

# EUREKA! IDEAS AND INNOVATION OF YOUTH – EUREKA! YOUTH PROJECT

Institute for Innovation and Technology,  
Korona plus d.o.o.



# EUREKA! IDEAS AND INNOVATION OF YOUTH - Eureka! Youth Project

(Description of the project from the field of Youth – Secondary Schools, Universities...)

The purpose of the project is a development of the model for the competent promotion of innovation among pupils and students. The main objective behind development of such a model is to bring about an increase in the innovative abilities of young people, teacher-mentors as well as others in the broader social environment. The goals are to raise awareness amongst the target groups, to ensure the acquisition of knowledge and skills pertaining to innovation processes, as well as support the most innovative in implementing actual projects.

## Innovation appraisal

The Institute for Innovation and Technology is developing the area of creativity, R&D and related innovation of young people (secondary schools, students) for over two decades. Professionally, morally and financially the projects was supported by many domestic institutions, but also international institutions / projects. The results are highly valued in the international arena as well. A few years ago, we were also invited to present our ideas and results as an example of good practices at the United Nations headquarters in Geneva. In the beginning of 2009 we were invited to give a lecture at the European Parliament in Brussels.



The innovation is fully supported by teachers and by students. Every year number of participants is increasing. Many of the proposals became successful, market-accepted innovations, based on an excellent idea, strong R&D activities, international patents and efficient realisation.

**Eureka! Youth project was presented at the closing conference of the European Year of Creativity and Innovation 2009 in Stockholm as the only best practice example from Slovenia.**

## Description of the innovative practice

### Theoretical frameworks

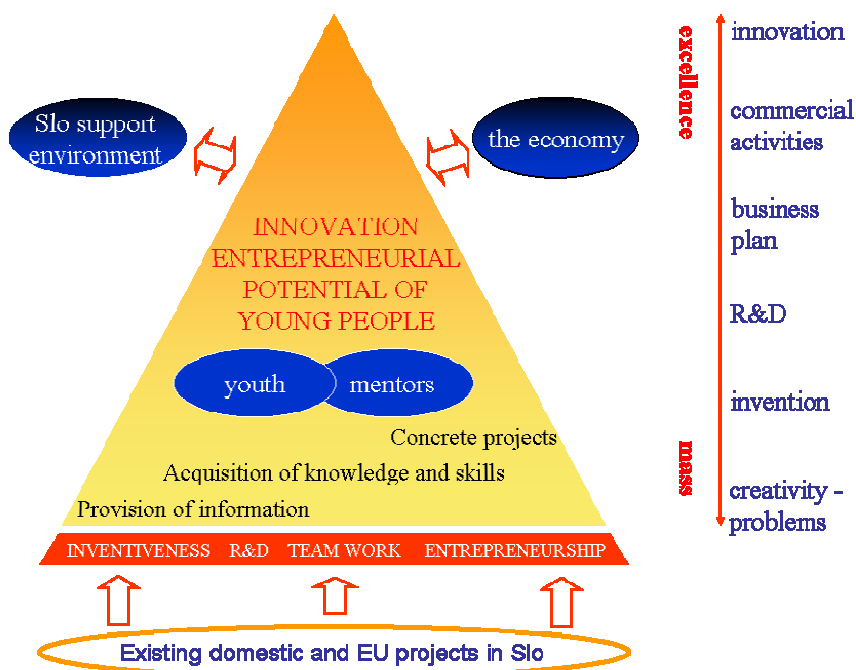
The model for the competent encouragement of innovation among pupils and students has been designed according to the analysis of the situation as regards the innovative abilities of youth in Slovenia. The main

objective behind constructing such a model is to bring about an increase in the innovative abilities of young people, teacher-mentors as well as others in the broader social environment. The goals are to raise awareness amongst the target groups, to ensure the acquisition of knowledge and skills pertaining to innovation processes, as well as support the most innovative in implementing actual projects. The project's structure is pyramidal (Figure 1), deriving its critical mass from activities which shall embrace a large number of students and further provide the conditions, interactions and stimuli that shall lead to the actual accomplishment of tangible innovation. The model itself, based on support activities and projects already underway in Slovenia, is directed towards achieving innovation in the context of projects realised by youth. Although students and their mentors are the main target groups which shall attain specific goals, this project actively embraces the many players which make up Slovenia's support environment together with the commercial and other end-users who shall become the beneficiaries of innovation.



There are two paths towards innovation: the accomplishment of personal ideas in an entrepreneurial sense, and the solution of actual extant problems defined by organisations and enterprises in which an idea is affected. It is of cardinal importance that this project is designed and managed in a systemic way – that it is started and co-ordinated at the national level, and affected via a network of teachers in conjunction with the regional institutions and companies which shall thus endow it with regional and local components. In effect this means that individual activities shall be synergistically connected, and thus the red thread of activities leading to actual accomplished results will not be lost in the I-I (invention-innovation) chain.

Figure 1: The concept of Eureka! Youth project “From mass to excellence”



## From mass to excellence

- ❖ **Information, short workshops, and comics:** Workshops are on the one hand the practical demonstration of techniques concerning managing the creativity to innovation process, while participants make a first but important step towards achieving innovation. The web-based tools and other possibilities for the project's support are presented. In continuation of the workshop we motivate and help them to develop and realize their own ideas.

- ❖ **Web portal: [www.inovativnost.net](http://www.inovativnost.net):** The basic functions of the web portal (<http://www.inovativnost.net/>) is providing information and networking. Most important applications:
  - ❖ »School of Innovation”: On our web site we have E-school of Innovation which is available free of charge members of the club innovation and entrepreneurship. E-school of Innovation is divided into several sections, which as a whole shows the whole area of creativity and innovation (developed in the framework of European projects).
  - ❖ e-news: On the E-bulletin board we are publishing information that may be of interest to young people as mentors, and other releases. Together with partners we are preparing news (eg, successful good practices in the European Union, info on domestic calls, info about interesting lectures, articles, info on the media - local media as well as such. Business Week, Fortune, which published an extremely interesting contributions with a strong International note) and regularly published them on the E-bulletin board and also sent them to members by email. Occasionally we also invite young people who already have successfully participated in R&D and innovation activities to present their experience and participate on forums, blogs.... The aim is to present viable ideas and to encourage young people to see potential in research and development and innovative work.
  - ❖ Forum – internet chat room: Presentation of international events that drive the innovation achievements of the world economy, is without doubt an interesting topic. Nothing less is not important achievements of the Slovenian economy as well as youth. Thus, through the online forum we conduct several guided discussions related to these topics. The purpose of this activity is to inform and actively involve more members and other website visitors.
  
- ❖ **Educational materials – books:** In the context of successful projects which actively integrated over 6000 young people, trained over 1200 mentors, published numerous books and comics and written several dozen articles:

- ❖ Innovation in School - From creative teaching to innovation and entrepreneurship (Inovativnost v šoli - Od ustvarjalnega poučevanja do inovativnosti in podjetnosti):

The book is intended for anyone interested in creativity, innovation and work with young people. In the book, we presented the basic concepts related to creativity and innovation, presented the role of schools, teachers in creative work with young people and the possibilities of creative teaching in the schools. In the book also the stages of invention-innovation chain, adapted to youth is presented. Some parts of the book are available at:

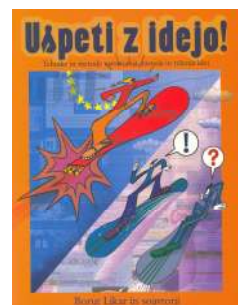
[https://www.researchgate.net/publication/292128693\\_Inovativnost\\_v\\_soli\\_-\\_Od\\_ustvarjalnega\\_poucevanja\\_do\\_inovativnosti\\_in\\_podjetnosti](https://www.researchgate.net/publication/292128693_Inovativnost_v_soli_-_Od_ustvarjalnega_poucevanja_do_inovativnosti_in_podjetnosti)



- ❖ Succeed with the idea! Techniques and methods of creation, development, and marketing ideas (Uspeti z idejo! Tehnike in metode ustvarjanja, razvoja in trženja idej):

The book is primarily intended for students and teachers/mentors. Individual chapters represent assistance which could be used in various stages of invention - innovation work. Among the chapters there are some very interesting articles of distinguished experts which represent their views on innovation. Some parts of the book are available at:

[https://www.researchgate.net/publication/292128779\\_Uspeti\\_z\\_idejo\\_Tehnike\\_in\\_metode\\_ustvarjanja\\_razvoja\\_in\\_trzenja\\_idej](https://www.researchgate.net/publication/292128779_Uspeti_z_idejo_Tehnike_in_metode_ustvarjanja_razvoja_in_trzenja_idej)



❖ To young researchers (Mladim raziskovalcem):

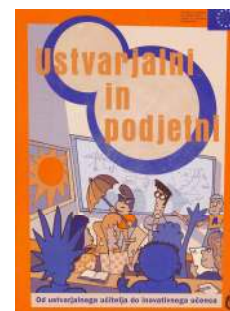
The book is the result of numerous discussions that co-author Peter Likar had with Slovenian researchers, in particular with winners of Kidrič award - the highest Slovenian award or prize for scientific achievement or for scientific research in the years from 1957 to 1991. For several years he portrayed the winners as the TV reporter for science. The book is written for those young people and also for other people who are interested in research work with a desire to peek into the world of science and learn some scientific work "tools". Some parts of the book are available at:



[https://www.researchgate.net/publication/292127709\\_Mladim\\_raziskovalcem](https://www.researchgate.net/publication/292127709_Mladim_raziskovalcem)

❖ And comics Creative and Entrepreneurial – From the creative Teacher to innovative Student (Ustvarjalni in podjetni - Od ustvarjalnega učitelja do inovativnega učenca)

Comic book is primarily intended for teachers who by their educational work are noticing that some of the pupils and students solve everyday challenges in a more innovative and less conventional manner. It is also intended for pupils and students themselves. The main aim of the Comic book is to show the entire innovation process in a fun, yet sufficiently professional manner, and to advise how and where to obtain further information and knowledge. It also includes a series of practical tips on how transfer a good idea into practical solution. Complete book (in Slovene) available at:



[https://www.researchgate.net/publication/292128020\\_Ustvarjalni\\_in\\_podjetni\\_-\\_Od\\_ustvarjalnega\\_ucitelja\\_do\\_inovativnega\\_ucenca](https://www.researchgate.net/publication/292128020_Ustvarjalni_in_podjetni_-_Od_ustvarjalnega_ucitelja_do_inovativnega_ucenca)

❖ **Competition Eureka! Ideas and Innovation of Youth:**



Competition Eureka! Innovation of Youth: The competition's aim is to encourage innovative ways of working, from the creative thinking to the final outcome - a new product, new services, improved way of working, savings... Competition Eureka! Ideas of Youth: The competition's aim is to identify an opportunity or problem (every day's problems, research problems, opportunities at school and in the social environment, environmental challenges etc.) and in the next phase the creation of new ideas. For participating in the contest it is necessarily that the idea has already been tested, proved as useful or commercially interesting!

❖ **Consultancy, co-operation with the economy:** Consulting activities are aimed at young people and teachers in following areas: creativity and innovation in teaching techniques, creating ideas, research and development work, intellectual property, review the state of the art (technology watch), business activities, business plan preparation, integration of domestic and international interest network, marketing, intellectual property, financing options and venture capital, innovation, entrepreneurship support projects by the Slovenian and EU support the environment, the use of the Internet in the innovation and R & D work, project work...

❖ **Conferences, exhibitions, popularisation:** At the conclusion of the final competitions we organize a Ceremony and the presentation of the best inventions and innovations of youth. We also attended some important fairs in Slovenia and abroad.

❖ **Successful projects of young people:** After completing the evaluation of projects, which arrived in contests Eureka! Youth



selective results are announced at the web page. Full results and public recognition of the winners are published the closing ceremony. Eureka winners are invited to present their projects.

- ❖ **Co-operation with the economy:** In the last year we started with an original end very well accepted idea. Via the campaign "A View from the Different Window" we drew the connection between the most creative, R&D oriented and innovative young people on one side and internationally successful companies and top researchers and professors on the other. Entrepreneurs and academics listened to youngsters and provided them with their vast experience, different views of their intellectual capital and tried to open the door to the future. It should be noted the active involvement of aspects of intellectual property that are necessary and important part of the campaign. Therefore The Slovenian Intellectual Property Office is one of the important partners.
- ❖ **Media communication:** A significant element of our activities is also a media communication. The primary purpose is to show the achievements of the youth, the activities itself, opportunities for the target public and raising the R&D and innovation culture. Media events are of utmost importance for young people and mentors themselves, because they make such announcements, and promotional opportunities to present their work. In last years, approx. 100 media events were performed in most important national TV and radio broadcasts, newspapers, journals, round tables etc. It represent and extremely important activity targeting not only the participants but different publics and the whole nation as well. The leader of the activities prof. Likar received the Prometheus of Science for Excellence in Communication award in 2009 by the Slovenian Science Foundation. Describe the explicit/implicit theoretical educational frame of the innovative practice if any (e.g. the Constructivist perspective or IBST-Inquiry Based Science Teaching-, or PBL- Problem Based Learning-, or REC -Research and Education Collaboration-, or Communities of learners and/or Participative methodologies ...) and the scientific educational frame (main topics and/or main educational questions, as e.g. argumentation in science).



## More detailed description of the Eureka! Youth project

I. Project duration and geographical scope: The project lasted from November 2005 till December 2009 in Slovenia.

II. Budget: Project budget was 200,000EURO.

III. Target Group: The project's primary target group were Pupils in Secondary and High Schools and Students. Secondary target group were teachers/mentors.

# Presentation of the Organization

## Institute for Innovation and Technology, Korona plus d.o.o.

Institute for Innovation and Technology is an innovatively oriented organisation from Slovenia with its mission closely linked to rising innovativeness in schools, economy and among the youth in Slovenia, which is an integral part of EU. The organisation operates in close cooperation with a wide network of specialists of various professional profiles and collaborates with national and foreign organisations. The Institute has been developing the area of creativity, innovation-open innovation and technology transfer for over two decades. Professionally, morally and financially the projects and therefore the development of innovative young people in this period were supported by many national and also international institutions/projects. About 100 successful research, applied, technological and other national and EU projects have been carried out (Ministries, Public Agency for Technology of the Republic of Slovenia, Public Agency of the Republic of Slovenia for Entrepreneurship and Foreign Investments, Chamber of Commerce and Industry of Slovenia, the ESF– European Social Fund, Phare MOCCA, Leonardo da Vinci, FP7 etc.) numerous books and comics published, several award competitions, numerous conferences and exhibitions implemented at home and abroad, several cooperation with the economy established, tenths of widely recognised and expert papers... Owing to the uniqueness of their concept, the Institute was invited to present its concept at the United Nations' headquarters in Geneva as one of the best European concepts as well as at the Closing Conference of the European Year of Creativity and Innovation in Stockholm.



In addition, the Institute for Innovation and Technology has developed ten patents, numerous innovations, countless models and copyright works, many of which proved to be extremely marketable - nationally and internationally.

## Project Leader's short Biography

### prof. dr. Borut Likar, MBA

Likar is a full professor at the University of Primorska. His work encompasses management of creativity, R&D, technology, and innovation processes in the field of educational system and industry. He is the author of hundreds of scientific, expert and other publications, initiator of several international projects and the author of patents, models and copyright works - many proved to be extremely marketable. He is an innovator and a recipient of many international awards for his innovations and for scientific achievements. Among numerous lectures he has given, the talks at the United Nations' headquarters in Geneva and at the European Parliament in Brussels were met with a particularly wide response. Likar is also the amateur photographer, where he is particularly interested in creative and innovative approaches to photography. He also engages in writing aphorisms, which were published internationally.