



Co-funded by the  
Erasmus+ Programme  
of the European Union



573965-EPP-1-2016-1-SE-EPPKA2-CBHE-JP

Enhancing innovation competences & entrepreneurial skills in engineering education

## Innovation and entrepreneurship in engineering education

*Huaan Fan, Royal Institute of Technology (KTH), Sweden*

INNOCENS-HERITAG joint dissemination seminar, NUACA, Yerevan. 2019-02-14.

## Innovation and global challenges

---

- For developed countries to maintain competitiveness and welfare systems in a globalized economy
- Sustain economical growth in emerging countries, move up on the value chain
- Diversify economy, reduce oil & gas dependency
- Create jobs & welfare to benefit all citizens

## Small startups can become tech giants

---

Google

facebook

Spotify®

Alibaba Group  
阿里巴巴集团

Tencent 腾讯

## How to develop innovation ?

---

### **Creativity**

Innovation competences,  
pedagogy, curricula,  
teaching, learning,  
assessment

### **Environment**

Innovation system,  
policy, legal system,  
government- university  
– business partnership

### **Entrepreneurs**

Entrepreneurial mindset,  
knowledge, skills,  
support

## The INNOCENS project

---

- A capacity building project supported by EU's Erasmus+ Programme
- 19 partners in 7 countries (Armenia, Georgia, Belarus, Kazakhstan & Sweden, Spain, Finland), including 11 universities
- KTH as coordinating institution
- 3-year project (15/10/2016 – 14/10/2019)

## 11 university partners

---

- Royal Institute of Technology (KTH), Sweden
- Turku University of Applied Sciences, Finland
- Polytechnical University of Valencia, Spain
- National Univ of Architecture & Construction of Armenia
- National Polytechnical University of Armenia
- Georgian Technical University
- Batumi State University
- Belarusian State University
- Brest State Technical University
- Almaty University of Power Eng. and Telecommunication
- Taraz State University

## Study visit, training, 3 workshops



## Develop & start 2 general courses

### Innovation systems

#### Syllabus / topics

- 1) Importance of innovation for economic growth and development
- 2) Innovation indicators, international innovation assessment and ranking
- 3) National innovation policy
- 4) Human capital and intellectual property rights
- 5) Government-university-business partnership
- 6) Innovation process and innovation management
- 7) Professional support in innovation and entrepreneurship:
- 8) Technology-based innovations: biotech, health and clean energy, IT and telecom, *finitech*
- 9) Social entrepreneurship to meet new challenges in societies

### Entrepreneurship for engineers

#### Syllabus / topics

- 1) Business idea generalization
- 2) Intellectual property strategies
- 3) Customers and market
- 4) Team building
- 5) Finance, venture capital
- 6) Business plan
- 7) Internationalization
- 8) Project 1: case study and analysis
- 9) Project 2: business plan development



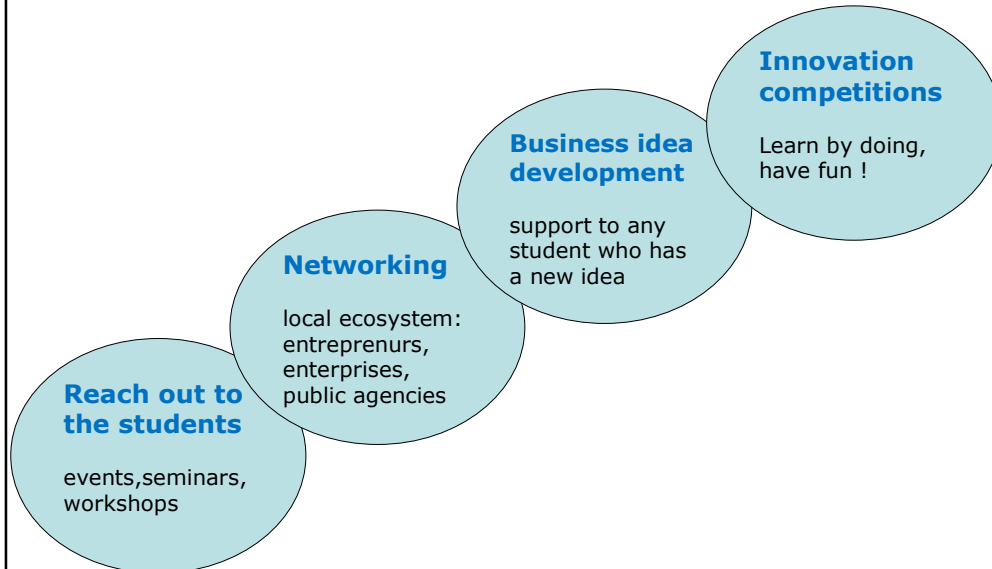
## Opening two innovation centers in Yerevan



## 4 innovation centers in Kazakhstan, Georgia



## Development of innovation centers



## INNOCENS innovation competition



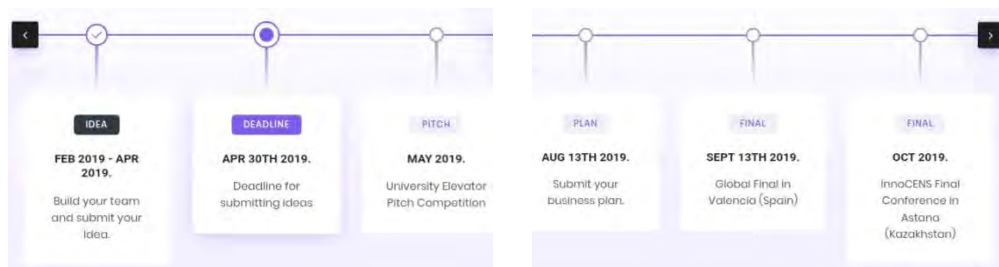
## Criteria of business idea competition

---

- Novelty of the business model
- Commercial potential
- Social impact
- Quality of the business plan
- Pitch performance

## Competition timeline

---



For more INNOCENS information

---

<https://gidec.abekth.se/InnoCENS>

<https://innocens.webs.upv.es>

**Israel  
Griol Barres**

israel.griol  
@gmail.com

@igriol

**BUSINES IDEA DEVELOPEMENT  
& INNOVATION COMPETITION**



**INNOCENS HERITAG**  
joint event  
February 2019



**INNOCENS**  
INNOVATION &  
ENTREPRENEURSHIP



**IDEASUPV**  
tu empresa empieza aquí



**UNIVERSITAT  
POLITÈCNICA  
DE VALÈNCIA**



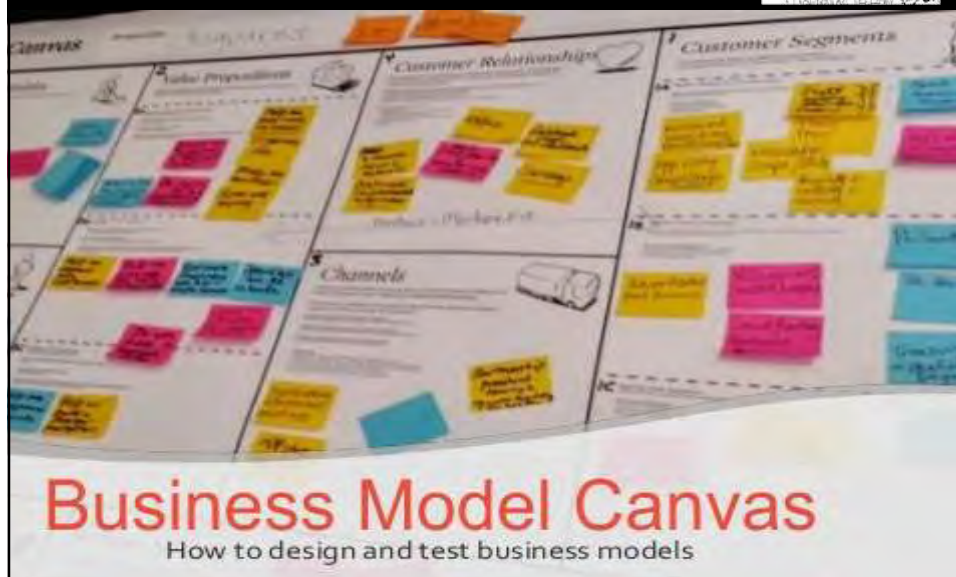




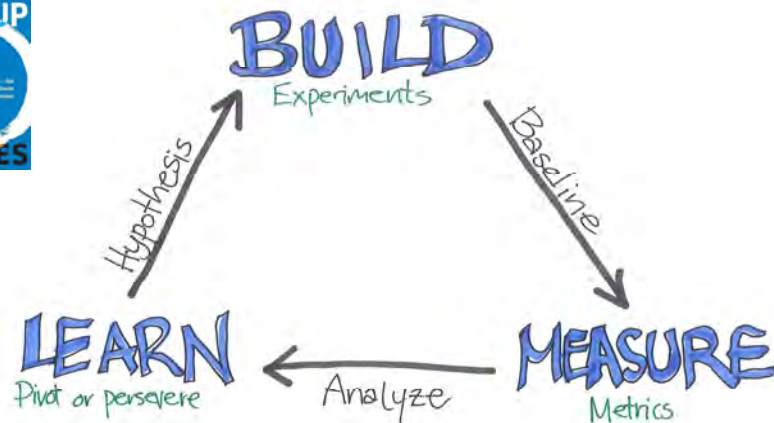
## Entrepreneurship Day

1. INSPIRATIONAL TALK BY A LOCAL ENTREPRENEUR.
2. PRESENTATION OF THE SERVICES OFFERED BY THE INNOCENTRE.
3. EXPODAY (Showroom of local products by your local startups).
4. SMALL WORKSHOP ON LEAN CANVAS or any tool that can be used in a competition.
5. PRESENTATION OF THE LOCAL COMPETITION.

### Trainings: Learning by doing



## Trainings: Learning by doing



## Trainings: Learning by doing



'There are no facts inside your building, so get the heck outside'

- Steve Blank





### **Mentoring sessions: Face to Face**



## MENTORING

Process:

### **1. PRE-BOOKING AN APPOINTMENT VIA INNOCENTRE WEBSITE.**

We need to include a banner and a form.

The form should include:

- Contact data of the entrepreneur.
- Linkage with the university.
- Group members.
- Description of the idea.
- Sector.

### **2. THIS DATA NEEDS TO BE INCORPORATED TO OUR CRM.**

### **3. THE MANAGER OF THE MENTORING GROUP NEEDS TO ASSIGN THE PROJECT TO ONE OF THE POOL OF MENTORS.**

### **4. THE MENTOR CONTACTS THE ENTREPRENEUR VIA EMAIL AND OFFERS A DATE FOR A MEETING.**

## MENTORING

Process:

### **WHAT TO DO IN A MENTORING MEETING?**

Evaluate idea and team.

Evaluate business model.

Create and evaluate a validation plan.

Team building, partner agreements.

The entrepreneur/startup contacts the mentor every time they want to meet.

All the meetings are scheduled in the CRM.

Cohesionate the  
local  
entrepreneurial  
ecosystem

MIT Model



And more...

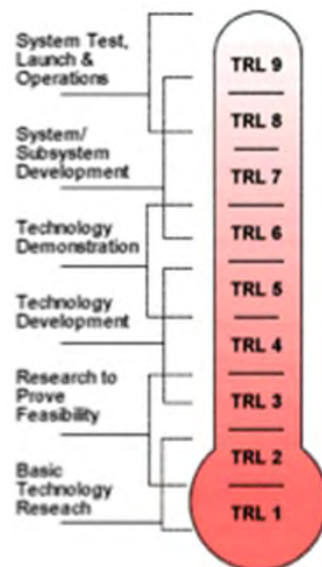
- Access to funding: investors, business angels...
- Physical spaces: Rooms, FabLabs, Coworking spaces, Offices...
- Team building
- Business Idea Competitions

14:16 ს მიმართულებით მატარებელი იმობილიზაცია. TV25.GE საქართველოს პრეზიდენტის

## Evaluation of business ideas

- Commercial potential.
- Innovation / Novelty.
- Social/Job/Climate impact.
- Degree of validation of the idea.
- Strength of the team.
- Quality of the pitch. Communication skills.

Technology Readiness Level (TRL) of Company X products & services:





## Evaluation of the maturity of a startup

Key topics & questions to be addressed for any startup:

Perceived status of this BP:


		"Advanced"	"80% done"	"Under-developed"
<b>Management summary &amp; introduction</b>	<ul style="list-style-type: none"> <li>Does my management summary plus my elevator pitch/intro from the top-level reflect the contents of this business-plan ("use of the pyramid principle")?</li> <li>What pain do I solve plus what are the expected financials and finance need?</li> </ul>	✓	✓	✓
<b>Market segmentation &amp; beachhead market</b>	<ul style="list-style-type: none"> <li>What is the customer pain in each of the identified market segments and what solution do I provide in each of these segments?</li> <li>What is my beachhead market and why did I chose this market segment?</li> </ul>	✓	✓	✓
<b>Market sizing &amp; - trends</b>	<ul style="list-style-type: none"> <li>What is the Total Addressable Market (TAM) in each of the identified market segments, especially for the beachhead market?</li> <li>What are the market trends in each of the identified market segments?</li> </ul>	✓	✓	✓
<b>Sourcing, manufacturing &amp; supply</b>	<ul style="list-style-type: none"> <li>What is the Technology Readiness Level (TRL) of my products/services?</li> <li>How, where and when do I source, manufacture and supply (the components of) my products/services and at which prices and quantities?</li> </ul>	✓	✓	✓
<b>Financial planning</b>	<ul style="list-style-type: none"> <li>What are the expected revenues, profits and cash-flows in the financial planning period and what are the key value drivers in the different scenarios?</li> <li>What is my finance need plus finance/investor strategy?</li> </ul>	✓	✓	✓
<b>Organizational &amp; legal structure</b>	<ul style="list-style-type: none"> <li>How do I optimize my organizational &amp; legal structure in order to capture the envisaged revenues and profits in the financial planning period?</li> <li>How do fiscal and tax laws influence my organizational &amp; legal structure?</li> </ul>	✓	✓	✓
<b>Team</b>	<ul style="list-style-type: none"> <li>Is my (management) team up to the task and does my team have the right capability mix? Does my team have consistent/achievable founder's dreams?</li> <li>How do I recruit, incentivize and retain top talent?</li> </ul>	✓	✓	✓
<b>Main implementation actions</b>	<ul style="list-style-type: none"> <li>What are the most important milestones for implementation in the coming year and where are eventual bottlenecks foreseen?</li> <li>How do I solve eventual foreseen bottlenecks?</li> </ul>	✓	✓	✓
<b>SWOT &amp; competitor analysis &amp; risk mitigation</b>	<ul style="list-style-type: none"> <li>What are my startup's main SWOT items and how does current &amp; future competition and risk mitigation influence these items?</li> <li>How do I achieve a durable competitive advantage?</li> </ul>	✓	✓	✓
<b>Sales &amp; marketing &amp; branding &amp; pr</b>	<ul style="list-style-type: none"> <li>What is my startup's go-to-market plus sales channel strategy and how can promotion and advertising support the value proposition towards the client?</li> <li>What are my cost of sales and what is the budget for my sales organization?</li> </ul>	✓	✓	✓

Source: Company X; Climate-KIC; Start-U-up


17



## INNOCENS COMPETITION





**Do you have a  
business idea?**  
Compete for a  
big impact.



Apply now on  
**INNOCENS Business** [www.innocens.webs.upv.es](http://www.innocens.webs.upv.es)  
**Idea Competition.**

Co-funded by the  
Erasmus+ Programme  
of the European Union






INNOVATION BUSINESS IDEA COMPETITION by InnoCENS

## Do you have a business idea?

Compete for a big impact in the InnoCENS Innovation  
Business Idea Competition 2019.

[Call for participation](#)
[Download Participation form](#)



DEADLINE FOR PARTICIPANTS
April 30th 23:59

# 79

ARMENIA

# 22

BELARUS

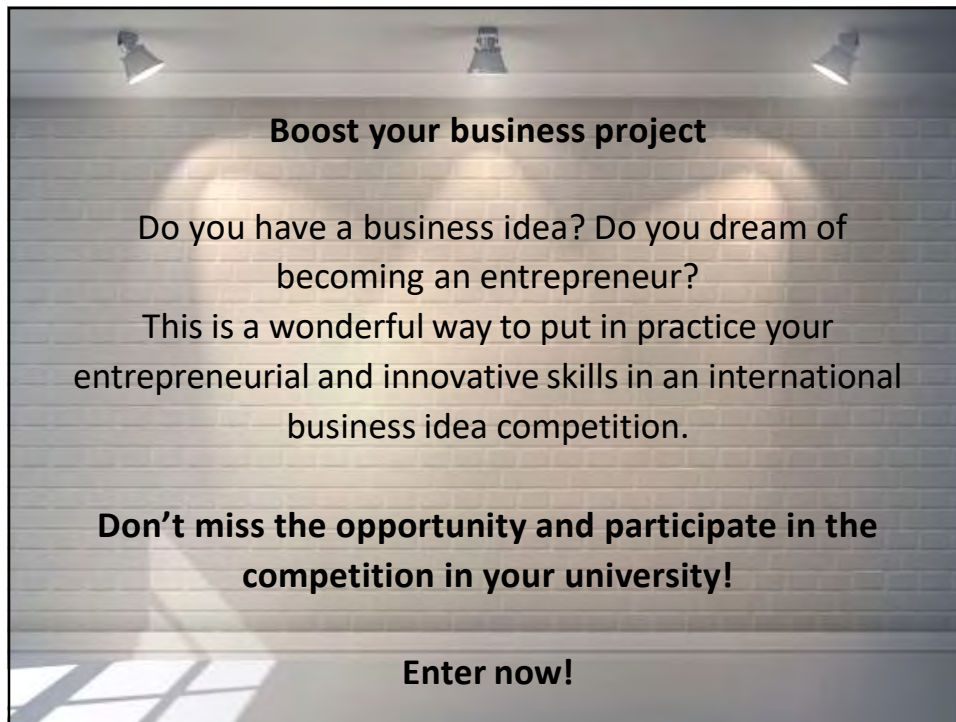
# 12

GEORGIA

# 10

KAZAKHSTAN

Armenia - Belarus - Georgia - Kazakhstan



**INNOCENS  
COMPETITION**

**STEP 2: Every  
INNOCENTRE  
selects TOP10  
ideas**

**Each team sends:**

- Business Model Canvas
- 5 minute presentation
- Innocentre provides coaching and training in Elevator Pitch!!!

**INNOCENS  
COMPETITION**

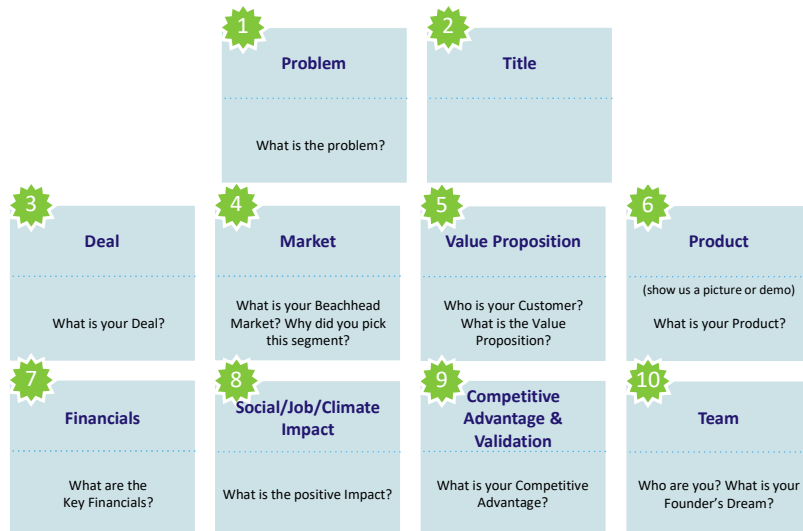
**AWARD: Up to  
2500€ to attend  
Global Final**

**STEP 3: Pitch  
competition in  
every university  
partner – May 2019**





## COMMON PITCH DECK



25

**INNOCENS  
COMPETITION**

**STEP 4:  
Business Plan  
Submission –  
Aug 13<sup>th</sup> 2019**



**INNOCENS  
COMPETITION**

**STEP 5:  
INNOCENS  
Global  
Competition**

**Valencia (Spain) – Sep 13th 2019**

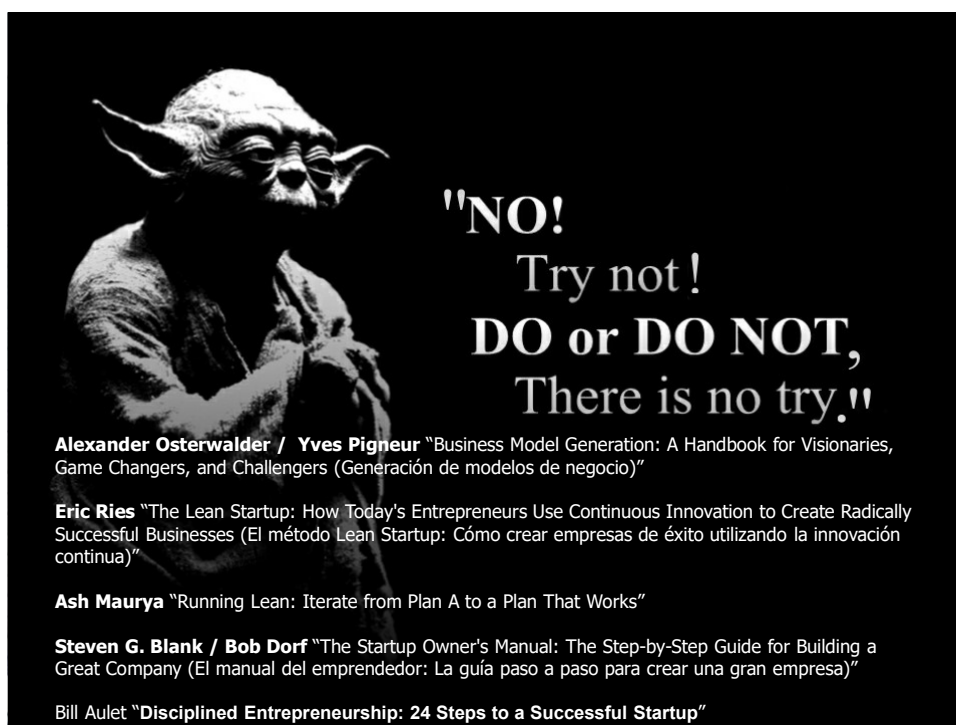


**INNOCENS  
COMPETITION**

**STEP 6: Global  
champion  
attend the  
InnoCENS Final  
Conference**

**Astana (Kazakhstan) – October 2019**





# Innovation Pedagogy & Competence Assessment Turku University of Applied Sciences (TUAS)

Tarja Åberg, TUAS, Finland  
February 2019

## Innovation Pedagogy & Competence Assessment, TUAS in InnoCens:

WP3 Introduce innovation pedagogy in teaching and learning  
WP4 Define and assess innovation competences

Tarja Åberg, TUAS, Finland  
February 2019



## Innovation pedagogy

- a learning approach that defines in a new way how knowledge is assimilated, produced and used in a manner that can create sustainable innovations

## Innovation

- a process of constantly improving knowledge which leads to new sustainable ideas, further knowledge or other practices applicable in working life

Tarja Åberg, TUAS, Finland  
February 2019

## Why the change is needed? from traditional pedagogy to innovation pedagogy

- The job description of young people can change approx. 25 times during their lifetime.
- About 65% of young people today will work in jobs which do not even exist now.
- The most important competences to success in working life will be skills for life-long learning, ability to recognize and assess own learning and ability to develop it
- We live in a dynamic environment and need to be able to solve wicked problems such as climate change

Our students' success at work is not the only aim for education. We must support them to grow up as critical, constructive and ethical citizens, actively participating in developing the society for a better place for all living beings and for the environment.

Tarja Åberg, TUAS, Finland  
February 2019

## Why innovation pedagogy?

The traditional approaches in HEIs do not provide competences needed in current and future work

Graduating students from HEIs must have innovation competences (such as creativity, critical thinking, initiative, team work and network abilities), which enable them to participate in innovation processes in their future jobs so that real innovations are created.

The graduates will be successful in their work and life in general, as well as the organizations, where they work, will be successful.

Tarja Åberg, TUAS, Finland  
February 2019

## The Corner stones of Innovation pedagogy

- activating learning and teaching methods
- working-life orientation
- innovative RDI operations integrated with studies
- flexible curricula
- multi-disciplinary learning environments
- internationalization
- entrepreneurship
- versatile and development-oriented assessment
- renewing teacher roles

Tarja Åberg, TUAS, Finland  
February 2019

## TUAS participation in research on innovation competences within EU projects

- Co-funded by LLP
- How to measure innovation competencies
- theoretical background building **INCIDE barometer**
- 2011-2013

INCIDE

INNOKOMPPI

- Co-funded by ERF
- Validating the tool
- **INNOKOMPPI barometer**
- 2012-2014

- Co-funded by Erasmus KA
- From higher education to the enterprises
- **FINCIDA barometer** to be used also in enterprises
- **software application tool for competence assessment**
- 2014-2017

FINCIDA

Tarja Åberg, TUAS, Finland  
February 2019

FINCIDA

<https://www.fincida.eu>

### Main deliverables:

- > Needs analysis in all partner companies
- > Guide to University Company Co-operation
- > An online Rater Training Toolkit
- > Software Application for FINCIDA Barometer Innovation Assessment Tool

Tarja Åberg, TUAS, Finland  
February 2019

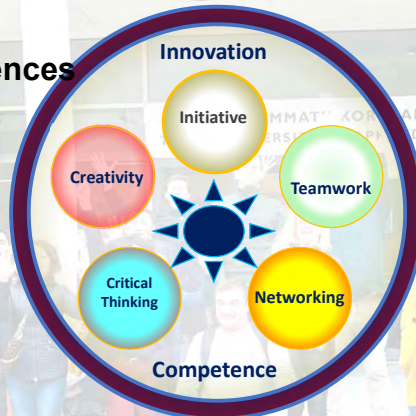




Co-funded by the  
Erasmus+ Programme  
of the European Union



**Innovator has mastery on  
one or more of the  
basic innovation competences**



**“If you want to change  
student learning,  
change assessment”**

(Brown, et al. 1997)

© FINCODA UPV-SEE-CSP team (2017).  
*Innovation Competence Model*

Tarja Åberg, TUAS, Finland

February 2019



Co-funded by the  
Erasmus+ Programme  
of the European Union






**Innovation Pedagogy & Competence Assessment  
status of activities  
in  
InnoCens:**

Tarja Åberg, TUAS, Finland

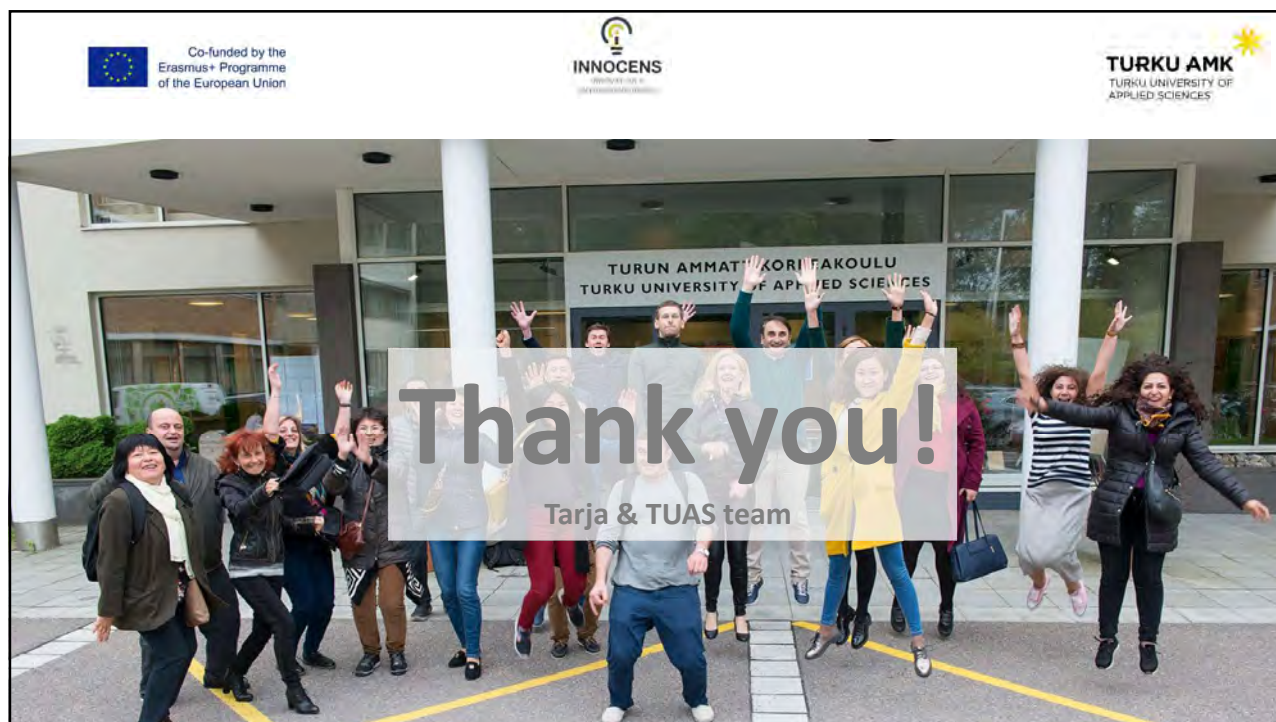
February 2019



 Co-funded by the Erasmus+ Programme of the European Union					
Activity/Event:	Implementation of innovation pedagogy				
INNOCENS Partner Universities:	NUACA, NPUA, BSU_BY Minsk, BrSTU Belarus, GTU Tbilisi, BSU_GE Georgia, TarSU Kazakhstan, Almaty University				
Name of the courses/programmes in which InnoPeda has been practised	Civil& industrial engineering, Etrepreneurship for engineers, Energy & electrical engineering, Entpreneurship & problem solving, Industrial Engineering and Technology, Innovative Pedagogy and new technologies, Product engineering, Innovation methods of intelligent systems design, Entrepreneurship for engineers, Fundamentals of pedagogy and psychology, Basics of electronics, Real estate valuation, Project mgmt, Mgmt, Design, Microeconomy, Statistics, Strategic mgmt	Number of TOTAL students in InnoPeda pilots	Number of TOTAL University staff in InnoPeda pilots	Number of TOTAL external stakeholders (private, public, NGO) in InnoPeda pilots	
Implementation periods (semester)	Between summer 2017 to summer 2019	315	90	20	
Which InnoPeda methods have been practised?	Co-teaching, Group work, Team learning, Project work, Practical learning, Multidisciplinarity, Working- life orientation, Project hatchery, Networking.				
Overall feedbacks from students	Mainly positive in many ways; innovation competences developed, More opportunities in learning process, Confused at the beginning to take an active role...				
Comments from the participating lecturers	Developed renewed role, Change from traditional assessment to development oriented assessment, Challenging, Still need practice & training, Step by step...				
Do you plan to continue practising InnoPeda methods in the future ?	Yes				
Activity/Event:	Assessment of innovation competences				
How have you developed innovation competences assessment in your University (e.g. utilized FINCODA Barometer)? What are your key experiences, remarks and further	Will be done later after translations to own language, Partly used, used applied, Yes, Plans of implemetation in place				
Have you used FINCODA Rater Training Toolkit to train your staff/students? If yes, please give us user experiences	Both; Yes & No				
Have you used HEINNOVATE application in your University? If yes, what are your core remarks and further development plans in this	N/A, No, Yes				

Current summary overview of Innovation pedagogy & Innovation competence assessment activity status of eight participant Universities in InnoCens

Tarja Åberg, TUAS, Finland  
February 2019



## INNOCENS – HERITAG Joint Dissemination Seminar

Yerevan 14-February, 2019

### Higher Education interdisciplinary Reform in Tourism management and Applied Geoinformation curricula HERITAG

Erasmus+ Capacity Building in Higher Education  
Education, Audiovisual and Culture Executive Agency

**Luis A. Ruiz**

















*Polytechnic University of Valencia (Spain)  
HERITAG Project Coordinator*






561555-EPP-1-2015-1-ES-EPPKA2-CBHE-JP

## Consortium

### Partners

	UPV	SPAIN	POLYTECHNIC UNIVERSITY OF VALENCIA
	AUTH	GREECE	ARISTOTLE UNIVERSITY OF THESSALONIKI
	KTH	SWEDEN	ROYAL INSTITUTE OF TECHNOLOGY
	UNIBO	ITALY	UNIVERSITY OF BOLOGNA
	NIACA	ARMENIA	NATIONAL UNIVERSITY OF ARCHITECTURE AND CONSTRUCTION OF ARMENIA
	ASUE	ARMENIA	ARMENIAN STATE UNIVERSITY OF ECONOMICS
	OSU	ARMENIA	GORIS STATE UNIVERSITY
	SERF	ARMENIA	SCIENTIFIC AND EDUCATIONAL REFORMS FOUNDATION
	UITO	ARMENIA	UNION OF INCOMING TOUR OPERATORS
	RUMEA	ARMENIA	RUMEA Traveling Trips Club Ltd.
	ISU	GEORGIA	IJA STATE UNIVERSITY
	GTU	GEORGIA	GEORGIAN TECHNICAL UNIVERSITY
	BSU	GEORGIA	SHOTI RUSTAVELI BATUMI STATE UNIVERSITY
	GeoG	GEORGIA	GEOGRAPHIC Ltd.
	NACHPG	GEORGIA	NATIONAL AGENCY FOR CULTURAL HERITAGE PRESERVATION
	SkyT	GEORGIA	SkyTravel Ltd.

### Associated Partners

	MoE	ARMENIA	MINISTRY OF ECONOMY OF RA
	ANQA	ARMENIA	National Center for Professional Education Quality Assurance
	UAA	ARMENIA	Union of Architects of Armenia



561555-EPP-1-2015-1-ES-EPPKA2-CBHE-JP

## Objectives - HERITAG

- To create **interdisciplinary master courses** in GIT for cultural heritage and tourism, integrating marketing and entrepreneurship skills oriented to consolidate local industry
- To establish Geoinformation and Tourism **Technology centres** (GTTC), new **GIS laboratories** and update existing equipment in partner country universities
- To foster **continuing education** in Higher Education institutions
- To **re-train academic staff** in GIT, tourism management and entrepreneurship
- To introduce and improve **good practices** for quality assurance in partner countries universities
- To establish **links** between universities, administration and society

INNOCENS-HERITAG Joint Dissemination Seminar – Yerevan 14-February, 2019



561555-EPP-1-2015-1-ES-EPPKA2-CBHE-JP

### Work Packages

Society needs	<ul style="list-style-type: none"><li>• Survey</li><li>• Advisory Boards</li></ul>
Equipment & Labs	<ul style="list-style-type: none"><li>• Geoinformation and Tourism Technology Center</li><li>• GIS Labs</li><li>• Geodetic equipment</li></ul>
Training	<ul style="list-style-type: none"><li>• Geoinformation</li><li>• Tourism economics &amp; Entrepreneurship</li><li>• Workshops in higher education methods</li></ul>
Curricula development	<ul style="list-style-type: none"><li>• New courses</li><li>• New teaching materials</li><li>• New joint and double master degree</li></ul>
Continuing Education	<ul style="list-style-type: none"><li>• Develop 2 modules</li><li>• Create learning materials</li></ul>
Dissemination	<ul style="list-style-type: none"><li>• Web sites</li><li>• Final conferences</li><li>• Labour market days</li></ul>

INNOCENS-HERITAG Joint Dissemination Seminar – Yerevan 14-February, 2019



561555-EPP-1-2015-1-ES-EPPKA2-CBHE-JP

## Outcomes – Society needs

- **Survey** and analysis of Geospatial information Technology (GiT) **education and stakeholder needs** and opportunities in cultural heritage and tourism sectors
  - Need to impulse of **renovation of tourism sector**
  - Demand for **training in GIT** in tourism sector
  - **GIT for promotion** of cultural heritage
- Creation of **Advisory Board academy-industry**: to provide sustainability to GTTC and promote activities from university to society



INNOCENS-HERITAG Joint Dissemination Seminar – Yerevan 14-February, 2019



561555-EPP-1-2015-1-ES-EPPKA2-CBHE-JP

## Outcomes – Equipment and labs

- Creation of a **Geoinformation and Tourism Technology Center** (GTTC) in Armenia (NUACA) with geodetic equipment, hardware and software
- Creation of 2 **Geographic Information Systems Labs** in ASUE and GSU with hardware and software



INNOCENS-HERITAG Joint Dissemination Seminar – Yerevan 14-February, 2019



561555-EPP-1-2015-1-ES-EPPKA2-CBHE-JP

## Outcomes – Training

### Training of teachers

#### 6 technical trainings

- **GIS for economics** and tourism (*Tbilisi, Georgia*)
- Mobile and **web mapping** for CH tourism (*Valencia, Spain*)
- **Entrepreneurship** for tourism (*Valencia, Spain*)
- Laser scanning and **3D modelling** (*Stockholm, Sweden*)
- **Photogrammetry** for CH documentation (*Thessaloniki, Greece*)
- **Economics for tourism** development (*Rimini, Italy*)



#### 2 workshops in Higher Education

- **Quality Assurance** (*Batumi, Georgia*)
- **New teaching methods** (*Goris, Armenia*)



INNOCENS-HERITAG Joint Dissemination Seminar – Yerevan 14-February, 2019



561555-EPP-1-2015-1-ES-EPPKA2-CBHE-JP

## Outcomes – Curricula development

- Development of **new interdisciplinary courses** in Geoinformation, Tourism Economics and Entrepreneurship at master level > 18 new courses in Armenia
- **Reform courses** at master and bachelor levels
- Development of **teaching materials** (17 new items)
- **2 Longlife Learning modules** in Geoinformation and Tourism economics
- Learning materials

INNOCENS-HERITAG Joint Dissemination Seminar – Yerevan 14-February, 2019



561555-EPP-1-2015-1-ES-EPPKA2-CBHE-JP

## Outcomes – Curricula development

Joint Master in Project Management (ASUE-NUACA)

Master in Geoinformation Management for Cultural Tourism (UPV)



Double degree



ALMA MATER STUDIORUM  
UNIVERSITA DI BOLOGNA

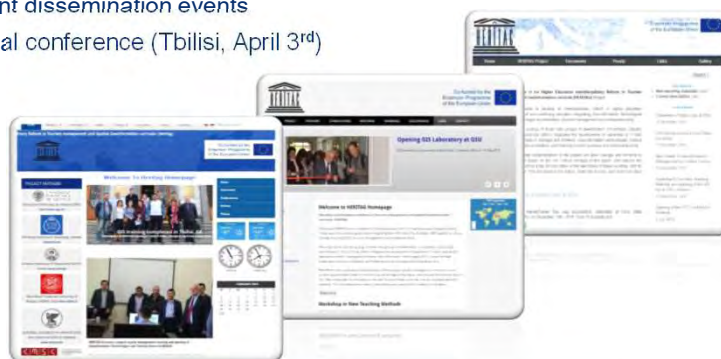
INNOCENS-HERITAG Joint Dissemination Seminar – Yerevan 14-February, 2019



561555-EPP-1-2015-1-ES-EPPKA2-CBHE-JP

## Outcomes – Dissemination

- Project dissemination websites (Armenia, Georgia, Spain)
- Labour market days at partner universities
- Joint dissemination events
- Final conference (Tbilisi, April 3<sup>rd</sup>)



INNOCENS-HERITAG Joint Dissemination Seminar – Yerevan 14-February, 2019





561555-EPP-1-2015-1-ES-EPPKA2-CBHE-JP

## Final remarks

- **Potential of cultural tourism** in Armenia is key to activate economy, and its development should be done in a sustainable manner to preserve traditions and culture
- **GIT** can contribute to document and promote cultural heritage and to develop the tourism
- **Entrepreneurial activities** should be fostered from administration, and links created between academy and industry
- **Armenian universities** are open and prepared to change, and willing to establish **interdisciplinary collaborations** within and outside of the country

INNOCENS-HERITAG Joint Dissemination Seminar – Yerevan 14-February, 2019



561555-EPP-1-2015-1-ES-EPPKA2-CBHE-JP

## **Thank you!**



<http://heritag.am/>  
<http://heritag.ge/>  
<http://heritag.webs.upv.es/>

INNOCENS-HERITAG Joint Dissemination Seminar – Yerevan 14-February, 2019

A stylized, colorful illustration of a landscape. The foreground features rolling green hills with a dark brown path winding through them. On the left, there are two trees: one with green foliage and one with purple foliage. A small red bird is flying in the sky above the trees. The background consists of layered, wavy bands of blue and white, suggesting a sky or distant hills.

# CULTURAL TOURISM ENTREPRENEURSHIP, ECONOMY

*Laura Vici*

*Center for Advanced Studies in Tourism (CAST)  
University of Bologna (Italy)*



# Cultural tourism in Italy

- The Cultural and Creative Industry in Italy generates 6.0% of total GDP (92.2 billion EUR).
- Multiplier effect 1.8 → total contribution 163.3 billion EUR
- Tourism is the main driver
- 51 Unesco sites (over 1052 in 165 countries)
- 210 museums, 262 monuments and archaeological sites
- In 2017, visitors amounted to 50.26 million (3 sites cover 26% of total visitors).
- 36% tourists arrivals registered in cities of art (60% inbound tourists).
- Cultural tourism is growing

# Italian Cultural system

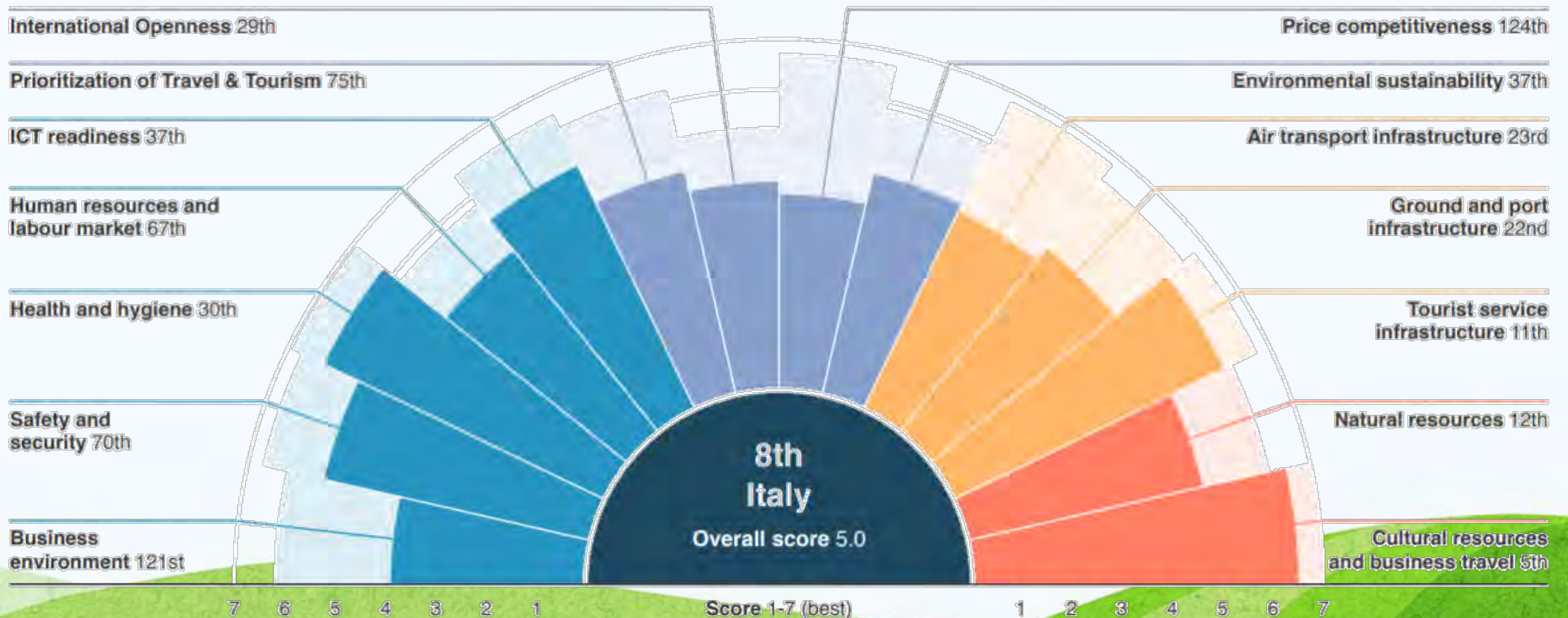
- 415k cultural firms/institutions/organizations → 290k organizations with culture as core activity; 125k organizations creative driven
- 40.2% in Unesco sites
- 1.5 mln people employed (6.1% of total employment)
- Complex organizations → several tasks, heterogeneous stakeholders, different goals → scarce resources
- Sustainability issues → variety of sources, plural activities, long-term programming but short-term results. Important fixed costs
- Managerial tools and strategies needed in cultural organizations.
- Big social transformations and conditions needed, digital technologies and innovation involved for future sustainability.
- Reorganization of virtual and physical spaces

# Italian Cultural system

- Italy should improve its competitiveness in the Travel and Tourism sector
- Overcrowding and overtourism is a big issue (visits concentrated in a few days and in a few sites).

Pillar Rank/136

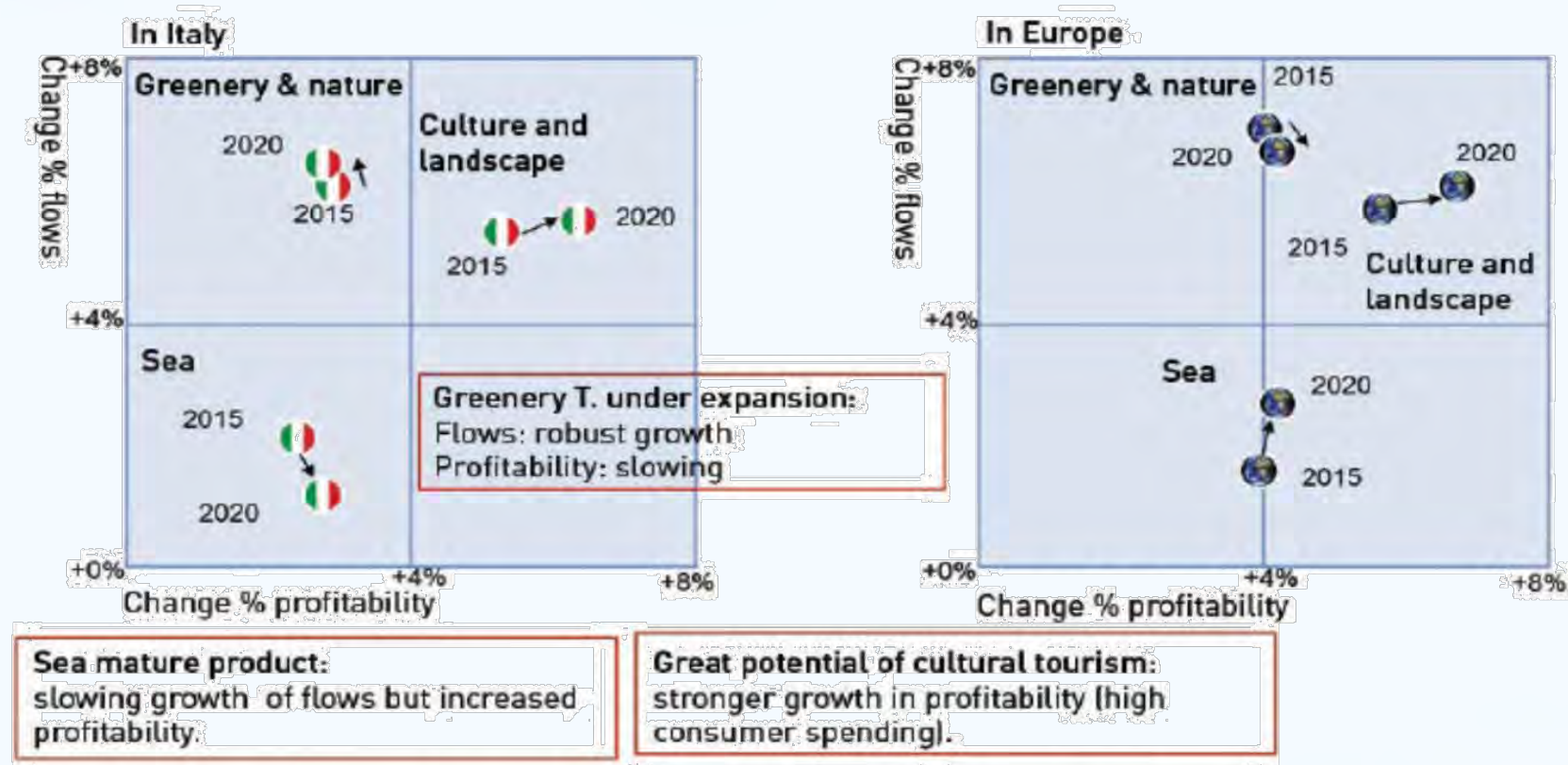
Pillar Rank/136





# Italian Cultural system

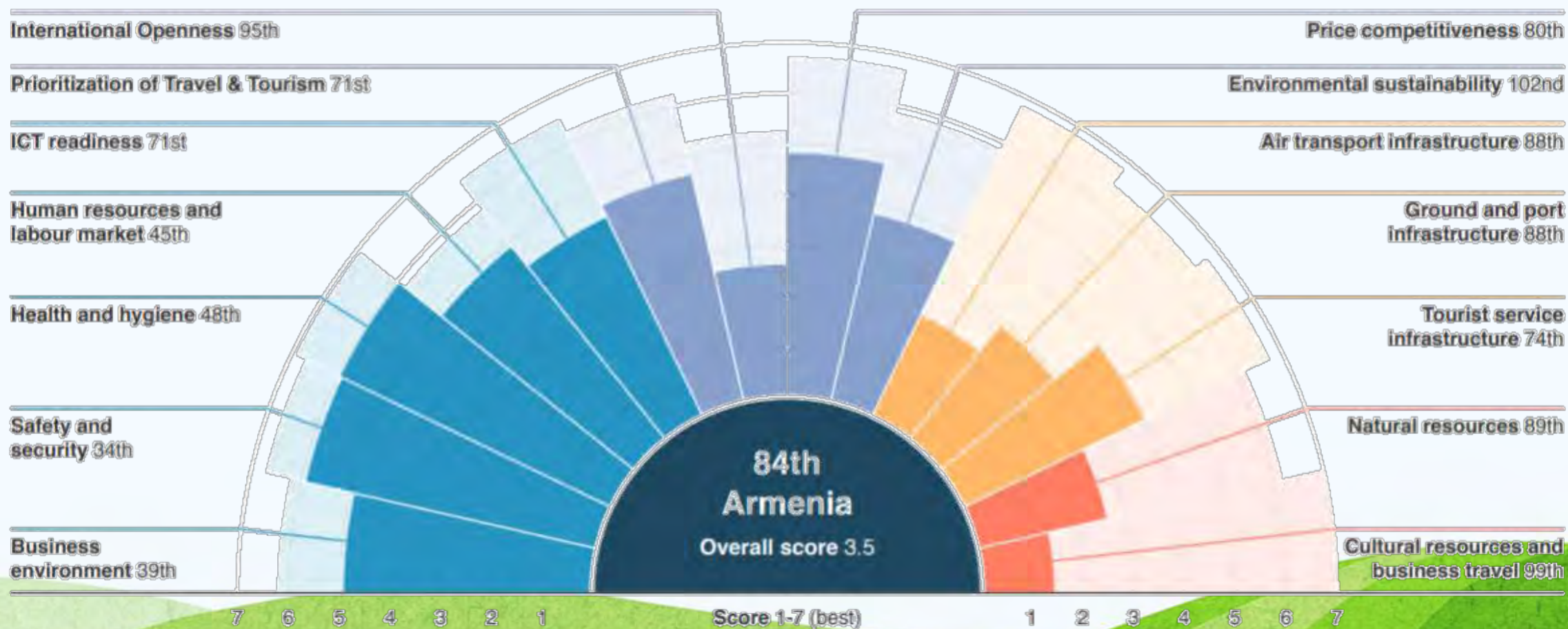
Flows and profitability trends of certain tourist products in 2020



# TTCI for Armenia

Pillar Rank/136

Pillar Rank/136



# Strategic Plan for Tourism

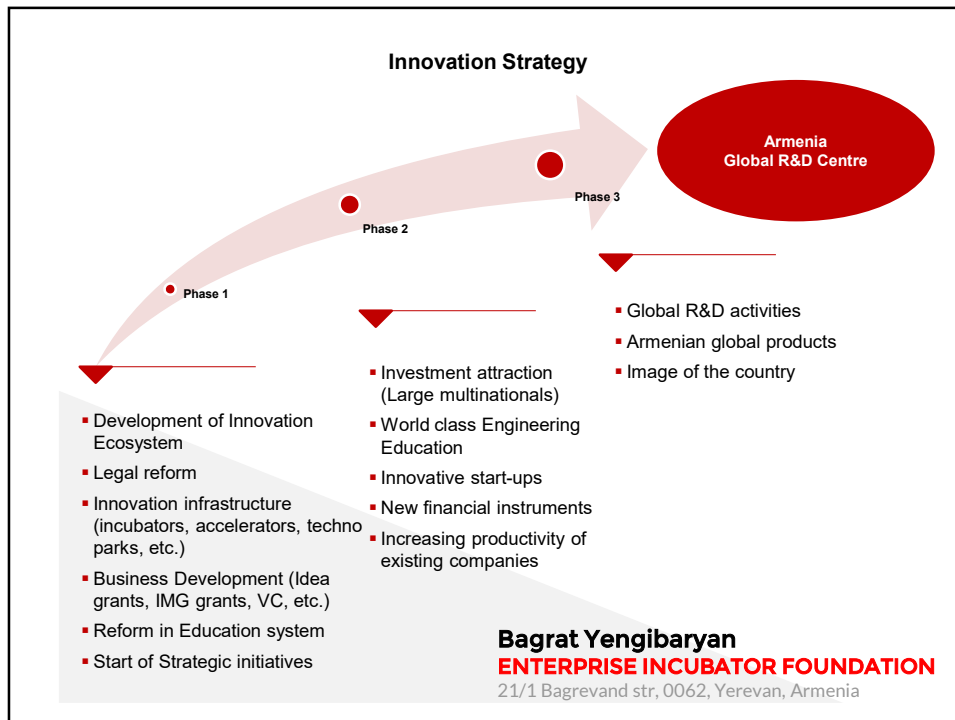
- The Strategic Plan for Tourism 2017-2022 identifies four main goals:
  - 1.To innovate, specialize and integrate the country's amenities;
  - 2.To boost the tourism system's competitiveness;
  - 3.To create effective and innovative marketing;
  - 4.To achieve efficient and participatory governance when drawing up and establishing the Plan.
- But other three strategic cross-cutting principles are specified:
  - Sustainability (economic, social and environmental sustainability)
  - Innovation
  - Accessibility (in terms of physical and cultural permeability)
- This principles and goals should be common to every single economy





Thank you!

Laura Vici  
[laura.vici@unibo.it](mailto:laura.vici@unibo.it)





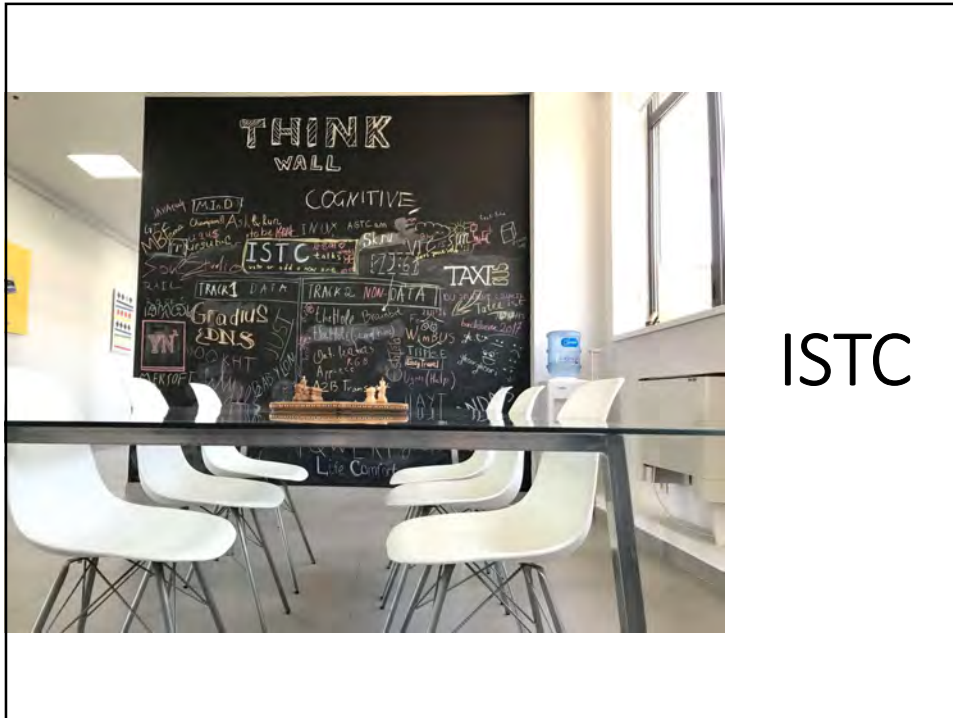


GTC



VTC









EC



Cyber  
Security  
Center

Preferred Destination  
for multinationals,  
successful investments  
& acquisitions

SYNOPSYS®

Mentor®  
A Siemens Business

GFI®

NATIONAL  
INSTRUMENTS

CISCO

Microsoft

ORACLE®

vmware®

monitis

LIVE LOOK  
ORACLE

MEMOIR  
SYSTEMS

IBM®

Catering R&D needs of the large corporations with our innovative  
and creative workforce.

## Made in ARMENIA

- **PicsArt** - with **100 + million** monthly active users and **450+ million** installs.
- **SoloLearn** - More than **21mln** online learners worldwide, among 10 hottest Bay Area startups with under \$10M in funding.
- **Joomag** - distributing, tracking and monetizing publications online to more than **500,000** worldwide publishers.
- **Shadowmatic** - Apple Design Award of 2015



SOLOLEARN  
LEARN PLAYING. PLAY LEARNING

teamable

CODEFIGHTS

Shadowmatic

Presenting to the world with MADE IN ARMENIA brand.



Thank you!  
Any questions?



**ENTERPRISE INCUBATOR FOUNDATION**

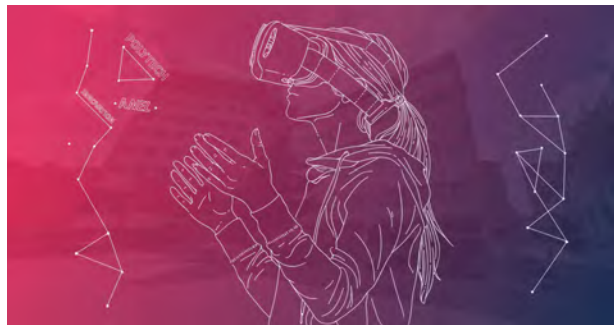
21/1 Bagrevand str, 0062, Yerevan, Armenia

Tel: +374 11219797

E-mail: [info@eif.am](mailto:info@eif.am); URL: [www.eif.am](http://www.eif.am)



**National Polytechnic University of Armenia**



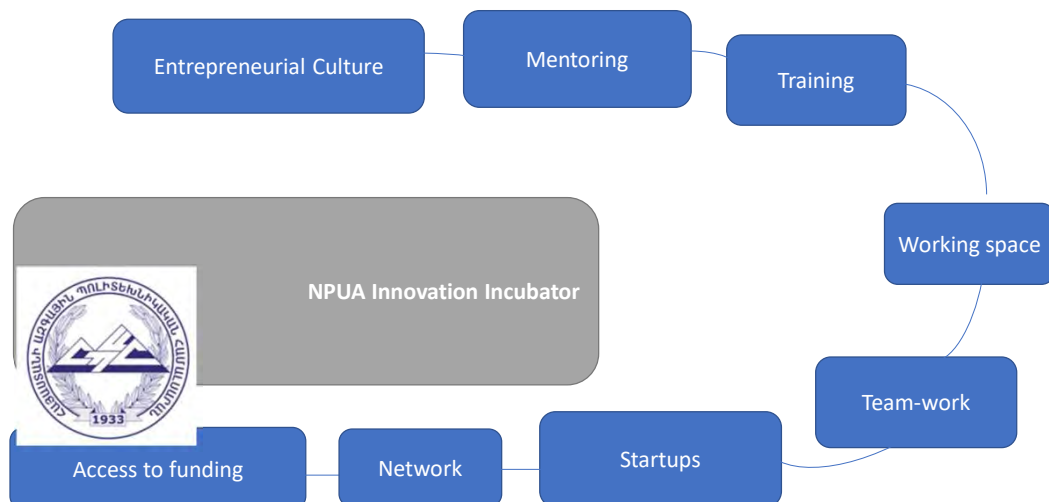
**NPUA Innovation Incubator**



Co-funded by the  
Erasmus+ Programme  
of the European Union



**ANEL**







  
**INNOCENS**  
INNOVATION & ENTREPRENEURSHIP

  
**Erasmus+**





**03.07-04.08.2017**

**“ENGINEERING AND INNOVATION” SUMMER SCHOOL**

The “Engineering and Innovation” Summer School offers an extended overview of product’s life cycle realization from idea to innovative product.

Target group: 3rd year and above students with technical background

Application deadline: June 15, 2017

**THINK LIKE AN ENGINEER!**

—

**BE DIFFERENT**

—

**DREAM BIG**

—

**HAVE FUN**

—

The best participants will be supported in bringing idea to marketable product and forming “Start-up” from team.

**ANEI**

Yerevan, 105 Teryan Building 10  
Tel: +37410 566375  
[www.anei.am](http://www.anei.am)  
03.07-04.08.2017









NPUA Innovation Incubator opening

Visit of president of RA

Visit of Ministry of Education





**26.04.2018**  
**INNOVATION IS THE ANSWER OF ALL CHANGES**

**Seminar**  
You are invited to participate in "Innovation is the answer of all changes" seminar, during which innovation related to technological, business and country's economic growth will be discussed. Various scientific, social, and technological and the present and future trends and directions. The following topics will be discussed:

- New concepts of latest technological innovation and benefits
- Innovation at work (cases and businesses)
- Innovation as a vehicle for country's economic growth
- Innovation trends, values and obstacles
- Examples of innovation tools



**19.04.2018**  
**Hybrid and Electric Vehicles - from prototypes to everyday use**

**Seminar**  
We are pleased to invite you to participate in "Hybrid and Electric Vehicles - from prototypes to everyday use" seminar. One of the most difficult to integrate electric motor to carry single and small cars, while nowadays more trucks are powered exclusively by electric and hybrid engines (EV and HEV) are becoming more and more popular. Are electric cars expected to be the future - or it just one of the past?

The seminar is devoted to cover these and many other questions. The main challenges and existing directions of EV and HEV existing technology vehicles presented.

- Where are we, humans in solving these challenges?
- Maybe it is you, who should contribute in creating new technologies for the existing everyday use of electric and hybrid vehicles presented.



**22.03.2018**  
**DIGITAL TRANSFORMATION - INDUSTRIAL IOT AND INDUSTRY 4.0**

**Seminar**  
We are pleased to invite you to participate in "Digital Transformation - Industrial IoT and Industry 4.0" seminar, during which will present the latest trends and solutions for manufacturing and process automation, and influence of the "IIoT" implementation on increasing output, enhancing performance and improving product design.

The following topics will be discussed:

- What is Industrial IIoT?
- Difference between Industrial IIoT and commercial IoT?
- Industrial IIoT Architecture
- IIoT Integration
- The role of IIoT in Industrial IoT
- Real World Examples of Industrial IIoT Systems

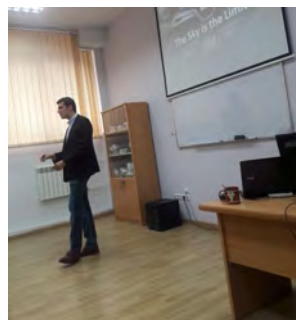


**15.03.2018**  
**SIMPLE TRANSISTORS AND COMPLEX PROCESSORS - INVISIBLE TECHNOLOGIES BEHIND INNOVATIONS**

**Seminar**  
Why the 17 mobile phones with the cost of a brick did not cost around four thousand dollars, while today with a similar price you can successfully get a phone for free? Why these smart 64 mobile phones today? Why the latest of mobile phones available are a major innovation? During the seminar, we will try to further discuss to these questions and discuss the following topics:

- Current trends and challenges in semiconductor industry
- IIoT and technologies necessary for the mobile phones of the future
- Automotive industry requirements for semiconductor devices
- Challenges of IIoT and semiconductor
- Contemporary engineering methods and tools pointing on solving the control problems of the industry

## Series of seminars from Industry representatives



## Series of seminars from Industry representatives



"Do-A-Thon" within "Brain Awareness Week" framework and within partnership of Medical University



Participation in Engineering Forum-EXPO in Vanadzor






**Note to young engineers and inventors**

The International Contest of Children Engineering Teams is a competition for young people with bold ideas and inventions. Gather a team and show the world what you are capable of.



**The world is waiting**  
Show off your talent and engineering skills at an international event.





**Win prizes**  
The main Contest prize - 1 000 000 rubles. Winners will receive valuable prizes from the Contest partners.

**Who is eligible to participate?**

Teams of three to seven contestants. The only ages allowed are 18 or younger. No participant replacements are allowed after the submission of your team throughout the entire Contest.

## Preparation for ICET 2018 international completion

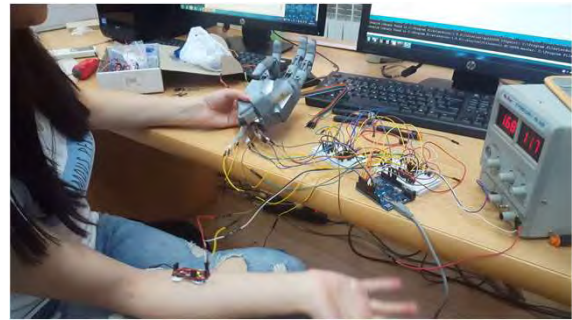
## SFI- Labyrinth



## ThreeSmart- Conveyor robot



## Power Engineers – Electricity from sound

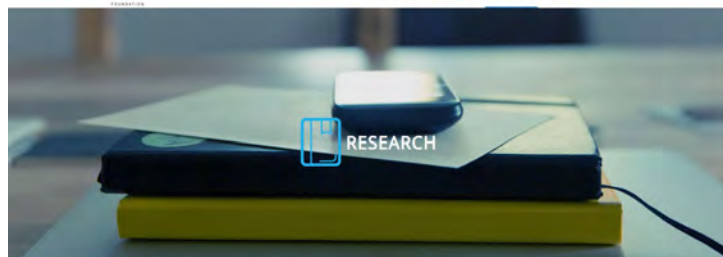


## Armbionics— Bionic hand controlled by electromagnetics signals



**istc**

EDUCATION STARTUPS RESEARCH BLOG CONTACT US



ISTC RESEARCH GRANT PROGRAM

US-ARMENIA RESEARCH  
COLLABORATION GRANT



Health VentureLab supports teams bringing applied science to customers.



4 month long  
weekly support



For international  
teams



Industry &  
Academy backed



Full support  
network

Participation in Competition, Budapest

Participation  
in Startup  
boost  
weekend



**ORGANIZERS**



**PARTNER UNIVERSITIES**





- Entrepreneurship Day- October 10, Yerevan
- NPUA Start-up competition, Yerevan
- Participation in ICET international competition - December (2nd phase), Moscow, Russia

Upcoming events

## Entrepreneurship Day-October 10

Within cooperation with Ministry of Transport,  
Communications and IT of RA

### Key Speaker: Nina Achajian

Nina focuses on venture and growth investments in enterprise SaaS and digital health. She is particularly excited about vertical SaaS solutions that replace pen and paper workflows.

Nina joined the team from Cota Capital, where she led investments in Cover, TubiTV, Blueprint Genetics and Mission Bio. Previously, Nina was an FP&A Lead for Google's AdSense team where she managed a multi-billion dollar book of business covering Amazon, IAC, and eBay. Nina started her career as a high yield bond trader at Citigroup. She also is the founder of HIVE Ventures, the first seed fund focusing on Armenian entrepreneurs.

Nina graduated from Harvard University with a B.A. in Government and is a recipient of the Michael C. Rockefeller Scholarship. Nina currently lives in San Francisco and enjoys watching football and Formula 1.



Success stories  
ENERGY GLOB





GROVF WINS THE AWARD OF A FUNDING  
HORIZON 2020



## Success stories GROVF



TECHNOLOGY  
WEEK  
2018

15 - 19  
OCTOBER 2018

National Polytechnic University of Armenia

*“Have an Innovation Idea, team, Startup project or just want to be in the event's epicenter, become of participant of the most technologically advanced week of the most technologically advanced University”*



ՀԱՅԴՆԱԿԱՆ

ANEL

Հայաստանի Ազգային  
Համալսարանի Լաբորատորիաներ



INNOCENS





## Day 1: Open doors



## Day 2 Students' projects EXPO



ՀԱՊՅ.85  
ամյակ

Հայաստանի Ազգային  
Ճարտարագիտական Լաբորատորիաներ



## INNOCENS

Co-funded by the  
Erasmus+ Programme  
of the European Union



# Day 3 Entrepreneurship



## Day 3-5 Workshops/Masterclasses

---



## Day 3-5 Team work

---





## Day 5 Competition

**STARTUP BOOST WEEKEND**

A STARTUP COMMUNITY EVENT TO UNITE THE UNIVERSITIES OF ARMENIA TO SEED HEALTHY ENTREPRENEURSHIP

Logos for Catalyst, ANEL, and AUA are visible at the bottom.

A woman in a blue top is speaking at a wooden podium with a microphone. Behind her is a large banner that reads 'STARTUP BOOST WEEKEND'.

A group of people are posing with large prize certificates. One certificate is for \$400 and another is for \$600. They are all smiling and looking at the camera.

Startup boost weekend Vol3





INNOVATION BUSINESS IDEA COMPETITION by InnoCENS

# Do you have a business idea?

Compete for a big impact in the InnoCENS Innovation Business Idea Competition 2019.


[Call for participation](#)

[Download Participation form](#)





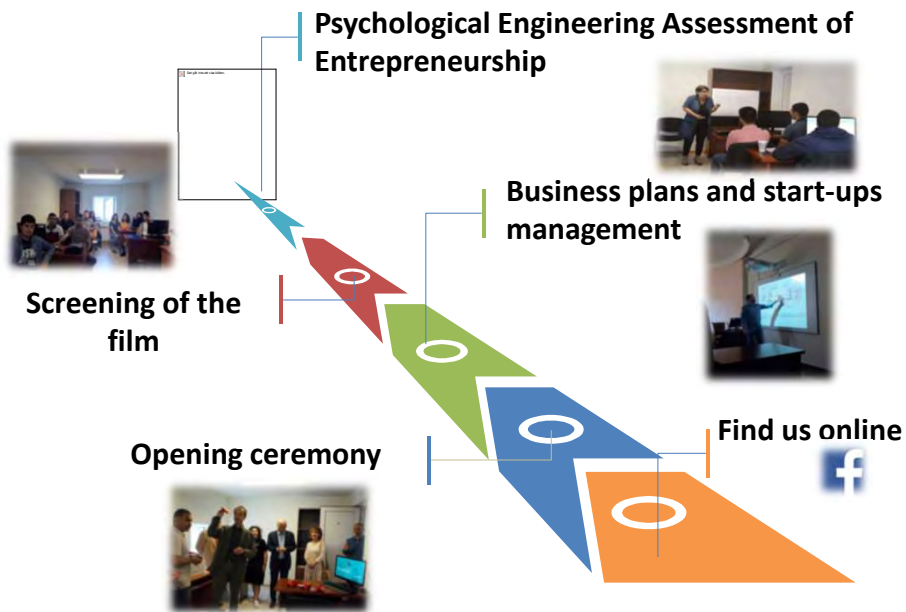
## Our main activity InnESC



- 01 Education**  
 Education is the passport to the future, for tomorrow belongs to those who prepare for it today.
- 02 Working space**  
 Space is a full service, creative working environment with a unique entrepreneurial spirit, where ideas develop, businesses build and relationships evolve.
- 03 Consulting and support**  
 We offers flexible consulting and support options to be best fit our students needs.
- 04 Experience exchange**  
 Think – discuss- discover.
- 05 Open to New Opportunities**  
 We are always open to new opportunities.

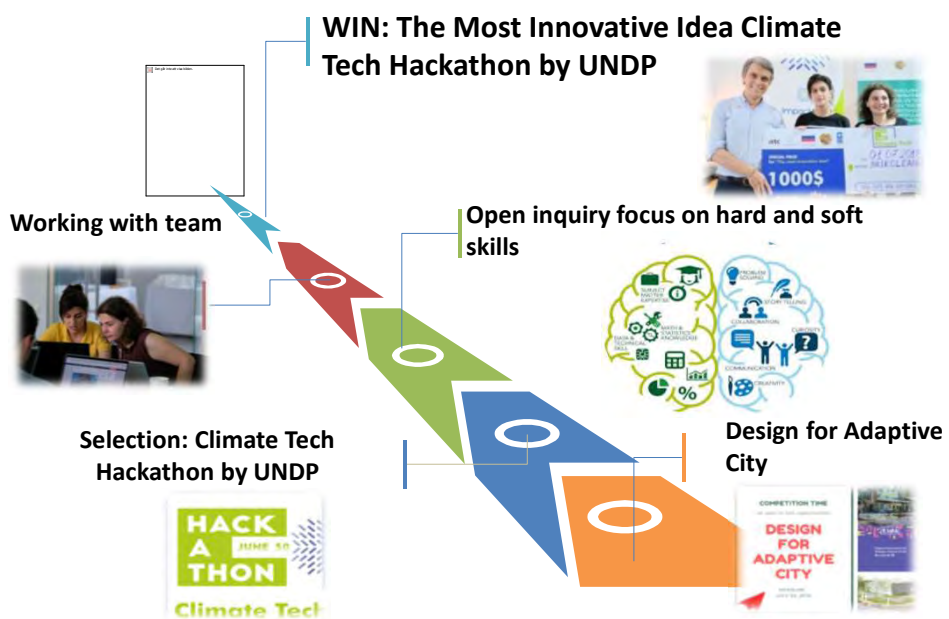
**MAY 2018**

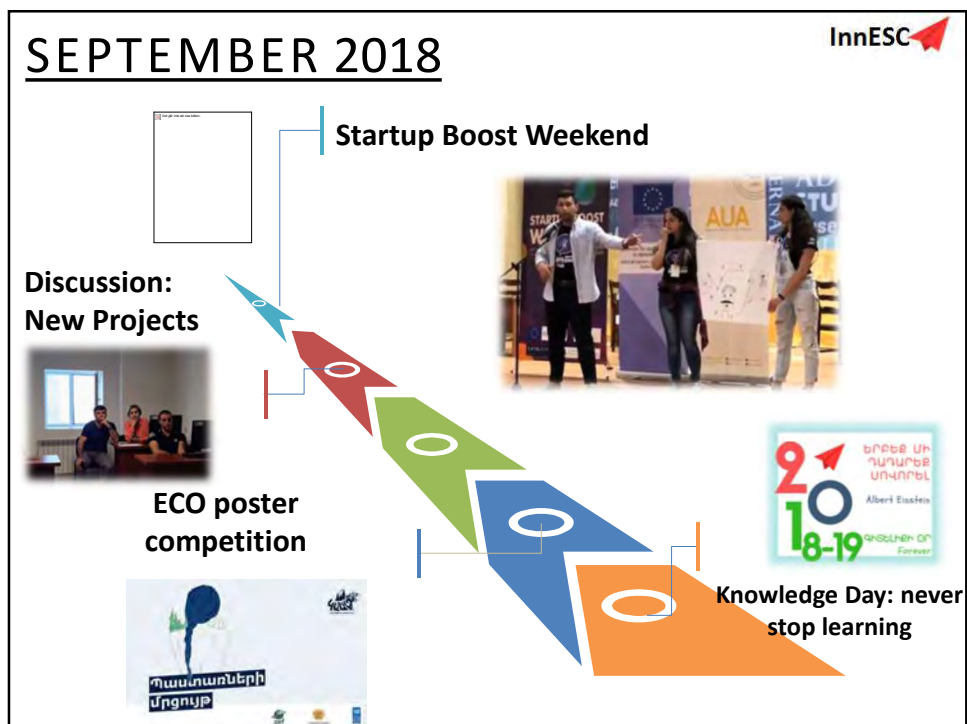
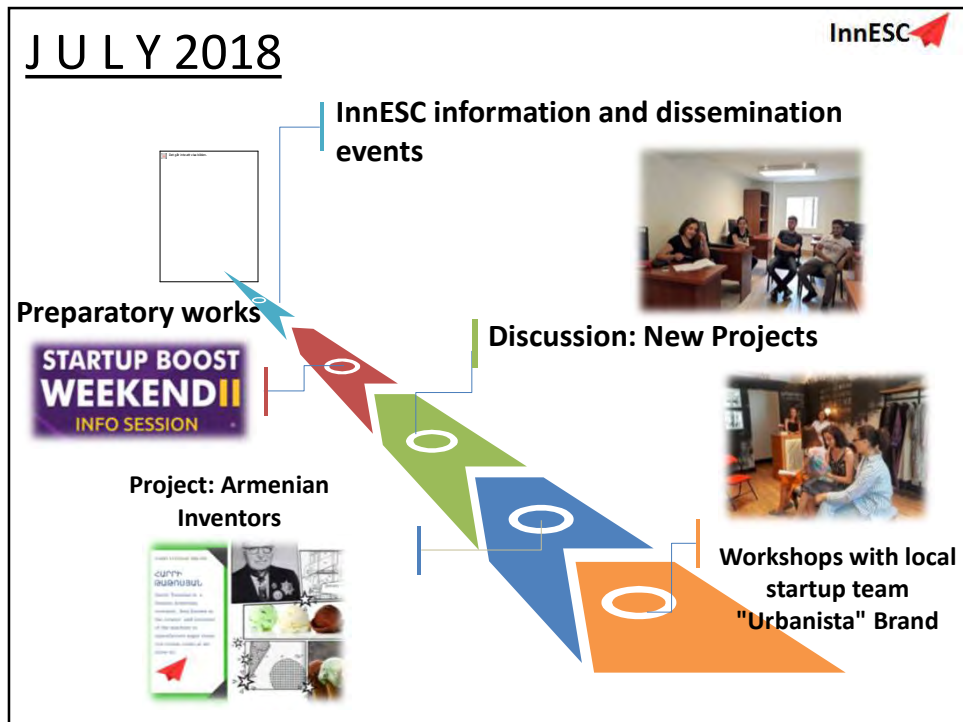
InnESC 



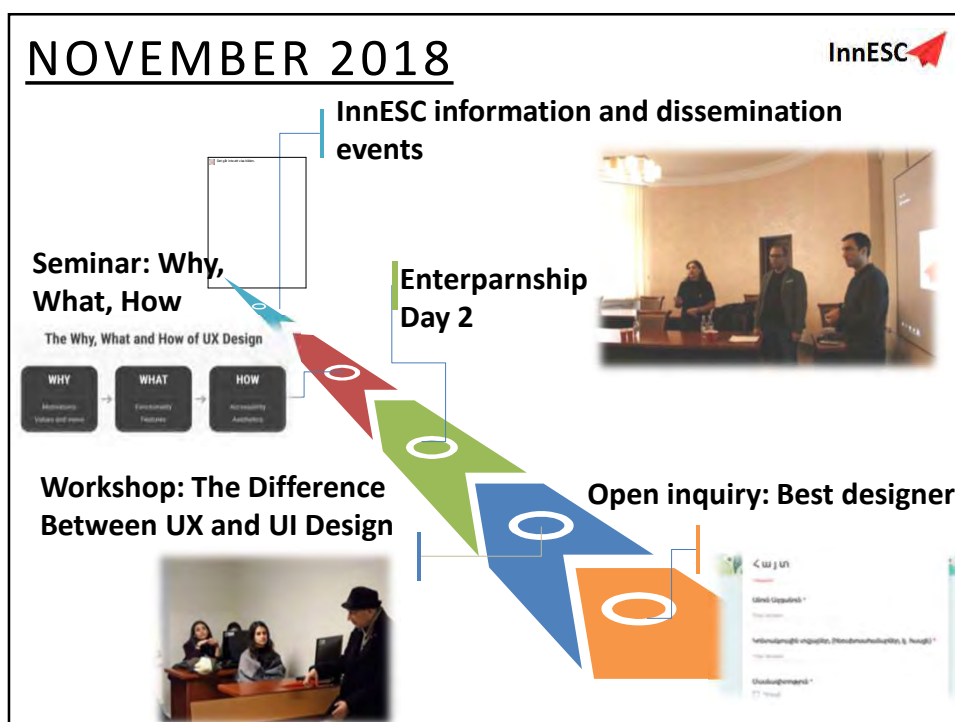
**JUNE 2018**

InnESC 













## DECEMBER 2018


InnESC 

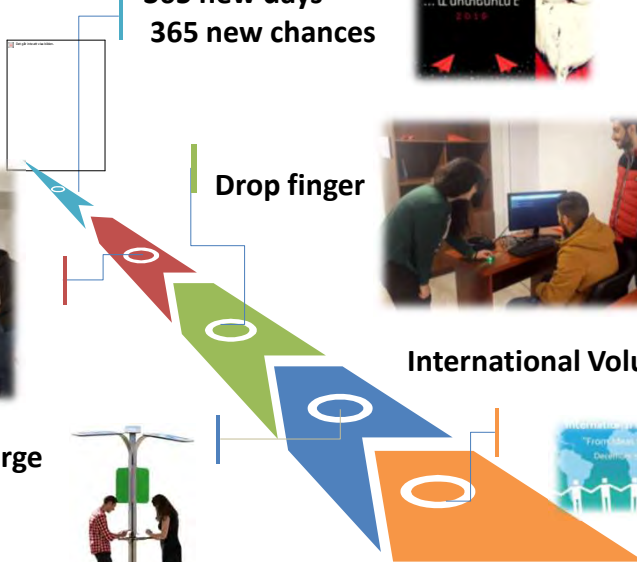
365 new days  
365 new chances

Thank you 


Drop finger 

Yerevan Charge 


International Volunteer day 





## JANUARY/FEB 2019

InnESC 

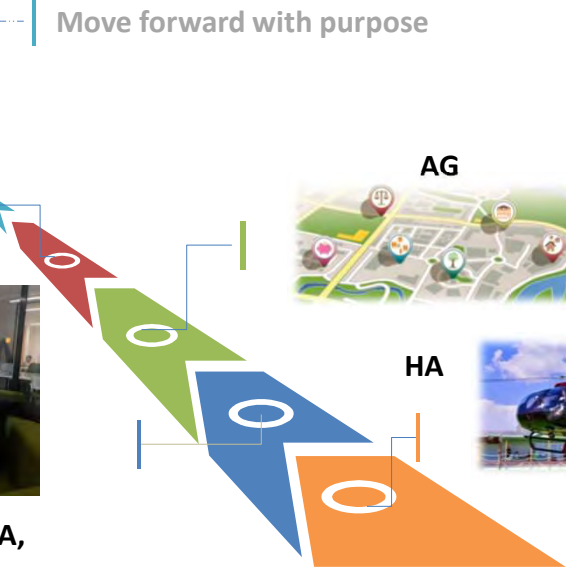
Move forward with purpose

NUACA: Competition 

AG 

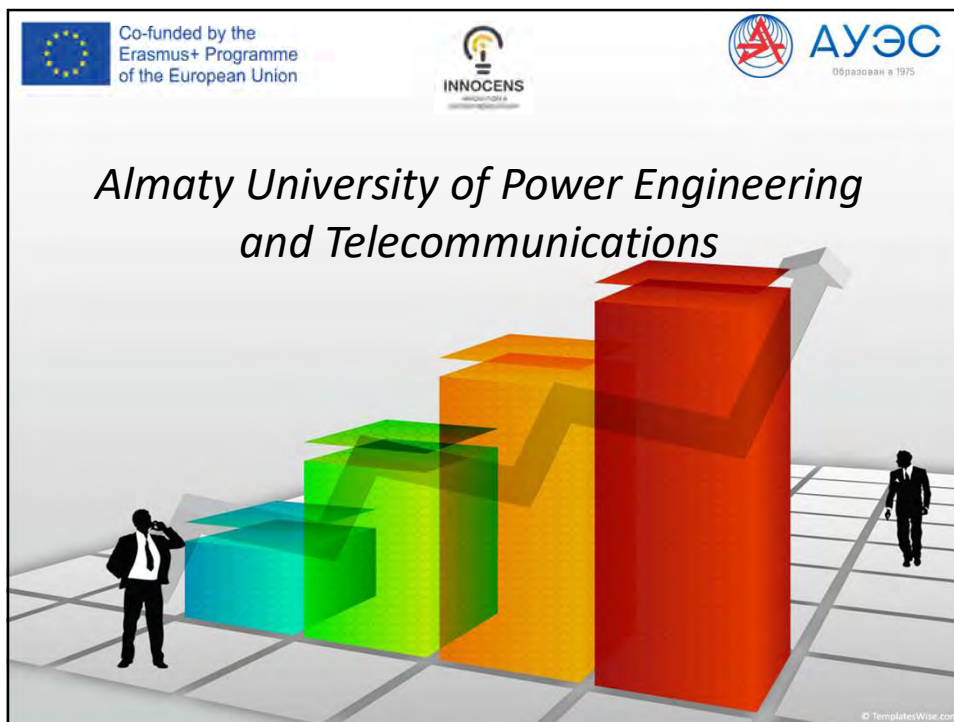
HA 

Participate in GRTIA, BC, AUA



we  what we do

THANK YOU







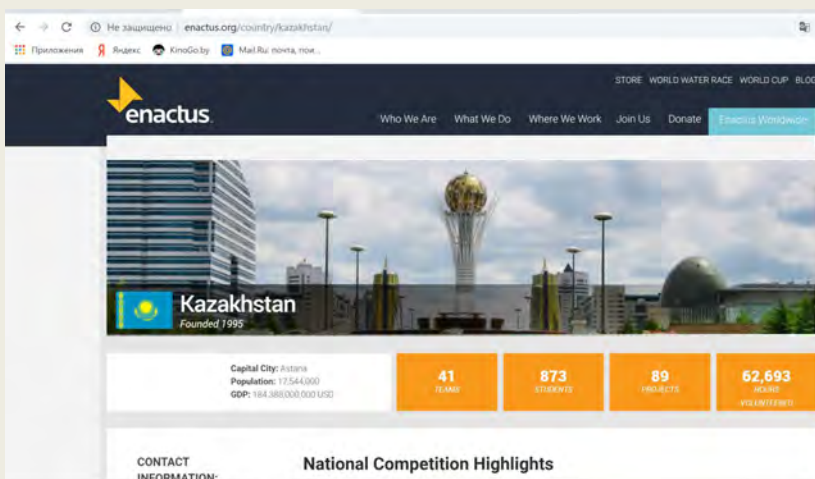
Co-funded by the  
Erasmus+ Programme  
of the European Union



АУЭС  
Образован в 1975



## ENTREPRENEURIAL ACTION US





Co-funded by the  
Erasmus+ Programme  
of the European Union



INNOCENS



AYEC  
Образован в 1975



Олимпиада на разработку  
информационных  
средств студентами

March 2018 Creation of IT  
platform for robots with GPS  
navigation



October 2018 Science and  
innovation Competition in the  
framework of the conference  
"Science and Innovation for Young  
Scientists"



November 2018 National Championship in  
robotics among pupils and students



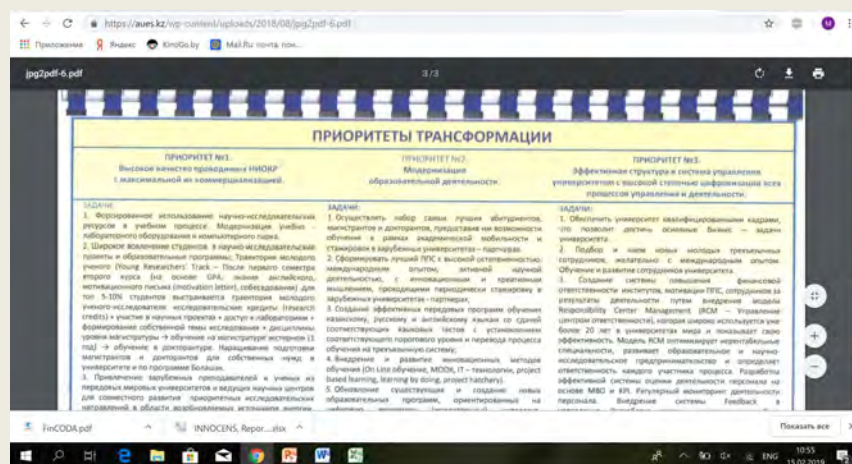
- ☐ «Smart house,
- ☐ «Technology M2M – Smart traffic light»,
- ☐ «Automatization of sewage water controlling  
system»,
- ☐ «Fingerprint recognition software  
development»,
- ☐ «The use of Unmanned aerial vehicles in  
agriculture»,
- ☐ Fire Detection and Fire Extinguishing Robot,
- ☐ Door lock (door handle) with fingerprint  
identification.



# Innovation pedagogy

- Combining learning, innovation and research'
- Transformation of teaching technology and implementation of new methods into the strategy of University development to year 2025
- Assessment of performance - individual-interpersonal-networking model

## Priority of transformation #2 – implementation of new methods of teaching



[illegible]





Co-funded by the  
Erasmus+ Programme  
of the European Union



## **Taraz State University**

**573965-EPP-1-2016-1SE-EPPKA2-CBHE-JP  
«ENHANCING INNOVATION COMPETENCES  
AND ENTREPRENEURIAL SKILLS IN  
ENGINEERING EDUCATION» INNOCENS  
2016-2019**

**Erevan 2019**



## **Progress report on two new courses**

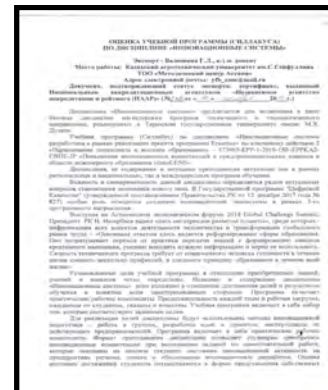


## Innovation systems

- Course was started in second semester of 2017-2018 academic year.
- Students from engineering programs – 8 programs
- Innopeda methods - team learning, project learning, co-teaching, practical training
- Expertise of syllabus by external experts

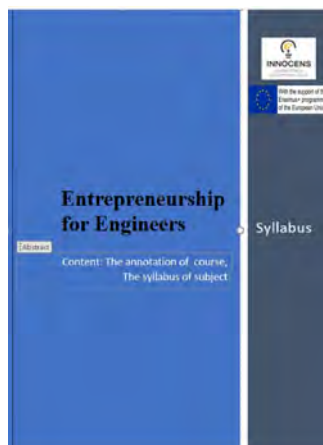


### Expertise of course by external experts



## Entrepreneurship for engineers

- Start – 1 semester of 2018-2019 academic year
- Programs – all engineering programs
- Innopeda methods - team learning, project learning, co-teaching, practical training
- Expertise of syllabus by external experts



### Expertise of course by external experts



### Feedbacks:

1. We became more creative and initiative
2. We have skills and working-life orientation competences
3. We can work in project learning environments in groups
4. We get skills in co-teaching

## Final exam Entrepreneurship for engineers

**34 students**

- » First Vice-rector
- » Vice-rector for research
- » Director of master programs



## Assessment of innovation competences

We have developed innovation competences assessment at the University:

- Questions of FINCODA Barometer was translated to Russian.
- Development of special assessment module based on the INDIGO software application.
- This survey was participated by students of master students from engineering programs. (After innovative pedagogy, our students acquired deeper skills for working in groups and being creative).
- In spring semester, we will use INDIGO in internal workshop “Innovative competences: from individual to program” for teachers of TarSU.

## Assessment implementation

### Results of a survey of students

#### Barometer FINCODA questionnaire

The overall result for all assessment competencies		Percentage of responses by group				
Score	Percentage	Creativity	Critical thinking	Team working	Initiative	Networking
0-2	0	0	0	0	0	0
3	36,84	5,26	0	0	0	0
4	57,89	57,89	89,47	27,78	89,47	73,68
5	5,26	36,84	10,53	72,22	10,53	26,32





## Training for students

### 1 step. Presentation of the project and competition – 10.11.2018.

Students from: Taraz State University; Taraz State Pedagogical University; Polytechnic college



### 2 step. Training 27-28.11.2018.

- » Innovation entrepreneurship.
- » Best practices of entrepreneurship .
- » Assessment of business proposals.
- » Presentation of the Canvas - model.



Co-funded by the  
Erasmus+ Programme  
of the European Union



M.KH.DULATY TARAZ STATE UNIVERSITY

YOUTH POLICY ADMINISTRATION OF THE AKIMAT OF ZHAMBYL REGION

THE CENTER OF INNOVATION AND ENTREPRENEURSHIP

# Entrepreneurs day

November 29, 2018

11



## 3 step. Entrepreneurship Day – 29.11.2018.

**Guests – inviting entrepreneurs**

- » Baygabylova Tursynay – Beauty salon «Brilliant»;
- » Abduhalykov Olzhas – «Prime Family Group»;
- » Aytbaev Alikhan – cafe «Turkish doner kafe»;
- » Sarsenov Alisher – «Tazamaster»;
- » Orynbayeva Zeynur – «Frutibuket»;
- » Berkbulov Anuar – Design Studio.






## Opening ceremony

- *March 2, 2018*

*Participants:*  
 Department of entrepreneurship and innovation development,  
 Akimat of Jambul region  
 Department of entrepreneurship and industry of Taraz city  
 Entrepreneurship Chamber of Jambul region  
 Entrepreneurship development fund Damu of Jambul region  
 Youth Entrepreneurship Development Council  
 Representatives of business

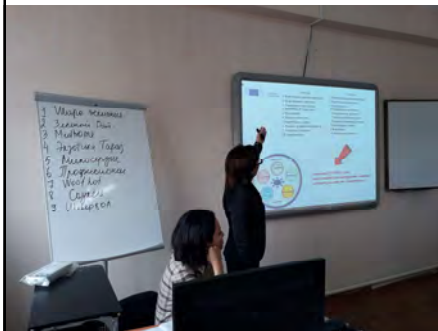


## Center of Innovation and Entrepreneurship



## Innopeda implementation

- January 23-24, 2018  
Workshop for teachers “Innovation pedagogy – preparing entrepreneurs” – 56 people









## Erasmus+ CBHE Projects Results Fair 25/10/2018



### III class diploma for outstanding and content-reach presentation



## Students' innovation project competition "Inno TarSU" 12/04/2018



## Innovation Business Idea Competition

### Information students portal

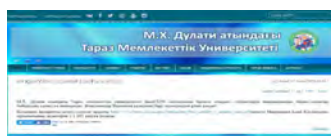


### Printed version



### Links

[http://www.tarsu.kz/images/dokumenty/KTO\\_HOCHET\\_POEHAT\\_V\\_ISPANIU\\_RUS.pdf](http://www.tarsu.kz/images/dokumenty/KTO_HOCHET_POEHAT_V_ISPANIU_RUS.pdf)  
[http://www.tarsu.kz/images/dokumenty/kto\\_poedet\\_v\\_ispaniy\\_kaz.pdf](http://www.tarsu.kz/images/dokumenty/kto_poedet_v_ispaniy_kaz.pdf)  
[http://www.tarsu.kz/images/dokumenty/kto\\_poedet\\_v\\_ispaniu\\_eng.pdf](http://www.tarsu.kz/images/dokumenty/kto_poedet_v_ispaniu_eng.pdf)  
<http://portal.tarsu.kz/upload/files/Spain%20ru.docx>  
<http://portal.tarsu.kz/upload/files/Spain%20kz.docx>  
<http://portal.tarsu.kz/upload/files/Spain%20ru.docx>  
<http://www.tarsu.kz/ru/component/k2/item/7671-kto-khochet-poeihat-v-ispaniya-v-sentyabre.html>



### Web site of university



### Facebook and Instagram pages



## Innovation Business Idea Competition

21



М.Х. Дулати атындағы Тарау мамандығы университеті  
байқау қатысушылары

### ИННОВАЦИЯЛЫҚ БИЗНЕС-ИДЕЯ БАЙҚАУЫ

Бүгінгі таңдағы жағдай

INNOCENS - жергілікті білім беру қауымдастығы инновациялық идеяларды қолдауға бағытталған байқау. Жобаның мақсаты - студенттердің инновациялық идеяларды жүзеге асыруға қабілетін арттыру, ұлттың инновациялық және кәсіпкерлік дамуына жағдай жасау. Байқау бағдарламасына, инновациялық идеяларды ұсыну, студенттер және компаниялар қолдаушылардың инновациялық идеяларын қолдауға бағытталған. Жоба орталықтары: Шымкент, Павлодар, Семей, Қызылорда, Астана, Алматы, Тарау және Батыс Қазақстан облыстарында 11 жерде жүзеге асырылады.

INNOCENS жобасы студенттердің инновациялық бизнес-идеяларын қолдауға бағытталған байқау қатысушылары. Ұсынылатын бизнес-идеялар қызықты, қолданбалы, өнімді, өнімді, бизнес-идеялардың сапасы мен сервистің жақсартуына бағытталған болуы керек.

1. Байқау қатысушылары студенттер қатарынан тек 2019 жылдың 15 наурызына дейін байқау қатысушысы ретінде-ақ белгіленген уақыт бойынша бизнес-идея ұсынуы керек.
2. Бір топта қандай бір ұран астында жұмыс істей білуі тиіс.
3. Байқау 2019 жылдың сәуір айында соңына дейін өткізіледі.
4. Байқауға қатысушылар: Павлодар (Шымкент) 2019 жылдың 13 қыркүйегіне дейін қатысушылар қатысуы керек.
5. Жобаның тек 2019 жылдың 13 қыркүйегіне дейін өткізілетін тіркеліс тізіміне бизнес-идеялар ұсынуы керек.
6. Байқауға қатысушылар 2019 жылдың қыркүйегіне дейін Астана қаласында INNOCENS жобасына қатысушылар қатысуы керек.

М.Х. Дулати атындағы Тарау мамандығы университетінің байланыс тұлғасы:  
Эльмира Рахымжанова - INNOCENS жобасының ұлттық координаторы, Байқау процесі және қатысушылар ұйымдастырушысы.  
E-mail: elmirar@mail.ru, телефон: (7242) 454753, қысқарту: 2.1.303

1. In order to participate in the competition, a team of three students will submit a business idea using a pre-defined template, before March 15, 2019

2. University will organize a pitch competition to choose a local winner before the end of April 2019

3. The winning teams will submit a full business plan before August 13, 2019

4. The final competition will be held in Valencia, Spain, on September 13, 2019

5. Winner of the final competition will be invited to INNOCENS final conference in Astana, Kazakhstan, in October 2019.




### ИННОВАЦИОННОСТЬ, БИЗНЕС-ИДЕЯ

Аты:	
Адрес:	
Төп мүшесі 1:	Аты-жөні Телефоны Мобильный номер Email Телефон
Төп мүшесі 2:	Аты-жөні Телефоны Мобильный номер Email Телефон
Төп мүшесі 3:	Аты-жөні Телефоны Мобильный номер Email Телефон
Бизнес-идеяның қысқаша сипаттамасы (макс. 1000 сөз):	
Сіздің бизнес-идеяңыздың нағыз пайдасы?	
Сіздің тұтынушыларыңыз кім?	
Түпнұсқа құжат	

## Presentation of business ideas for community

Meeting with the Chairman of the Mazhilis of Parliament - Nigmatullin Nurlan  
January 31, 2019



<p>ҚАЗАҚСТАН РЕСПУБЛИКАСЫ БІЛІМ ЖӘНЕ ҒЫЛЫМ МИНИСТРЛІГІ М.Х.ДУЛАТЫ АТЫНДАҒЫ ТАРАЗ МЕМЛЕКЕТТІК УНИВЕРСИТЕТІ</p> <p>ҚР Жастар жылына арналған «Бүгінгі жастар-үлкен мүмкіндіктер буыны» тақырыбындағы студенттердің ХХІ ғылыми-практикалық конференциясының <b>ШАҚЫРУ – БАҒДАРЛАМАСЫ</b></p>  <p>04.03.2018 ж. - 13.03.2018 ж.</p> <p><b>ПРИГЛАШЕНИЕ – ПРОГРАММА</b> на ХХІ студенческую научно-практическую конференцию на тему: «Современная молодёжь – поколение больших возможностей», посвященной Году Молодёжи в РК</p> <p>04.03.2019 г. – 13.03.2019 г. Тараз</p>	<h2 style="text-align: center;">XXI students' scientific conference</h2> <div style="border: 1px solid black; padding: 5px;"> <p><b>Разработка развивающих игр для детей на примере книги «Touchbook»</b> Бесбай К., Оразбаева А., Садуаулы Ж. – магистрант 2 курса спец.ТКИЛП Фанзова Э.Р. - к.э.н., доцент</p> <p><b>Дұрыс тамақтану жолдарын қалыптастыру</b> Белгібаева А., Ермекбаева А., Кузметова С., Абишева Ф. - - ТПТМ мамандығының 2 курс магистранттары Фанзова Э.Р. - э.ғ.к., доцент</p> <p><b>Қаласы қуыршақтарын ұлттық нақышта әзірлеу</b> Матпұсаева З., Тасплат Ж. - ТПТМ, ИС тобының студенттері Чернявская Н.П. - т.ғ.к., доцент</p> <p><b>Әйелдерге арналған адам ағзасына пайдалы эко-кеудешені жасау</b> Естебекова Л. – ТПТМ мамандығының 2 курс магистранты Усеналиева А. - ТКИЛП мамандығының 2 курс магистранты Фанзова Э.Р. - э.ғ.к., доцент</p> <p><b>Создание клининговой компании «Blestit» в сфере обслуживания</b> Юдина А., Суранышбекова Л., Жетібаева А.- магистранты 2 курса спец. Информатика, Метрология Чернявская Н.П. - к.т.н., доцент</p> <p><b>Внедрение интернет магазина «Tapsyris.kz»</b> Амиров И., Ауелбаева А., Есмұратова М. – магистрант 2 курса спец. АиУ Фанзова Э.Р. - к.э.н., доцент</p> <p><b>Разработка натурального твердого мыла «Milagro» на основе ослиного молока</b> Мадинарова Г., Рысбаева Г., Киргизбекова А. – магистранты 2 курса спец. ХТНВ Фанзова Э.Р. - к.э.н., доцент</p> <p><b>Создание декоративной корзинки «Basket girls»</b> Абдинаев У., Тураева А., Бекбердиева А. – магистранты 2 курса спец. ТПЕП Чернявская Н.П. - к.т.н., доцент</p> <p><b>Создание мобильного приложения «Arteka.trz»</b> Амантайқызы А., Сагит М., Дәуітбаева Г., Аблет Ж. - магистранты 2 курса спец. Химия, Информатика Чернявская Н.П. - к.т.н., доцент</p> <p><b>Ұлттық дәстүрлі технология негізінде «БОЗА» сусымын өндіру және тұтынушыларға ұсыну</b> Аманбаева А. – В16ТПЕП-1.3 тобының студенті Койбаков С.М. – т.ғ.д., профессор</p> </div>
--	--

# Thank you!





# ArtisGL 3D Publisher

ALL-IN-ONE 3D PUBLISHER

ArtisGL 3D Publisher is the new innovative way to view, create, edit, share and distribute 3D content

- ▶ REAL-TIME RENDERER & LIGHTING
- ▶ MATERIALS
- ▶ INTERACTIVITY
- ▶ ENVIRONMENT
- ▶ EFFECTS
- ▶ IMPORT AND EXPORT
- ▶ ANIMATION
- ▶ PUBLISHING TARGETS

# ArtisGL Plugins

ArtisGL 3D Publisher provides free of charge, direct exporting plugins for popular 3D editors

## Plugin for Autodesk® Revit®



- ✓ Direct export to ArtisGL
- ✓ Export to .OBJ
- ✓ Enjoy real-time rendering
- ✓ Interactivity, video and real-time rendering

## Plugin for Autodesk® 3DS Max®



- ✓ Direct export to ArtisGL
- ✓ Edit materials and lightning
- ✓ Add interactivity & hotspots
- ✓ Produce video and VR ready content

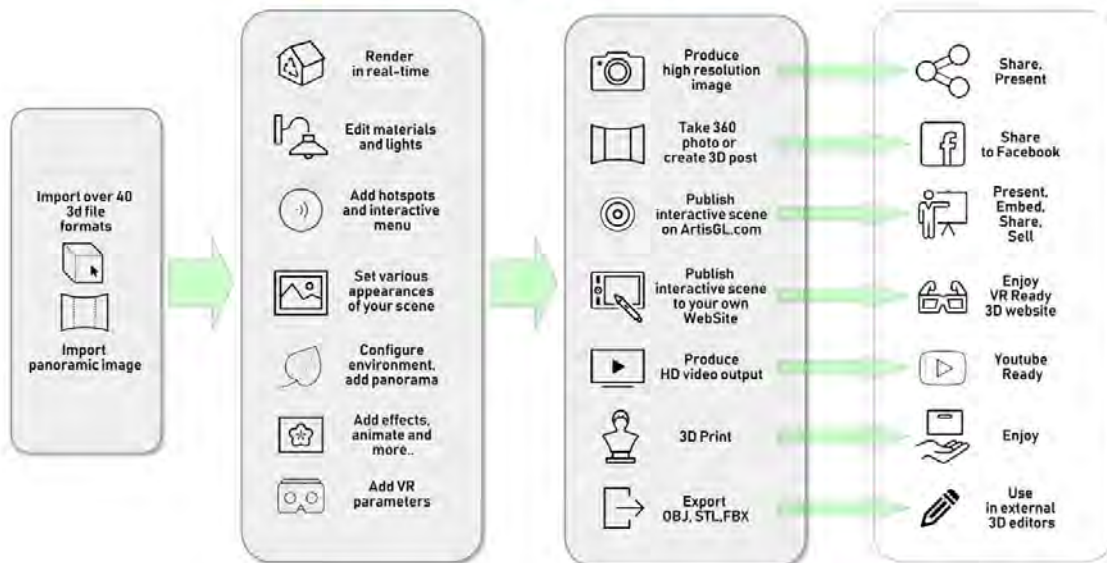
## Plugin for Blender®



- ✓ Direct export to ArtisGL
- ✓ Powerful material editor
- ✓ Superfast rendering engine
- ✓ WebVR ready



## ArtisGL - All in One 3D Publisher

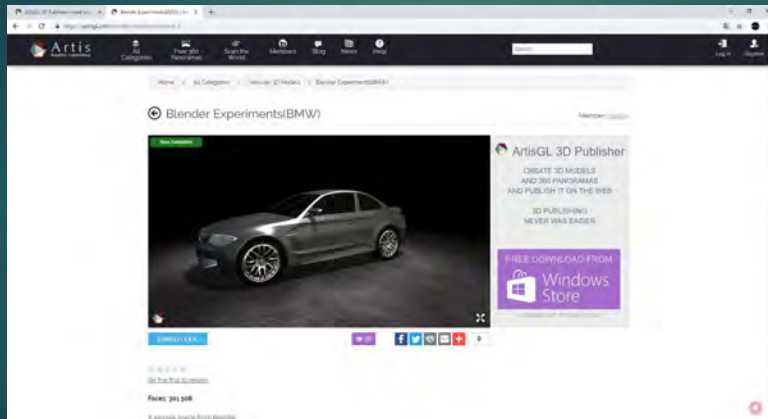


<https://artisgl.com>

ArtisGL: version 3.0 by ArtisGL Team

# Web3D Technology

- ▶ ArtisGL allows to publish interactive 3D content to any website and create 3D websites





# WebVR

- One click VR ready content



# Fast video production

- ArtisGL uses GPU to render video content in minutes





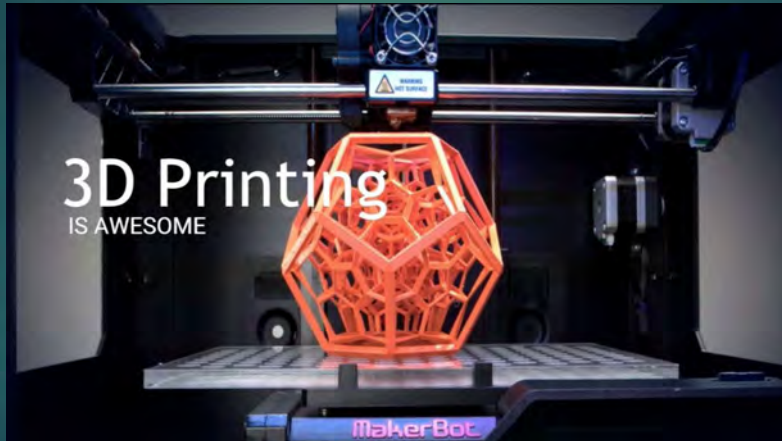
# Fast HQ images production 360 Images Production




## Facebook 3D publishing



# 3D Printing



A screenshot of a presentation slide with a light gray background and a dark blue border. The text "Blender Scene exported to ArtisGL" is centered in a black, sans-serif font. A small red rectangular tab is visible at the top right of the slide.

Blender Scene  
exported to ArtisGL

## One of most popular free products

A presentation slide with a dark teal background and a red rectangular tab on the right side. The title "One of most popular free products" is at the top in white. Below it is a bulleted list of statistics in white text.

One of most popular free products

- ▶ Most popular 3D product in Microsoft Windows Store
- ▶ 25,000 free version users
- ▶ +100 users per day
- ▶ 2000+ registered members, daily grow
- ▶ 14,99 USD per month paid plan
- ▶ Sales growing 20% per month



## ArtisGL Team INVESTORS

- ▶ Arman Boshyan (CTO of BG Solutions)
- ▶ Grigor Barseghyan (former president of Microsoft Armenia, CEO BG Solutions)
- ▶ Servers sponsored by Microsoft Azure

Arman Boshyan previous patent applications US20100060640A1  
(Volume Rendering methods)



# Thank you

- ▶ <https://artisgl.com>
- ▶ Download for free



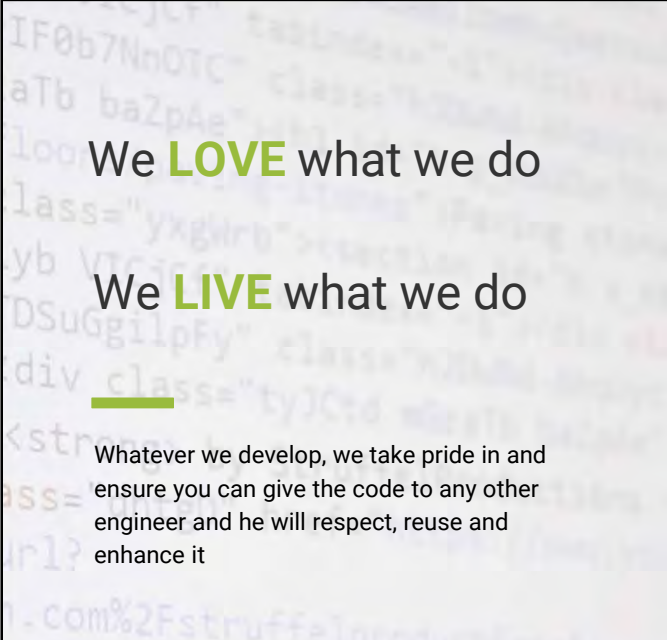
## ABOUT

HackTech is an innovation focused software development company on a mission: we want to help to build businesses faster. We have extensive experience in multi-tenant software projects that serve thousands of users. We specialize in PHP, Laravel and other modern frameworks to deliver new ideas faster.

## A NEW KIND OF ENGINEERING COMPANY

- 01 We leverage technology to make human life better.
- 02 If you want pure rapid innovation without bureaucracy, hyperbole or over-selling, tell us your idea. We are specifically focused on technologies that speed time to market for new ideas.
- 03 We consult and invest in promising startups. Currently we are shareholder in our 3 products.

INNOVATION ENGINEERING



We **LOVE** what we do

We **LIVE** what we do


Whatever we develop, we take pride in and ensure you can give the code to any other engineer and he will respect, reuse and enhance it

—

WE BREATHE  
WELL DESIGNED  
& DOCUMENTED  
SOFTWARE.


HACKTECH<sup>↑</sup>
INNOVATION ENGINEERING

OUR  
SERVICES




SOFTWARE  
DEVELOPMENT

- PHP Laravel Framework
- NodeJs
- Angular Js
- Vue Js
- AWS cloud
- CI/CD




UX DESIGN

- Usability Consulting
- Heuristic Analysis
- User Interface Design
- Prototype Construction



QA & TESTING

- Test case definition and execution
- Test automation
- QA Services and Consulting

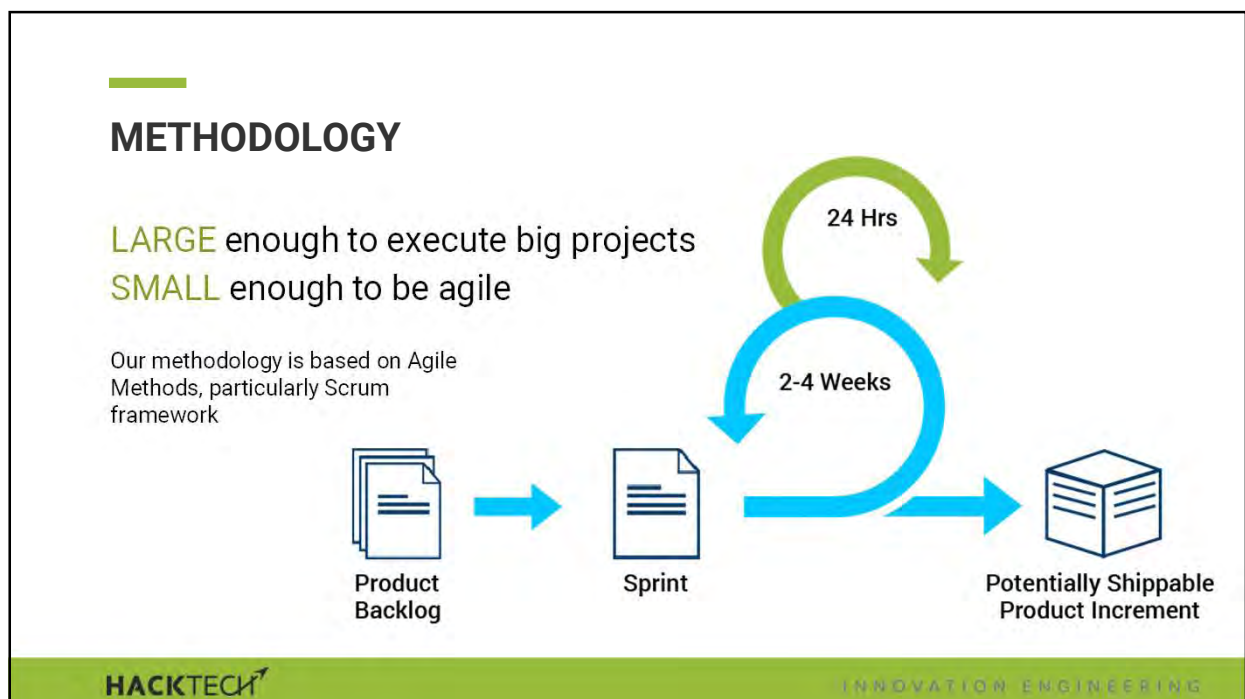
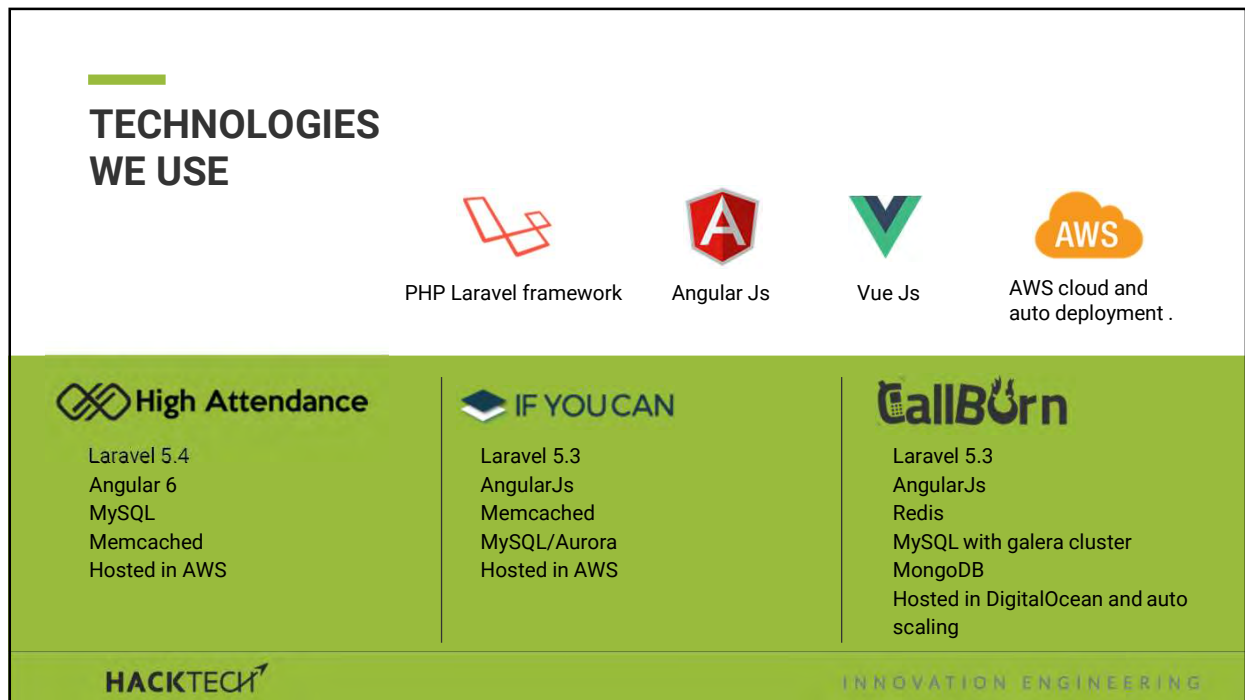


CONSULTING

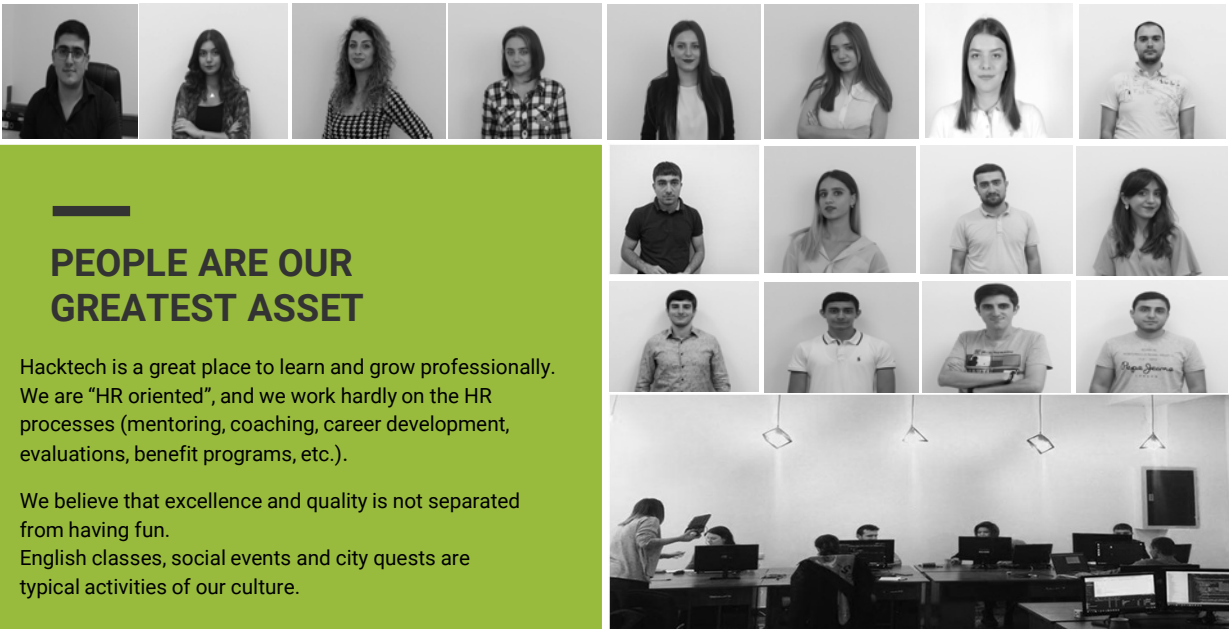
- Definition of technological strategies
- BPR (Business Process Redesign)
- Functional specification of software solutions
- Definition of technological architectures

HACKTECH<sup>↑</sup>
INNOVATION ENGINEERING

2





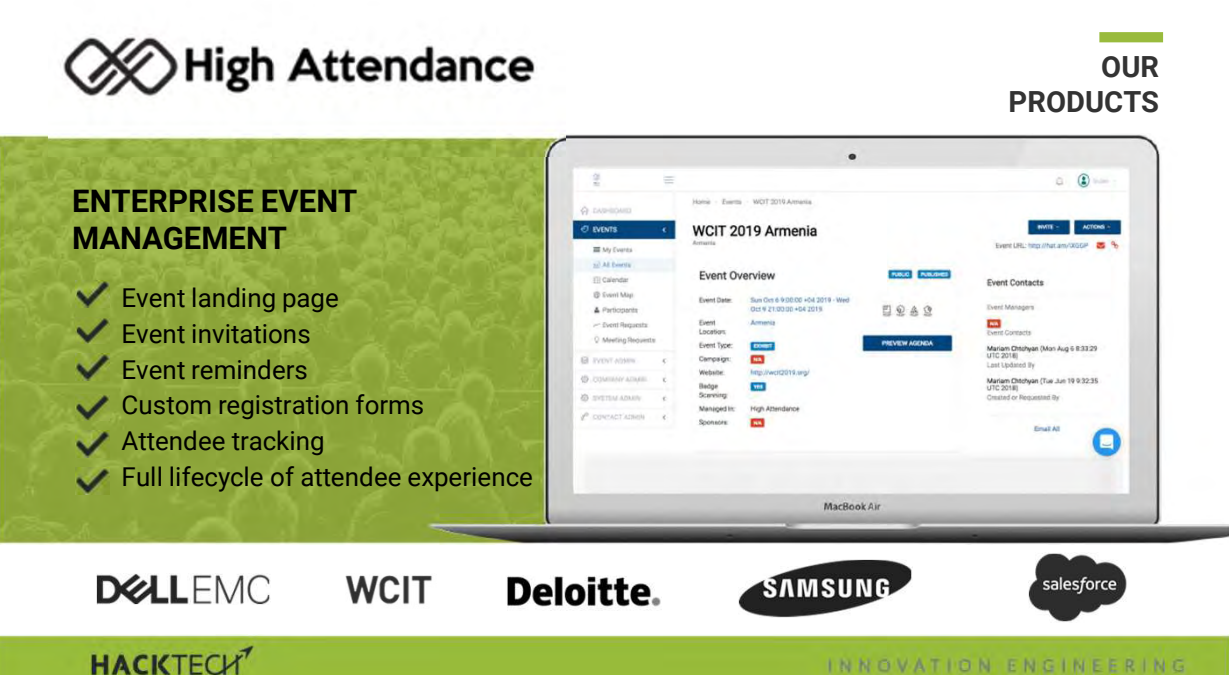


## PEOPLE ARE OUR GREATEST ASSET

Hacktech is a great place to learn and grow professionally. We are "HR oriented", and we work hard on the HR processes (mentoring, coaching, career development, evaluations, benefit programs, etc.).

We believe that excellence and quality is not separated from having fun. English classes, social events and city quests are typical activities of our culture.

**HACKTECH** INNOVATION ENGINEERING



## High Attendance

### OUR PRODUCTS

#### ENTERPRISE EVENT MANAGEMENT

- ✓ Event landing page
- ✓ Event invitations
- ✓ Event reminders
- ✓ Custom registration forms
- ✓ Attendee tracking
- ✓ Full lifecycle of attendee experience

**WCIT 2019 Armenia**

**Event Overview**

Event Date: Sun Oct 6 9:00:00 +04 2019 - Wed Oct 9 21:00:00 +04 2019

Event Location: Armenia

Event Type: [Create](#)

Campaign: [http://wcit2019.am/](#)

Website: [http://wcit2019.am/](#)

Badge: [http://wcit2019.am/](#)

Managed By: High Attendance

Sponsors: [http://wcit2019.am/](#)

**Event Contacts**

Event Managers

Event Contacts

Martian Chislyan (Mon Aug 6 8:33:29 UTC 2018)

Last Updated By

Martian Chislyan (Tue Jun 19 9:32:35 UTC 2018)

Created or Requested By

Email All

**Dell EMC** **WCIT** **Deloitte** **SAMSUNG** **salesforce**


**HACKTECH** INNOVATION ENGINEERING

**High Attendance**

**OUR PRODUCTS**

**ENTERTAINMENT**

**CUSTOMER REGISTRATION FORMS**

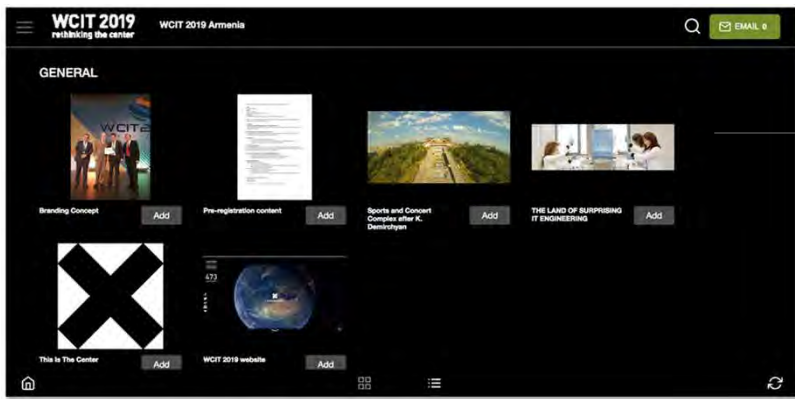


The image displays a digital interface for the WCIT 2019 Armenia event. On the left, a colorful circular graphic is divided into segments labeled 'Africa', 'Asia', 'Europe', 'Latin America', 'Middle East', 'North America', and 'South America'. To its right is a banner for 'WCIT 2019 ARMENIA THE POWER OF DECENTRALIZATION'. Below the banner is a blue box with the text 'WORLD CONGRESS ON INFORMATION TECHNOLOGY' and '6-9 October 2019'. To the right of this is a 'PRE-REGISTRATION' form with fields for 'No Options', 'Email Address', 'Last Name', 'Country', 'Company', 'Job Title', 'Phone Number', 'Will you be participating in WCIT 2019?', 'Will you be exhibiting at WCIT 2019?', and 'Will you be speaking at WCIT 2019?'. At the bottom, a green bar contains the 'HACKTECH' logo and the text 'INNOVATION ENGINEERING'.

**High Attendance**

**OUR PRODUCTS**

**DIGITAL COLLATERAL BROWSER**



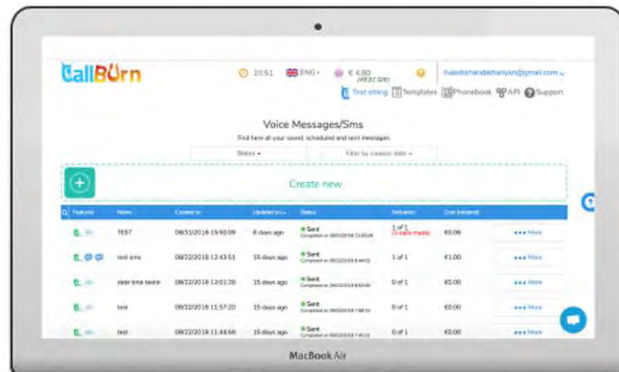
The image displays a digital collateral browser interface for the WCIT 2019 Armenia event. The interface is dark-themed and features a grid of content cards. The top section is titled 'GENERAL' and includes a search bar and an 'EMAIL' button. The content cards include 'WCIT 2019 Armenia', 'Pre-registration content', 'Sponsors and Content Complex after K. Demichyan', 'THE LAND OF SURVIVING IT ENGINEERING', 'This is The Center', and 'WCIT 2019 website'. Each card has an 'Add' button. At the bottom, a green bar contains the 'HACKTECH' logo and the text 'INNOVATION ENGINEERING'.



## ALPHA exhibitor during Web Summit 2018 in Lisbon

- ✓ Cheaper than SMS
- ✓ Interactive
- ✓ No need for data connection
- ✓ Landline & Mobile phones support
- ✓ Support audio & text source
- ✓ Custom Caller ID

## OUR PRODUCTS



## First Worldwide Voice Message Web-Platform

After 3 missed calls sends an SMS

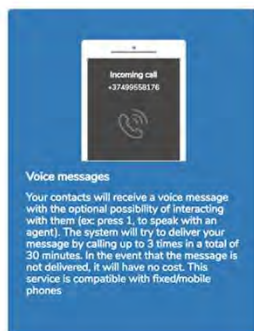
HACKTECH

INNOVATION ENGINEERING



## Step 1

## OUR PRODUCTS

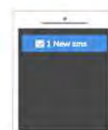


suggested



Voice messages if possible, otherwise text messages (SMS)

The system will try to deliver a voice message (read in the button on the left to understand how it works). If the voice message is delivered successfully, the sending will be completed, otherwise the voice message will have no cost and a text message will be sent in its place (SMS will be sent only on mobile phonenumber).




Sms

Your contacts will receive a simple SMS text message of high quality premium category (160 characters, instant delivery). For reasons dependent on their technology, SMS messages are not compatible with landlines and interactions and will be charged even if they are not delivered or not read. For these reasons this option is the least profitable, but you can use it if you still feel comfortable with the classic. This service is NOT compatible with landline phones.

HACKTECH

INNOVATION ENGINEERING



OUR PRODUCTS

Step 2

Create voice message

From a text

From an audio file

From your templates (24)

Write a text and we will magically convert it into a voice that you can listen and modify by yourself by trying out the available voices

English (GB)-Kate

Write your text here, including optional interactions instructions (eg: press 1 to contact with us) - then configure interaction inside relative section

Confirm and select the content

Characters count: 0

If you added interactivity to voice message content, remember to enable it here (eg. "press 1 to..")

☐

Replay Voice Message

Make your recipients able to replay the audio message

☐

Call Live Transfer

Your recipient will be able to request a live-in-call transfer to one of your numbers, eg: sales agents

☐

Call me back

If your customer want to contact with you but not in that moment, he will be able to request a recall

☐

Blacklist me

If they do not want to receive anymore your calls, give you the ability to unsubscribe with this interaction

Playback Count

Choose how many times the audio of your message will be played

1x

2x


3x

4x

5x

HACKTECH

INNOVATION ENGINEERING



OUR PRODUCTS

Step 3

Choose recipients ?

Phonebook

Manual input

From your templates

Q	Name	No. of contacts	Updated on	Group type
<input type="checkbox"/>	ALL CONTACTS	49531 contacts	--	
<input type="checkbox"/>	TEST	1 contacts	31/08/18 13:50	Autosaved
<input type="checkbox"/>	545412	2299 contacts	24/08/18 10:00	Manually added
<input type="checkbox"/>	121212	1 contacts	24/08/18 09:41	Manually added
<input type="checkbox"/>	ghgh	1 contacts	22/08/18 12:16	Manually added

Showing 14 of 42 items


[select 5 items](#) - [select 42 items](#)

49531 phonebook contacts total count

HACKTECH

INNOVATION ENGINEERING





OUR PRODUCTS

Step 4

Review and send

Sending from Caller ID

Voice messages

+37455452730

Change

☐ Send messages in random order

Recipients

Estimated maximum price

74A

?

74A

?

☒ Notify me by email

Tag this message with a name

Save

Pre-listen message on your phone

7

Send choosing advanced options


Schedule and/or limit recipients/speed

Send now

Message/s will be sent immediately with no speed limitation

HACKTECH

INNOVATION ENGINEERING



OUR PRODUCTS

API Access keys

Table of keys that you have generated to access the Callburn API

+

Create new

Description	Type	Created	
Testing Hakob	Production Key	01/13/2018 11:51:03	More ▾
TEST KEY	Test Key	04/18/2018 12:42:29	More ▾

URL and Logs

Delivery reports URL ?

http://sendreplyhere.com/myncustomapp

Export API Log

Export HTTP log

HACKTECH

INNOVATION ENGINEERING

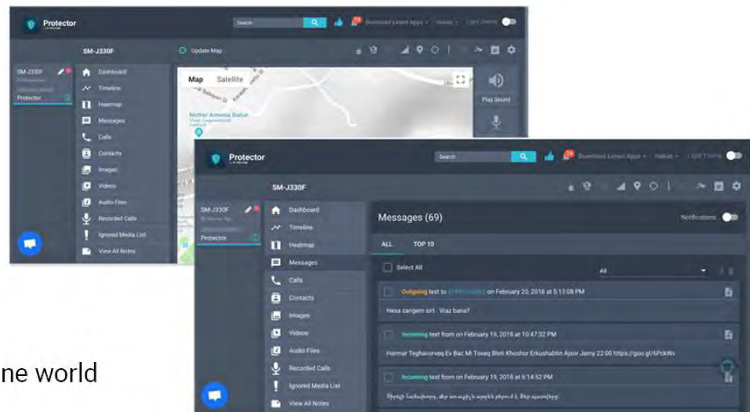


**Protector**  
by IF YOU CAN

**OUR  
PRODUCTS**

Securely, instantly and incrementally backs up your child's account in the cloud, equipping you with the digital binoculars for real time monitoring

- ✓ Help ensure safety
- ✓ Enable awareness
- ✓ Parenting in the smartphone world



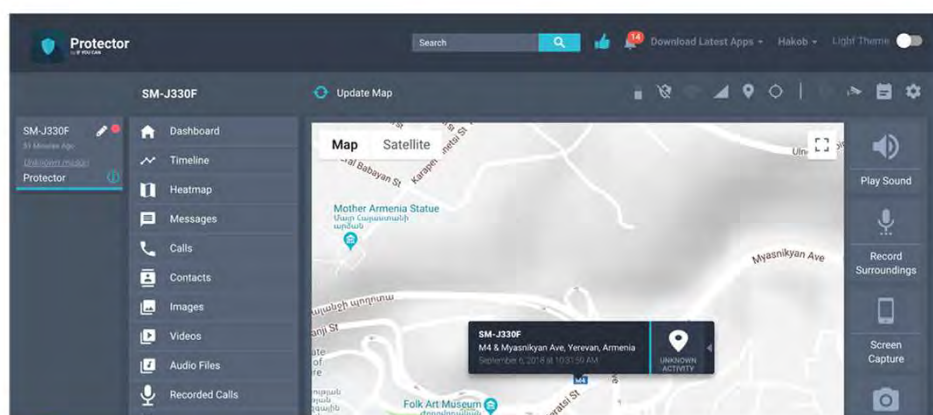
**HACKTECH**

INNOVATION ENGINEERING



**Protector**  
by IF YOU CAN

**OUR  
PRODUCTS**



**HACKTECH**

INNOVATION ENGINEERING

## THANK YOU

We are situated

Nairi Zaryan 73/1  
Armenia, 0014, Yerevan

### Global Office hours

Mo-Fr: 8:00-8:00pm GMT

Saturday: 8:00-14:00 GMT

Sunday: We are resting, you should too.

[ask@gohacktech.com](mailto:ask@gohacktech.com)

**HACKTECH**





Brainbit

Messenger Marketing & Chatbot



The background image shows a person's hands writing on a notepad. The notepad has a hand-drawn diagram with a central circle and several lines radiating outwards to other circles. The person is wearing a watch on their left wrist. The image is slightly blurred, focusing on the text overlay.

# What are Chatbots and Messenger Marketing?

**Messenger Marketing is in prime position to become the world's #1 marketing channel in the coming years...and the companies who become early adopters of this fast-growing channel are going to have a serious advantage over their competitors.**

# 6 Key Advantages of Using E-Commerce Chatbots



## No Abandoned Carts

Online shopping bots turn to chat into an e-commerce tool. Bots increase online checkout rate providing more personalized offers tailored to customer purchase habits.



## Enhanced Customer Support

Customer support chatbots efficiently operate 24/7/365, process multiple queries simultaneously and offload human teams from routine for more intellectual work.



## Intelligent Broadcasting

Retail bots improve targeting. They help brands create fail-safe broadcasting in messengers compared to the emails forever lost unread in customer's inbox.

# 6 Key Advantages of Using E-Commerce Chatbots



## Increased Conversion Rate

Customer service chatbots lead consumers through sales funnels via intuitive in-messenger chat. They act as a purchase or buying bots to sell, cross-sell and up-sell.



## Omnichannel Experience

E-commerce chatbot ensures smooth purchase experience across channels and satisfies today's customers who tend to blend shopping on the web, mobile, and in-store.



## Platform Integrations

Chatbots easily integrate with industry-proven platforms and become a one-stop e-commerce solution for a complete purchase journey from shopping to review.

# How chatbots can improve your marketing strategy?



## Analytics

Chatbot gives you analytics (big data) about your user's behavior and preference.



## Generating Natural Leads

Chatbot generates natural leads and transform them into new paying customers.

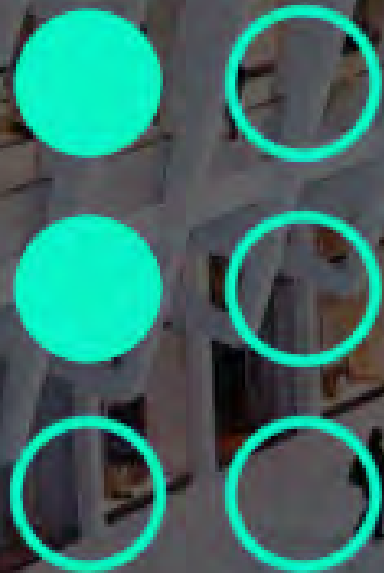


## Broadcast

You'll always have an opportunity to send promotional broadcasts to your users and receive feedbacks.



# How can chatbots improve your SMM strategy?



## Higher Engagment Rate

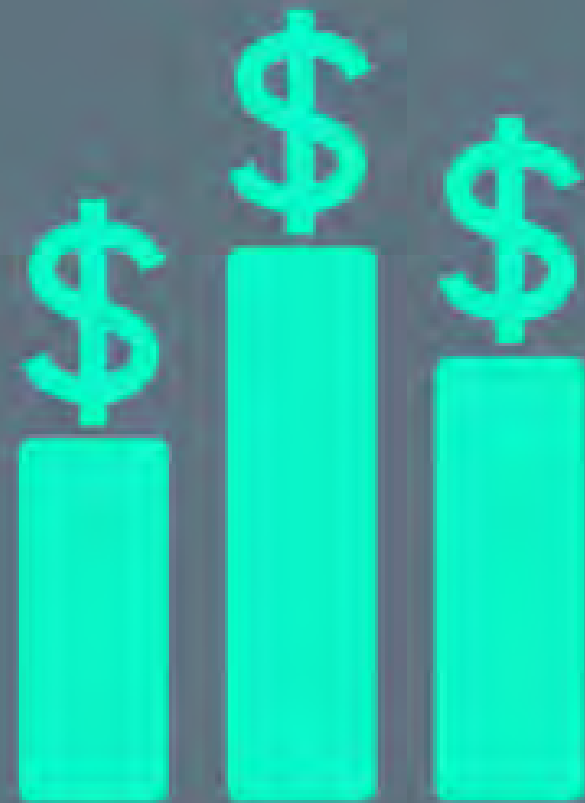
Chatbot can increase social media's page's visibility and reach more than 200%



## Comment Replay Automation

Chatbots can automatically replay to all comments on your social media page and start a friendly conversation with your fans.

# Some Estimations



Chatbots are cost-effective. You can have high results through little investment.

619%

CTR

Messenger Marketing strategy results 243 % higher open rate and 619 % higher CTR rate.

134

New Customers

You'll have around 134 new customers from chatbot's 6000 active users in the digital area.

# Contact Us



041228225



[marketing@brainbit73.de](mailto:marketing@brainbit73.de)



Hakob Hakobyan 3 (Mergelyan Cruise)