



EVENTO ORGANIZZATO DA



Dipartimento dell'educazione,
della cultura e dello sport

University of Applied Sciences and Arts
of Southern Switzerland

SUPSI

Report of the Transnational Conference Open Data and Open Maps for Heritage Protection

Bellinzona, 21 February 2020

Overview and documentation of the conference.

Open Data and Open Maps for heritage protection is an international conference organized at Castelgrande Bellinzona (Ticino Canton, Switzerland) 21 February 21st, 2020. The event has been organised by the Laboratory of visual culture with the Institute of Earth Sciences (Department for Environment, Constructions and Design - University of Applied Sciences and Arts of Southern Switzerland, SUPSI) in collaboration with the Ticino Canton network for the enhancement of heritage (Sistema per la valorizzazione del patrimonio culturale SVPC, Department of Education, Culture and Sport of Ticino Canton) in the frame of the project *CHEERS - Cultural HERitagE. Risks and Securing activities* (ASP693) co-financed by the Interreg VB Alpine Space Programme through the European Regional Development Fund (ERDF).



A historical image of Castelgrande di Bellinzona in public domain, preserved by the Swiss National Library and made accessible through Wikimedia Commons as part of a collaboration with the Wikimedia CH association which supports Wikipedia in Switzerland. Max van Berchem, 1904. Courtesy Swiss National Library and Wikimedia Commons.

	#	Link/description
Number of participants	41 participants	
Nationalities	6 European nationalities	Switzerland, Italy, Sweden, France, Germany, Austria.
Presentations	8 new presentations with 2 discussions	
Audio recordings	All conference has been audio recorded and edited	
Discussion survey collected	18 total survey collected	10 surveys about the current situation 8 about future scenarios
Photo		
Post on social media	2 events created by Cheersalps and SUPSI 9 posts on Facebook during the conference on Cheersalps 6 individual posts pre and post conference	SUPSI event: https://www.facebook.com/events/3178518105510235/ CHEERS ALPS event: https://www.facebook.com/events/218344925973419/ CHEERS ALPS posts: https://www.facebook.com/pg/CheersALPS/posts/?ref=page_internal
Like / sharing post	8 people shared the post of the event 19 people interested in attending the event 97 like of posts and events	
Online articles	SUPSI websites Alpine Space - Cheers website Touring Club Italiano website Wikipedia:Raduni	http://www.supsi.ch/lcv/eventi-comunicazioni/eventi/2020/2020-02-21.html https://www.alpine-space.eu/project-news-details/en/7132 https://www.touringclub.it/evento/bellinzona-ch-convegno-open-data-and-open-maps-for-heritage-protection https://it.wikipedia.org/wiki/Wikipedia:Raduni/Open_Data_and_Open_Maps_for_Heritage_Protection
Evaluation survey collected	7 post-conference evaluation	
People who sign the privacy statement - cc-by-sa license	36	

Introduction

Natural disasters represent a major threat to cultural heritage. The 2019-2022 European Work Plan for Culture, sets out as first priority the sustainability of culture and it stresses the importance of digitalisation – to potentiate access, expression, preservation, dissemination and consumption of cultural heritage – and the relevance of cultural statistics to support evidence-based policy making at European and national level. The concrete actions for the sustainability of culture includes for the first time the topic of adaptation to climate change, the use of mapping methods, a specific focus on the safety of heritage under extreme climate circumstances, and the production of recommendations to lead to awareness-raising and capacity-building of national heritage experts about sustainability of cultural heritage.

In the countries of the Alpine region – Switzerland, Italy, France, Austria, Germany and Slovenia – where the damage caused by climate change is increasingly tangible, the link between data related to natural hazards and about heritage remains disconnected, inaccessible and unusable in the management of emergencies by public authorities and citizens.

Improving data and the interoperability of data about heritage and about hazards and risks can contribute to a better and more efficient safeguard of cultural resources. Data and maps are sources of information and tools to assess risks, prepare, respond to emergencies and recover from them. Opening data and maps means to allow them to become interoperable and to potentiate their use among all stakeholders involved in risks prevention and heritage protection.

The interoperability of data presupposes a common understanding about how to prepare and structure data, how to make them available on different platforms to encourage their use, reuse, modification and their selection and transformation for different purposes. The aggregation of data about heritage and hazards allows to plan and systematize practices of intervention useful both in the preservation of the sites, and in the actions to be carried out during and after the emergency. Data can be used to increase awareness about risks and self-protection and citizens can contribute to integrate and monitor data.

The conference Open Data and Open Maps for heritage protection has focused on the existing data and maps about heritage, hazards and risks, and it has envisioned scenarios to enhance the interoperability and use of these data and maps. The conference has been structured into two sessions focusing on the available data and on scenarios.

The Available Data and Maps about Heritage and Natural Hazards for Heritage Protection

This section has explored the **current situation**, by answering the questions: what is the role and relevance of data and maps for heritage protection? Which are the existing data and maps about heritage, hazards and risks? Do we have open data and open maps related to our Alpine space? Which data do we still need? Do current data meet the standards of findability, accessibility, interoperability, and reusability (FAIR data)? How should we prepare data? Which are the main problems?

Interoperability and Use of Data and Maps about Heritage and Natural Hazards for Heritage Protection

This section has envisioned **scenarios**, by discussing the following questions: what can data and maps do for the protection of heritage? How can we integrate data and maps about natural hazards and risks to assess risks, prepare, respond to emergencies and recover from them?

Program and related outcomes

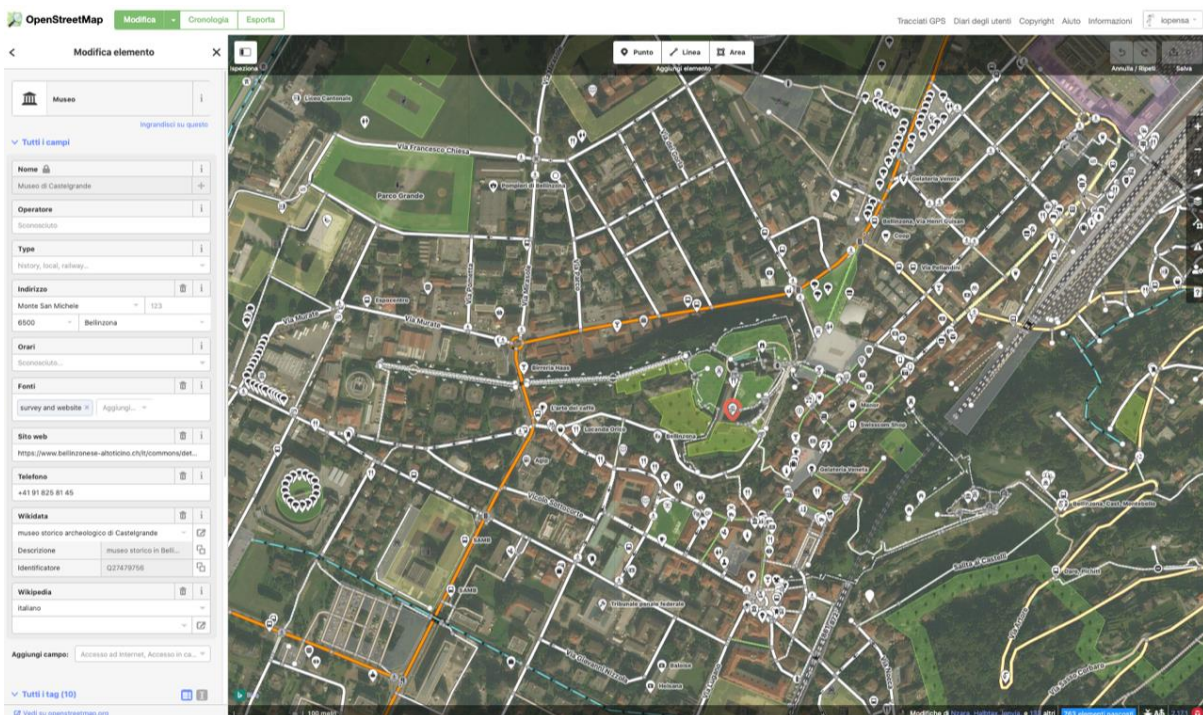
After the welcome of Roland Hochstrasser (Head of the Cultural observatory of Ticino, Department of Education, Culture and Sport of Ticino Canton) and Giulia Pesaro (coordinator of the project *Cheers. Cultural HERitagE. Risks and Securing activities*), Iolanda Pensa (organizer of the event and head of the research area “Culture and Territory, Laboratory of visual culture, Department for Environment, Constructions and Design - University of Applied Sciences and Arts of Southern Switzerland, SUPSI) introduced the conference.

In her introduction Iolanda Pensa presented the current situation of open data about heritage and natural hazards in Ticino, and the work of the Swiss team in creating an emergency plan for an ethnographic museum. Shethen focused on the structure of the conference, and on clarifying the meaning of the concept “open”, by presenting its main features though the exploration of open collaborative projects (OpenStreetMap, Wiki Loves Monument, Wikipedia), the legal issues connected to documenting and opening data about heritage, and the new possibilities offered by online collaborative projects in terms of participation, collaboration and sharing of data.

Roland Hochstrasser [AUDIO RECORDING](#)

Giulia Pesaro [AUDIO RECORDING](#)

Iolanda Pensa [AUDIO RECORDING](#)



The Bellinzona map created by the OpenStreetMap community. Thanks to its free license, the map and its data can be continuously updated and used by everyone for any purpose. Bellinzona image taken from OpenStreetMap in edit mode, 2020.

Current situation - The Available Data and Maps about Heritage, Hazards and Risks for Heritage Protection

Keynotes

John Andersson, Executive Director of Wikimedia Sweden.

Title of the intervention: *Data about Heritage: Wikipedia, Wikidata and Wiki Loves Monuments*. [Slides](#)

[Audio recording](#)

[Video interview](#)

François Robida, Information Systems and Technologies at BRGM /French geological survey

Title of the intervention: *Available data, maps and tools and how they can be improved through the concept of FAIR data (data which are findable, accessible, interoperable and reusable)*. [Slides](#)

[Audio recording](#)

[Video Interview](#)

Roundtable and discussion with a focus on the current inventories and data available in Switzerland.

Beat Estermann, Deputy Head of the Institute for Public Sector Transformation, Data & Infrastructure unit, Bern University of Applied Sciences; board member of the Opendata.ch association and founder of its OpenGLAM working group; organizer of the annual Swiss Open Cultural Data Hackathon

Title of the intervention: *Open Cultural data in Switzerland*. [Slides](#)

[Audio recording](#)

Giulia Buob, Observatory of territorial development (OST Osservatorio dello sviluppo territoriale), Academy of Architecture Mendrisio, Università della Svizzera italiana

Title of the intervention: *An example of research application. Public spaces in peri-urban areas of Canton Ticino*.

[Slides](#)

[Audio recording](#)

Moderator: Massimiliano Cannata

[Audio recording of the discussion](#)

Discussion

During the discussion a survey was distributed to participants in order to collect further content and information about the current situation related to data and open data. The survey was filled in by 10 participants. The survey was structured as a four questions template and it aimed at understanding existing strengths and weaknesses, opportunities and problems related to open data about cultural heritage, risks and natural hazards.

Which are the existing data and maps about heritage, hazards and risks?

- Wikipedia/Wikidata. E.g. In Austria Wikilist about CH registered by UNESCO and Federal Bundesdenkmalamt
- GLAM: Database of cultural heritage
- Openstreetmap
- INSPIRE Directive: EU Spatial data infrastructure
- Géorisques: <https://www.georisques.gouv.fr/>
- Austria: www.hora.gv.at - all natural hazard zones with actual and historical events

Which data do we still need?

- OR which data we would like to have?
- About CH - knowledge elements needed to better prepare the emergencies and rescue activities
- A more precise description at local level of cultural heritage and also the need to make the maps of protector forests open

- OSM – for car accidents
- vulnerability
- risk analysis about data before making data available
- detailed descriptive data
- Quantitative data but also data expressing quality (values, emotional perception and personal attachment)
- open data as a background for building heritage database
- geolocalized data
- additional data is not needed. the connection link is missing many times

How current data meet the standards of findability, accessibility, interoperability, and reusability (FAIR data)?

- Research Data Alliance: <https://research-data-network.readme.io/docs/research-data-alliance>
- it depends from the produces side: what to collect and for which purposes.
- Huge difference between quantitative and qualitative data. In the field of CH there is a huge variety of cases and words for “describing” things at the sectoral level.
- Based on Swiss government directives (are there implemented yet?)
- Based on INSPIRE directive (FAIR is not implemented throughout)
- Important to know where to find data
- Digesting data
- It totally depends in which area you are interested

Which are the main problems?

- Data policies (at international, national and local level – not homogeneous)
- Public/private data management system
- Accessibility
- Availability
- Quality
- Reliability
- Checking/verification processes
- Use of correct licenses
- Vulnerability
- Security of data
- Security through obscurity (ex. Security for churches: do not share data / information on the works, if the church does not have an alarm in case of theft). Impact on insurance value.
- Visibility of data
- Data structure/shapes
- Who pays
- Interoperability (of existing data, but also methods and approaches of data collection)
- Findability (knowledge in terms of repository to learn data exists, there is no overview of available data)
- Confusion between accessibility/open source
- Culture/mentality of society priorities
- Collaboration between people and research groups/fields
- Integration of citizen participation

Scenarios - Interoperability and Use of Data and Maps about Heritage and Natural Hazards for Heritage Protection

Keynotes

Alison Heritage, Project Manager, Strategic Planning and Research, ICCROM

Title of the intervention: *What can data and maps do for the protection of heritage?* [Slides](#)

[Audio recording](#)

Roundtable and discussion with a focus on the use of data for heritage protection and the role of citizens (self-protection, enriching data, monitoring sites...).

Federico Morando, fellow of the Centre Nexa for Internet and Society at Politecnico di Torino, public lead of Creative Commons Italia (2012-2018), founder of the start-up Synapta focussed on linked open data.

Title of the intervention: *The scenario in which all data are fully open and accessible* [Slides](#)

[Audio recording](#)

Francesco Panella, European Commission, DG Joint Research Centre, Monitoring, Indicators & Impact Evaluation.

Title of the intervention: *The Cultural and Creative Cities Monitor. Cultural Gems* [Slides](#)

[Audio recording](#)

Moderator: Marco Pregnolato, Research centre for the environment and sustainable development of Lombardy Region, Catholic University of Brescia

[Audio recording of the discussion](#)

Discussion

During the discussion a survey was distributed to participants. The survey was filled in by 8 participants and it was structured into two questions aiming at understanding future scenarios and opportunities.

What can data and maps do for heritage protection?

- Raising awareness/ Produce evidence / state of the art / current situation
- Legal use of data
- Localization of heritage
- Value/wellbeing
- Link Government with non government data
- Quantify and qualify heritage by means of communication through visualization
- Support data driven decision making, based on availability of current data and the use of historical mapped data:
 - Control
 - Alerting
 - Evidence based decision making
- Reveal hidden relationships between heritage and hazards
- Keep the memory of the sites that are likely to disappear
- Recovery in case of damage (Global strategy on climate change and its consequences)

How can we integrate data and maps about natural hazards and risks to assess, prepare, respond to emergencies and recover from them?

- Increasing the levels of details (different stakeholders need different levels of detail, especially first respondent have different needs) to provide essential information for the right user group.
- the right map/data “scaling” option
- geoservices WMS/WFS
- open format/standard: geo.. intertis
- platform openstreetmap
- data scouting
- defining/redefining the value
- sustainability of projects
- data risk assessment
- production of data about heritage → both quantitative and qualitative
- overlapping with natural hazards maps
- take into consideration the scale: we can work at global scale but the action (e.g. participation of local committees in case of emergency) must be transposed and adapted to the local scale
- GIS system can provide the infrastructure to deal with natural hazards, risks and heritage
- use of open platforms that allow visual data analysis: es. NOMOKO <http://nomoko.world/the-blog/>
- integration of information and data about the emergency services: e.g. location of a closed place to store object in case of emergency

Conference evaluation

Participants have been asked to fill in a qualitative evaluation survey after the conferences.
7 people out of 41 have fill in the evaluation form.

In this feedback, **the aspects** of the conference that people find **most useful and thought-provoking are:**

- An increased understanding of the technical functioning of the open data "world" and the role of the institutions in the collection of data and the organization of datasets.
- the presentation by John Andersson of Wikimedia Sweden, as it clearly suggested the huge work behind it and how the active contribution of all the parts involved is necessary.
- The intervention by Federico Morando, maybe a little bit rhetoric but really brilliant in terms of ideas and reflections.
- The intervention by François Robida
- Need to freely access data, availability and metadata
- Debate on the reliability / quality / accessibility of open data.
- I got very encouraged by the talks of John Andersson, François Robida and Alison Heritage. The possibility for everyone to participate and share their knowledge - like e.g. the work on openstreetmap or wikidata lists of cultural heritage makes a huge contribution for our collective human knowledge
- The discussion about security issues. Concerning security there are still some unresolved issues, which cannot be solved by keeping or leaving out security relevant information
- The discussion about openstreetmap and federal concerns to public data.

The suggestions about **the next steps to implement** to support open data and open maps for heritage protection (training, conferences, projects..) are:

- I think that one of the most important elements is the better understanding of the uses of the datasets so to go deeper inside the qualities and typologies of "data demands" and the related queries.
- Work on accessibility
- An international heritage project (structured like a framework) can be an excellent work direction
- Involving more the administrative offices of the canton, as they are ultimately responsible for the management of data and maps (for example the forestry section for hazard maps, cultural heritage office, ...).
- In CHEERS the implementation of open maps of natural hazards will be an important part of T2
- Introduction of serious quantification to the purpose
- Living labs should also be considered
- The use of open data for modifying cultural landscapes (state, social connectivity, population) and their perception by the public administration & authorities should be discussed and might be an added value for cultural heritage protection
- Training and networking to implement or connect different ideas for cultural heritage protection

Other comments on the conference:

- Some presentations have been not focused enough on data collection and organization and on the specificities of cultural heritage
- Perfect logistics and the Castelgrande venue is a very functional location to do the event (beautiful, prestigious venue, very elegant, welcoming)
- The round tables are interesting, it is a more original and engaging way to hold conferences.
- Nice atmosphere, interesting discussions, enough time for small talk and networking
- Some topics addressed in the program, where not covered eg. monitoring sites

Field of work of evaluators

Academic research, communication, natural science, public administration (Geomatics office, center of competence of geoinformation - Head of the infrastructure of the cantonal administration geodata) data management, cultural risks, geomatics.

Interests of the evaluators

Cultural heritage, natural hazards and disasters, public policy and technology, geoinformation, diffusion standards, formats, urban resilience, OSM.

Participants

Bramani, Chiara. Consultati SA, Lugano
De Luca, Vanessa. SUPSI, Laboratory of Visual Culture
Foldal, Cecilie. Austrian Research Centre for Forests
Garlandini, Simone. Geografo indipendente, Locarno
Genasci, Marco. Repubblica e Cantone Ticino
Hütterer, Christoph. Federal Monuments Authority Austria
Iasio, Christian. BRGM - Bureau de Recherches Géologiques et Minières
Jean, Giacinta. SUPSI, Conservation and restoration
Jung, Martin. AIT Austrian Institute of Technology GmbH
Kropfitsch, Christian. Joint Commission of Austrian Academy & Federal Ministry of Defense
Longhitano, Rachele. Dipartimento del Territorio, Repubblica e Canton Ticino
Lopomo, Debora. Wikimedia CH, GLAM Program & Partnership Manager
Losa, Lorenzo. Wikimedia Italia
Marchiori, Elena. Lugano Living Lab - Città di Lugano
Minciaroni, Maria Chiara. Touring Club Italiano
Muscionico, Angelo. Olympic Museum, Lausanne
Pelloni, Loris. Osservatorio Ambientale della Svizzera Italiana (OASI), Dipartimento del Territorio, Repubblica e Canton Ticino
Pesaro, Giulia. Fondazione Lombardia per l'Ambiente
Picco Schwendener, Anna. USI, Faculty of Communication Sciences
Piqué, Francesca. SUPSI, Conservation and restoration
Ponzio, Sara. Osservatorio dello sviluppo territoriale (OST)
Pregolato, Marco. Research centre for the environment and sustainable development of Lombardy Region, Catholic University of Brescia
Pucciarelli, Marta. SUPSI, Laboratory of Visual Culture
Santoro, Tobia. Ufficio della geomatica, Repubblica e Canton Ticino
Scapozza, Cristian. SUPSI, Institute of Earth Sciences
Sonognini, Lorenzo. former director of Monte Verità; president of the ethnographic museum of Val Verzasca; COO Zardi Ricerche SA; founder Sonognini Partner
Stäblein, David. Rachel Carson Center for Environment and Society, Munich, Germany
Torricelli, Gian Paolo. Osservatorio dello sviluppo territoriale (OST)
Vallenari, Loris. Osservatorio dello sviluppo territoriale (OST)
Zaccarelli, Giulio. SUPSI, Conservation and restoration with a focus on the management of deposits and the method Re-Org

Biographies of speakers

John Andersson is the Executive Director at Wikimedia Sverige (WMSE), the Swedish chapter of the international Wikimedia movement. WMSE works with Wikipedia and many other free knowledge projects which we support through partnerships, software development, training, educational material, research, volunteer training and support, accessibility and diversity initiatives, awareness raising and lobbying. As such John has extensive experience how to effectively engage the general public in crowdsourcing. A few examples of projects initiated by him include the FindingGLAMs project where data about the world's cultural heritage institutions are compiled, and Wikispeech which is an open source text-to-speech solution for Wikipedia which is improved through crowdsourcing. WMSE is currently building a large team to support partners across the world to share content to the Wikimedia platforms, an effort which will be officially launched in mid-2020. John has been actively involved in the Wikimedia movement since 2006 and a full time employee since 2012. He has a Bachelor's degree in International Crisis and Conflict Management and a Master in European Studies.

Giulia Buob is a geographer specialized in GIS and geoprocessing analysis of spatial data. She graduated in physical geography at Fribourg University (Switzerland) in 2014. Since then, she has gained experience with both temporal and spatial data-processing in a GIS environment; she started her career with the mapping of glaciers in Chile at Centro de Estudios Científicos (CECs) and acquired more knowledge about spatial data and python data-processing in Switzerland, working for the Swiss national park and for Hauenstein Geoinformatics in Canton Graubünden. From 2016 to 2019 she worked as a scientific collaborator at OASI (Osservatorio Ambientale della Svizzera Italiana, Dipartimento del Territorio) where she acquired experience in environmental projects management and temporal data manipulation. She currently works as a GIS analyst at Osservatorio dello sviluppo territoriale (OST), a research unit of the Architecture Academy in Mendrisio (www.arc.usi.ch/ost), where she performs GIS complex data processing for the analysis of Ticino's urban landscape at local, regional and transnational scales.

Massimiliano Cannata is professor in geomatics at SUPSI. He received his PhD in Geodesy and Geomatics after his master degree in environmental engineering at the Politecnico di Milano. Since 2007 He's the head of the geomatic division within the Institute of Earth Sciences (www.supsi.ch/ist) in Switzerland. Massimiliano is active in education, research and consulting. He teaches classes in topography and geo-informatics at SUPSI; coordinates and participates in several swiss and international research projects; executes mandates for the local and federal administration and the private sector. His research interests include environmental monitoring systems based on low-cost devices and IoT technologies, geospatial web services and applications, mathematical modeling applied to natural resources and hazards. Massimiliano applies the Open Science approach in all his works to support the democratization of technology, particularly to support the development of low income economies. He is a long lasting member of the Open Source for geospatial international community (OSGeo) where currently cover the roles of project officer for the istSOS (www.istsos.org) software and co-chair for the Open Geoscience committee.

Beat Estermann is Deputy Head of the Institute for Public Sector Transformation at Bern University of Applied Sciences where he leads the Data & Infrastructure unit. He specializes in research and consulting activities related to the digital transformation of the public sector, including open data, linked data, and crowdsourcing. Among his areas of interest are the heritage sector and the performing arts. Beat Estermann is a board member of the Opendata.ch association and founder of its OpenGLAM working group which promotes open data and participatory approaches among heritage institutions and organizes the annual Swiss Open Cultural Data Hackathon.

Alison Heritage is a heritage scientist and wall paintings conservator. She has been working at ICCROM since 2011, where she acts as a focal point for research at ICCROM, undertaking horizon scanning of the heritage sector and related sectors to identify future trends, bring priority issues to the fore, and promote knowledge sharing to enhance research relevance and impact in heritage conservation. Her current research interests focus on the role of heritage within sustainable development, and its contribution to wellbeing. She holds a PhD from University College London, two postgraduate degrees from the Courtauld Institute of Art, University of London, and a BSc Hons in Environmental Chemistry from Edinburgh University. She is a Fellow of the International Institute of Conservation, and an Accredited Conservator-Restorer (Institute of Conservation, UK).

Roland Hochstrasser graduated from Lausanne University in 2002. In 2004 he obtained his degree in Urban Studies (MAS) from the Swiss Graduate School of Public Administration (IDHEAP) and the Institute of Geography (IGUL). In parallel with his studies, he has also acquired a lot of working experience in the areas of culture, environment and information technology. Since 2005, he has worked as scientific advisor to the Department of Education, Culture and Sport (DECS). In 2013 he made a major contribution to the launch of a new process of cultural governance entitled Samara – il patrimonio culturale del Cantone Ticino, the purpose of which is to promote the cultural and scientific heritage of the region. Two years later his book focusing on management and enhancement of the image assets of the Centro di dialettologia e di etnografia was published by the Swiss Academy of Humanities and Social Sciences. The following year, he was a member of the steering committee of the conference Digitalizza la Cultura. In 2017 he obtained a Certificate in Management and Leadership for Archival, Library and Information Science at the University of Bern. In the same year he has been nominated president of the Association of Ethnographic Museums of Ticino (Amet) and took on the role of head of sector at the Division of Culture and University Studies (DCSU), becoming also a member of staff.

Christian Iasio has provided consultancy services and R&D activities since 1998 concerning geospatial data management for natural resources planning, risk and disaster management, damage assessment, design and prototyping of tools for early warning systems and operational crisis management. He contributed to several European funded projects concerning risk, vulnerability and resilience assessment and management, and led the scientific development of Interreg and industrial projects concerning the integration of remote, proximal and in situ monitoring sensors in mountainous regions. During the seismic crisis in Central Italy of 2016, he was delegated by the Italian Council of Geologists as GIS advisor to the “Damage and Security Assessment Office” of the Command and Control Directorate at Rieti (Department of Civil Protection, Ministry of the Interior). At BRGM, he is currently in charge of cross-domain research initiatives dedicated to innovative development in the field of risk and crisis management, and coordinator of an international

workgroup within the scope of the "European Plate Observing System" (<https://www.epos-ip.org>) EPOS Sustainability Phase (H2020 funded project) .

Federico Morando is an economist, with interdisciplinary research interests focused on the intersection between law, economics and technology. His research activity mainly concerns models of production and sharing of digital contents, with a focus on linked (open) data, public sector information, and administrative transparency. He taught intellectual property and competition law at Bocconi University in Milan, and he lectured at the Politecnico di Torino and at the WIPO LL.M. in Intellectual Property. He holds a Ph.D. in Institutions, Economics and Law from the Univ. of Turin and Ghent. From Dec. 2012 to Apr. 2018, he led the Creative Commons Italy project. From 2008 to 2012 he served as the first Managing Director of the Nexa Center for Internet & Society, and from 2013 to 2015 he was Director of Research and Policy at the Center. At the beginning of 2016 he co-founded Synapta, an innovative start-up specializing in linked data and developing ContrattiPubblici.org, a search engine and business intelligence tool on Italian public procurement.

Francesco Panella currently works at the European Commission's Joint Research Centre, supporting research and activities in the context of cultural and creative cities. He holds an MA in Culture, Policy and Management from City University in London and a BA in Disciplines of the Arts, Music and Entertainment from Università di Bologna.

Iolanda Pensa is senior researcher, head of research in the "Culture and Territory" area at the Laboratory of visual culture and actively involved in the implementation of Open Science within the Research and Innovation team of At SUPSI University of Applied Sciences and Arts of Southern Switzerland. Previously she was scientific director of the Moleskine Foundation for the project "WikiAfrica: Increasing the quality and quantity of African content on Wikipedia" (which produced over 30'000 contributions to the Wikimedia projects with the involvement of volunteers and over 100 institutions). She organized in 2016 "Wikimania Esino Lario", the Wikipedia world gathering in a 700-inhabitants mountain village of the Alps, she is chair of the international Wikimania Committee, member of Wikimedia Italia and Wikimedia CH, active in the implementation of the contest Wiki Loves Monuments and in increasing the documentation of cultural heritage on Wikipedia and the Wikimedia projects. Among her projects "Share Your Knowledge: Creative Commons and Wikipedia for cultural institutions", "Wikipedia Primary School: Providing on Wikipedia the information necessary to complete the cycle of primary education in the languages used by the different education systems", "Swiss Foundations and Open Licenses", "The Alps on Wikipedia" and "Culture and Safety in Africa with all the research documentation on the Wikimedia projects. Art historian, she holds a Ph.D. in Social anthropology and ethnography at the EHESS in Paris and in Territorial government and planning at the Politecnico di Milano.

Marco Pregnolato is a researcher and freelance consultant in the fields of adaptation to climate change and disaster risk reduction. He currently works for the Catholic University of Milano, the Lombardy Foundation for the Environment and is a member of Ecometrics, a leading consulting firm in the field of Emergency Planning. He acquired his M.A./M.Sc. at the University of Milano in 2004, with a specialization in modelling for water management, hydrology and soil degradation processes. Since 2005, he has been working in the field of scientific support to environmental actions and policies and specialized in the processes of knowledge transfer and exploitation in policy & decision

making processes. Among the others, he was one of the main investigators in the early development of the EUSALP Climate Adaptation Platform for the Alps, worked in the FP7 project Know-4-DRR: Knowledge for Disaster Risk Reduction on the theme uncertainty in crises situations, and was the principal investigator in the development of the Regional Action Plan for Climate Adaptation of region Lombardy.

François Robida is the Deputy Head of Division, Information Systems and Technologies Division. Mining engineer and geostatistician, and has 25 years of experience in computer science applications to earth sciences with BRGM (French Geological Survey). Following his first work in mining geostatistics, he has been in charge of the design and development of software and programs related to all aspects of geology, and especially to 3D modelling. He was then responsible for the BRGM software group, a team co-ordinating the development and marketing of software developed by BRGM. In his current position, he is in charge of the R&D and of the European projects in the domain of Information Systems for BRGM. Involved as an actor of the development of interoperability at different levels, he is a member of the European Expert Group for Inspire (the initiative of the European Commission to develop European Spatial Data Infrastructure), where he represents the European geological surveys association (EuroGeosurveys). As representative of BRGM in OGC (OpenGIS consortium), he is also a member of the OGCEurope advisory board, and member of ADAE-CNIG (French counsel for geographic information) working group for geospatial interoperability.

Credits

A conference organised by the Laboratory of Visual Culture with the Institute of Earth Sciences (Department for Environment, Constructions and Design - University of Applied Sciences and Arts of Southern Switzerland, SUPSI) in collaboration with the Sistema per la valorizzazione del patrimonio culturale (SVPC-DECS) del Cantone Ticino in the frame of the project *Cheers. Cultural HERitagE. Risks and Securing activities* (ASP693) cofinanced by the Interreg VB Alpine Space Programme through the European Regional Development Fund (ERDF).

Chairs: Iolanda Pensa and Roland Hochstrasser

Coordinator: Marta Pucciarelli

With the support of Vanessa De Luca, Cristian Scapozza, Massimiliano Cannata, Giulio Zaccarelli (SUPSI) and Christian Iasio (BRGM - Bureau de Recherches Géologiques et Minières). With the collaboration of Organizzazione turistica regionale (OTR) Bellinzonese e Alto Ticino Turismo.

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