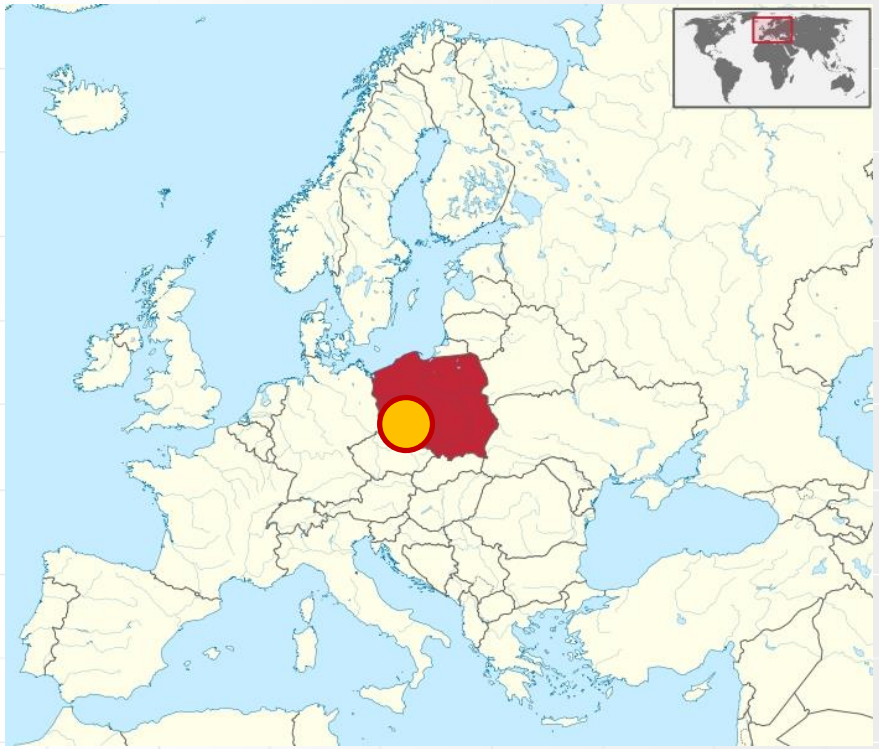
Wrocław University of Science and Technology

Campus Web Mapping and Analysis of Campus Area Quality. Participatory GIS in Poland



Jan Blachowski

Faculty of Geoengineering, Mining and Geology,
Geodesy and Geoinformatics Division,
Wroclaw, Poland

July 11, 2018

ESRI USER CONFERENCE

HR EXCELLENCE IN RESEARCH

Wroclaw University of Science and Technology

PLAN OF PRESENTATION

- *GIS AT WUST*
- *GIS STUDENT CLUB*
- *CAMPUS WEB MAP #GeoportalWUST*
- *CAMPUS MAPPING #MapWUST*
- *CAMPUS TACTILE MAP*
- *CAMPUS PERCEPTION STUDY #WhatILikeatWUST*
- *INTERNATIONAL COOPERATION MAP*
- *OTHER STUDENT PROJECTS*
- *CONCLUSIONS*

WROCLAW UNIVERSITY OF SCIENCE AND TECHNOLOGY

SOURCE https://dolny-slask.org.pl/4734386,foto.html

FACTS & FIGURES

- 28 815 students,
- 854 doctoral students,
- 2 165 research and teaching staff,
- 16 faculties,
- 175 buildings,
- 154 student science groups,
- 19 student organizations,
- 14 student culture agencies,
- 51 fields of education,
- over 130 specialisations

GIS EDUCATION AT WUST

FACULTY OF ARCHITECTURE

Spatial Planning

- *undergraduate/graduate programs:*
  - *BSc (first-cycle) full-time undergraduate program (7 semesters),*
  - *MSc (second-cycle) full-time graduate program (3 semesters)*

FACULTY OF GEOENGINEERING, MINING AND GEOLOGY

Geodesy and Cartography

- *undergraduate/graduate programs:*
  - *BSc (first-cycle) full-time undergraduate program (7 semesters),*
  - *MSc (second-cycle) full-time graduate program (3 semesters) Geomatics*

Mining and Geology

- *graduate program*
  - *Msc full-time graduate program (3 semesters) Geoinformatics*

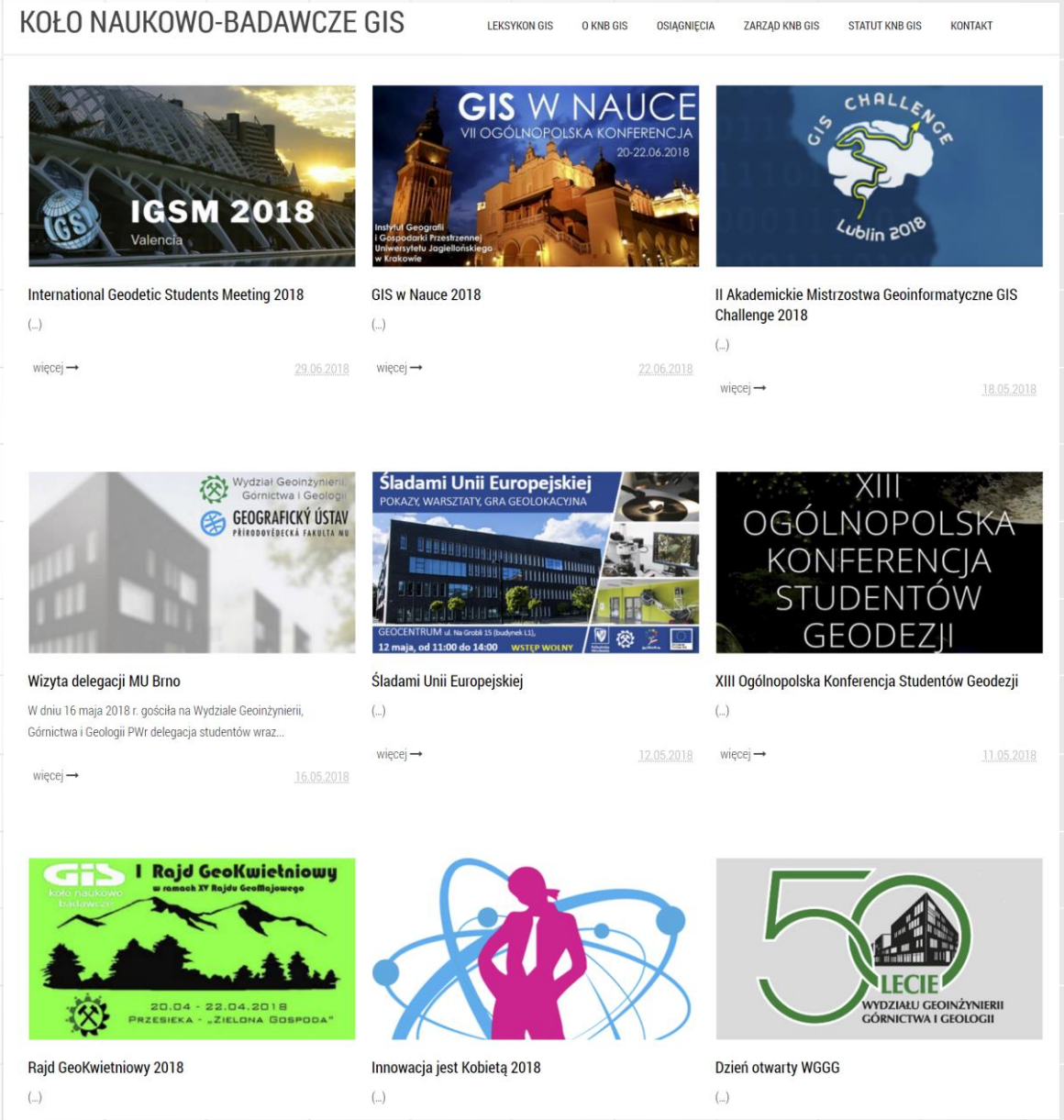
POST-GRADUATE GIS COURSE

- *(1 year / 2 semester)*
- *17 editions*

GIS STUDENT SCIENCE GROUP

- *GISDay organisation,*
- *GeoMay mountain hikes,*
- *Day of Surveyor celebrations,*
- *Science Fair exhibitions*

GIS STUDENT SCIENCE GROUP - PROJECTS

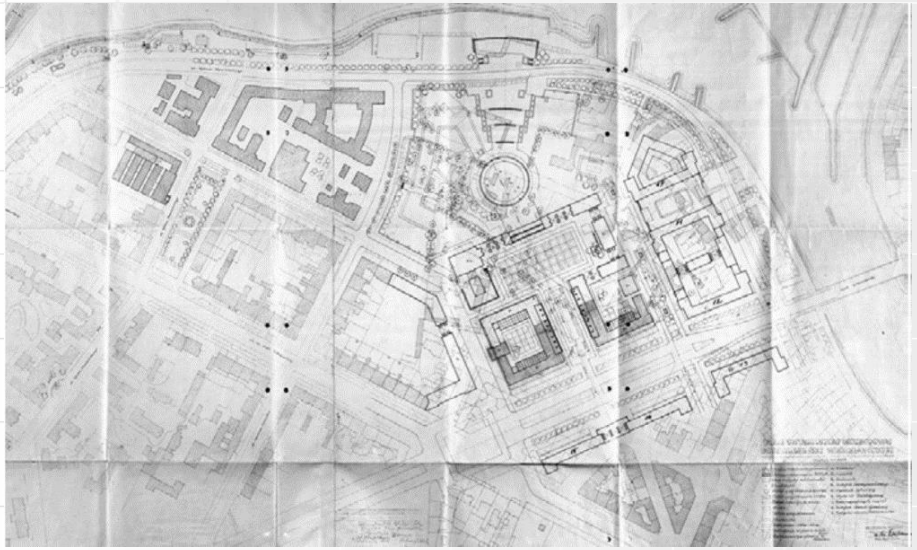


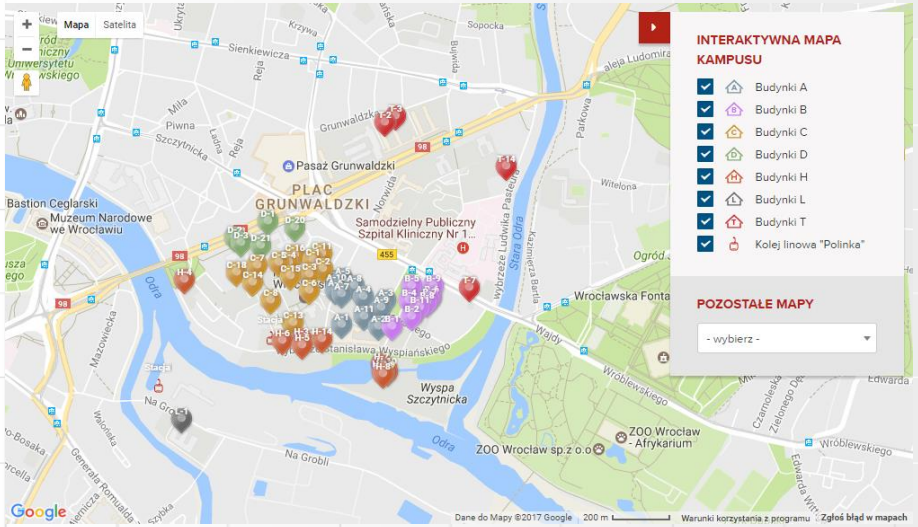
EXAMPLES OF STUDENT PROJECTS AND DIPLOMA TOPICS

- *Visibility analysis for viewing towers in the Polish Sudety Mts.,*
- *WUST Campus Map for the visually impaired,*
- *Multicriteria analysis of electronic timetables location in public transport stops (Wroclaw),*
- *Dolny Slask on a map*
  - *Battles in Lower Silesia (11th Century >),*
  - *Treasures of the World War II,*
- *Table Mountains National Park, so which peak is the highest?*

http://knbgis.pwr.edu.pl/

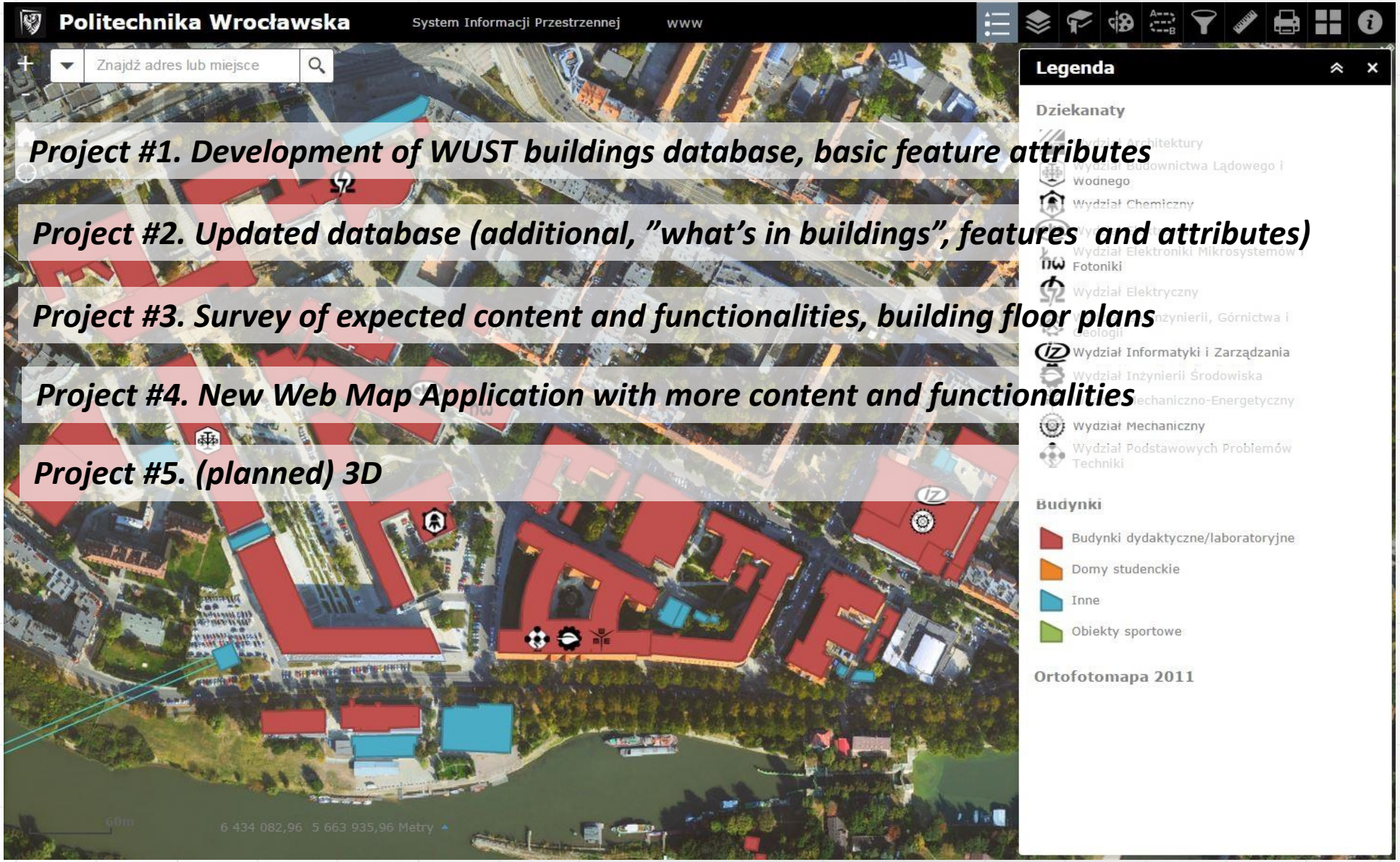
WHY NOT MAKE A WUST WEB MAP?





- *1950 Map of WUST buildings by Prof. Andrzej Frydrycki*
- *Map in the WUST Prospectus*
- *Interactive map available on the WUST web page*

WHY NOT MAKE A WUST WEB MAP?



Project #1. Development of WUST buildings database, basic feature attributes

Project #2. Updated database (additional, "what's in buildings", features and attributes)

Project #3. Survey of expected content and functionalities, building floor plans

Project #4. New Web Map Application with more content and functionalities

Project #5. (planned) 3D

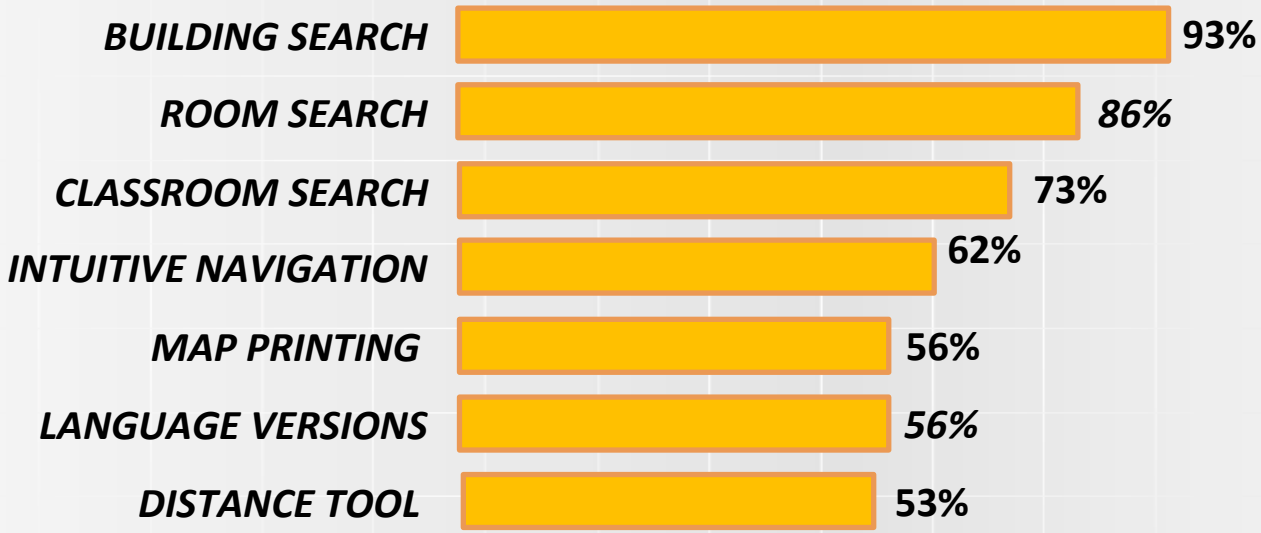
WHY NOT MAKE A WUST WEB MAP?

WEB BASED SURVEY OF POTENTIAL MAP USERS EXPECTATIONS (CONTENT)

Source: Zagrodnik P., 2017

WHY NOT MAKE A WUST WEB MAP?

WEB BASED SURVEY OF POTENTIAL MAP USERS EXPECTATIONS (FUNCTIONS)

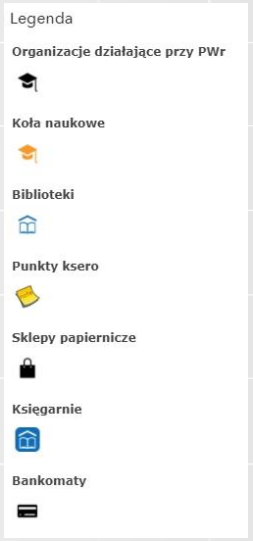


Features proposed by respondents

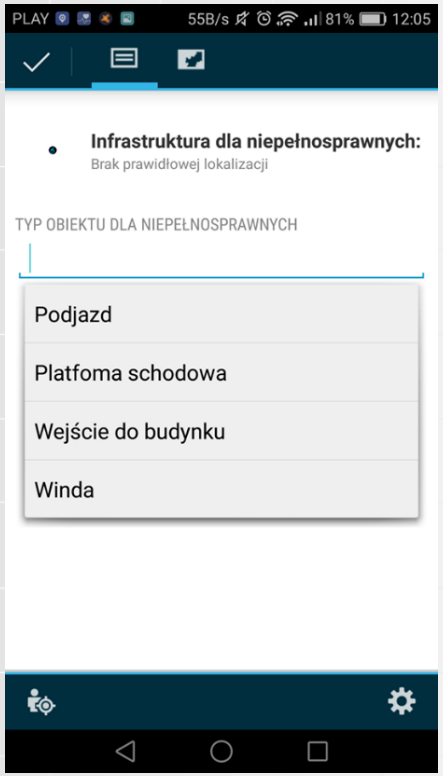
- *entrances to buildings,*
- *infrastructure for people with disabilities,*
- *Wi-Fi access points,*

Source: Zagrodnik P., 2017

WHY NOT MAKE A WUST WEB MAP?



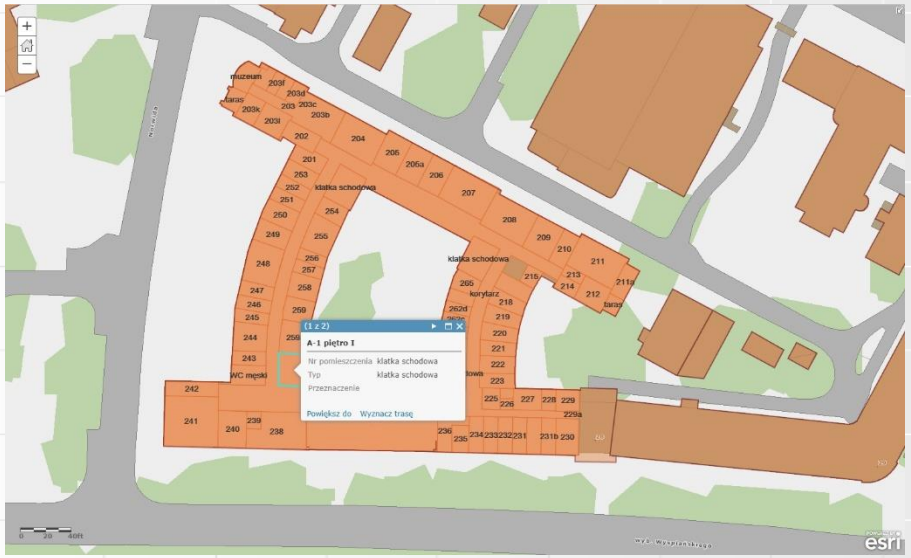
CAMPUS MAPPING



- RAMP
- PLATFORM
- ENTERANCE
- ELEVATOR

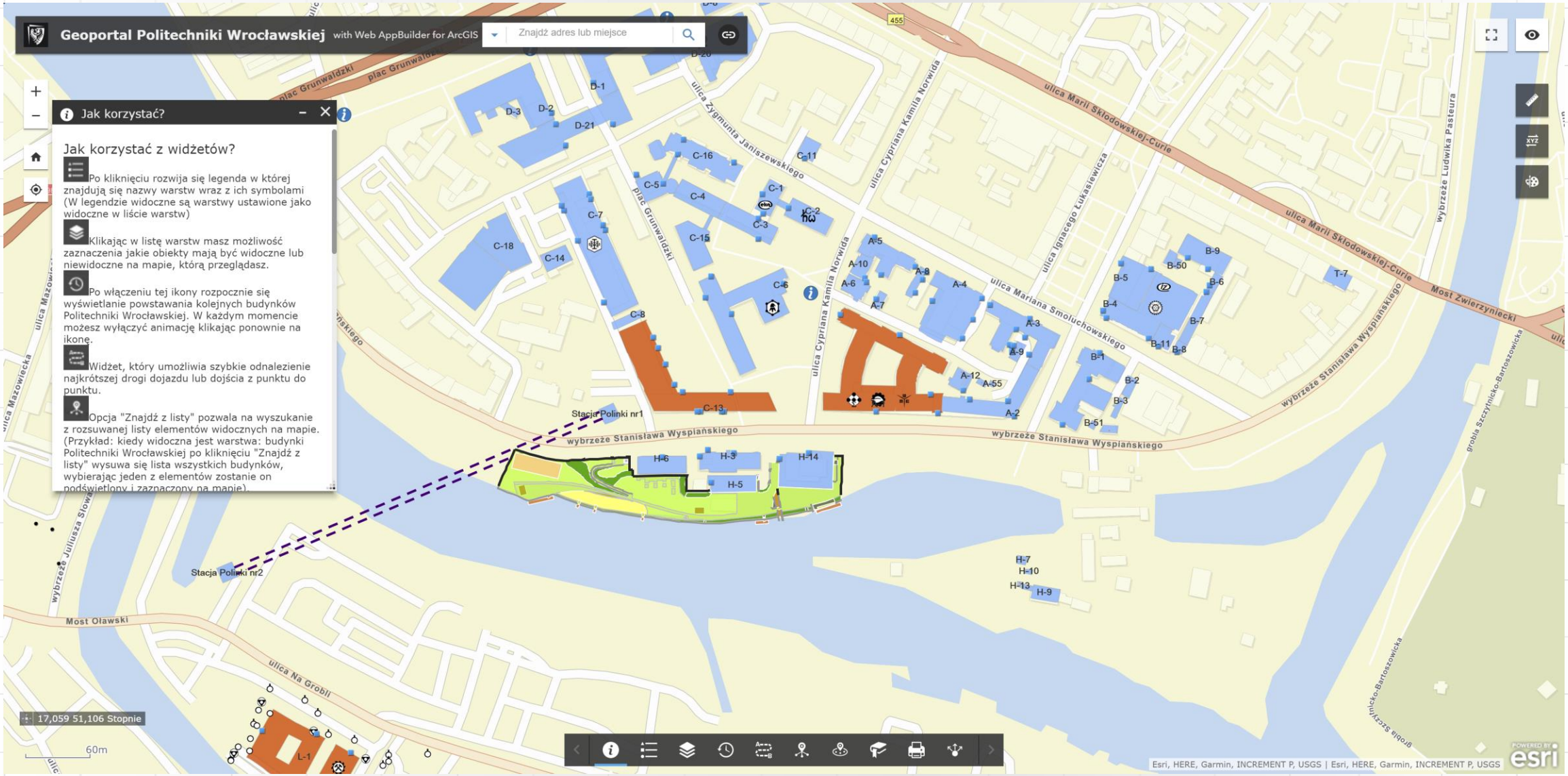
Source: Zagrodnik P., 2017

WHY NOT MAKE A WUST WEB MAP?



Source: Zagrodnik P., 2017

WHY NOT MAKE A WUST WEB MAP?



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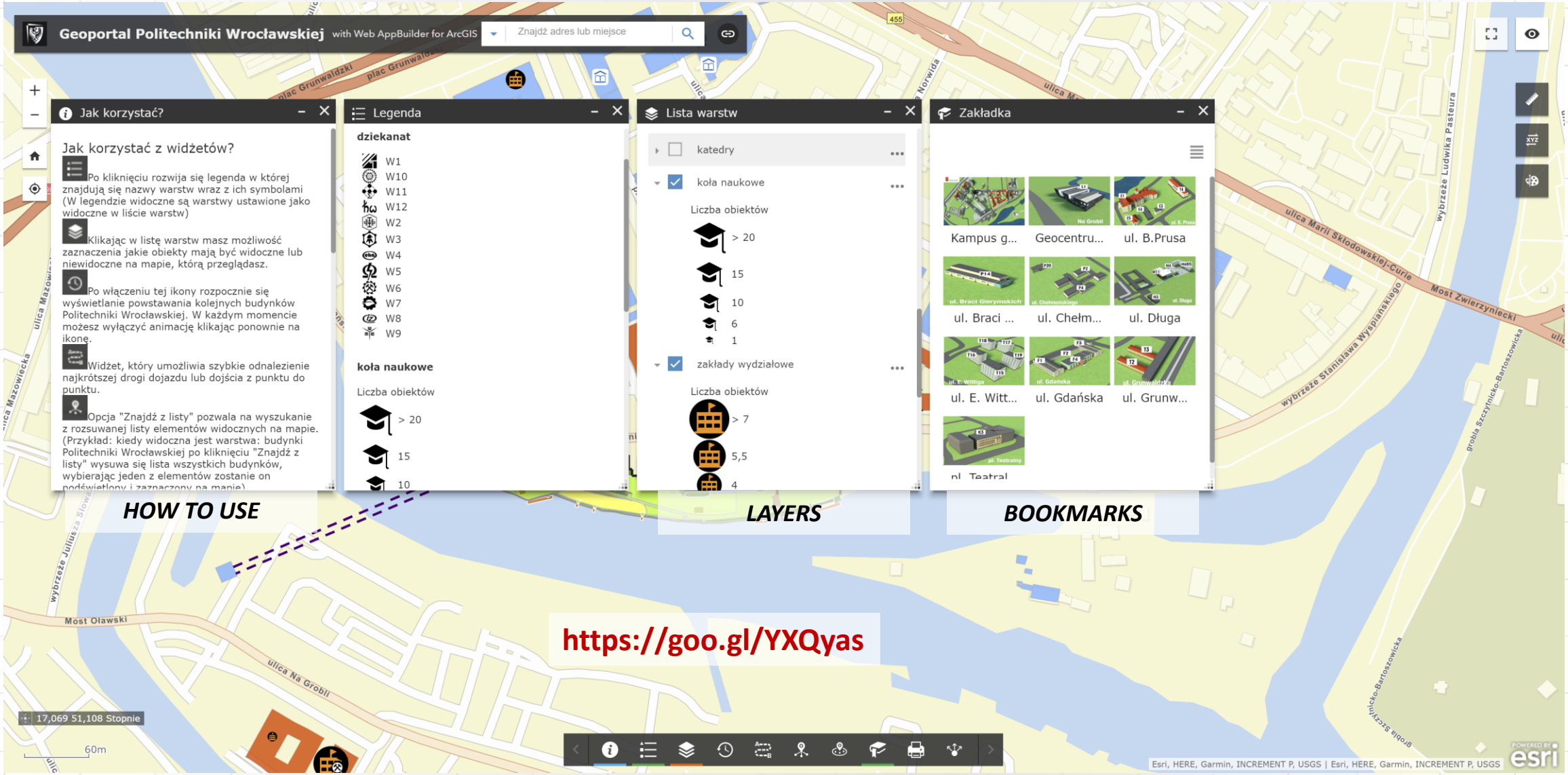
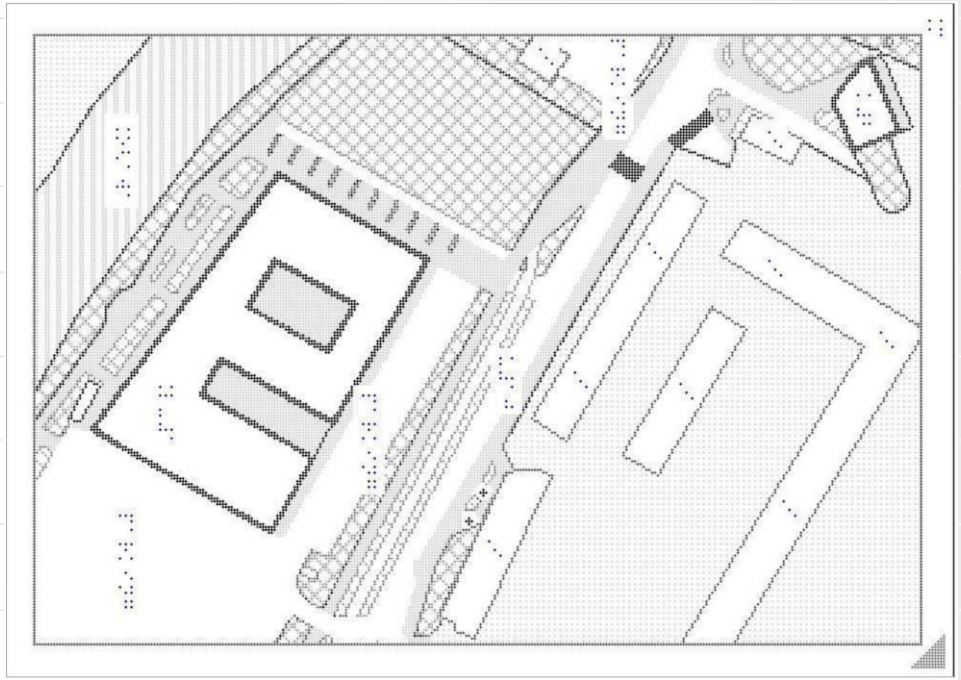
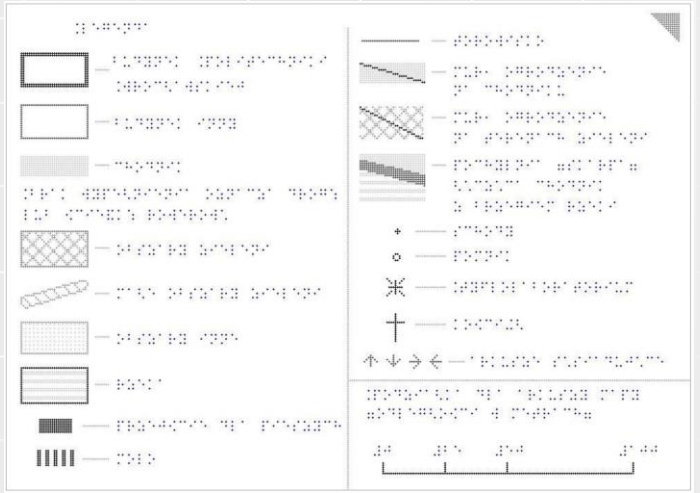
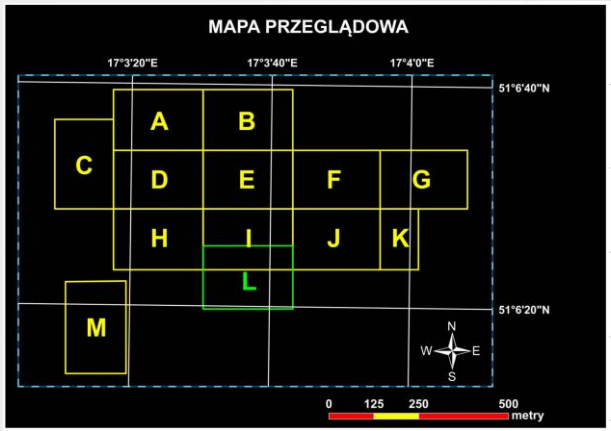


TACTILE MAP







- ***Color version***
- ***Tactile version***

Source: Zedel O., 2017

#WHAT I LIKE/DISLIKE ON THE CAMPUS?

koło naukowo badawcze

#CoLubięNaPWr

W ramach działalności Koła Naukowo-Badawczego GIS, chcemy stworzyć mapę prezentującą, co na kampusie Politechniki Wrocławskiej podoba się jej studentom oraz pracownikom, a co niekoniecznie. W tym celu niezbędna jest dla nas Wasza pomoc. Zatem bardzo prosimy, abyście wskazali na mapie znacznikiem miejsce, które uważacie za **NAJBARDZIEJ ATRAKCYJNE** i uzasadnili swój wybór oraz podali informacje, które pozwolą nam Was sklasyfikować. **Ankietę możecie wypełniać wielokrotnie**, do czego zresztą gorąco zachęcamy. Z góry dziękujemy za pomoc. Have fun :)

1. Wprowadź informację

Płeć
- kobieta
- mężczyzna

Status
- student
- pracownik

* zaznaczając opcję "pracownik" w polu Stopień studiów proszę zaznaczyć "nie dotyczy"

Stopień studiów
- I
- II
- III
- nie dotyczy

Wydział

Wydział Geoinżynierii Górnictwa i Geologii (W6)

Dlaczego wybrałaś/wybrałeś to miejsce?*

:)

pozostały(-o) 298 znaki(-ów)

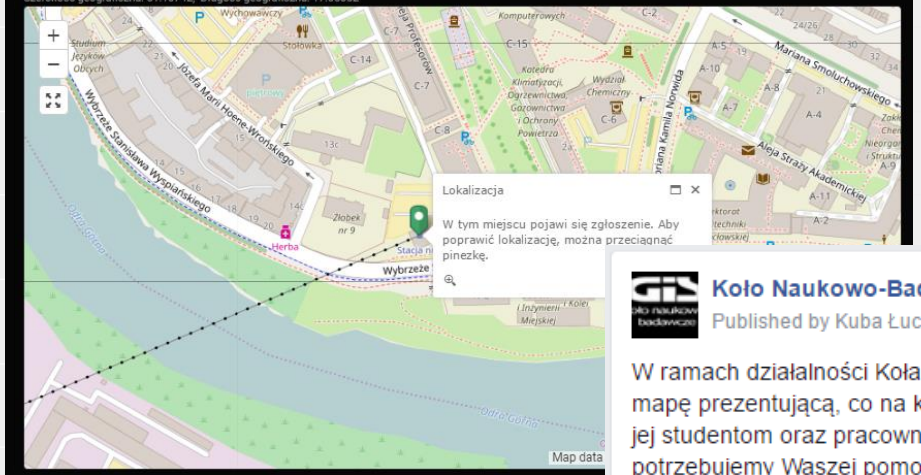
2. Wybierz lokalizację

Podaj lokalizację dla tego obiektu poprzez kliknięcie/dotknięcie mapy lub za pomocą jednej z następujących opcji.

Wyszukaj

Znajdź adres lub miejsce

Szerokość geograficzna: 51.10742, Długość geograficzna: 17.05852



3. Wypełnij formularz

Dodaj te informacje do mapy.

Zatwierdź wybór

- ***GeoForm Survey,***
- ***Social Media,***
- ***Student Activity Days.***

Koło Naukowo-Badawcze GIS
Published by Kuba Łuczak [?] · 13 January ·

W ramach działalności Koła Naukowo-Badawczego GIS, chcemy stworzyć mapę prezentującą, co na kampusie Politechniki Wrocławskiej podoba się jej studentom oraz pracownikom, a co niekoniecznie. W tym celu potrzebujemy Waszej pomocy. Bardzo prosimy o wypełnienie poniższych geoankiet (szczegóły znajdziecie w ich opisach)
- https://goo.gl/XAk4Px - #CoLubieNaPWr
- https://goo.gl/Xw3jTR - #CoLubieNaPWr_Part2
Ankiety możecie wypełniać wielokrotnie!
Liczymy na Waszą pomoc, ale i kreatyw... See more

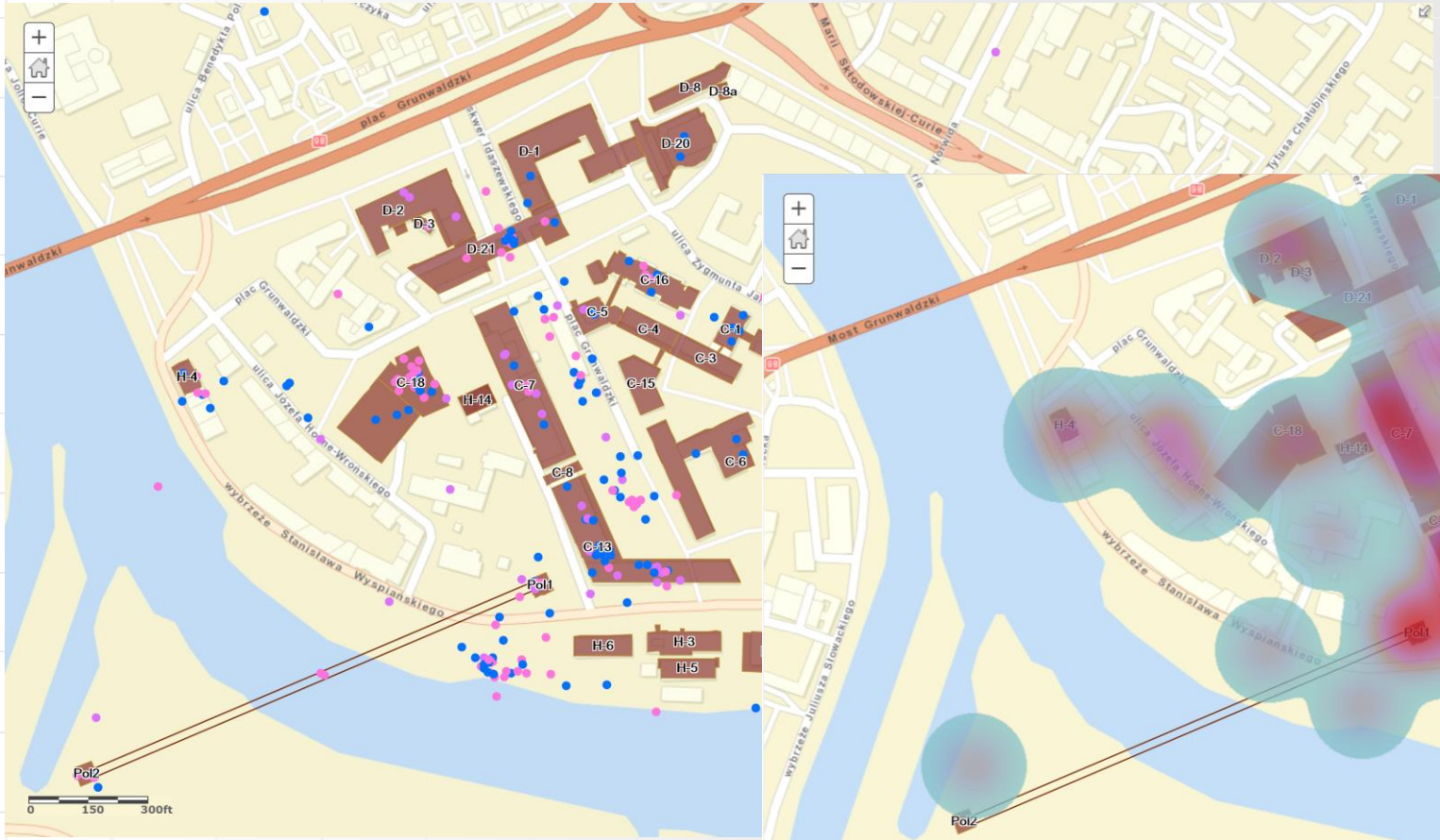
4,775 people reached — Boost post

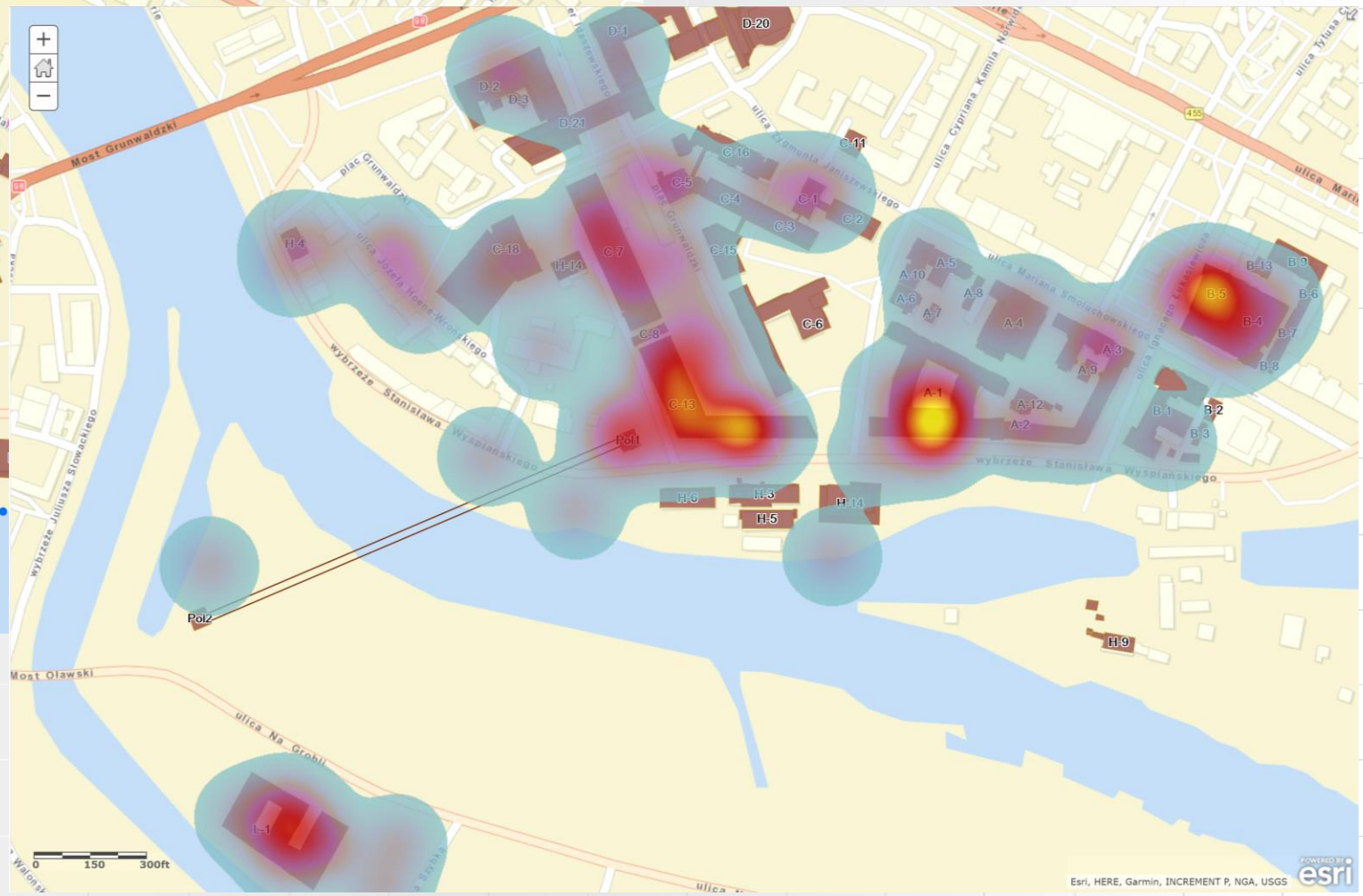
Like · Comment · Share

18 shares

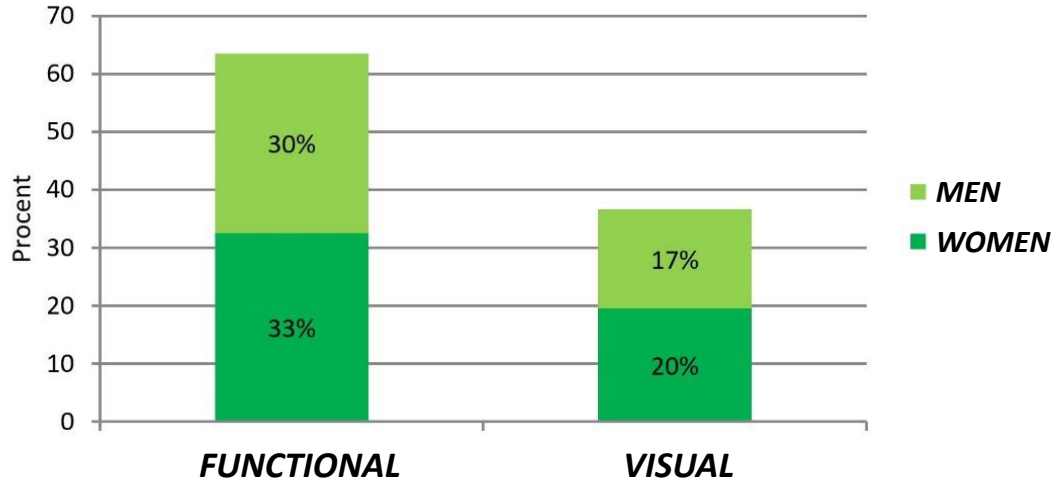
Write a comment...

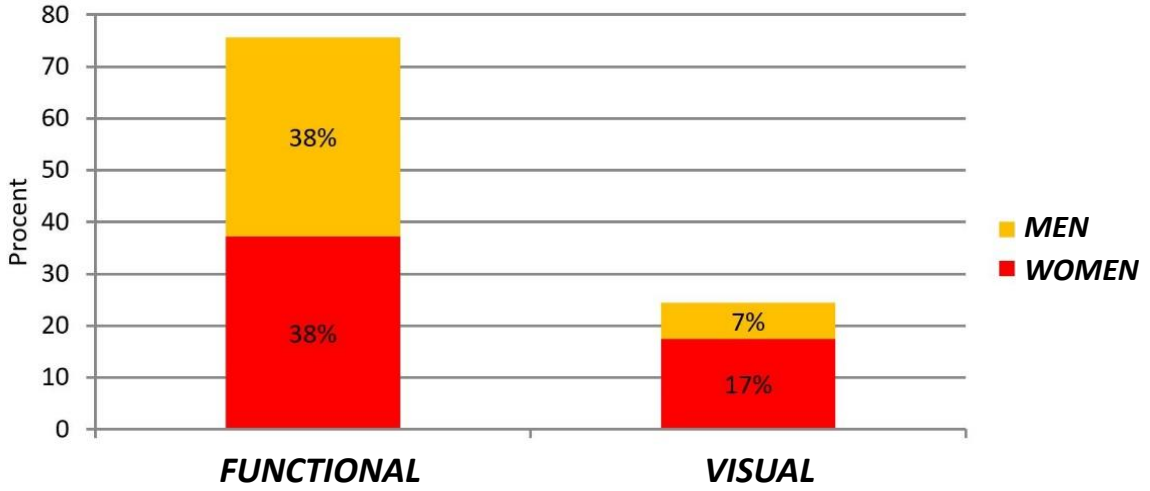
#WHAT I LIKE/DISLIKE ON THE CAMPUS?





#WHAT I LIKE/DISLIKE ON THE CAMPUS?

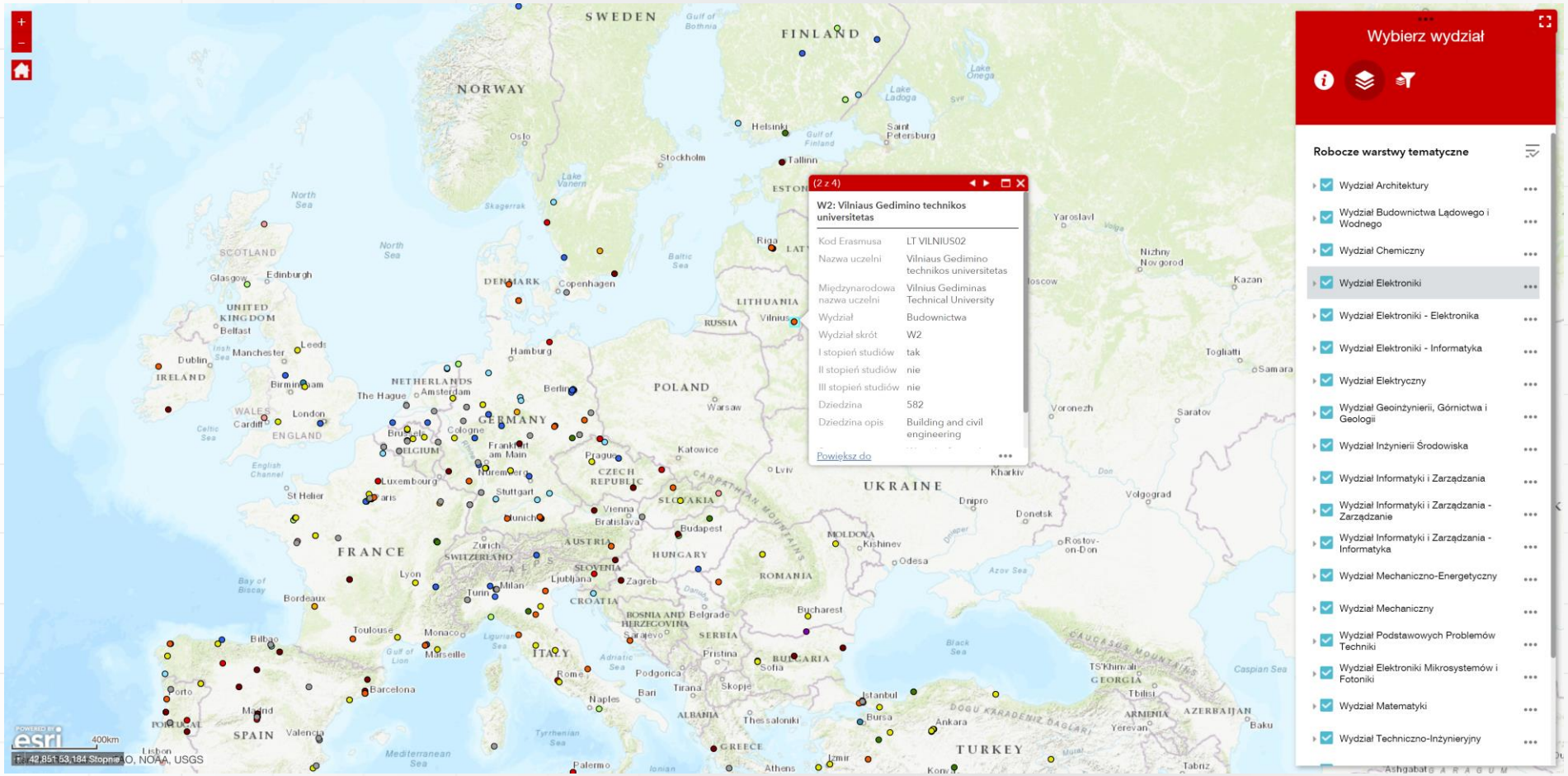




INTERACTIVE MAP OF PARTNER UNIVERSITIES

Erasmus is an European program for universities, their students and employees. It supports international cooperation of higher education institutions, enables students to travel abroad for a part of studies and practice, promotes mobility of university staff.

INTERACTIVE MAP OF PARTNER UNIVERSITIES

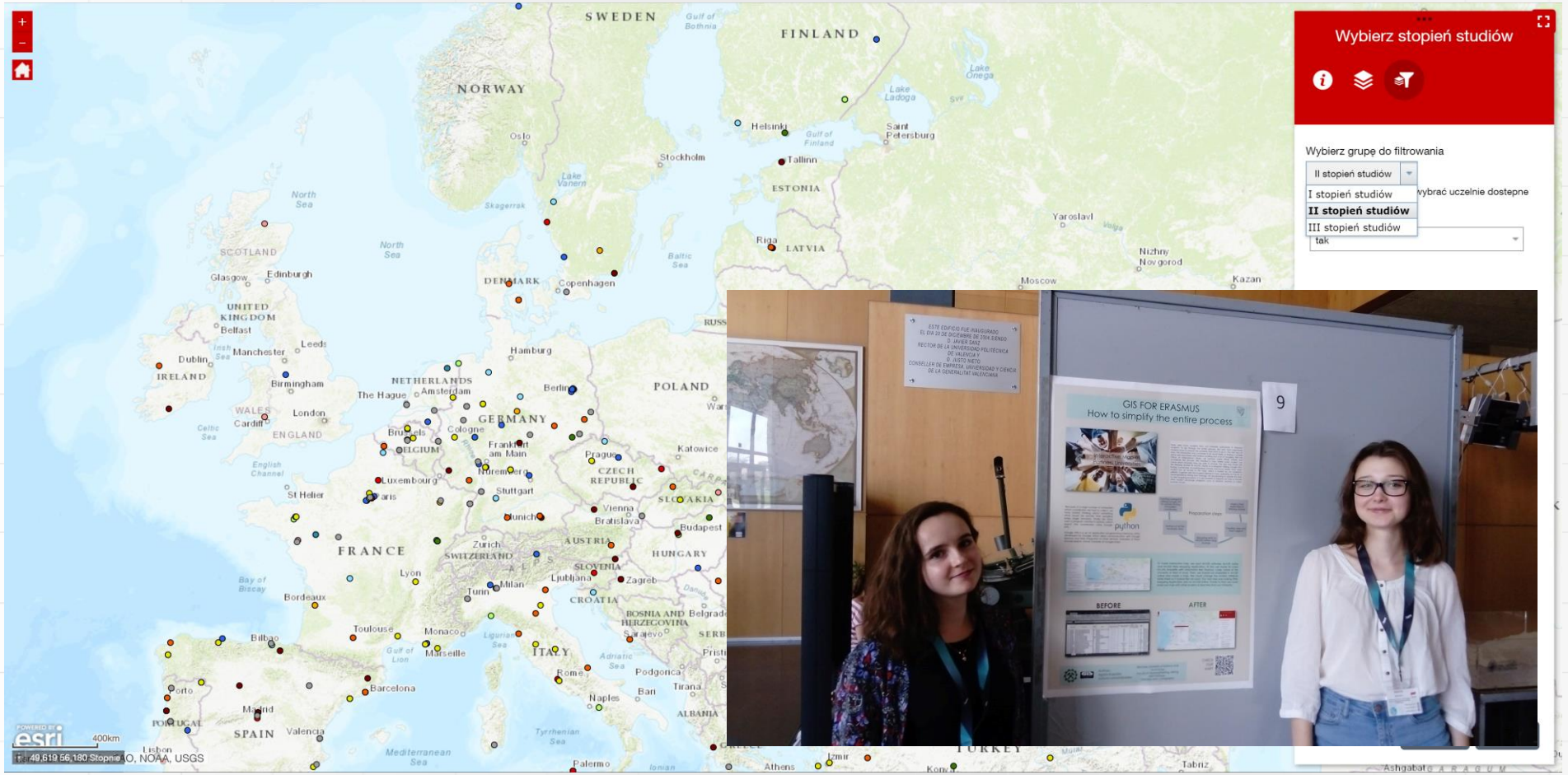


Select the faculties of interest to you, and the partner universities available for them will be displayed on the map.

INTERACTIVE MAP OF PARTNER UNIVERSITIES

Select the degree of study that interests you to choose the universities available for that level of study.

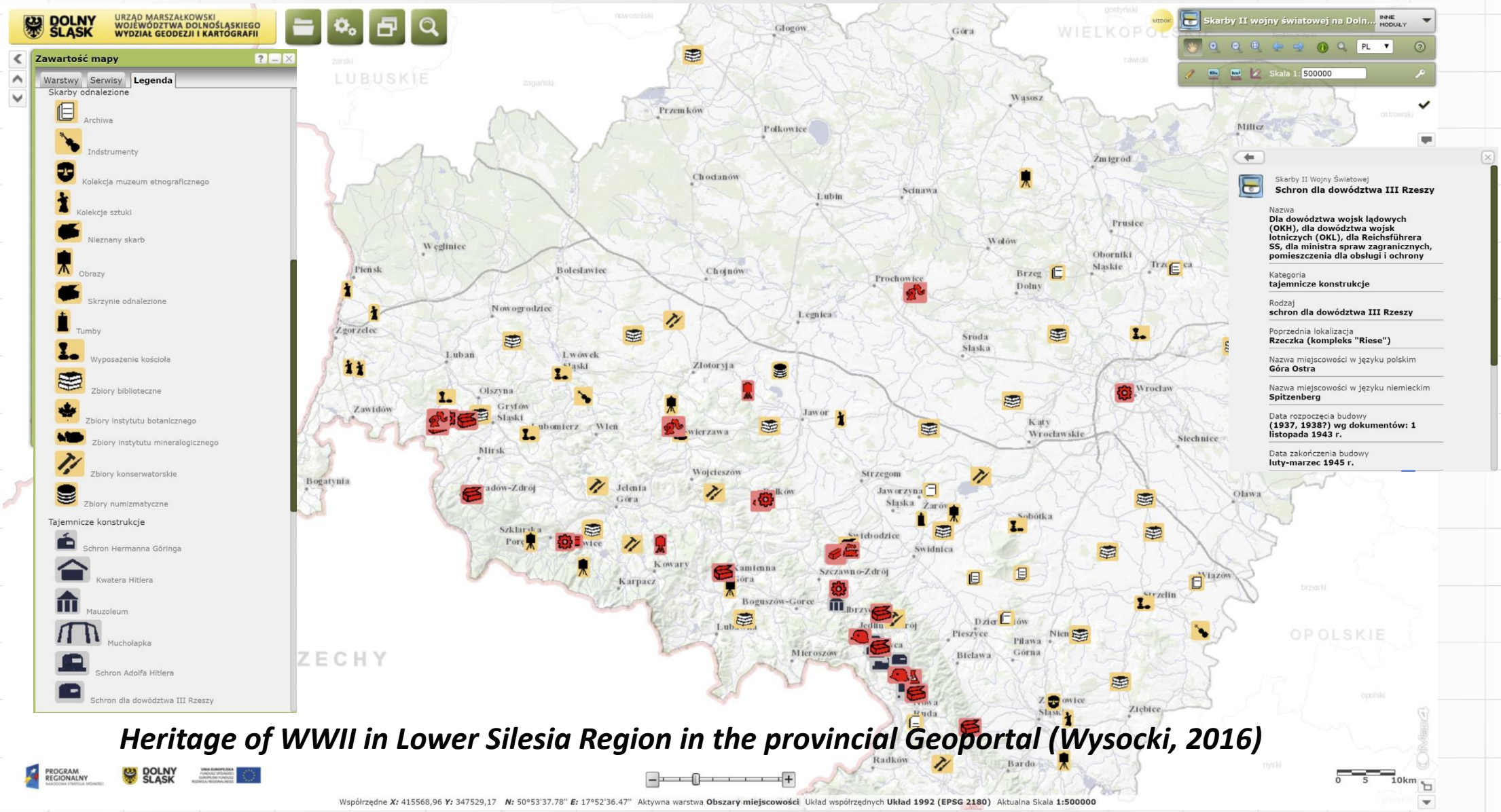
INTERACTIVE MAP OF PARTNER UNIVERSITIES



31. International Geodetic Students Meeting in Valencia (Spain), June 2018.

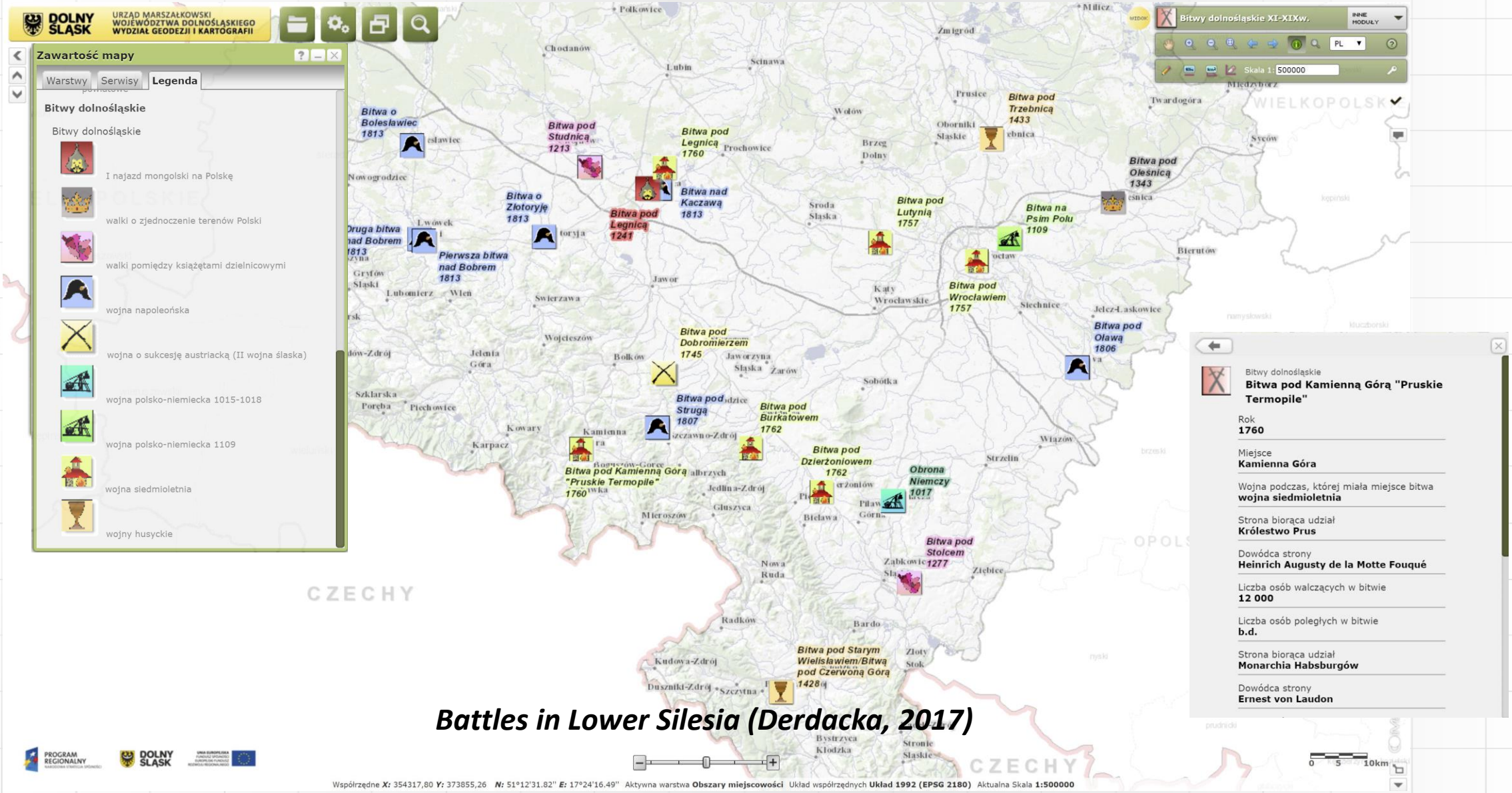
https://goo.gl/FQQH6h

GIS STUDENT SCIENCE GROUP - PROJECTS



Heritage of WWII in Lower Silesia Region in the provincial Geoportal (Wysocki, 2016)

GIS STUDENT SCIENCE GROUP - PROJECTS



Battles in Lower Silesia (Derdacka, 2017)

CONCLUSIONS

- *Development of the Campus Web Map Project (new layers, building floor plans, updated attributes, 3D models and 3D visualisations),*
- *Continuation of current projects (e.g. #WhatILikeAtWUST / #WhatIDislikeAtWUST),*
- *New projects (e.g. Analysis of solar potential for WUST building rooftops, interaction with academic community – reporting damaged infrastructure, indoor navigation)*

- *Development of organisational and teamwork competences (e.g. GISDays),*
- *Knowledge and building GIS skills (student projects),*
- *Interaction/cooperation with peers and young researchers during workshops, seminars and student conferences*

THANK YOU

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https://www.researchgate.net/profile/Jan_Blachowski