beFORE

Newsletter 2°

beFORE 2nd meeting in Bialystok

*By Alessandro Guadagni, ValueDo (IT) and
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The second meeting of the project "Becoming Future-ORiented Entrepreneurs in universities and companies" took place on May 22 and 23 2017 in Białystok, Poland. The first day of the meeting was opened by the welcome of Mrs. Joanna Ejdys, Dean at BUT University and Anna Kononiuk (BUT project manager) who presented the main University activities. It was attended by all the project partners as well as by the representatives of businesses, the municipality, and researchers of Bialystok University of Technology.

Upcoming events…

3rd Project meeting
6th & 7th November in Florence, Italy

The 3rd face to face beFORE Partnership meeting will be held in Florence, Italy, the 6th and 7th November 2017. ValueDo, the society which manages *91C: Coworking Space*, specializes in European, national, regional and local socio-economic project management, will be the host partner this time.

The next FEN meeting
8th November in Florence, Italy

Taking the advantage that the project's next meeting will be held in Florence, the next Foresight Europe Network will be celebrated also in Florence, at ValueDo premises, the 8th November.

beFORE 2nd meeting in Bialystok- cont.

By Alessandro Guadagni, ValueDo (IT) and Anna Kononiuk, BUT (PL)

The first day of the meeting was devoted to the presentation of WP1 results both by the leader and the project partners involved in this research phase. BUT presented the main WP1 results, focusing on more than 1.000 competencies of the future-oriented manager collected by the partnership, after having analyzed scientific articles on Innovation, Entrepreneurship and Foresight. BUT presentation was followed by WP1 individual partner presentations. UNIPI, FREIE, MUE, ITeE-PIB and 4CF presented how they performed the desk research and the main results achieved. After a long discussion on this topic, the partnership agreed to compare the results retrieved by BUT team with the data mining results proposed by UniPI. The partnership also agreed to carry out statistical analysis, for the narrower set of competences. The competences that would be considered the most important would be then addressed when designing the training course.

In the second part of the day, Anna Sacio-Szymanska - project coordinator on behalf of IteE-PIB - presented the investigation phase, focusing mainly on the methodologies to follow and the action plan to be implemented for reaching out our target groups: entrepreneurs, teachers and university students. Her presentation was followed by Ibon Zugasti (PROSP) who reminded the partners the importance of the project dissemination and the attention given by EACEA to this aspect. In the next step Annamari (MUE) presented the project website structure to the partnership, the main sections and the possible tools to be used on the webpage. The next issue discussed by the partnership is WP 9 External expert's selection criteria. Riccardo (ERRE) reminded the partnership that ML1 should be evaluated through a double procedure: stakeholders and external evaluators. The partnership agreed to have experts coming from different sectors and decided to consider as a "plus" having a background in different sectors (academia, consultants, entrepreneurs) if they come from other countries not encompassed in the partnership

The second day of the meeting was devoted to the "Futures literacy workshop" aiming at getting acquainted the partners with new methodologies of foresight. The workshop, once introduced the main methodological aspects of workshop and the overall framework, was facilitated by Kacper Nosarzewski and Norbert Kołos (4CF), after having introduced the main methodological aspects of workshop and the overall framework. This workshop allowed the partnership to test innovative methodologies for training in the field of future scenarios.

Extracting foresight competencies through text mining. How to spot weak signals – *by Leonello Trivelli and Silvia Fareri, UNIPI (IT)*

The first steps of beFORE, and in particular **Work Package 1**, focus on the identification on main foresight competencies to be taken into consideration to design programs that will be the core of the project. To achieve this the consortium decided to adopt a two phases approach; initially a manual extraction of competencies from research papers, training programs and business practices was performed by all the partners, secondly a text mining was ran by **University of Pisa**.

This automatic analysis of competences had the aim of finding information hidden on the huge quantity of starting sentences extracted from papers. In order to maximize the precision and the completeness of the result, it was strictly necessary to combine automatic processes with manual cleaning (and annotation).

The idea was to **reduce the complexity** of the sentences by **reducing their length**, **deleting** the less informative words, eliminating the most frequent and low informative words/chunks[1] and **agglomerating** the final competences on homogeneous **clusters** with the same/similar behaviour.

This iterative process **started with** the list of competences that were manually extracted from papers and **ended when** the medium phrases length value reached five; if it was not, the process started again from the beginning. The purpose was to obtain competences with an **optimal mean length value**, to make the data as homogeneous and manageable as possible, maximizing the subsequent clustering performance and, consequently, the overall process quality.

The final output of the process is **the list of competencies associated with their correspondent clusters** and **a graphical representation** of their distribution and correlation. The analysis on the competencies demonstrated that they can be split into three groups:

- Methods/Software
- Soft Skills
- Competences

The first two groups are expressed in form of names, acronyms, and adjective+nouns. The latter group is more interesting: they are real competences and are expressed as adj/adv+verb+object. The possibility of expressing competences through the framework "**Adjective/Adverbs + Verbs + Objects**" enables us to draw up new competences different from the ones founded above; the final goal would be reached associating different "competences atoms", as shown in the following scheme.

Figure1: Framework of expressing competences
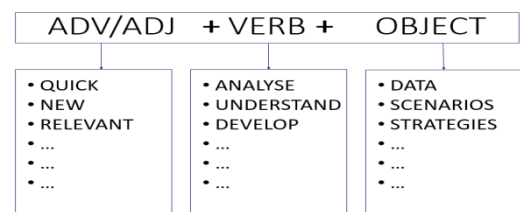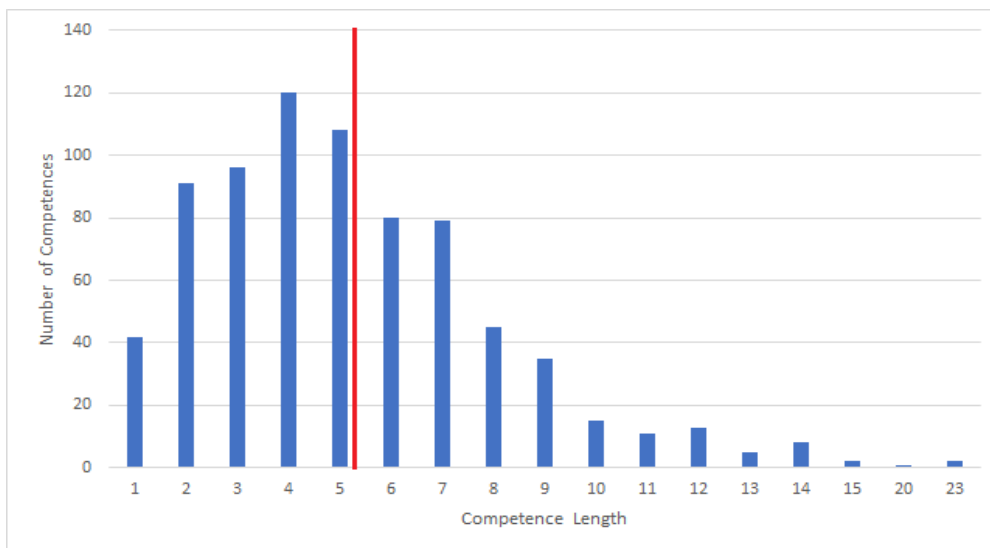

Source: Own elaboration

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[1] Chunks are defined as frequent multiwords or sequences of 2 or more words e.g credit card.

Starting from these results the consortium is going through next steps of the project by exploiting a homogeneous and clustered set of competencies that will be the core of the training programs that will be designed and delivered by the end of the project itself.

Further details here

The following Pareto Graphs and Hystograms are examples of what obtained through the statistical analysis, in particular medium length, standard deviation and number of competences for every step.

Figure2: Exemplifying hystogram of one of the final steps of the iterative process made by competence length and number of competences for each group (Medium Value Length: 5.23; Number of competences: 755; Standard Deviation: 2.99)

Source: Own elaboration

Figure 3: Exemplifying Pareto Graph of one of the final steps of the iterative process made by competence length and number of competences for each group (Medium Value Length: 5.23; Number of competences: 755; Standard Deviation: 2.99)
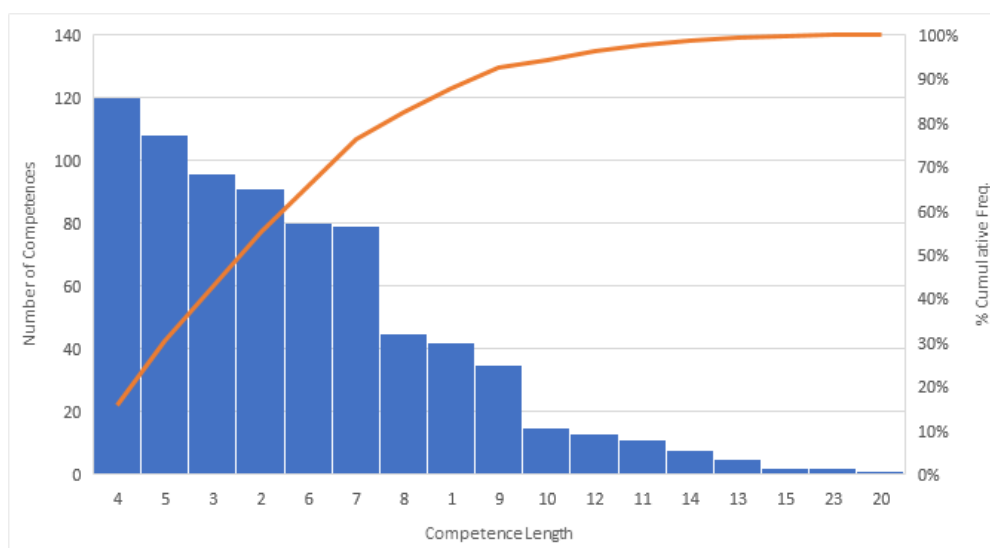
Source: Own elaboration

"Futures of a Complex World" conference and Foresight Europe Network meeting in Turku, Finland on 12-14 June 2017 *-By Anna Sacio-Szymańska, ITeE-PIB (PL)*

The representatives of beFORE project team attended **18th Futures of a Complex World** conference to discuss the results that we have achieved so far with experts and practitioners in the field of Futures Studies.

The conference was organized by Finland Futures Research Centre of University of Turku in co-operation with Finland Futures Academy, the National Foresight Network, Finland and the Foresight Europe Network, FEN, which is also the associated partner of beFORE project.

With 120 speeches scheduled, along 8 key themes (Fig. 1) it was evident from the start that we would have to prioritise and eliminate in order to make a choice. Having done that, we realized that a pool of presentations that were worth attending, was still enormous.

Table1: *Futures of a Complex World conference 2017 - topics of thematic sessions and keynotes*

Thematic sessions:	Keynote speeches:
- *Complexity and systems thinking;* - *Resilient futures;* - *Futures of education, learning and work;* - *Futures of consumption and the economy;* - *Futures of democracy, society and values;* - *Technology foresight, an era of transformation, human and technology interaction;* - *Challenges and opportunities for global governance;* - *Methods and methodology of futures research.*	- John L. Casti, *Prosperity on the Edge of Crisis (or, Why the Trend is Not Your Friend*[2]; - Kristel Van der Elst, *Industry 4.0: The New Production Paradigm and Its Implications for Policy*[3]; - Rene Rohrbeck; *The Lack of Tangibility of the Mid-Term Death*[4]; - Riel Miller, *Transforming the Future: Anticipation in the 21st Century*[5]; - Cornelia Daheim, *The Future of Work – Scenarios for 2050 from the Millennium Project and beyond*[6].

Taking into account crucial educational component of beFORE project, we have decided to attend the keynotes and the sessions on "Futures of education, learning and work" (Tabl. 1, 2).

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[2] https://futuresconference2017.files.wordpress.com/2017/06/keynote_john-casti.pdf
[3] https://futuresconference2017.files.wordpress.com/2017/06/keynote-kristel_van-der-elst.pdf
[4] https://futuresconference2017.files.wordpress.com/2017/06/keynote_rene-rohrbeck_-final.pdf
[5] https://futuresconference2017.files.wordpress.com/2017/06/keynote_riel-miller.pdf
[6] https://futuresconference2017.files.wordpress.com/2017/06/keynote-cornelia-daheim_final.pdf

Table2: Futures of a Complex World conference 2017 – selected presentations

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Selected speeches from the session on "Futures of education, learning and work":

- Erica Bol, T*each the Future;*
- Heiner Benking, *Futures of learning and negotiation, policy-making, and awareness/consciousness;*
- Matias Mateau*, Plan Ceibal 2020: Future scenarios for technology and education;*
- Sari Miettinen, *Futures Guidance as a means to promote futures thinking;*
- Jude Walker, *The Cogitaire 5 Model –Thinking Our Way into the Future.*

We got deeply inspired by the presentations, which focused on the topic of personal capabilities for the future (Tab. 1). These were also the topics explored by our consortium in the beFORE Knowledge Alliance project. More specifically, in the first 6-month long phase of the project we have been screening the literature in the fields of futures studies, innovation management and entrepreneurship. Similarly, we carried out the analysis of higher education curricula, non-formal education course offers and business case studies. Our aim was to identify and single out competences of a future-oriented entrepreneur.

Table3: Overview of topics related to personal capabilities for the future presented at "Futures of education, learning and work" session during Futures of a Complex World conference in Finland (2017)

PROJECTS AND APPROACHES	PERSONAL CAPABILITIES FOR THE FUTURE	FURTHER READING:
Cogitaire 5 Model – involves five thinking capabilities that could prepare people for the varied types of work and personal decisions which they need to make in the modern, chaotic world of the "Sharing Economy".	- Futures Thinking - Systems Thinking - Complexity Thinking - Entrepreneurial thinking - Design thinking	(Walker 2017) https://futuresconference2017.files.wordpress.com/2017/06/walker.pdf
Teach the Future initiative - promotes futures thinking skills that allow kids and young adults (8 – 24) to become the entrepreneur of their own future and the world around them. Also, it encourages, enables and supports integrating these skills into the curricula worldwide.	- Anticipation - Complex thinking - Interrelation - Thinking empathically - Imagination - Creative thinking	(Bishop, Bol 2017) https://futuresconference2017.files.wordpress.com/2017/06/bishop-bol.pdf www.teachthefuture.org
Futures Guidance project - combines futures studies theories and methods, theories of experiential learning and future-oriented counselling, as well as the use of simulations to promote active and hopeful attitude towards the future and to encourage futures-oriented career and life management among young adults.	- Self-awareness - Personal futures cognition - Non-linear thinking (plurality of futures) - Proactive acting in different situations and contexts	(Miettinen 2017) https://futuresconference2017.files.wordpress.com/2017/06/miettinen.pdf http://getalife.fi/index_en.html
Deep Learning partnership - encompasses the broader idea of human flourishing, which refers to learning systems that encourage youth to develop their own visions about what it means to connect and flourish in their constantly emerging world, and equip them with the skills to pursue those visions.	- Collaboration - Creativity and imagination - Critical thinking and problem solving - Citizenship - Character education - Communication	(Mateu 2017) https://futuresconference2017.files.wordpress.com/2017/06/mateu.pdf http://npdl.global/

Source: own elaboration based on https://futuresconference2017.wordpress.com/

In Turku, the mission set for the beFORE team, was to ask the experts of Foresight Europe Network to comment and assess the list of 39 competences of a future-oriented entrepreneur, that were selected at a certain stage of analyses carried out at that time.

This group activity took place at Foresight Europe Network meeting on the 14 June (Pic. 1, 2, 3).

Picture1: beFORE project presentation
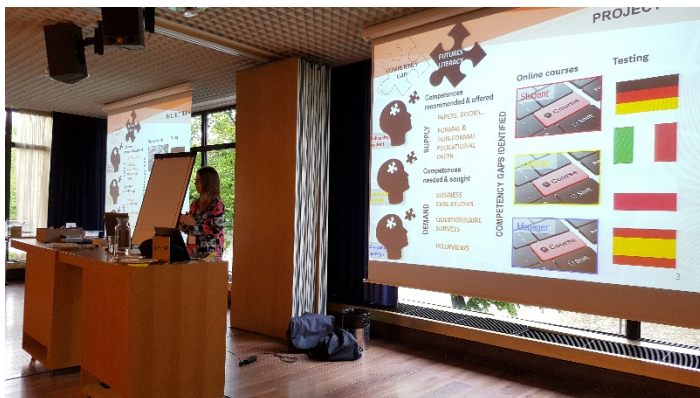
While we are writing this overview, the beFORE team responsible for the normative analysis and clustering of the competences is still working, so that the final list is exhaustive enough to be included in the training needs analysis questionnaire, which will then be distributed among university students, university teachers and entrepreneurs

Picture1: Assessing the competences of a future-oriented

The content of the presentations that we attended at the conference and the discussions we had at FEN meeting have boosted the interest of beFORE project team members towards:

- exploring and under-standing **why** a certain future-orientation competence matters in a given job situation;

- deliberating **whether** it is still possible to develop future-orientation competences later in life (and through distant mode of education);

Picture1: Assessing the competences of a future-oriented

- learning from those **who** are actually "planting a certain competence seed" related to futures thinking and acting among youngsters (primary or high school students).

We hope to address these crucial issues in the upcoming phases of our project.

Successful ISPIM workshop on *Futures Literacy and Entrepreneurship*

by Ibon Zugasti, Prospektiker (ES) and Anna Sacio-Szymańska, ITeE - PIB (PL)

About ISPIM

ISPIM –the International Society for Professional Innovation Management -is an association of members from research, industry, consulting and the public sector, all sharing a passion for innovation management - how to successfully create new products, processes and services from ideas to stimulate economic growth and well-being. Formed in Norway in 1983, ISPIM has members in over 70 countries and is the oldest, largest and most active innovation network in Europe, expanding rapidly in the Americas and Asia-Pacific (http://www.ispim-innovation-conference.com)

Session development and outcomes

This workshop was composed of two main parts, initial talks and moderated discussion, after the introduction and welcome by Ibon Zugasti (Prospektiker) and Anna Sacio-Szymańska (ITeE-PIB). The first talk provided the conceptual and theoretical foundation regarding the notion of Futures Literacy (FL) against the project background by Kacper Nosarzewski (4CF). The second talk did introduce case studies of teaching Futures Studies & Entrepreneurship (curricula and methodology), through the Teach the Future initiative by Erica BOL (Teach the Future Europe).

The general presentation of the Erasmus+ beFORE project by Anna Sacio-Szymańska (ITeE-PIB) was the beginning of the second part of the session, followed by the presentation of the skills identified for a future-oriented entrepreneur within WP1 by Anna Kononiuk (BUT). The two talks were followed by a group work and good practice sharing about the content of future-oriented educational offer against the demand for foresight

competencies seen through the lens of academics and professionals. Building on the experience of the participants, it was possible to collect suggestions and ideas on the structure of the educational needs analysis questionnaire and establish an accurate initial reference framework for building coherent Futures Literacy e-learning courses.

The following figure presents the results of the brainstorming exercise regarding personal capabilities of a future-oriented entrepreneur. All capabilities listed were regarded as equal by the participants of the brainstorming exercise:

Figure4: The outcome of a brainstorming exercise at Futures Literacy and Entrepreneurship workshop organized by beFORE project at ISPIM 2017 conference

persuading
energizing
inspiration
enthusiasm
passion

prospecting (system thinking)
perceiving (systematic scanning)
identifying tipping points
vision
focus

listening
empathy
failure
tolerance
inclusiveness

accounting
(interpreting,
communicating
financial
information)

innovation
inventiveness
creativity

independence
self-driven
persistence
perseverance

instinct
risk-taking
intuition (gut feeling)
probing (experimentation)

Source: Own elaboration get from ISPIM 2017 conference