

Innovation Laboratory

– Good Practice Guide

Radom 2014

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The presented edition (II) constitutes an element of the 2012–2014 implementation of another Leonardo da Vinci project dedicated for development of the i-Lab concept, as well as for its implementation in the area of lifelong vocational education: *The Innovation Laboratories for the Quality Assurance of Vocational Education and Training (i-Lab2)*, 2012-1-PL1-LEO05-27430.

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Dorota Koprowska, ITeE – PIB

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Contents

Preface	5
Introduction	7
1. The innovation laboratory concept and possibilities of using <i>(Jolanta Religa, Katarzyna Skoczylas)</i>	11
2. Issues and instructions within the scope of designing the innovation laboratory <i>(Katarzyna Skoczylas)</i>	17
2.1. Environment	17
2.2. Additional Aspects	21
2.3. Technology	23
3. Role and tasks of the facilitator <i>(Jolanta Religa)</i>	27
3.1. Introduction	27
3.2. i-Lab Facilitator's Functions, Activities and Competences	28
3.3. Occupational Standard for i-Lab Facilitator	34
3.4. The Route to Becoming an i-Lab Facilitator	38
4. Information and Communication Technologies Supporting implementation of the session <i>(Tomasz Sułkowski)</i>	41
5. European innovation laboratories development projects <i>(Tomasz Sułkowski)</i>	45
5.1. European i-Lab Competences Development Programme (i-Lab), 2006–2009	45
5.2. The Innovation Laboratories for the quality assurance of vocational education and training (i-Lab2), 2012–2014	47
6. Case studies of using the i-Labs <i>(Tomasz Sułkowski)</i>	49
6.1. Case studies of University of Essex i-Labs at Southend and Colchester	49
6.2. Case studies of i-Lab Istanbul at Okalip Training and Conference	51
6.3. Case studies of i-Lab in Institute for Sustainable Technologies in Radom	54
6.4. Case studies of i-Lab in the University of Dunarea de Jos	59
6.5. Case studies of the i-Lab at the University of Rzeszow	61
6.6. Case studies of the i-Lab in the Saxon Education Company for Environmental Protection and Chemical Occupations Dresden Ltd. (SBG Dresden)	62
6.7. Case studies of the i-Lab in the Šolski Center Ptuj	63

APPENDICES **65**

- A.** *Brainstorming – the basic method of working in the i-Lab*
(Katarzyna Skoczylas) 67
- B.** *Icebreakers – examples* 71
- C.** *Detailed Information on Some i-Labs* 77



Dear Readers,

We invite you to find out about an exciting, innovative solution – i-Lab (Innovation Laboratory). You are the witnesses of another stage of development of its potential and resources in Europe.

If you are reading this Guide, probably you already belong to the group of i-Lab enthusiasts or you have met some of them and want to find out more about principles of their functioning and applicability.

This Guide to Good Practice aims at helping with:

- understanding the i-Lab essence and appreciating its potential,
- using the functioning i-Labs in an efficient manner,
- “getting hooked”,
- designing and creating one’s own i-Lab.

The original Guide (edition I) was developed and published in 2008 by the Partnership of the Leonardo da Vinci Project: *European i-Lab Competences Development Programme*. Cooperation of educational institutions from Great Britain, Poland, Greece, Romania and Turkey, coordinated by the Essex University, aimed at development of practice and promotion of the i-Lab use in entire Europe. A two-year project was successful as its scope enabled its effects to function also beyond the EC funding period. Under the project, three innovation laboratories were established and they have been operating to this day (in Poland, Turkey and Romania).

The Institute for Sustainable Technologies-PIB, enriched with experience from the above-mentioned project, took up an initiative that might provide further development of such an innovative technology as i-Lab. University of Rzeszow, Universita Duracea de JoS (Romania), The Saxon Education Company for Environmental Protection and Chemical Occupations Dresden Ltd. (SBG; Germany), School Centre Ptuj (Slovenia) joined the cooperation. In 2012, the application for the Leonardo da Vinci programme (Transfer of Innovation) was developed. It aimed at obtaining the European funds for implementation of an international project titled *The Innovation Laboratories for the Quality Assurance of Vocational Education and Training (i-Lab2)*. The project team managed to win the support of the assessing experts! According to the mentioned title, application of the innovation laboratories in processes of development of the vocational education and training quality constituted the idea of a new international

undertaking. Under the project, an innovative solution – i-Lab – was transferred to new European countries and applied within the area of vocational education. As a result of two-year cooperation of partner institutions, another four laboratories were established. Their resources were implemented in pilot sessions in Romania, Slovenia, Germany and Poland. The results of pilot implementations constitute one of elements supplementing and enriching the resources of the Guide to Good Practice.

In addition, development by the ITeE-PIB team of an original software Virtual BrainStorm (VBS) constitutes an exceptionally significant achievement. It is an alternative solution against the American software Facilitate.pro previously applied in i-Labs. The VBS software functionalities are strictly adjusted to the methodology of work in an innovation laboratory. Translation of its interface, under the i-Lab2 project, into English, Slovenian, Romanian and German significantly increases the capability of i-Lab popularisation in lifelong vocational education processes in the European countries.

Culturally and professionally diversified partnerships of both projects guaranteed the multitude of approaches and new concepts to use ideas and resources of the innovation laboratories. In addition, they contributed to their geographical popularisation within the European Community.

We wish you an interesting reading and inspiration for your own ideas of using the innovation laboratories. We hope that you will successfully apply, further popularise and promote them.

*i-Lab2 Project Partnership
October 2014*

Introduction

Although we have made an effort to prepare the Guide with maintenance of logical sequence, you can certainly peek into its different fragments in any sequence. This Introduction aims at helping you, dear Readers, with finding topics that you regard as particularly interesting.

The Guide consists of the following parts:

1. The innovation laboratory concept
2. For what purposes is the i-Lab applied?
3. Issues and instructions within the scope of designing the innovation laboratory
4. Role and tasks of the facilitator
5. Software supporting implementation of the session
6. European innovation laboratories development projects
 - 6.1. European i-Lab Competences Development Programme (i-Lab1), 2006–2009
 - 6.2. The Innovation Laboratories for the quality assurance of vocational education and training (i-Lab2), 2012–2014

The innovation laboratory concept

Section First of the Guide defines the purpose and intention behind the i-Lab concept as “inspiring, innovative convenience dedicated for users ready to move from their everyday environment to an unusual space stimulating creative thinking and problem solving”. Each innovation laboratory combines three elements:

- separated space providing with appropriate physical environment,
- software supporting a team working in the i-Lab,
- facilitator who can properly use the opportunities created by space and software in order to support any group using the laboratory resources, moderation of the decision-making process or problem solving.

This Section brings closer the i-Lab genesis and indicates some benefits resulting from its application.

For what purposes is the i-Lab applied?

Section Two provides an overview of the manner in which i-Labs can be used, together with some case studies. The case studies are particularly interesting: if an i-Lab is novel in Southend-on-Sea, how much more so is it novel in Istanbul – one client describes the experience in the single word “extraordinary”!

The case studies have been developed with the clients, so that they are the real thing.

These case studies demonstrate some of the different applications and illustrate why the i-Lab is so useful for these types of group meetings: showing how much can be achieved in a short time..

Issues and instructions within the scope of designing the innovation laboratory

In the Section Four, the project’s partner institutions present their experience concerning the i-Lab development in countries that are diversified in terms of culture and economy (Great Britain, Turkey, Poland, Romania, Germany, and Slovenia). They constitute the basis to give directions to everybody who plans development of its own laboratory. The section includes topics concerning:

- Layout, including: capacity, free space, breakout spaces, doors, entrance and disabled access,
- Décor, including: work stations, furniture, lighting, audio, changeability and gadgets,
- Facilities, including: whiteboards, projector and screens, air-conditioning, storage, catering, toilets and complying with regulations,
- IT, including: PCs, monitors, scanner/copier/printer, control, digital camera, conferencing, reliability of connection to internet and power supply and phone/VOIP.

Role and tasks of the facilitator

The facilitator’s function in the i-Lab requires not only “conventional” skills of the facilitator, but also the ability of the best possible taking of opportunities offered by the i-Lab. The project defined the required competences (expresses as the competence standard) and developed the facilitator training programme on its basis. Section Four presents both elements.

The i-Lab1 project partnership is exceptionally proud of the developed training course, which constitutes an experimental course conducted in the innovation laboratory with the “learning-by-doing” method that demonstrates techniques actually applied in the course of real i-Lab sessions. The training programme has been already applied at preparation of another group of facilitators.

Beyond the project, the i-Lab session facilitator's course is shared also by some partner institutions (Essex University from Great Britain or BCD from Turkey) based on commercial principles.

Software supporting implementation of the session

The software constitutes the third component of the innovation laboratory concept. It is concerned by the Section Five, including the information concerning the functions that the i-Lab software should have, as well as samples of the specific IT solutions applied in functioning innovation laboratories.

European innovation laboratories development projects

The last Section Seven presents shortly the undertakings that have significantly contributed to development of the innovation laboratories in Europe. It includes description of two projects completed under the Leonardo da Vinci Programme:

1. *European i-Lab Competences Development Programme (i-Lab1)*, UK/06/B/F/PP/162-564 (2006–2008)
2. *The Innovation Laboratories for the Quality Assurance of Vocational Education and Training (i-Lab2)* 2012-1-PL1-LEO05-27430 (2012–2013).

i-Lab 2
TRANSFER OF INNOVATION

1. The innovation laboratory concept and possibilities of using

Jolanta Religa, Katarzyna Skoczylas

What is an Innovation Laboratory?

An i-Lab (Innovation Laboratory) is an inspirational innovative facility designed to transport users from their everyday environment into an extraordinary space encouraging creative thinking and problem solving.

History of i-Labs

The i-Lab concept is based on a model created by Royal Mail's Futures and Innovation Group in Rugby, United Kingdom. Piloted in 1997 as a concept, Royal Mail's current facility opened in 2000.

The i-Lab's initial purpose was to provide simulated environments as a way of including new and potentially disturbing factors in organisational planning and to help management teams brainstorm future possibilities. However, in the process it became apparent that the interactions within the groups involved were often very effective in building team relationships, increasing openness and trust, and encouraging shared innovative thinking.

Therefore, the idea of an i-Lab has evolved to become a special place in which groups and teams can explore and extend their thinking beyond the normal boundaries of assumptions and constraints.

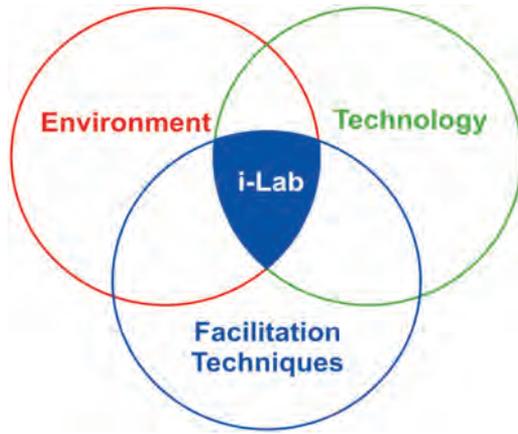
What makes the i-Lab different?

The i-Lab concept has three interlinking components:

- Environment
- Technology
- Facilitation Techniques

Environment

An i-Lab is created in such a way that the participants feel that they are gathering to work together in a dedicated space that in no way resembles their



normal working environment. The features which characterise it are privacy, multiple media for working; including whiteboard walls and technology to capture and process thoughts and ideas, and a distinctive design layout.

Ani-Lab can be decorated in many different ways to create a vibrant, inspiring and creative environment:



Technology

One of the many collaborative working tools in the i-Lab is the special computer software that gives many benefits:

- The group does not need to stop to write down their ideas as the software helps to capture their thoughts and plans as they work. The high-speed processing of their ideas helps to expand their thinking and gives them space to evaluate and agree on actions.
- Use of the software can be completely anonymous. This allows participants to share their ideas honestly and frankly, breaking down the traditional hierarchy and caution sometimes found in traditional meetings.
- It enables a large number of ideas to be generated, shared and recorded in a short amount of time.

Regular use of the i-Lab can encourage people to try different starting points and ask different kinds of questions.

Facilitation techniques

Facilitation constitutes the third element aiming at stimulation of the idea generating process through the use of environment, technology and the group work dynamics.

Competent facilitation of the i-Lab sessions ensures their efficiency and success achievement by a group. The applied techniques stimulate openness, creativity, as well as enable the group to achieve the results suitable for practical application.

Apart from session planning and conducting, the facilitator prepares the final report on the i-Lab work, including the list of submitted ideas and photos of entries on boards during the session. In this way, the user obtains an illustrated record of performed work.

The mentioned i-Lab elements are complementary; operate jointly to enable the users to “release” their skills and potential in order to find relevant solutions of a posed problem. The interior design itself – usually energetic and inspiring – allows the users to reject the bond connecting them with their typical working environment and refers to the childhood period when (as research shows) human creative potential is the largest.

For what purposes is the i-Lab applied?

The strength of the i-Lab is its proven and unique approach to innovative and creative thinking which lends itself to a wide variety of applications.

i-Labs constitute flexible spaces and are applied by various types of organisations and institutions. Enterprises (from small companies to large international corporations), public organisations, training and educational institutions (including universities), as well as charities successfully use the potential and convenience offered by the i-Labs.

The innovation laboratories constitute support for any team work, including among others planning (e.g. action scenarios), management (e.g. of changes, conflicts, projects), development (e.g. of strategies, products, services), mind mapping, organisation of consultation or focus groups, training and many others.

In addition, i-Lab is useful at integration of heterogeneous groups, for example at work of institutions hiring the personnel from different cultural environments, during implementation of international projects, social consultations and sessions with participation of business support organisation members.

An intensive environment

The i-Lab is an intensive positive place where lots can happen and much can be generated in a short space of time. For example a half day session in the i-Lab has continually shown to achieve the same amount of output as a more 'traditional' full day meeting. A one hour session in the i-Lab has been proven to be more ideas driven and results led than a normal weekly departmental meeting.

The i-Lab can enliven a traditional conference, by use of short sessions for small groups from the main delegation. A two day i-Lab session can generate a dramatically greater amount of output than weeks of traditional meetings, for example a 2008 session at i-Lab Colchester with local primary schools designed an entire new educational centre - including architect instructions, building contents and concept, floor plans, types of usage, and operational needs. The group were amazed by how far they had come, and what had been achieved in a total of 12 hours, over two days, in the i-Lab.

In the chapter 6 of the Good Practice Guide the case studies of real i-Lab clients were described. Below is a selection of comments giving a 'snapshot' of client feedback, following their time in the i-Lab environment:

"The result of the i-Lab session exceeded my wildest dreams! What would have taken a month of meetings was achieved in one very enjoyable day".

"It was a super environment which promoted brainstorming and sharing of ideas with colleagues on a particular focused project. Using the computers was great to quickly gather the views of the group. The i-Lab gives great possibilities on generating ideas and people's opinions".

"The venue, facilities and facilitation made for a most stimulating day. We were delighted about the extent to which the i-Lab environment generated our creative

juices and helped us come together. Your follow-up report was also very clear, succinct and prompt”.

“Just thought I’d drop you a line to say what a success yesterday’s session was. Everybody commented on how much they enjoyed it and how much they all got out of it. The facilitator was excellent and pitched the session perfectly to our individual needs”.

“The i-Lab is an inspiring and fun place to be. It’s almost a child-like experience where you forego any preconceptions about what you’re supposed to do and start from scratch”.

“The i-Lab allowed a number of people from wildly differing backgrounds, who hold wildly differing standpoints, to gather in an informal environment to discuss various options and understand where each other were coming from. In this way, it saved a great deal of time, and was also a lot of fun”.

i-Lab 2
TRANSFER OF INNOVATION

2. Issues and instructions within the scope of designing the innovation laboratory

Katarzyna Skoczylas

Partners of the project i-Lab1 have drawn on their experience of setting up i-Labs in four very different countries as the basis for advice to those planning to construct their own i-Lab.

2.1. Environment

Core Features

Innovation requires creativity and inspiration which are products of the subconscious mind, although they can be consciously encouraged by creating the right environment. An i-Lab needs to be (amongst other things) a space where people feel free, unthreatened and undistracted, away from others and away from the constraints of their normal environment. In order for people to feel at ease and able to think and create ideas, they should be able to move around easily, and should not be distracted by obstructions such as partitions, inner walls, columns or heavy furniture.

1. Layout:

a. Capacity

The optimum number of people for an i-Lab session is between 8 and 20. A capacity of 20 may be more commercially viable.

b. Free space

Columns should be avoided in order not to obstruct the free space, and to give clear sight lines around the room.

c. Ability to sub-divide the space

For large i-Labs, inner doors can be used to create different spaces. For smaller facilities, screens and curtains can be used for the same purpose.

d. Free-form or non-standard layout

An i-Lab should create a unique environment. Therefore the room's shape should ideally be unconventional, for example by removing the single focal point at the front of the room as would normally be found in a traditional meeting

room. This can be achieved, for example, by creating an oval or ellipse rather than a rectangle. If space or budget limitations do not allow a room without corners, trade-offs may be unavoidable. For an i-Lab with corners, the feeling of having a front of the room can be avoided by creative furniture layout.

e. Breakout space

In addition to the core i-Lab there should be a dedicated space for different activities, socialising and relaxation. This area should be used for activities such as ice breaking and should create a feeling within the user that they are free to move around. Ideally this area will be located adjacent to the main i-Lab.

2. Atmosphere:

a. Colour & Texture

The room should be substantially different from the user's normal working environment. The décor can be used to diminish the inhibitions we place on our subconscious, feeding it with a broad range of metaphors from which to develop new ideas, and so releasing our inner creativity. For example it may look young and fresh so as to subconsciously remind participants of their uninhibited childhood. This can be achieved by the use of bright and bold colours (known to stimulate creativity), different textures or could be designed around a theme (eg a space ship or a submarine research laboratory). This could also extend to the design and incorporation of almost every object used in the lab, including coffee cups, pencils and pens. Essentially, the style must promote creativity and innovation.

b. Furniture

I-lab has to serve groups with different numbers of people. The sessions may require different seating arrangements, such as in groups or rows. Computers are used in most sessions, so tables with niches for PCs are preferred. The use of laptop or tablet computers would be a further advantage. Preferably, the furniture should have changeable covers and/or configuration. This will enable i-Lab operators to change the feel of the room at a minimum cost by either changing the covers or moving furniture around. This is a good approach for creating a "wow effect" for repeat customers.

- Modular, non-rectangular tables which can be brought together to form a round table with PC stations,
- flexibility provided by lightweight and easy to move furniture,
- bright and bold colours,
- comfort and ergonomics,
- different from normal working environment.

c. Accessories/Toys

Toys which trigger creativity, such as Lego coloured pencils, crayons, coloured cutting paper and games such as "Snakes and Ladders" should be present especially in the Breakout area. Props for role-playing are also desirable.

3. Facilities:

a. Whiteboards, fixed or flexible

Rewritable whiteboards should be put up all around the room for writing and posting notes.

This can be created by painting or covering most of the walls with plastic material, or arranging sufficient whiteboards around the room. As many whiteboard surfaces should be created as possible.

b. Ventilation

Proper heating, cooling, air circulation and de-humidification are essential. The air conditioning should be silent in order to avoid any disturbance that would effect the quality of communication and creative thinking. The aim is to create a comfortable environment without distractions.

c. Printed material (newspaper/magazines)

During i-Lab sessions, users may want to go through old magazines for inspiration and for ideas as metaphors to assist their creativity and innovative thinking processes.

d. Storage

Storage and/or cupboards with high and deep shelves as well as drawers are advisable for storing paper and other stationery materials used during i-Lab sessions. By-products of previous i-Lab sessions may be stored here as well. Storage capacity should be similar to an ordinary office. Portable drawers and storage boxes are very useful to present new tools, toys or games to the participants and to clear and store them when an i-Lab session is over.

Flexible, movable storage also helps to vary the space and environment.

4. Hospitality/Catering:

a. Refreshments

Users should be free to drink tea and coffee etc. An area near the i-lab and the Breakout room should be provided for the provision of these and other refreshments during the session.

b. Food

For sessions lasting throughout the day availability of in-house catering is desirable.

c. Toilets

Toilet facilities should be available nearby for quick and easy access.

5. Insulation from distraction

Distractions from outside the i-Lab should be minimised as much as possible. Depending on the location of the i-Lab, noise insulation and curtains may be necessary. The Breakout room should have natural light if possible to balance the artificial light in the i-Lab. Long periods with only artificial light can affect the concentration of the users.

6. Accessibility (physical/sensory)

Access to the i-Lab, the Breakout room and all other facilities should be designed ensuring the needs of people with disabilities are met and in accordance with national legislation where applicable. I-Labs can enable people with disabilities to participate where otherwise their participation might be restricted.

7. Doors

Doors perform an important function in i-Labs, by providing a sense of entering a special environment. The psychological effect of doors closing in an i-Lab gives the participants the feeling that they are insulated from their normal environment and their normal daily life.

To minimise disturbance, doors may be kept closed during sessions and therefore, access should be controlled from outside, for example by bar-coded entry cards or keys. This is also important for safety and security reasons.

8. Regulation compliance

Rules and regulations for fire, health and safety standards, and disability and discrimination must be followed. These will vary according to the country in which the i-Lab is located, however here are some of the basics:

- Exit signs
- Fire extinguishers in visible and easily accessible locations
- Non sharp objects at entrances or exits

Desirable Features

1. Lighting:

- a. The ability to adjust lighting levels. This allows people's perception of time-of-day, and therefore energy levels to be influenced.
- b. Flexibility – ability to change light levels in different areas according to preference.
- c. The ability to synchronize lighting effects with music is also a desirable feature.

2. Music:

- a. Ability to operate internally within the i-Lab.
- b. Instrumental music recordings (CDs, MP3s etc.).

3. Access to Natural Light

Participants should ideally have access to natural light in the breakout space.

4. Striking entrance

A light effect could be used at the entrance to create a feeling of entering a special place (e.g. a space shuttle).

5. Changeability

Repeat participants should experience a change in the environment from previous sessions. This can easily be enabled by changeable furniture covers. It is preferable that the interior of an i-Lab be radically changed every 2–3 years although with changeable coverings etc., this may be extended by 1–2 years.

6. Ability to restrict Internet/phone access

External communication should be limited as far as possible, except for tele- or video-conferencing. To minimise external interference, use of mobile phones should be restricted where possible. Internet access should also ideally be restricted for the same reason.

7. Seating arrangement for groups

Island units for groups of 3-5 people are desirable.

There should be no front to the room to enforce the idea that this space is different to conventional rooms.

Ideally people should not be able to see each others' monitors from their own position – this adds to the anonymity, and encourages self-confidence.

8. Camera

Having a digital camera allows the whiteboards, other activities and products to be photographed. These photos can then be integrated into the report. These are useful when photographing timelines and large diagrams and lists.

2.2. Additional Aspects

1. Anonymity

In i-Lab sessions, especially those which incorporate brainstorming sessions, participants often prefer to have their ideas kept anonymous. This is often essential for the success of the sessions. The facilitator should be extremely sensitive to this, while contributing to a session. Software used as a support tool during the sessions should be selected with this in mind. Fortunately, almost all software products designed for this purpose have features which enable full or partial anonymity (Full anonymity being double blind, i.e. the facilitator does not know the provider of any input to the system. Partial anonymity enabling the facilitator

to trace the source of the input. In both options other participants do not know the input provider).

2. 'Post-it' note pads

Post-it or similar pads can be used widely, such as for casting votes or for proposing new ideas, etc.

3. Toys/Gadgets/Props

The process of creative thinking can be tiring for participants. Toys, gadgets and props not only help to refresh the ability of people to generate creative ideas, but can provide new metaphors on which to base new insights. A variety of toys, gadgets, etc should be used liberally in the i-Lab environment as well as in the breakout room. These could incorporate the logo of the i-Lab.

Examples include:

- stationery,
- lego,
- small puzzles,
- big-version games – e.g. snakes and ladders/jenga,
- finger puppets,
- fancy dress items,
- toy animals,
- musical instruments.

4. Ongoing facilitator development

The i-Lab should support the initial training and continuing professional development and lifelong learning with regard to i-Lab facilitation skills and techniques for their i-Lab facilitators. This will be supported through i-Lab Net. The quality of the results of each i-Lab session will be a direct reflection of the quality of the facilitator.

5. Supporting the facilitator network

Each i-Lab should ideally have a network of i-Lab facilitators available for use. However, individual i-Lab facilitators may work with more than one i-Lab. Facilitators should be able to offer their services through i-Lab Net.

6. Booking process

Booking an i-Lab is not merely an event booking. The i-Lab is not just a room and therefore cannot be booked in the same way as you would book a meeting room. An i-Lab session should be preceded by a planning meeting between the i-Lab facilitator and client in order to understand the objectives.

The process should flow as follows:

- enquiry,
- discussion of objectives,
- draft agenda,
- review with client,
- amendments,
- run session.

For a one-day i-Lab session an i-Lab facilitator can expect to spend half a day planning.

7. Reporting process

Once the i-Lab session is complete, a report is prepared for the customer. In order to do this:

- Photographs should be taken to show the outcome of each stage, such as design of the concept or the product, any drawings, text on whiteboards, etc.
- Information processed by the software (i.e. suggestions, voting results, etc) must be printed and kept in files for future use.
- A list of participants must be printed.

For a one-day i-Lab session an i-Lab facilitator can expect to spend another half day preparing the report.

8. Ability to deliver without technology

As successful i-Lab sessions can rely heavily on technology, it is important to have access to technical support during the session.

The Facilitator and the i-Lab should still be able to function without the facilitation software if necessary. Back-up options such as using the whiteboard, post-it notes, and other activities should be employed in such a situation.

9. Facilitator must be able to 'forget' technology

Whilst i-Labs tend to rely on technology (computers, projectors, lighting etc) the environment and technology should be easy to control, so that the facilitator can concentrate on other aspects of the session.

2.3. Technology

Core Equipment

All technology to be used in an i-Lab should be simple enough to be used by participants with only basic skills.

1. Computers

In an i-Lab, each user, facilitator and their assistant are equipped with ordinary PCs. These PCs are used together with software specifically developed for use in i-Lab sessions. The software is a support tool for many activities conducted in i-Labs such as brain storming, focus group activities, etc.

Having office software installed on the computers is not a requirement but does have benefits. Word processing software is required to produce and improve the format of reports. A microphone and speaker are also essential for external contact when needed. A webcam can be useful for video-conferencing.

2. Continuous power supply

Uninterrupted power supply units (UPS) should be an integral part of the basic infrastructure especially in countries with unreliable power supply. It will be useful both when there is a power cut and in the case of voltage fluctuations which can harm equipment.

3. Reliability of Internet access

Due to remote access requirements for some facilitation software and the need to view certain websites during i-Lab sessions, reliability of internet access is an important factor.

4. Projector and screen

A digital projector is needed in an i-Lab to project the output of the facilitation software to a screen or whiteboards. This enables all the participants to see the output of their efforts simultaneously and discuss them. They can also see the results on their own monitors. Additionally the projector and screen can be used to show slides and video clips to stimulate creative thinking. In i-Labs with bigger budgets, plasma screens can also be used.

Where possible, additional screens and projectors should be used around the room to prevent the feeling of being in a classroom or that there is a front to the room.

5. Digital camera

Digital cameras are an essential piece of i-Lab equipment. They are used to capture images of the notes or drawings and any output or models developed during i-Lab sessions. The alternative is to use expensive copying systems, which can be installed to rails extending to all the areas covered by whiteboards. This equipment can copy the images and provide print outs as needed.

6. Printer

Access to a printer is needed from within the i-Lab. The printer needs to be fast enough to produce copies for all participants and the facilitator within a reasonable time. A colour printer is desirable, but not essential.

Desirable Equipment

7. Plasma screen

Plasma screens can be used to increase the sense that the i-Lab is a high-tech environment, however they are expensive substitutes for standard projectors and screens.

8. Audio system

An audio system is necessary to play music and other ambient sounds, as well as sound attached to presentations, videos and DVDs. Audio helps to enhance the environmental control, offering stimulation and calming effects.

9. Multi-site functionality

Some i-Lab software operates on the Internet and enables several i-Labs to work in tandem. This alone makes it desirable to have telephone and teleconferencing facilities. Using VoIP is preferable to standard telephones as it reduces ongoing costs. Phones and VoIP also have other uses during i-Lab sessions or when the room is being used for another purpose. This feature is especially useful for institutions with offices situated around the country or the world.

Skype is the most popular VoIP available. Its tools are more diverse and reliable compared to similar products.

10. Wi-Fi network

Wi-Fi networks are cheap and easy to install. They also solve a number of practical problems in setting up, modifying and relocating an i-Lab. A Wi-Fi network is essential if an i-Lab is established with portability and mobility in mind. Even though it is not a requirement of an i-Lab, it is a very useful and cost-effective addition. Wi-Fi reduces the amount of cabling required for the installation of the i-Lab, and aids flexibility in usage of the space. However, Wi-Fi connections tend not to be as reliable as cable connections. Where a wi-fi network is used the security aspects should be considered.

11. Laptops and tablet computers

Laptop and tablet computers are often used in i-Labs. Although they are more expensive than ordinary PCs, they are helpful in generating a high-tech

environment, which is a benefit for an i-Lab. They are particularly useful in modular i-Lab facilities. Tablets are even more effective in giving the impression of a high-tech environment. Other benefits of tablet computers may be established once their use becomes more widespread. Although they are more useful, tablet computers are considerably more expensive than standard PCs and laptops.

12. Scanners and photocopiers

Scanners and photocopiers are present in virtually every office. Access to these may be useful in copying and saving documents and other material that is produced within a session..



3. Role and tasks of the facilitator

Jolanta Religa

3.1. Introduction

The i-Lab facilitator is more than a traditional facilitator, as their role within the i-Lab is more complex. They need a wider range of competences: the i-Lab facilitator will have expertise in using the i-Lab environment, software and technology, and understand the concepts behind them.

The i-Lab facilitator:

- designs the session to make optimal use of the additional facilities available,
- manages and runs the session using a variety of techniques within the unique i-Lab environment,
- produces a report of the i-Lab session.

The i-Lab Development Partnership project has identified the competences required by an i-Lab facilitator, and developed an appropriate training course.

The effective operation of an i-Lab brings together skills more conventionally found in two people: the facilitator and the IT support technician. Practice shows that these two roles can be combined and performed by the same person, although it is also common for there to be two people with complementary capabilities operating as a team.

This project has defined only the additional competences very specifically needed for running an i-Lab session – it does not specify the basic competences of the generic facilitator and IT support technician, as this has already been done by others. However, we should not forget that the i-Lab facilitator team will facilitate the brain storming and decision making process, as well as operating the software and the equipment.

One major objective of the project has been to develop and pilot a training programme for i-Lab facilitators. The training programme is competence based and depends on correct identification of competences needed in the i-Lab and the development of an occupational standard. The occupational standard is useful not only for the development of a curriculum but it is also a good tool for assessing and certifying the performance of someone who has developed the required competences informally through experience on-the-job.

3.2. i-Lab Facilitator's Functions, Activities and Competences

At the heart of this approach is the idea that competence means a recognised performance level in the workplace against an identified standard. It refers to not only the ability to use appropriate knowledge, skills and attitudes to achieve expected results in the workplace, but it also includes the ability to perform effectively in different situations, environments, and using different technologies.

The performance of the learner is assessed against the occupational standard:

- before the training to determine which competences already exist and which ones need to be learned (diagnostic assessment),
- repeatedly during the training to determine progress and areas requiring additional focus (formative assessment),
- at the end of the training to certify that competence has been achieved (summative assessment).

As occupational standards are about performance, the assessment needs to take account of the practical abilities as well as theoretical knowledge which is required for good performance. Moreover, assessment must look closely at how knowledge and understanding are combined with effective application in the workplace.

Functional analysis needs to be done to obtain data that can serve as the basis for occupational standard. Standards developers need to obtain specific detail about the functions that are performed in the occupation. Three basic stages were undertaken for the analysis of the i-Lab facilitator occupation:

- defining the occupation,
- identifying major functions,
- conducting a skills analysis.

Comprehensive and accurate data on the skills used by i-Lab facilitators could have been obtained through a process of analysing the occupation in a rational and structured manner. As the major technique for analysing an occupation is a structured group interview using people working in that occupation, the project team applied this technique by interviewing i-Lab facilitators who were also involved in the project. In the first stage a face-to-face group interview was organised in order to identify the functions performed by i-Lab facilitators, from approaching the client, and offering the i-Lab services, to administering the i-Lab and related budget.

A comprehensive list of the skills and functions required from an i-Lab facilitator was compiled following a face to face meeting with experienced facilitators and subsequent online discussion.

The following functions were identified:

- A. i-Lab professional functions:

- 1) Design i-Lab sessions,
 - 2) Facilitate i-Lab sessions,
 - 3) Introduce i-Lab to participants and guide participants through sessions.
- B. i-Lab administrative functions:
- 4) Manage budget and financial issues,
 - 5) Manage administrative issues,
 - 6) Market the services of the i-Lab.
- C. Technological functions:
- 7) Facilitate technology (operate appropriate i-Lab software),
 - 8) Trouble-shoot technology.

From this list of functions, three individual roles were identified:

- i-Lab facilitator,
- IT support technician,
- i-Lab manager.

Obviously these three roles have overlaps but it is clear that the i-Lab facilitator and IT support technician are crucial for operating the i-Lab and also have very specific competences whilst the manager practices common managerial and marketing competences using basic knowledge about i-Labs services. Consequently this project devotes more attention to the first two roles, condensed as discussed earlier into the title of “i-Lab facilitator”.

A second round of information gathering was developed by means of the software FacilitatePro when a special session was opened and participants were focussed on each aspect. All members of the project team logged on when convenient and contributed to the completion of the picture of the i-Lab facilitator.

Eventually with a new on-line session the project team gathered additional information about the types of evidence required for assessing the expected performance of the i-Lab facilitators:

FUNCTION 1 – Design i-Lab sessions				
Tasks, procedures	Outcomes Quality benchmark	Knowledge	Skills	Attitude
Collect information about the client and their needs for facilitation (about the topics of the facilitation session)	Identified needs and aims of the client	Environment knowledge Group activities/games Group dynamics	Communication (Written & Oral) Observation Matching information Active listening Setting-up environment for creative thinking Adapting to the client needs	Discretion / Trustworthiness Attention Enthusiasm Creativity Flexibility Self Confidence
Select games and group activities	Appropriate activities for the target group and the aim of the session			
Plan activities				
Prepare materials and equipments	Range of materials and equipments selected for specified session			
Ensure appropriate training for those who will implement the session	Common understanding of the implementation requirements			

FUNCTION 2 – Facilitate i-Lab sessions					
Facilitate generating ideas	Ideas produced by participants	Facilitation techniques Group dynamics Body language	Leadership Questioning Conceptualisation Systemic thinking Understanding non-verbal communication Ability to inspire Active listening Initiate conversation Giving feed-back Overcome blockages Keeping discussions on track Ability to steer the group on positive direction Ability to help the group to pull out solutions of a problem Giving feed-back Appropriate use of space and time	Confidence Self-control Controlling group activity Versatility Empathy Encouraging Personal integrity Objectivity Outcome oriented Timeliness	
Brain storming	Building on ideas generated by the participants				
Stimulate achievement of results	Participants acting coherently as unitary group				
Direct the course of events toward achievement of desired outcomes	Results produced and accepted by the participants				
Reports on sessions' outcomes	Realistic report	Reporting techniques	Oral & written communication Capacity for synthesis	Fairness Objectivity Clarity	

FUNCTION 3 – Introduce i-Lab and guide participants			
Introduce environment	Clients familiarised & comfortable	Environment knowledge Categorised customer information Ice-breaking techniques Acceptance by participants of rules of acceptable behaviour	Communication (Written & Oral) Matching information Active listening Facilitation skills Motivation Observation Operating the related technique and equipment
Sets the scene	Materials and equipments in place ready to be used		Enthusiasm Flexibility Creativity Sensitivity Self Confidence Trustworthy Sense of humour Charisma
Inform about facilities, ground rules and Occupational Health and Safety rules	Group ready to participate safely and confidently in the session		
Warm up the group using ice- breaker	Group ready to participate actively in the session		

FUNCTION 4 – Facilitate technology				
Operate the i-Lab software	Facilitation software	Comprehensive PC skills Team-working	Readiness Empathy Distributive attention Task oriented Result oriented	
Contribute to the implementation of i-Lab sessions				
Participate actively in the i-Lab sessions				
Assist participants in using technology				
FUNCTION 5 – Trouble-shooting				
Identify causes of technical problems	Knowledge about the technology used in the i-Lab Knowledge about uses of equipment Causes of troubles OHS rules	Operating the equipment	Attention Responsibility Care for participants	
Fix technical problems				
Maintain the functionality of equipment				

3.3. Occupational Standards for i-Lab facilitator

The data drawn from the occupational analysis is not on its own the occupational standard. The information collected about major functions and skill areas together with data on performance, attitudes, knowledge and procedures served as a base from which standards writers created the occupational standard for i-Lab facilitator.

The format of the occupational standard provides information to the learner, trainer and assessor. The standard sets out what a person should know and be able to do to perform well in their role, and represents the basis for a qualification. Due to the currently small number of i-Lab facilitators and the fact that project partner countries have different qualification systems that don't allow a single approach for certification of competence, the project team decided to allow each partner to use the i-Lab occupational standard in accordance with their own country's rules. The format of the occupational standard is British, and consists of Units of competence. Each unit describes the learning outcomes (**the learner will...**) and the assessment criteria (**the learner can...**). For each unit the project team proposes level 3 (according to European Qualifications Framework).

Unit title: (A) Design i-Lab Sessions/Conferences

LEVEL (*proposed*) 3

The learner will	The learner can
1. Understand and demonstrate how to explain how i-Lab sessions/conferences are planned and developed	A1.1: Explain to the client how i-Lab sessions/ conferences work (plan, activities, role, objectives, topics). A1.2: Present the advantages of using an i-Lab
2. Understand and demonstrate how to organise (design) an i-Lab session/conference	A2.1: Collect data/information about the client and his/ her needs for i-Lab facilitation in order to organise the session/conference. A2.2: Design a plan for the i-Lab session/conference, including working strategies and techniques, activities and games after consulting and agreeing with the client according to the group characteristics and requirements
3. Understand and demonstrate how to prepare the i-Lab and its facilities for an i-Lab session/ conference	A3.1: Ensure the room is set up to optimise the outcomes of i-Lab session/conference A3.2: Equip the facilities adequately with appropriate equipment and materials. A3.3: Set up the i-Lab appropriately for each session
4. Understand and demonstrate how to transfer information about a designed session/ conference	A 4.1: Ensure appropriate training for those who implement the designed sessions/conferences

Unit title: (B)Facilitate i-Lab Session/Conference

LEVEL (*proposed*) 3

The learner will	The learner can
1. Understand and demonstrate how to identify target individuals/groups, the duration of time and best-fit tools/activities	B1.1: Identify the individuals/group that needs to be involved in any decision making process. B1.2: Estimate the duration in accordance with the established session/conference topics. B1.3: Identify the best-fit tools/activities in order to facilitate the decision making process.
2. Understand and demonstrate how to achieve the desired results/outcomes	B2.1: Encourage participants to contribute to decision-making process through brainstorming or other tools. B2.2: Stimulate participants to act coherently as unitary group in order to achieve the desired result/outcome. B2.3: Direct the course of events toward achievement of desired results/outcomes. B2.4: Create a good, friendly atmosphere, open to any suggestions.
3. Understand and demonstrate how to record discussions/sessions effectively	B3.1: Use different tools (electronic or other methods) in order to record the development of the whole session. B3.2: Ensure the confidentiality and safety of all the recordings (gathered data).
4. Understand and demonstrate how to report results/outcomes to client	B4.1: Complete a realistic report reflecting the results/outcomes of the session/conference. B4.2: Give appropriate feedback to the client by summarising the results/outcomes to date.

Unit title: (C) Organise and Conduct i-Lab Activities for Stimulating Creativity

LEVEL (*proposed*) 3

The learner will	The learner can
<p>1. Understand and demonstrate how to organise the i-Lab activities in order to stimulate creativity.</p>	<p>C1.1: Select and use activities/games (ice breaker and reviver activities, puppets magazines, craft materials, musical instruments, Lego, etc.) which encourage participants to move around and do creative things.</p> <p>C1.2: Identify when a “block” occurs and find out ways to either explore or resolve it.</p> <p>C1.3: Encourage people to contribute more by being provocative, when appropriate, or relaxed, friendly and open minded.</p> <p>C1.4: Make combination of individual or group activities.</p>
<p>2. Understand and demonstrate how to implement the i-Lab activity in a creative and stimulating atmosphere.</p>	<p>C2.1: Estimate accurately the amount of time necessary for each activity, but keep a flexible attitude on this matter.</p> <p>C2.2: Present the methodology of an i-Lab session by giving clear instructions and by ensuring that all participants understand them.</p> <p>C2.3: Provide a variety of proposals in order to support all the activities involved in an i-Lab session.</p> <p>C2.4: Be flexible, as moderator, when interpreting the responses, and, if necessary, redefine some rules.</p> <p>C2.5: Amend the timing of an activity if appropriate.</p>

Unit title: (D) Use Specialised Software to Conduct i-Lab Sessions/ Conferences

LEVEL (*proposed*) 3

The learner will	The learner can
1. Understand and demonstrate how to conduct an i-Lab session using the specialised software.	D1.1: Use the software competently and show the participants how it works. D1.2: Manage brain storming sessions and use different voting mechanisms appropriately D1.3: Resolve ICT problems using her/his ICT and specialised software knowledge with calm and controlled manner.
2. Understand and demonstrate how to present the specialised software to potential clients.	D2.1: Demonstrate to the client how the specific i-Lab software works and what the advantages of using it are. D2.2: Provide simple demonstration sessions to potential clients.

3.4. The Route to Becoming an i-Lab Facilitator

Perhaps the key questions to answer here are “What is different about an i-Lab facilitator?” and “Why is any special training required?” The role of an i-lab facilitator goes beyond a typical facilitator’s role. An i-Lab facilitator manages the design and running and reporting of an i-Lab session including using a variety of techniques within the unique i-Lab environment. The i-Lab facilitator has to design the session keeping in mind the optimum use of the tools and technology available to be used in a range of activities throughout the session. An i-Lab session is always designed to meet the objectives of the client and a provisional agenda will be approved by the client. This will include a balance of large group, small group and individual activities. However the facilitator must be prepared to amend the agenda during the session according to way the session is evolving, participants reacting or new issues are arising. Although always having the client’s objective in mind the session may well twist and turn to allow new issues to be explored.

The route by which someone becomes a fully proficient i-Lab facilitator can be likened to an i-Lab session: you know where you want to get to but there are many ways of getting there. However, unlike an i-Lab session, the end of the journey is never reached, there is always something more to learn, whether from a more experienced i-Lab facilitator or perhaps from a participant who comes up with a good idea that can be used in a future i-Lab session.

Especially in these early days, i-Lab facilitators have developed their skills through a variety of routes and come with a variety of experiences and backgrounds. Some have been conventional facilitators or trainers; some come with an inherent interest in creative thinking and innovative ways of doing things. Some fall into it by accident, perhaps after seeing a successful i-Lab session and becoming an i-Lab enthusiast. Yet others come from an interest in the software or innovative interior design. The formal 2 day training may include trainees with a great variety of prior background and competence. So, the trainee may be someone who has barely experienced an i-Lab, or it might be someone who already has experience, perhaps by supporting an existing facilitator. The training however will present a challenge to all trainees, as people have to adjust to new flexible way of managing sessions with groups of people to reach a desired outcome. Indeed teachers and experienced trainers often have some difficulty in adapting their long held working practices to suit the flexible methods that are essential in an i-Lab. Other people may have difficulty dealing with the software, but whilst the training has been designed to equip people to carry out activities using brain storming software, it does not “teach” a specific software package or how to set it up. That needs to be provided separately and will depend on the specific software used by a particular i-Lab.

It was decided for practical reasons that the formal training programme should be limited to a two day training session. The session is in an i-Lab, practical and experiential, so that it provides examples of good practice. It is designed so that individual trainers can adapt the content and examples used to suit the particular group of trainees. As the trainees progress through the first day’s training they will experience for themselves elements typical of an i-Lab session, and then be given an explanation of why these activities are carried out in different circumstances. Ample time is given for discussion. The activities follow a topic chosen by the trainer and include icebreakers, individual software based activities, whole and smaller group work using the whiteboard walls, revival activities, timeline work, etc. As with an actual i-Lab session, all the products of the activities are recorded by digital camera and a record is kept of all computer activity.

At the end of the first day trainees have:

- experienced the various aspects of an i-Lab session,
- an understanding of why and when they are used,
- discovered the process of planning an i-Lab session and
- begun to learn how to deal with difficulties that may arise during a session.

The second day follows a completely different format. The trainees are allocated into groups who will plan and deliver part of an i-Lab session to the rest of the trainees. This commences with the trainees having a mock meeting with a “client”. As with a real client the trainees have to understand what it is the client wants from the proposed session and have to explain what an i-Lab session can

(and cannot) deliver to the client. Each group then plans a complete i-Lab session. A number of the planned activities are then carried out by the group with the other trainees acting as participants.

After completing the formal training, the next stage on the journey for most facilitators will be to co-facilitate an i-Lab session with a more experienced facilitator. This enables them to practise and develop their skills, continue to learn but not have the total responsibility for an i-Lab session until they are sufficiently confident. Of course in the project's case, starting i-Labs in three new countries, the trainee i-Lab facilitators have not had this luxury of gradual immersion, but have instead been 'thrown in at the deep end' to use their new i-Labs. i-Lab Net helps to fill this gap by providing a supportive community of i-Lab enthusiasts so that the isolated i-Lab facilitator is no longer alone.

Gradually the facilitator becomes more proficient, designing new kinds of activities themselves, using the software in a more complex way, discovering new ways to use i-Labs but always learning; the journey never comes to an end, it is a process of lifelong learning.

4. Information and Communication Technologies supporting implementation of the session

Tomasz Sułkowski

Technology is the third component of an i-Lab (in addition to the environment and the facilitator) and this relates primarily to the software. The software performs several functions:

- Enabling participants to contribute simultaneously (no need to wait politely in a queue to make a contribution, no danger of more assertive people crowding out or drowning out the contributions of other participants), maximising inputs in a given time;
- Providing anonymity and equal status to participants and their contributions so that people can be controversial or uninhibited, and even the lowest status person can contribute equally, unconcerned by what others may think;
- Enabling contributions to be built on, developed, re-arranged and manipulated in many ways (unlike writing on boards and sheets). The options available are the principal distinguishing features of different packages;
- Enabling contributions to be kept and easily re-used (for instance in a report of what happened).

In addition participants may be remote and still contribute fully to an i-Lab session.

The type of facilities provided by software packages include:

- Commenting on contributions already made (in text and with smileys or other emoticons);
- Assembling all contributions into a single list, changing their order, associating like with like, classifying them;
- Ranking contributions or voting on them in a variety of ways (e.g. “distribute 10 points between the contributions, you can give more than 1 point to a contribution”);
- Attaching actions, responsibility and deadlines to items, effectively building an action plan from the conference;
- Special facilities for the facilitator such as being able to: arrange/sort responses during the session, prepare additional agenda items, and direct the flow of participants through the conference.

While selecting the i-Lab software package, the following aspects should be taken into account:

- improvements for the participants
- improvements for the moderator
- software knowledge among other i-Lab users and moderators

In addition, the following factors affect the i-Lab software use:

- compatibility with various operating environments
- networking capacity
- equipment requirements
- compatibility with other software
- functionality with regard to requirements of the disabled people
- various language versions of the software
- access to specialised training within the scope of software service and administration

The software applied by the Project Partnership of the *European i-Lab Competences Development Programme (i-Lab1)* was delivered by Facilitate.com. Software packages constitute commercial packages, their form is still evolving, and thus it is difficult to describe all its functionalities. If you are interested, you may find out more on the manufacturer's website <http://www.facilitate.com>.

In the project, under which this Guide has been published (i-Lab2), the VirtualBrainstorm (VBS) software was applied. It was developed in the Institute for Sustainable Technologies–PIB in Radom for the needs of the locally operating Innovation Laboratory. Under the project, the software was extended by new language versions (English, German, Slovenian and Romanian) and shared with the Project partners for the needs of newly-established i-Labs. The software implementation was preceded with the training course for representatives of partner institutions, concerning the software service and administration.

VBS has been installed on the Institute's servers, while the access to it may be obtained via any Internet browser (www.multivbs.itee.radom.pl). The software distinguishes three user groups.

Administrator – manages all the users, establishes and removes sessions, assigns a trainer and participants to the selected session, has the rights of moderator and participant. In the system, several accounts of an administrator may function. Each of them has access only to the sessions and users' accounts that it has entered to the system on its own. Such a solution enables to share the software installed on one server with several institutions, while keeping the sessions confidential.

Trainer – has access to tools enabling opening and closing sessions, groups the ideas, defines the voting types, generates reports, and has the participant's rights.

Participant – participates in a brainstorming session by adding entries and comments, attaching files to sessions, participates in voting, and has access to final reports.

Brainstorm with use of the VBS software is conducted in three stages:

- 1) Registration of ideas. At this stage, each session participant enters its ideas. Depending on the software configuration, this stage may be entirely anonymous or each idea may be signed with a user login.
- 2) Grouping of ideas. This function is applied in a situation when similar ideas appear. Then, the trainer creates a group and collects ideas concerning one aspect of a discussed topic in it. Such a solution enables to avoid “dispersion” of points at the voting stage, which constitutes the last session stage.
- 3) Voting. Each participant may freely dispose the pool of points assigned to it. The software automatically calculates all the points, thus enabling the selection of solutions regarded by the session participants as solving a discussed topic to the highest degree.

After the voting stage, the software automatically generates four reports: Rating by ideas (ideas according to a number of scored points); Rating by idea groups (idea groups according to a number of scored points); All ideas (without consideration of scoring results); Ideas in groups (without consideration of scoring results). All reports may be exported to the PDF file.

i-Lab 2
TRANSFER OF INNOVATION

5. European innovation laboratories development projects

Tomasz Sułkowski

5.1. European i-Lab Competences Development Programme (i-Lab1), 2006–2009

The European i-Lab Competence Development Project has been supported by the European Commission Leonardo da Vinci Community Vocational Training Action Programme 2000-2006. The Leonardo da Vinci programme is part of the European Commission's Lifelong Learning Programme and is designed to build a skilled workforce through European partnerships

Background

The Innovation Lab (i-Lab) concept was first developed by the Royal Mail in 1998 in response to a need to look at problems differently and to develop an environment which promoted innovative thinking and creative decision-making. i-Labs are designed to encourage and facilitate creative thinking for a variety of groups and teams to help overcome traditional barriers such as hierarchy, politics and personalities, habitual thinking and assumptions, which can often prevent creative and innovating thinking.

As the University of Essex developed its first i-Lab in the Southend Campus, it identified the need to identify the competences needed by i-Lab facilitators, to understand the essential elements of i-Labs and to expand the uses of i-Labs. i-Lab facilitation is different to traditional facilitation and therefore facilitators require different skills and competences.

Aims and Objectives

The project aimed to:

- increase the uses of i-Labs by developing new and broader applications for them,
- identify occupational standards and training for facilitators,
- identify the key characteristics of i-Labs,

- establish an i-Lab users' network to disseminate best practice for i-Labs and facilitators.

Through the training of i-Lab facilitators the aim was to enable:

- businesses to improve decision-making, problem solving and action planning,
- help organisations to find creative and innovative solutions,
- empower more employees and improve participation by employers in the above.

Achievements

The project has created a collaborative partnership which has led to the following key achievements:

- New i-Labs operational in Poland, Romania and Turkey with increased interest for additional i-Labs,
- i-Lab Design Guide for use by future i-Lab developers,
- Occupational standards for i-Lab facilitators and associated training programme which will be offered by University of Essex, The Institute for Sustainable Technologies – National Research Institute, Executive Agency for Higher Education and Research Funding and BCD,
- A virtual network for use by i-Lab facilitators and hosts containing a wealth of best practice and experience to support not only future delivery of i-Lab facilitation but also new applications.

Partnership

The University of Essex led the creation of a wide partnership to delivery the project. The partnership consists of the following:

- University of Essex (UK) – Higher Education provider with 2 i-Labs;
- Cambridge Professional Development Ltd (UK) – private sector company with experience in managing and supporting European projects with expertise in initial and continuing development of professional expertise;
- The Institute for Sustainable Technologies – National Research Institute (Poland) – a state owned scientific and research institute with experience in international co-operation on scientific, research, development and implementation projects;
- Executive Agency for Higher Education and Research Funding (Romania) – the largest professional body in Romania in the field of Higher Education whose mission is the promote quality and innovation in academic research and to encourage knowledge transfer;
- Kavrakoglu Consulting (Turkey) – private sector company providing management consultancy and online business management training. Project activity was transferred to BCD in May 2008;

- BCD (Turkey) – new private sector company which provides management consultancy and online business management training;
- IDEC Ltd (Greece) – private sector company providing evaluation expertise to a wide variety of international projects.

5.2. The Innovation Laboratories for the quality assurance of vocational education and training (i-Lab2), 2012–2014

The Innovation Laboratories for the Quality Assurance of Vocational education and Training (i-Lab2) constitutes a two-year project (2012–2013) implemented under the Leonardo da Vinci: Transfer of Innovation Programme.

Its main objective is the improvement of the vocational education and training quality through the Innovation Laboratory application in didactical processes. This objective shall be achieved by:

- establishment of new laboratories in partner countries
- competences development concerning employees of newly-established Innovation Laboratories (trainers, coaches) within the scope of i-Lab application in didactical processes
- pilot implementation of the i-Lab in the practice of vocational education
- identification of new applications for the Innovation Laboratories in the vocational education and training.

As a result of the project, the target group of beneficiaries: teachers, trainers and managers of VET institutions shall acquire new competences within the scope of application of the ICT technology in the educational process. An indirect beneficiary group, students of vocational education, shall develop its creativity, innovativeness, skill of problem solving, team work, efficient use of ICT tools through participation in classes during which the i-Lab shall be applied.

Project outcomes

The outcome of the project implementation shall include mainly:

- four new innovation laboratories in Poland, Germany, Romania, Slovenia
- new language versions of the Virtual Brainstorm (VBS) software – English, German, Romanian, Slovenian
- 16 persons – employees of the partner institutions acquired new skills within the scope of preparing and conducting the i-Lab sessions
- The Guide to Good Practice updated with descriptions of new experience
- innovative methods of education and improvement

Project partnership

- Institute for Sustainable Technologies – National Research Institute (Poland) – Project Leader

- School Centre Ptuj (Slovenia)
- Saxon Education Company for Environmental Protection and Chemical Occupations Dresden Ltd. (SBG) (Germany)
- University of Rzeszow (Poland)
- Dunarea de Jos din Galati University (Romania)
- IDEC (Greece).



6. Case Studies of using the i-Labs

Tomasz Sułkowski

6.1. Case studies of University of Essex i-Labs at Southend and Colchester

The University of Essex has two i-Labs based at its Southend and Colchester centres. Since their conception, the i-Labs have become a proven key resource for University of Essex teams and students for away days, consultations, strategic planning, training, committees, focus groups etc. The i-Labs have become beacons for the University of Essex as a modern flagship venue and tool for networking, building links, knowledge transfer and partnership working with outside stakeholders. The i-Labs are a developing business in terms of clients both from inside the University and from outside businesses, not for profit, charitable and educational groups.

Case 1: A day of creativity sparks growth at Anglia IT Recruitment

Clive Thomas, MD of Anglia IT Recruitment (a small private sector business), came across the University of Essex's Colchester i-Lab during a meeting with the University's business development managers.

"Coming into our third year of growth at Anglia IT Recruitment, I felt we needed an injection of new ideas to support our strategic planning," Clive Thomas, Managing Director of Anglia IT Recruitment explained. "We normally hire a meeting room in a hotel for this type of thing and, although we are generally a creative group of people, we needed new enthusiasm for the task. I was also concerned that, as MD, I was dominating the strategic planning process and needed to find a way of allowing others to contribute ideas".

Anglia IT Recruitment hired the i-Lab based at the University of Essex's Colchester Campus for one day. They invited a marketing specialist and one of their clients to join the Anglia IT Recruitment team of 7. An i-Lab facilitator was hired to oversee the event.

"We generated over 20 ideas to improve our services to clients and improve our marketing", Clive said. "The brainstorming software was particularly effective in allowing all ideas to be heard and the facilitator was fantastic in facilitating a more democratic process. I felt I no longer had to be the one steering the ideas and I think others felt they could contribute more".

Ideas generated by the team included developing a new recruitment methodology called the Build Teams model and more innovative ways to market their business.

Clive emphasised the impact being in a different environment had on the team: “The i-Lab is an inspiring and fun place to be. It’s almost a child-like experience where you forego any preconceptions about what you’re supposed to do and start from scratch”.

Case 2: Scoping the Regional Cities East Manifesto

The ‘Regional Cities East’ Chief Executives Group met in the Colchester i-Lab to develop their thinking on the scope and role of Regional Cities East initiative.

Mike Crouch, Executive Director of Colchester Borough Council, reported that the comment from all five cities was universally favourable. Mike said “The venue, facilities and facilitation made for a most stimulating day. We were delighted about the extent to which the i-Lab environment generated our creative juices and helped us come together. Your follow-up report was also very clear, succinct and prompt”.

Case 3: Haven Gateway Partnership use i-Lab to prepare Consultancy Brief

In March 2005, Haven Gateway Partnership (a sub-regional economic partnership) appointed an external consultancy to write a tender document for the establishment of a ports and logistics academy, which would provide training needs and solutions to local businesses.

They therefore needed an opportunity to bring together a number of people from diverse backgrounds to brainstorm ideas for putting together a feasibility study that would form the basis for the tender document.

“We needed to get people from our partner organisations – such as universities, colleges, job centres and local businesses – to come together in order to air their opinions on what barriers there might be to the project and what potential benefits it could offer”, explained Richard Morton, Project Manager of Haven Gateway Partnership.

Whilst working with the University of Essex on other projects, Haven Gateway Partnership came to hear of the i-Lab at the University’s Colchester campus. “It seemed to fit the bill perfectly”, said Richard. “The session was ideal for preparing a brief for the consultancy that we appointed to write the tender document. The consultancy has used a great deal of the information from the brief, which came directly out of the i-Lab session. This information has therefore been absolutely

central to the finished tender document, which we are confident will be successful in winning us the contract to develop the academy.

“The i-Lab allowed a number of people from wildly differing backgrounds, who hold wildly differing standpoints, to gather in an informal environment to discuss various options and understand where each other were coming from. In this way, it saved a great deal of time, and was also a lot of fun”.

General conclusions on use of i-Labs by the University of Essex i-Labs at Southend & Colchester

The i-Labs have been used by a wide variety of groups from both within and outside the University. We have learnt and grown our skills from each session, perhaps sometimes adapting the i-Labs, buying new equipment such as Lego, puppets, musical equipment, and adopting new skills such as Edward de Bono’s ‘six thinking hats’ etc. We have also recently increased our i-Lab computer area from 12 to 16 work stations, to allow larger groups to use the facility. We also regularly combine use of the i-Labs with a seminar meeting of up to 60 guests, where we rotate smaller groups through the i-Lab for quick-fire sessions of one hour. These ‘snap-shot’ i-Lab sessions have proved very successful.

6.2. Case studies of i-Lab Istanbul at Okalip Training and Conference Centre

Okalip is a private enterprise which was established in 2005. The centre provides full services for seminar and conference activities. It has seminar rooms of different capacities, catering services, recreational facilities and provides technical support including materials and equipment.

The customer profile is composed mainly of private sector institutions. Two adjacent rooms, one rather small as compared to the prime one, was converted into an i-Lab in 2007 based on the invitation of KMI. These rooms have been used both as an i-Lab as well as traditional seminar rooms as it is not possible to use them solely as i-Lab.

As they are adjacent, it provides the ability to expand the space when it is needed to do group work after the brainstorming and voting sessions.

As Okalip does not employ any facilitators/trainers, facilitation has been provided by consultants who have been trained as i-Lab facilitators on behalf of KMI.

The following examples reflect successful cases.

Case 1: A Steel-Iron Casting Company: "Increasing Company Value"

The company is a client of KMI which receive both management consulting and executive training. The company have a target of going public in 5 years time. They were advised to use the i-Lab facility in Istanbul in order to brainstorm with the management team and the CEO on how to increase the company value.

As the participants felt comfortable in giving ideas due to the anonymity of Facilitate.com, the brainstorming session was very fruitful. The group voted and selected 4 topics which would help increase the value of the company, amongst which was the suggestion of converting the facility into a shopping mall.

During the second half of the day, the groups worked on these proposals and came up with lots of new interesting ideas. These topics were then assigned to 4 groups to work out the detailed execution plans. Both i-Lab rooms were used and writable walls were very effective as it gave lots of space for the team members. Teams then visited each other where presentations took place using the plans written on the walls. Movement of the groups between two rooms added a nice flavour to the atmosphere of the session.

The groups encountered two small problems. An area of the i-Lab which was intended to be used by a group did not have enough light, but by using the smaller i-Lab facility the problem was solved. A second minor problem (easily solved) was the white boards on the walls. Taking photos of the execution plans of the groups required using flash cameras. But as the walls reflected light, some pictures were difficult to read. This was solved by not using the flash.

The participants made positive comments on the anonymity feature provided by the software. To them this was a major advantage, that enabled all sort of ideas to be generated which, in a conventional seminar room would not be possible as the CEO and the board members were present.

Case 2: A Multinational Software Distribution Company: "Increasing Process Effectiveness"

The company needed improvement in their Marketing Planning and Implementation Process before their new marketing period began. As this improvement had to be fast, the company was invited to the i-Lab facility in order to work out the problem. A group of 20 managers from different departments who took part in the related process were first interviewed to grasp the main

sources of the problem and the i-Lab session was designed in order to find solutions.

In a one-day program, the group generated lots of new ideas and gathered related ideas on 4 major areas for improvement and worked on how to implement them. At the end of the day, an implementation committee was established in order to consolidate the ideas under these topics and turn them into an action plan. Indeed, this methodology had been used in an earlier consulting work for the same company but an ordinary seminar room was utilised for the action plan.

The i-Lab provided added value in two major areas:

- a) Generation of ideas had been much more fruitful and much faster;
- b) As time used more efficiently, more time was allocated for generation of execution plans and the results were more effective.

People who attended the i-Lab commented largely on the benefit of the software for both anonymity and for the use of electronic flipchart which sped up the process of brainstorming and voting. Writable walls were the other major feature they liked as they could write their ideas freely while establishing their action plans.

Case 3: Magic Talent Group

This non-profit organisation aims to improve self-awareness among well educated young people, so that they can be active in shaping their own futures so that they work in the fields they enjoy.

The group organised an activity in the i-Lab of Istanbul for young graduates and senior class university students between ages of 20-25 in order to come up with innovative projects. The group defined certain criteria for selecting the most innovative project and established a committee with executives from Microsoft Turkey and Google Turkey. The winner would be supported by sponsorship from the Magic Talent Group in order to put the idea into practice.

The participants were very much impressed with the atmosphere which brought them back to their childhood, especially with toys and other tools used. Although the participants did not know each other, and despite the fact that there was some competition, participants did cooperate because of the friendly environment created.

General conclusions on i-Lab use

Utilisation of the i-Lab had started soon after it was established and all cases proved to be satisfactory. People that attended found it interesting. After each session, further materials were added to the i-Lab, such as presentation rails, blank

newspaper pages and various toys which enriched the experience. Replacing the tables with modular systems also added extra flexibility for the design of the sessions depending on the size of the group as well as on the kind of activities to take place.

6.3. Case studies of i-Lab in Institute for Sustainable Technologies in Radom

The Institute for Sustainable Technologies – National Research Institute is a state-owned research and development institute situated in Radom, Poland. A symbiosis between research on advanced, high technologies and research on the work environment and vocational education has been created by the Work Pedagogy of Innovative Economy Centre, which is one of the Institute's departments.

Scientific-research and training activities of the Centre comprise, among other things:

- a methodological base for the development of vocational continuing education
- the vocational development according to the labour market requirements
- the implementation of activating methods
- new teaching methods and new teaching materials during the teaching process.

For many years, the Centre has also run experimental courses as well as organising national and international conferences. Therefore the idea of i-Labs very closely corresponds with the direction of our activities.

Case 1: The opportunities of using the i-Lab resources in the future activities of Institute

This was the first session in the i-Lab in the Institute for Sustainable Technologies – National Research Institute in Radom. The group were the employees of the Work Pedagogy of Innovative Economy Centre. The session subject was: The opportunities for using the i-Lab resources in the future activities of the ITeE – PIB.

After a short introduction on What is an i-Lab? The facilitator proposed a short icebreaker game to energise and motivate the group. When the group felt more comfortable and relaxed, the facilitator gave a short introduction about the software features (i.e. guarantee of anonymity), and afterwards presented the problem which would be the subject of the session: "What are the possibilities for using the i-Lab laboratory resources in the future activities of the ITeE – PIB?"

Participants carried out brainstorming on the above mentioned topic with the use of the Facilitate.Pro software. The result of this activity was a list of ideas and concepts. As the next step, each participant allocated points for the most valuable ideas in his/her opinion. In this way the group chose the 2 concepts with the highest number of points. The facilitator divided the participants into 2 groups and assigned one team to each of the chosen concepts. The concepts were 'drawing up new projects' and 'opportunities to express one's own opinions'. Participants carried out an analysis of strengths, weaknesses, opportunities and threats (SWOT) concerning each idea for using the i-Lab. Using the time line exercise, participants exchanged opinions in the relaxation area (they could say what they think about the session problem, and change their mind if being impressed or persuaded by the opinions from the rest of the group). This exercise enabled people to look at the issue from the point of view of others.

Evaluation of the session by the participants was the final point (expectations, impressions, opinions, etc.). Everybody was impressed and gave positive feedback.

Case 2: The business English lesson

For the topic of the session, a business case study was chosen which would involve brainstorming new product ideas.

The first part of the session was conducted in the computer room where the goal was to allow the class to use available technology to anonymously generate ideas, comment on others' input and finally vote on the best options. In the first phase, students immediately began posting their thoughts and enjoyed the system feature whereby entries were projected on the wall for the rest of the group to see which consequently sparked new ideas.

In the next phase, the class was free to comment on the gathered posts, previous entries were criticised, praised and additional ideas or modifications were entered. The anonymous feature of the system was very crucial here as students were able to focus on ideas and express their honest opinions without hesitation.

After voting on and choosing the best ideas, the class moved to the relaxing room where they were split into 2 groups. Each group had to prepare a presentation marketing their business idea. After adapting to the change of environment, the groups began putting together ideas for the project. Students were relaxed and openly shared their thoughts. This open communication was thanks to the mood previously set in the

computer room combined with the very informal setting of the relaxing room. Both groups came up with attractive presentations filled with original ideas.

Finally, after the lesson the class discussed and evaluated the i-Lab session. In general, students said that they enjoyed the lesson and had fun combining the facility's tools with their language skills. Some comments regarding improvement included use of ice-breakers at beginning of the session start and extending the time limit.

General conclusions on using the i-Lab

The Innovation laboratory in ITeE – PIB was designed and established in the framework of the Leonardo da Vinci Programme, in 2008. Therefore we are still new to the i-Lab concept and building our skills and knowledge in running and facilitating sessions. In this short time however, it is clear that everyone feels excited about the i-Lab, once they have experienced it!

Concerning the general specification for i-Labs, the innovation laboratory in Radom was created to be an extraordinary space encouraging and inspiring creative thinking. We have been pleased to see this key aim has been achieved through the first reactions to the i-Lab design and décor which were surprise and interest. The method of brainstorming is already well known as a useful meeting tool in Poland, but thanks to the i-Lab's special computer software, many new possibilities are available.

As well as the case studies described above, a number of short demonstration sessions for different target groups were carried out in the Radom i-Lab to promote its possibilities, potential and innovative approach. These 'taster sessions' included a visit of representatives from The Ministry of Economy.

Feedback from these sessions proved positive, with participants showing real appreciation and interest in the different approach to creative and innovative group working provided by the i-Lab concept.

Case 3. Innovation Laboratory in organisation of office processes

One of sessions organised in ITeE – PIB in Radom corresponded with the subject of education in the occupation of Economist Technician and concerned the office work organisation. That session aimed at selection of those elements of office work processes that required improvement, reorganisation, change or enhancement.

In the first part of that session, the participants used the brainstorming method to try to find an answer for a question: "Which product should be launched to improve the office work". The question

formulated in such a way enabled to define the areas within the office work processes that required improvement. However, at the same time, the session participants proposed some solutions of identified areas. That part of the session was finished with voting for ideas, which was supposed to lead to selection of three concepts that, according to the participants, were mostly solving the problem posed in the beginning. Three ideas were selected: 1) computer with a motion sensor, without the necessity of manual starting, turned on immediately after entering the office, 2) self-cleaning desk, 3) (office) equipment responding to voice instructions. The VirtualBrainstorm (VBS) software available in the i-Lab was applied to register the ideas and to vote.

In the second part of the session, the participants were divided into three groups. Each group received a task to develop and specify one of three selected ideas. That part resulted in posters presenting the benefits being a consequence of implementing the idea in practice, specific examples of application of an adopted solution, possibility of its implementation.

It should be noted that a part of proposed solutions (including the self-cleaning desk) may be regarded as far from reality and having nothing in common with a real process of office work. However, we did not want to limit our participants and impose on them frames within which they could move. It would be inconsistent with the i-Lab idea, while the participants would be afraid whether their ideas had a certain chance for being used in reality.

The session was ended with evaluation enabling to assess the i-Lab usefulness in the vocational education process. The participants paid attention mainly to a specific environment, which was nothing like a traditional classroom. It affected the imagination capturing and searching for non-traditional and futuristic solutions. Another factor emphasised by the participants was constituted by the software providing with the anonymity of statement. Thus, the fear of criticising or ridiculing the proposed solutions was eliminated. The participants enjoyed the dynamics of classes – in a short time, they used many educational methods and managed to develop specific solutions, which would be hard in the course of a traditional lesson. The session participants would very eagerly invite their colleagues to such classes and use the i-Lab against other subjects.

Case 4. Innovation Laboratory in the occupational orientation

In the second session organised under the project, the i-Lab was applied within the scope of occupational orientation of the last-grade students of the basic vocational school. That session aimed at designation of the future occupations and at definition of the scope of work in a given occupation, determination of usual occupational tasks, description of the path of education in a given occupation, as well as of a person working in that occupation. The i-Lab session corresponded with the cycle of activities aiming at helping young people with selection of a further path of vocational education.

That session was organised according to a traditional i-Lab activity scenario. After the first part of the session, including presentation of the i-Lab concept for the participants and performance of exercises aiming at group meeting and integration, the brainstorming stage was begun. It consisted in collection of answers to the question: "What occupations will be demanded in the nearest future?" That part of the session aimed at collection of the largest possible quantity of ideas of occupations to be searched for on the labour market. Approx. 40 diversified propositions were collected. Some included specific names of currently functioning occupations, others – very abstract at first glance, like e.g. "happiness ticket taker", "space guide", "undiscovered land guide" or "stress-free life organiser". Certainly, these occupations will probably not function in the nearest future on the labour market; however the analysis of all the proposals enables to define some areas, within which real paths of professional career may be searched for.

Such proposals as the above-mentioned "space guide", "undiscovered land guide", "entertainment organiser", "time machine expert" indicated that on the labour market one would search for occupations related to free time organisation or entertainment organisation. Occupations within this area have already been functioning on the labour market and it is possible to be educated within their scope. Another example may be constituted by the following occupation proposals: "family coordinator", "somebody who will deal with all official businesses on my behalf", or mentioned "stress-free life organiser", which indicate the already functioning occupations related to personal and professional consultancy. Some proposals concerned also healthcare and they corresponded almost entirely with the valid Classification of Occupations and Specialisations.

After the completed stage of idea collection, while voting, the participants selected three proposals of occupations, which, in their opinion, were mostly needed on the labour market: 1) happiness ticket taker, 2) psychical healer, 3) originator of quick money earning and wealthy

life. The third stage consisted in development of descriptions of the selected occupations. In groups, the participants defined what the representatives of such an occupation would do, what predispositions, skills and knowledge would be necessary for work in that occupation. The outcomes of that training part were presented in the form of posters.

The session was finished with evaluation, the results of which emphasised the following aspects of conducted classes. The participants enjoyed the fact that on allegedly “theoretical” classes they were able to use computers, which happened at school only during IT classes. Similarly to the previous session, the participants paid attention to the environment that affects positively the session participants, class dynamics and efficiency. Just like participants of the previous session, they would eagerly invite their colleagues to such classes and integrate the i-Lab permanently into the vocational education process.

6.4. Case studies of the i-Lab in the University of Dunarea de Jos

The i-Lab innovation laboratory in Galati was established on the Department of Computer Science and Information Technology from the Faculty of Automatic, Computer and Electrical and Electronic Engineering. The main educational purpose of the Faculty is constituted by provision of institutions, regional and national companies with the access to highly qualified graduates. Scientific research concerns mainly IT&C Assisted Education, Artificial Intelligence, Data Mining, Human-Computer Interaction and Advanced Web technologies. The Faculty conducts close cooperation with vocational schools, as well as offers qualifying courses for teachers with the agency of the Continual Training Department. Close cooperation with the business environment enables the team to adjust its educational offer to the needs of local business entities. The innovation laboratory on the Faculty operates in order to provide teachers and local entrepreneurs with the access to innovative solutions that may be used, among others, within the scope of improvement of their professional qualifications.

Case 1. IT technologies for people with disabilities – new tools and services

The session was attended by nine students of the IT field and it corresponded with the theme of subjects related to the computer application design. The i-Lab session took two days and aimed at finding new ways of helping people with disabilities through development of computer applications that may be implemented in practice. The session included three separate stages: preparation of the session, the actual work session, and analysis of the results. As the participants had no experience within the scope of cooperation with people with

disabilities, at the first stage of the session there was conducted the presentation of the main types of disabilities and existing applications on the market, dedicated for persons with different types of disability: intellectual-learning disabilities, sensory-visual impairments and physical-mobility impairments. Then, the facilitator defined purposes of the session, ideas and methodologies of work in the i-Lab, principles of using the VBS software.

The session was anonymous, thus enabling the brainstorming session participants not to feel limited and to present approx. 30 various ideas. Due to the diversity of proposed solutions, ideas were not grouped, but the stage of selection of the most promising concepts was commenced. In the voting, six ideas with the highest score were selected and submitted for further analysis. Two ideas described in detail were chosen with the Formal Concept Analysis (FCA) method: 1) mobile device able to read bar-codes of products on a supermarket shelf, i.e. a tool for autonomous shopping for blind or mobility-impaired persons 2) programmable integrated circuits (PICs), along with infrared sensors to guide motorised wheelchairs over black stripes, drawn on the sidewalk, near bike trails.

Case 2. IT among the high school students

That session aimed at definition of actions that should contribute to an increased interest of the youth in the IT use in education, thus contributing to improvement of their IT competences. The session was attended by the Computer Science students. Its results were to be applied to improve the vocational education quality through modification of the curriculum at that faculty and its adjustment to the current needs of the educational process participants.

At the brainstorming stage, approx. 30 ideas were collected, which constituted mostly the proposal of integration of new topics into the educational process, development or modification of those already existing. In voting, two ideas were selected as regarded by the session participants as the most important and the most urgent for implementation: 1) replacement of current courses that have no practicality with new ones useful and popular (like, programming Android / iOS, embedded technologies) 2) organisation of programming contests whose prizes would be interviews with various IT employers

In the opinion of the session participants, use of the i-Lab environment stimulates creativity. The VBS software simply records all the ideas, but also enables to specify the best solutions. Results obtained

in this way may be developed with use of known statistical methods, which leads to receipt of more detailed data concerning a researched area. Participants emphasised an unusual interior design that was beneficial for quick mind regeneration and efficient group work.

6.5. Case studies of the i-Lab at the University of Rzeszow

The University of Rzeszow was established in 2001 as a result of a merger of the Teacher Education School in Rzeszow, Maria Curie Skłodowska University – Rzeszow Branch and the Faculty of Economy of the University of Agriculture in Krakow.

The University conducts professional courses preparing the students for the modern labour market, preparing the teachers for the modern educational system, including the system of education of the European countries. It offers education on the highest European level.

The University proposes the wide selection of bachelor, master and postgraduate studies, specialised and supplementary training. It conducts an ongoing cooperation with local vocational schools and enterprises.

Case 1 – The Dream House

The classes were attended by the third-grade students of the secondary technical school of construction. The House of the Future was their topic. While using their knowledge of modern construction, materials and technological solutions, the session participants tried to create their dream house. After short introduction to the subject, students started an anonymous submission of ideas. The proposed subject aimed at organisation of the students' knowledge concerning modern construction materials, technological solutions applied in modern construction, as well as at search for new solutions, proposal of materials with specific, so far unseen properties, definition of conditions to be met by a hospitable house.

Among many submitted ideas, the session participants selected two of them that constituted the basis of further works and considerations.

Case 2 – The Car of the Future

That session organised for the third-grade students of the secondary technical school of motor vehicle engineering concerned the car of the future. Being aware that students participating in the session have a great knowledge within that scope, the facilitator tried to manage the session in such a way that its participants would use the best solutions

from modern car models and “compose” the car of the future on that basis. The ideas submitted during the session were not limited only to use of the existing solutions within the area of security, drive unit or control systems. Many proposals concerned changes or modifications of existing solutions. The best ideas selected by the participants were presented in the poster form.

Participants of both sessions assessed very positively the activities they had attended. The most often mentioned positive aspects of the i-Lab session included the atmosphere beneficial for creative work and team work, methods of conducting the i-Lab activities, environment so much different than the school one, affecting general wellbeing and learning process. Many session participants believe that the same effects would not have been achieved during a traditional lesson.

6.6. Case studies of the i-Lab in the Saxon Education Company for Environmental Protection and Chemical Occupations Dresden Ltd. (SBG Dresden)

SBG is a private non-profit institution with almost 25 years of experience in the German Dual VET system. It runs its activities within the scope of organisation of first professional training, advanced training and retraining courses. Core branches are the chemical and the waste management industry. SBG organises also training for painters and florists. Each year more than 400 apprentices and more than 150 managers (i.e. certified specialists in the field of chemistry) are trained at SBG.

The SBG established the i-Lab in 2013 and the beginning of 2014. i-Lab is split in two separate rooms. One of them functions as a relaxing room designed like the forest, while the second room constitutes a place for organisation of the brainstorming sessions. The session room is equipped with laptops and relevant furniture. The SBG trainers can function as facilitators.

Activities aiming at improved quality of education

Two organised sessions aimed at identification of measures to be undertaken in order to improve the quality of organised vocational training. The first session was attended by 13 VET trainers, while the second session was attended by eight training participants and apprentices.

A priority of both organised sessions was constituted by collection of the highest possible quantity of proposals concerning actions that should affect the quality of the vocational education process. For this reason, most of the time planned for sessions was dedicated to the brainstorming stage. In this way, many proposals of solutions were collected, but also the VBS software was applied

for development of selected ideas. The session participants treated the posed problem within a very broad scope, as the significant part of proposals concerned changed conditions and working hours of trainers and lab technicians, the scope of tasks and duties of the SBG employees, motivation for work, educational offer – its validity and methodology of preparation. In voting, the session participants selected the ideas they regarded as having the largest impact on the educational process quality. The selected ideas, as well as other submitted during both sessions, were transferred to the company management. In the course of further proceedings, they shall be analysed, and some of them shall be implemented.

The session participants were surprised with the software utility, enabling to collect so many various ideas concerning one problem. They emphasised the easiness of the software use, its universality and applicability not only during the i-Lab session. It should be emphasised that a part of ideas recorded during both sessions concerned the i-Lab implementation in the vocational education process, which had already been done. The session participants enjoyed the i-Lab environment, which made them feel relaxed and able to concentrate on an analysed problem due to its originality and design.

The promising results of the first sessions and positive opinions of their participants disposed the SBG management to integrate the i-Lab into undertakings conducted together with local entrepreneurs and the Technical University in Dresden.

6.7. Case studies of the i-Lab in the Šolski Center Ptuj

Case 1: Establishing a supportive environment for business incubator

The session was attended by students of the final year of programs mechatronics, computer technician and electrical engineer. The session corresponded with the cycle of measures aiming at preparation of the vocational education graduates for functioning on the labour market. At the first stage, the facilitator presented the i-Lab2 project and rules to be observed during the i-Lab session. Then, the exercise was organised for a group to get to know each other and integrate. It was a discussion on the importance of the participants' names. At the next stage of the session, participants were identifying the environmental elements beneficial for the development of entrepreneurship in the brainstorming process. They had 15 minutes to present their ideas related to a given subject. That stage was very fruitful due to anonymity provided by the applied software. Participants presented many ideas in a very short time. The next stage of the session was voting, during which the group chose ideas it regarded as the best. Each participant had at its disposal 10 points to freely split among all the ideas. After voting, participants

moved to room 2, where they were split into three groups. Each group was extending one of three best voted ideas. First two, top rated, ideas included visiting enterprises and introduction of entrepreneurship as a school subject.

Case 2: How to encourage entrepreneurial mind-set among the vocational school students

The second session concerned the similar subject and was experimentally held at a distance. The participants' profile was similar as in the previous session: students of the final year of programs mechatronics, computer technician and electrical engineer. Participants were to log in from their homes to the VBS software at a specific time and give several answers to the question concerning the way of encouraging entrepreneurial mind-set among young people. There were 15 ideas in all, while at the next stage the participants selected one idea in voting: visiting the entrepreneurs and their companies, to be implemented by the Centre management in the following years.

The main problem of that session was constituted by poor quality of some internet connections, therefore participants were trying to log in to the system for several times. Despite that, the session was very fruitful: a series of ideas was generated and should be applied in the future in organisation of the vocational education process within the scope of preparing young people to enter the labour market or start their own business activity. In addition, the session confirmed that the VBS software without remaining elements of the i-Lab environment may be applied in the vocational education process.

General conclusions concerning the i-Lab application

Persons participating in the i-Lab session regarded them as a very interesting experience. The i-Lab equipment, including various didactical accessories, white magnetic boards, is a great convenience during the group work. An original interior design makes an impression of being separated from the school reality, thus contributing to creative and unencumbered work. The VBS software enables collection of many ideas in a very short time, which is very difficult with use of traditional methods. Moreover, the anonymity provided by the software makes the i-Lab session activities less stressful. The session participants, when asked for a brief summary, stated that they were surprised by its efficiency and free atmosphere beneficial for creative thinking.

APPENDICES

i-Lab 2
TRANSFER OF INNOVATION

Brainstorming – the basic method of working in the i-Lab

Jolanta Religa, Katarzyna Skoczylas

Creativity constitutes an indispensable element of the decision-making process in business, as well as a basic determinant of creative management. In terms of an organisation, creativity manifests itself in creation of new solutions (innovations) in the process of work.

An innovation is introduction of new, improved ways of taking actions in order to improve functioning of an organisation as whole.

In the literature, one may find many proposals of techniques aiming at decision making and creative problem solving. One of them consists in encouragement of team members to question and criticise an opinion that dominates in a group, even if it calls the management's position into question. However, this proposal is difficult for implementation, as people do not like to be criticised. Thus, they do not want to perform the role of "nit-pickers". Therefore, neither one side nor another would feel comfortable. A solution may be constituted by assigning the role of *advocatus diaboli* to some participant of a discussion. It consists in searching for blind spots of all the solutions presented in a group. However, one should keep in mind that this role should be assigned always to a different person, so that a group does not eliminate a "malcontent"¹⁾.

Another proposal is applied in some Japanese companies and it consists in the sequence of statement, starting from the lowest-rank employees and ending on the manager. This method enables to avoid being driven by opinions of the higher-rank employees. However, a different status of group members may constitute an obstacle in conducting such a discussion, as it is less efficient due to extreme differences among ranks of discussion participants. The higher-rank employees talk more often and more than representatives of lower-rank positions in a company. The lower-rank persons address their comments to the higher-rank persons. The higher-rank representatives believe that the lower-rank persons talk too long. Therefore, one proposes a discussion in subgroups with similar status, and then a joint meeting in order to agree on a final solution²⁾.

In her book, Barbara Kożusznik proposes that team members should consult with trusted members of another group, and then present the results of this consultation in front of their own group. This should prevent a team's separation from the external information and opinion – one of the factors contributing to the group thinking³⁾. Tadeusz Tyszkowski proposes regular invitation of guests from beyond

¹⁾ <http://chaber.wikidot.com/blog:3> [access 23 April 2014]

²⁾ <http://chaber.wikidot.com/blog:3> [access 23 April 2014]

³⁾ Kożusznik B., *Zachowania człowieka w organizacji [Human Behaviour in an Organisation]*, Polskie Wydawnictwo Ekonomiczne, 2014.

a group, even if they are not experts in a given field. This provides with a broader view of a discussed issue. Establishment of two or more competitive teams having the same tasks to solve constitutes another idea. Competition forces a group to search for the most optimal method of objective accomplishment⁴⁾.

Dutch sociologists have noticed that an increased individual responsibility for a result of collective work forces the team members to make more reasonable decisions. Unfortunately, such a method would work only in male groups. As Tadeusz Tyszka proposes, at the stage of group establishment, it should be diversified in terms of personal characteristics; thus, one should select at least one person that is less popular among the rest of members, has a sceptical approach to ideas proposed by a group and does not hesitate to criticise them⁵⁾.

Brainstorming is probably the simplest method, understood as the process of generating ideas, in which each proposal of a solution is treated with special attention, refraining from criticism. A group leader should present the issue in the way understandable for each discussion participant and see to noting down each proposed solution e.g. on a board, in the form of a material for further debate and analysis. Thanks to this, group members start to think out of the box. During the brainstorming, the "idea chain" phenomenon is frequent – one presented idea leads to other suggestions related to it. However, it may lead to the "productive blockage", when one meeting participant talks too long, making it impossible for others to present their ideas.

Brainstorming is one of the known methods of searching for new solutions. Alex Faickney Osborn, an advertising specialist, started to work on methods of creative problem solving in 1939. He was unsatisfied with employees who were unable to propose creative ideas on their own, which were required to create promotional campaigns. As a response to this issue, he started to organise group thinking meetings and observed a huge improvement in terms of quality and quantity of concepts generated by his employees. Osborn described the brainstorming method in the 1953 book titled *Applied Imagination*.

According to Osborn, brainstorming should be applied in the event of a specific question or issue – when there are more questions, this method may appear to be inefficient. Brainstorming is applied to generate the largest possible quantity of creative ideas concerning solution of a selected task or issue. This method is particularly recommended in searching for solutions of issues occurred at implementation of the quality system. In addition, one should keep in mind that solving a given issue with the brainstorming method requires inventiveness, intuition and imagination, instead of criticism. General brainstorming principles

⁴⁾ Tyszka T., *Psychologiczne pułapki oceniania i podejmowania decyzji [Psychological Traps of Assessing and Decision Making]*, GWP Gdańskie Wydawnictwo Psychologiczne, Gdańsk 1999.

⁵⁾ Tyszka T., *Psychologiczne pułapki oceniania i podejmowania decyzji [Psychological Traps of Assessing and Decision Making]*, GWP Gdańskie Wydawnictwo Psychologiczne, Gdańsk 1999.

include free imagination, providing the largest possible number of ideas, no criticism⁶⁾.

Free imagination causes that one submits extravagant, unusual, innovative ideas, which constitute the brainstorming essence. The more features like those characterise an idea, the better: even an unrealistic idea may lead to quite a useful solution.

The largest possible number of ideas is important, as the more the ideas are there, the more probable finding the best one is. In the course of brainstorming, apart from submitting one's own ideas, it is possible to improve other concepts, develop the previous ones and connect several of them to get new, better solutions. The ideas cannot be criticised.

Avoidance of a critical assessment during development of new ideas constitutes the most important brainstorming principle. Criticism shall occur later on – during an assessing session.

According to Osborn, two rules have particular significance in terms of the brainstorming efficiency: first, one should rely on assessment; second, one should strive for the largest possible number of ideas. While observing those rules, Osborn formulated four main principles of the brainstorming, which aim at elimination of blocks at participants, stimulation of the idea generating process and increase of general team creativity. They are as follows:

Focus on quantity – this principle means that the largest possible quantity of generated ideas constitutes the most important issue during problem solving. Then there is a better chance that one shall manage to find a reasonable and efficient solution of a selected problem.

Withhold criticism – in the event of brainstorming, one should wait with criticism for a stage at which the experts join the work. Based on this assumption, the participants shall freely share their ideas⁷⁾.

Welcome unusual ideas – new ways of thinking may result in better solutions. It requires looking at a problem from a different perspective, to introduce new assumptions, etc⁸⁾.

Combine and improve ideas – several good ideas may be combined in one, following the rule: 1+1=3. The idea creating process may be stimulated with use of associations.

⁶⁾ <http://chaber.wikidot.com/blog:3>[access 23 April 2014]

⁷⁾ Osborn A.F., *Applied Imagination: Principles and Procedures of Creative Problem Solving* New York: Charles Scribner's Sons, 1953.

⁸⁾ Osborn A.F., *Applied Imagination: Principles and Procedures of Creative Problem Solving* New York: Charles Scribner's Sons, 1953.

According to the results of conducted research, brainstorming may be very effective. However, one should keep in mind that there are factors that may adversely affect its efficiency. They include, among others, presence of a dominating personality at the first stage, too much ambition of some participants, participants who do not let others talk, low openness for ideas of experts who assess them, participants who easily change the subject to the one unrelated to the task⁹⁾.

Brainstorming aims at creation of the highest possible quantity of solutions of a presented problem. Work in a group, within which it is possible to use more broadly the potential of knowledge and experience of particular team members, is favourable for this situation. People working in a group become more creative, thus enabling discovery of innovative solutions. Brainstorming puts particular emphasis on the number of ideas, not on their quality. Alex Osborn, creator of the brainstorming method, thought that at least several ideas among many submitted ones should appear to be valuable. The brainstorming session includes three main stages: introduction, idea generation, completion. Application of this method to search for new solutions is not something new, but together with its development there has been created many IT tools supporting implementation of this method. Combination of the latest computer solutions with verified methods of team work brings positive results on the path of stimulating creativity, searching for innovative solutions appearing in various areas of human activity.

The group work method applied in the innovation laboratories, aiming at improvement of group decisions, is based on the brainstorming method known for many years. Appropriately constructed software is an element constituting an advantage of the solutions applied in i-Lab. After presentation of the issue, participants enter their ideas, further comments and proposal assessments on the screen. Ideas, any doubts concerning proposals and voting results are displayed on the projection screen in the room. Main advantages include anonymity, honesty and speed, as it excludes chats, limits digressions and allows everybody to speak simultaneously.

⁹⁾ <http://chaber.wikidot.com/blog:3>[access 23 April 2014]

Ice breakers – examples

Ice-breakers are a useful tool not only in all facilitated sessions, but are particularly useful in the i-Lab environment. There are many types of ice-breakers and some are more appropriate to the i-Lab environment than others. Please find some selected, tried and tested examples below. Further ice breakers can be found on the website.

1. Ice-Breaker title: People Bingo

Resources required: Preparation time prior to i-Lab session to collate responses and prepare 'bingo card'. Photocopied sheets and pens for participants in session.

Time needed: 20 minutes

Instructions:

Prior to the session, the facilitator emails the participants and asks them to provide (secretly) by return email one interesting fact about themselves.

The facilitator then creates a grid with all the participant responses (see example below).

The facilitator keeps a list of the answers for themselves

On the day of the session, each participant receives a copy of the grid, and a pen.

They then have to network and speak to other attendees to find out which interesting fact belongs to which person.

The first person to get all the answers shouts 'bingo'.

A prize can be given if applicable.

The facilitator lastly reads out the interesting fact, and the people to whom it belongs. The person can then expand on this fact if they wish.

Particular benefits:

This is great for teams just starting to know each other.

It creates a lot of energy and enthusiasm, and gets people talking to each other, well beyond the interesting facts.

It is useful for the facilitator to see all the interactions and begin to learn the characters of the participants in the i-Lab session.

Notes of caution:

Do not use unless you have sufficient time to prepare it. Better for 10+ people.

Other comments:

This has been replicated by those who have experienced it in the i-Lab for their own meetings

For participants

Each participant has a grid of the interesting facts. They write the name of the person they think the fact belongs to.

This person is trained as gun slinger	This person loves eating raw potatoes	This person's great grandfather was Winston Churchill
This person is a champion cat breeder	This person has never owned a TV	This person's Aunt invented post-it notes
This person is a grade 8 pianist	This person is a fruitarian	This person grows giant vegetables

For facilitator (with answers)

This person is trained as gun-slinger Brian	This person loves eating raw potatoes Rebecca	This person's great grandfather was Winston Churchill Charles
This person is a champion cat breeder Sheila	This person has never owned a TV Steve	This person's Aunt invented post-it notes Mike
This person is a grade 8 pianist Wilf	This person is a fruitarian Amy	This person grows giant vegetables Daphne

2. Ice-Breaker title: My job

Resources required: Whiteboard, white board pen per person

Time needed: 5 minutes

Instructions:

'What do you do?'

'What do you like about your job?'

The rules are no words, just pictures!

When you've finished, just write your first name at the top of your drawing

After a few minutes, we shall feedback to each other.

Particular benefits:

This is good to learn a little about the people and the jobs they do. As a facilitator you may begin to see what motivates these people and what makes them happy.

It is useful to learn people's names at the beginning of the session. It can be an interesting alternative to a standard attendee list, to take a photo of each of the participant's drawing and their name and display in the post session i-Lab report as the front cover.

Notes of caution:

This is more useful in groups where everyone is from the same working group.

Do not use if you know the team to be really unhappy and de-motivated.

Other comments:

Very easy, involves little preparation.

3. Ice-Breaker title: Bin-bag portraits

Resources required: paper, bin bags, pens/pencils

Time needed: approximately 5 minutes

Instructions:

Every participant is issued with a piece of paper, a bin bag and a pen or pencil. They are instructed to put the piece of paper inside the bin bag.

Participants are split into pairs.

They are then asked to draw a portrait in the bag, of their partner without looking.

Portraits are then shared for all to see.

Particular benefits:

This does not require any participant to have any particular skills at drawing/art.

The portraits will often look childish – helping with the concept of taking people back to a time when they were able to be more creative with their thoughts.

This can be done either in the main area of the i-Lab or the breakout area as long as there are tables.

4. Ice-Breaker title: Coat of arms

Resources required: whiteboard, marker pens

Time needed: about 15 minutes

Instructions:

Participants draw coat of arms on the whiteboard and divide it into two/three/four fields. In every field each person draws or writes the information about themselves e.g.: good points, hobby, interests etc. Then all participants tell about themselves according to the pictures.

Particular benefits:

Help the participants to get to know each other; they often focus on sharing personal information such as hobbies, family etc.

5. Ice-Breaker title: Complete the sentence

Resources required: pieces of paper, pen, basket/hat/box

Time needed: about 15 minutes

Instructions:

Before the session the facilitator should write the following sentences on small pieces of paper and next put into basket/hat/box etc.

Example of sentences:

1. I've always wanted.....
2. I like.....
3. I can.....
4. If I could be another person I would be.....
5. In my opinion an ideal woman/man is.....
6. I like working with people who.....
7. Life is
8. My 3 wishes to gold fish.....
9. I'm dreaming about.....
10. I've wanted to be a.....

Every participant chooses one/two piece(s) of paper and completes the chosen sentence.

Particular benefits:

Create a positive group atmosphere, help people to relax, break down social barriers.

6. Ice-Breaker title: M&M Game

Resources required: M&Ms or any other multicolour sweets/candy, bowl

Time needed: about 15 minutes

Instructions:

Pour M&Ms or any other multicolour candy into a bowl. Have everyone in the group grab as much or as little as they like from the bowl. Make sure that no one eats their candy right away. For each piece of M&M candy they took, they will have to answer a question, depending on its colour. For example, you can designate:

- Red candy: favourite hobbies
- Green candy: favourite foods

- Yellow candy: favourite movies
- Orange candy: favourite places to travel
- Brown candy: most memorable or embarrassing moments
- Blue candy: wild cards (they can share anyone they choose)

You can be creative and choose any questions you think would be fitting for your group. The facilitator will then call out the colour topic and everyone will go around the room sharing 1 answer per M&M. As an example: if you chose two red pieces of candy, you will have to name two of your favourite hobbies. After the individual has shared that colour with the group, he/she may then eat their candy. Continue to go around the room until each colour topic has been shared.

Particular benefits: This icebreaker is a simple way to help people introduce facts about themselves. It's very flexible and adaptable – and (if you have a sweet tooth) delicious too!!!

7. Ice-Breaker title: String Game

Resources required: big roll of yarn or string, scissors

Time needed: about 15 minutes

Instructions:

This activity needs a little bit of preparation work. Purchase a big roll of yarn or string. You can buy any colour, or multiple colours if you wish. Take a pair of scissors and cut strings of various different lengths – as short as 5 centimetres, and as long as 30 or more centimetres.

When you are finished cutting the string, bunch all the pieces up into one big clump of string.

To play, ask the first volunteer to choose any piece of string. Have the person pull on it and separate it from the other pieces of string. Ask them to introduce themselves as they slowly wind the piece of string around their index finger. The funny part of this icebreaker game is that some of the strings are extremely long, so sometimes a person must keep talking for a very long time! This is a good way to get everyone to start talking. People might find out something interesting or new about each other. Feel free to adapt this game according to your needs.

Particular benefits:

The String Game is an introduction icebreaker game and conversation starter that allows people to tell others about themselves. It's a simple game and can be adapted according to your needs.

Detailed information on some i-Labs

Name of i-Lab, website

University of Essex – Southend Campus i-Lab

<http://www.essex.ac.uk/i-Labs/>

Name and contact details of prime contact (email, phone, postal address, street address)

Business Hub

University of Essex

Southend Campus

Elmer Approach

Southend-on-Sea

Essex

SS1 1LW

T: 01702 328310

F: 01702 328301

E: businesshub@essex.ac.uk

Name of owners of i-Lab, website

Business Hub, University of Essex Southend Campus

www.essex.ac.uk/businesshub

Number of places in i-Lab: 16

Description of software

Facilitate.com

MindMeister

Description of breakout facilities

- Large Breakout Area that can hold several small groups
- Flexible seating/furniture layout
- Tea/Coffee vending facilities
- AV Projection System and Speakers extend to Breakout Area
- Wireless Access for i-Lab Laptops

i-Lab facilitators: their names and any special distinguishing features (eg special expertise)

- Julie Jones – Lead Facilitator and i-Lab Manager
- Matt Softly – Senior Facilitator and Technical Developer Expertise in Facilitation Software and Audio Visual integration within i-Labs. Future development of i-Labs.

Who can use it

Open to all, especially: Businesses
Private and Public Sector
Education
Community

When started

1st Generation i-Lab established at Princess Caroline House in 2003
2nd Generation i-Lab established at Gateway Building in 2007.

Description of any associated facilities

Business Hub

The Business Hub is a purpose built facility that can offer you and your organisation a wide range of support services, all of which are specifically designed to deliver a sustainable, successful business culture.

Business Incubation Centre

The Business Incubation Centre is made up of 20 units varying in size and shape. The units are suitable for office based functions and are available to let to start up and growing companies, providing easy in/out tenancy agreements and inclusive rents.

Special features and any other information

- 6 x NEC projector panoramic 'immersion' environment Wireless network access,
- Tablet-based laptops, allowing stylus drawing onto desktop applications.



Name of i-Lab, website

iLab Colchester

www.essex.ac.uk/iLabs

Name and contact details of prime contact (email, phone, postal address, street address)

i-Lab Colchester

University of Essex

Wivenhoe House

Wivenhoe Park

Colchester

Essex

CO4 3SQ

United Kingdom

Hannah McMorran, i-Lab Manager,

T. +44 (0)1206 873163,

E. i-Lab@essex.ac.uk



Name of owners of i-Lab, website

University of Essex www.essex.ac.uk

Number of places in i-Lab

i-Lab Colchester is primarily designed for groups of 16 or less. However larger groups can be accommodated under the guidance of the i-Lab Manager. The i-Lab has been used to great success for groups of up to 50 when included as part of an event programme and with specialist support from the i-Lab.

Description of software

Facilitate.Pro

Mindmeister

Description of breakout facilities

The i-Lab suite combines zones for computer based, discussion and workshop activities with vibrant décor, creative tools, and floor to ceiling whiteboard walls throughout.

i-Lab facilitators

In-house facilitation can be provided by the i-Lab manager. In addition, i-Lab Colchester has a network of professional trainers /coaches/ facilitators who are trained in i-Lab facilitation.

Who can use it

The i-Lab is available for hire by external organisations as well as University of Essex staff and students.

When started

i-Lab Colchester was created in 2004 and commenced official operation in 2005.

Description of any associated facilities

i-Lab Colchester is located in the Constable Building at the University of Essex. It has adjoining, well equipped meeting rooms for up to 60 guests, as well as an atrium area for networking events. Wivenhoe House Hotel, adjacent to the i-Lab building, can provide overnight accommodation and dinners for residential bookings.

Special features and any other information

i-Lab Colchester has continually evolved in its three years of operation. It features advanced AV presentation technology, and a dynamic and inspiring vibrant design to further stimulate innovative and creative thinking.



Name of i-Lab, website

Istanbul i-Lab

www.bcdtr.com

Name and contact details of prime contact (email, phone, postal address, street address)

BCD Business Consulting and Development

Şakayikli sok., No.17, 3.Levent, 34330

Istanbul

Alper Eliçin

aelicin@bcdtr.com

Name of owners of i-Lab, website

Mr.Emre Utkan

Okalip Toplantı Hizmetleri A.Ş

www.okalip.com

Number of places in i-Lab

One room with a capacity of 20; smaller room with a capacity of 8; total of 16 notebooks

Description of software

Facilitate.Pro

Description of breakout facilities

There is a very large breakout area of the conference centre where attendants of the i-lab can share. Tea-coffee service; game machines, relaxation corners are available.

The smaller room dedicated for i-lab session can also be used for shorter breakout sessions.

i-Lab facilitators: their names and any special distinguishing features (eg special expertise)

Zehra Eliçin – Facilitator, management and training consultant

Alper Eliçin – Facilitator, management and training consultant

Emre Utkan – Co-facilitation, especially in using Facilitate.Pro

Who can use it

Open to all, especially:

- businesses,
- private and public sector.

When started

i-Lab was established in the second half of 2007. Operation started within the context of i-Lab Project with 2–3 pilot runs which took place early 2008.

Special features and any other information

- Movable tables; modular system
- Wireless access to internet via laptops
- Tea/coffee corner
- Projection system with remote control
- Removable (vertical) screen
- Music broadcasting
- Buttons for Technical Assistance and Announcement to the breakout and lunch areas
- Air conditioning
- Fire exit
- Cabinet with practical drawing storage boxes filled with legos and other toys, magazines, etc.



Name of i-Lab, website

Polish i-Lab, Radom

<http://ilab2.eu>

Name and contact details of prime contact (email, phone, postal address, street address)

Institute for Sustainable Technologies – National Research Institute

Work Pedagogy of Innovative Economy Centre

6/10 Pulaskiego Street

26-600 Radom

T: 0048 48 3606819

F: 0048 48 3644765

www.itee.radom.pl

instytut@itee.radom.pl

contact person: Jolanta Religa

jola.religa@itee.radom.pl

Name of owners of i-Lab, website

Institute for Sustainable Technologies – National Research Institute

www.itee.radom.pl

Number of places in i-Lab

Originally, the Radom i-Lab was designed for 9 people. But as experience shows, larger groups can be accommodated under the guidance of the i-Lab Manager.

Description of software

Facilitate.Pro

Description of breakout facilities

- Large relaxing room stylized as a bottom of the ocean (aquarium, real fish, water plants, water motifs, sand, shells) and relaxing sounds
- Flexible seating/furniture layout
- Tea/Coffee vending facilities
- AV Projection System and Speakers extend to Breakout Area

i-Lab facilitators: their names and any special distinguishing features (eg special expertise)

Katarzyna Skoczylas – i-Lab Facilitator

Joanna Łabędzka – i-Lab Facilitator

Tomasz Sułkowski – Technical support

Who can use it

The Radom i-Lab is available for all, especially:

- internally for staff and students of the Institute
- externally for: private and public institutions of business, education, R&D and community sectors

When started

Innovation laboratory in Radom was one of three i-Labs established in frame of *European I-Lab Competence Development Programme*. It was created in 2007.

Description of any associated facilities

The first Polish innovation laboratory is located in the main building of the Institute for Sustainable Technologies in Radom. All the Radom i-Lab users can rely on support of the other Institute's departments and teams (e.g. Library, Publishing House, Innovation Strategies Team, Information Technologies Team, Organization and Promotion Centre) as well as on the potential of experts and institutions cooperating with the Institute.



Special features and any other information

In accordance with the general specification for i-Labs, the innovation laboratory in Radom is created as an extraordinary space encouraging and inspiring creative thinking.

Thanks to specific features of the software, it will be possible to form interdisciplinary teams interested in particular issues under different points of view, consuming the minimum time.

Our assumption is to incorporate the innovation idea, methodology of work in the i-Lab and its potential into the other activities undertaken in the Institute, for instance we are going to open the i-Lab to the network of enterprises established within the Equal Community Initiative – The Polish Network of Cooperation & Innovation of microenterprises.

Name of i-Lab, website

i-Lab

<http://i-Lab.itee.radom.pl>

Name and contact details of prime contact (email, phone, postal address, street address)

University of Rzeszow
Faculty of Mathematics and Nature
ul. Prof. S. Pigoń 1
35-395 Rzeszów
www.ur.edu.pl

Name of owners of i-Lab, website

University of Rzeszow
www.ur.edu.pl

Number of places in i-Lab

The laboratory was designed for 12 persons

Description of software

VirtualBrainstorm (VBS)

Description of breakout facilities

The big room with coloured furniture. Three tables, two sofas, six chairs, two armchairs. The coffee machine, the blackboards for designing ideas.

i-Lab facilitators: their names and any special distinguishing features (eg special expertise)

Agnieszka Długosz – i-Lab Facilitator

Anna Koziarowska – i-Lab Facilitator
Aleksander Piecuch – i-Lab Facilitator
Waldemar Furmanek – i-Lab Facilitator
Arkadiusz Nisztuk – Technical support
Piotr Ziemia – Technical support

Who can use it

Pupils, teachers, students of various faculties, entrepreneurs.

When started

The innovation laboratory was established as one of four under the project *The Innovation Laboratories for the Quality Assurance of the Vocational Education and Training (i-Lab2)*. The first session took place in May 2014.

Description of any associated facilities

The i-Lab is located at the University of Rzeszow, at ul. Pigionia in Rzeszow.

The laboratory is composed of two separate rooms: one equipped with computers, projects, printers, and second – room for relaxation and group work. Moreover, the i-Lab is equipped with necessary educational games applied at the stage of idea collection during sessions. The session participants may use the coffee maker and the vicinity of the laboratory.

Special features and any other information

The innovation laboratory is a place of meetings, discussions and sessions stimulating creative thinking. It uses the concept of innovative methodology of class conducting, as well as may be applied at work with students, entrepreneurs or in the University management processes. The laboratory can be made accessible for the vocational education students, teachers, as well as for employees of enterprises operating within the enterprise zones.



Name of i-Lab, website

Innovation Lab Romania (Laboratorul de Inovare din Romania)

www.i-lab.ro

Name and contact details of prime contact (email, phone, postal address, street address)

Bld. Schitu Magureanu,

Nr. 1, Etaj 3,

Bucharest, Romania;

Luciana Bratu;

T: 004 021 307 19 35

E: luciana.bratu@uefiscsu.ro

Name of owners of i-Lab, website

UEFISCSU-Unitatea Executiva pentru Finantarea Invatamantului Superior si a Cercetarii Stiintifice Universitare (EAHERF-Executive Agency for Higher Education and Research Funding).

www.uefiscsu.ro,

www.cncsis.ro

Number of places in i-Lab: 8–10

Description of software

Facilitate.Pro

Description of breakout facilities

Three linked meeting places with a jungle theme.

i-Lab facilitators: their names and any special distinguishing features (eg special expertise)

Enaru Maria Luiza – PR/marketing

Nicolaescu Marius Dorian – IT

Bratu Luciana – project management

Who can use it

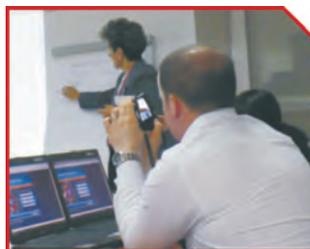
- public and private sector
- non government organis
- universities

When started:

2008

Description of any associated facilities

central location



Name of i-Lab, website**Romanian iLab, Galati**<http://www.ilab2.eu/>**Name and contact details of prime contact** (email, phone, postal address, street address)

University „Dunarea de Jos” Galati

47, Domneasca Street

Galati

Romania

(+40) 236 460 182

<http://www.ugal.ro>Contact person: Adina Cocu adina.cocu@ugal.ro**Name of owners of i-Lab, website**

Faculty of Automatic, Computer and Electrical and Electronic Engineering

<http://aciece.ugal.ro>**Number of places in i-Lab**

The i-Lab has 10 computer stations, but the laboratory can accommodate up to 15 people.

Description of software

VirtualBrainstorm (VBS)

Description of breakout facilities

- large relaxing room decorated as a sandy beach on the Danube River Delta (suggestive wallpaper, white/beige/light-green colors theme, living plants, decorative bowls with sand and shells).
- modular furniture that can be rearrange according to the needs.
- comfortable sofa and puff chairs.
- coffee table/cabinet.
- video-projection system extended from computer area.

i-Lab facilitators: their names and any special distinguishing features (eg special expertise)

Emilia Pecheanu

Adina Cocu

Mihai Vlase

Who can use it

The i-Lab laboratory is available for:

- internal staff and students
- external people from public or private institutions, schools, companies.

When started

The innovation laboratory was established as one of four under the project *The Innovation Laboratories for the Quality Assurance of the Vocational Education and Training (i-Lab2)*. The first session took place in May 2014.

Description of any associated facilities

The iLab laboratory is located in one of the buildings of faculty, in the university campus. The iLab users can benefit of all the technical facilities of Computer and Information Technology Department. The department staff can support with their expertise to the smooth running of the brainstorming sessions conducted in a laboratory.

Special features and any other information

In accordance with the general specification for iLab, the innovation laboratory in Galati has a special designed space that encourages creative thinking and problem solving. The idea of iLab is that it is a special place in which groups and teams can explore and extend their thinking beyond the normal boundaries of assumptions and constraints.

Another facility of iLab is a Web application that works like a social group-social network. Plus to this web application, the laboratory offer facilitation techniques that can be used to manage the creative process so that the participants get the most out of their ideas. The iLab features work together, allowing users to unlock their skills and potential to find applicable



Name of i-Lab, website

Learning and Resources Centre i-Lab

<http://www1.uea.ac.uk/cm/home/services/units/is/lib/larc>

Name and contact details of prime contact (email, phone, postal address, street address)

UEA i-Lab
Learning and Resources Centre
Floor 02
Library
University of East Anglia
Norwich
NR4 7TJ

Gurpreet Gill – i-Lab Manager

E: g.gill@uea.ac.uk,

T: 01603 592951

All inquiries in the first instance should go to:

E: larc@uea.ac.uk

T: 01603 592951



Name of owners of i-Lab, website

University of East Anglia

Number of places in i-Lab: 12

Description of software

Collaborative meetings software: GroupSystems; Faciliate.Pro

Description of breakout facilities

i-Lab is located in the staff and postgraduate Learning and Resources Centre (LaRC). A refreshment area and a larger break out room which can accommodate up to 16 people is available.

i-Lab facilitators: their names and any special distinguishing features (e.g. special expertise)

i-Lab facilitators are all based in the Centre for Staff and Educational Development:

Gurpreet Gill – Staff Development Officer

Paul Levy – Head of the Centre for Staff and Educationalm Development

Steve Oldfield – Staff Development Officer

Specialisms include: Learning, teaching and research, creativity and creative problem solving, strategic planning, management development, general personal and professional development

Other external facilitators may be bought in to work in the i-Lab.

Who can use it

The UEA i-Lab is primarily for internal use by staff and research postgraduates but is also open to external users. External clients tend to be mainly from the public sector and other educational institutions.

When started:

2001

Name of i-Lab, website

C Space (Creative Space), information about Bridges CETL and its learning spaces can be found at

<http://www.beds.ac.uk/bridgescetl/about/learningspaces>

Name and contact details of prime contact (email, phone, postal address, street address)

Bridges CETL,
University of Bedfordshire,
Park Square, Luton, Bedfordshire, LU1 3JU
Mark Atlay,
E: mark.atlay@beds.ac.uk,
T: 01582 489133

Name of owners of i-Lab, website

Bridges CETL,
<http://www.beds.ac.uk/bridgescetl>

Number of places in i-Lab: 25–30**Description of software**

Facilitate.Pro

Description of breakout facilities

The **F-space** or also called Formal Space is a ‘boardroom’ which may also be used for seminars, small-scale lectures, meetings, presentations or small-scale conferences. The area includes a range of technologies to support the learning or discussions.

The **S-space** or Social Learning Space is designed to enhance learner engagement in a relaxed setting. The space is also used for University and Departmental Open Days, small meetings or lunches either with students or staff members.

i-Lab facilitators: their names and any special distinguishing features (eg special expertise)

Maja Jankowska – CETL Researcher, maja.jankowska@beds.ac.uk

David Pike – Staff Development Officer, david.pike@beds.ac.uk

These facilitators work especially well with the software in the space

Who can use it

- University staff,
- students,

- Student Union,
- local community and businesses,
- other partnership institutions

When started

September 2005

Description of any associated facilities

Please see description of breakout facilities

Special features and any other information



Name of i-Lab, website

German i-lab, Dresden

<http://www.ilab2.eu/>

Name and contact details of prime contact (email, phone, postal address, street address)

Saxon Education Company for Environmental Protection and Chemical Occupations Dresden Ltd. (SBG Dresden)

Gutenbergstraße 6

01307 Dresden

T.: 0049351444560

F.: 00493514445612

www.sbg-dresden.de

Contact person: Jens Hofmann

j.hofmann@sbgdd.de

Number of places in i-Lab

The i-Lab at SBG Dresden can accommodate 10 or more persons according to the session preferences. The i-lab session managers are trained. The i-Lab consists of a working and a relaxing room.

Description of software

VirtualBrainstorming (VBS)

Description of breakout facilities

One room for relaxation equipped with sofas and tables. Walls painted with forest motives.

i-Lab facilitators: their names and any special distinguishing features (eg special expertise)

Mr. Jens Hofmann – ilab facilitator

Mrs. Anne Berger – ilab facilitator

Mrs. Anke Menning – ilab facilitator

Mr. Thomas Mönch – technical support

Who can use it

Trainers and apprentices in the area of vocational education and training of the SBG company (i.e. laboratory technicians of a chemical, biological and physical laboratory), within the scope of development of new ideas, process improvement, etc. Student entrepreneurs cooperating with SBG.

When started

The innovation laboratory was established as one of four under the project *The Innovation Laboratories for the Quality Assurance of the Vocational Education and Training (i-Lab2)*. The first session took place in May 2014.



Description of any associated facilities

The i-Lab is located in two rooms of the SBG didactical building. The i-Lab relaxation part and its vicinity are designed in the way resembling the forest. i-Lab is equipped with laptops and tablets enabling to keep some flexibility while generating ideas. According to a group size, the facility may be easily equipped with additional laptops. Rooms, furniture and technical equipment constitute an integral space affecting creative thinking and creativity.

Name of i-Lab, website

i-Lab 2 Šolski Center Ptuj, Slovenia

http://www.scptuj.si/index.php?option=com_content&task=view&id=185&Itemid=196

<http://www.ilab2.eu/>

Name and contact details of prime contact (email, phone, postal address, street address)

Šolski center Ptuj / School Centre Ptuj

Volkmerjeva cesta 19

2250 Ptuj

Slovenia

T: +386 (0)2 787 17 00

F.: +386 (0)2 787 17 11

info@scptuj.si

<http://www.scptuj.si/>

Contact person: Darja Harb

darja.harb@scptuj.si

Name of owners of i-Lab, website

Šolski center Ptuj

<http://www.scptuj.si/>

Number of places in i-Lab

i-Lab was designed for 10 people (in the room 1 there are 10 computers), but there can be accommodated larger groups. Also our room 2 (relaxing room) is designed for larger groups (maximum 20 people).

Description of software

VirtualBrainstorming (VBS)

Description of breakout facilities

Walls painted in bright yellow, diversified with photo-wallpapers in green shades. The room includes colourful comfy seats, boxes with didactical accessories, audio-video projection equipment.

i-Lab facilitators: their names and any special distinguishing features (eg special expertise)

- Mirjana Šeruga – i-Lab facilitator
- Milan Bukšek – Technical support

Who can use it

i-Lab is available internally for employees and students of the School Centre Ptuj.

When started

The innovation laboratory was established as one of four under the project *The Innovation Laboratories for the Quality Assurance of the Vocational Education and Training (i-Lab2)*. The first session took place in May 2014.

Description of any associated facilities

The innovation laboratory is in the main building of a vocational school in the School Centre Ptuj. It is composed of two neighbouring rooms equipped in accordance with the i-Lab concept: computers, multimedia projectors, whiteboards, educational games, teaching materials. There is being prepared another room for students in the Training Centre (MIC) of the School Centre Ptuj, dedicated for students to develop their ideas for their own business.

Special features and any other information

In innovative laboratory may be carried out different form of instructions and lessons for small groups of pupils/students. Innovative laboratory allows better participation of pupils/students in the classroom. It encourages active thinking and giving new ideas. Function of anonymous participation in sessions encourages relaxed cooperation from which can be derived very good ideas. It encourages the entrepreneurial spirit.



