Starting points

- Water resources
- Coastal zones
- Biodiversity
- Agriculture
- Human health
- Tourism

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<tr>
<th>Climatic variable</th>
<th>Impacts</th>
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<td>Decrease of average of precipitation</td>
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<td>Increase of average temperature, mainly maximum</td>
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<td>Sea level rise</td>
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<td>Increase of extreme precipitation events</td>
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Cascais

+ 97 km²
+ 30 km coastal line
+ 1/3 of protected landscape
+ Metropolitan Area of Lisbon
+ Renowned tourist destination
+ 210 000 inhabitants
+ Unrivaled heritage
Challenges to address!

+ Climate adaptation promotes resilience through the increase of the adaptive capacity: innovation

+ As most impacts and related strategies are medium to long term, it requires a transformative approach.

+ Spatial planning and resource management become more complex and citizens must be given a new role for added contribution

+ Professionals must be qualified and encouraged to study and implement new ideas and approaches. Technology can be a priority and a key asset for data retrieval and
Smart city

+ Citizen 2.0
+ Technology as a tool which can collect, process and provide useful information
+ towards citizens, students, city managers and stakeholders
+ Transformative approach based on technology and raising human potential
+ Cross sector use and implementation
+ transparency and democracy driven
Monitoring climate and weather data

+ Local network
+ Local management
+ App driven
+ Real time data assessment
+ Free usage and API integration
The Ribeira das Vinhas trail

- The Ribeira das Vinhas is a 10 km long stream/creek
- starts in the mountain range in the natural park
- ends in the urban center
- located within a aquifer area
The approach!

+ Riverside restoration
+ 33,000 citizens served
+ “Smart” design features
+ Cost effective
The approach!
Monitoring: smart + intelligent

+ capacity “as is” over 50 m3/s

+ Approach with human intervention and warning.

+ technology to use in case of flooding and study

+ together with relevant data from meteorological stations nearby
Monitoring climate data: urban planning

+ From 2D to 3D

+ Tools that can be predictive: today VS tomorrow

+ Market driven solutions with academic input

+ Climate related planning and risk assessment

+ Information increases information
Monitoring climate data: urban planning

Os consumos diários do edifício “EMAC” seguem a tendência de outros modelos de dispersão de cidades mediterrâneas, em que os consumos energéticos são maiores para o arrefecimento do que para o aquecimento, sendo, por isso, observável um maior consumo energético nas temperaturas máximas diárias mais elevadas.

+ building energy efficiency
+ climate change long term perspective
+ free data for planner and construction professionals
Next try: urban green areas

+ urban allotment
+ infiltration areas
+ ecosystem services (flooding and cooling)
+ reduction of 65% water needs
+ meteorological stations for management and ecosystem evaluation
+ human comfort and cooling potential
Latest news!

+ live meteorological data

+ confirmation of fire impact on local weather

+ useful to analyze fire progression

+ unsure about the use of live feed in command center
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What we need!

+ We must understand how weather data can be transformed for usage and extreme weather event risk assessment.

+ What are the best case studies in the EU city wise? How can we learn with partners?

+ Business developers can benefit from our know how and we can contribute for economic development. But data and tools must be maintained as free access. How can we promote freeware?

+ Data integration on risk assessment will follow a “big data” approach. Cities usually not related or capacitated to use this data.
+ Smart must also be intelligent

+ Ensure the reach of different stakeholders and appropriate information for each type

+ Smart City approach is still in early stages but already providing useful information for managers and partners

+ Citizens are tech friendly

+ A new approach on city management will bring new partners and business activities, but let us keep focus on data accessibility!

+ we have much to learn and we need your help! Any ideas? Sharing is caring!
CASCAIS
Tudo começa nas pessoas