

Table of Contents

INTRODUCTION.....	5
THE INNOBAROMETER TOOL.....	6
FUNCTIONAL SPECIFICATIONS.....	12

INTRODUCTION

Within this deliverable we present, based on the feedback received from the process of D.3.3 development, the action plan describing the common Innobarometer e-tool which will be developed under the framework of the egov_INNO project.

THE INNOBAROMETER TOOL

The INNOBarometer is seen as on-line platform that will collect E&I information, on the basis of which it will construct and present E&I indices regarding the region of Western Greece and Apuglia. To that end:

- Two on-line questionnaires will be constructed: The first will be answered periodically by representative samples of the general public,¹ while the second will be answered by entrepreneurs/companies (potentially by all members of the local business associations). Each user will log-in either as a member of the general public or as an entrepreneur/company (member of the local business community),² and properly directed (forwarded) to one of the two questionnaires. Following the example of the Global Entrepreneurship Monitor,³ both questionnaires will solicit basic responder information.⁴ In addition, the former will solicit input regarding entrepreneurial behavior and attitudes;⁵ while the latter will solicit entrepre

¹ The RDF is already running a business climate survey for a number of years, hence has some expertise and can manage a transition. Even if the sample were not predetermined, it could be properly weighted on the basis of the regional population's demographic composition reported by the Hellenic Statistical Authority (ELSTAT).

² He/she will provide a username, email address, password, and accept the site's rules of conduct. Each member will also be allowed to access his/her past responses.

³ This is a five-university initiative which scores and ranks entrepreneurship across the globe at the country level, on an annual basis since 1997, after the answers provided to structured questionnaires by both specific and random population samples.

⁴ For instance, gender, age, postal code, the level of formal education (in the case of the former questionnaire), the sector, the age of company, the turnover, the postal code, the number of employees (in the case of the latter questionnaire).

⁵ For instance, perceptions regarding entrepreneurship, the ease of starting a business, entrepreneurial intentions, the fear of failure.

Table a: Sample questions for the general population

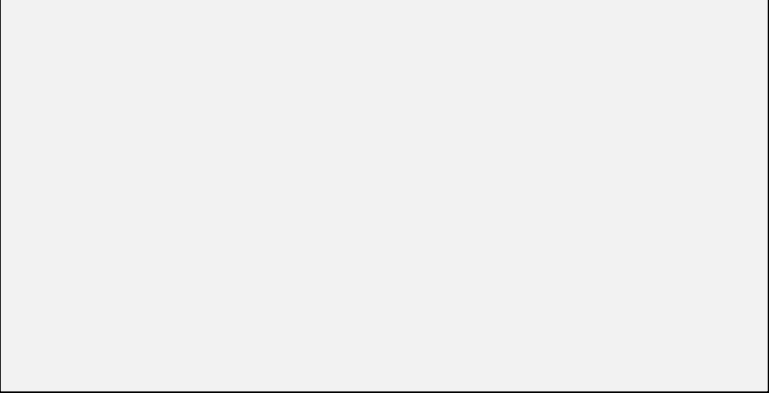
- 1 Are you currently a nascent entrepreneur, i.e., actively involved in setting up a business you will own or co-own? Yes/No
(NB: A business that is being set up has not paid salaries, wages or other payments to the owners for more than three months.)
- 2 Are you currently owner-manager of a new business? Yes/No
(NB: A new business is one that has paid salaries, wages or any other payments to the owners for more than three months, but not more than 42 months.)
- If you answered 'yes' in one of the two above questions:
Otherwise go to question 5.
- 3 Were you involved in entrepreneurship because you had no better option for work? Yes/No
- If the answer in the previous question is 'no':
Otherwise go to question 5.
- 4 Were you involved in entrepreneurship because (a) you wanted to be independent? Yes/No
(b) you wanted to Yes/

Table b: Sample questions for the entrepreneurs/companies

- | | Completel
y
false | | | | | Completel
y
true | | | | |
|---|-------------------------|---|---|---|---|------------------------|---|---|---|---|
| On entrepreneurship | | | | | | | | | | |
| 1 In my country there is sufficient equity funding available for new and growing firms. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 2 Science parks and business incubators provide effective support to new and growing firms. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| Regarding innovation | | | | | | | | | | |
| 3 Did in the course of the last 12 months your enterprise introduce: | | | | | | | | | | Y |
| (a) New or significantly improved goods?
(NB: Exclude the simple resale of new goods and changes of a solely aesthetic nature. | | | | | | | | | | e |
| (b) New or significantly improved services?
neurship information ⁶ and | | | | | | | | | | / |
| in-novation information. ⁷ | | | | | | | | | | N |
| (See Tables a and b.) | | | | | | | | | | o |

⁶ For instance, the reasons for starting a business, the export opportunities.

Box 1: Links to useful E&I statistics and examples
OECD Indicators of entrepreneurial determinants:
<https://www.oecd.org/sdd/business-stats/indicatorsofentrepreneurialdeterminants.htm>
Eurostat Entrepreneurship indicator programme:
<https://ec.europa.eu/eurostat/web/structural-business-statistics/entrepreneurship/indicators>
Global Entrepreneurship Monitor:
<https://www.gemconsortium.org/>

- 
- Statistics produced by ELSTAT, Eurostat, the European Commission and others will be collected, preferably via automated and semi-automated downloads. (A list of such sources is provided in Box 1.)
 - Each type of data will be processed (processed separately) into regional or sub-regional indices to create reports or out-

⁷ For instance, on the introduction of goods/services/process innovations, where these innovations were developed, as well as on R&D expenditure.

Table c: An example of statistics collected by third parties used to construct indices

	EL51	EL52	EL53	EL54	EL61	EL62	EL63	EL64	EL65	EL30	EL41	EL42	EL43
	E. Macedonia, W. Thrace	C. Macedonia	W. Macedonia	Epiros	Thessaly	Ionian Islands	W. Greece	C.Greece	(rest of) Peloponnese	Attica	N. Aegean isl.	S.Aegean isl.	Crete
Population with tertiary education	0.337	0.587	0.389	0.590	0.468	0.425	0.448	0.363	0.568	0.733	0.418	0.448	0.454
Lifelong learning	0.156	0.162	0.248	0.098	0.138	0.179	0.184	0.032	0.050	0.266	0.168	0.083	0.112
Scientific co-publications	0.216	0.349	0.159	0.524	0.248	0.116	0.405	0.096	0.091	0.395	0.201	0.048	0.482
Most-cited publications	0.609	0.580	0.855	0.622	0.599	0.197	0.554	0.605	0.489	0.583	0.632	0.537	0.627
R&D expenditure by public sector	0.440	0.504	0.397	0.606	0.445	0.330	0.572	0.220	0.342	0.449	0.572	0.324	0.727
R&D expenditure by business sector	0.120	0.108	0.018	0.088	0.054	0.000	0.126	0.196	0.095	0.250	0.018	0.000	0.064
Non-R&D innovation expenditures	0.450	0.401	0.415	0.352	0.407	0.416	0.441	0.367	0.251	0.240	0.277	0.561	0.479
Product or process innovators	0.486	0.475	0.534	0.342	0.560	0.385	0.564	0.501	0.453	0.501	0.421	0.546	0.510
Marketing or organizational innovators	0.381	0.503	0.456	0.395	0.362	0.430	0.494	0.421	0.504	0.448	0.308	0.355	0.600
SMEs innovating in-house	0.408	0.498	0.551	0.27	0.616	0.39	0.611	0.51	0.485	0.51	0.46	0.47	0.5

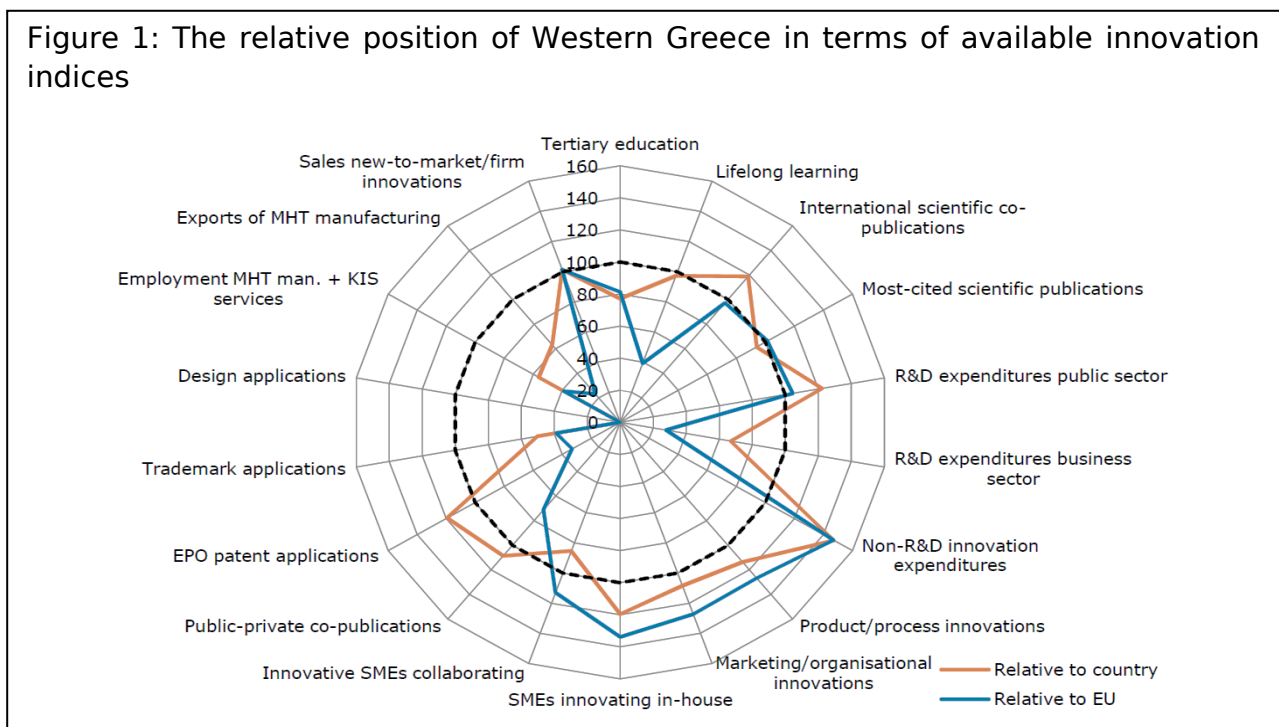
puts providing useful information to the local business community, the general public and policy makers. (Examples of the kind of output envisioned are supplied in Table c, Figure 1, and Map 1).

- An on-line library/repository of reports and studies on E&I in Western Greece and Apuglia will be available on-site. (See Box 2.) This is expected to grow as all users of the Barometer’s anonymized raw data (whether postgraduates students writing their theses or professors, researchers, private analysts and so on) will also be required to turn in a copy of their analysis.

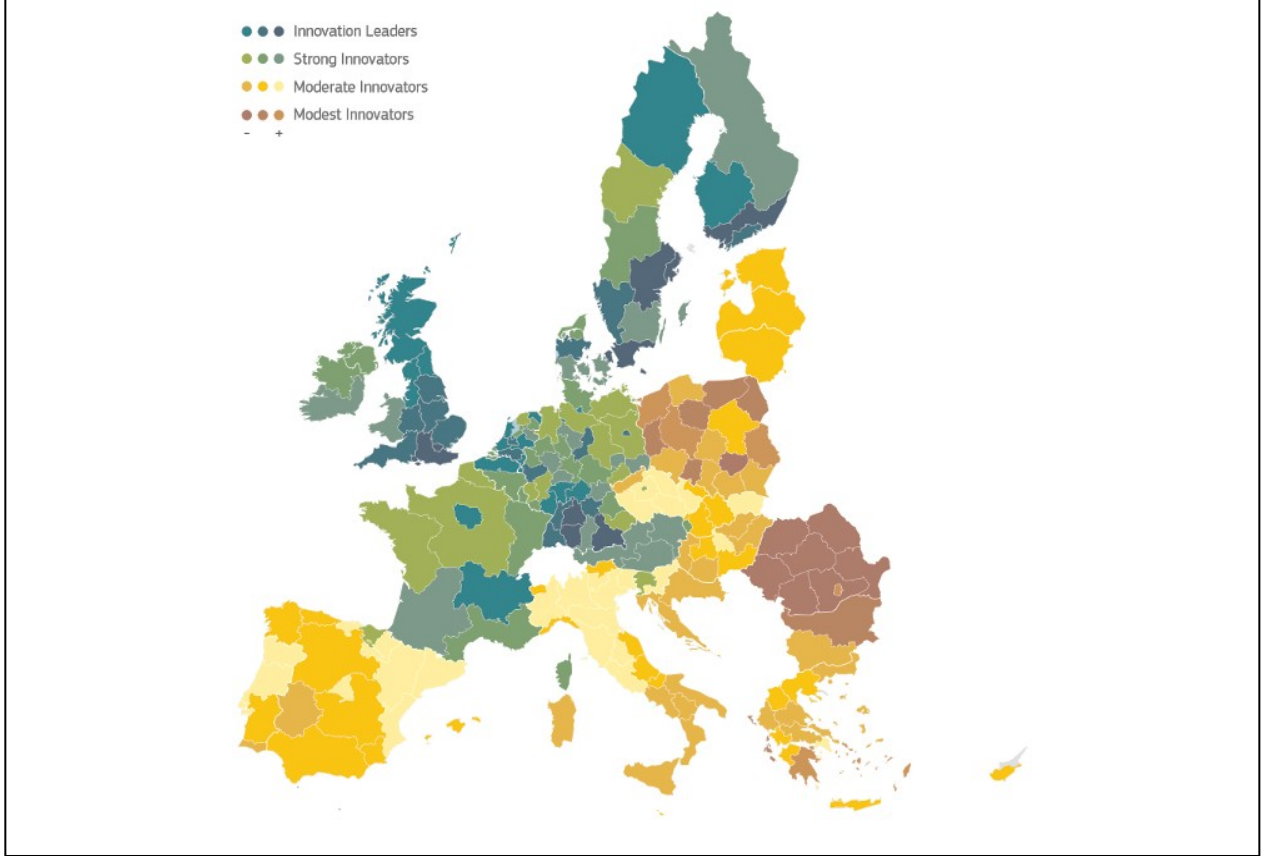
By and large, visitors will be able to view the progress of selected indices over time at an aggregated sub-regional and/or sub-sectoral level (in both table and graph format) or view selected indices at a particular point in time (in both table and radar/spider charts), as long as the body of observations is sufficiently large to prevent de-anonymization.

Technically, the Barometer can be developed by one person or two people in six months, using PHP, Javascript, jQuery, Html & CSS, Mysql for database; a CentOS or Ubuntu server for the operating system; and Apache or Nginx for the web server.

Figure 1: The relative position of Western Greece in terms of available innovation indices



Map 1: The overall position of Western Greece in terms of available innovation indices



Box 2: An example of a study carried out for Western Greece that could be placed in the Barometer's repository

Regional differences in entrepreneurship - technology, input and spending effects across Greece: 2001-2011

By Prodromos Prodromidis, Eleni-Vasiliki Papathanasiou (KEPE)

The study engages in (a) Granger causalities involving labor and capital across six broad economic sectors at the regional level, along with (b) econometric analyses regarding the effects of labor, capital and investments across the six sectors, and of public spending variables on regional GDP from 2000 to 2011 in Greece, in order to aid in development policy planning. It finds evidence of both connections/spillovers of economic activity, as well as evidence of regional differences in entrepreneurship and technology (total factor productivity), different labor and spending effects across regions, and different capital and investment effects across sectors

FUNCTIONAL SPECIFICATIONS

AIM

The Innobarometer is a survey on activities and attitudes related to innovation and entrepreneurship. Each year, it gathers **information** from the **businesses** and provides a unique source of direct information on innovation for policy makers. The survey is based on a) **standard questionnaires** to help monitor change in how companies manage their innovation activities, plan investment to modernise their business, and tackle barriers to the commercialisation of innovation and b) inclusion of information from various sources (statistical offices etc)

Aim of the application under development is to formalise such a tool to cover the cross border area of Western Greece and Apuglia.

FUNCTIONALITIES

The tool will provide the following functionalities:

- Data input (on various business and economic indicators) with two ways:
 - o Import csv/xls/xml
 - o Questionnaires
- Create and export reports/projection reports and statistics (customized by the user e.g. per year, correlations)
- Users management system (administrator, users/rights)
- Repository of reports/ studies

INPUTS

- Use of standard predesigned questionnaires for SMEs
- Imports cvs/xls/xml of pre-existing (e.g. from ELSTAT in Greece and the ARTI tool in Apuglia) and pre-processed data
- User input

Dashboard / Insert Arti Data

Download CSV Download XLSX Download PDF

Field: [] Type: [=] Value: value to filter Clear Filter

Year	Sector	Number of companies	Total companies	Percentage
2012	Chemistry, Pharmaceuticals an...	3	7	42.8571
2012	Means of transport and equip...	3	8	37.5
2012	Technical plant works: repair, m...	1	3	33.3333
2012	Metallurgy and metal products ...	2	8	25
2012	Computers, electrical, electronic...	3	14	21.4286
2012	Advanced business support ser...	4	29	13.7931
2012	Media and communication serv...	3	32	9.375
2012	Household, leisure and other g...	0	2	0
2012	Public utilities (D35 + E36-39)	0	3	0
2012	Construction (F41-43)	0	4	0
2012	Non-metallic minerals (C23)	0	0	0
2012	Accommodation and catering, t...	0	0	0
2012	Financial and insurance services...	0	0	0
2012	Cultural, sports and other servi...	0	0	0
0		0	0	0

Figure 1. Example of a data set imported from the ARTI Italian tool

Dashboard / Export GDP Table

Download CSV Download XLSX Download PDF

Field: [] Type: [=] Value: value to filter Clear Filter

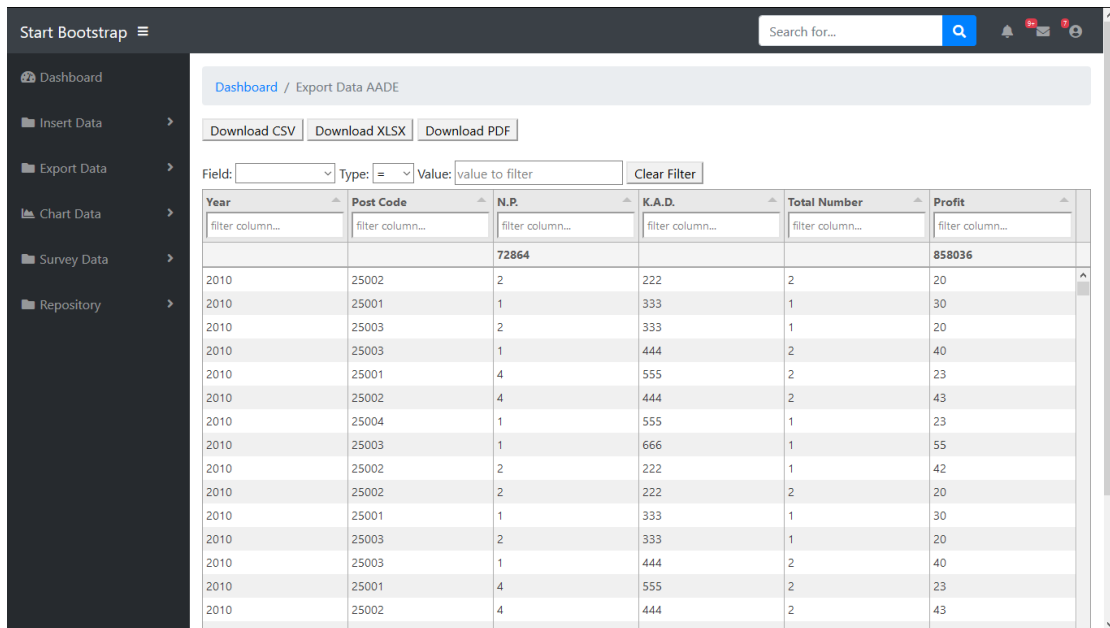
Έτος	Ελλάδα	Ανατολική Μακεδονία, Θράκη	Κεντρική Μακεδονία	Δυτική Μακεδονία	Ήπειρος	Θεσσαλία	Ιόνια Νησιά	Δυτική Ελλάδα
2008	241990	9450.34	33304.4	4801.57	5157.9	12166.3	4522.18	11364.7
2009	237534	9306.01	32439.1	5038.6	5024.51	11814.3	4200.25	10889.7
2010	226031	9197.63	30347.9	4980.91	4930.15	10835.3	3992.38	10671.4
2011	207029	8149.88	28091.6	4818.94	4611.25	9953.17	3479.28	9610.56
2012	192074	7579.47	25807	4724.15	4187.22	9516.79	3259.88	8956.6
2013	180935	7004.48	24172.3	4398.39	3989.21	9064.71	3066.45	8274.67
2014	178440	6877.74	23771.4	4530.01	3955.23	9114.24	3111.77	8195.7
2015	177159	6830.77	23918.1	4336.71	3925.24	9153.57	3128.53	8155.8
2016	176636	6901.25	24237.4	3915.54	3960.03	9213.91	3124.42	8031.87
2017	181036	6938.65	24952.7	4010.06	4001.38	9436.89	3158.92	8164.38

Figure 2. Example of a data set imported from ELSTAT

OUTPUTS

- Export xls / web services
- Reports (tables, graphs, bars) – e.g. number of enterprises and turnover per nace codes
- Reports combined (correlations)
- Specific indicators (based on predefined formulas of calculation)

- Projection report for some indicators (based on predefined methods of calculation)



Year	Post Code	N.P.	K.A.D.	Total Number	Profit
		72864			858036
2010	25002	2	222	2	20
2010	25001	1	333	1	30
2010	25003	2	333	1	20
2010	25003	1	444	2	40
2010	25001	4	555	2	23
2010	25002	4	444	2	43
2010	25004	1	555	1	23
2010	25003	1	666	1	55
2010	25002	2	222	1	42
2010	25002	2	222	2	20
2010	25001	1	333	1	30
2010	25003	2	333	1	20
2010	25003	1	444	2	40
2010	25001	4	555	2	23
2010	25002	4	444	2	43

Figure 3. Example of a report with a dataset from the Grekk AADE

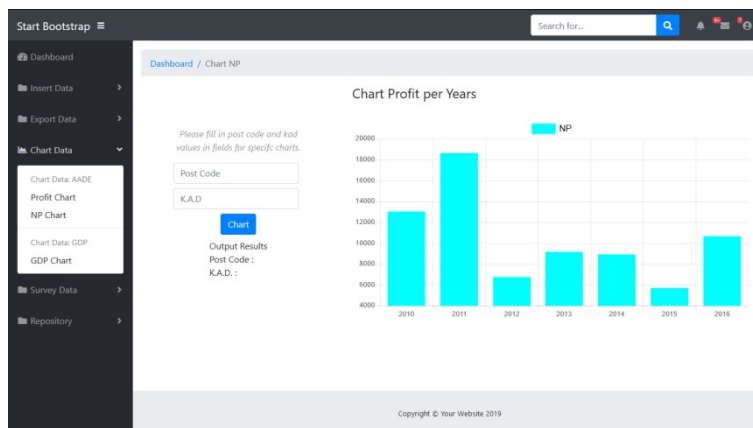
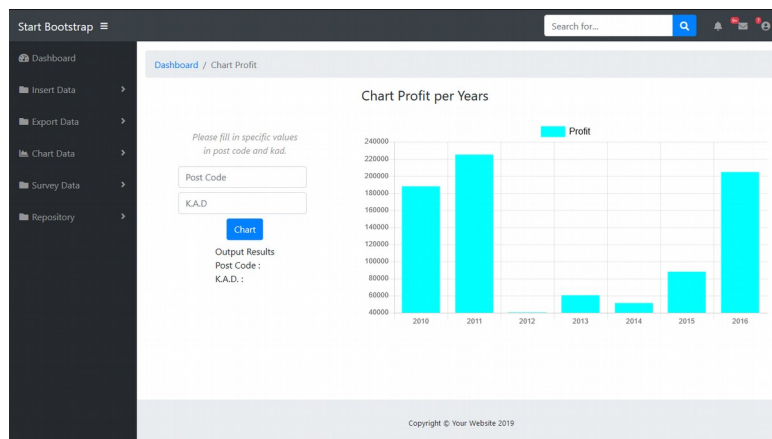


Figure 4. Example of two chart report

USERS

- Admin
- Policy makers
- Business support organizations
- Hierarchical, roles
- Enterprises (to fill in questionnaires)