Data Literacy at the interface of higher education and business

DATALIT Project

Evodevo‘s Pilot and suggestions for SMEs to reuse it

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Data Literacy in Evodevo

Evodevo is specialised in data analysis and artificial intelligence. Its role in the DATALIT project was to provide the point of view of private companies.

During the DATALIT project, Evodevo realized:

- a wide research to highlight needs and expectancies in universities and companies
- an analysis of the educational offers in Italy and in Tunisia
- a design of the competences framework
- a course with title “Open Data Based Interactive Infographics with Tableau”
- a pilots to test the general approach and methodology

Research on expectancies

Evodevo contributed to the analysis of expectancies in the companies. The analysis was based on its own competence, 1-to-1 interviews and a focus group with Italian leader companies.

The analysis of the educational offers

Evodevo contributed to the analysis of educational offers in Italy, with regards to companies.

Evodevo has a strong knowledge of Tunisia, a European partner, so it analysed all the educational offers in that Country and the kind of job searches.

Design of the competences framework

Evodevo contributed to the analysis of educational offers in Italy, with regards to companies and its own requirements.

Course on open-data based infographics

Evodevo build on its experience on the software Tableau, data visualisation and infographics to develop a course focused on using open data as to communicate with data.

The course is articulated in seven sections:

1. Intro: an introduction to infographics, storytelling and data discovery.
2. Communication: how to communicate with data with regards to the audience, the media. Analysis of the communication process.
3. Data: This section is about finding useful data, in particular open data, how to clean, transform and integrate them, how to discover stories in data.
4. Visualisation: from this section, it start a course on Tableau software, with a focus on creating analyses with different types of charts, colouring, filtering and excluding data, managing time series and geographical analyses.
5. Analysing: more advanced techniques such as creating sets and histograms, creating calculated variables, quick table calculations. The section explores how to create dashboards.
6. Stories: in order to create a storytelling, this section explores the technicality of Tableau's stories, how to create interesting stories, adapt them to each media and how to publish them on the web.
7. Examples: in this section we shown all the other section together with real examples of infographics, using data coming from Eurostat website.

Pilot to test the general approach and methodology

The Pilot in Evodevo had the objective to develop the staff and interns' competences on data visualisation in order to improve through infographics the communication potential for its customers, that includes Italian news agencies and government.

The final result are infographics.

Evodevo is a SME working mainly with government and large enterprises in the area of artificial intelligence, data mining, advanced analytics and data visualisation.

Furthermore, its customers are interested in infographics able to communicate to general public and their stakeholders key figures.

The pilot build on these needs in order to promote a culture of data-driven communication

The objectives of the pilot were the following:

- Understanding the concept of Data Visualisation used for dashboards and infographics.
- Understanding the connection between Data Visualisation and communication.
- To develop:
    - Data Literacy.
    - Data Visualisation design.
    - Data analysis.
    - Data-driven communication.
    - Infographics.
- Let people to be able to use infographics to communicate and engage as active citizens.

Evodevo used its own certified "Evodevo Open Process" in order to reused open data, with some new concept from design thinking

The pilot took place in person.

To have an attractive pilot, we worked a lot as a team with continuous improvement focused on specific tasks.

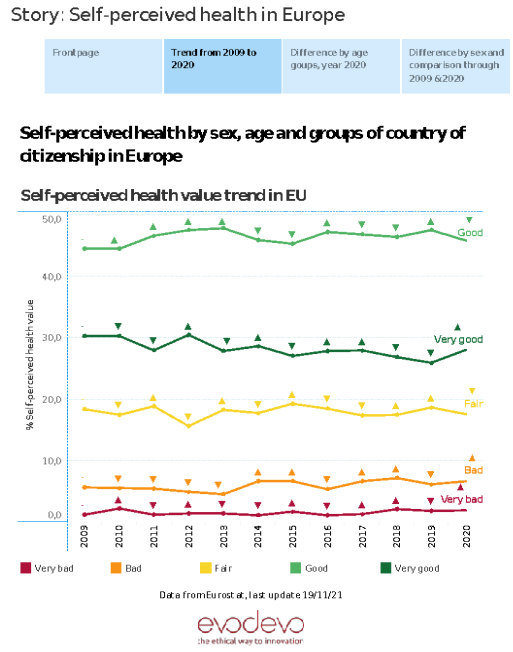
Evodevo had two goals: in the short term, let the participants to learn data visualisation and infographics; in long term, to develop a method to train new employees and interns.

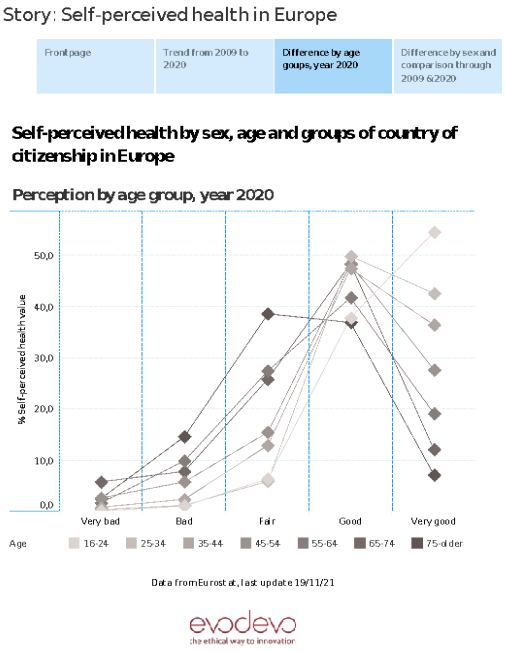
The benefits for Evodevo is the opportunity to made its team stronger on key skills. The trainees were able to create infographics to use in working contexts and in active citizen engagement as well.

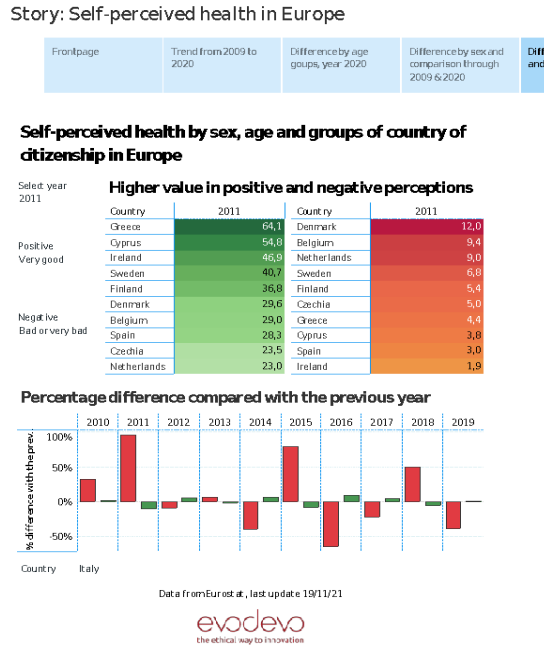
Given the high value of the realised infographics, they were published on Evodevo's web site, including the home page.

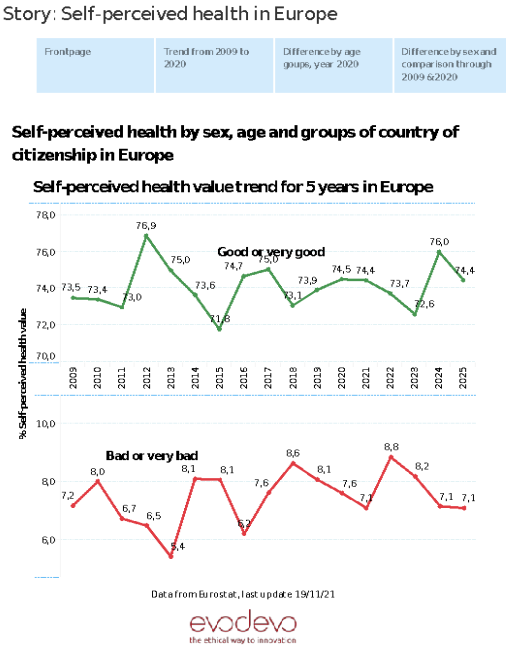
It was a challenge to manage the starting point that the participants in the pilot had different background and different knowledge about informatics and data analysis.

Here there are some examples of the realised infographics on Eurostat data about European health.









Here there are some examples of the realised infographics on Evodevo.

Evodevo's Story

Intro | Where are our Research Partners | European Research Projects | Countries we operate

SOME FACTS ABOUT EVODEVO

OUR OFFERING

Evodevo is an Innovation Company that moves smoothly from Semantic Technologies to Business Intelligence, from Data Mining to Decision Support Systems (DSS), with a distinctive focus on Corporate Ethics and CSR.

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

DATA VISUALISATION AND ANALYTICS

INNOVATION MANAGEMENT AND CSR

We work with Public Government, Enterprises all around the world

We are partner with Universities and Research Centres in Italy, Europe and the rest of the World

evodevo
the ethical way to innovation

Evodevo's Story

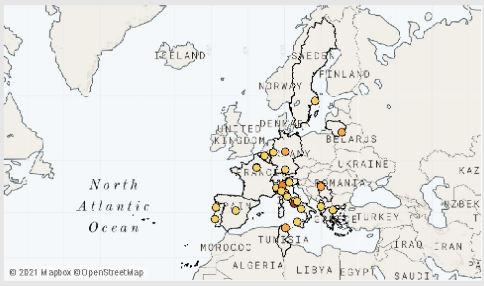
Intro | Where are our Research Partners | European Research Projects | Countries we operate

OUR RESEARCH PARTNERS: EU PROJECTS

We work with Universities, Innovation Companies and Research Centres all around the world

All

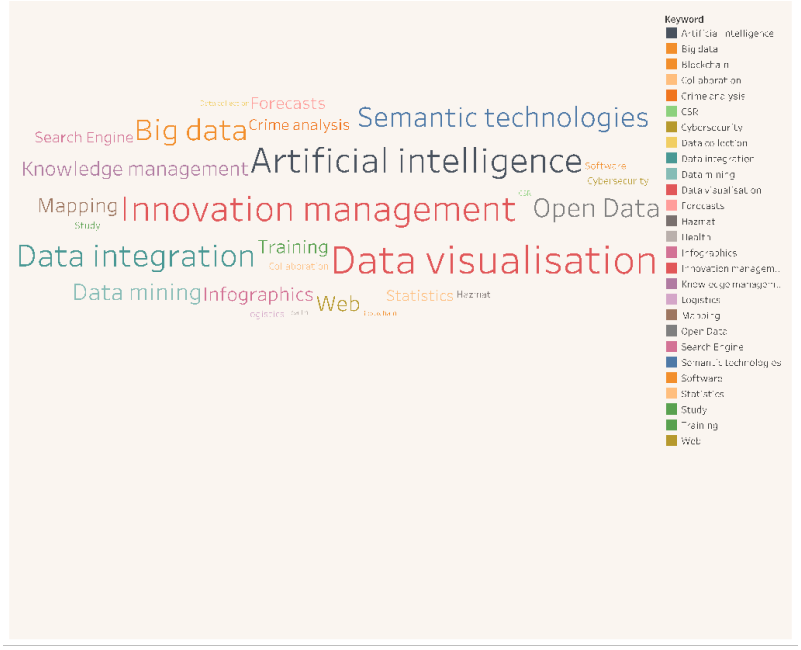
Cities of our partners in the funded projects



evodevo
the ethical way to innovation

Evodevo's Story

Intro | Where are our Research Partners | European Research Projects | Countries where we operate | Main business topics



It was used the Level5 methodology in order to assess the final level of the participants of the pilot.

Given the success of the pilot, it will be used as guideline to train new employees and interns. The course will be reused, offering training with the selected data sources.

Evodevo want to extend the pilot in order to focus on corporate infographics such as fiscal or sustainability reporting.

How to reuse Evodevo's experience

The experience of Evodevo can be used by other SMEs to find how to use data in their context and how to promote data culture.

The process we suggest is based on these steps:

- Acknowledge the importance of a data-driven culture.
- Collect and explore the available data, both that present in the company that that available as open data.
- Start an innovation process to figure out possible and useful outputs using design thinking as a guideline.
- Use a collaborative approach to analyse data and creating raw analyses.
- Use the raw analyses to create dashboards, stories, and interactive infographics to be published on the web.
- Get feedbacks to understand where to improve the process.

With the right software tools, it is easy to analyse data; we describe how to do that in our course, that have no prerequisite, it can be used by any people interested in data visualisation. We suggest to interested companies to ask to have an account on the Moodle server used in the project, https://moodle.level5.eu, download the free version of Tableau and begin to study the course to leverage the knowledge of data visualisation skills.

The ideal is to structure a data-driven communication approach: infographics can support the company communication goals, providing the company with a state-of-the-art external image improving its brand value.

Infographics can be shared on their own web sites and on the social networks, such as LinkedIn, Facebook and Instagram, both as interactive graphics than as images.

The data-driven approach can be used to position the company in wider contexts; for instance, if a company is specialised in food production, the infographics can show the new trends in food and show how the company is following these trends and its relative importance with respect to the global or local market. Or the company can show the improvements they provide to their customers.

There are lots of advantages in using data-driven communication; some of there are:

- People trust more data-based statements than qualitative ones ("we have the 23% of the market" is more credible than to say "we are the strongest on the market")
- It is possible to convey lot of information with a single image; in this way it is possible to use all the limited attention time of the readers.
- The The internet is a noisy place, full of information and misinformation. It can be difficult to know how to stand out from the crowd, especially as a small business.
- It is cost-effective: it is possible to create dazzling graphics and amaze the audience showing the company's knowledge and skills with limited costs.

Conclusions

Data literacy skills are critical for Evodevo business and are becoming increasingly critical for all companies, even outside ICT, and for informed citizens.

DATALIT project was helpful to strengthen Evodevo's awareness and knowledge of several aspects of data literacy that are only partially knows before the project.

In particular, to define all the aspects of the soft skills involved in data activities has permitted to Evodevo to define a new approach on internal training. The methodology used

in the trainer of the trainers meeting, Design Thinking, now is become a valuable internal asset and in working with customers. This approach was used in creating the course “Open Data Based Interactive Infographics with Tableau”.

The Level5 methodology is another important acquired asset, that permits to Evodevo to have an objective framework to measure the effects of trainings.

Last, but not the least, the DATALIT project permitted to the Evodevo’s team to meet great people with strong competences, vivid passion for their work, great sensitivity and desire to collaborate. To participate in this project was a great experience, an excellent way to create a lively European network.