



 **FabLab.hr**
C R O A T I A



The Abdus Salam
**International Centre
for Theoretical Physics**

**2nd Workshop on
Science Dissemination for the Disabled**



Science Dissemination for the Disabled, Trieste, October 23-25, 2017



FabLab.hr | Give-a-Hand



Roberto Vdović, Morana Pap, FabLab.hr

FabLab.hr | a Fablab with maker's heart

About FabLab.hr

FabLab, civil association for promotion of digital fabrication, was founded in 2013 as a non-profit and based on MIT's Fab Charter. It is aimed at promoting digital fabrication, encouraging DIY and helping society benefit from the makers movement. Intense activities - in line with three main missions:



Teaching following skills : Design Thinking, STE[A]M, 3D Parametric Modelling, Generative Design, 3D Scanning, Digital fabrication, Electronics, Robotics, Virtual Reality, Augmented Reality, IoT, BigData, Biosensors, Smart Sensing



Projects & FabLab PopUp events

Make-IT understanding collective awareness platforms with the maker movement, **FabLabNet**, making central Europe more competitive by unlocking the innovation capacity of FabLabs, **Campus Living Lab**, integrating makers movement into living lab concept, **Make@School**, national initiative for creative labs in primary schools, **FabLab@Road**, PopUp mobile activity, **FabLab@Boat**, summer PopUp mobile activity for coastal zone

30 events
35.000+

6 media
TV, radio

3 EU
projects

5 national
initiatives

6 EU
proposals

3D Printing Open Days, Maker Faire, Scientific Picnic, Design District, Ready Made Ilica, Carnet User Conference, FABELgrade, FABLab Festival, European Makers Week, Designathon, Open Design Day, International Kids Festival,



2016
2017

Understanding Collective Awareness Platforms with the Maker Movement



2016
2019

Making central Europe more competitive by unlocking the innovation capacity of FabLabs



2017
2020

Entrepreneurial skills for young social innovators in an open digital world. A European Initiative!

Education (R)evolution | Education

Introducing new **digital tools** and **design thinking** processes in order to boost **STE[A]M skills**. Facilitating **responsible education and research** in local and global context, by linking **three educational levels**. Long-term goal is to **make children believe** they can turn their ideas into reality and encourage them to remain in the **creative phases** of their minds, as well as support them in development of **soft skills and cooperation** from the early

ages.
20 primary schools

5 secondary schools

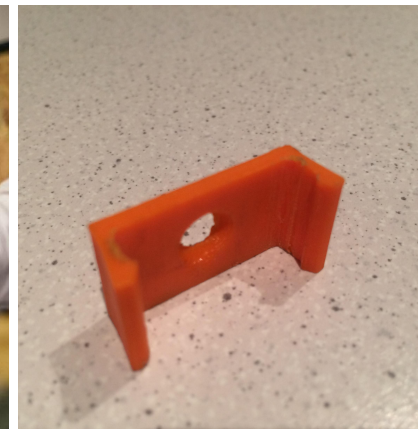
18 school workshops

2 teachers association

4 university institutions

74 teachers

Make@School national initiative (since 2013), aiming at introducing digital co-creation into schools through creative labs | **Re3D** cooperation with Secondary School Faust Vrančić (since 2016), inspired by circular economy: reuse, recycle, hack to build new digital fabrication tools | **Campus Living Lab** research with Faculty of Architecture, University of Zagreb, how campus and higher education can benefit from the makers movement



Local Solutions Go Global | Business

Engaged digital technology which encourages development of entrepreneurial mindset by facilitating turning ideas into products and leveraging local insights to develop solutions for global market. Co-creation by merging analogue and digital technology for creative and innovative use on global market in cooperation with quadhelix stakeholders.

25 SME's

4 tech park & incubators

3 corporations

3 hubs & co-working

One-2-3D Creative co-creation by merging analogue and digital technology for creative and innovative use | **HUB_S Sesvete** using makers culture inspired space for urban and commercial regeneration as a case study for underdeveloped or (not)transformed urban areas | **Makerbuino** helping with idea2product process for DIY inspired project by Albert Gajšak, www.makerbuino.com



Give-a-Hand | Local Community

Innovation inspired by situations local community members, especially **persons with disabilities**, are facing on daily basis. **Unlocking creative potential** of local community by **interdisciplinary co-working** and **inclusion** in solving problems and issues.

Flying vehicle helping transform a drawing made by a child with autism into a 3D model | **Special cutlery** research and development for children with neurodevelopmental and motoric disorders - developing sensory optimized modular tools **Kufta Go Global** helping an artist with disability to go global with his handmade work by using 3D scanning, 3D modelling and digital printing services | **Need-a-Hand** based on eNable the Future initiative, helping a student at the Faculty of Architecture leading the project of developing and manufacturing a prosthetic hand for himself.

7 civil associations

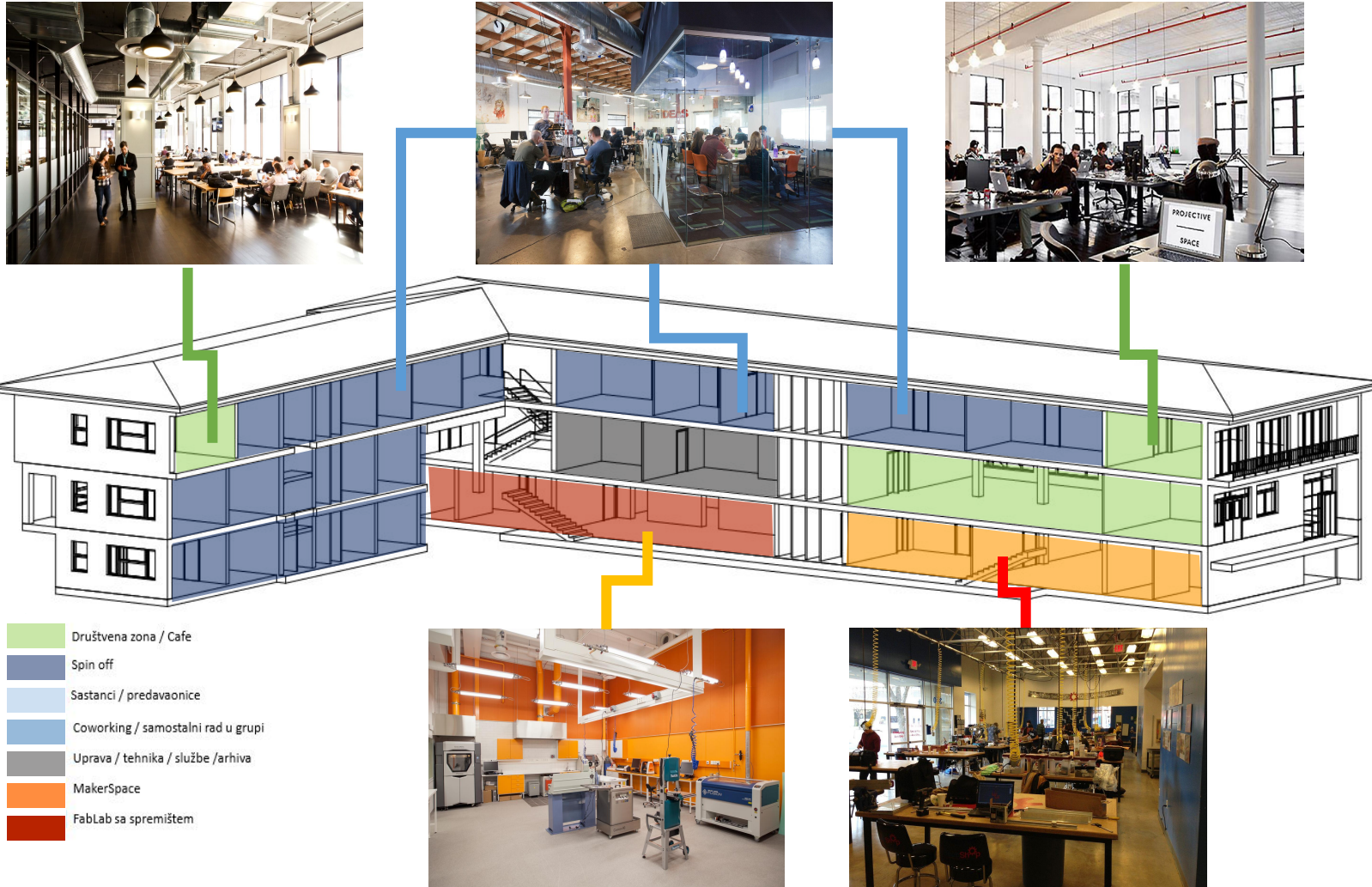
9 creative workshops

5 organizations for disabled persons

3 museums

6 local community





HUB_Sesvete

1 > MakerSpace

2 > FabLab

3 > Coworking | Co-Design

Partners:

- City of Zagreb
- Sesvete Local Community
- Civil Organizations in Sesvete
- Primary School Sesvete
- High School in Sesvete
- University of Zagreb
- FabLab.hr
- Local businesses

ReMljet

- . national park - preservation
 - . **huge amount of waste**
 - . recycle to new products
 - . **Precious Plastic inspired**
- part of Fab@Boat to outreach



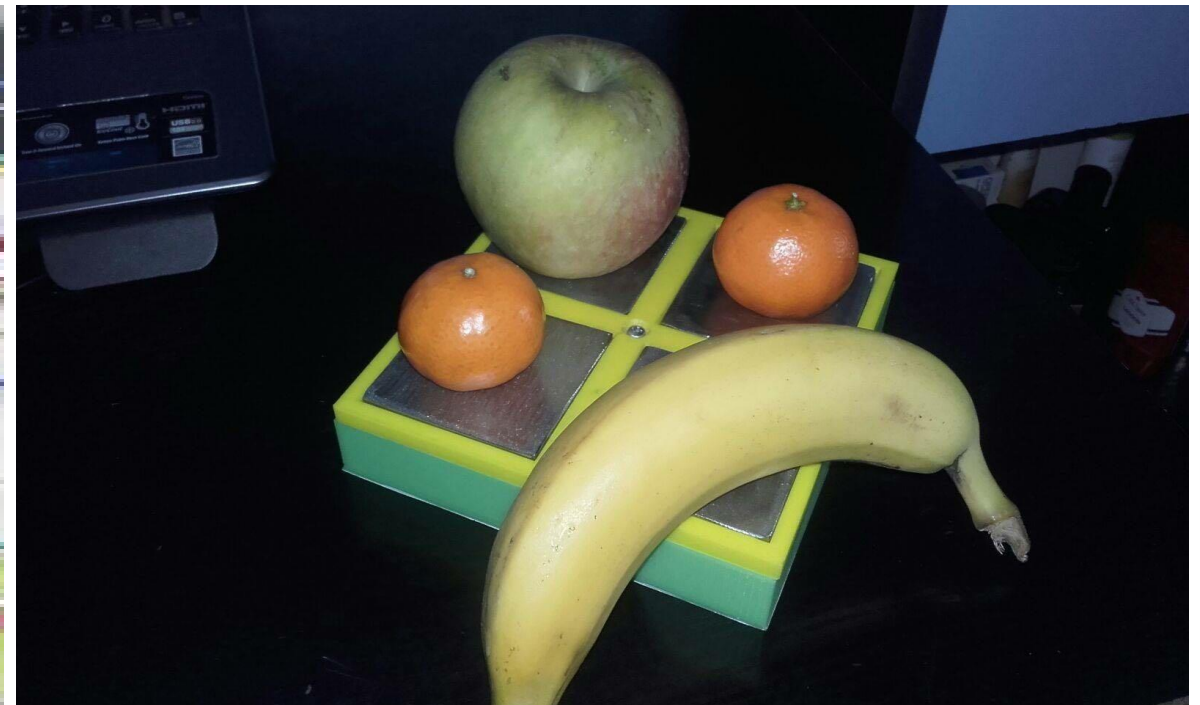


Gabrijela J.
Flying vehicle
2015-2016
Supervisor
Ana Elizabet



NGO for autism
2016-2017
Supervisor
Kristina Škaler

Capative sensing



Stjepan Kulfa: Kulfa GoGlobal / 2016> | Supervisor: Roberto Vdovic

Stjepan Kulfa

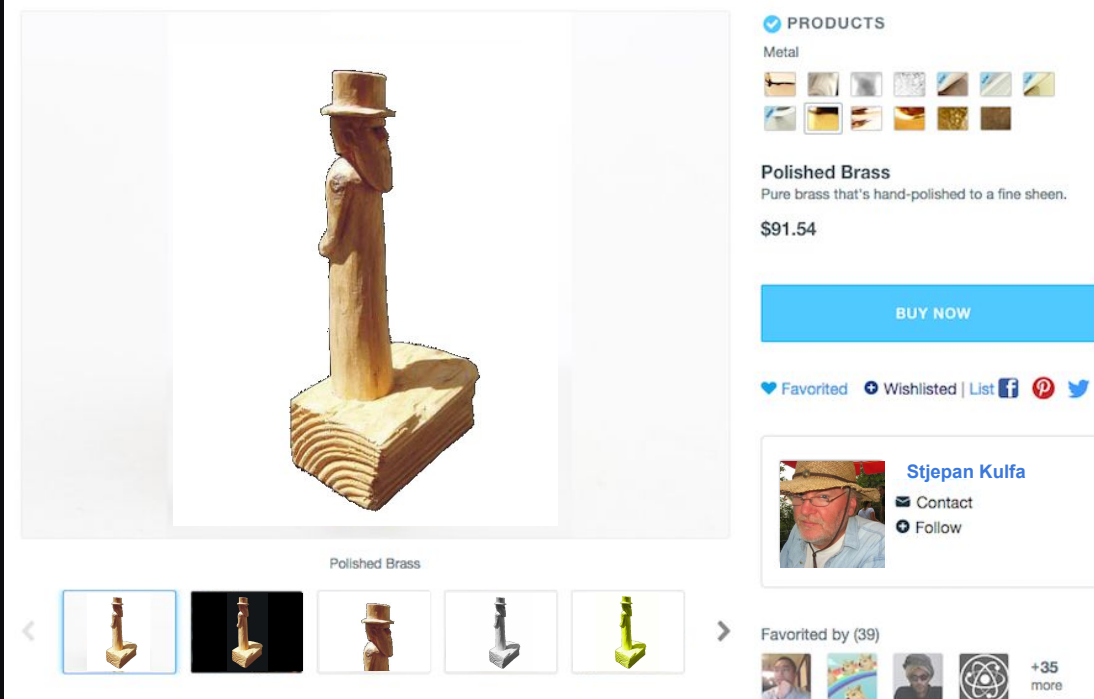


Handmade wodcraft



Shapeways shop to be

Kulfa Collection: Grandpa

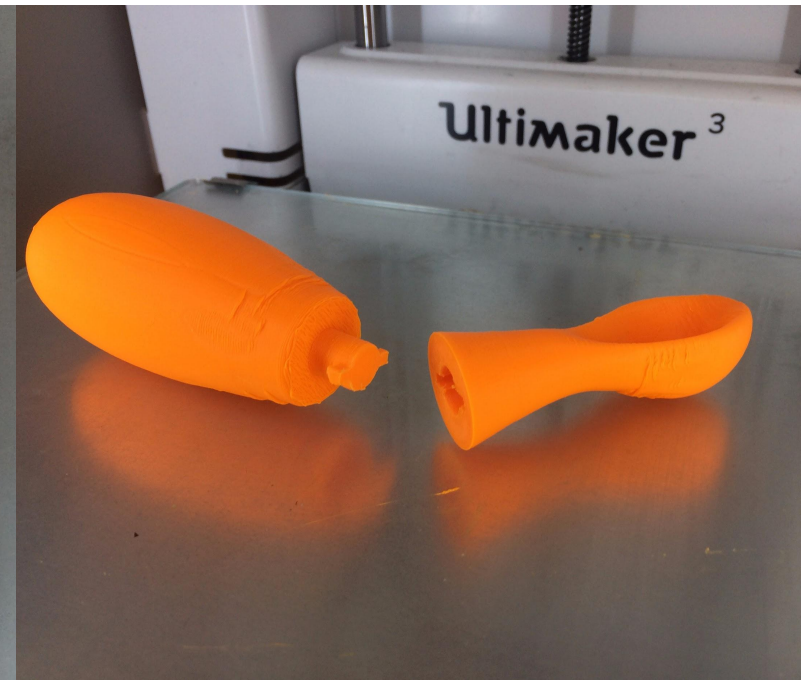
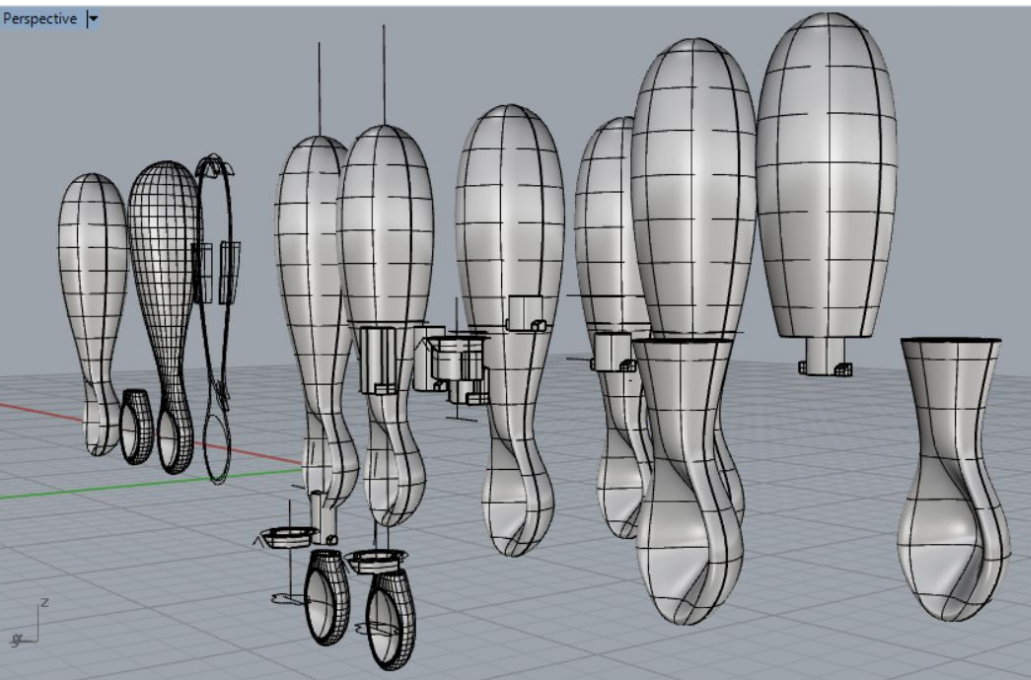


FabLab: Special cutlery / 2014> | Supervisor: Morana Pap



Emma
Exoskeleton development

Motoric issues
Modular design
Customized individually with
movement capture (PeThe)



KiDnect Team: PeThe / 2011> | Supervisor: Jerislav Bobić

PeTHE
Personal Therapist System

KiDnect tim



Karmela Brešan,
Dominik Tomičević,
Ivan Borko, Ivan
Antonić

Microsoft Kinect Based

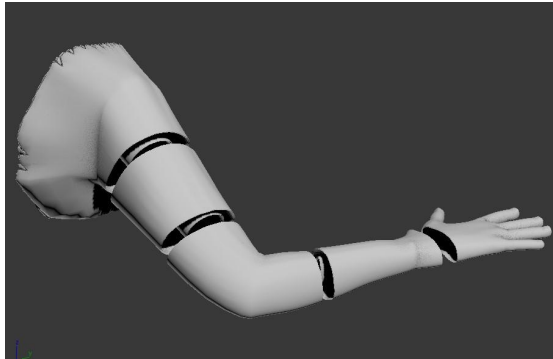


Imagine Cup
Croatian finals 1st place - 2011,
Top 18 finalists - Imagine Cup 2011,
Worldwide finals, New York
Imagine Cup Grants Winner 2012



<http://www.pethe.eu>

Kristijan Mamić: Need-a-hand / 2015> | Supervisor: Morana Pap



3D SCAN



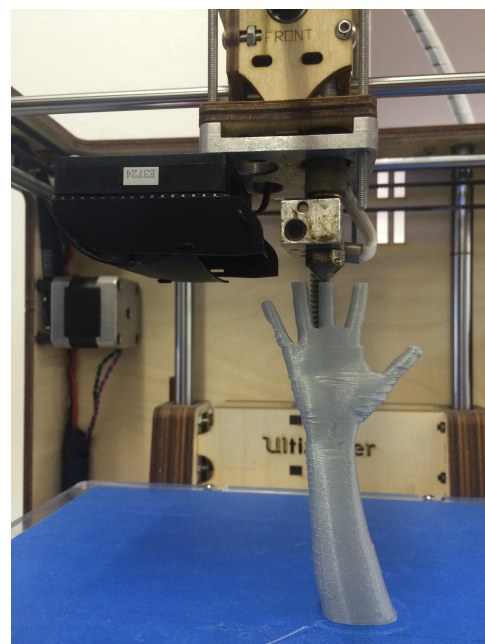
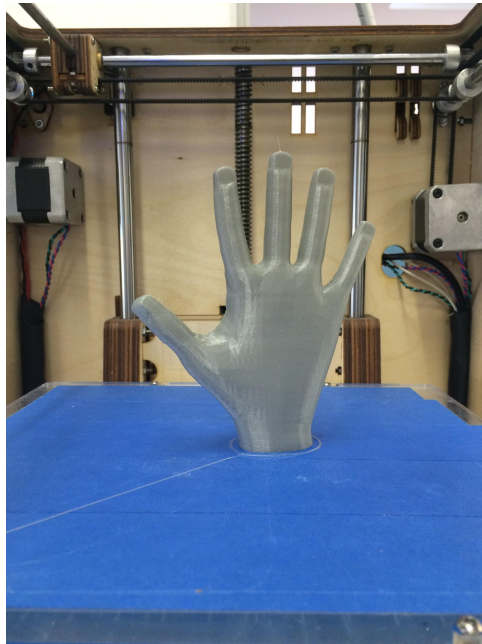
CAD

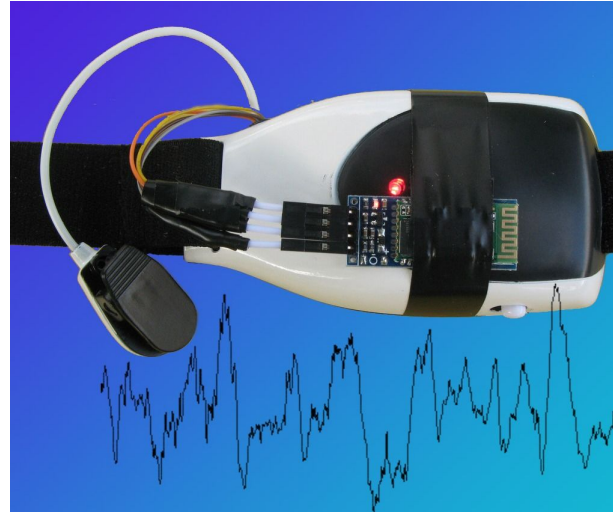


3D PRINT

3D scanning
3D modeling
3D printing
mechatronics
biosensors

enablingthefuture.org

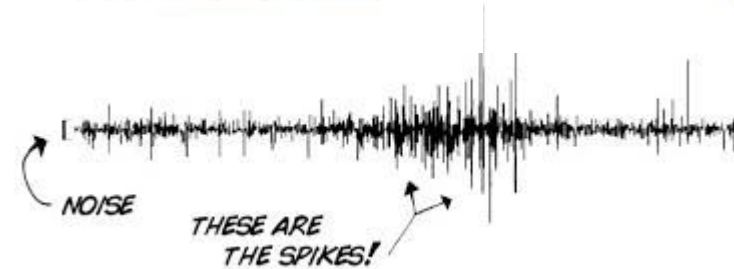
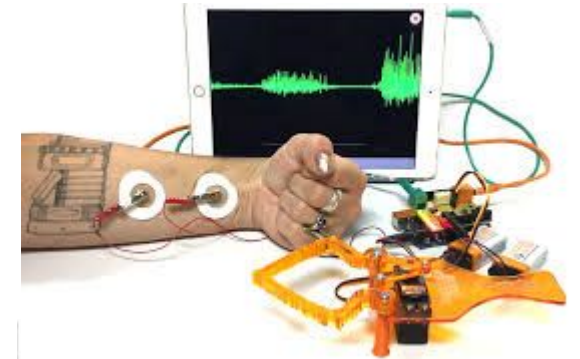




BITalino sensors



FabLab: Biosensing / 2016> | Supervisor: Morana Pap



FabLab: AR&VR developemnt / 2016> | Supervisor: Morana Pap

Augmented reality (AR)
Virtual reality (VR)

**UI development for
persons with disability**
R&D in architecture

3D scanning onfly

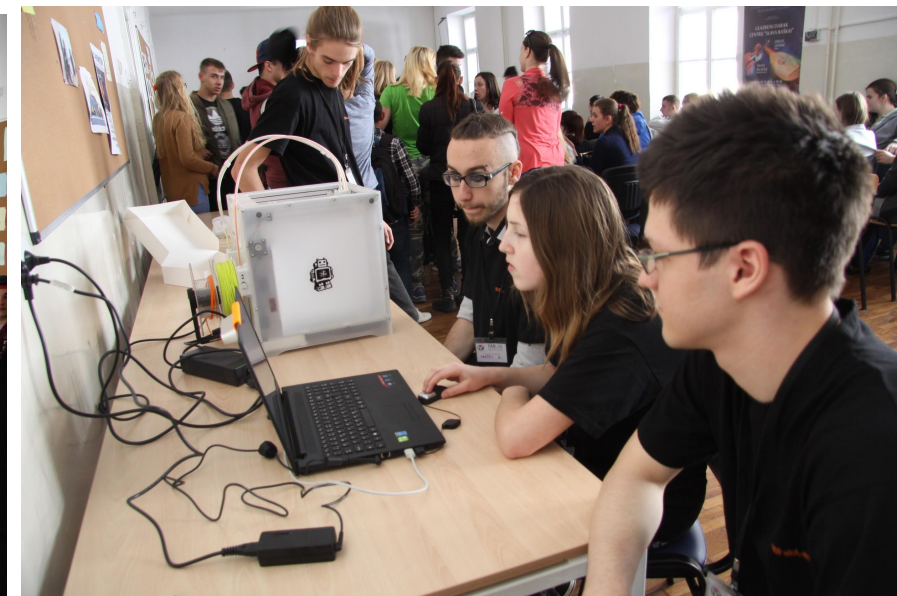
Bridget AR



Oculus Rift VR

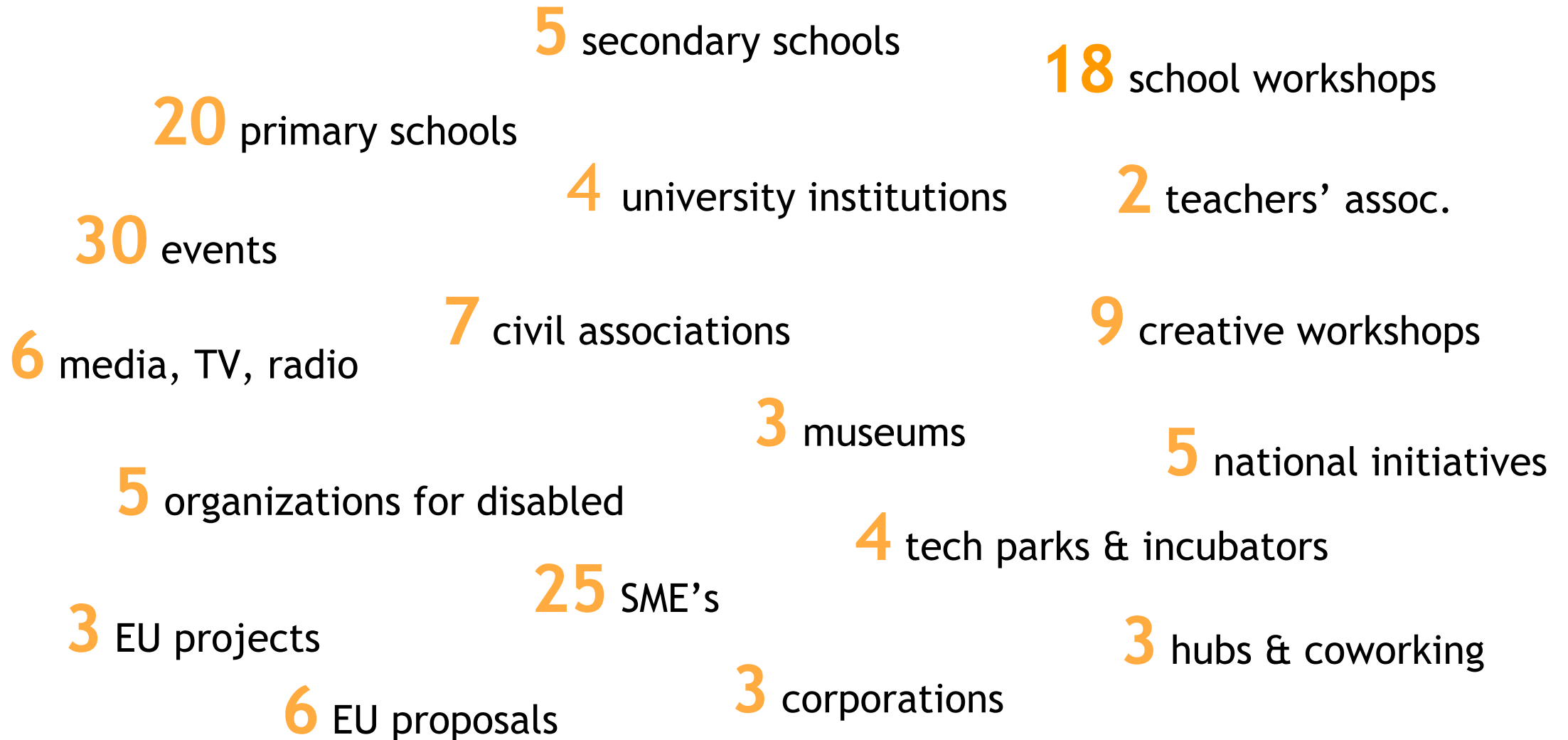


FabLab: DOIT project / 2017> | Supervisor: Roberto Vdovic

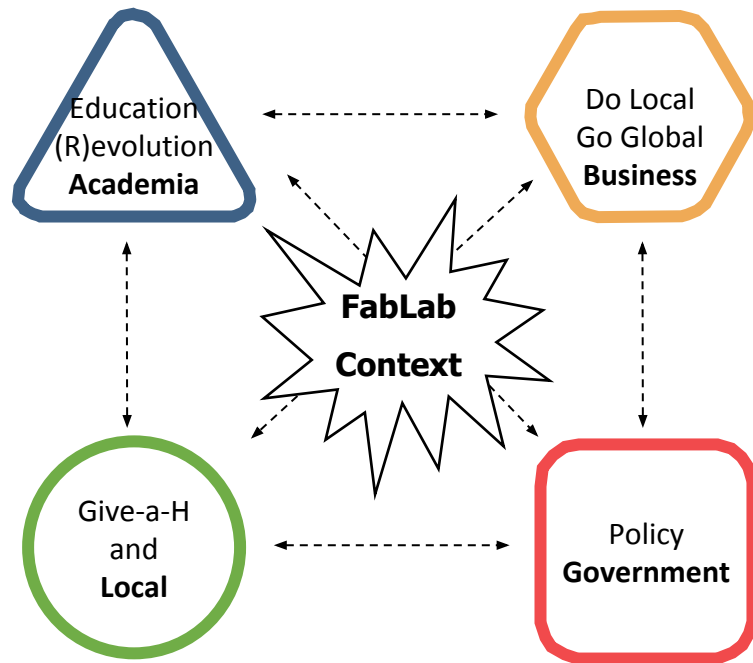


Entrepreneurial skills for young
social innovators in an open
digital world
A European Initiative!

Slava Raškaj Educational Centre Zagreb is a part of the Ministry of Demographics, Family, Youth and Social Policy. We provide services to **persons with impaired hearing, with normal hearing but with impairments concerning the voice-speech-language communication, with communication difficulties from the spectrum of autism and pervasive developmental disorder as well as to children and young people with multiple disorders.** We provide service to clients from their birth up until the age of 30.



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