 1) Specialisation in the raw materials industry;
- 2) Geographical coverage in reference countries and EU;
- 3) Confidentiality;
- 4) Fair price.

[1] Strong recognised capacity (public image) on raw materials diplomacy will leverage the success of cooperation schemes.

Axis of positioning:

- 1) Specialisation;
- 2) Strong network/alliances;
- 3) Simplicity.

6.2 Raw materials diplomacy

Despite raising 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 analysis, 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 cycle, the corresponding (increasingly sophisticated) material flows and the expected (technological) demand. Cooperation with the EU bodies and Members States and with international organisations such as OECD or UN should be advanced and cherished.

Segmentation/Targeting:

- Trade policy officers from the European Union (Commission) and its Member States;
- Managers of strategic stockpiles;
- Commodity traders, trade agencies;
- Commodity investors;
- Trade networks.

Positioning

Factors of positioning:

- 1) Specialisation in the raw materials industry;
- 2) Proximity to EU policy makers and trade officials;
- 3) In-deep knowledge of the raw materials value chain;
- 4) Independency;
- 5) Confidentiality.

Axis of positioning:

- 1) Specialisation;
- 2) Strong network/alliances;
- 3) Confidentiality.

6.3 Sustainability audit and consulting

The minerals industry faces severe constraints and public opposition in many countries because of its (bad) reputation. When an accident happens somewhere in the world, it impacts the entire industry, no matter how well a company manages its assets and incorporates best environmental, economical and social practices. Despite many efforts to create standards, both the industry and the public perception of these standards are affected by fuzziness. This opens space for the creation of services covering the evaluation of the social and environmental performance of individual companies. The outcome of this evaluation, if provided by an independent, not for profit, specialised and above suspicion organisation, is less likely to challenged. This could become a social and environmental rating for the minerals industry.

Segmentation/Targeting:

- CEOs and shareholders of mining companies (specially large international companies and companies seeking expansion);
- CEOs and shareholders of smelters and processing plants (specially big international companies);
- Minerals' industry associations and networks from the EU and RC.

Positioning

Factors of positioning:

- 1) Independency;
- 2) Not for profit;
- 3) High specialisation;
- 4) Confidentiality;
- 5) EU based.

Axis of positioning:

- 1) High specialisation;
- 2) Independency;
- 3) Professionalism;
- 4) Accountability.

7 SERVICE MIX

The above detailed segmentation, targeting and positioning requires a strong alignment of the services' components and the corresponding infrastructure requirements. This alignment is delineated in the following sections 7.1 and 7.2.

7.1 Services components

The most valued components of a service are its benefits, the price and the way the service is delivered (Kotler, 2000). The definition of the service components of the Observatory is detailed in Table 5.

Table 5 – Definition of service components, by prospective service groups of the International Raw Materials Observatory.

Service group	Cooperation schemes (research)	Cooperation schemes (education)	Cooperation schemes (industry)	Raw materials diplomacy	Sustainability audit and consulting
Benefits	• In depth knowledge of the raw materials value chain • Global networking • Simplicity / convenience			• Authoritative , insightful intelligence and independent advice • Specialisation in the minerals industry, with global in-depth knowledge of the raw materials value chain • Confidentiality	• Value added advice; • Regulatory compliance (audit and rating) • Specialisation in the minerals industry • Confidentiality • Accountability
Price	• Low price • Consider success fee			• Medium price	• Medium to high price
Delivery	• Face to face meetings organised back to back with major world conferences / workshops on raw materials • Follow up throughout web platform			• Proactive assistance with maximum flexibility, adapted to customer needs	• Standardized performance metrics and reporting

7.2 Infrastructure requirements

A holistic service-delivery infrastructure encompasses the following four infrastructure elements (PWC, n.d.):

- Process— Degree of workflow standardization and simplification, quality, end-to-end perspective, policies, compliance and performance measurement;
- Organization— 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 6 details, by group of services, the specific infrastructure elements of the Observatory.

Table 6 – Definition of infrastructure requirements, by prospective service groups, of the International Raw Materials Observatory.

		Infrastructure requirements			
Infrastructure Service group	Most valued characteristics	Process	Organisation	People	Technology
Cooperation schemes	• Specialisation • Global networking • Low cost	• Standardized • Continuously improved	• Organized "by area/activity" • Centralized, to provide control and economies of scale • Outsourcing is possible 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
Raw materials diplomacy	• Insightful specialised advice • Proactive assistance • Customised service	• Customized reporting and analysis • Flexible planning and analysis	• Organized "by customer" • Integrated with specialty services to provide single contact	• Highly skilled • Deep sector and business knowledge • Strong interpersonal and teaming skills	• Supports ad hoc analysis • Automates standard reporting
Sustainability audit and consulting	• Value-added specialised advice • Regulatory compliance	• Structured compliance activities • Standardized performance metrics and reporting	• Organized "by service" with centralised control • Aligned by product to reinforce functional knowledge	• Deep functional knowledge and technical skills required • Ongoing training reinforce specialization	• Supports specialty data and information requirements • Automates standard reporting

8 ORGANIZATIONAL 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").

Membership of the Observatory will include Full Members and Associated Members, both abided to a code of ethics. Full membership will be limited to non-profit-making 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, and educational institutions. Full Members will have voting rights. Associated Members won't have voting rights. Those members include companies or holding companies with interests in the mineral raw materials field and their lack of voting rights aims to guarantee the independency of the Observatory. Full Members and Associated Members will pay a membership fee.

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, which takes the administrative activities. In addition, the Observatory may also have an Advisory Board, where respected members of the minerals 'community and representatives of international organisations will have a seat.

The structure of the Observatory will be as light as possible, relying on a strong set of key-partners and using independent consultants to develop and provide specific services, under the direct supervision of the Secretary General (Figure 8). 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.

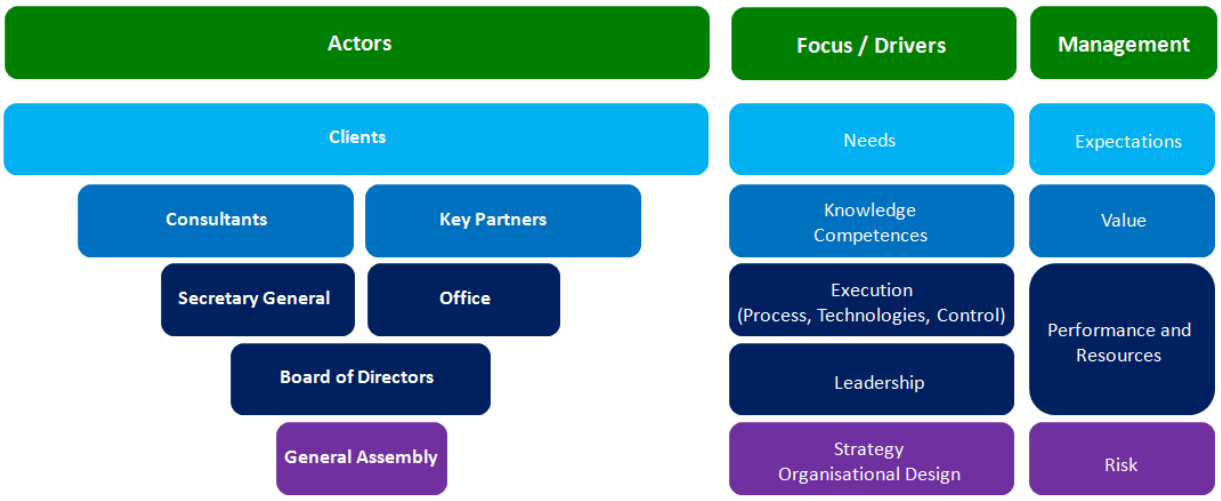


Figure 8 – Organisational structure of the International Observatory for Raw Materials, and corresponding drivers and responsibilities of each hierarchic level.

Attitudes and behaviours of staff (including consultants, the office, key-partners and the Secretary General) are critical to implement the Observatory strategy and deliver its value discipline. Recruitment of staff must favor professionals with propensity to help customers, having risk tolerance and willing to pursuit service excellence. Training will be the favoured path to fill skill gaps. Training and incentives will be aligned to inspire staff and reward the desired attitudes and behaviour.

9 KEY PERFORMANCE INDICATORS

Key performance indicators (KPIs) are valuable aids for measuring success and to ensure an organisation keeps its culture, business processes and management systems aligned. The selection of KPIs depends on the organisation's aims and business. Generally, KPIs should cover relevant management dimensions.

In the case of the International Observatory for Raw Materials, the assessment of strategic performance must include three relevant management dimensions: strategy; processes; and results.

Taking into consideration the strategic goals of the International Observatory for Raw Materials, its core competences and the strategic position defined, the attainment of these goals as a result of the successful implementation of the strategic prescription requires the close monitoring of four areas:

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

Table 7 outlines the strategic priorities of the Observatory, and lists the KPIs that should be considered to monitor the implementation of its strategy, processes and results.

Table 7 – Definition of KPIs of the International Raw Materials Observatory.

Strategic Priorities	Strategy	Process	Results
Financial Sustained capital investment and access to capital	Percentage of fixed costs	Cash Flow Net Margin	Profitability
Customer relationship Customer intimacy Access to EU policy makers Independency	Target market preference Number of alliances	Number of customised services offers Nr. of verified sources of information used Project success	Reputation and credibility (rated by customers) Market share Degree of specialisation
Internal processes Standardized and flexible planning and analysis Standardized performance metrics and reporting	Number of modes of producing and delivering Number of levels of operational flexibility	Unplanned downtime Meeting of deadlines Labour skills and competences	Number of best in class teams
Innovation	Number of new services launches arousing from innovative ideas	Number of innovative ideas internally generated Number of suggestions received from clients	Innovation Sales Rate

The KPIs described are organised by business dimensions in Figure 9.

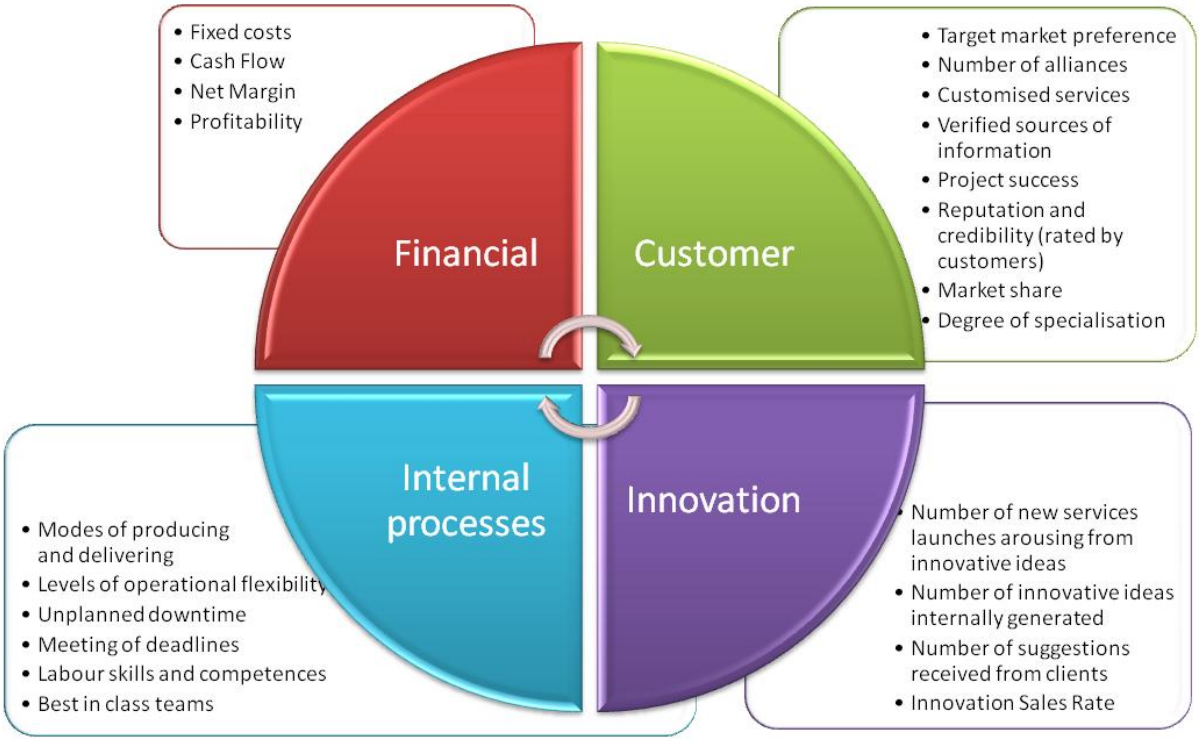


Figure 9 – KPIs, by business dimension, of the International Observatory for Raw Materials.

Objectives, data needs, periodicity of analysis and definition of actions and corrective measures to face deviations on the above mentioned KPIs will be detailed in the Business Plan of the International Observatory for Raw Materials (deliverable D3.2).

The KPIs that monitor the innovation dimension are in line with the indicators of the Plan on Innovation Management of the Observatory.

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 intelligence, and/or specialised audit and consultancy in sustainability and environmental performance. 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 SWOT analysis shows that existing competition factors are organised around four categories: 1) knowledge and knowledge management; 2) reputation and (perceived) quality of services; 3) innovation; and 4) existing alliances and networks. To face and beat existing competition the Observatory needs to stand out in four main areas: 1) marketing / commercial (quality / personnel competence, external image, customer knowledge); 2) finance (cost leadership); 3) production (in house distribution of knowledge, access to updated and reliable information, innovation / adoption of latest developments); and 4) organisation (networks / alliances, experience and knowhow of key staff).

A *Focus* generic competitive strategy, associated with a *Customer Intimacy* value discipline is the best way forward to occupy and secure a winning strategic position for the International Observatory of Raw Materials. But the implementation of the strategy will require operational flexibility, which can only be supplied by highly skilled and competent personnel, combined with innovative approaches.

The specialization of the International Raw Materials 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 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, under the direct supervision of a Secretary General. 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 propsective services. Key decision-making authority will happen at the interface with clients, hence facilitating an effective management of customer relationships.

The assessment of the Observatory performance includes indicators that cover four main business areas: 1) finance; 2) customer relationship; 3) internal processes; and 4) innovation.

The definition of the set of services of the observatory, and the corresponding marketing-mix will be detailed in the Business Plan of the International Raw Materials Observatory. The Business Plan will include also sales forecasts and a provisional budget, all in line with the principles carved in this Strategic Plan.

11 BIBLIOGRAPHY

Abell, D. (1980). *Defining the Business: The Starting Point of Strategic Planning*. Englewood Cliffs, New Jersey: Prentice-Hall.

Allison, M., Kaye, J. (2015). *Strategic planning for nonprofit organizations: a practical guide for dynamic times*. Hoboken, NJ: John Wiley & Sons, Inc.

Barry, B. W. (1997). *Strategic planning workbook for nonprofit organizations*. Saint Paul, MN: Amherst H. Wilder Foundation.

Boynton, A.C., Zmud, R.W. (1984). *An Assessment of Critical Success Factors*. Sloan Management Review (25:4), pp. 17-27. doi: 10.1145/269012.269019

Chan, K., Mauborgne, R. (2004). MacMillan, I., Selden, L. (2008). *Value Innovation: The Strategic Logic of High Growth*. Harvard Business Review, July-August 2004.

Core competences (2015). Investopedia.com. Retrieved January 18, 2017 from http://www.investopedia.com/terms/c/core_competencies.asp.

Customer Intimacy - A Strategic Choice - Not The Same As. (2017, January 09). Retrieved January 17, 2017, from http://on-the-mark.com/customer-intimacy-a-strategic-choice-not-the-same-as-customer-focused/

De Vasconcellos, J., Hambrick, D. C. (1989). *Key success factors: Test of a general theory in the mature industrial-product sector*. Strategic Management Journal, 10(4), 367-382. doi:10.1002/smj.4250100406.

Drucker, P. F. (1954). *The practice of management*. New York: Harper & Row.

Drucker, P. F. (1993). *Innovation and Entrepreneurship*. Collins.

European Commission (2013). Innovation - *How to convert research into commercial success story? Part 3: Innovation management for practitioners*. Luxembourg: Publications Office of the European Union.

Freund, Y. (1988). *Critical success factors*. Planning Review,16 (4), 20-23. doi: 10.1108/eb054225.

GE Approach - Boundless Open Textbook. (n.d.). Retrieved January 19, 2017, from https://www.boundless.com/marketing/textbooks/boundless-marketing-textbook/marketing-strategies-and-planning-2/strategic-views-25/ge-approach-142-4048/

Humphrey, A. (2005). SWOT *Analysis for Management Consulting*. SRI Alumni Newsletter. Retrieved from https://www.sri.com/sites/default/files/brochures/dec-05.pdf.

Kotler, P. (2000). *Marketing management*. Upper Saddle River, NJ: Prentice Hall.

MacMillan, I., Selden, L. (2008). *The Incumbent's Advantage*. Harvard Business Review, October 2008. Retrieved January 3, 2017, from https://hbr.org/2008/10/the-incumbents-advantage

Markides, C. (2000). *All the right moves: a guide to crafting breakthrough strategy*. Boston, MA: Harvard Business School Press.

Mission Statement (n.d.). BusinessDictionary.com. Retrieved January 18, 2017, from http://www.businessdictionary.com/definition/mission-statement.html

Moxon, P. (1970). *Product Strategy Tools - GE/McKinsey Portfolio Matrix*. Retrieved January 10, 2017, from http://pmoxon.blogspot.pt/2011/09/product-strategy-tools-gemckinsey.html

Nickels, W. G., McHugh, J. M., & McHugh, S. M. (2013). *Understanding business*. New York: McGraw-Hill Irwin.

Ohmae, K. (1982). *The mind of the strategist: the art of Japanese business*. New York: McGraw-Hill.

Pfeiffer, J. W., Goodstein, L. D., & Nolan, T. M. (1985). *Understanding applied strategic planning: a manager's guide*. San Diego, CA: University Associates.

Porter, M. E. (1985). *Competitive advantage: creating and sustaining superior performance*. New York: Free Press.

Porter's Generic Strategies: Choosing Your Route to Success. (n.d.). Retrieved January 19, 2017, from https://www.mindtools.com/pages/article/newSTR_82.htm

PWC – How to design finance as a strategic service-delivery organization. (n.d.). Retrieved January 10, 2017, from http://www.pwc.com/us/en/increasing-finance-function-effectiveness/how-to-design-finance-as-a-strategic-service-delivery-organization.html

Reimann, B. C. (1995). *Leading Strategic Change: Innovation. Value. Growth*. Planning Review, 23(5), 6-36. doi: 10.1108/eb054519.

Seizing Competitive Advantage. (n.d.). Retrieved January 10, 2017, from http://www.strategybydesign.org/seizing-competitive-advantage/

Strategic Planning: A Ten-Step Guide - World Bank. (n.d.). Retrieved January 18, 2017, from https://siteresources.worldbank.org/INTAFRREGTOPTEIA/Resources/mosaica_10_steps.pdf .

SWOT Analysis (2015). Investopedia.com. Retrieved January 18, 2017 from http://www.investopedia.com/terms/s/swot.asp.

Treacy, M., & Wiersema, F. (1993). *Customer intimacy and other value disciplines*. Harvard Business Review, 71(1), 84-93. doi:10.1225/93107

Vision Statement (n.d.). BusinessDictionary.com. Retrieved January 18, 2017 from http://www.businessdictionary.com/definition/vision-statement.html