HABITATS' CONTRIBUTION TO INSPIRE:

APPROACH AND RESULTS OF ITS SOCIAL VALIDATION

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HABITATS aims

‘to *operationalise a broad range of public and private services*

that require the use of ***reliable spatial environmental data*** *regarding living species and their habitats*

enabling those services to access the required information **because it has been made available according to a common format’**

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Imbedded on issues that link the mosaic of institutional relations and interest groups, and their evolution.

Develoment is a process ***and environmental sustainability is fundamental to it***

- **Continuous, medium and long term**

  -complex

  -nonlinear

  -It is controllable

  -Multi-directional

  -Results of multiple forces

  -interacting in space and time

Social Validation

It is a process that contributes to the better understanding, efficiency and effectiveness of a project / program

The aim of

Basic Principles of social validation

Validity **goes hand in hand with the quality of the results and their contribution to the impact.**

The acceptance and confidence **of results is based on their validation.**

Social validation determines the social importance of the effects of any practice, policy or anything else that is the focus of a project.

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We knew how to proceed…

The situation of each HABITATS pilot was represented as the intersection of two main axes – or “impact drivers”

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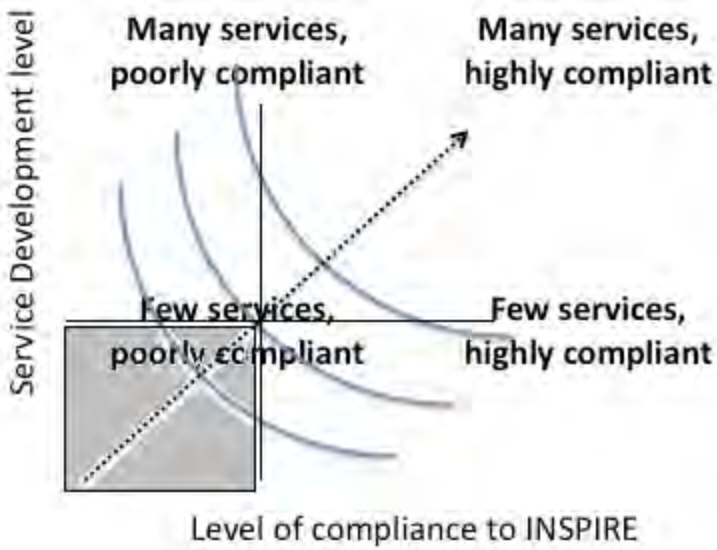
- **The level of SDI compliance to INSPIRE in terms of data and metadata models, standards and application schemes;**

- **The extent to which new services are developed –or upgraded– with or without proper SDI compliance;**


Many services, poorly compliant
Many services, highly compliant
Few services, poorly compliant
Few services, highly compliant
Service Development level
Level of compliance to INSPIRE

Q I

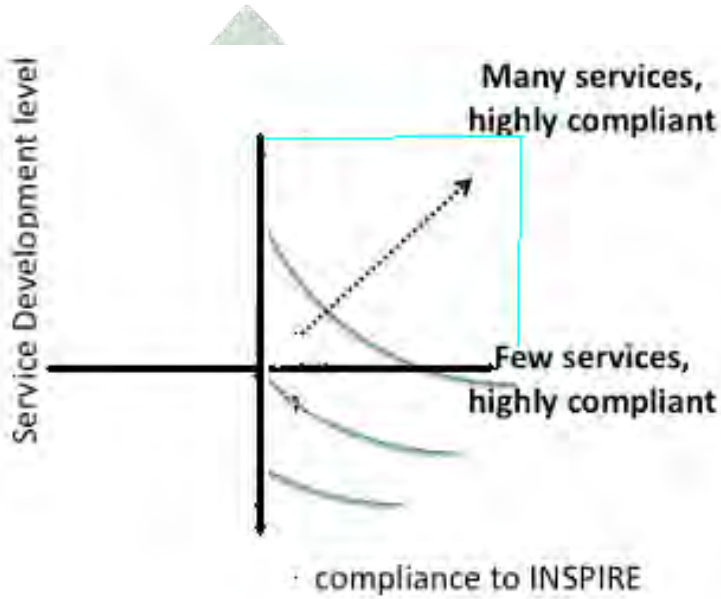
Q II


Many services, poorly compliant
Many services, highly compliant
Few services, poorly compliant
Few services, highly compliant
Service Development level
Level of compliance to INSPIRE

QIII


Many services, poorly compliant
Many services, highly compliant
Few services, poorly compliant
Few services, highly compliant
Service Development level
Level of compliance to INSPIRE

QIV


Service Development level
Many services,
highly compliant
Few services,
highly compliant
compliance to INSPIRE

HABITATS strategy

is based on the coupling of social content in terms of social validation innovative methodologies with highly relevant technological innovative developments

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- ✓ **Empowering processes and procedures**
- ✓ **The social significance of the impact**

Matching the taxonomy of social validation "ideal types" with the three main areas of interest for our analysis:

Social Validation Type	Pilots involved	Focus of evaluation
Potential benefits of user involvement influence data modeling and standards adoption.	Wild Salmon Monitoring (IE) Economic Activity of Marine Habitats (LV) Forest Management (CZ)	Social significance of stated goals
Direct expert/end-user interaction with data modeling process.	Monitoring Protected Marine Area (ES) Environmental Education in a Natural Reserve (ES)	Social appropriateness of followed procedures
User-driven co-design of services leading to "demand pull" INSPIRE adoption.	Hiking Trip Planner (IT) Sheep and Goat Herding Management (IT)	Social importance of obtained effects

The situation of each HABITATS pilot was represented as the intersection with a third main axe

- **The level of SDI compliance to INSPIRE prescriptions for the Annex III data themes 16-19 in terms of data and metadata models, standards and application schemes;**

- **The extent to which new services are developed –or upgraded– with or without proper SDI compliance;**

- **The degree of end-user satisfaction –defined and measured – regarding those services.**

What is a stake?

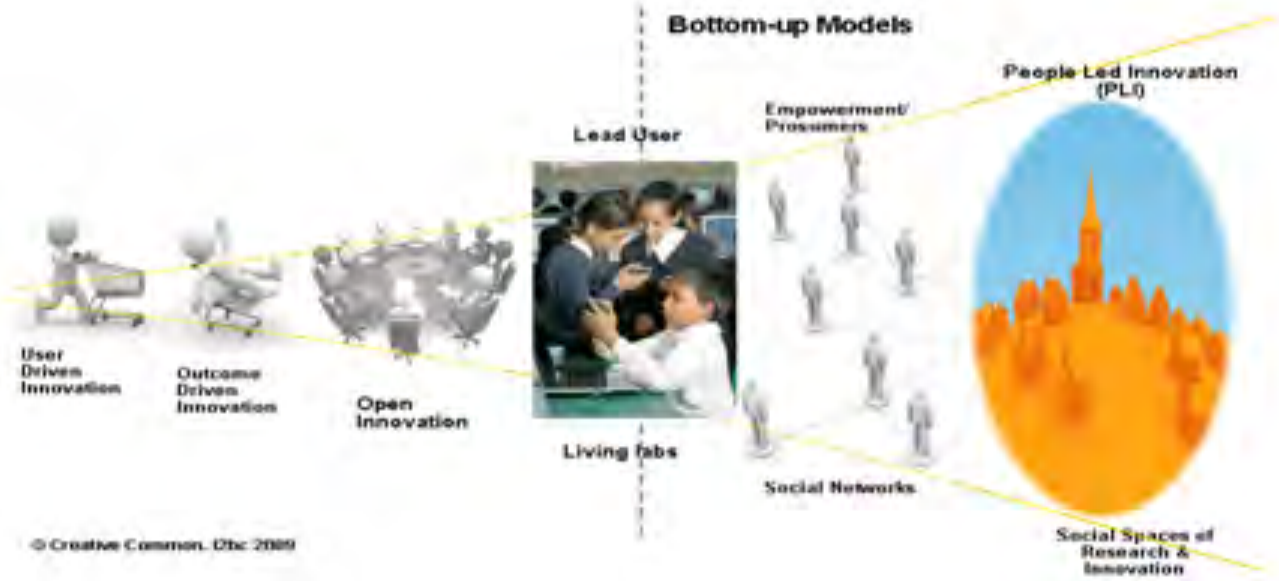
This establishes that ***stake*** is to be considered the potential for gain or loss by a given individual or group when choices have to be made that involve other groups as well with other possible gains or losses.

USER NEEDS : availability, accessibility, usability and services

Each of the HABITATS pilots is therefore built on:

- existing concrete services currently carried out by project partners
- potentials of data access through network services and
- Enhancement through usage scenarios developed by user communities, in order to meet the three HABITATS criteria of relevance, openness and responsiveness.

Engaging communities

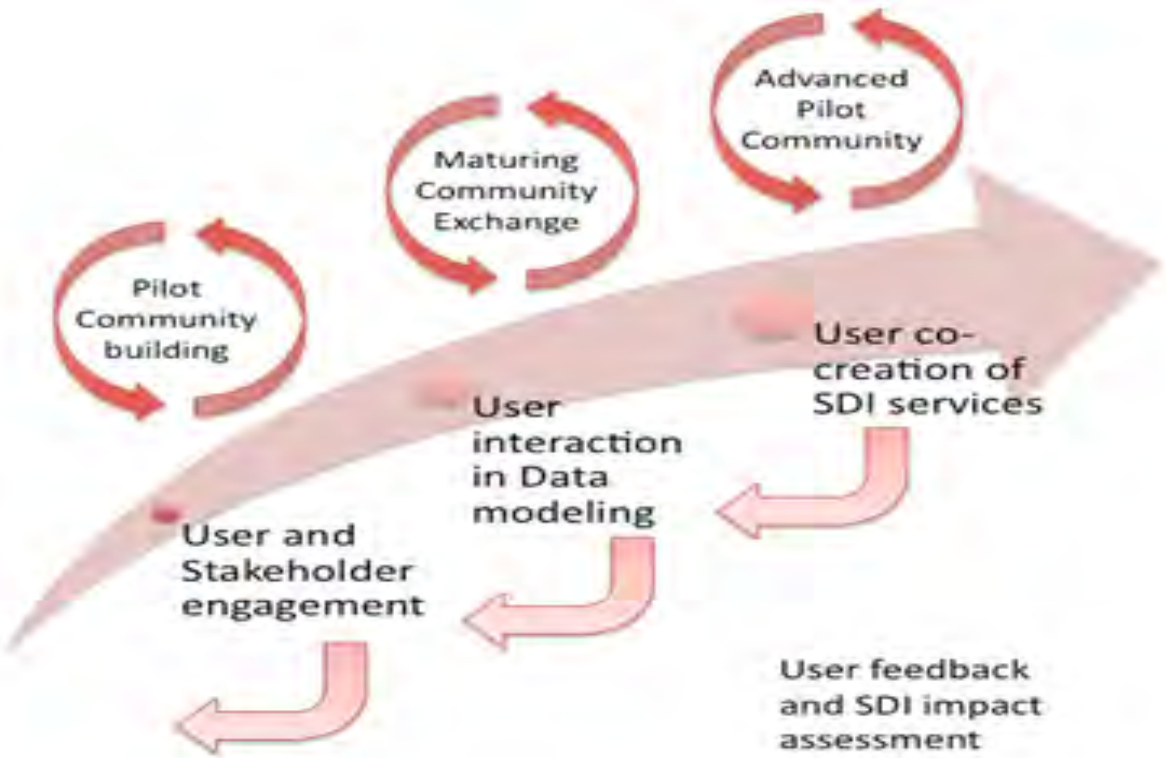


And at a more local level

Whether the context of the stakeholders in the validation sites if cultural, institutional, financial and legal barriers are preventing or delaying the sharing of existing data?

If so, How should we, the HABITATS' consortium and its stakeholders, be looking at these barriers so as to further understanding on the need of harmonization of key spatial data themes required for support environmental policies?

Do stakeholders have an understanding of what kind of issues are crucial for enhanced environmental policy-making at their communities, local level, and how they these may impact on their livelihoods?


Advanced Pilot Community
Maturing Community Exchange
Pilot Community building
User co-creation of SDI services
User interaction in Data modeling
User and Stakeholder engagement
User feedback and SDI impact assessment

- ***Validation driven by the prospect of user engagement***

In this case end-users are not yet directly involved in social validation, but the prospect of user engagement is already influencing institutional behavior. Pilots involved are: Wild Salmon Monitoring (IE), Economic Activity of Marine Habitats (LV), and Forest Management (CZ).

- ***Validation through direct user interaction with the data modeling process***

In this case there is, or will be, direct participation of (expert/non expert) users in data modeling. Pilots involved are: Monitoring Protected Marine Areas (ES), Environmental Education in a Natural Reserve (ES).

- ***Validation driven by the co-design of innovative "demand pull" services***

This is the most user-driven approach, as it actually involves final end-users in the co-design of services that use INSPIRE compliant data sources. Pilots involved are: Hiking Trip Planner (IT), Sheep and Goat Herding Management (IT).

Management of natural resources	
Wild Salmon Monitoring (IE)	Online service to allow Fishermen check what fishing they are allowed to do in a particular river.
	Or input their rod catch data on their smart phone.
La Palma Protected Marine Area (ES)	Online temporal series for each Parameter for general users and expert users.
	Eco-tourism
Hiking Trip Planner (IT)	Map browsing on Internet and mobile phones.
	Define by themselves the composition of maps based on their personal specific interest;
Natural Environment – Augmented Reality (ES)	Download waipont, routes, maps from centralized site with official and updated data; Browse maps with mobile phones or smartphones equipped with GPS receivers Users give feedback on quality of routes. Visualize the spatial data with 360º images of a outdoor stage via web Tourist routes – educational.
Economic activities	
Sheep and Goat Herd Management (IT)	Services for locating animals Service to stay in contact with the park administration to assign grazing areas.
Economical activity at marine coastal benthic habitats (LV)	Construction Works at the Marine Areas – online information and planning tool.
	Fishing Activities – information service on the marine coastal habitats.
National policy	
Czech National Forest Programme (CZ)	Online service on Subsidies in the forest management – important to a lot of people and private growers.
	Forest Management (silverculture) procedures to avoid floods – as current tree species do not retain water well.
	Mapping of Forest Types – mainstream forest management procedures.

Use case	Wild Salmon Fishing Conservation Catch Advice in Ireland
Actors	Fishermen, Anglers, Researchers, Decision Makers, other actors related to the Salmon Fishing industry in Ireland.
Task	To make formulation of the Irish Wild Salmon Fishing Regulations more participatory by involving all relevant actors interactively in the process, making their databases more open and widely available (and INSPIRE complaint), and enable users to provide feedback on how to make the data more useful for them. For instance, anglers could provide real-time rod-catch data using a smart phone application – where catch and release fishing is allowed on rivers.
Assumptions	That the proprietary Databases can be made INSPIRE-compliant using the HABITATS Metadata profile to be accessible on the Irish Spatial Data Exchange (ISDE) using the HABITATS Reference Laboratory tools and portal.
Description	The Irish Standing Scientific Committee on the status of Irish Salmon Stocks (or Salmon Advisory Group) scientifically analyses all data on wild salmon in Ireland and issues recommendations every December on the conservation of salmon stocks in each of the 148 Irish salmon fishing rivers for the coming year. These have a major direct impact on anglers, commercial fishermen and fishing-related businesses such as guest houses, hotels and lodges, associated with each of these individual rivers.
Comments	The aim is to use the HABITATS INSPIRE Social Validation approach to transform the data and modes of operation of this community from being mainly "information push" to be being a lot more "User pull" by making the data open and usable online based on INSPIRE principles, open standards, and social networks to validate the utility and acceptability of the data. This will enable the developement of services based on economies of scale using spatial information that adheres to a standard format that is widely adopted. This fits well into the HABITATS "Management of Natural Resource Management" cluster, and will engage Citizens (fishermen, anglers, fishing-related business, researchers and administrators/decision-makers) to be involved, for future sustainable operation.

Use case	Wild Salmon Fishing Conservation Catch Advice in Ireland
Actors	Fishermen, Anglers, Researchers, Decision Makers, other actors related to the Salmon Fishing industry in Ireland.
Task	
Assumptions	
Description	
Comments	

Use case	Wild Salmon Monitoring and Management Internationally
Actors	Researchers, and Decision Makers
Task	
Assumptions	
Description	
Comments	

Use case	Monitoring of a Proteded Marine Area
Actors	State Government Ministries, Regional Ministries, Local government, Universities and Research Centres
Task	
Assumptions	
Description	
Comments	

Use case	Hikers' Trip Planning
Actors	Madonie Park Authority, Local tourism enterprises, Hikers
Task	The main objective is to provide a mobile information service to collaboration in monitoring flora and fauna as well as the infrastructures. Information related to maps and paths enhanced w environmental information will allow to plan a trip and obtain int additional facility will allow hikers to take a picture or make a note i the park (i.e. sighting of an endangered species, signalling a need t send such information to the Park management.
Assumptions	The availability of updated and reliable maps and geographical infor The availability of information related to the environmental flora and The availability of internet or other forms of connectivity along the shelters).
Description	Use of INSPIRE-compliant data models and metadata allows for smo
Comments	

Pilots involved	Stakeholder List								
	1	2	3	4	5	6	7	8	9
	SDI Owner	Scientists, Researchers	Decision Makers	Fishermen, Anglers, Shepherds	Tourism Enterprises	ICT Enterprises	Tourists, Visitors	Non profit Associations	Other (specify)
Wild Salmon Monitoring (IE)	v	v	v	v	v				Salmon Advisory Group
Economic Activity of Marine Habitats (LV)	v	v	v	v				v	Foreign investors
Forest Management (CZ)	v	v	v					v	Forest owners
Monitoring Protected Marine Area (ES)	v	v	v			v	v		Disabled persons
Environmental Education in a Natural Reserve (ES)	v	v	v		v	v	v		
Hiking Trip Planner (IT)	v				v	v	v	v	
Sheep and Goat Herding Management (IT)	v			v		v			Dairy farmers

IMCS Pilots Results

The 5 type of stakeholders' feedback and their marked-up sheets were approximately as follows:

1. SDI owner, the research institute.
The stakeholder has been interested into visual display of data for research purposes and also partly into INSPIRE-compliance. The services requested did not change over the time substantially. SDI owner has also plans to maintain the pilot services as the costs are not high and can be funded through the national basic funding for research institutes.

2. local researchers and students.
These stakeholders were mostly interested in having exact references in location data or habitat data necessary for the study and research. So the main emphasis was on user-friendly tools which were developed consequently.

3. decision makers
The members of local authorities/governments. Representatives related to the implementation of INSPIRE indicated towards the importance of compliance with the standards. That was solved during the pilot development. Otherwise the interest was not high.

4. international researchers.
Similar to the local investigators, international researchers were interested in the precision of the data and locations of the habitats as well as compatibility of the formats for use in wider area assessments.

5. non-governmental organizations. NGOs represented the stakeholders interested in the technologies of pilot services. They were even advising for some solutions but did not require additional services.

Irish Pilot Results

The 5 type of stakeholders' feedback and their marked-up sheets were approximately as follows:

1. SDI Owner
IFI Technical Manager.

Still only a few services, but INSPIRE compliance is now being addresses, whereas before it was not

2. Scientists, Researchers
IFI Head of Fisheries Protection

Had no AIS Phone App service before We now have it, and it involves the anglers and public, and INSPIRE compliance is being addressed.

3. Decision Makers
Director of IFI

The Phone App involves everyone in an user friendly way, and allows IFI as the future LMO to begin implementing to INSPIRE requirements.

4. Salmon Angler
Private individual who has used the App

Salmon conservation is vital for the future of angling in Ireland. Would like to see more easy to use services such as the Phone App. Has no interest in INSPIRE.

Lessons learnt

- ***Flexible and adaptive methodological approach***: **focusing on monitoring and evaluating innovative approaches under diverse cultural and social conditions, using evidence-based methods complemented by cross-referencing of key processes at each iteration of development and re-design of tools**

- ***Stakeholder interaction and participation***: **the monitoring and evaluation methodology for assessing the effectiveness of tools and the impact of their adoption requires gathering evidence of the evolving dynamics among the different stakeholders at different stages of the process**

- ***Multi-level perspective***: **the monitoring and evaluation methodology includes a 3-stage cycle of diagnostics, assessment, adjustments that need to be cross-referenced at local, national and regional levels, serving to evaluate the effectiveness of the methods and tools, and at the same time providing the means for identifying the mechanisms and networking efforts needed for scaling-up the results.**

HABITATS has identified three criteria that can motivate uptake and move from mere outcomes to real impact

- ***Relevance***: services developed in validation pilots must be concrete enough to suggest added value while broad enough in scope to allow for adaptation to different usage scenarios.
- ***Openness***: the approach adopted should be suggestive enough to generate new scenarios for trans-European data sharing, with pilot stakeholder communities open to cooperation.
- ***Responsiveness***: the project services and communities should be able to flexibly adapt to the needs and requirements of new users considered as an increase in network value, thus responding positively to expectations.

HABITATS great aspiration

The long-term viability and sustainability of the social spaces of research and innovation in pilots... ***'the ideal mix for sparking of viral standards adoption processes'***

gracias