



European Academy for Industrial Management

Dr Zoran ANIŠIĆ, full professor

University of Novi Sad, Serbia

Faculty of Technical Sciences

**Department of Industrial Engineering
and Management**



European Academy for Industrial Management

Agenda:

- University of Novi Sad
- Faculty of Technical Sciences
- Department for Industrial Engineering and Management
- Center for Product Development and Management
- Reserach and Development Projects
- Future of Industrial Engineering & Management



University of Novi Sad



UNS

was founded on 28 June 1960.

Today it comprises 14
faculties located in the four
major towns of the
Autonomous Province of
Vojvodina:
Novi Sad, Subotica, Zrenjanin
and Sombor.



Facts and Figures

40,000 students at undergraduate studies

1,200 at postgraduate master's and specialist studies

2,374 attained doctoral degrees

2,800 teaching staff and **1,100** non-teaching staff





Faculty of Technical Sciences (FTS)

IMPORTANT POINTS

18th May 1960

FTS was founded as the
Faculty of Mechanical Engineering in Novi Sad.

22nd April 1974

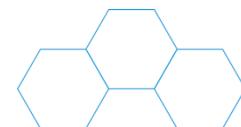
The establishment of the DEE1 and DCE was the reason for the
change in the name of the Faculty into the FTS

19th February 2007

National Agency for Accreditation Scientific and Research institution
make a decision to accredit FTN for scientific and research activity



**REALIZATION OF HIGH POSITION AMONG
THE BEST IS THE VISION OF THE
FACULTY OF TECHNICAL SCIENCES**





Facts and Figures

Staff

- **1022 full-time** employees
- **760** are participants in the lecturing process
- **247** are not lecturing staff
- **103** full professors and **67** associate professors
- **121** assistant professors
- **305** assistants
- **98** researchers

Studies

- Master Academic Studies
- Undergraduate Academic Studies: 8 semesters
- Master Academic studies: 2-4 semesters
- Specialist Academic Studies : 2-4 semesters
- Doctoral Academic Studies: 6 semesters
- Undergraduate Professional Studies: 6 semesters
- Specialist Professional Studies: 2-4 semesters
- MBA: 4 semesters



Departments (13)

- Production Engineering
- Mechanization and Construction Engineering
- Energy and Process Engineering
- Technical Mechanics
- Power, Electronics and Telecommunications Engineering
- Computing and Automatics
- Civil Engineering
- Traffic Engineering
- Architecture and Urbanism
- **Industrial Engineering and Management**
- Graphic Engineering and Design
- Environmental Engineering
- Fundamental Disciplines in Engineering

Centres (31)

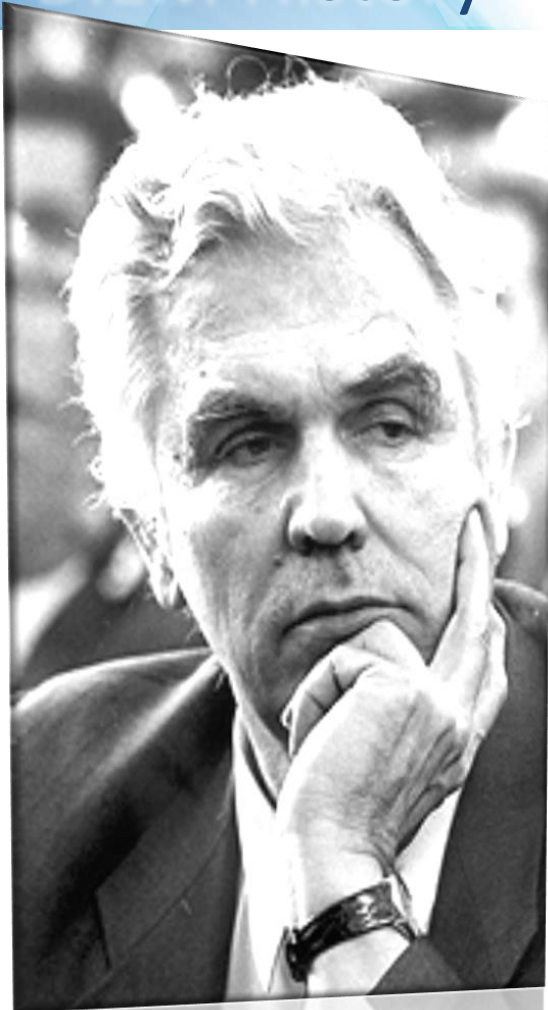
- RESEARCH AND TECHNOLOGY CENTRE
- GEOSPATIAL TECHNOLOGIES AND SYSTEM CENTER
- GRAPHIC CENTRE GRID
- ENVIRONMENTAL ENGINEERING CENTRE
- SURFACE ENGINEERING AND
- NANO TECHNOLOGY CENTRE
- **CENTRE FOR PRODUCT DEVELOPMENT AND MANAGEMENT**
- CENTER FOR IDENTIFICATION TECHNOLOGY
- CENTRE FOR YOUTH ENTERPRENUERSHIP
- CENTER FOR GLASS RESEARCH
- CENTRE FOR DISASTER RISK MANAGEMENT
- CENTRE FOR TECHNOLOGIES AND E-BUSINESS SYSTEMS
- CENTRE FOR METROLOGY
- COMPUTER CENTRE
-



Department of IEM

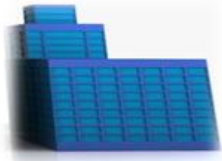
- Respectable unit of Faculty of Technical Sciences, the biggest faculty in the SEE, playing significant role in Serbian and regional economy.
- DIEM is unique scientific and research entity, combining fields of:
 - **Engineering,**
 - **Organization,**
 - **Management and Business,**
 - **Finances.**

DIEM History



- **15 May 1960.** – prof. dr Dragutin Zelenović, member of Serbian Science and Arts Academy founded Chair for Industrial Production Improvement within Faculty of Mechanical Engineering in Novi Sad.
- **29 June 1979.** – 9 Professors founded Institute of Industrial Systems
- **29 June 1990.** – Founded Research and Technology Center
- **29 June 1999.** – Established Institute of Industrial Engineering and Management
- **29 June 2002.** – IIM/EURO International Postgraduate Business and Engineering School
- **29 June 2006.** – DIEM – Department of Industrial Engineering and Management

Facts & Figures



1 Department



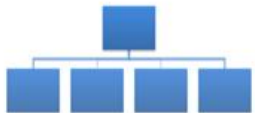
951 Graduate engineers



3 Study programs



1629 Masters engineers



4 Chairs



147 Masters of Science



15 Laboratories



104 PhDs



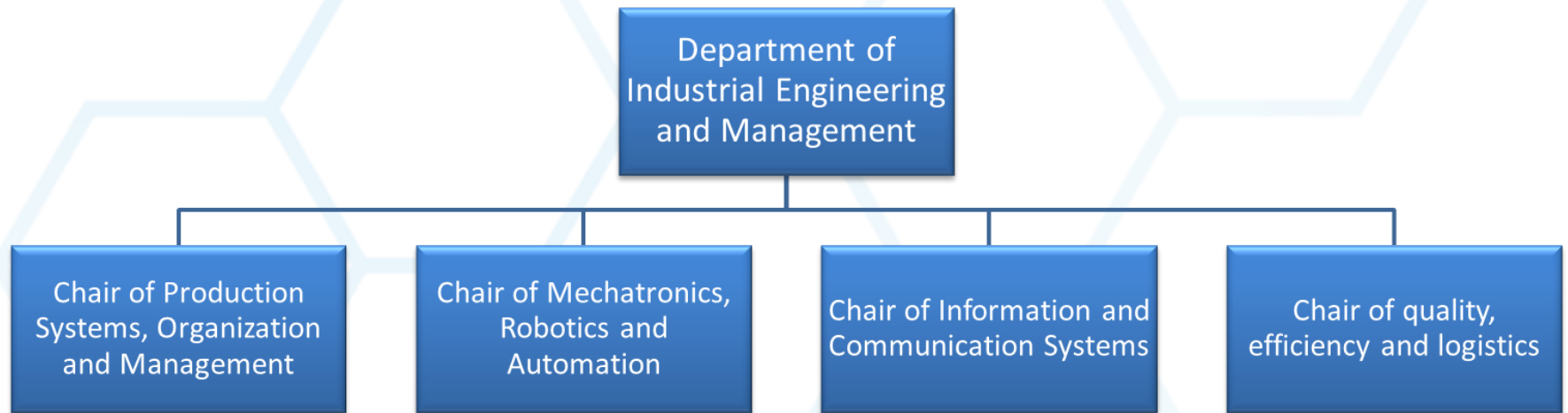
121 Employees



140 MBAs

134 Professional specialists

Organization of DIEM

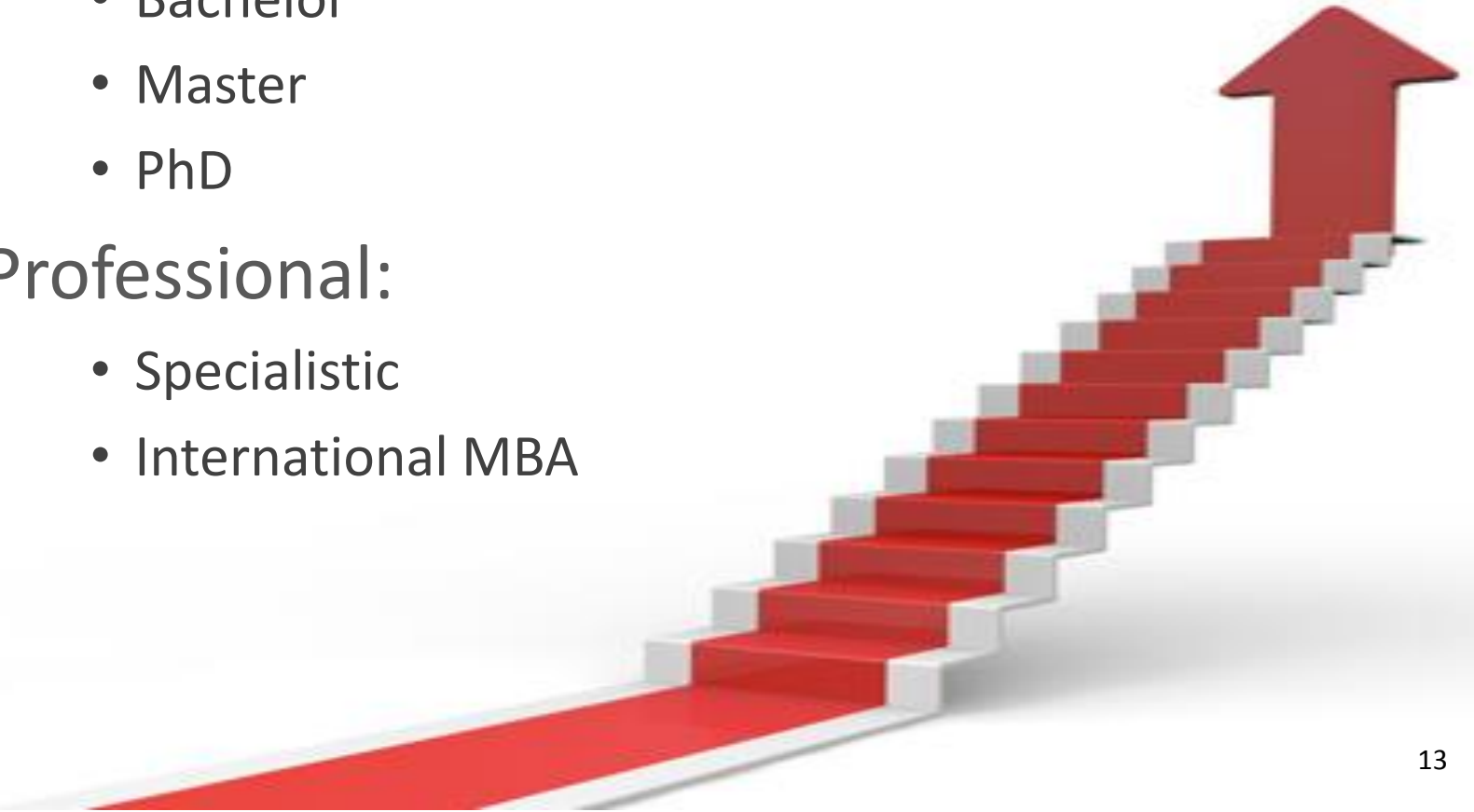


Laboratories



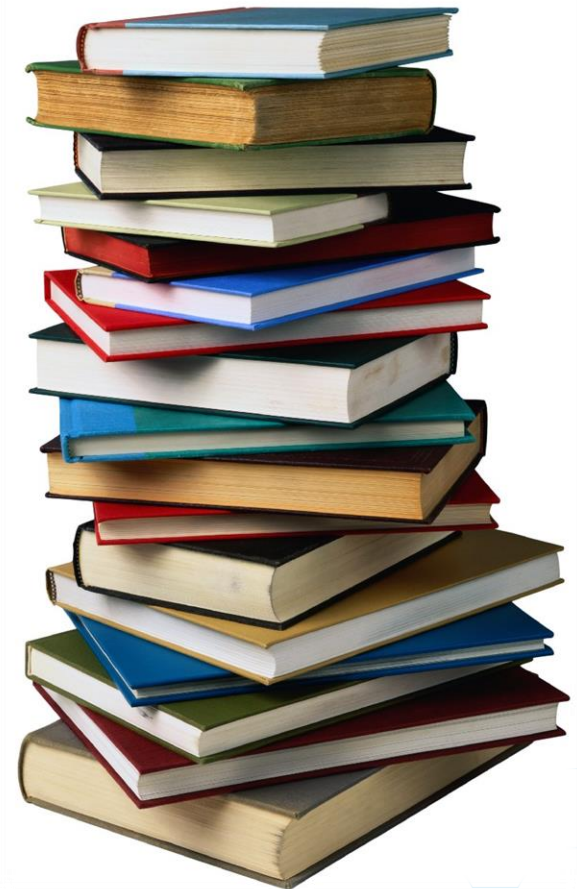
- Manufacturing & Assembly Systems
- Production Systems Control
- Distance Learning
- Media Engineering
- Disasters
- Programmable Logic Controller PLC
- Robotics
- Mechatronics
- Automation
- Artificial Intelligence
- Computer Integrated Systems
- Automation Systems Management
- Information Communication Systems
- Quality, Logistics and Maintenance

- Academic:
 - Bachelor
 - Master
 - PhD
- Professional:
 - Specialistic
 - International MBA



Bachelor studies

- 4 years, 240 ESPB
- Three study programs some of which student chooses to enroll, and at 4th year opts for a narrower field within the program :
 1. Industrial Engineering
 1. Design, organization and management of automation
 2. Information management and communication systems
 2. Engineering Management
 1. The organization and management of the company
 2. Innovation and Entrepreneurship
 3. Project Management
 4. Investment Management
 5. Information Management
 6. Quality Management and Logistics
 7. Risk and Insurance Management
 8. Industrial marketing and engineering of media
 9. Human Resource Management
 3. Mechatronics, Robotics and Automation
 1. Mechatronics, Robotics and Automation
 2. Mechatronics in mechanization





Master studies

- 2 years, 60 ESPB
- 3 new study programs:
 - Development and product lifecycle management (PLM)
 - Advanced engineering technology
 - Logistic Engineering and Management



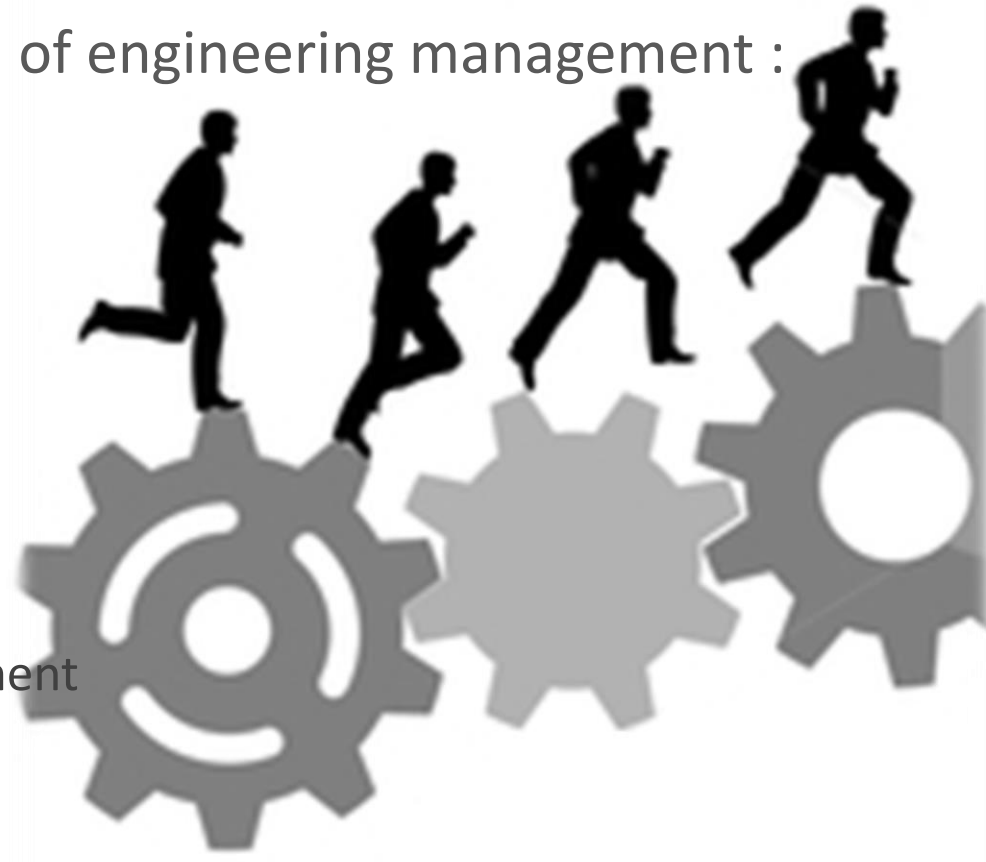
Third level academic studies

- PhD studies
 - 3 years, 180 ESPB
 - 2 study programs:
 - Industrial engineering and engineering management
 - Mechatronics
- Specialistic academic studies
 - 3 semesters, 90 ESPB
 - 2 study programs:
 - Industrial engineering
 - Engineering management



Professional studies

- 1 year, 60 ESPB
- Specialistic studies in the field of engineering management :
 - E-business
 - Human Resource Management
 - Public Relations
 - Controlling and Internal Audit
 - Insurance and Risk
 - Media Management
 - Investment Management
 - Actuarial Science and Management
 - Public procurement





International specialistic studies

- *MBA – Master of Business Administration*
- Business Management, 2 years, 180 ESPB
- Partnership cooperation with *UBI - United Business Institutes* from Brussels
- *Joint Degree UNS & UBI*





Research portfolio

- Research areas:
 - Technology and Production, organizational and management structure of industrial systems
 - Mechatronics, Robotics and Automation
 - Terms of use of information and communication technologies in work processes
 - Quality, efficiency and internal system support and logistics
 - Engineering Management
 - Identification technology



Projects

- Annual and perennial
- National, which is funded by:

- Ministry of Education and Science and
- Provincial Secretariat for Science and Technological Development of APV

- International projects:

- *TEMPUS*
- *WUS*
- *CEEPUS*
- *FP7*



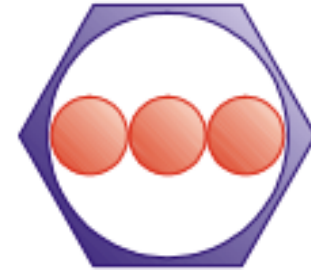
International Journal of Department of IEM

- *International Journal of Industrial Engineering and Management (IJIEM)*
- First edition in 2010
- Visibility in the SCOPUS database





UNIVERSITY OF NOVI SAD
FACULTY OF TECHNICAL SCIENCES
DEPARTMENT OF INDUSTRIAL
ENGINEERING AND MANAGEMENT
21000 Novi Sad, Republic of Serbia
Trg Dositeja Obradovica, 6



organizes

16th International Scientific Conference on **INDUSTRIAL SYSTEMS**

IS '14

October 15-17, 2014



Managing Co-creation and Personalization in Central Europe 23-26 September 2014, Novi Sad, Serbia

10th Anniversary of MCP-CE (2004-2014)



23-26 September 2014,
Novi Sad, Serbia

6th International Conference on
Mass Customization and
Personalization in Central Europe
(MCP - CE 2014)

**Managing Co-creation
and Personalization in
Central Europe**

Important Dates

Abstract submission deadline:
31 March 2014

Notification to Authors:
14 April 2014

Final paper submission deadline:
15 May 2014



Call for Papers for 3 joint events!

6th International Conference on
Mass Customization and
Personalization in Central Europe
(MCP - CE 2014)

16th Configuration Workshop
(CWS - 2014)

1st Doctoral Student Workshop
(DSW - 2014)

Mass Customization and Personalization in Central Europe



Cooperation with industry

- **Realized:**
 - In collaboration with ITC - Research and Technology Center and CAM Engineering
 - Within its own centers:
 - Centre for Development of Human Resources
 - Center for Youth entrepreneurship
 - Center for Disaster risk management
 - **Centre for Product Development and Management and**
 - Center for Identification Technology



Zoran Anisic - Curriculum vitae

- Full Professor in the field of Production Systems, Organization and Management
- Director of the center for product development and management - “myProduct”
- Head of academic master study programme in product lifecycle management - PLM



Publications:

- 24 - papers in scientific journals
- 12 - chapters in scientific books
- 6 - international conferences organizer and editor of conference proceedings
- 140 - conference papers
- 5 - teaching books
- 9 - international scientific projects
- 15 – industry projects

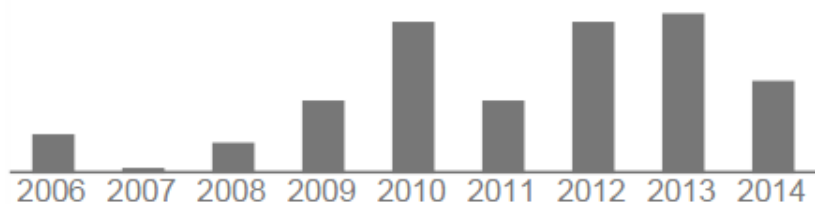
Citations

Google Академик

Индекси навода

Све Од 2009

Наводи	124	106
h-индекс	6	5
i10-индекс	2	2



Scopus

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Anišić, Zoran

Faculty of Technical Sciences, Novi Sad, Serbia

Author ID: 35309227500

Documents: 20

Citations: 39 total citations by 32 documents

h Index: 4 The *h* Index considers Scopus articles published e

Co-authors: 24

Subject area: Engineering , Computer Science [View More](#)



Publications in Journals

Anišić, Z., Veža, I., Suzić, N., Sremčev, N., Orčik, A.: *Improving Product Design with IPS-DFX Methodology Incorporated in PLM Software*, Tehnički vjesnik/Technical Gazette, ISSN 1330-3651, Vol. 20 No. 1, 2013, pp.183-193

Firstner (Furstner) I., Anisic Z., Takac, M.: Product Configurator Self-Adapting to Different Levels of Customer Knowledge, Acta Polytechnica Hungarica . Journal of Applied Sciences, 2012, Vol. 9, No 4, pp.129-150, ISSN 1785-8860

Suzic, N., Stevanov B., Cosic, I., Anisic, Z., Sremcevic, N.: Customizing Products through Application of Group Technology: A Case Study of Furniture Manufacturing, Strojniski vestnik = Journal of Mechanical Engineering, 2012, Vol. 58, No 12, pp. 724-731, ISSN 0039-2480

Anisic Z., Krsmanovic C.: Assembly Initiated Production as a Prerequisite for Mass Customization and Effective Manufacturing, Strojniski vestnik = Journal of Mechanical Engineering, 2008, Vol. 54, No 9, pp. 607-618, ISSN 0039-2480, UDK: 658.5



Conference Chairman

- Mass Customization and Personalization in Central Europe **MCP-CE 2008, 2010, 2012, 2014**
- International conference on Entrepreneurship, Innovation and Regional Development **ICEIRD 2010**
- International conference on Mechatronics in Education **Mech-Edu 2011**



Teaching books

- Assembly systems and technologies
- Assembly joints, tools and machines
- Assembly systems and technologies - workbook
- Product development in PLM
- Integrated Product Development
- Technological and Business Forecasting



Academic courses

- Product Development,
- Decision Theory,
- Technological and Business Forecasting
- Product and Service Management
- Assembly Technologies



International projects

Fostering Students' Entrepreneurship and Open Innovation in University-Industry Collaboration – iDEAlab TEMPUS (2014-2017)

Improvement of Product Development Studies in Serbia and Bosnia and Herzegovina - IPROD (2012 - 2015), 530577-TEMPUS-1-2012-1-RS-TEMPUS-JPCR

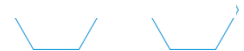
Production and Profitability improvement in Serbia Enterprises by adopting Lean Thinking Philosophy and strengthening Enterprise – Academia connections, LeanEA, JPHES 511084-Tempus-2008-IT-JPCR, 2010-2013,

MAS-PALM - MASTER STUDIES AND CONTINUING EDUCATION NETWORK FOR PRODUCT LIFECYCLE MANAGEMENT WITH SUSTAINABLE PRODUCTION, Agreement number – 144959-Tempus-2008-IT-JPCR, 2008-2011,

MECH-EDU, IPA Cross-Border Cooperation Programme, Subotica Tech College of Applied Studies, MC-OI Network, Mass Customization and Open Innovation Network, Multilateral Project,

RELOAD - Regional Elements of Logistic Opportunities Assessment and Development, INTERREG, br. projekta: 05SER03/03/010, Period: 2007 - 2008.

Feasibility Study and Supporting Project Documentation Elaboration for Subotica Industrial Park, INTERREG, br. projekta: 04SER02/01/013, Period: 2007 - 2008.



Activities of the *My Product* Center

www.myProduct.rs



Centar za razvoj
i menadžment proizvoda

Education:

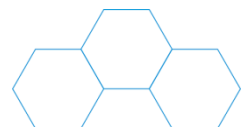
- Business Seminars,
- Workshops,
- Summer Schools,
- Specialistic Studies

Projects:

- Industrial collaboration,
- Consulting.

Science and Research:

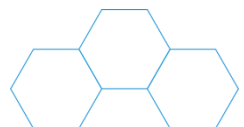
- Int. conference (MCP-CE),
- Publishing journals & books,
- Joint research projects,
- Networking.

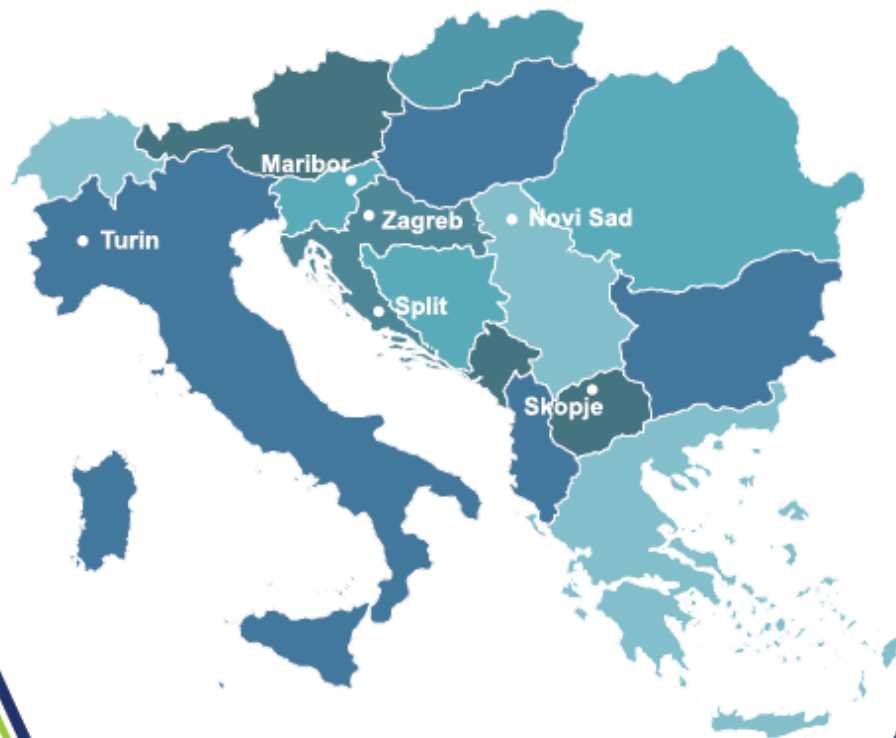


Fields of Interest



- PLM - Product Lifecycle Management;
- NPD - New Product Development;
- MCP - Mass Customization and Personalization;
- OI - Open Innovation





**Master of Science in
Product Lifecycle
Management**

1 year 60 ESPB



80 licences:

- NX,
- Solid Edge,
- Tecnomatics,
- Teamcenter

Sertifikat

o položenom stručnom ispitu

Nemanja Sremčev

TEAMCENTER

Teamcenter:

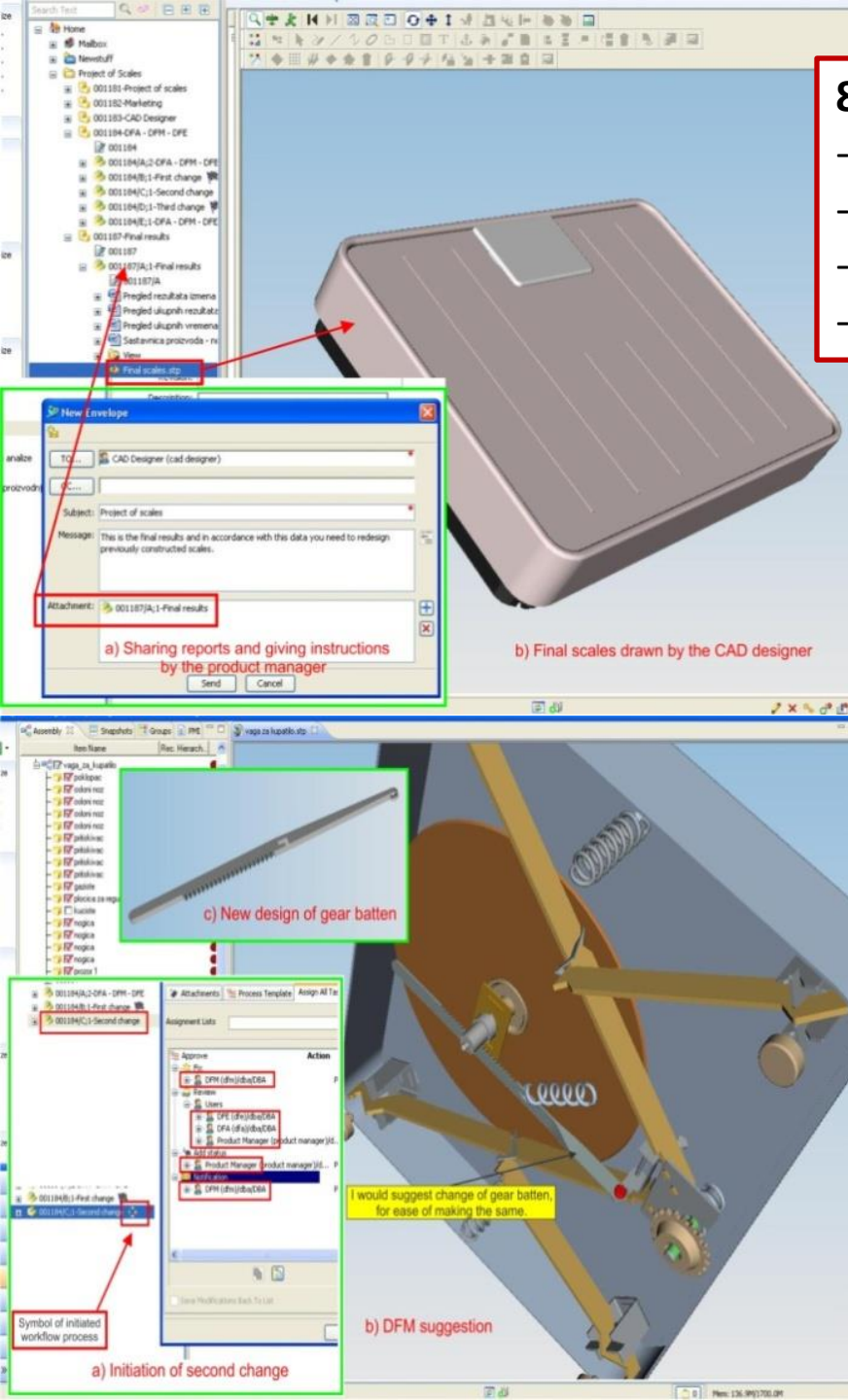
Engineering Proces Management
Requirements Management
Lifecycle Visualization
Schedule Management

za Industrial Technology Systems

U Beogradu
Dana: 13. Jula 2011 godine



Ing. Tihomir Erdeljic
Generalni direktor



OPEN INNOVATION

Innovative Design Challenge



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The stage is not active



Handle

Idea generation for the handle.

Mar 4, 2014 - Jan 9, 2014



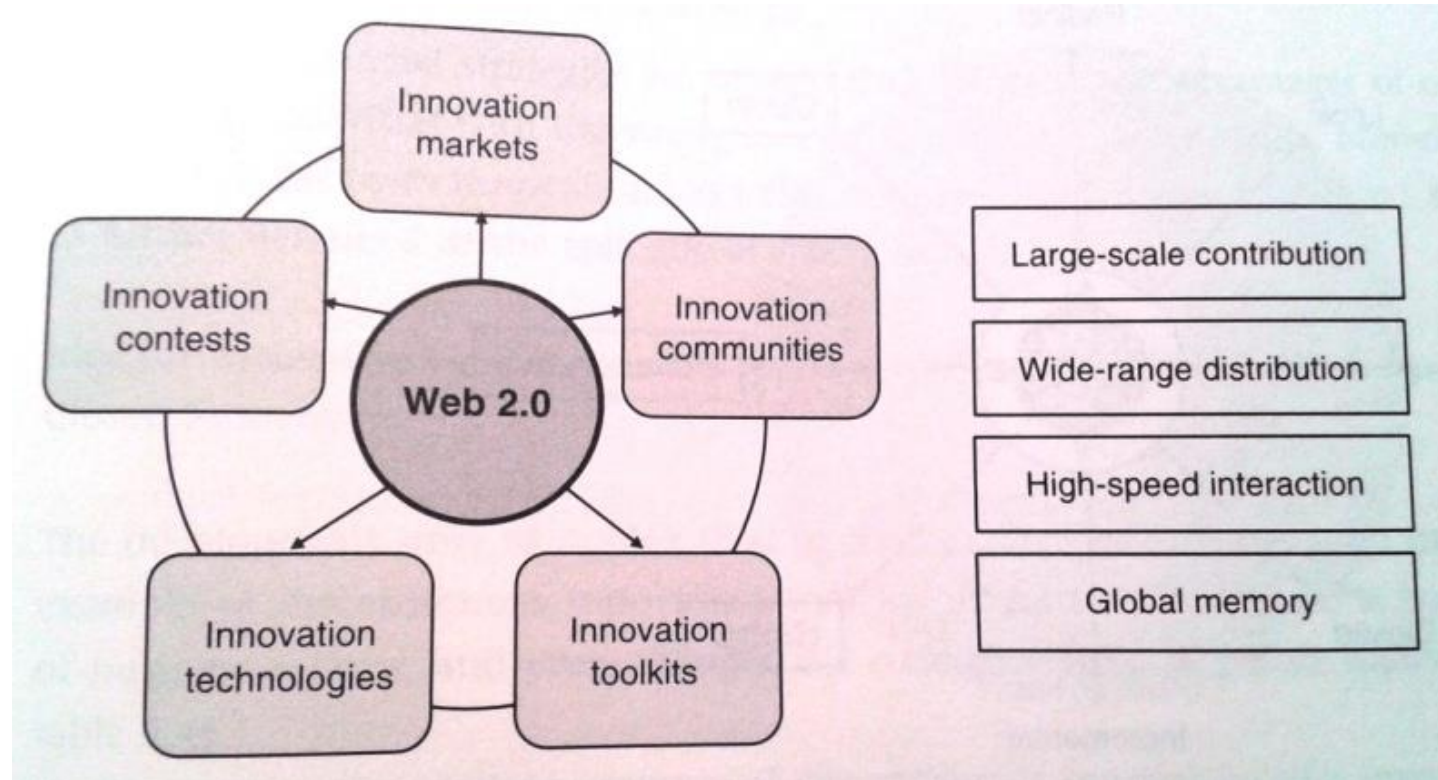
Buggy wheel

Ideas for mounting the buggy wheel.

Dec 3, 2014 - Jan 9, 2014

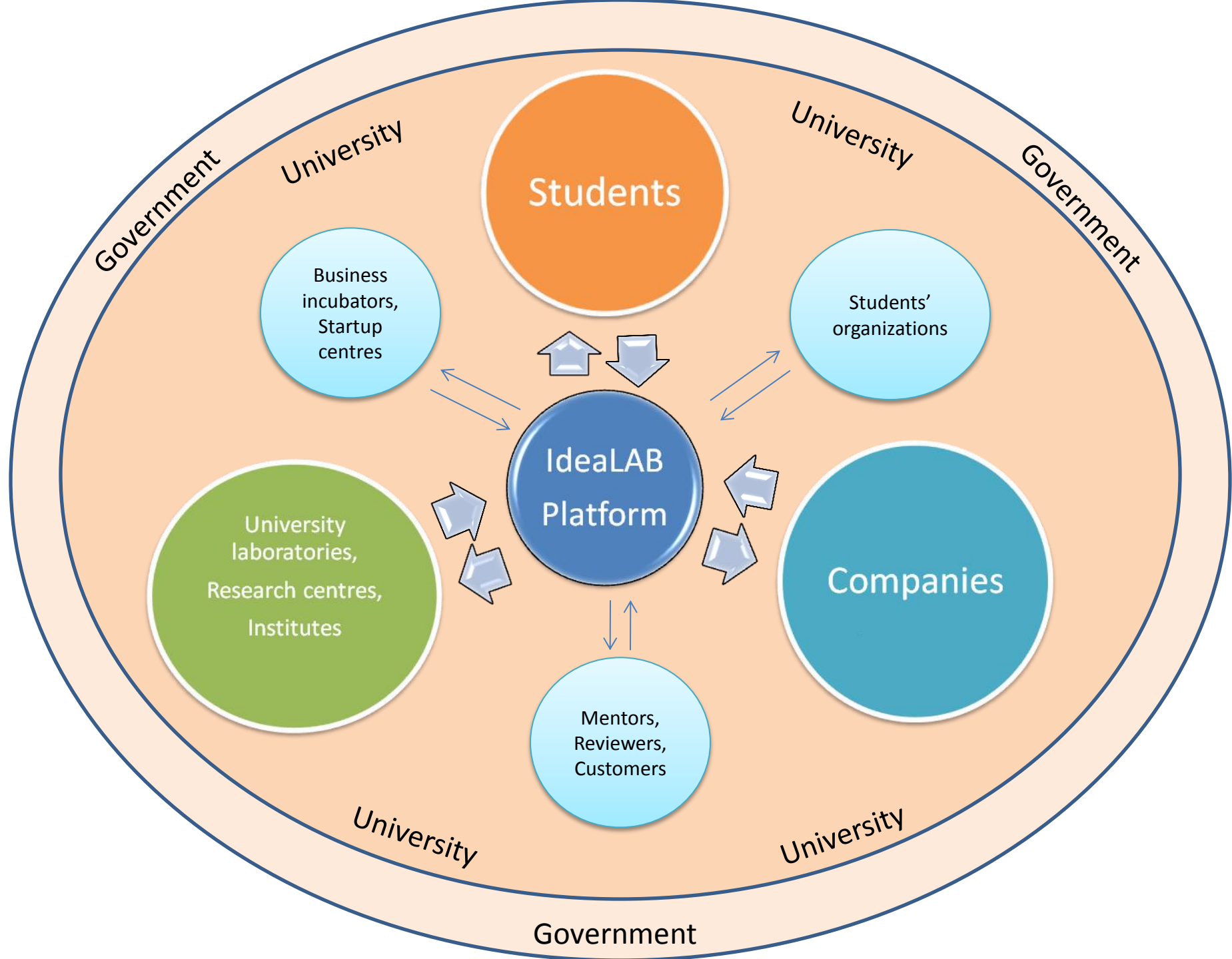


Tools for Open Innovation



Leading Open Innovation, by Anne Sigismund Huff (Editor), Kathrin M. Möselein (Editor), Ralf Reichwald (Editor), The MIT press, 2013.

Chapter 5: Kethrin M. Moslein: Open Innovation: Actors, Tools and Tensions



Innovative Design Challenge

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Buggy wheel



The description of the project can be found in attachments.

Documents for download

Ordinal	Document	Name
1.		Klikni zaključaj i kreni.pdf
2.		funkcionalni zahtevi rucka.pdf
3.		MTM 2 Analiza postavljanja i skidanja rucke za guranje.pdf
4.		rucka2.pdf
5.		funkcionalis elvarasok tolokar.pdf
6.		Functional requirements.pdf

Messages and stages

[General messages](#)

[First phase](#)

[Second phase](#)

[Third phase](#)

From Mass Production to Mass Customization:

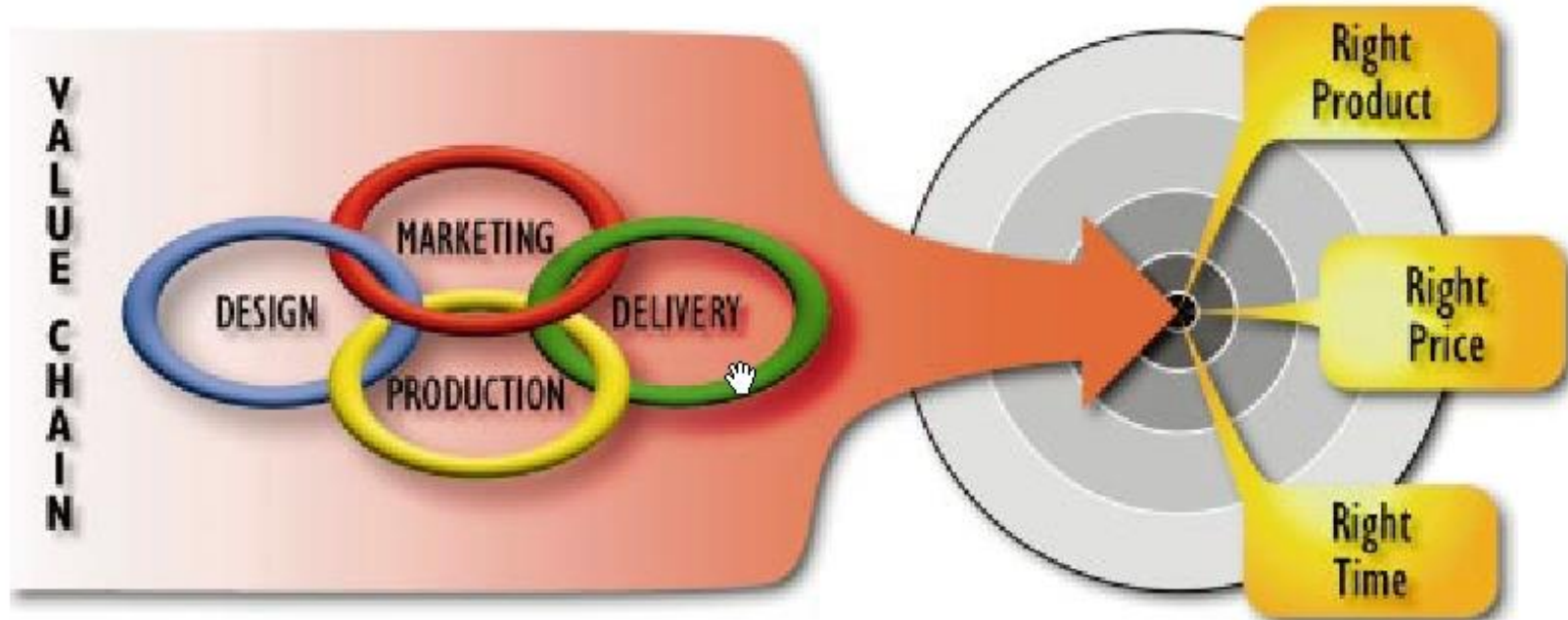


Mass Customization and Personalization means producing goods and services by meeting individual customer's needs with near mass production efficiency.

From one car for all...

...to a unique car for each of us





MASS PRODUCTION

Make-to-Stock

Predefined

Long

Acceptable

Low

KEY CHARACTERISTICS

Business Model

Product

Life Cycle

Quality

Price

MASS CUSTOMIZATION

To Order

**Configured at
Order Entry**

Short

Superior

Competitive

Osnova

Segment

Police

Polica

Polica sa konzolom

Stenderi

Nosac stendera

Stender BASIC-1

Stender BASIC-2

Stender BRAVO

Stender COOL

Stender ALKA

Stender PIN-1

Stender PIN-2

Kruzni stender

Drzaci

Zakacke

Razno

Obicna vesalica

Segment

Stub

Vezni element

Odstojnik

Kugla

Štelujuća noga

Nosac štendera

Nosac štendera

Štender BRAVO

Polica

Polica

Nosac police

Polica sa konzolom

Polica

Konzolni nosac police (par)

Parametri



Precnik

50

0

Boja

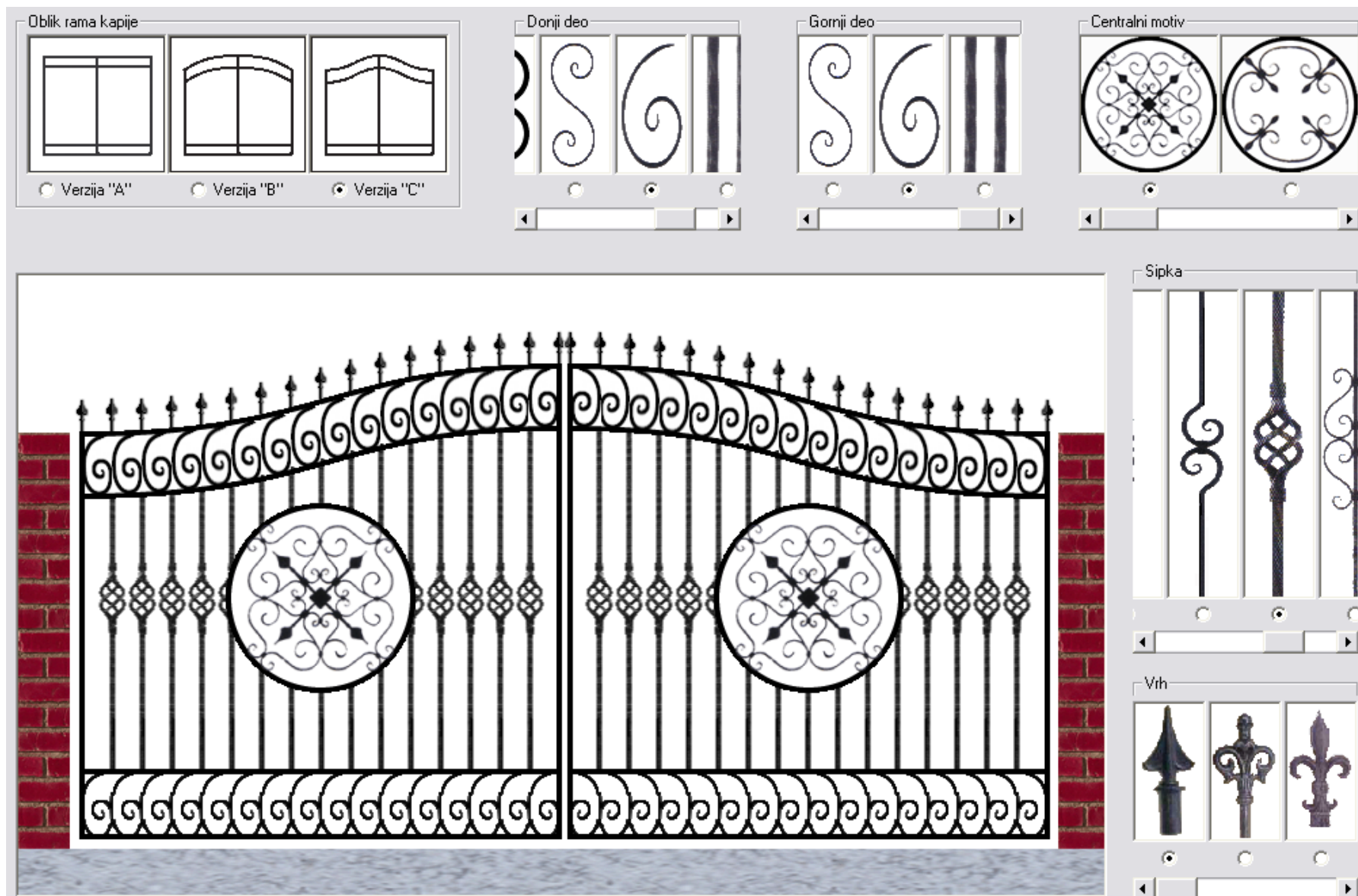


Podesavanje

Delovi

Naziv	Kom.	Cena	Vrednost
Konzolni nosač police (pa	1	210,00	210,00
Kugla	1	500,00	500,00
Nosač police	1	115,00	115,00
Nosač štendera	2	420,00	840,00
Odstojnik	1	300,00	300,00
Polica	2	350,00	700,00
Štelujuća noga	1	460,00	460,00
Štender BRAVO	1	150,00	150,00
Stub	1	220,00	220,00
Vezni element	1	140,00	140,00

Configurator – www.romic.rs



INTELLIGENTER KONFIGURATOR FÜR THERMOISOLIERUNG UND GEBÄUDEDEKORATION

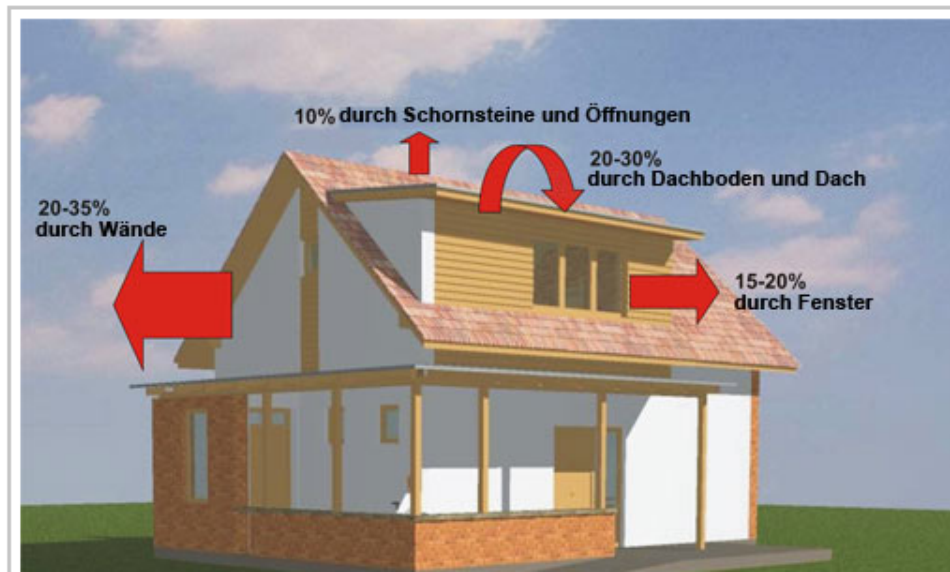
Mit dem Masterplast - Konfigurator für Thermoisolierung und Gebäudedekoration können sie alle nötigen Elemente für ihr Haus definieren und sich selbst von den Vorteilen der Thermoisolierung überzeugen, die ihre Investition wird sich in kürze auszahlen.

Mit dem Masterplast - Konfigurator können sie Schritt für Schritt die Bauparameter ihres Gebäudes angeben und die ideale Auswahl treffen für alle Thermoisolierungselemente für Fassade, Keller, Böden, Halbstockwerke und Dachboden.

Mit dem Masterplast - Konfigurator können sie ihr Haus dekorieren, wir bieten ihnen eine weite Auswahl an Farbmörtel für Fassaden, Dekoleisten und weitere Dekoelemente aus Styropor.

Das Masterplast System steht ihnen jederzeit zur Verfügung damit sie ihre optimale Isolierungs- und Dekorationslösung auswählen können.

Wo passiert der Wärmeverlust?



Anmelden

Benutzer:

Passwort:

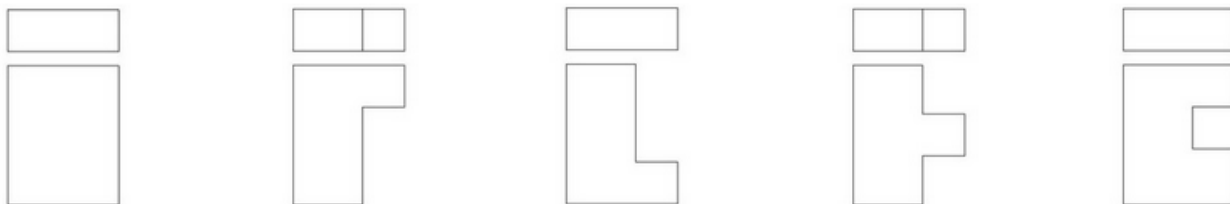
login

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[Vergessenes Passwort](#)

[Häufig gestellte fragen](#)

Oblik tlocrta



nivo:

1. sprat



www.masterplast.rs

Ako imaš nekih nejasnoća
traži pomoć od našeg
majstora!

[Postavite pitanje našem
majstoru](#)

[Često postavljena pitanja](#)

Dužinske dimenzije tlocrta (obimne dimenzije) Visina, odnosno potrebne visine nivoa

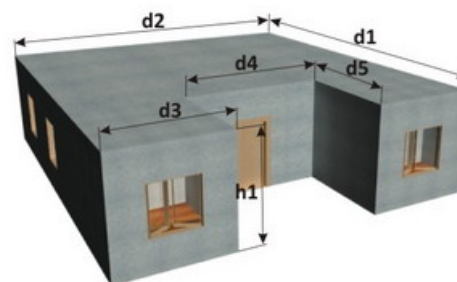
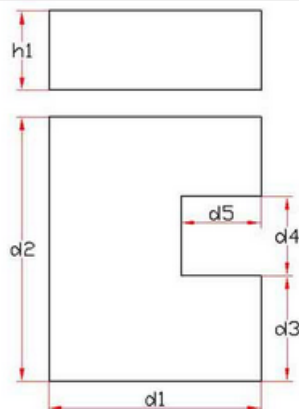
d1: h1:

d2:

d3:

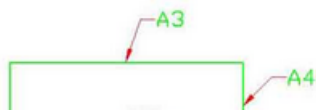
d4:

d5:



Procenat slobodne površine spoljnih zidova nivoa zgrade

A1: A5:





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PARTICIPANTS

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CONTACT



6th International Conference on
Mass Customization and Personalization
in Central Europe (MCP - CE 2014)

23-26 September 2014, Novi Sad, Serbia

Managing Co-creation and Personalization in Central Europe

10th Anniversary of MCP-CE (2004-2014)

On behalf of the organizing committee we are pleased to announce the 6th International Conference on Mass Customization and Personalization in Central Europe (MCP - CE 2014) when we proudly celebrate the 10th anniversary of our activities.

Organized for the sixth time, the biannual MCP-CE conference is an event of Customer Co-Creation that offers customers a chance to express their opportunity for innovations and new business models such as Innovation platforms, for sharing designs and developments and

SEARCH KEYWORD:

Search...

www.mcp-ce.org

New Business Models **User Driven Innovation**
Co-creation **Crowdsourcing** **Personalization**
Open Innovation **Mass Customization**
Social Media **Co-working Space** **Additive**
Manufacturing **Innovation Platform** **Craft**
customization **Crowd Intelligence** **Open Service**
Effective Manufacturing **Lean Organization**



Thank you for your attention!



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F +381 21 459 536
M +381 64 120 32 73

anisic@uns.ac.rs
www.myproduct.rs



Center for Product Development and Management