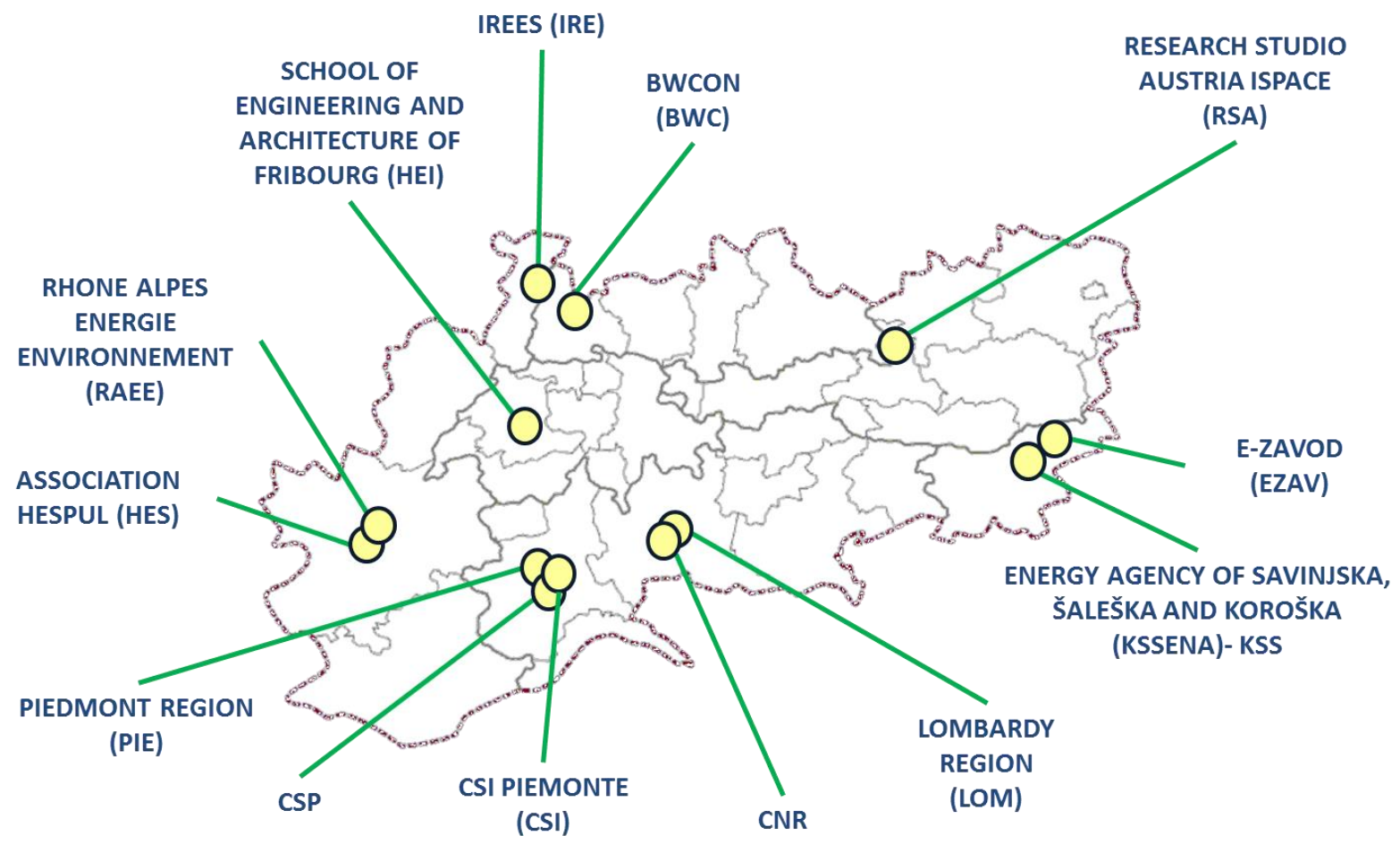


The4BEES

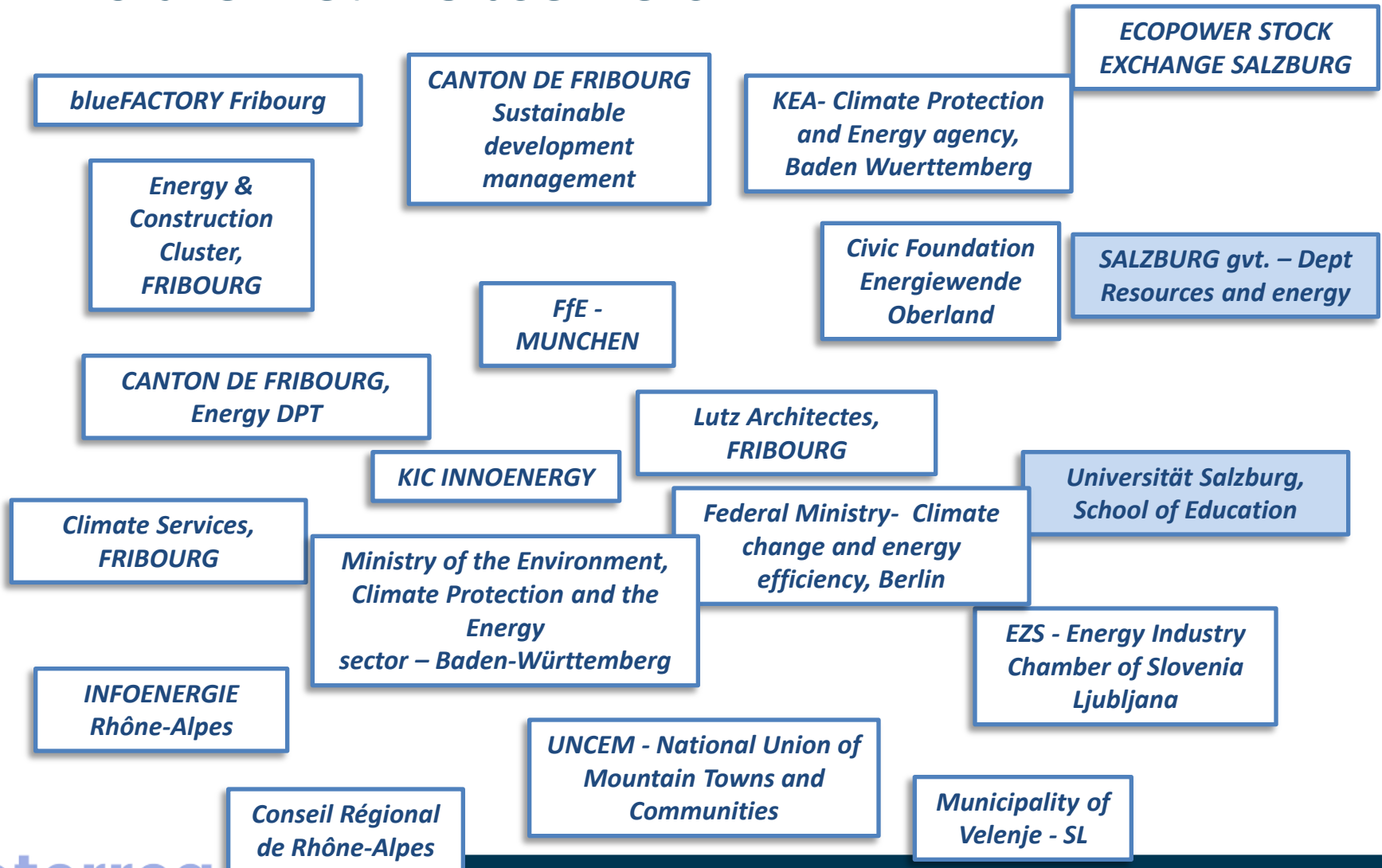
Transnational Holistic Ecosystem 4 Better
Energy Efficiency through Social innovation
Awareness-Raising zur Optimierung des
Energieverbrauch mit Demos

Manfred Mittlboeck & Robert Vogler
DIGITAL:EARTH 2016, Salzburg 30.03.2016

Who are we? - Partnership



Who are we? - Observers



Goals of the The4Bees: Awareness Raising On Energy Efficiency And Carbon Footprint

The following outputs shall be achieved:

- to consolidate and grow knowledge on the **relationships among behavioral changes, energy efficiency, carbon emissions and the benefit of ICT**, consistently with art.12 of the Energy Efficiency Directive.
- EED Art. 12: **Member States shall take appropriate measures to promote and facilitate an efficient use of energy by small energy customers**, including domestic customers. These measures may be part of a national strategy.
- In The4Bees **awareness will be raised thanks to innovative and effective methods and tools** (bar camps, digital storytelling, infographics) based on a socioeconomic study on virtuous behaviors and capitalization of previous/current initiatives.
 - => Aim: improved awareness as the basis of change of behaviors.

Goals of the The4Bees: Awareness Raising On Energy Efficiency And Carbon Footprint

Why the The4Bees?

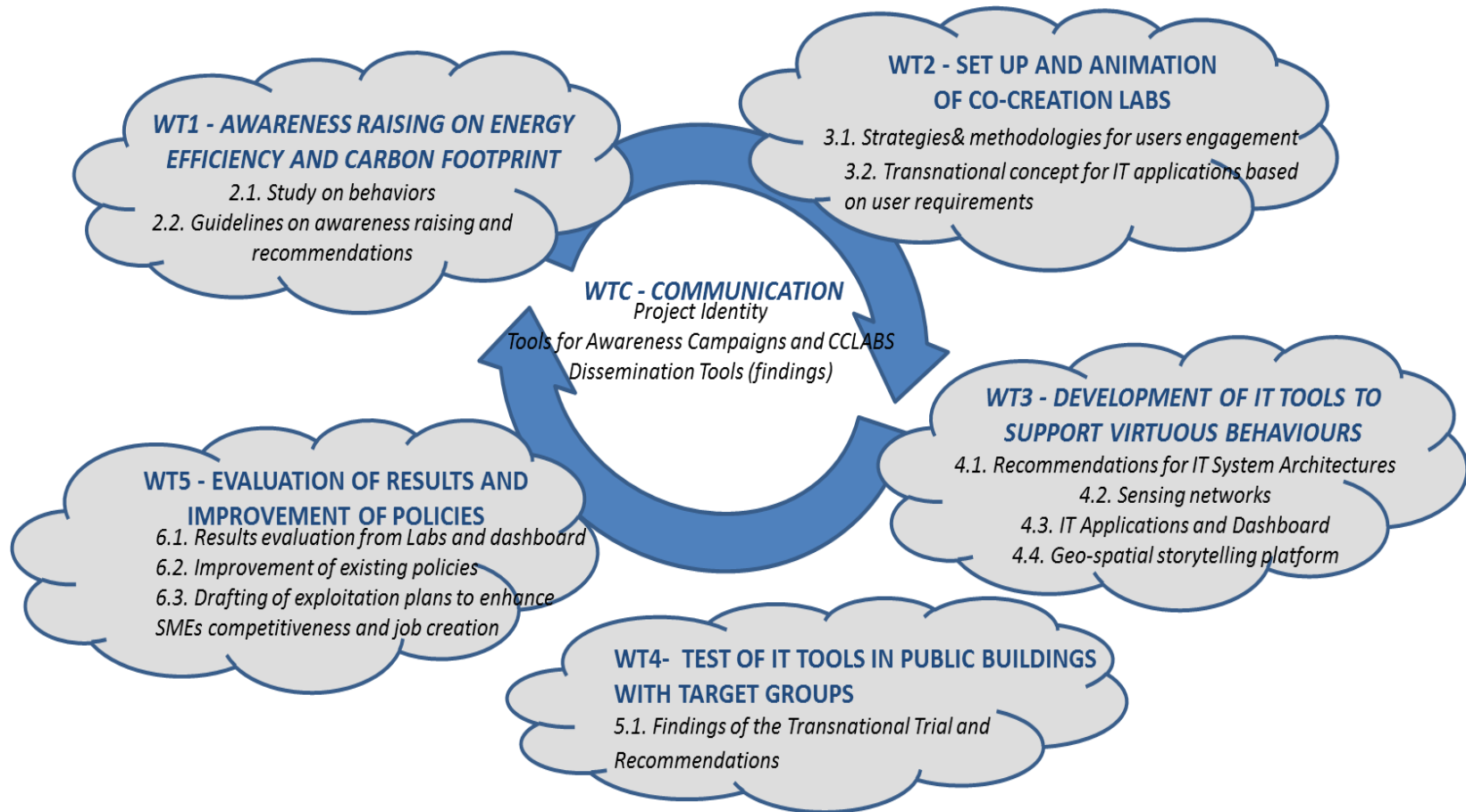
- THE4BEES builds on the hypothesis: **Energy is consumed by people rather than by buildings.**
- Although most of the strategies to achieve **energy efficiency in buildings focus on technical mitigation measures**, to reach the ambitious goals on Low Carbon set by EU and Alpine Strategy, both structural and soft approaches shall be considered in a complementary way
- **THE4BEES focuses on the behavioural changes of users in public buildings needed to achieve reduction of energy consumption.**
- **Behavioural changes and energy reduction will be assessed** and will improve transnational, regional and local low carbon and spatial development policies.

Behavioural change on energy use in buildings

Different **target groups** (every citizen is an energy user)

- Households (tenants, owners)
- SME (decision makers, workers, employees)
- Authorities on the national, regional and local level (generating and implementing policies, controlling compliance)
- **Education and training (schools/high schools)**
- NGOs, others
- Two categories:
 - Those who decide (and deliver the frame work, e. g. landlords, managers of a company/school/accomodation facility) and
 - **those who practice (tenants, employees, teachers, students, tourists etc.)**

Expected Outputs of the The4Bees



Summary & Discussion: WP3 Development of IT Tools to support virtuous behaviours

Geoplatform & Stories

OpenEnergyMonitor

Integrate system for (remote) electrical energy metering

Easy compare internal/external conditions for thermal energy experiments

The image shows the hardware setup for the OpenEnergyMonitor system. It includes a Raspberry Pi board, a smart meter, and a FIBARO wall plug. A blue arrow points from the text 'Integrate system for (remote) electrical energy metering' to the smart meter and Raspberry Pi. A green arrow points from the text 'Easy compare internal/external conditions for thermal energy experiments' to the Raspberry Pi and FIBARO wall plug. The FIBARO wall plug is described as 'The smallest in the world'.

Active Indoor Positioning

Device Localization Using Beacons

This map shows the position of different devices using Bluetooth Low Energy Beacons. A combination with an indoor-map makes it possible to do real-time positioning within a building. Additionally, a video stream is included showing what the devices see.

The image displays a 3D indoor positioning map. The map shows a building layout with various rooms and corridors. Red lines indicate the paths of devices. A legend on the right lists the devices: Nexus 9 LifeCam Device, Nexus 5 Laura, Samsung Bernhard, Motorola, Nexus 5 Handy, and Guest. The map also shows the position of beacons and the active indoor positioning system.

Progressive Geo-View

Map Visualization Set-up

Scenario: baseline (2015-03-10-17-48-32-002)
Scenario Name: baseline
Statistics Field: Total number of entrepreneurs female

- Start Color: Yellow End Color: Red
- Number of Classes: 7
- Classification Method: Natural Breaks

Review Inputs Start over Run

Visualize Simulation Results

The image shows a map visualization of the distribution of entrepreneurs in a region. The map is color-coded according to the scenario settings. A legend on the right shows the distribution of entrepreneurs, with a peak at 2.0. The map includes a 'Zoom to' field and a 'Zoom in' button.

Sound of Music

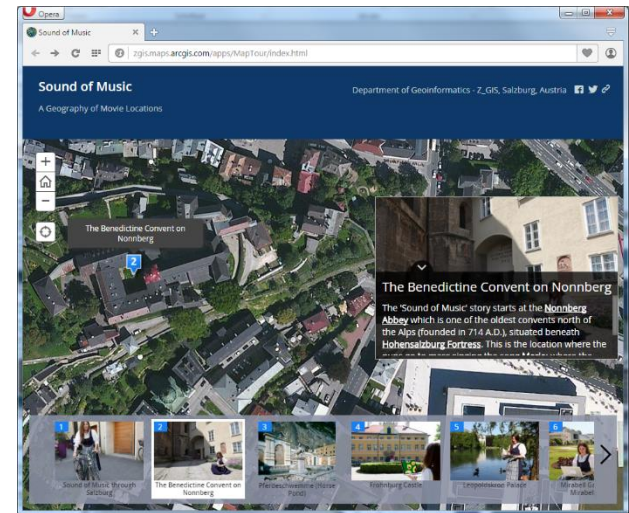
A Geography of Movie Locations

Department of Geoinformatics - Z_GIS, Salzburg, Austria

The image shows an aerial map of Salzburg, Austria, with movie locations marked. The map includes a legend for the movie locations: Sound of Music through Salzburg, The Benedictine Convent on Nonnberg, and Friesenweidner Point. A heatmap overlay shows the distribution of movie locations, with a peak at 2.0. The map includes a 'Zoom to' field and a 'Zoom in' button.

Goal Salzburg : use the infrastructure and communication hub to communicate the4bees resources/results

- How can we bring the right information to the right people at the right time?
- **Information management** well performed brings the right information to the right people at the right time and **in the right presentation format.**



Co-creation activities the4bees storytelling apps

- What about the4bees 4D storytelling apps?
 - to actively engage your audience with your data, analysis, and projects
 - its about user generating maps in 4bees living labs based on
 - authoritative resources and maps with narrative text, images, and multimedia content.
 - Maps make it easy to harness the power of maps and geography to tell your story.
 - Bring together public administration, energy providers and citizens
 - Define and establishe energy consumption KPIs with stakeholders
 - Engagement of use case involved parties
- Task: Joint development of user-centric storytelling flagship apps
- Task: create (map-)dashboards for energy KPIs

What About storytelling & maps for the4bees

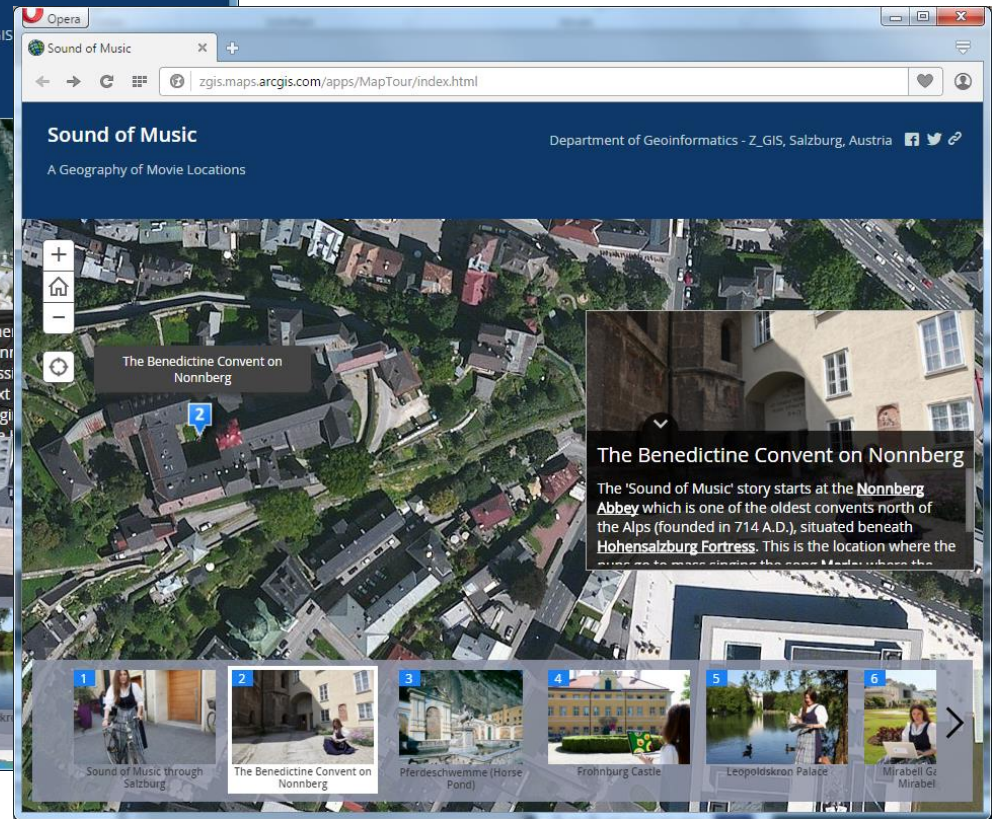
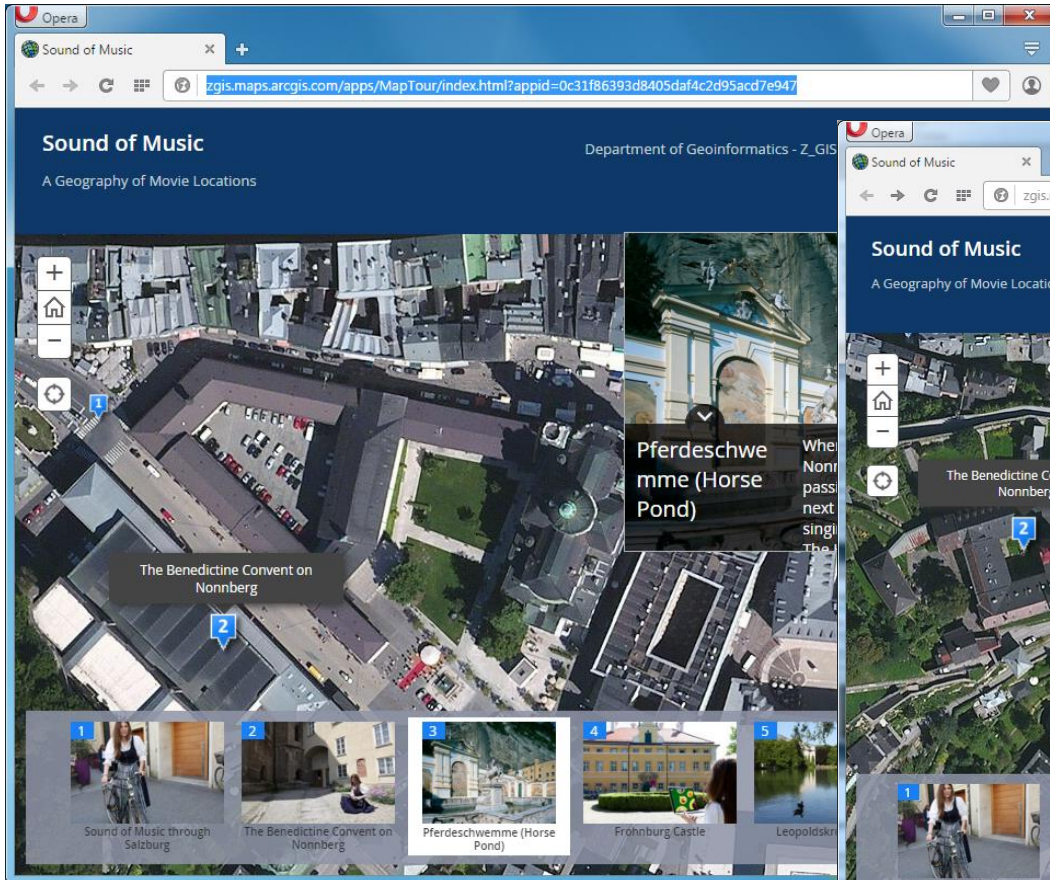
- Connect with your audience
 - Who is your audience?
 - Before you build your story map, think about who will be seeing your story!
 - Craft your text, maps, and other content to suit your audience.
- Lure people in
 - Start your story with a bang.
- User experience supports the story
- Strive for simplicity
 - Stories are distillations. The more you do to remove nonessential elements, the more likely you are to tell an effective story!
 - A person should not have to get to the fifth or sixth section in your story to understand our 4bees concepts and mission
- Easy-to-read maps
 - Make sure your maps are as simple, clear, and user-friendly as possible



Geo-spatial storytelling

an example

Storytelling example: Sound of Music



Summary & discussion

- THE4BEES focuses on the **behavioral changes of users in public buildings** needed to achieve reduction of energy consumption.
- Different **target groups** (every citizen is an energy user)
 - Education and training (schools/high schools)
 - those who practice (tenants, employees, teachers, students, tourists etc.)
- **Joint development of user-centric storytelling flagship apps**
- **Need: Participating schools & teachers**



WE WANT YOU!

The4BEES

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