Eureka! Innovation of Youth

At the beginning there are loads of ideas.
The first step is the most important.
We cannot make it without errors.
Innovation is a chaotic process.
Patience is essential.
You compete primarily against yourself.
Each project is different.

Do we innovate or play jackstraws?

Project Leader

Inštitut za inovativnost in tehnologijo
Institute for Innovation and Technology

Supported by

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA VISOKO ŠOLSTVO, ZNANOST IN TEHNOLOGIJO

TIA
Tehnološka agencija Slovenije
Slovenian Technology Agency

URAD REPUBLIKE SLOVENIJE ZA INTELEKTUALNO LASTNINO

Members of the Consortium

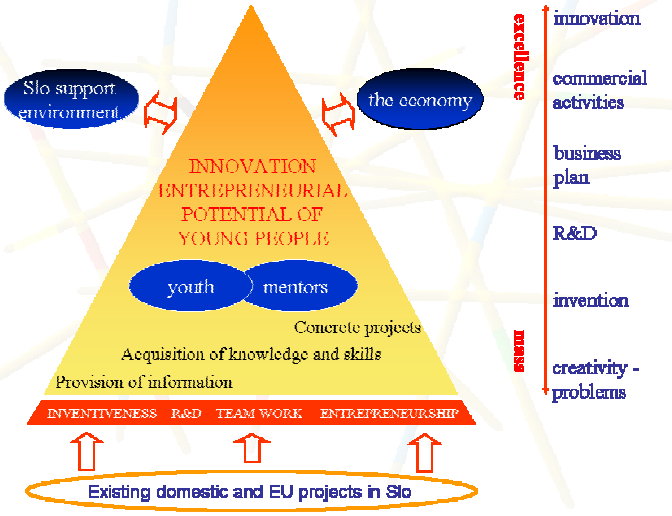
GIZ KFT

ALIANTA
ZAVOD ZNAJDI SE

As long as you know that you don't know, you are on the right path.

(Borut Likar)

The project structure is pyramidal – it derives from mass and is oriented towards excellence – to concrete innovation



Project objectives:

- greater awareness and motivation of young people and their mentors,
- acquisition of innovation-entrepreneurial skills,
- support provided to young people and mentors in creating and innovating,
- improved co-operation between R&D, economy and education,
- higher number of inventions and innovations of young people,
- better preparedness of youth for labour market or self-employment.

Project results:

- Development of a unique concept of innovative youngsters - presented also at the United Nations and European Parliament as one of the best European concepts.
- the projects integrated a significant part of Slovenian youth and their mentors in innovation processes resulting in several successful innovations achieved by young people!

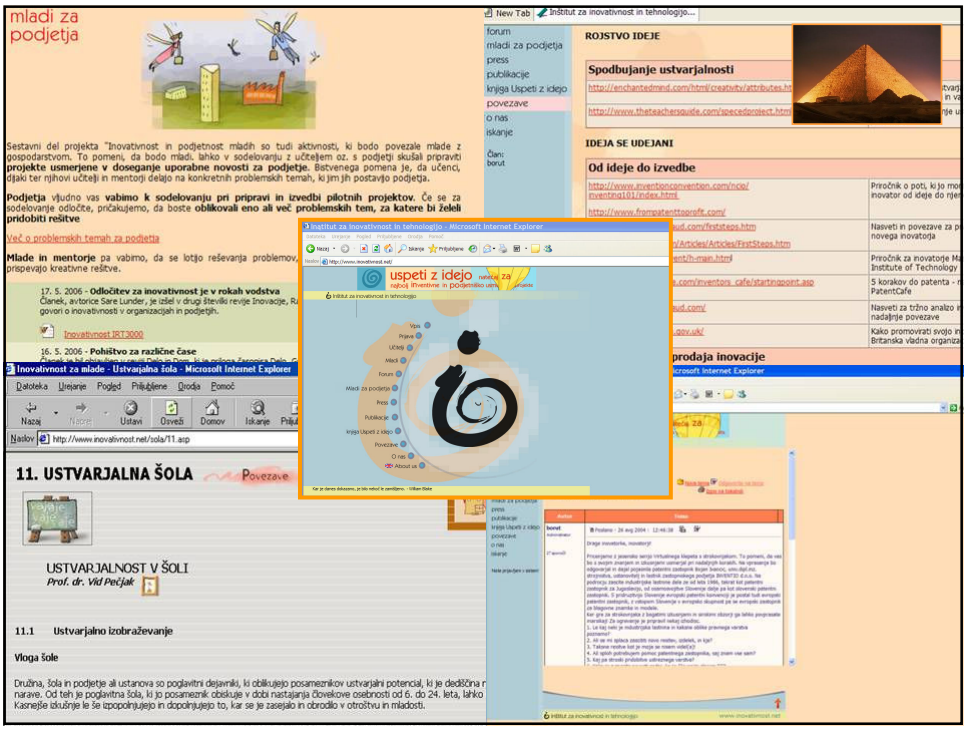
Ideas grow in
the field of doubts.

(Borut Likar)

From Mass to Excellence

- competition Eureka! Ideas of Youth
- www.inovativnost.net
  - school of Innovation
  - e-news
  - forum – internet chat room
  - co-operation and discussion with experts
- information, short workshops, comics


TEHNIČNA RIŠBA BO KMALU KONČANA
POGLEJTE NA INTERNETU, ALI JE KDO IZUMIL KAJ PODOBNEGA
STVAR BO UPORABNA KOT DEŽNIK IN KOT PEČICA!
NE! MI SMO PRVI!
Intelektualna lastnina
Intelektualna lastnina je oznaka za ustvarjalne aktivnosti človeka na industrijskem, znanstvenem in umetniškem področju. V grobem je lahko ločimo na avtorske pravice in industrijsko lastnino. Zakaj spleh zaščita intelektualne lastnine? Ideje ni mogoče zavarovati pred tatvino tako kot predmet. Lahko bi jo sicer zapisali na listek in ga zaklenili v predal, vendar bi tako ostala le mrtva črka na papirju. (Veliko idej je sicer zares shranjenih tako - temu pravimo poslovna skrivnost). Ideja pa oživi šele, ko se uresniči. Prevedeno v naš jezik - ko se pretvori v (gospodarsko) uporaben proizvod ali storitev. Intelektualna lastnina na eni strani varuje pravico avtorja do gospodarskega izkoriščanja lastne ustvarjalnosti, po drugi strani pa, ker ima omejen rok trajanja (za patent običajno 20 let), onemogoča, da postane vsak dosežek po preteku tega časa prosto dostopen javnosti in s tem prispeva k dobrobiti vsega človeštva.
Za nas najzanimivejši element industrijske lastnine je patent. S patentom se zavaruje izum (to je tehnična rešitev tehničnega problema), ki je »nov, dosežen z ustvarjalnim delom na tavni izumiteljstva in je industrijsko uporabljiv. Stroški prijave patenta so precej visoki, zato patentno zaščito običajno zahtevamo v državah, ki so za naš izum tržno zanimive. Preden pričnemo razmišljati o patentni zaščiti, pa temeljito preverimo, ali ni morda naše ideje zaščitil že kdo drug. Še bolj pomembno pa je, da to preverimo, preden pričnemo s proizvodnjo svoje inovacije. Če se izkaže, da smo prodajali že zaščiteno tujo idejo v dobri veri, da je naša, nas utegne to drago stati. Prvo informacijo o obstoječih patentih lahko pridobimo kar iz javno dostopnih patentnih baz na internetu, za temeljitejšo preverjanja pa se obrnemo na patentnega zastopnika (ta nam lahko pomaga izpeljati tudi celoten proces zaščite izuma). V šoli pa lahko za vajo iz patentnih baz samo izbiskamo sorodne (ali celo enake) izume, ki rešujejo naš tehnični problem.
SREDNJEŠOLCA MICA IN MARC STA SI PRIVOŠČILA ROBINZONSKE POČITNICE NA OTOKU.
DOBRO, DA SEM SE SPOMNIL IN VZEL TRNEK!
SUPER LE ENO TEŽAVO IMAVA ... POZABILA SVA VŽIGALICE


mladi za podjetja
Sestavni del projekta "Inovativnost in podjetnost mladih so tudi aktivnosti, ki bodo povezale mlade z gospodarstvom. To pomeni, da bodo mladi, lahko v sodelovanju z učiteljem oz. s podjetji skušali pripraviti projekte usmerjene v doseganje uporabne novosti za podjetje. Bistvenega pomena je, da učenci, djaki ter njihovi učitelji in mentorji delajo na konkretnih problemskih temah, ki jim jih postavijo podjetja.
Podjetja vljudno vas vabimo k sodelovanju pri pripravi in izvedbi pilotnih projektov. Če se za sodelovanje odločite, pričakujemo, da boste oblikovali eno ali več problemskih tem, za katere bi želeli pridobiti rešitve
Več o problemskih temah za podjetja
Mlade in mentorje pa vabimo, da se lotijo reševanja problemov, prispevajo kreativne rešitve.
17. 5. 2006 - Odločitev za inovativnost je v rokah vodstva
Članek, avtorice Sare Lunder, je izšel v drugi številki revije Inovacije, R... govori o inovativnosti v organizacijah in podjetjih.
Inovativnost IRT3000
16. 5. 2006 - Pohištvo za različne čase
Inovativnost za mlade - Ustvarjalna šola - Microsoft Internet Explorer
Datoteka Urejanje Pogled Priljubljene Orodja Pomoč
Naslov http://www.inovativnost.net/sola/T1.asp
11. USTVARJALNA ŠOLA
Povezave
USTVARJALNOST V ŠOLI
Prof. dr. Vid Pečjak
11.1 Ustvarjalno izobraževanje
Vloga šole
Družina, šola in podjetje ali ustanova so poglavitni dejavniki, ki oblikujejo posameznikov ustvarjalni potencial, ki je dedščina narave. Od teh je poglavitna šola, ki jo posameznik obiskuje v dobi nastajanja človekove osebnosti od 6. do 24. leta, lahko kasnejše izključnje le še izpopolnjujejo in dopolnjujejo to, kar se je zasejalo in obrodilo v otroštvu in mladosti.
New Tab
Inštitut za inovativnost in tehnologijo...
forum
mladi za podjetja
press
publikacije
knjiga Uspeti z idejo
povezave
o nas
iskanje
Član:
borut
ROJSTVO IDEJE
Spodbujanje ustvarjalnosti
IDEJA SE UDEJANI
Od ideje do izvedbe
Institut za inovativnost in tehnologijo - Microsoft Internet Explorer
uspeti z idejo
prodaja inovacije


Inštitut za inovativnost in tehnologijo
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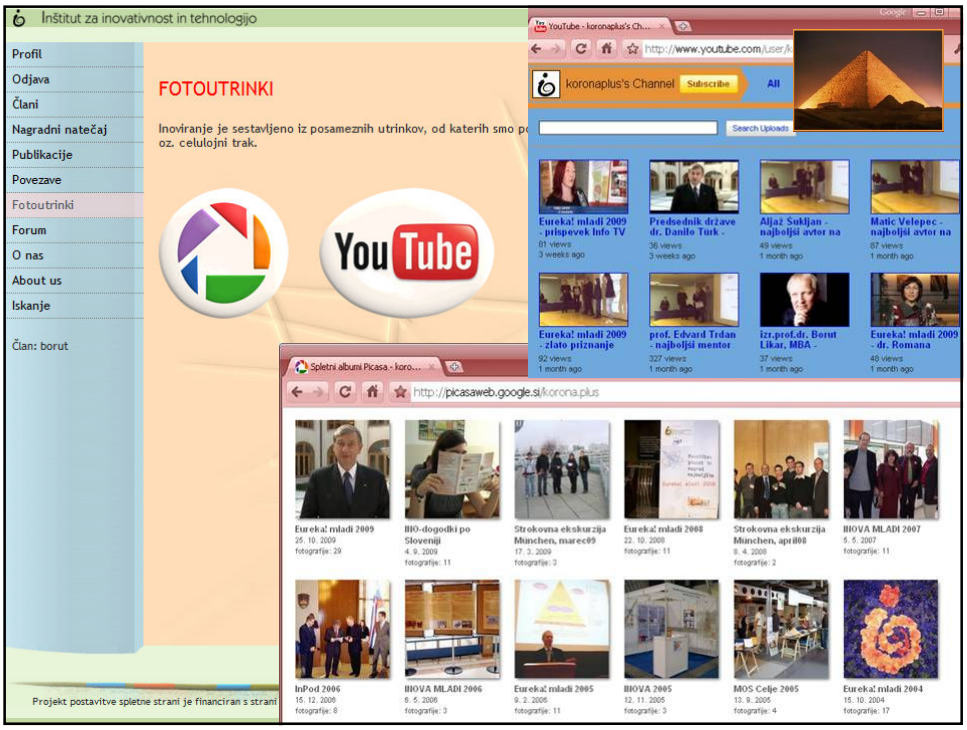
Iskanje
Neprijavljen uporabnik!
mladi/ šola inovativnosti
Namen je pridobivanje znanj povezanih z verigo od ideje pa do končne realizacije. Tako b
obdelali zanimiva področja, ki jih je potrebno prehoditi, da ideja postane uporabna. Vsak
novo poglavje, od spodbujanje ustvarjalnosti, prek selekcije in vrednotenja idej, o osnov
razvojnega dela, zaščiti intelektualne lastnine, možnosti uporabe sodobnih informacijskih
inovacijskem delu ter seveda o uspešni komercializaciji novosti.
S sodelavci se bomo potrudili, da bo vključenih več praktičnih primerov, dobrodošla pope
strokovni članki povezani s tematiko. Sestavni del bodo tudi linki, kjer boste na domačih i
straneh našli še marsikaj zanimivega.
Prepričani smo, da ste z nekaterimi temami in problemi srečali že pri svojem delu. O vsem
radi delili izkušnje s kolegi iz cele Slovenije, pa se lahko v sproščenem pogovoru pomenite
spletnih straneh (inovativnost.net).
Zaenkrat toliko, v bodoče pa vas čaka več prijetnih presenečenj.
Vsa poglavja Šole inovativnosti so na voljo le registriranim članom. »Registrirajte« se že
Povabilo radovednim
PREDGOVOR - Matjaž Mulej
UVOD - Borut Likar
Rojstvo ideje
USTVARJALNO RAZMIŠLJANJE - Borut Likar
Ideja se udejani
KRITERIJI ZA IZBOR INVENCIJE - Borut Likar
KAKO RAZVITI IN PRODATI IDEJO - Borut Likar
Tudi pamet je naprodaj
INTELEKTUALNA LASTNINA - Borut Likar
Inovativnost v šoli
INVENCIJSKO-INOVACIJSKI MANAGEMENT Z UPORABO DIALEKTIČNE TEORIJE SISTEMOV
(PODLAGA ZA URESNIČITEV CILJEV EVROPSKE UNIJE GLEDE INOVIRANJA)
DDr. Matjaž MULEJ, zasl. prof. (Teorija sistemov in inovacij) in soavtorji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O nas
About us
Iskanje
Član: borut
FOTOUTRINKI
Inoviranje je sestavljeno iz posameznih utrinkov, od katerih smo p
oz. celulojni trak.
YouTube
Projekt postavitve spletne strani je financiran s strani
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http://picasaweb.google.si/korona.plus
Eureka! mladi 2009
25. 10. 2009
fotografije: 29
IIO-dogodki po Sloveniji
4. 9. 2009
fotografije: 11
Strokovna ekskurzija München, marec09
17. 3. 2009
fotografije: 2
Eureka! mladi 2008
22. 10. 2008
fotografije: 11
Strokovna ekskurzija München, april08
8. 4. 2008
fotografije: 2
IIOVA MLADI 2007
6. 5. 2007
fotografije: 11
InPod 2006
15. 12. 2006
fotografije: 8
IIOVA MLADI 2006
8. 5. 2006
fotografije: 3
Eureka! mladi 2005
9. 2. 2006
fotografije: 11
IIOVA 2005
12. 11. 2005
fotografije: 3
MOS Celje 2005
13. 9. 2005
fotografije: 4
Eureka! mladi 2004
15. 10. 2004
fotografije: 17

From Mass to Excellence

- educational materials – books
- e-training
- www.inovativnost.net
  - school of Innovation
  - e-news
  - forum – internet chat room
  - co-operation and discussion with experts
- competition Eureka! Ideas of Youth
- information, short workshops, comics

Eureka! Innovation of Youth – Educational Materials

Teacher Training – some comments

»This is a long yet safe path to innovative society.«
»Extremely comprehensive approach – keep going like that!«
»Very interesting and useful.«
»Similar seminar would be needed also for school management.«
»Congratulations on successfully implemented programme.«
»This is the right path to knowledge society«.

From Mass to Excellence

- conferences, exhibitions, popularisation
- consultancy, co-operation with the economy
- competition Eureka! Innovation of Youth
- educational materials – books
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- www.inovativnost.net
  - school of Innovation
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Presentations of the project Eureka! Innovation of Youth at home and around the world

European Parliament

From Mass to Excellence

- successful projects of young people
- media communication
- co-operation with the economy
- conferences, exhibitions, popularisation
- consultancy, co-operation with the economy
- competition Eureka! Innovation of Youth
- educational materials – books
- e-training
- www.inovativnost.net
  - school of Innovation
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- competition: Eureka! Ideas of Youth
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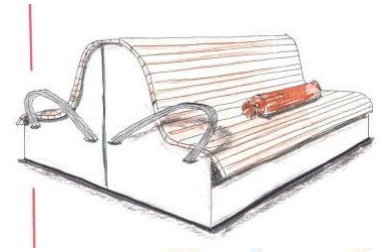
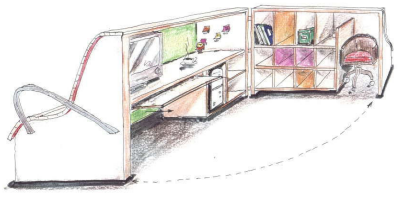
Successful co-operation with the European Patent Office and Slovenian Intellectual Property Office

Eureka! Innovation of Youth

Eureka 2003 - Innovation of Youth





World innovations 2009

Foldable Office

A View from the Different Window

The purpose is to connect:

the most creative young people

&

internationally successful companies,
renowned researchers,
professors who dare to think differently

via: presentation of the projects prepared by young people, demonstration of good practice, exchange of experience, personal coaching, networking etc.

Without his ideas Jamie Oliver would only be a great cook who nobody knew.

(Borut Likar)

Eureka! Innovation of Youth

Beating speed records with vehicles powered by human drive – Eivie

Project description:

The objective is to establish the boundaries of human power in connection with technology.

Human body is harnessed to a vehicle, and by pushing the pedals in an aerodynamic housing, on two wheels enormous speeds may be achieved on appropriate road groundwork by riding in reverse direction.

What does it solve?

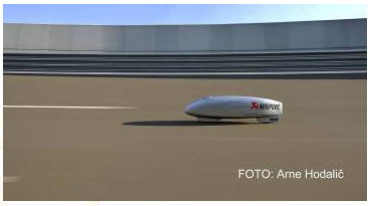
Technical problems and physiological problems in aerodynamics, effectiveness of a special cycling sport.

Key achievements:

• World 1-hour record - 2008,

• World record at the low altitude of 200m with flying start - 2009.

• Innovation attracts media attention which is useful for the purposes of advertising recumbent and other ultra light, e.g. electrical vehicles of new generation in the future.



Author: Damjan Zabovnik;
Mentors: Pavle Kovač, Matjaž Leskovar, Leon Plestenjak, Simon Pivec, Andrej Pagon, Arne Hodalič, Otmar Kugovnik, Borut Likar, Igor Akrapovič, David Saylor, Boris Brovinsky, Gregor Veble, Rado Kikelj, School: Faculty of Sport
Prizes and awards:
Fly with an Idea (1st place) – 2003, The Most Entrepreneurial Idea (2nd place) – 2004, Eivie I makes part of the collection of the Technical Museum of Slovenia, Bistra, For a few days Eivie II was exhibited in the Science Museum, London

Eureka! Innovation of Youth

4-D furniture – furniture with the regulation of height and position

Project description:

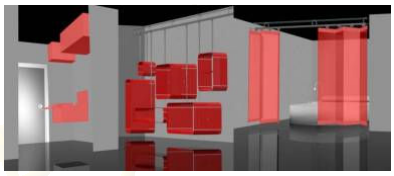
System of furniture for which the height and position may be set in 3-D space dictated by the 4th dimension – time. In the context of time for example the same table may be dinner table or club table, it may be stored beneath the ceiling, or it may follow child's development. A particular surface may be a bench now or a shelf.

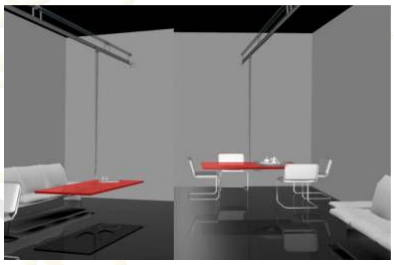
What does it solve?

High density of population, urbanisation and capital create extremely small apartments, barely usable. 4-D system of furniture is multifunctional and thus enables rational use of apartment space, which become more pleasant and user-friendly.

Key achievements:

4-D furniture is economically profitable and also functional. A concept is designed but not realised yet.





Author: Ivana Antolović, BArch
Mentor: Prof. Dr. Igor Kalčič
School: University of Ljubljana, Faculty of Architecture
Prizes and awards:
2 prizes awarded by the Institute for Innovation and Technologies,
Nomination for Prešern's Award,
Named the most "promising" architect at the Month of Design event

Eureka! Innovation of Youth

Urban Planning Game

Project description: UPG represents a concept of democratic involvement of the public in shaping the future of a town by way of an interactive game.

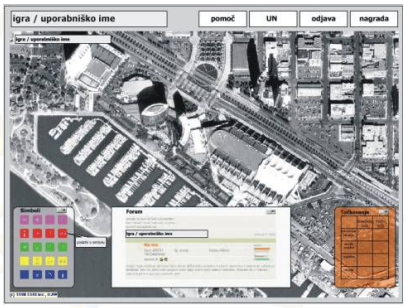
What does it solve? UPG is a powerful tool which brings to light the public problems, stimulates cooperation and anticipates thinking and creativeness.

Key achievements:

• The existing town organization does not support the increased needs of inhabitants of the 21st century. The need to reorganize the contents is growing.

• Experts and government could use UPG to obtain ideas for sustainable town development planning on the basis of the experience of its inhabitants.

• Promotion, communication, social cooperation, education, awareness.



Author: Lavoslava Benčić,
Mentor: Martin Mele,
School: Institute and Academy for Multimedia, Ljubljana, Slovenia

Prizes and awards:
Eureka 2005 awarded by the Institute for Innovation and Technology, Ljubljana, Inova 2006, Zagreb,
Selected project at the 12th International Conference on Virtual Systems and Multimedia in Xi'an, China (published by Springer Verlag LNCS).

Eureka! Innovation of Youth

Boatman's Path

Project description: In an innovative and interactive way the Boatman's Path presents children the cultural and social heritage of the Ljubljanica River. During the boat ride an animator tells children the stories related to the river and places near the river.

What does it solve? The project solves the lack of adequate and high-quality tourist offer in the town, i.e. offer designed to attract children's attention. Furthermore, the project strives to solve the problem of preserving immaterial cultural heritage of the town.

Key achievements: For the third-year running the Boatman's Path presents free time activity for children in the centre of town, and attracts participants from the entire Slovenia. Due to innovative content the Boatman's Path is a successful project also introduced as extra activity at schools and kindergartens. Co-operation with the National Museum of Slovenia (Exhibition on Cultural Heritage of the Ljubljanica River).

Authors: Teja Močnik, Saša Starec, Urša Valič,
Mentors: Špela Pogorelec, Rajko Muršič,
School: Faculty of Arts, Department of Ethnology and Cultural Anthropology

Prizes and awards:
2005 – Golden Award Eureka! Innovation of Youth 2005, 2008 – award Sejalec presented by the Slovenian Tourist Organisation to five most innovative projects in the field of tourism

Eureka! Innovation of Youth

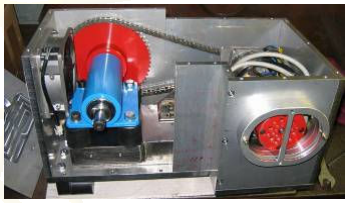
Device for shot blasting of wooden pegs

Project description: The device for shot blasting of interdental pegs is computer run via controller. Blasting drum is driven by electrical motor run by controller. Since 6 different models are treated along the length, treatment is controlled with different programmes.

What does it solve? Device solves skimming of sharp edges resulting from the production of interdental pegs. It is essential to achieve constant quality for the entire batch of products.

Key achievements:

Savings of more thousand Euros, Ensuring constant quality for the entire batch of products, By now 1200 operation hours have been performed without any problems, In 2 years this means more than 2,500,000 treated pieces, Products are distributed throughout the world.



Authors: Krešimir Gorišek, Matjaž Gajšek, Dejan Čuček, Roman Zupanc,
Mentor: Roman Zupanc,
School: School Centre Celje, Secondary School for Mechanical Engineering and Mechatronics

Prizes and awards: Golden Award for the 1st place and the Award for the Most Entrepreneurial Project Eureka! Innovation of Youth 2007, Bronze Award for the Best Innovations in Slovenia presented by the Chamber of Commerce and Industry, Celje 2008, Award for Ensuring Standard Quality, 2007

Eureka! Innovation of Youth

Regulation of light at the entrance and exit from the tunnel

Project description: The project solves disturbing passage in or out of the tunnel at sudden change of light. Some ten metres on each side of the tunnel the lighting is regulated or changed pursuant to external day light. At night time the lighting is also present outside the tunnel which gradually diminishes.

What does it solve? Sudden change of light when entering/exiting the tunnel proves very disturbing for drivers. The project solves the problem by making the change gradual at all times. On the basis of sensors in and outside the tunnel, the lighting at the beginning and the end of the tunnel gradually changes.

Key achievements: Innovation proves useful for all existing tunnels since the drive is more pleasant and safer. When drivers drive out of the tunnel, they are not blinded b strong day light and vice versa, when driving into the tunnel, the passage to internal lighting is gradual.

Authors: Hruste Dedič, Renato Egger,
Mentor: Milan Ivič,
School: SERŠ School of Electrical Engineering and Computer Science

Prizes and awards:
Golden Award Eureka! Innovation of Youth 2008, 3rd place Youth for the Progress of Maribor 2009, Silver Award Young Researchers of Slovenia (Association for Technical Culture of Slovenia) 2009.

Eureka! Innovation of Youth

Biomasa – cheaper heating (furnace on wooden chips)

Project description: The purpose of the project was to reduce costs of heating in a residential house. The project is designed in two sets (mechanical and electrical). I produced the electrical part while Marko Kokovica produced the mechanical part. It was all produced in our home workshop in order to sustain the lowest possible costs.

What does it solve? The system is run automatically which provides maximum comfort during heating. The costs are minimal. It is only necessary to purchase wooden chips, produced during cleaning of forests. Emissions discharge is small in comparison with other types of heating. Efficiency is considerable higher.

Key achievements:

Heating season annually/unit: before (heating oil): approx 1500€; now with wooden chips: approx 600€.

Author: Andrej Bičanič,
Mentors: Valentin Peternel, Marko Kokovica,
School: Secondary School of Technical Sciences Šiška

Prizes and awards:
1st place FuturEnergia: Energy is our Future, Golden Award Eureka! Youth 2008, The Most Entrepreneurial Project Eureka! Innovation of Youth 2008, The Most Ecological Innovation Eureka! Innovation of Youth 2008, Bronze Award at the Meeting of Young Researchers of Slovenia.

For every "I've discovered" you can hear, there are a hundred "I was wrong" you cannot hear.

(Borut Likar)

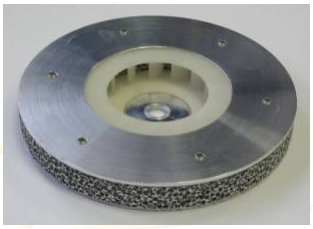
Eureka! Innovation of Youth

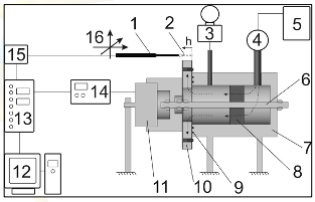
Bladeless impeller made of open cell porous material

Project description: Innovation addresses centrifugal turbowheel, where transfer of energy from turbowheel onto fluid is carried out via structure of porous material and not via blades, as in ordinary blower.

What does it solve? Optimisation of technological problem, lower noise emissions and an option to implement additional functions (catalytic converter, heat converter, filter,..).

Key achievements: May be used in numerous areas, such as for example air injection into full cell due to low noise emissions; in devices where the product combines functions of catalytic converter due to large specific surface of porous material and lower; in heat converters where the products combines the functions of heat converter and blower.





Author: Gašper Benedik,
Mentors: Prof. Dr. Brane Širok, Assist. Prof. Dr. Marko Hočevar, Aljoša Močnik,
School: Faculty of Mechanical Engineering, University of Ljubljana

Prizes and awards:
International PCT patent application, two basic scientific papers, First Prize Eureka! Innovation of Youth 2009, two presentations at the conferences

Eureka! Innovation of Youth

Electrical installation without technical radiation

Project description: Electrical installation without technical radiation is a classical installation which needs to be implemented with specifically defined materials and pursuant to a specific procedure.

What does it solve? Prevents emissions of electromagnetic radiation of electrical installation devices into habitable room.

Key achievements:

- Production of electrical installation material of new generation
- Innovative procedure of producing electrical installation
- Patented electrical installation material which prevents radiation is in the process of obtaining certificates and preparing mass production.

Author: Matjaž Režek,
School: School Centre Ptuj, High Vocational College – Mechatronics

Prizes and awards:
Golden Award for 2nd place EUREKA Innovation of Youth

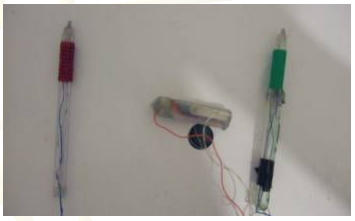
Eureka! Innovation of Youth

IR interactive board

Project description:
IR interactive board is all about using wireless IR camera set in an angle of 45 degrees and directed towards projection screen and IR pens, which serve to set the position cursor on the projection screen. Numerous pens may be used at the same time, this is particularly important in schools, when problems may be solved by more pupils, students or other users at the same time.

What does it solve?
Reasonable price enables great functionality of IR interactive board. Great mobility of the device is also important.

Key achievements:
The board is developed and in the phase of testing. It presents great market potential which we wish to take advantage of and we are thus in search of potential producers.



Author: Matic Velepec,
Mentor: Edvard Trdan,
School: Secondary School of Technical Sciences Šiška

Prizes and awards: Golden Award for 3rd place Eureka! Innovation of Youth 2009, and Award for the Most Innovative Project

Eureka! Innovation of Youth

GPS.o.S - Concept of devices and services assisting demented patients and elderly

Project description: Development of new devices of GPS.O.S Home and GPS.o.S Institution, or new comprehensive concept of devices and services assisting demented patients and elderly as well as other groups of patients, disabled people or people with special needs.

What does it solve? Concept enables greater mobility, better care and lower costs of care provided to demented patients, elderly and disabled people. Via sensors the device psycho-physiological, state of users, transmitted via mobile communications to their carers who can react appropriately.

Key achievements: Average social care expenses in 25 EU Member States account for 54 % of total public spending. The costs of care and nursing of demented patients are extremely high. Our innovation reduces expenses of medical insurances. The market of the innovation is the entire EU. Mentor company Monolit d.o.o. is engaged in marketing for hospitals, elderly homes and private users.

GPS.o.S Institution & Home

Author: Nika Pušenjak, BPsychologist, Young researcher from the economy,
Mentors: Prof. Dr. Anton Grad, MD, Assoc. Prof. Dr. Matej Tušak, BPsychologist, Jožef Pušenjak, BSc, Matjaž Hribar, MSc, PMBA, Rok Jesenko, geoinformatics, Monika Fuhs, MSc, BCIAC,
University and mentor company: University of Ljubljana, Faculty of Medicine, Sigmund Freud Privat Universität (SFU) Wien, Monolit d.o.o., Ljubljana

Prizes and awards: Eureka! Innovation of Youth 2009: the Best Project for Solutions in the Life if Disabled People, Golden Award, the project achieving the best assessment »DIRECT INCENTIVES for research & development activities in companies – Projects 2008«, Public Agency of the Republic of Slovenia for Entrepreneurship and Foreign Investments – JAPTI.

Eureka! Innovation of Youth

Microcontrolling experimental moduls

Project description: The objective was to produce modular learning tool for learning programming of microcontrollers, which shall be low-cost and at the same time appropriate for practical use and adjustable for different applications.

What does it solve? Helps learning programming and the use of microcontrollers. It is cheaper and simpler than the existing learning tools and, after the learning process, it may be built into an adequate housing and thus used also in practical applications, such as industrial controller.

Key achievements: in schools as a learning tool (currently used by High Vocational College Ptuj), in home electrical workshops as a learning tool or as a controllers in different applications, in industry as low-cost yet extremely powerful controller of different applications

Author: Gregor Krušič,
Mentors: Bruno Lubec, Slavko Murko,
School: ŠC Ptuj, School of Electrical Engineering and Computer Science

Prizes and awards:
Golden Award presented at the meeting of young researchers of Slovenia and the participation at the EUCYS, Golden Award for the Most Entrepreneurial Project Eureka! Innovation of Youth 2009, and others

Eureka! Innovation of Youth

Learning tool for the lessons of physics – Hovering of magnet

Project description: the project is designed as a toy for home party yet at the same time as a learning tool for the lessons of physics with which hovering of magnet between two or only one diamagnetic slate.

What does it solve? Beside presenting hovering of magent, the characteristics of displayed test may also be used for the production of mechanical devices with extremely low losses of energy.

Key achievements: Operation of magnetic fields presented in a very simple manner. With the help of the device the Earnshaw's theorem from 1842 is rejected; the theorem states that a collection of point charges cannot be maintained in a stable stationary equilibrium configuration without additional power or energy for stabilizing or using cooled superconductors. Presented idea could be used for producing extremely precise mechanical and measurement devices (e.g. seismographs).

Authors: Peter Jare,
School: Šentvid Grammar School, Ljubljana, Slovenia – 1st year student

Prizes and awards:
Silver Award Eureka! Innovation of Youth 2009, Golden Award and the Best Project for Solving School Challenges Eureka! Innovation of Youth 2009, Special Award "A View from the Different Window" Eureka! Innovation of Youth 2009

Eureka! Innovation of Youth

Determining toxicity of organophosphorus insecticide of chlormefos for terrestrial organisms

Project description:
from eco-toxicological point of view the work is rare in Slovenia, the study helped us establish toxicity of organophosphorus insecticide (chlormefos) of earthworms Eisenia andrei and Porcellio scaber.

What does it solve?
the problems of establishing sublethal effects.

Key achievements:
- Innovation in the field of establishing sublethal effects,
- the use of more sensitive indicators of actual toxicity of substance,
- the application of the state-of-the-art methods of establishing effects,
- production of a model for assessing the risk of the use of different toxic substances.

Author: Rok Hrženjak,
Mentors: Nevenka Kožuh Eržen and Lucija Kolar,
School: University of Ljubljana, Veterinary Faculty

Prizes and awards:
Prešern's Award of the Veterinary Faculty, Award for sustainable development for 2008,
Award for the Most Ecological Innovation Eureka! Innovation of Youth 2009

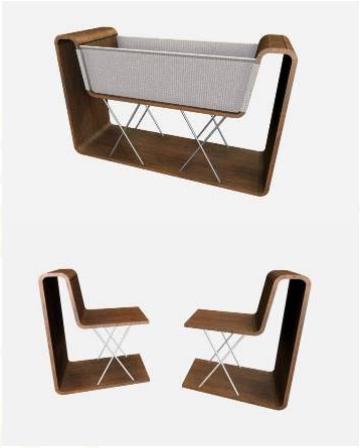
Eureka! Innovation of Youth

Ameba basket for newborns

Project description: Ameba basket is adjusted to newborns in its form up to their fifth month of age. The design and materials ensure peaceful and comfortable sleep. After the initial use the basket dismantles into two modern designed chairs which can be used in any interior.

What does it solve? Life of furniture is prolonged with smartly designed construction of the basket. Transformation of the basket enables us to obtain two chairs which may be used for many years. Thus a piece of furniture is used to the fullest which would otherwise only be used for 5 months.

Key achievements: Ameba basket is ergonomically designed not only for the mother/father but also for the newborn baby who is its actual user. The emphasis put on design was sustainability and timeliness. With thus designed furniture with an option of transformation maximal use of wood is achieved and consequently a contribution to positive ecological measures.



Author: Tadeja Juteršek,
Mentor: Lenka Kavčič,
School: The Academy of Design in Ljubljana

Prizes and awards:
Golden Award for the 1st place at Eureka! Ideas of Youth 2009, Rozman's Award for the Idea "Basket Ameba"

The greatest innovation of the future will be the change in us all.

(Borut Likar)

hope you enjoyed the ride

authors: assoc.prof.dr. Borut Likar, Urška Mrgole, Lavoslava Benčič
korona@siol.net