META-FORESIGHT
Software Platform and Tools

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Definition of RI:

- a *localized network* of distributed informational systems / modules;
- which were developed by *organizations* to inform different groups of a territory, locality or region;
- that uses *human and artificial intelligence* in the collection, processing, and dissemination of information;
- communicates via the *Internet*; and
- the constituting modules are *integrated* so effectively that become indistinguishable for the external user.
1. Introduction

Meta-foresight as regional intelligence differs from BI

**Business intelligence**
- Is a company activity to overview its internal and external environment, with the intention of finding information that can be incorporated into management processes.

**Regional / territorial intelligence**
- At the other side of business intelligence is regional or territorial intelligence. This may be defined as an informational network linking information stakeholders of a locality.
- It is a network allowing ‘an observation strategy towards the competitors, the markets, and the environment.
- These practices lead to an economic intelligence approach, which, when applied to the territory, is called territorial intelligence.’
Meta-Foresight is a project in the field of regional collective intelligence: the objective is to **create a system of RI**.

- The problem to solve is **integration** of information offered by providers located into a region.
  - Integration in the supply side: Bring independent information providers to work together under a network structure.
  - Integration in the demand side: Feed back from the user integrated into the processing of information.

- **Four integration principles** are: (1) a network of information stakeholders, (2) a model of content integration combining information from audits, Foresight, Benchmarking, R&D, Technological Watch, and Technological Skills, (3) focus on industry sectors and companies, and (4) a web-based platform and tools assisting information integration.
1. Introduction

Regional intelligence

Inside the Company Data Base
2. Meta-Foresight Platform
Main instrument for achieving information integration

MetaForesight aims to produce an integrated information application, fostering regional knowledge-based capacities and policies, and supporting regional business intelligence through learning process at the regional and interregional level.
<table>
<thead>
<tr>
<th>Activities</th>
<th>Deliverables</th>
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</thead>
<tbody>
<tr>
<td>1. Review of existing information systems</td>
<td>D1. 1\textsuperscript{st} Sc meeting – Kick-off</td>
</tr>
<tr>
<td></td>
<td>D2. Survey on existing information systems</td>
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<td></td>
<td>D5. 2\textsuperscript{nd} SC meeting</td>
</tr>
<tr>
<td>4. Development of software application</td>
<td>D6. Software application and content management tools: Collection, Analysis, Dissemination</td>
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<tr>
<td></td>
<td>D8. Testing of the software application</td>
</tr>
<tr>
<td></td>
<td>D9. 3\textsuperscript{rd} SC meeting</td>
</tr>
<tr>
<td>6. Promotion/dissemination</td>
<td>D10. Web site</td>
</tr>
<tr>
<td></td>
<td>D11. 5 promotion leaflets (1 per partner)</td>
</tr>
<tr>
<td></td>
<td>D12. Publication of application guide</td>
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<td></td>
<td>D13. Final conference</td>
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<tr>
<td></td>
<td>D15. Final report</td>
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</tbody>
</table>
2. Meta-Foresight Platform

Overview: Three components

MetaForesight Model

1. Agents
   - Technology Skills
   - Regional Foresight
   - Benchmarking

2. Knowledge Model
   - Monitor
   - Compare
   - Evaluate
   - Report

3. Dissemination Website
   - Target Group 1
   - Target Group 2
   - Target Group n

About the Project

Objectives
The origin of the project is to embrace crucial issues for knowledge development in EU regions. Main goal is to...

Platform Overview

Components
- Portal
- Toolbox
- Guide

Latest Files
- Progress Check List
- 2nd Progress Report
- 1st Progress Report
2. Meta-Foresight Platform
Tools for information integration

Nine tools in 3 functions:
- Data collection
- Data analysis
- Dissemination

1. List of sources
2. Text miner
3. Data collection Q.
4. Data base
5. Analysis templates
6. Data viewer
7. Company report
8. Portal for sectors
9. Newsletter
2. Meta-Foresight Platform Structure

- Network
  - Authors
  - Integrator
  - Users

- Company audits
- Regional statistics
- Regional performance
- Sector performance
- Market watch
- R&D watch
- Foresight

- Data integration model
- Software platform
- Operated by a regional back-office
- Target Groups
  - Information portal, reporting, alert, newsletter
3. Two applications:
A. The sector: Trends in markets & technologies

The portal includes three levels:

(1) The **users**, regional authorities and institutions, intermediary organisations, companies may scroll the stories available or search for a specific topic in the database of the portal, though the search engine provided.

(2) the **authors**/ organisations access the application through login process, complete the data entry templates and feed the portal database;

(3) the **administrator** is responsible for the monitoring of the whole application, the coordination of the regional technology cooperation network for the collection of ‘stories’, the validation of the stories and the maintenance of the portal;
3. The sector

Users: Portal, newsletters and feed-back

- Users are informed through stories written by the authors
- The portal supports the creation of newsletters, collecting information from the ‘stories’ and communicated via email
- We have described a solution of information assessment and ranking by the users, giving feedback to the authors and guiding information selection

Data Collection

- T1: Information sources and search tool
- T3: Text miner
- T4: Database

Analysis

- Users feedback
- Benchmarking

Dissemination

- T8: Portal for data presentation
- T9: Newsletter and highlights

Web-based platform

External tool: Web intelligence (i.e. Google mini)
3. The sector
Authors and administrator: Entry point

- Data collection is based on a network of ‘authors’ who feed the portal
- The author after login selects the industry sector in which intends to write a ‘story’
- The portal covers by default five sectors, which are flexible and may change
3. The sector
Author: Sector selection

- The portal covers the main industry sectors / clusters in a region
- We estimate that most of the productive activity of a region is usually included in five sectors
- Information is structured in 5 fields (foresight, R&D, market watch, benchmarking, and skills) and 20 sub-fields
- Flexibility to add or remove fields / sub-fields
The authors add new stories on the portal:

- Selecting category and subcategory
- Date of entry
- Title
- Summary
- Full story
- Relation of the story to other categories or subcategories
- Format the text
3. The sector Administrator

Administrator has the overall responsibility of the Portal. He/she may:

- Create authors’ accounts and provide login passwords
- Edit or delete ‘authors’
- Add new categories or remove a category
- Write or edit articles
- Add or remove members

http://www.vrc.gr/metaforesight/portal/controlpanel/
3. The sector
Administrator: Newsletter

- In the field ‘Subject’ the administrator defines the subject of the e-mail that contains the newsletter

- In the ‘text’ field composes the cover letter of the newsletter

- ‘From date’ and ‘until date’ defines the period of time the newsletter will cover

- On ‘industries’ selects the sectors covered by the newsletter
4. Application B
Confidential company report

- The confidential company report starts with a company audit
- It is based on a structured questionnaire, which highlights the main issues that a company wants to know in order to improve its technological and innovation capabilities
- The information from the company audit is combined with data concerning the region and the sector where the company belongs, the markets, related technologies and research outcomes

Data Collection
T1: Information sources and search tool
T2: Questionnaire for data collection
T3: Text miner
T4: Database

Data Analysis
T5: Analysis templates and Variables relationship model
T6: Data viewer

Dissemination
T7: Individual report generation (Confidential report)

Web-based platform
External tool: Web intelligence (i.e. Google mini)
Data for the CCR cover all major fields of the company activity, but mainly the fields related to innovation, technologies, and processes.

CCR is structured in 8 sections:
A. Financial performance
B. Strategy and management
C. Products
D. Markets and competition
E. Research and innovation
F. Production processes
G. Supply chain and networks
H. Quality and standards
Each section includes 7 thematic fields, corresponding to data coming from and examining the company, the region, the sector, market trends, research results, technology foresight results, competences and skills.

Data are both quantitative and qualitative based on selected indicators and comments.
## Data sources and focus

<table>
<thead>
<tr>
<th>Target area</th>
<th>Source</th>
<th>Type of data</th>
<th>Data focus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Company</strong></td>
<td>Company audit</td>
<td>I: Quantitative and C: Qualitative</td>
<td><strong>Company practices</strong>: Financial, Management, Products, Markets, Innovation, Production, SC, Quality</td>
</tr>
<tr>
<td><strong>Region</strong></td>
<td>Regional statistics and development programmes</td>
<td>I: Quantitative and C: Qualitative</td>
<td><strong>The company within the region</strong>: Regional statistics or Regional practice</td>
</tr>
<tr>
<td><strong>Sector</strong></td>
<td>Benchmarking applications</td>
<td>I: Quantitative</td>
<td><strong>The company within the sector</strong>: Benchmarking with respect to max number of companies of the same sector</td>
</tr>
<tr>
<td><strong>Market watch</strong></td>
<td>Market intelligence applications</td>
<td>I: Quantitative and C: Qualitative</td>
<td><strong>Most important facts</strong> related to the company practices from - The sector - The region - Globally</td>
</tr>
<tr>
<td><strong>R&amp;D watch</strong></td>
<td>R&amp;D dissemination applications</td>
<td>C: Qualitative</td>
<td><strong>Most important R&amp;D</strong> related to the company practices from - Regional R&amp;D - EU R&amp;D - EPO patents</td>
</tr>
<tr>
<td><strong>Foresight</strong></td>
<td>Regional / national foresight exercises</td>
<td>C: Qualitative</td>
<td><strong>Future or emerging trends</strong> related - The region - The sector - The practices of the company</td>
</tr>
<tr>
<td><strong>Competence centres in the region and the sector</strong></td>
<td>Regional survey, web, associations, clusters,</td>
<td>C: Qualitative</td>
<td><strong>Competences</strong>, skills and services related to the company practices</td>
</tr>
</tbody>
</table>
## 4. Confidential company report

### Themes and questions distribution

<table>
<thead>
<tr>
<th>Company</th>
<th>Region</th>
<th>Sector</th>
<th>Market watch</th>
<th>R&amp;D watch</th>
<th>Foresight</th>
<th>Competences</th>
</tr>
</thead>
<tbody>
<tr>
<td>FINANCIAL</td>
<td>12</td>
<td>9</td>
<td>12</td>
<td>6</td>
<td>8</td>
<td>47</td>
</tr>
<tr>
<td>STRATEGY / MANAGEMENT</td>
<td>21</td>
<td>5</td>
<td>21</td>
<td>3</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>PRODUCTS</td>
<td>8</td>
<td>11</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>MARKETS / COMPETITION</td>
<td>15</td>
<td>3</td>
<td>15</td>
<td>6</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>R&amp;D / INNOVATION</td>
<td>15</td>
<td>14</td>
<td>10</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>PRODUCTION PROCESSES</td>
<td>27</td>
<td>8</td>
<td>18</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>SUPPLY CHAIN</td>
<td>16</td>
<td>3</td>
<td>16</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>QUALITY / STANDARDS</td>
<td>10</td>
<td>10</td>
<td>2</td>
<td></td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total:**

- Company: 124
- Region: 53
- Sector: 108
- Market watch: 28
- R&D watch: 12
- Foresight: 24
- Competences: 24

**Total:** 373
The text-miner facilitates data collection for a free text question.

It allows to mark useful information on the Internet, both qualitative data and qualitative comments, and then transfer it to the database.

It creates a separate record for each entry, while preserving information about the data source.

To use the text miner:

Press the information balloon near the free text frame.

A selection of web sites appears.

Inside the web sites select data to be transferred to the database.
4. Confidential company report

Analysis

- Data analysis guides the writing of the CCR
- It is organised in 8 sections, the same to the sections of data collection and entry
- A template guides data analysis in section, structured in themes and questions, which are filled by free text or tables
- The data viewer helps to see available data on the data base.
5. R&D and INNOVATION

5.1. Introduction

 Describe in the yellow frame the purpose of this section, i.e. This section of the report looks at the company R&D and innovation activity and performance; it places the company within its sectoral and regional context, comparing critical indicators innovation; it looks at future technologies and trends, and suggests ways to improve the company’s capability for innovation.

Free text:

5.2. Innovation performance

5.2.1. The concept of innovation for the company

 Describe, in the yellow frame, the concept of innovation introducing the distinction of product, process, and organisational innovation; radical and incremental innovation.

Free text:

5.2.2. Innovation performance of the company

 Make a Table showing the innovation performance of the company, using the variables [E1.11 to E1.19]

Table

5.2.3. Comment the qualitative aspects of the company innovation activity, using the variables: [E1.1 to E1.6]

Free text:

5.2.4. Give your assessment on the above performance

Free text:

5.3. The company within the regional innovation environment

5.3.1. Describe within the yellow frame the position of the company within the region. Start from simple facts, location, size, etc, using the variables [A1 and A2]

Free text:

5.3.2. Make a Table comparing the position of the region with the EU averages, using the variables [E2.11 to E2.14]

Table

5.3.3. Comment the above Table highlighting the strong and weak elements of the regional innovation environment.

Free text:

5.3.4. Comment the company innovation performance with respect to the regional strong and weak points. Place variables [E1.11 to E1.19] within the regional context described in 5.3.3.

Free text:

5.4. The company within the sector

5.4.1. Describe within the yellow frame the position of the company within the sector. Start from simple facts, size of the sector, position of the company within the sector (leader, follower, SME)

Free text:
4. Confidential company report

Sample Selection and Report Generation

- Sample selection enables to choose the benchmarking reference group. Options: Country, Region, Sector by NACE code, Valid reports, Locked reports.

- Print preview enables to see all sections of the report together.

- Print or Save mark the end of the report.
5. Meta-Foresight Platform
A Guide for collaborative intelligence

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III.1.2. From the administration entry point

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