frugalinnovation.how

# Regional Partnership Plan

## for West Pomeranian Region

by

Beter Ltd.

together with

Northern Chamber of Commerce

Erasmus+ This project has been funded with support from the European Commission

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## Preface

This publication has been produced under the project supported by the Erasmus+ program entitled Frugal Innovation. It aims to promote frugal innovation mindset in any regions. This document outline the formative assessment of frugal innovation in the current economic climate, knowledge and skills gap, policy recommendations and a strategic action plan in the Hungarian region.

This Strategic Partnership Plan can be utilized by academic actors, higher education policy makers as well as by business actors, organizations and chambers. It facilitates the creation of the conditions and organizational connections that are essential for the processes promoting frugal innovation.

Additional useful materials will be also produced in the framework of the Erasmus+ program entitled Frugal Innovation. These will be available free of charge on the following address: www.frugalinnovation.how. We recommend that those who are interested in this topic visit the official website of the project.

# EXECUTIVE SUMMARY

## What is Frugal Innovation Regional Action Plan

The Frugal Innovation Regional Partnership Plans comprise a series of **knowledge resources** which together form a strategic action plan that **guides** VET and HE institutions and wider stakeholders as to how to **effectively implement frugal innovation education** in their region.

**Participants** are likely to include:
- not for profit and private providers of enterprise and business VET education
-HEIs, especially universities
- local enterprise / business development offices and the municipal authorities they represent
-Small business associations / chambers of commerce
- Regional development organizations
-Public agencies responsible for education, training and development

Partnership Plans will be developed in:
**- West Pomerania in Poland**
**- Southern Great Plain region in Hungary**
**- Rijeke Partnership Croatia**
**- Northwest Ireland**

Each final Partnership Plan document will be **professionally designed** and be available to consult online and download as a series of electronic files including PDFs, webinars, video and /or other interactive elements.

## INNOVATIVE FEATURES

Collaborative approaches to producing action plans are not new, but this approach is innovative because:

a) Frugal Innovation is so new to the agenda at local and regional level, this will be the first time many participants have approached the topic.

b) Each plan will be tightly focused on the adaption of frugal innovation to specific regional context, opportunities and needs, enabling it to be highly place and time specific. This maximizes relevance and impact, not to mention participant' commitment to follow through.

c) Innovation is often misunderstood and – paradoxically - often taught in a highly traditional way. The Partnership Plans allow participants to discuss and recommend more effective ways of imparting these complex skills and attitudes for today's students. The diverse perspectives and student bases of different organizations will enrich everyone's understanding and help partners design more effective materials and approaches in further actions.

## IMPACT

The process of participating in the Partnership Plans and the final documents themselves will provide concrete benefits:

- increased understanding of the importance of frugal innovation in their region (goal: 90% change perception)
- commitment to introducing frugal innovation to their training services (if relevant) (goal: 90%)
- commitment to fulfilling other commitments to advance mainstreaming of frugal innovation as outlined in the Regional Partnership Plan (goal: 90%)
- knowledge, tools, and motivation to recommend frugal innovation to another organization in their professional network outside their region (goal: 50% recommend the project/concept)

This will lead to:

- an increase in the number of learners benefitting from frugal innovation teaching.
- a more "joined-up" approach to frugal innovation education and support in the region
- greater implementation of frugal innovation among local enterprises, leading to greater employment, competitiveness and resilience regional economies.

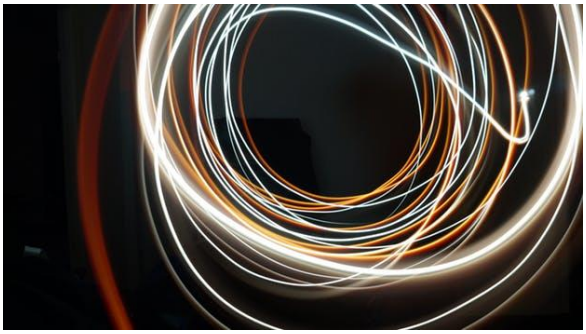
# ABOUT FRUGAL INNOVATION

## What is frugal innovation?

**Frugal innovation responds to limitations in resources, whether financial, material or institutional, and using a range of methods, turns these constraints into an advantage.**

*Source: Nesta, https://www.nesta.org.uk/feature/frugal-innovations/*

Frugal innovation is a new phenomenon that considered as both a mindset and a series of techniques that enables entrepreneurs to innovate despite resource constraints. The concept has emerged from developing countries but given the current climate of austerity and economic uncertainty across large parts of more developed countries (such as Europe), the phenomenon has gained an increasing attention in more advanced economies (Pisoni et al., 2018) and academic researches (Radjou – Prabhu, 2015). The definition and the understanding of frugal innovation vary among scholars, practitioners and policymakers that calls for discussion among the previously mentioned groups of stakeholders (Hossain, 2017).



This new type of innovation is often referred as resource-constrained innovation although it includes a wide range of interpretation (Pisoni et al., 2018). Previous researches and literature reviews on the topic concluded that the terms of frugal innovation is often described with the following aspects: affordability, low-cost manufacturing, low-cost materials, design focusing on basic functionality and minimal feature. Interestingly, frugal innovation can yield more benefit for the society than traditional innovations, since frugal innovation does not necessarily need sophisticated labs and infrastructure, however relies on basic engineering skills (Mandal, 2014). The role of frugal innovation is important in emerging countries, since society face unserved needs which are less attractive for companies (Tiwari – Henstatt, 2012).

## Why it is important?

Because
- it means: faster, better,cheaper;
- it allows companies to get high-quality products to market quickly using limited resources;
- it allows to be efficient and deliver what cusmtmer wants;
- hight-quality products can be affordable and sustainable, as well as meaningful for end-users.

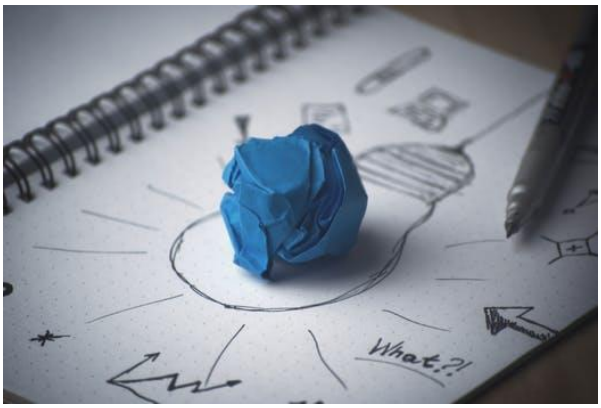
Although the EU identified entrepreneurship as a key competence since 2006 and that is one of the most important aims of the Entrepreneurship Action Plan 2020, there is still a little focus on frugal innovation at European Higher Educational Institutions. While multinational companies change their global strategies and shift their focus to low-income countries to develop frugal innovation (Ojha, 2014), European universities continuously rely on high-investment research and development activities. We do not suggest that teaching traditional innovation would be a wrong way, but we raise attention to frugal innovation that should gain more emphasis in students' curriculum.

In order to better understand the current climate at Higher Education Institutions, we conducted a research that aims to understand the perception of frugal innovation among various groups (both students and professors). This study has two aims. Firstly, to identify common misunderstandings and the perception of frugal innovation in contrast to traditional (high-tech) innovation, secondly, to identify possible teaching practices that can be implemented into entrepreneurship education and innovation generation. The outcomes of our investigation will provide significant insights into the perception of frugal innovation in the higher education (both students and professors) and will suggest teaching practices.

The results can contribute to the development of more effective teaching toolkits and seminars which can yield useful knowledge for students and improve their problem-solving skills in case of resource constraints. Furthermore, the development of students' curriculum will lead to more entrepreneurial higher education and will enhance innovation generation.

# ASSESSMENT OF FRUGAL INNOVATION IN THE CURRENT ECONOMIC CLIMATE

Frugal innovation is an underestimated topic in the Western Pomeranian and also in the whole country. In order to gain better insights from relevant stakeholders Beter Ltd. organized an in-person meeting with the representatives scholars. Our goal was to introduce them the concept of frugal innovation and perform certain tasks to determine the barriers that could hinder frugal innovation teaching. Furthermore, an online survey has been also carried out to reach wider audience (different stakeholders) and collect responses.




## Awareness of frugal innovation in West Pomerania Region based on qualitative research

At the beginning of the workshop some internationally known frugal innovations were introduced to the participants:

**Fluorescent curbs by Mahstone**

## Mitti Cool

Clay fridge
without electricity

## Tata Nano

The cheapest car

## Automated respiration rate monitor

by Philips


## Foldscope

An Origami-Based Microscope


## Nokia 1100

Cell phone with basic features

## Solar Light Bulb

Light without electricity

Before starting discussing about frugal innovation examples which can be observed in Poland, three criterions of frugal innovation were assumed:

- Affordable price
- Concentration on core functionality
- Targeted to the wide groups of recipients

comparing to the products already available on the market, especially those related with the usage of high-tech.

Participants agreed that frugal innovations are popular in developing countries and it's hard to point them out in Poland. After some time of consideration participants were able to present some examples:

**Mobile devices available in budget stores,** which price does not exceed 100 Euro. There was a tablet in the offer one of the budget chain store for 379,00 PLN, which is circa 88 Euro. And smartwatch for 89,90 PLN, which is circa 21 Euro. Such low price definitely resulted from leaning these devices from extra software and technical features. Only necessary parameters were used to provide basic functions of such devices.

Budget store: Biedronka

Products:

- smartwatch Hykker Chrono 3 – 89,90 PLN
- tablet Hykker myTab 10 3G – 379 PLN

**Household appliance offered by budget stores**

Participants also mentioned about other examples related to the offer of budget stores. Apart from the basis offer of food products and cosmetics, all budget stores sell special products which vary every week. Sometimes it is garments, books, music and games. And sometimes they offer **household appliance** like coffee machines, kitchen robots, which are far less expensive than similar products offered by typical producers of household appliance.

**Clouds**

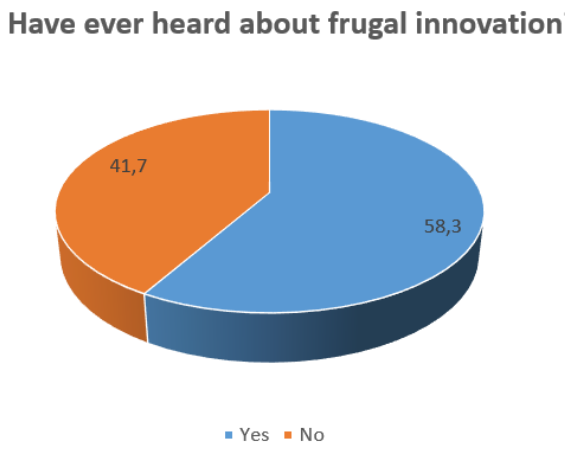
Instead of investing in expensive servers, one can by storage space for data using clouds. It is cheaper than buying hardware. What is more, you can storage data for any time, for hour, months, years. It is a flexible and cheap solution. Participants defined it as frugal innovation in services.

**Apartments and hostels**

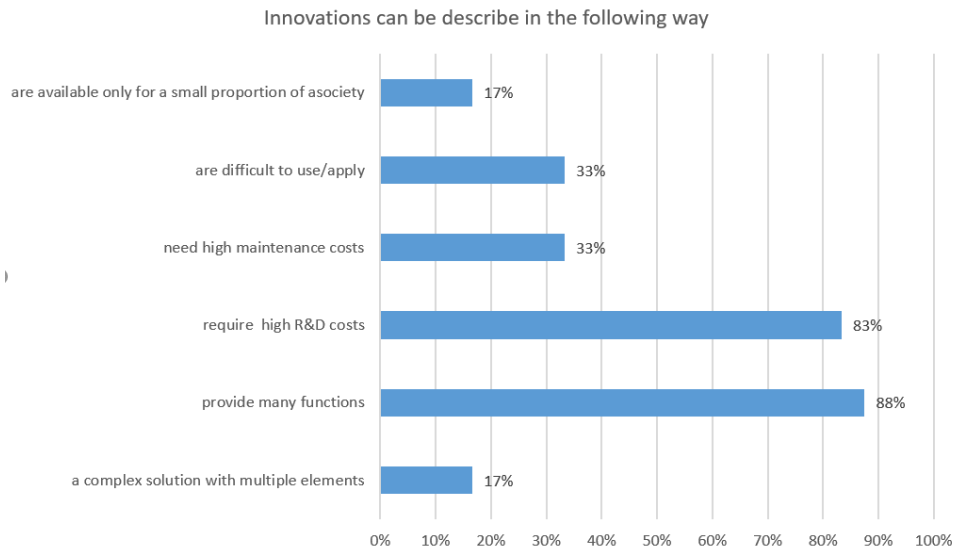
Touristic character of our region enhanced many private investors to buy new apartments on primary market or old apartments in secondary market in order to transfer them into attractive place for accommodation, which constitutes competition for traditional hotels. Such process is observed as well at the coastline and in the main cities of the region. For many participants this is frugal innovation because it is focus on the main functionality – to have a place to stay for a night/nights. Other services which are usually offered by hotels like food, gym, bars etc. are not in they offer, as it should be cheaper than typical hotel accommodation and this way target to more people who want to travel.

## Perception of frugal innovation in the light of an on-line survey

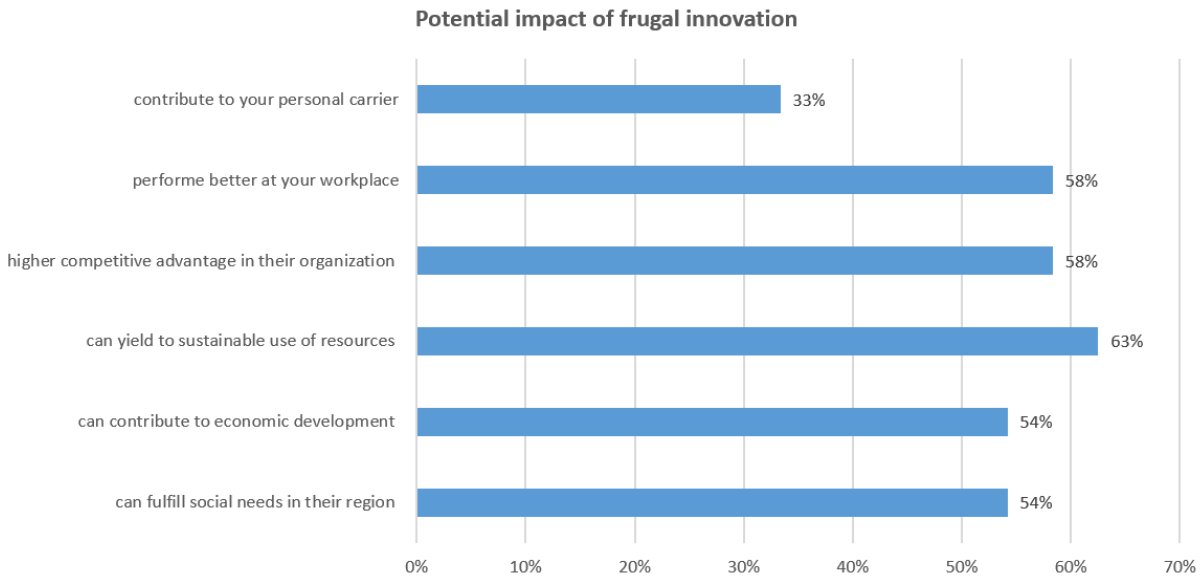
The on-line survey was conducted among various stakeholder from Hungary, Poland, UK, Ireland and Croatia. This Regional Action Plan presents the results only taking into account the opinion of participants from Poland, who were recruited to this on-line research by Beter Ltd. and Northern Chamber of Commerce.




More than a half have never heard about the frugal innovation concept, which makes the topic important to be introduced to the wider audience. What is more, after reading the explanation of the idea of frugal innovation, 98,5% admitted that such idea of innovation is interesting.



Respondents associated innovations with high R&D costs and multiple functionality (83% and 88% respectively). Only 33% indicated difficulties in the usage of innovations and also high maintenance costs.




Respondents were very positive about potential impact of frugal innovations in the region. They mainly underlined the sustainable use of resources, higher competitive advantage of the organizations and better performance at the workplace.

# INNOVATION PERFORMANCE, KNOWLEDGE AND SKILL GAP

## General information

Providing general view about knowledge and skill gap in the context of frugal innovations, general information about the region is presented in advance. To provide information about innovation performance of the region, data from the European Innovation scoreboard is used in this elaboration. This will enable reliable and comprehensive comparison of West Pomerania with other regions taking part in the project.

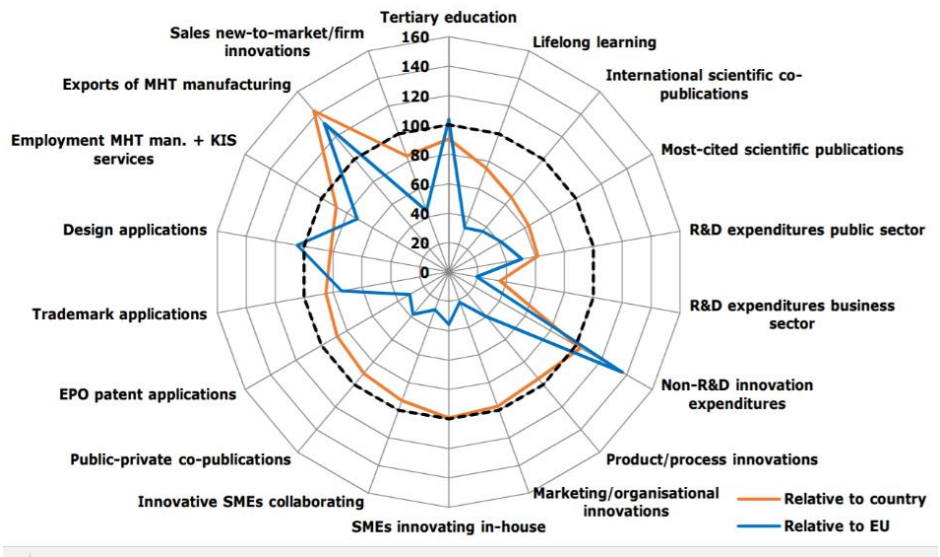

West Pomerania is a region located around the Baltic Sea with a coastline of 185km. The population was 1,684,025 in 2016 (Eurostat 2017) and covers an area of 22,892km2, making it the fifth largest region, covering over 7% of the national area. The regional capital city is Szczecin, which had around 404.9 thousand inhabitants in 2016 (Statistical Office in Szczecin 2017). Zachodniopomorskie can be characterised as a region with a strong service sector and still undergoing structural changes in relation to sea-based activities[1].

## West Pomerania according to European Innovation Scoreboard

West Pomerania is a Modest + Innovator, and innovation performance has increased over time. The table on the left shows the normalised scores per indicator and relative results compared to the country and the EU. The table also shows the RII in 2017 compared to that of the country and the EU in 2017, the RII in 2017 compared to that of the EU in 2011, and performance change over time. The radar graph shows relative strengths compared to Poland (red line) and the EU (blue line), highlighting relative strengths (e.g. Exports of MHT manufacturing) and weaknesses (e.g. Sales of new innovations). The table below shows data highlighting possible structural differences. For instance, the region is less densely populated, with higher employment shares in

[1] https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/west-pomeranian

utilities & construction and public administration, and slightly lower than average GDP per capita[2].




Source: Regional Innovation Scoreboard 2017 http://ec.europa.eu/DocsRoom/documents/24181

| | Data | Normalised score | Relative to PL | Relative to EU |
|---|---|---|---|---|
| Tertiary education | 39.9 | 0.571 | 90 | 104 |
| Lifelong learning | 2.6 | 0.150 | 75 | 32 |
| International scientific co-publications | 159 | 0.150 | 66 | 36 |
| Most-cited scientific publications | 3.1 | 0.225 | 63 | 41 |
| R&D expenditures public sector | 0.19 | 0.277 | 62 | 51 |
| R&D expenditures business sector | 0.09 | 0.088 | 36 | 19 |
| Non-R&D innovation expenditures | ± | 0.410 | ± | ± |
| Product/process innovations | ± | 0.176 | ± | ± |
| Marketing/ org. innovations | ± | 0.085 | ± | ± |
| SMEs innovating in-house | ± | 0.163 | ± | ± |
| Innovative SMEs collaborating | ± | 0.098 | ± | ± |
| Public-private co-publications | 18.4 | 0.112 | 90 | 38 |
| EPO patent applications | 0.46 | 0.119 | 88 | 31 |
| Trademark applications | 3.25 | 0.292 | 85 | 74 |
| Design applications | 1.23 | 0.546 | 82 | 105 |
| Employment MHT manuf./KIS services | 10.7 | 0.384 | 88 | 72 |
| Exports of MHT manufacturing | 69.6 | 0.833 | 143 | 132 |
| Sales new-to-market/firm innovations | ± | 0.207 | ± | ± |
| Average score | -- | 0.271 | -- | -- |
| *Country EIS-RIS correction factor* | -- | *0.786* | -- | -- |
| Regional Innovation Index 2017 | -- | 0.213 | -- | -- |
| RII 2017 (same year) | -- | -- | 87.5 | 47.0 |
| RII 2017 (cf. to EU 2011) | -- | -- | -- | 48.2 |
| Regional Innovation Index 2011 | -- | 0.189 | -- | -- |
| RII 2011 (same year) | -- | -- | 80.7 | 42.6 |
| RII - change between 2011 and 2017 | -- | 5.6 | -- | -- |

Source: Regional Innovation Scoreboard 2017 http://ec.europa.eu/DocsRoom/documents/24181

[2] http://ec.europa.eu/DocsRoom/documents/24181

## Research, Development and Innovation

The main scientific research organisations are: University of Szczecin, West Pomeranian University of Technology, Koszalin University of Technology, Maritime University of Szczecin, Pomeranian Medical University in Szczecin and Art Academy. There are two academic centers situated in different parts of the region (Szczecin, Koszalin). The great academic centre creates a substantial educational potential for the region. There are 19 higher-education schools, with nearly 50 thousand students, and approx. 14 thousand graduates each year, who represent all fields of study, from philology to the economic and technical fields. Additionally, new study programmes are being created, including specialists in IT and boatbuilding. The specific regional characteristic is that there are no institutions of the Polish Academy of Sciences or other public research institutions located in Zachodniopomorskie.

There are 4 Special Economic Zones in the West Pomerania region. Entrepreneurs operating in zones can benefit from public support granted in the form of income tax exemptions due to a new investment or due to creating new employment opportunities. There are many industrial parks as well. The most notable include The Stargard High Technologies Industrial Park, established in 2007 hosts several companies including Backer OBR - one of the largest companies on the Polish and European market specialised in solutions concerning heating and temperature control, Klippan Safety - specialised in the production of accessories for the automotive sector and a manufacture of rail equipment (known as ZPS). Another important industrial park is the The Goleniów Industrial Park, which hosts 43 companies, including LN Wind Power Blades, HG Poland, Faymonville, Abena and Dancoal. In Gryfino the Regional Industrial Park in Gryfino is located, which has a favourable geographical location for distribution to the German border. Kozalin has a Science and Technology Park at the Koszalin University of Technology as well as a special economic zone at the Koszalin Business Activity Zone which has nearly 100 companies.

The research and development (R&D) expenditures amounted to almost €43m for the region in 2014, making up a mere 0.28% of regional GDP, which has been declining since 2012 when it used to be 0.37%. Due to this, the region is the 3rd lowest when it comes to R&D expenditure in percentage of GDP and scores way below the country and the EU average estimated at 0.94% and 2.04% in 2014 (Eurostat 2017). The funding from the business sector in the region is also very limited, which is only 0.09% of

GDP, making the region lag behind most other regions. (Central Statistical Office of Poland, Science and Technology Report 2015). In 2015, the business sector contributed just 38.5% of the total R&D expenditures compared to the national average of 46.6% (Central Statistical Office of Poland 2017).

Despite the limited R&D expenditure in the period of 2013-2015, about 13.0% of all firms were so-called innovation active service enterprises and 18.5% of all firms were innovation active industry enterprises, having come up with a product or process innovation. These numbers are both above the national averages of 9.8% and 17.6% respectively for service and industry (Central Statistics Office of Poland 2017). When looking at patents, about 13 ½ patents were requested in 2012, which is around 3.2% of the 427 for the whole of Poland in 2012. Comparatively, this means almost 8 per million inhabitants for the region, far below the 11.22 per million inhabitants for Poland as a whole (Eurostat 2017).

The education levels of the region are lower compared to both the national and EU level when it comes to tertiary education. In 2016, an increasing number of 43.3% of people aged 30-34 years had at least a higher education degree, which is lower compared to the national average of 44.6% but higher than the EU average of 39.1% (Eurostat, 2017). However, the picture is more complicated when looking at gender as only 34.7% of males aged between 30-34 years have finished tertiary education compared to the national average of 35.6% and the EU average of 34.4%. Females do comparatively a lot better with figures of 52.3%, 53.9% and 43.9% respectively (Eurostat, 2017).

91 thousand people worked in industrial enterprises (3.5% working in industry in Poland). The percentage of employees in the high and medium high technology sectors in the total number of employees was 5.4% (6.7% in Poland). Based on a survey of economic activity of the population (BAEL) in 2015, the Human Resources for Science and Technology (HRST) group in the region was 280 thousand people, with 58.2% of women. R & D employment was 3,8 thousand (including 1.7 thousand women), which accounted for 2.4% of R & D in Poland (Central Statistical Office of Poland 2017)[3].

[3] https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/west-pomeranian

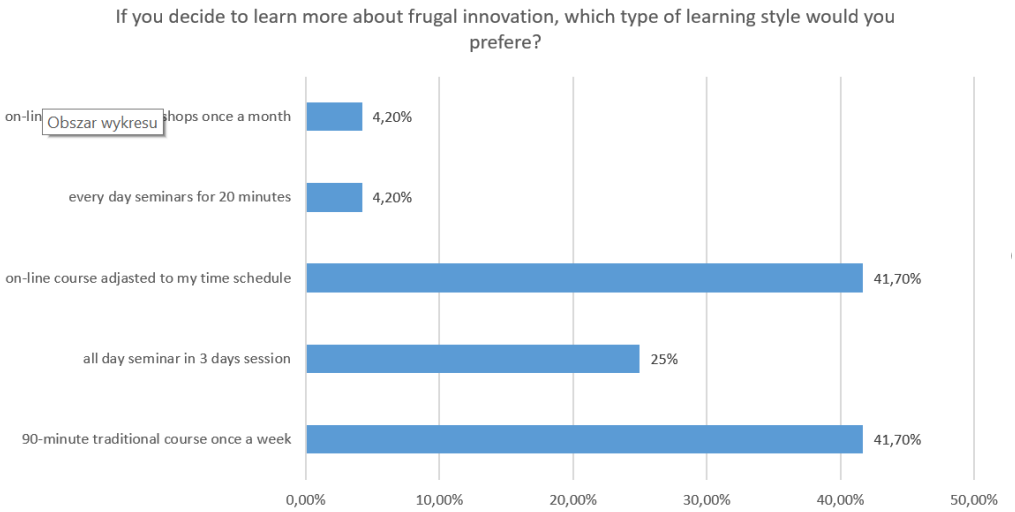
## Knowledge and skills gap on frugal innovation

Although there are some schools offering education in management which includes innovation , it is hard to find specific courses/classes/lectures/seminars devoted to frugal innovations. Also VET providing trainings for entrepreneurs seem not to have frugal innovation courses in their offer ("frugal innovation course Szczecin" was googled and no results were found).

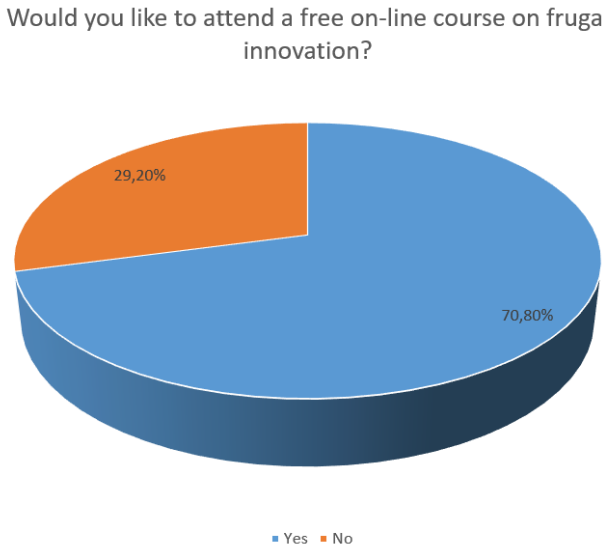
Also the offer of business support organizations functioning in West Pomerania were analyzed. Although there were some workshops concerning

managing innovation, there was no offer devoted specifically to frugal innovation.

## Participation in innovation education in the light of the on-line survey




On-line training course adjusted to individual time schedule and 90-minute traditional course were chosen as the most preferable learning style of frugal innovation.




The vast majority (70,8% of respondents) declared that they would attend a free in-line training course devoted to frugal innovation.

## RECOMMENDATIONS FOR INNOVATIVE PEDAGOGICAL APPROACHES

Project assumes the development of an on-line training course. What features should such course have to ensure effective education for different types of target groups.

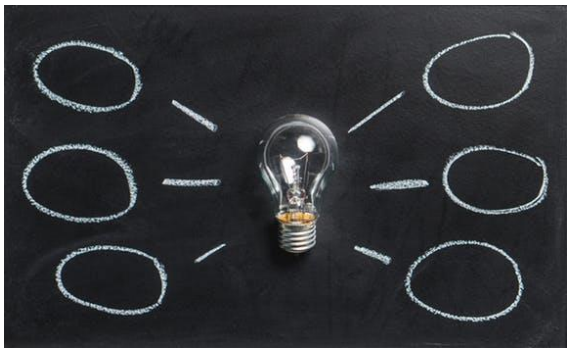
According to Course Arc[4], on-line courses' advantages are:

- ✓ Flexibility – This allows students to study when, where, and in the manner they prefer
- ✓ Responsiveness – Online content can quickly be updated, revised and made more up-to-date
- ✓ Variety – Content can be delivered via richly integrated multimedia (video, simulations, gaming, etc.)
- ✓ Dissemination – Lessons can reach well beyond the confines of a classroom, campus, or training center
- ✓ Accessibility – Materials can be easily customized to suit the special needs of each student

eLearning Industry[5] provides their 10 advice to develop effective on-line courses

1. **Understanding Of The Learning Process.**

An effectively designed online course or program must take into account multiple factors – the characteristics of targeted learners, the nature of the content, the role of the community in shaping learning, and integration of ongoing feedback and assessment; ample opportunities for practice and expert feedback to guide the development of knowledge in action.



**2. Based On The Needs Of Adult Learners.**

Research on adult learning demonstrates that adult learners share common characteristics and beliefs that can be integrated into any learning experience. Adult learners:

- Need to be treated with respect and recognition and their professional experiences integrated into workshops and discussions.
- Are practical and want solutions they can implement to address real-life challenges.
- Are self-directed and need to be given the opportunity to reflect on and analyze their own practice.
- Need to process information as part of learning.
- Have different learning styles.
- Need support of peers.

3. Linking Theory And Practice.

Online teacher professional development has been critiqued for its relative failure vis-à-vis face-to-face instruction to integrate theory with practice. As such, concepts such as

[4] https://www.coursearc.com/are-online-courses-as-effective-as-in-person-education/

[5] https://elearningindustry.com/designing-effective-online-courses-10-considerations

"pedagogical knowledge" remain more conceptual than practical – focusing on knowledge about practice versus knowledge in practice. Using real-time video –such as a videoconferencing system or web cameras– can capture practice "live" (though stationery video systems may not provide a full picture of student interactions and behaviors). Videorecording teachers' practice at certain points in the school year can provide a visual archive of teacher progression or regression in a certain area. And video can also be shared with other teachers as a study tool.

**4. Accommodating Range Of Learning Styles.**

Cognitive models or "frames of mind" shape the way learners perceive and process information and suggest that an individual's ability to learn is influenced by the manner in which information is presented. Course designers should create an array of assignments, activities, and assessments that allow learners to interact and practice with content in multiple ways, on multiple cognitive levels and using multiple measures and methods to assess learning.

**5. Accessibility.**

Effective online courses should be accessible to all learners. One way to do this is to make sure courses are "universally" designed. Universal Design for Learning (UDL) advocates that all learning experiences should be purposefully designed to be "barrier free" and accessible by providing multiple and flexible methods.

**6. Flexibility**

One of the most common misconceptions in online education is that face-to-face curriculum can be transferred wholesale to a distance education format. Rather, online courses must be designed "flexibly" and specifically for an online medium. Flexible design proposes that content be organized in flexible formats, used in a variety of activities and accessible through a variety of technologies.

**7. Offering Flexible Delivery.**

In addition to being flexibly designed, distance courses should be flexibly delivered. Flexibly delivered courses offer:

- Realistic options and choice in terms of time, place, and technology.
- Multiple modes of delivery (in the workplace; in block modes; modules; interactive format and other "non-standard" delivery).
- Options for delivery include alternative ways of on campus, in-class, independent lectures, seminars, tutorials, and practical sessions.
- Accommodation of the diverse learning needs and learning styles of learners.
- Use of technology and resources for learning supports to provide options to any students to access

and use materials in his/her own place (e.g., web-based teaching materials and exercises or assessment that is not time and place specific).

**8. Providing Flexible Assessment.**

Assessment is often the weakest component of an online program. One way to improve assessment is to design a "flexible assessment" system.

**9. Using A Variety Of Media.**

A mix of media is more effective than the reliance on one type of media because it satisfies the many types of learning preferences that one person may embody or that a class embodies. Particularly in print- and web-based professional development courses which are primarily text heavy, the use of still and moving visual media can help learners who are poor readers better understand content.

**10. Interactivity.**

"Interactivity" is one of those terms we often use without clearly defining. It involves 5 levels:

- Learner interaction with an object

  or person in a way that allows learners to improve their knowledge and skills in a particular domain.
- Multiple communications between learners around an object of study, a tool, or an experience.
- Learner control and program adaptation based on learner input.
- Reciprocal process of information exchange and sharing ideas between students and teachers.
- Multiple forms of synergistic participation and communication that aid the development of meaningful learning.

## STRATEGIC ACTION PLAN

This plan is adjusted to the needs and specificity of West Pomerania Region, nevertheless, after proper changes, it can be adopted by any organization that decides to engage in frugal innovation promotion. Therefore this The Strategic Action Plan can be perceived as a good practice of what necessary steps that should be carried out to implement frugal innovation mindset in any region

The Strategic Action Plan for West Pomerania Region consists of the following phases:

**PHASE 1** Define the aim based on a region's needs or specifics

**PHASE 2** Collect appropriate resources

**PHASE 3** Reach target groups and involve stakeholders

**PHASE 4** Offer your products / services

**PHASE 5** Monitor the execution and sustainability

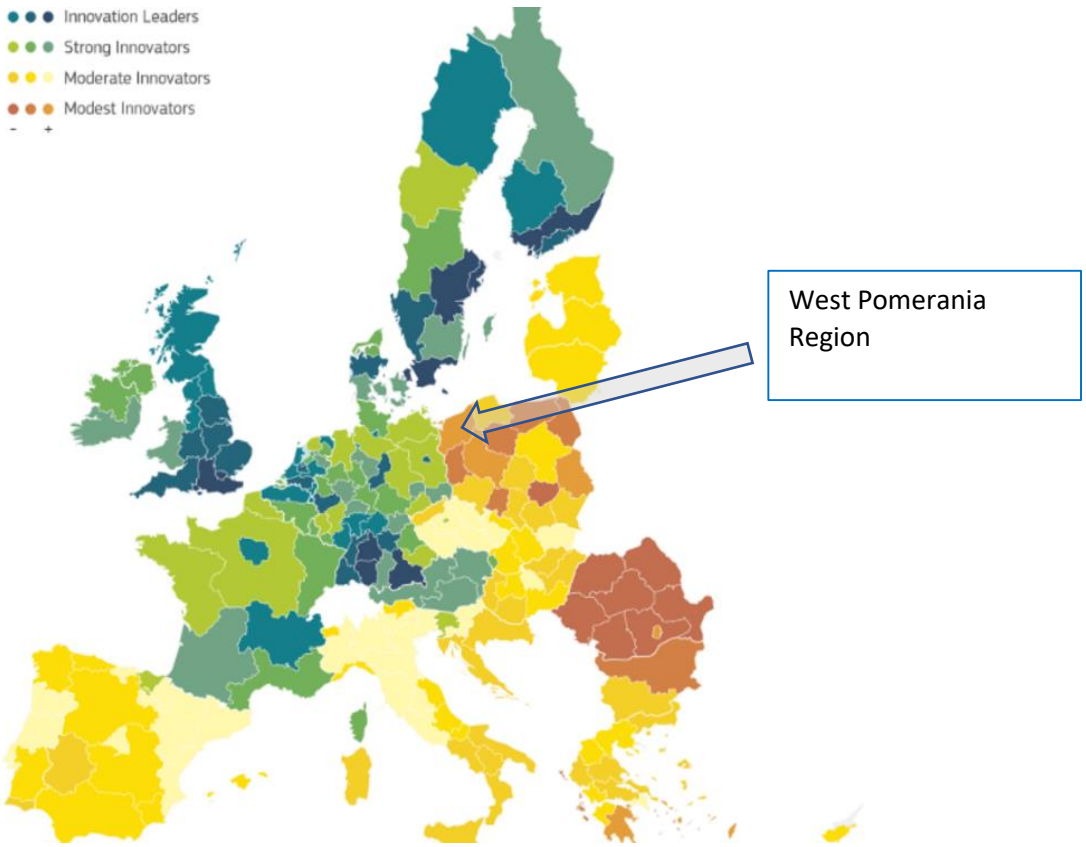
Each phase will be explained in details providing examples from the West Pomerania Region.

## PHASE 1 AIM

The main aim for West Pomeranian Region is to **raise the awareness on frugal innovation.** Such aim should lead to better understanding of frugal innovation and this way better innovation performance through implementing frugal innovation.

**Substantiation**

a. as it was pointed out in the previous parts of the document (especially chapter: Innovation Performance, Knowledge and Skill Gap), the innovation performance of the region is very week comparing to the rest of the European Union.




Source: Regional Innovation Scoreboard https://ec.europa.eu/growth/industry/innovation/facts-figures/regional_en

b. The vast majority have never heard about frugal innovation (see the results of the on-line survey presented in the chapter: Assessment of Frugal Innovation in The Current Economic Climate)
c. Many innovation weaknesses of our Region according to Regional Innovation Scoreboard, e.g. few SMEs innovating in-house, low R&D expenditures in private sector. Frugal innovations seem to be a remedy for this situation.

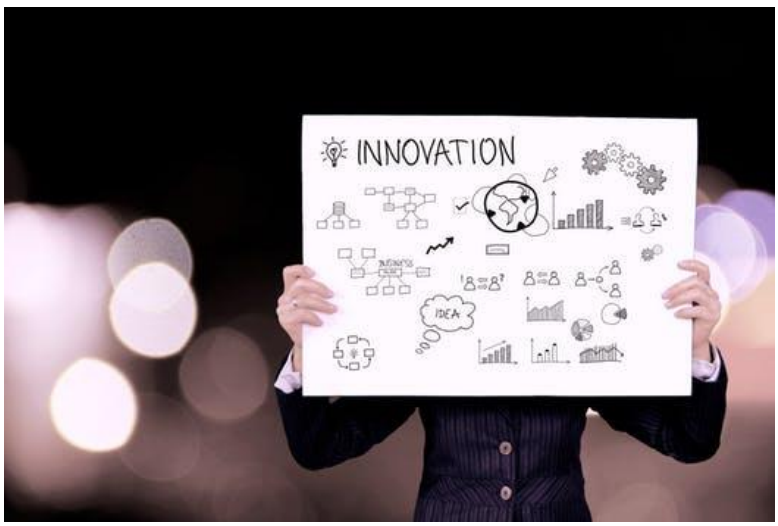
Operational goals:

**Goal A** Promoting the idea of frugal innovation

**Goal B** Attract various stakeholders to talk, teach and disseminate the idea of frugal innovations

**Goal C** Promote Frugal Innovation On-line course and other outputs developed within Frugal Innovation project

**Goal D** Try to implement frugal innovations in your organization / business or environment, according to the approach: *if I'm succeeding thanks to frugal innovations, other will try to follow me.*



# PHASE 2 Resources

## HUMAN RESOURCES

Human resources need to be organized in order to create and develop Frugal Innovation mindset. The following functions might be helpful:

**Account management deputy**

Tasks:

- Establishing and keeping contact with the stakeholders and members of the cooperation partners
- Creating contact lists
- Requesting stakeholders, making arrangements with them
- Keeping ongoing contact; informing and getting feedback from the stakeholders

**Education deputy**

Tasks:

- Educational organizational duties
- Drawing up the related educational program (course, summer school, student competition, etc.)
- Implementing frugal innovation mindset in the educational materials
- Keeping contact with HEI and VET actors

**Dissemination deputy**

Tasks:

- Communication activities
- Promoting the project among relevant stakeholders
- Informing local media about the milestones of the project
- Producing dissemination materials (flyers, posters, etc.) with customized content targeting stakeholders from businesses and academia

## MATERIAL RESOURCES

In order to contact potential stakeholders, some material resource are essential for effective activity. You should need:

- ✓ A computer with the Internet connection
- ✓ A phone
- ✓ A printer
- ✓ A desk
- ✓ An office/room where you can meet people
- ✓ Conference room to conduct trainings

## INTANGIBLE RESOURCES

Your company has developed a unique set of weightless resources which can be used for the promotion of frugal innovation. It can be:

- ✓ Data base of your clients/ stakeholders
- ✓ Personal relations with stakeholders
- ✓ Organizational culture
- ✓ Creativity
- ✓ Knowledge
- ✓ Know-how

PHASE 3

# Target group and stakeholders

The aim of the project is to bring together actors who have a need for and also the influence on the development of new ideas and implementation of frugal innovation concept in the region. By bringing them together, the actors get informed and involved, making it possible to exploit synergies stemming from that exchange. The Regional Partnership Plan clearly identifies the stakeholders that play essential role in the promotion of frugal innovation.

**Higher educational actors (teaching staff, management, students**): They have the greatest influence on the young studying in higher education, their engagement during the project completion is essential. Fostering frugal innovation mindset at the university can be executed with the involvement of teaching staff and the commitment of the management. The teachers can demonstrate the relevance of frugal innovation at the courses and students can utilize it during their internship. Furthermore, students can contribute to economic development and social issues by developing new ideas aiming to fulfill social needs.

**Local business experts / entrepreneurs:** They personally transfer the competences and motivations related to innovation through participating in the project and sharing experiences. They can also provide an important input in the development of the teaching toolkit created for the teachers.

**Local non-profit organizations and institutions** (e.g. Chamber of Commerce, professional community, club, etc.): Involvement of such organizations can enhance the efficiency of implementing frugal innovation mindset in the region. The collaboration is more efficient if it is established on the basis of existing partnerships, using their experience and network of contacts. In most regions, alongside general professional organizations, there are organizations supporting teaching and innovation skills of students, thus their involvement offers a good starting point for better understand the current economic climate.

**Local governmental and municipal actors:** Boosting innovation thinking among the key stakeholders is a priority in most regions for governmental and municipal institutions, and thus very often accompanied by publicly funded programs. In order to exploit the consistency and synergy between existing programs, it is practical to align the work of the partners with current as well as planned measurements. Naturally, this can be done most easily by involving relevant policy makers already at an early stage of the project.

In **West Pomerania** the following actors should be taken into consideration:

Higher educational actors:

- ✓ University of Szczecin, especially the Faculty of Economics and Management and the Faculty of Management and Economics of Services
- ✓ *West Pomeranian University of Technology in Szczecin*
- ✓ *Pomeranian Medical University*
- ✓ *The Szczecin Academy of Arts*
- ✓ *Maritime University of Szczecin*
- ✓ *The West Pomeranian Business School*
- ✓ *Technical University in Koszalin*

Local non-profit organizations and institutions

- ✓ Szczecin Incubator for Culture
- ✓ NetCamp Foundation
- ✓ Polish Entrepreneurs Foundation
- ✓ Zachodniopomorskie Stowarzyszenie Rozwoju Gospodarczego – Szczecińskie Centrum Przedsiębiorczości
- ✓ Technopark Pomerania
- ✓ Voivodeship Vocational Training Institution
- ✓ NOT Szczecin

Local governmental and municipal actors:

- ✓ Marshal Office
- ✓ City Hall

# PHASE 4 Offer

After drawing a list of potential partners the team should prepare an "offer" that clarifies the ways a partner can be involved in the implementation of the project. In the present formulation, "offer" refers to these opportunities and "ways to be involved" which can be offered to the partners. In order to define the offers, it is practical to divide the potential partners in the following categories:

**Teaching staff:**

Giving a lecture: It is useful to involve teachers and professors with extensive knowledge in management, marketing and innovation in the program to extend the general innovation knowledge of students through short lectures.

Mentoring: Similarly to professionals, teachers with theoretical experience can also give important feedback to students through direct interaction. It is particularly efficient if mentoring by an entrepreneur and a teacher is applied in combination.

Local SMEs and entrepreneurs:

Defining the problem: The opportunities and challenges of local economic climate and market. Entrepreneurs should be involved in defining the central problem as well as in filtering the student venture ideas; moreover, they may be requested to define potential entrepreneurial ideas.

Sharing experience: A teaching toolkit can be prepared for the purpose of a wider use of the educational activities carried out by the team, for which entrepreneurs may provide valuable input as well as feedbacks for already prepared teaching material.

Mentoring: The most efficient way of transferring knowledge is having direct, personal interaction between the entrepreneurs and the student. Mentoring may refer to team work incorporated in an academic course, to supporting a team participating in a university competition, and even to giving advice to a start-up (student) firm.

Other stakeholders:

Dissemination: It is an important element in the success of the program to raise the awareness of the program by the most stakeholders possible. In this respect, every stakeholder can contribute by advertising through their own communications channels. It is itself valuable information if they share the news about participating in the program on their online platforms.

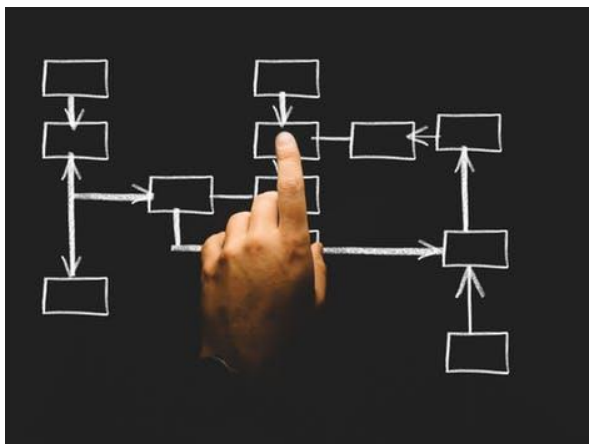
After the offer is completed, that should be sent out to the contact lists prepared in the previous sections. The following aspects should be considered in sending out the call:

Segmented message: As the partners in the team may have various, different motivations and interests, a one-size-fits-all general approach should be avoided. Instead, it is practical to send out the call by segments separated.

Personalized sending: The importance of personalization has already been emphasized, according to which it is useful to register the name of the internal contact person who has a direct (personal) relationship with a given member of the contact list. Instead of using the central email address of the project, each contact should receive messages or calls from this internal contact person.

Brief content: Although the program has a broad spectrum and numerous partnerships may be formed in the context of the team, it is still practical to announce only the most important message. It is enough to provide the details when it is clear who is actually involved in the project. Providing too long and complicated content, results in refusal without reading.

Monitoring the process: Establishing contact may take place via email, as well as social media channels. Whatever channels are chosen, it is important to ensure ongoing monitoring (opening rate, clicking rate, etc.), and, where justified, resend the message ("reminder"). It is useful to put a link in the first message to be used by those interested, thereby separating uninterested people (who opened it but did not click on the link) from unaware people (who did not even open it).



Now, the potential partners are invited to join the project and hopefully we received all feedbacks who will join and who won't. Based on the feedbacks, the interested stakeholders should meet, thus a kick-off meeting should be organized. The following topics must be covered by the coordinator team in the meeting:

- ✓ The aim of the project
- ✓ Brief description / introduction of members
- ✓ Brief description / introduction of frugal innovation – the previous research highlighted that a short introduction and discussion of frugal innovation is necessary for deeper understanding of the concept
- ✓ Presentation of the possibilities of involvement in the program targeted at frugal innovation
- ✓ Collection of attendant feedback
- ✓ Dedicating tasks for partners

A needs assessment should be sent out to the attendants of the kick-off meeting (and the ones who cannot attend but express their interest), in which they indicate their expressions of interest and the form of involvement. As the offers are presented in detail in the kick-off meeting, every stakeholder is aware of how they can take an active role in the project.

In order to record the ways of involvement approved it is practical to formally confirm an action plan. This document should include the following:

- ✓ The fact of and rationale for establishment of cooperation
- ✓ The name of involved parties and organizations
- ✓ The aims of the project
- ✓ The measures needed to pursue the aims of the project


- ✓ Signing this document offers a good opportunity for the involved parties to meet again and elaborate the practical implementation of the collaboration in the course of a final consultation before starting the actual educational activities.

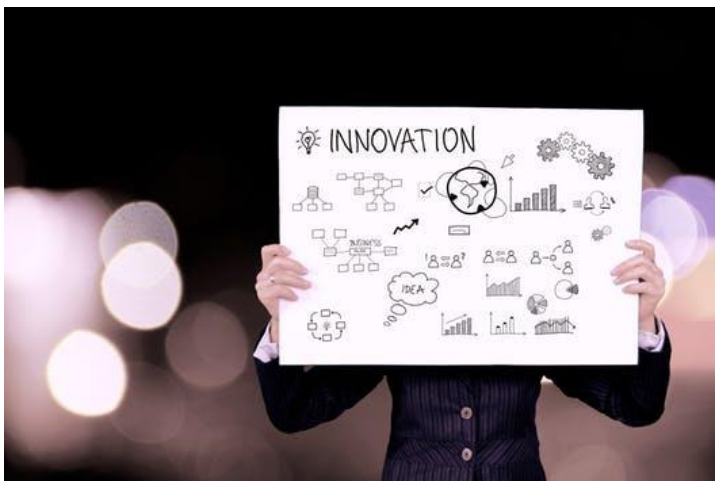
The formal establishment of the project can be followed by carrying out the actual activities fostering frugal innovation. This process can be divided into three sub-steps:

Recruitment: In this step, students, entrepreneurs and teachers (at HEI and VET) need to be informed about the frugal innovation program and the platform for application. Participants may be accessed via the following communications channels:

- ✓ Online interfaces (its website, Facebook page, Twitter channel)
- ✓ Online advertisement
- ✓ Encouraging the applied participants to share their own participation on their social portals
- ✓ Informing the management of each faculty through the central educational and/or marketing directorate
- ✓ Informing students in person (during courses) through fellow lecturers involved in the program

Education: This is the implementation of the educational program itself, which may take various forms, for example:

- ✓ Part of an existing course
- ✓ Online course
- ✓ Workshop
- ✓ Competition (for students and/or entrepreneurs)
- ✓ Summer school
- ✓ International Week course



## PHASE 5 Sustainability

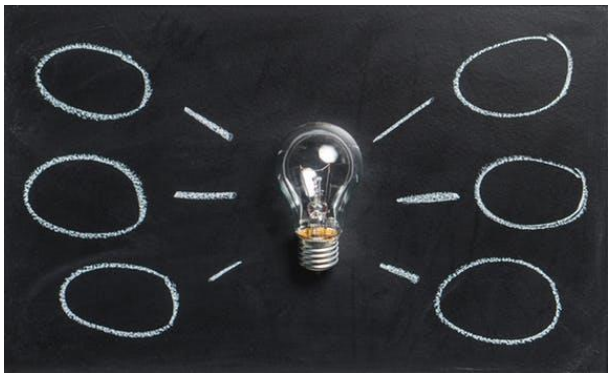
In the course of implementing the educational activities, an open and flexible attitude on the part of both the organizers and the participants is crucial. It is important to emphasize that there are no two identical programs, the outcome of a program changes in place and time, generally according to the specificities of the involved parties. This is the reason why the ongoing monitoring of the program is important.

The following measures may serve as a solution to the described challenges:

- ✓ Taking part in local events with the aim of promoting the program and frugal innovation mindset, as well as recruiting members.
- ✓ Joining other programs, projects and applications in the region where frugal innovation can be presented
- ✓ Promoting the educational elements using online media
- ✓ Including participants representation to the project to help strengthen the programs

Evaluation: It is essential to provide acknowledgment outside the scope of mere knowledge transfer to motivate the participants involved in the program. It may take place – depending on the implemented way of education – in the form of:

- ✓ Credit obtained for accomplishing the course
- ✓ Prize achieved in competition
- ✓ Document (certificate) verifying the completion of course



This regional action plan was elaborated on the basis of the concept developed by the University of Szeged (a partner in the project).