*Ovaj je projekt financiran iz programa istraživanja i inovacija Europske unije Horizon 2020 u okviru Ugovora o dodjeli bespovratnih sredstava broj 857592-TODO*

Dani infrastruktura prostornih podataka 2022 | Zadar, 19.-20. listopada 2022.

# Projekt *Twinning Open Data Operational*: Uspostava akademskog ekosustava otvorenih podataka na Sveučilištu u Zagrebu

**Ana Kuveždić Divjak**
Sveučilište u Zagrebu, Geodetski fakultet

Twinning Open Data Operational

Project Information

HORIZON 2020

**TODO**

Grant agreement ID: 857592

**DOI**

10.3030/857592

**Start date**
1 October 2019

**End date**
31 March 2023

**Funded under**

Twinning of research institutions

**Total cost**
€ 799 988,75

**EU contribution**
€ 799 988,75

**Coordinated by**

SVEUCILISTE U ZAGREBU - GEODETSKI FAKULTET

Croatia

Voditeljica i koordinatorica

# Ana Kuveždić Divjak

Sveučilište u Zagrebu, Geodetski fakultet

Twinning
Open Data
Operational

Project Information

HORIZON 2020

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**Coordinated by**
SVEUCILISTE U ZAGREBU - GEODETSKI FAKULTET
Croatia

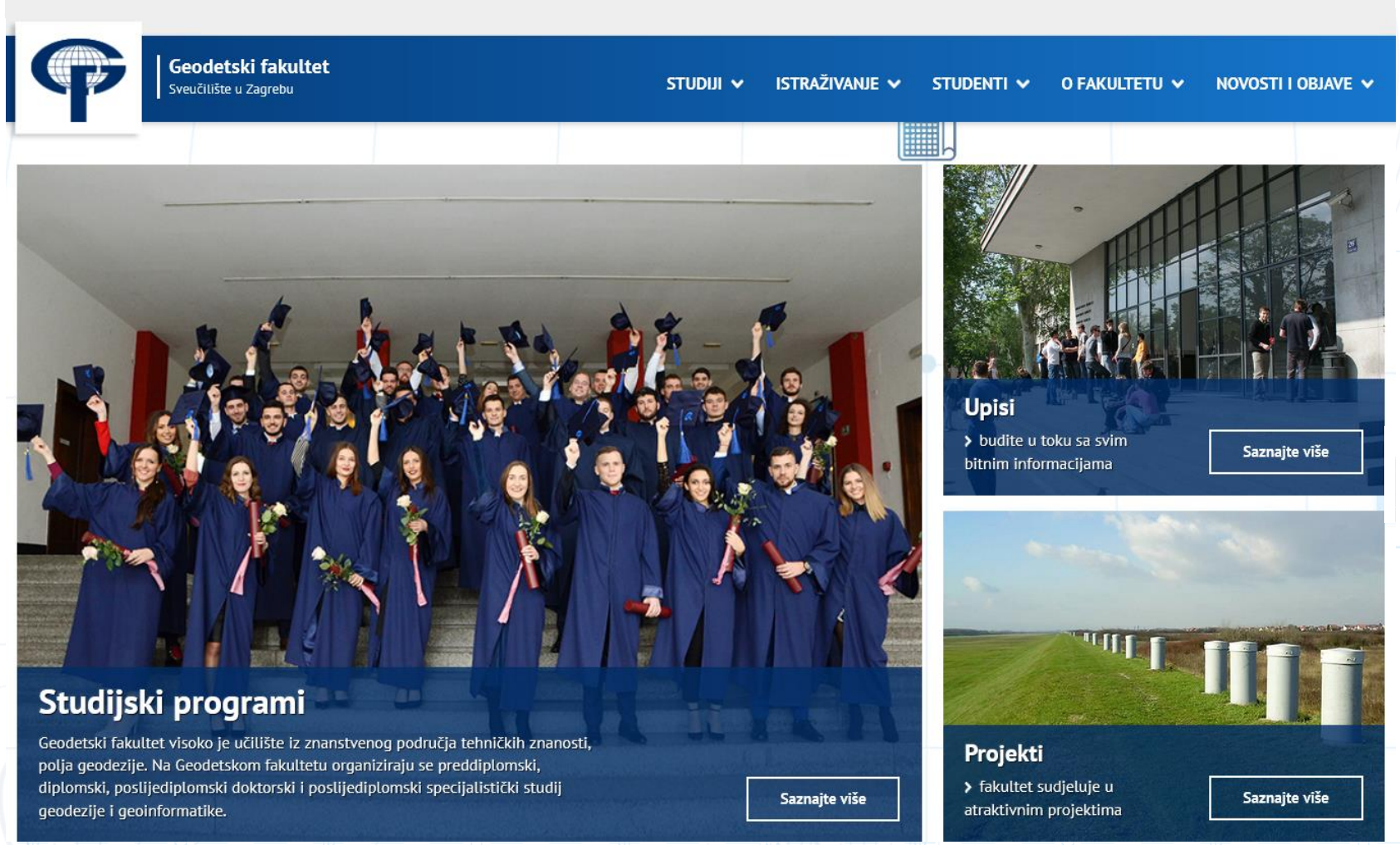
# Cilj projekta

unaprjeđenje interdisciplinarne znanstveno-istraživačke aktivnosti i inovacijskog kapaciteta sastavnica Sveučilišta u Zagrebu u području otvorenih podataka

Voditeljica i koordinatorica
**Ana Kuveždić Divjak**
Sveučilište u Zagrebu, Geodetski fakultet

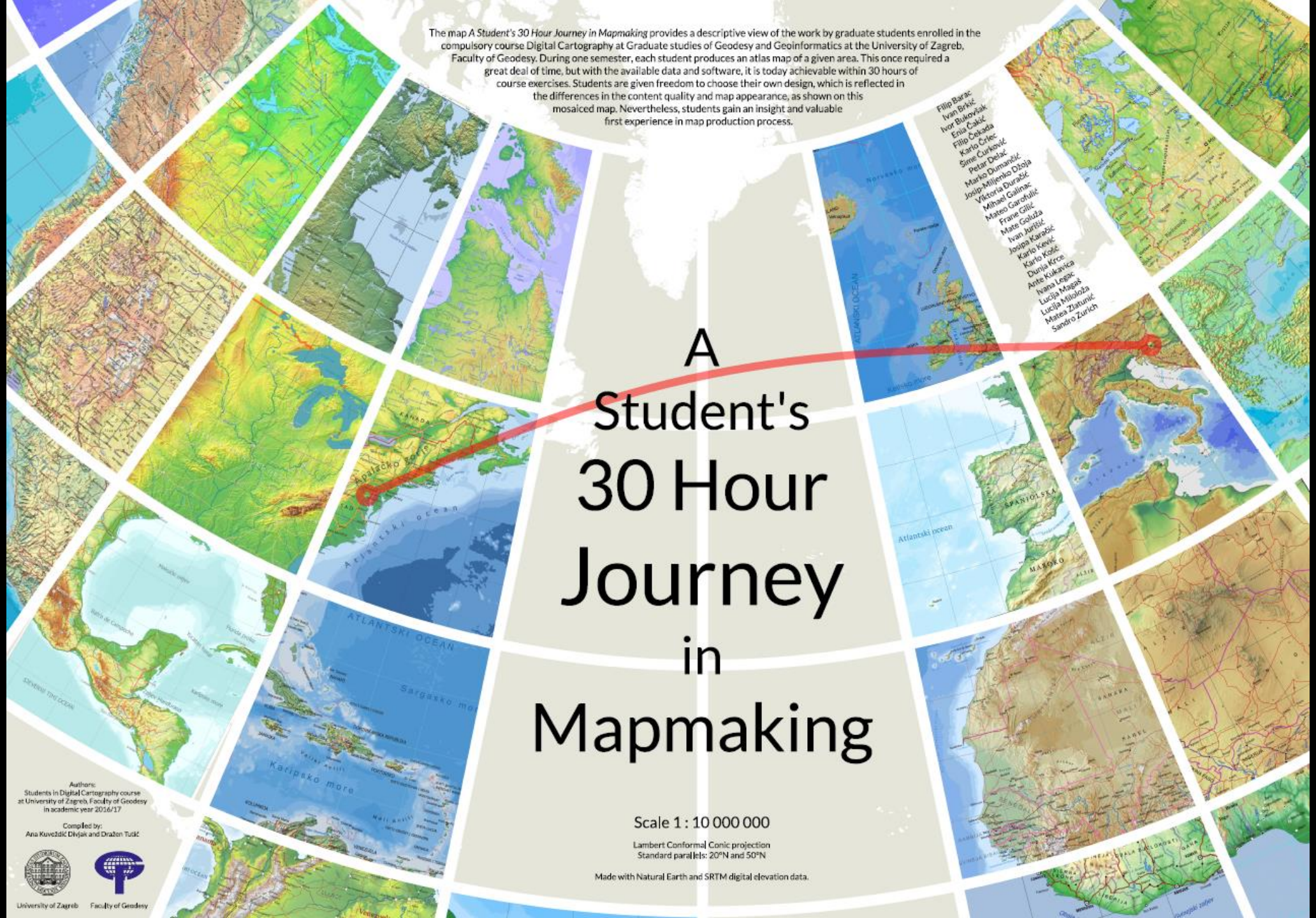
Točno
i točka

geof.unizg.hr




doc. dr. sc. **Ana Kuveždić Divjak**
Sveučilište u Zagrebu, Geodetski fakultet

φ = 45°48'31,1''
λ = 15°57'49,9''
H = 116 m


The map *A Student's 30 Hour Journey in Mapmaking* provides a descriptive view of the work by graduate students enrolled in the compulsory course Digital Cartography at Graduate studies of Geodesy and Geoinformatics at the University of Zagreb, Faculty of Geodesy. During one semester, each student produces an atlas map of a given area. This once required a great deal of time, but with the available data and software, it is today achievable within 30 hours of course exercises. Students are given freedom to choose their own design, which is reflected in the differences in the content quality and map appearance, as shown on this mosaiced map. Nevertheless, students gain an insight and valuable first experience in map production process.
Filip Barac
Ivan Brkić
Ivor Bukovšak
Enia Čakić
Filip Čekada
Karlo Crlec
Šime Ćurković
Petar Delać
Marko Dumančić
Josip-Miljenko Džoja
Viktorija Đuračić
Mihael Galinac
Mateo Garofulić
Frane Gilić
Mate Goluža
Ivan Juršić
Josipa Karabić
Karlo Kević
Karlo Kolić
Dunja Krce
Ante Kukavica
Ivana Legac
Lucija Magaš
Lucija Miloloža
Matea Zlatunić
Sandro Zurich
A
Student's
30 Hour
Journey
in
Mapmaking
Scale 1 : 10 000 000
Lambert Conformal Conic projection
Standard parallels: 20°N and 50°N
Made with Natural Earth and SRTM digital elevation data.
Authors:
Students in Digital Cartography course
at University of Zagreb, Faculty of Geodesy
in academic year 2016/17
Compiled by:
Ana Kuveždić Divjak and Dražen Tutić
University of Zagreb
Faculty of Geodesy
ATLANTSKI OCEAN
Sargasko more
Karipsko more
Atlantski ocean
SPANJOLSKA
MAROKO
ALŽIR
SAHARA
MALI
NIGER
NIGERIJA
LIBERIJA
Apalačko gorje
KANADA

novi sadržaji i usluge u kartografiji i GIS-u

# učenje i poučavanje

# otvoreni podaci

novi sadržaji i usluge u kartografiji i GIS-u

# učenje i poučavanje

# otvoreni podaci

otvaranje podataka i pružanje pristupa geoprostornim podacima

# Od fragmentiranih istraživačkih skupina…

(Listopad 2019.; prije TODO-a)

SVEUčILIŠTE U ZAGREBU:

Geodetski fakultet

Fakultet elektrotehnike i računarstva

Fakultet organizacije i informatike

Pravni fakultet

Fakultet prometnih znanosti

Agronimski fakultet

VANJSKI KLJUČNI DIONICI

University of the Aegean Greece

Delft University of Technology Netherlands

Twinning Open Data Operational

https://todo-project.eu

# … prema koherentnom istraživačkom okruženju

(Ožujak 2023; nakon TODO-a)

Twinning Open Data Operational

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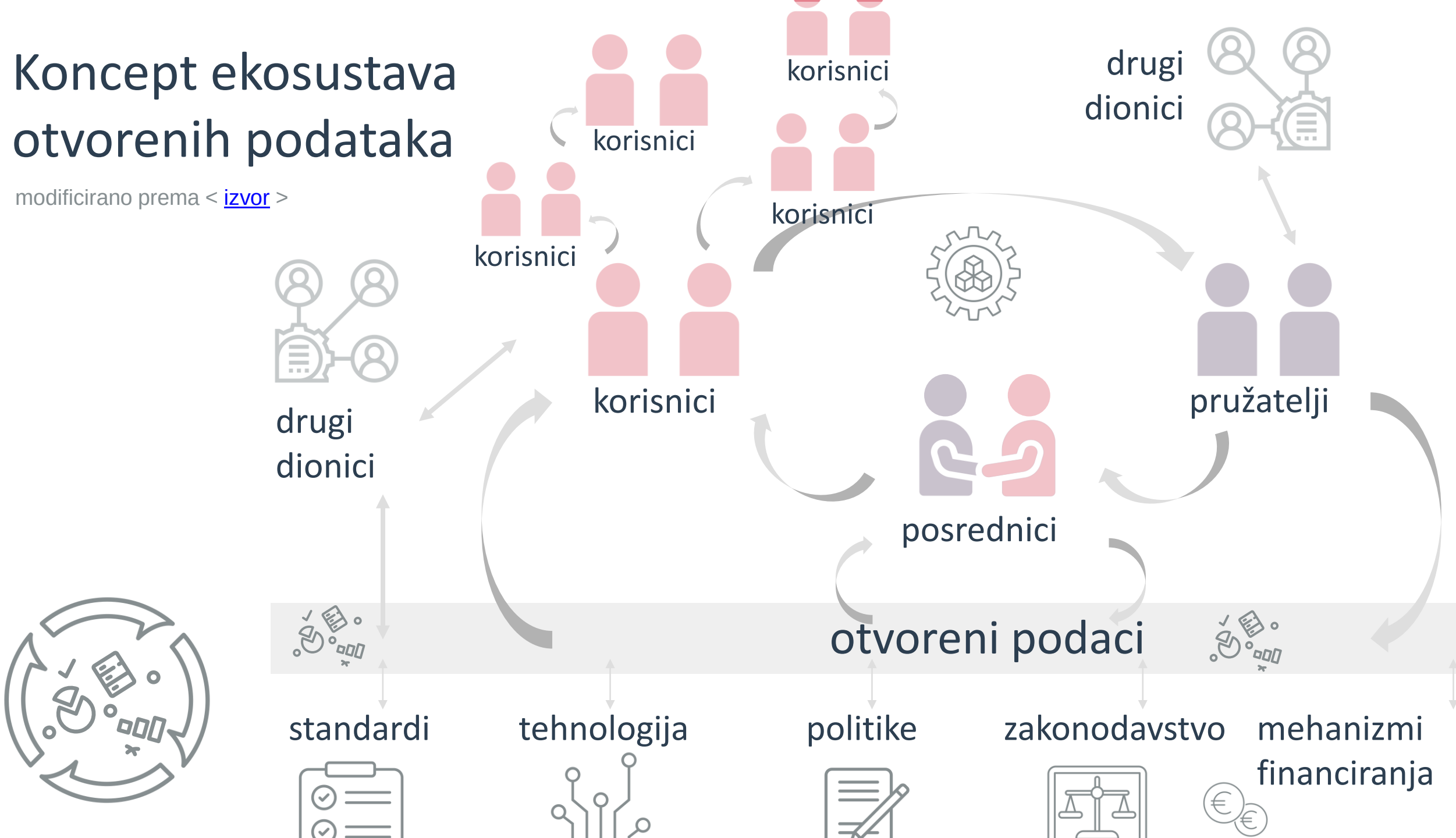
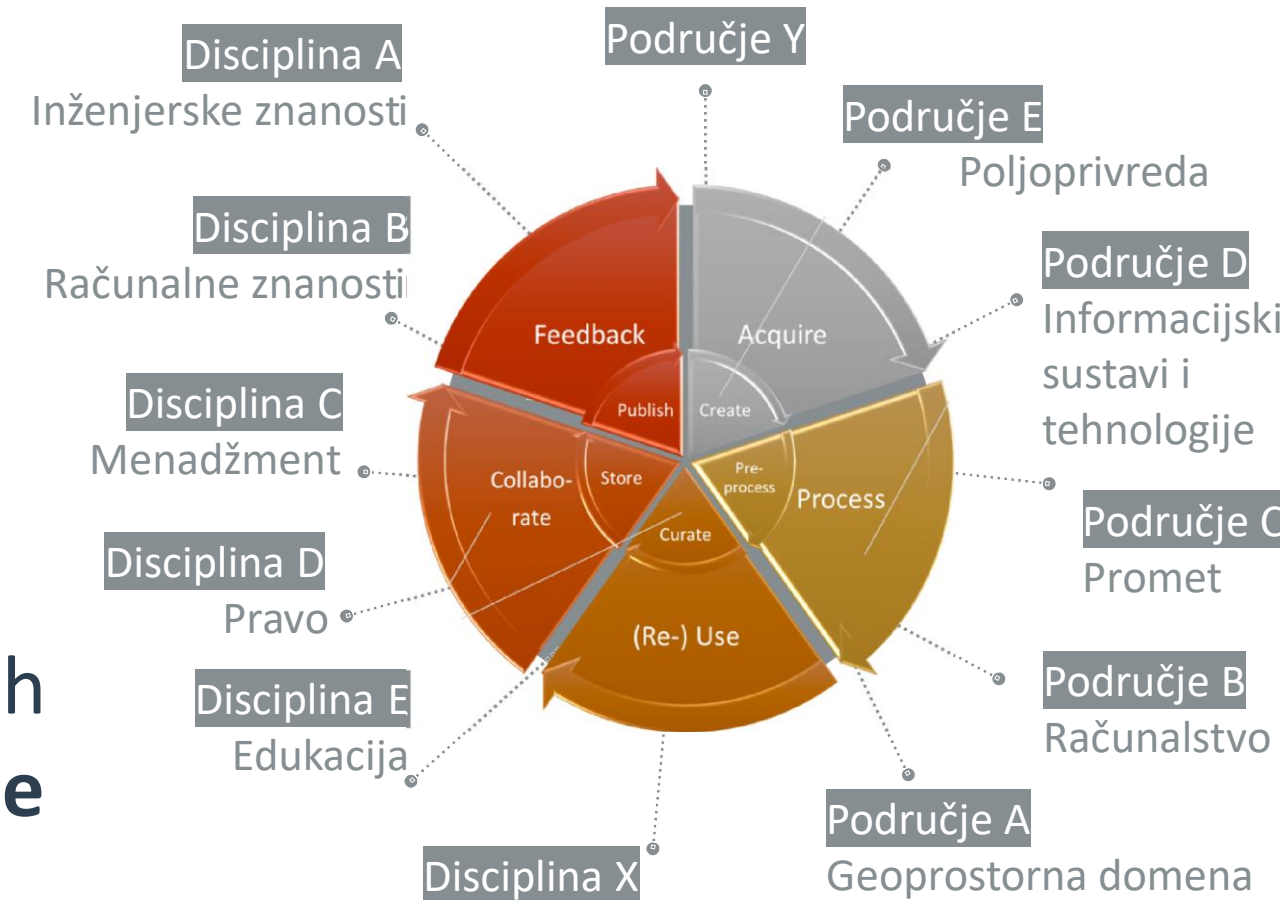
# Koncept ekosustava otvorenih podataka

modificirano prema < izvor >



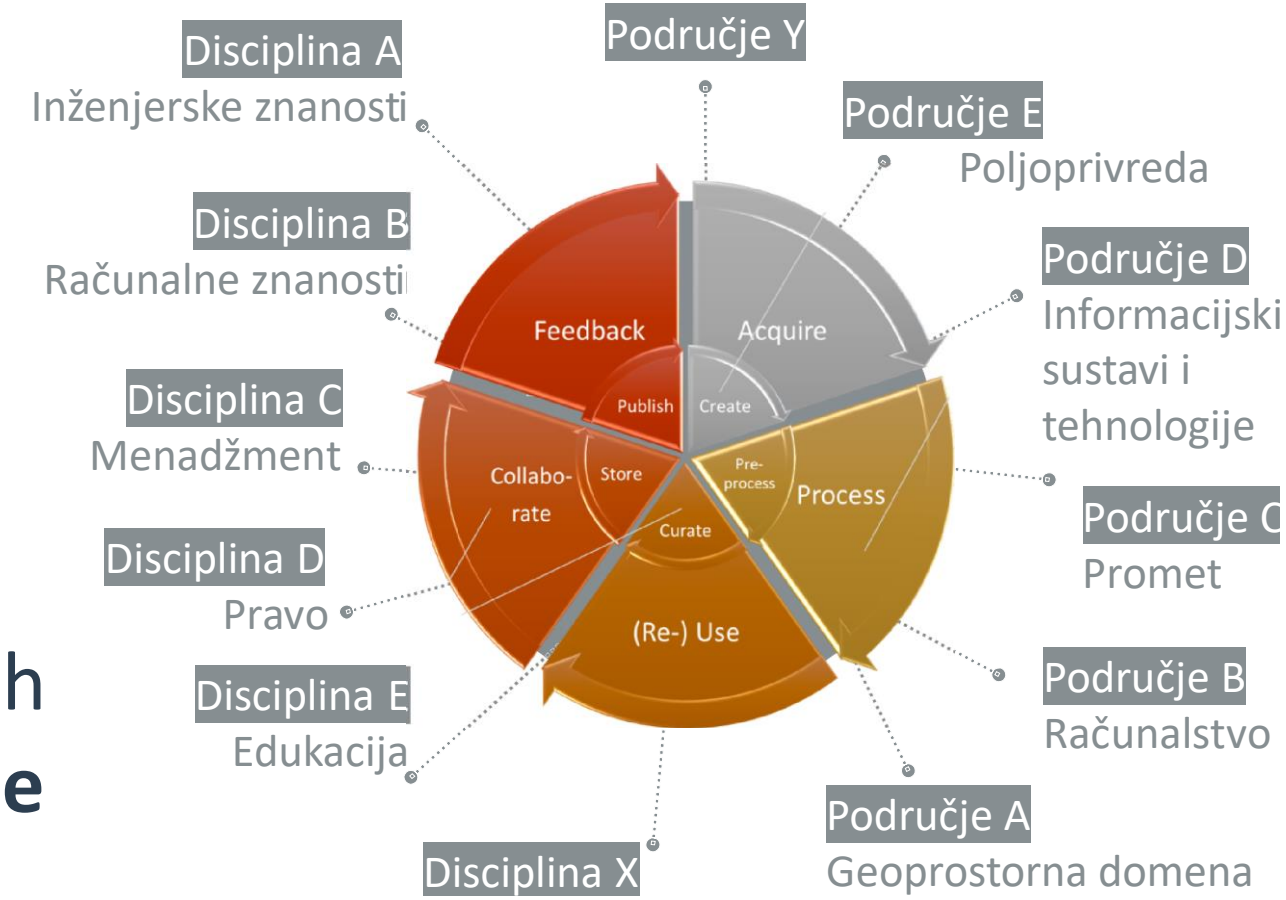
# Metodologija

**interdisciplinarni** pristup istraživanju otvorenih podataka koji istraživačke izazove promatra kroz **različite faze ciklusa** otvorenih podataka u **više područja primjene**



# Metodologija

**interdisciplinarni** pristup istraživanju otvorenih podataka koji istraživačke izazove promatra kroz **različite faze ciklusa** otvorenih podataka u **više područja primjene**




## Akademska zajednica

uloga pružatelja i korisnika otvorenih podataka | uloga aktivnog sudjelovanja u istraživanju ekosustava i provedbi nacionalne agende otvorenih podataka

# Aktivnosti projekta

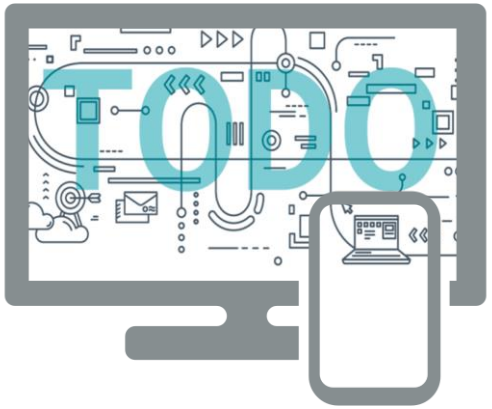
većinom su usmjerene na podučavanje i osposobljavanje, razmjenu znanja, suradnju i dugoročnu održivost

uspostava održivog akademskog ekosustava otvorenih podataka na Sveučilištu u Zagrebu

# Rezultati projekta

1 Uspostavljeno novo okruženje za istraživačke aktivnosti

- formalizirane istraživačke skupine (Open Data Labs) na razini 6 partnerskih fakulteta SuZG
- virtualno okruženje koje podupire dijeljenje informacija i znanja (materijali za učenje i podučavanje, webinari, MOOC, diseminacijski materijali, istraživački podaci)



# Rezultati projekta

## 2 Izgradnja kapaciteta u području otvorenih podataka

- svi sudionici projekta dijele zajedničku bazu znanja o ekosustavu otvorenih podataka i životnom ciklusu otvorenih podataka

# Rezultati projekta

## 2 Izgradnja kapaciteta u području otvorenih podataka

- Online Training Program (200 istraživača SuZG-a)
- Ljetna škola (40 TODO istraživača)
  (početni okvir za interdisciplinarna istraživanja)

# Rezultati projekta

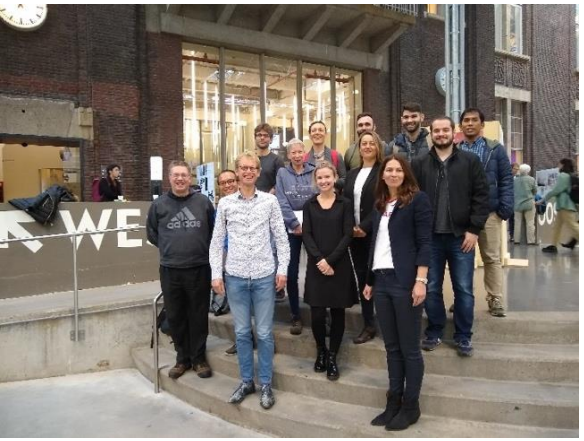
## 2 Izgradnja kapaciteta u području otvorenih podataka

- **Studijski posjeti**
  Open Data Developments, Opportunities and Challenges in Europe: lessons learned from Open Data best practices in 2022.
  > razumijevanje stvarne implementacije politika, tehnologija i inicijativa otvorenih podataka u različitim domenama;
  uvid u izazove s kojima se suočavaju

# Rezultati projekta

3 Suradnja i dijeljenje znanja: primjena interdisciplinarnog multi-domenskog istraživačkog pristupa

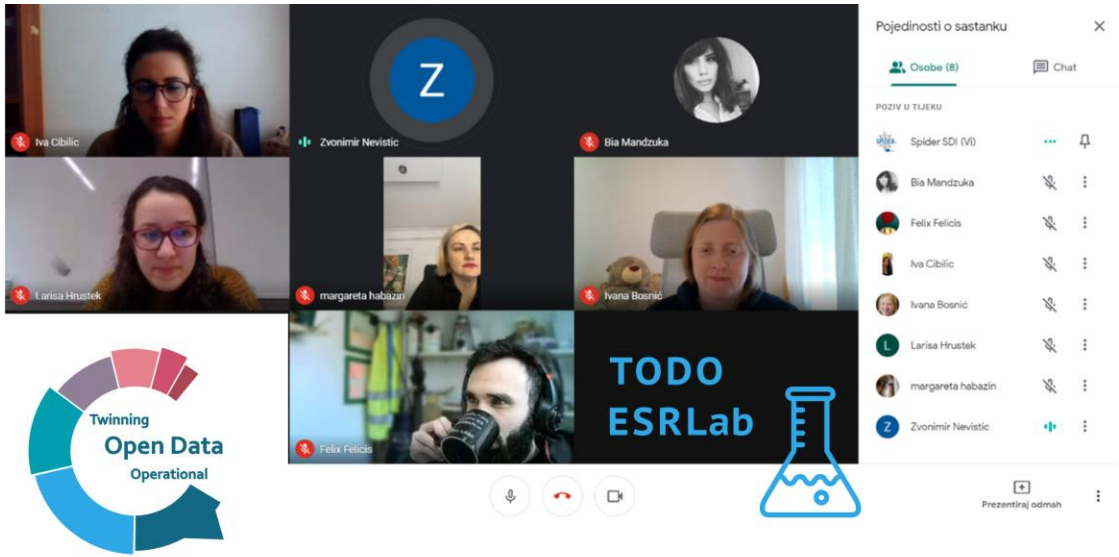
- istraživački seminari
- razmjene osoblja



# Rezultati projekta

## 3 Suradnja i dijeljenje znanja: primjena interdisciplinarnog multi-domenskog istraživačkog pristupa

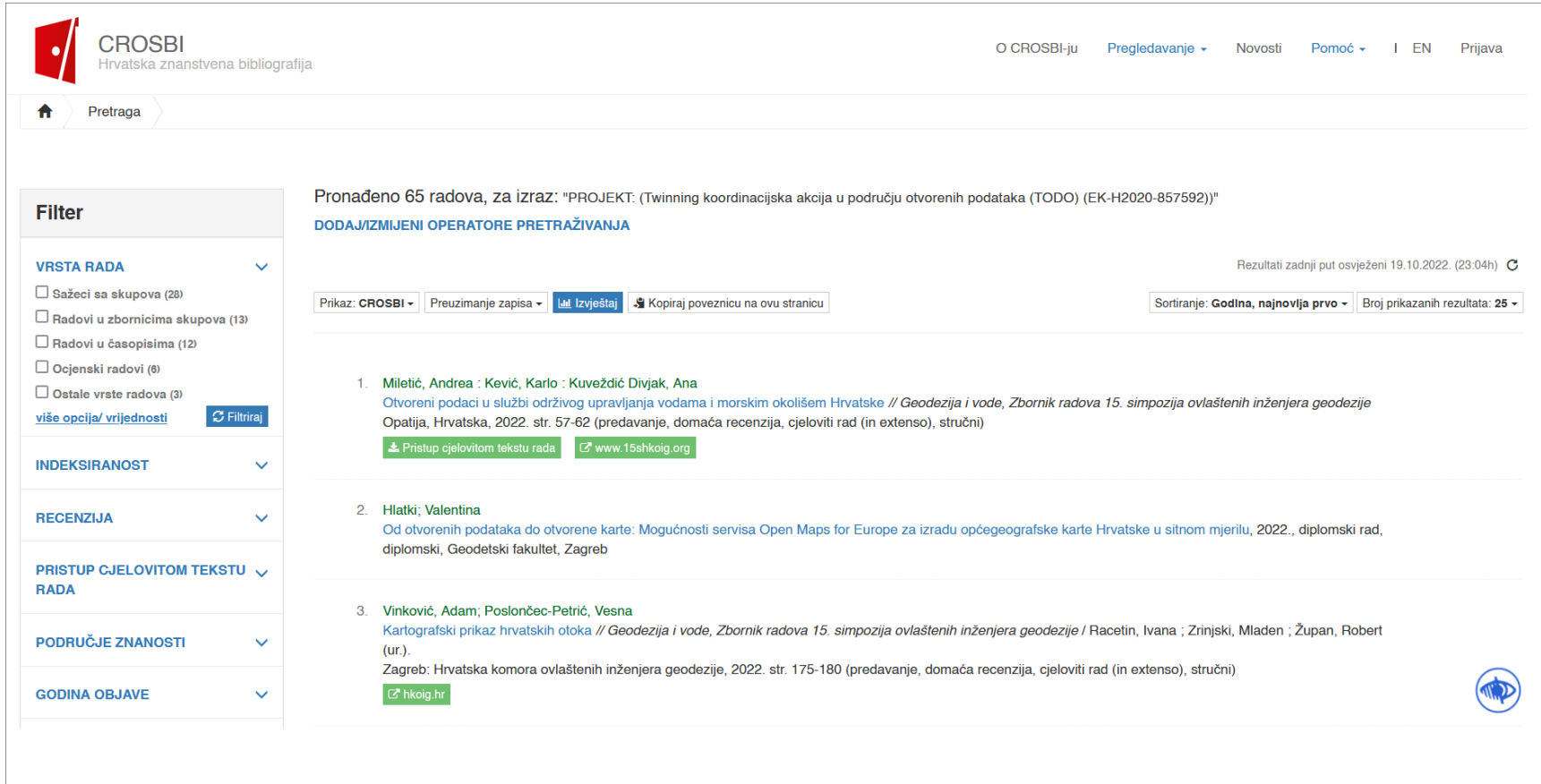
- doktorandi i diplomanti -> zajedničko mentorstvo
- 15 istraživača u ranoj fazi (TODO doktorandi)
- 17 konferencijskih radova, 6 publikacija u časopisima
- 3 doktorske disertacije
- TODO ESR Lab



# Rezultati projekta

## 3 Suradnja i dijeljenje znanja: primjena interdisciplinarnog multi-domenskog istraživačkog pristupa

- znanstvene publikacije



# Rezultati projekta

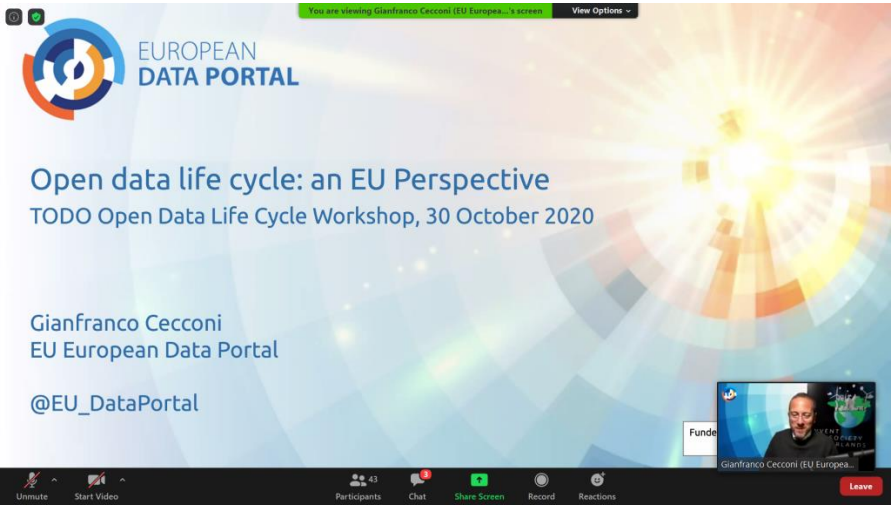
## 4 Održivi akademski ekosustav otvorenih podataka na SuZG

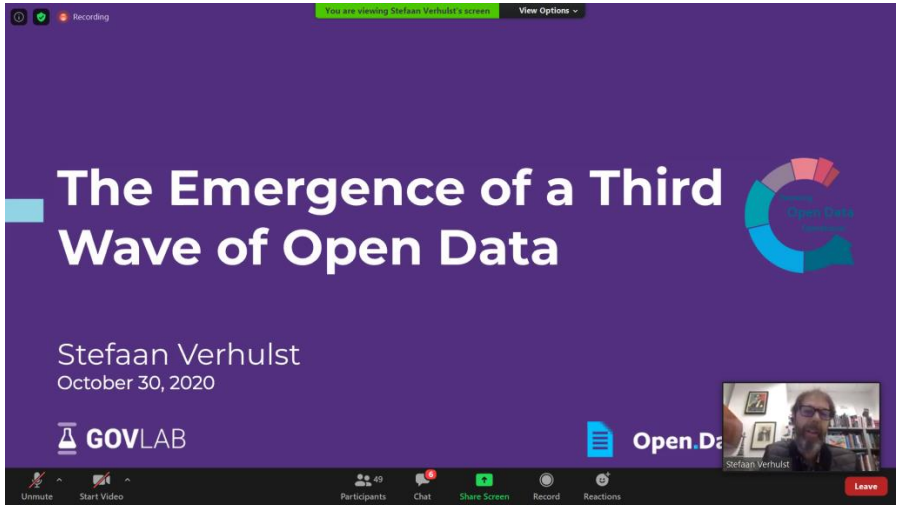
- Memorandum o razumijevanju (MoU)
- centar izvrsnosti za otvorene podatke na razini SuZ
- izrada zajedničkih projektnih prijedloga
- revizija studijskih programa i kolegija, edukacijske smjernice
- Joint Research Agenda

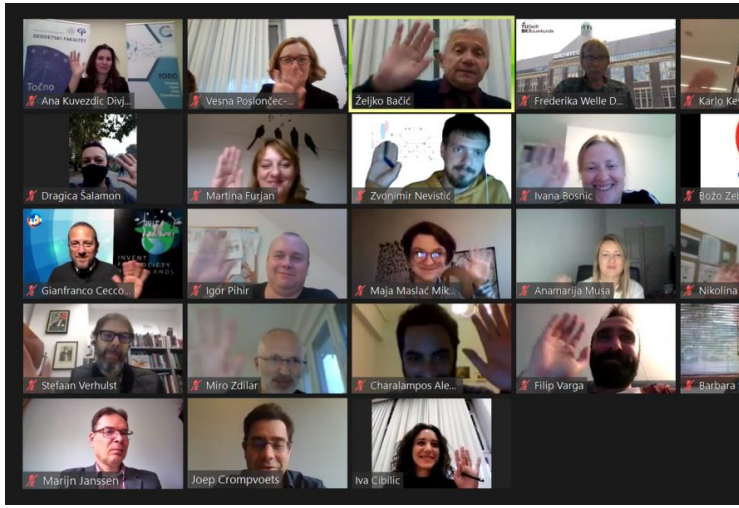
# Rezultati projekta

## 5 Doseg i diseminacija znanja

- Open Data Life Cycle Workshop
  (88 sudionika iz više od 10 zemalja)



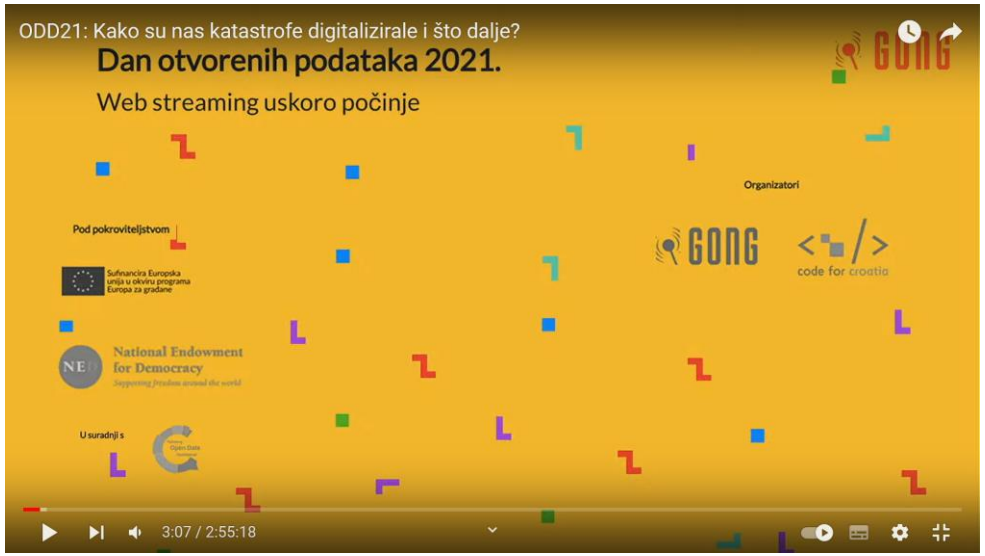



# Rezultati projekta

## 5 Doseg i diseminacija znanja

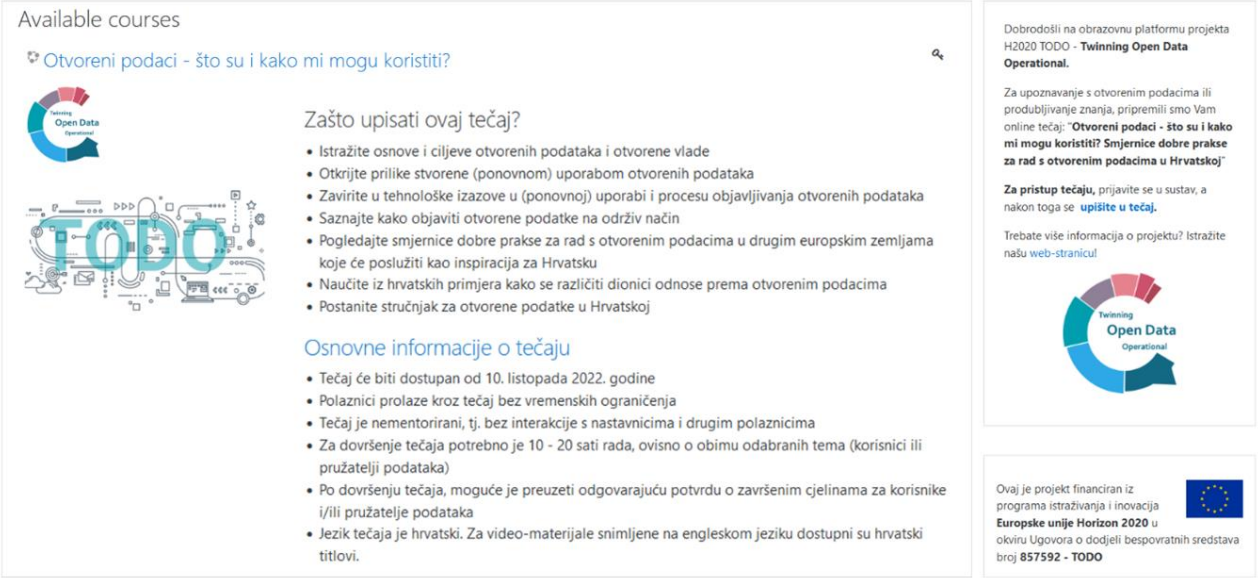
- Sudjelovanje na Danima otvorenih podataka 2020, 2021

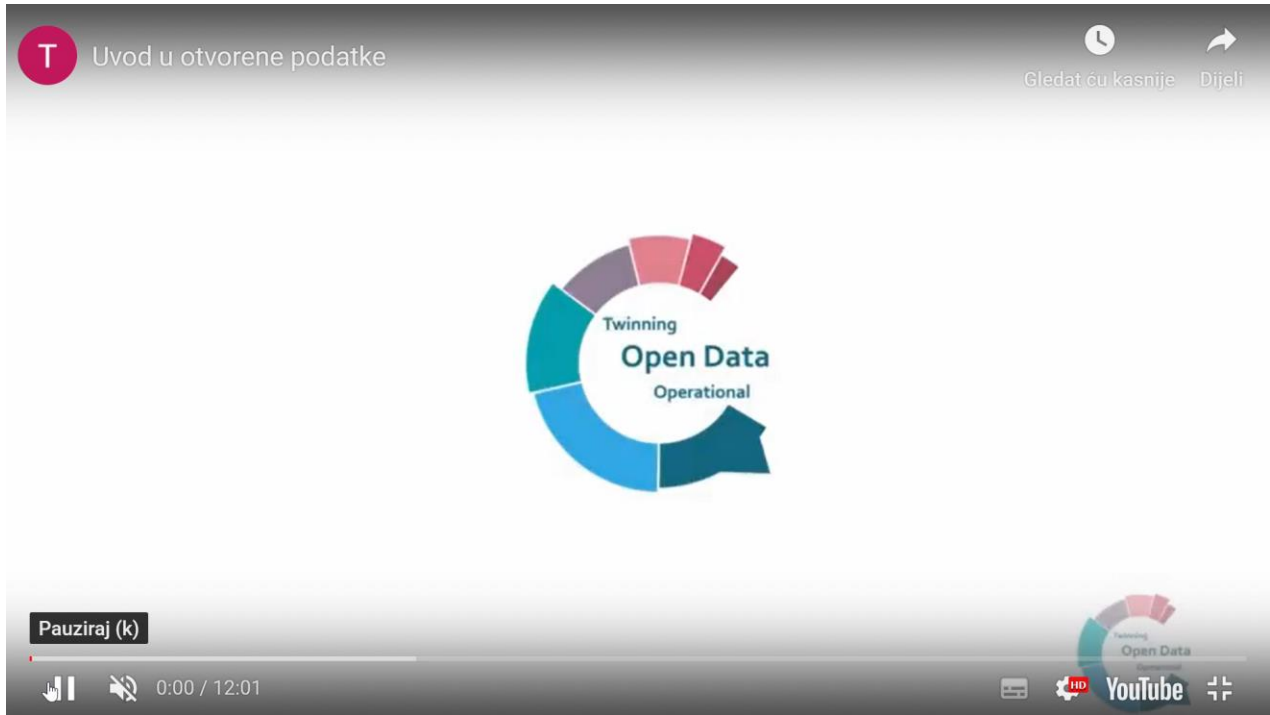


# Rezultati projekta

## 5 Doseg i diseminacija znanja

- otvoreni e-tečaj o otvorenim podacima



https://todo-project.eu

Project "TODO – Twinning Open Data Operational", approved by Horizon2020 programme – Twinning, started with its activities in October 2019 and will be completed by March 2023.

TODO project aims to leverage the interdisciplinary scientific excellence and innovation capacity of the University of Zagreb (UNIZG) in the field of open data to boost the supply and use of open government data in Croatia and beyond. Project partners are six faculties of the University of Zagreb - Faculty of Geodesy, Faculty of Electrical Engineering and Computing, Faculty of Organization and Informatics, Faculty of Law, Faculty of Transport and Traffic Sciences and Faculty of Agriculture – and Delft University of Technology (the Netherlands) and University of the Aegean (Greece). Coordinator of the project is Faculty of Geodesy, University of Zagreb led by Ana Kuveždić Divjak, PhD.

Within the project, around 40 scientists from partner universities collaborate within different activities and initiatives in the area of open data research. Numerous activities have been undertaken so far, including the organization of national open data conference, study visits, open data summer school, PhD trainings, starting MOOC on open data, etc.

More information about the TODO project is available at the official website of the project http://todo-project.eu/

and social media profiles:

- LinkedIn https://www.linkedin.com/in/todo-euproject/
- Twitter https://twitter.com/TodoProject @TodoProject
- Facebook https://www.facebook.com/TwinningOpenDataOperational/
- Researchgate https://www.researchgate.net/profile/Todo_Project
- Academia.edu https://unizg.academia.edu/TwinningOpenDataOperational

https://todo-project.eu

Panel

***Open Data Advances and Challenges in Geospatial Society***

Lecture and a hands-on workshop

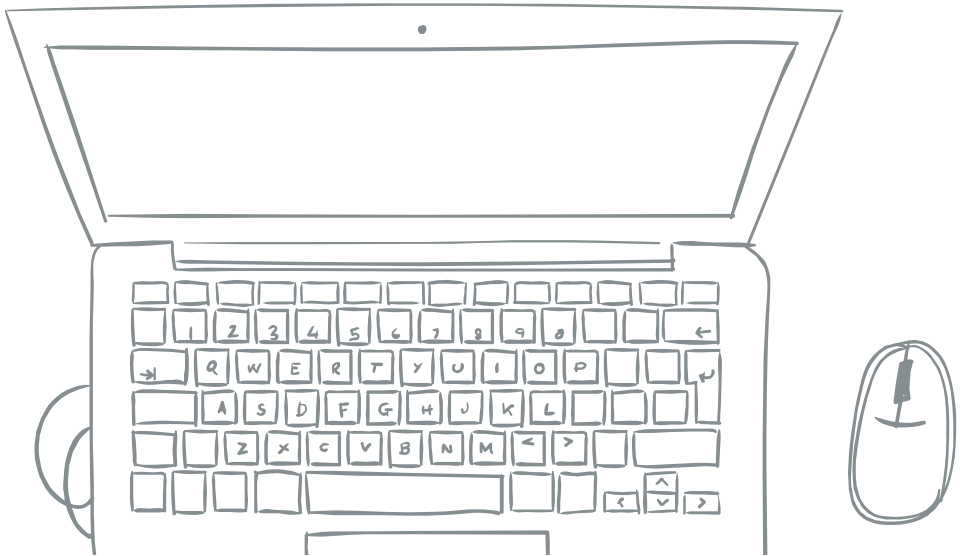
***Open Data Mapping:***

***Increasing the Impact of Open Data through Visualisation and Communication***

*This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement Number 857592 - TODO*

https://todo-project.eu

# Hvala! [Thank You!]



**Ana Kuveždić Divjak**

akuvezdic@geof.hr