EU-MACS
highlights of the assessment of the uptake of climate services

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with input from EU-MACS team

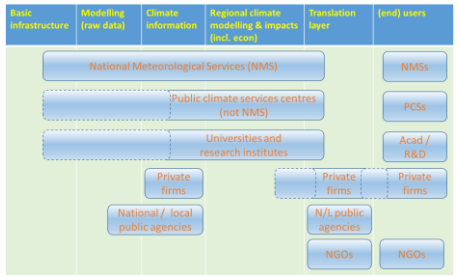
Climateurope Climate Services Festival
Belgrade 17-19 October 2018

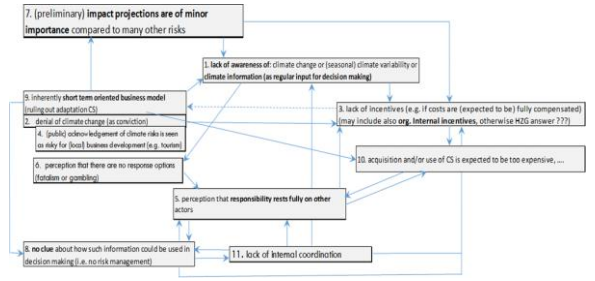
Main features of EU-MACS

- H2020 project 2016 – 2018 twinned with MARCO project
- Assesses **drivers, obstacles and enablers** for climate service market development
- … including the role of *innovation*
- Aims to promote **better matching** of supply options and user needs
- Engages with stakeholders from **finance, tourism and urban planning**
- Produces recommendations on policies and measures
- Offers tools and guidance for users and providers

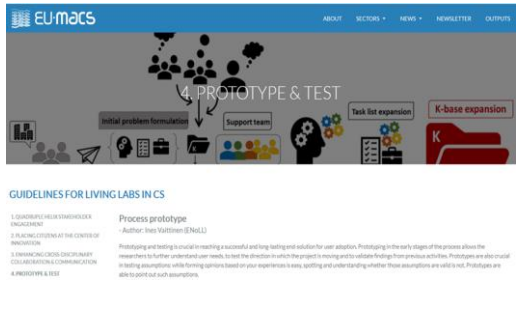
Key building blocks

- **Identifies & analyzes structural factors**
  - Regulation
  - Market structure
  - Benefits
  - Risk scope
- **Devises & applies interaction formats**
  - In the project – stakeholders
  - In climate services provision & use
- **Generates guidelines & tools**
  - Policy briefs
  - Living Labs
  - FAQ





	Generic	*Customised*
Focused	**Maps & Apps:** • Generic climate services • Freely or cheaply available … • … to all users	**Expert Analysis:** • Scientific, professional, commercial, monodisciplinary climate services • Tailored to specific decisions and decision-makers
Integrated	**Sharing Practices:** • Mutual services on … • … adapting and mitigating climate change in specific environments • Available to all users	**Climate-inclusive Consulting:** • Professional, commercial and … • … transdisciplinary climate services • Tailored to specific decisions and decision-makers



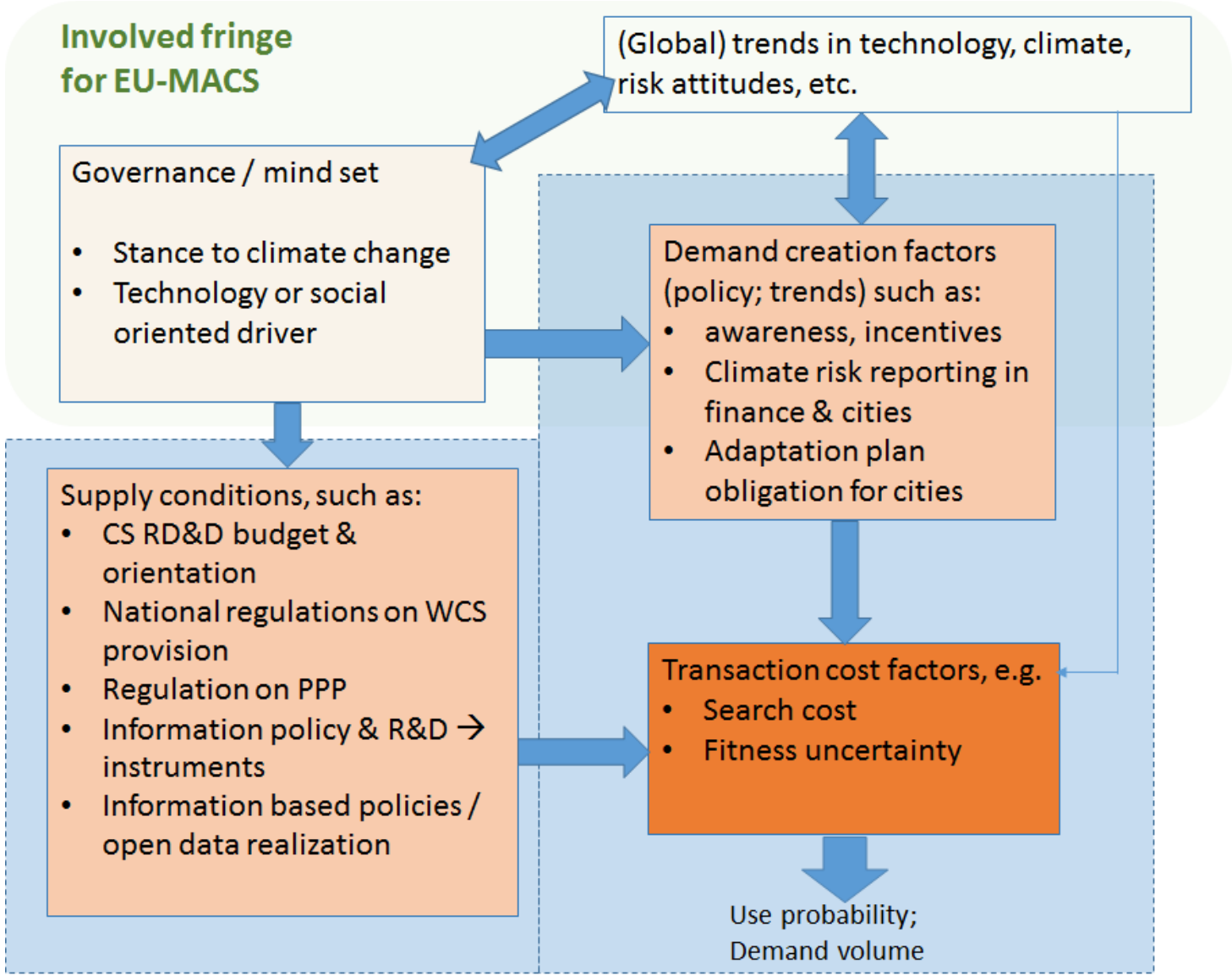
Main topics

- Structure of obstacles and mechanisms
- Value chain(s) of CS, business models, market structure
- Interaction formats – overview / example Tourism
- Obstacles and opportunities
- Inventory of policies & measures
- Towards a CS policy scenario

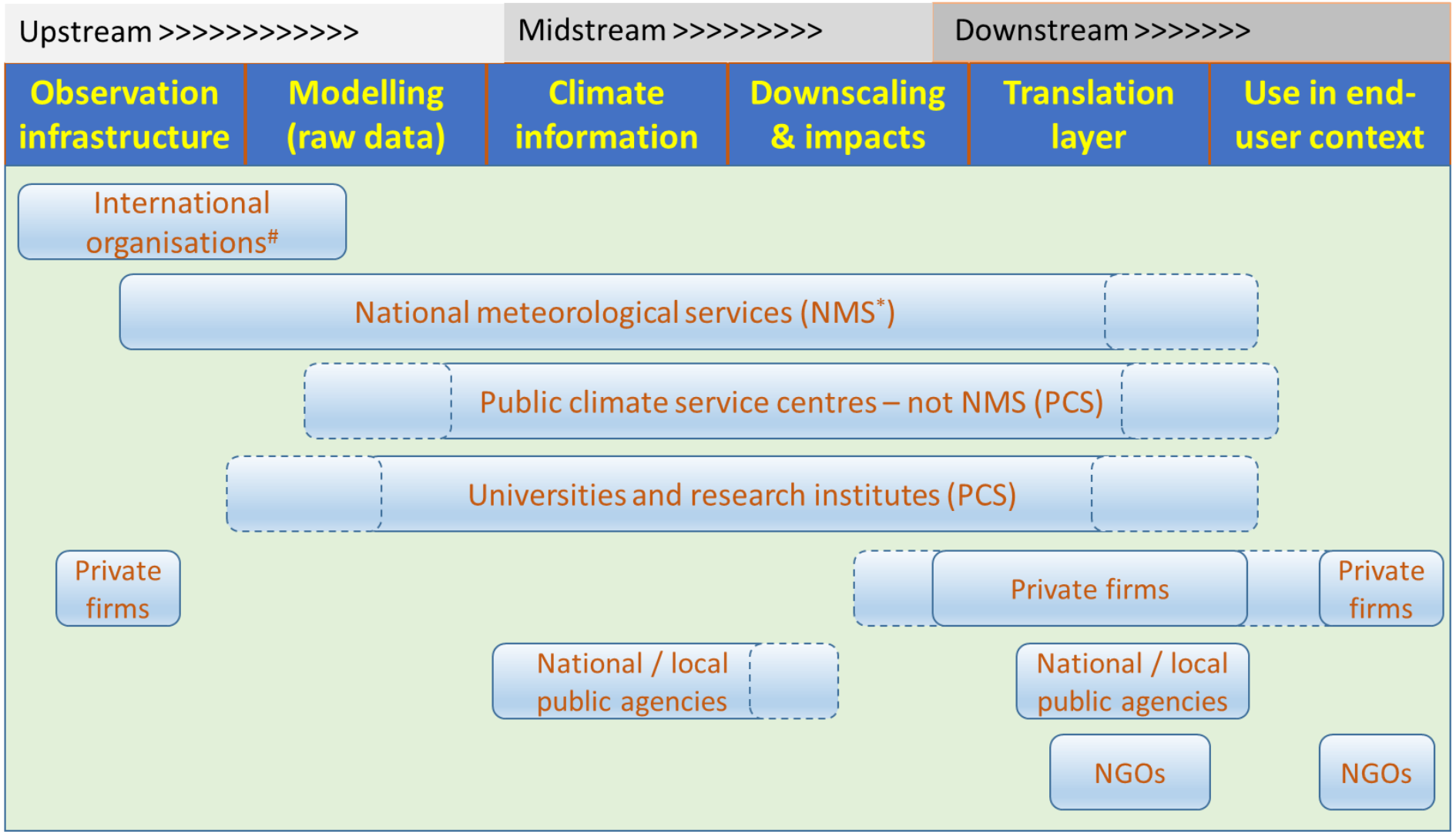
Structuring obstacle domains

Obstacles and drivers can be arranged in 3 economically and policy relevant domains:

- **Demand** (for climate services)
- **Supply** (of climate services)
- **Matching** of offers and needs



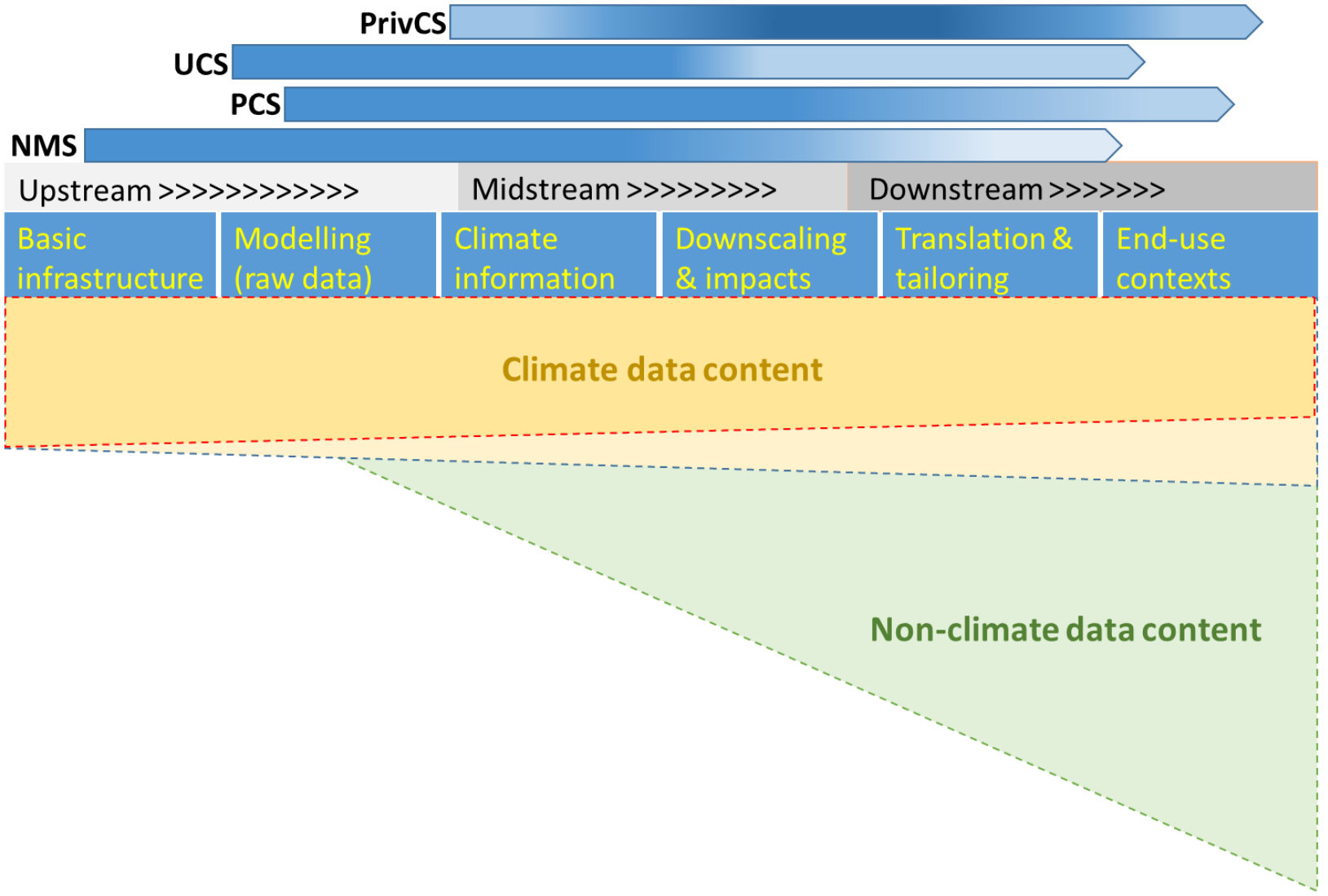
Value chain segments of climate service provision
(public) CS providers should realize their position



*) may also include hydrological services (NMHS); #) such as ECWMF and EUMETSAT

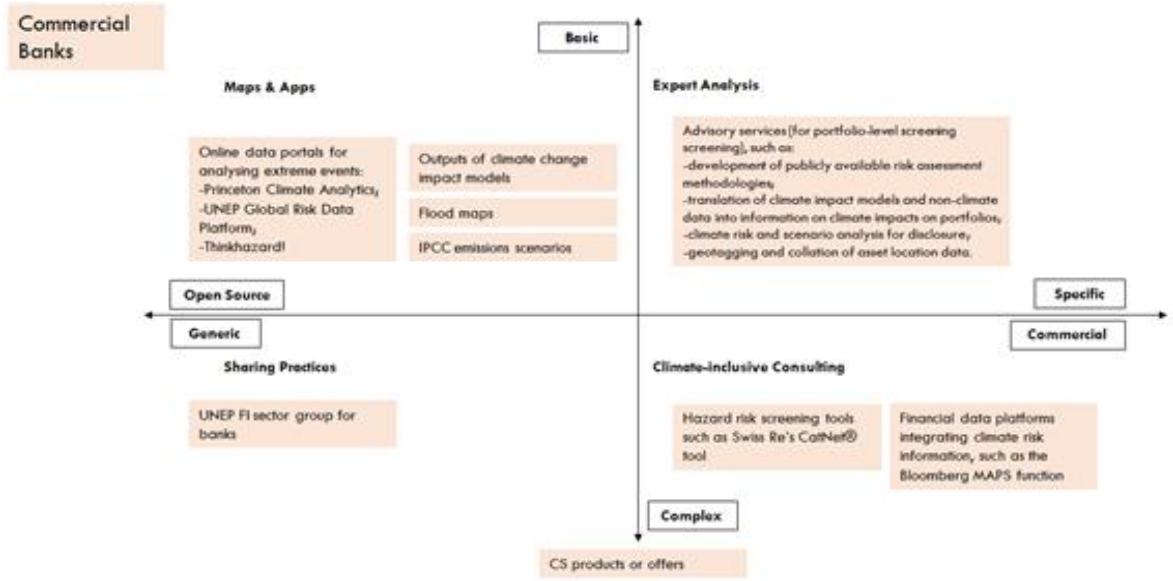
Value chain, providers, value added, obstacles

- It is very hard to combine skills for all 3 segments in one organization
- Seasonal and adaptation oriented climate services are largely separate w.r.t fitting interactive formats
- Market volume depends also on market structure
- Innovations in downstream and impact CS especially important

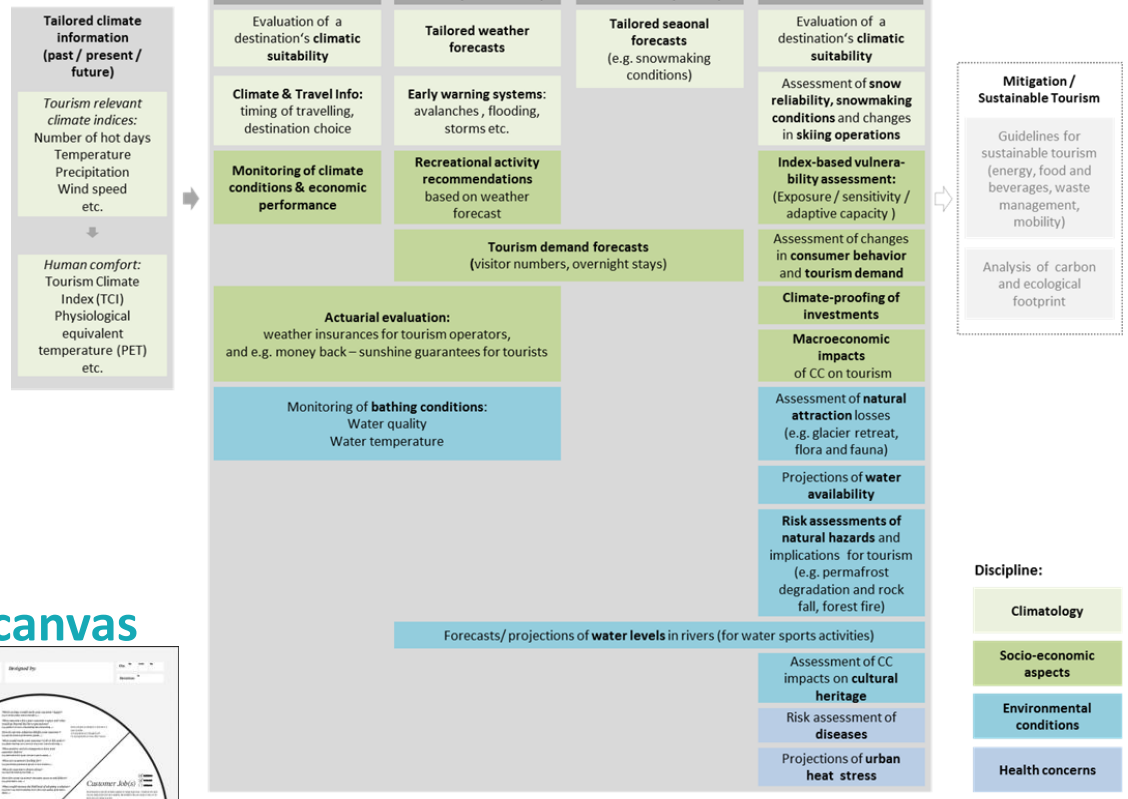


Exploration & interaction formats

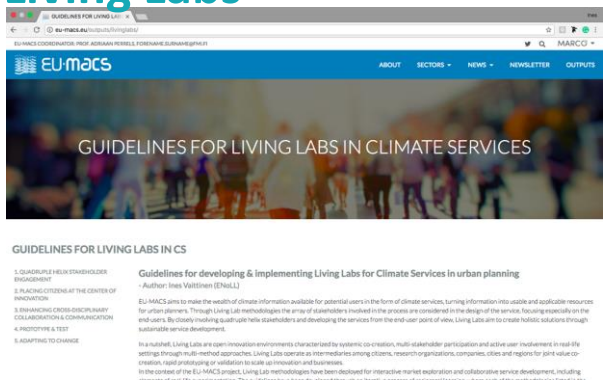
Product scenario matrix



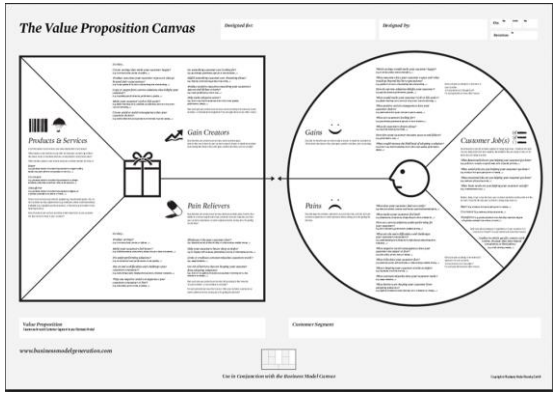
Initial palette of CS for tourism



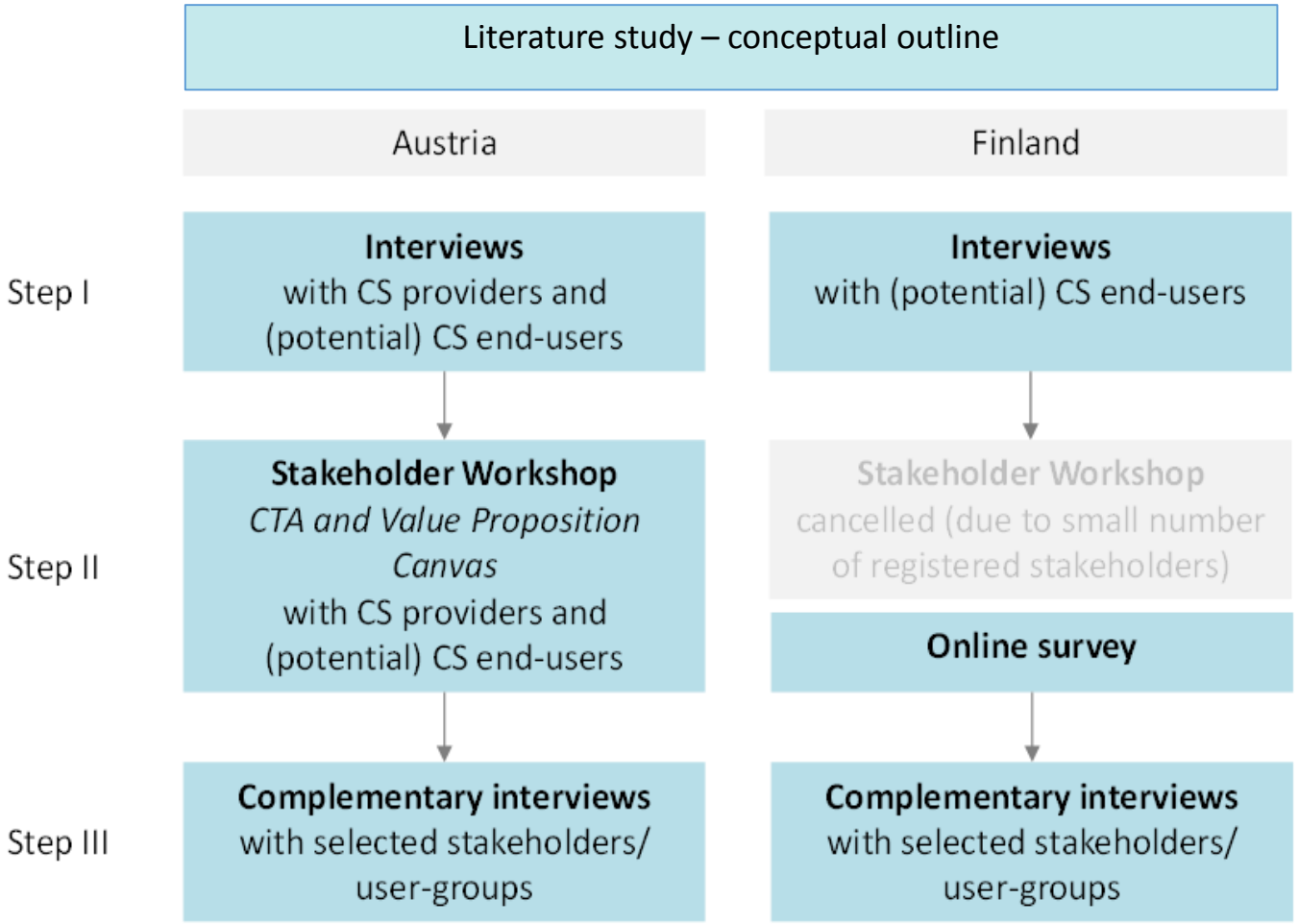
Living Labs



Business model canvas



Interaction with Tourism 1

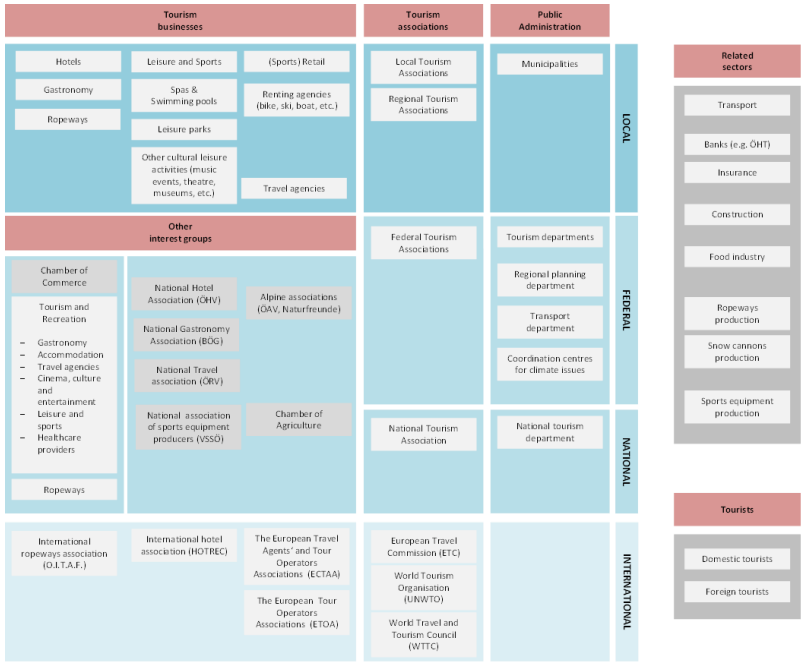


Involved:

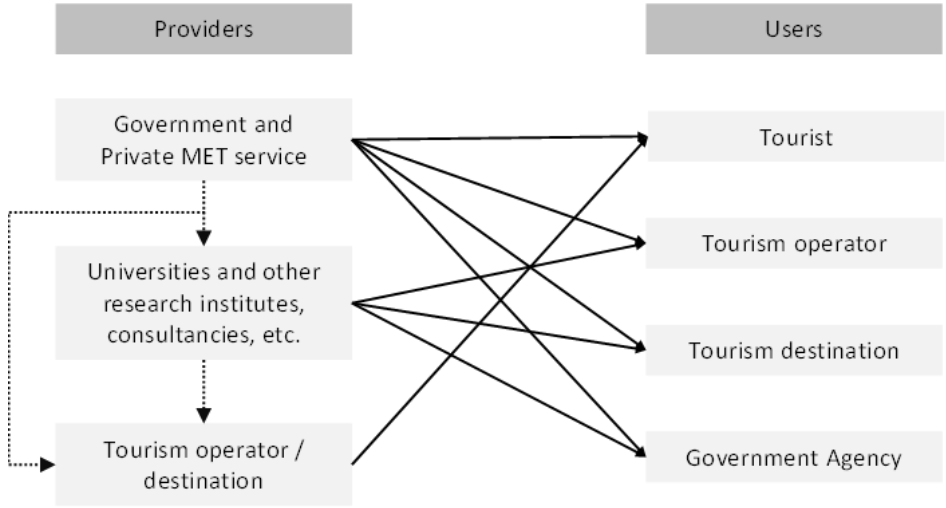
- Provincial & regional tourist boards
- Regional / local public administrations
- Hotel association
- Hospitality firms
- Ski resorts
- Recreation facilities
- Climate Service expert org:
  - Met-offices
  - Universities
  - consultancies

Interaction with Tourism 2

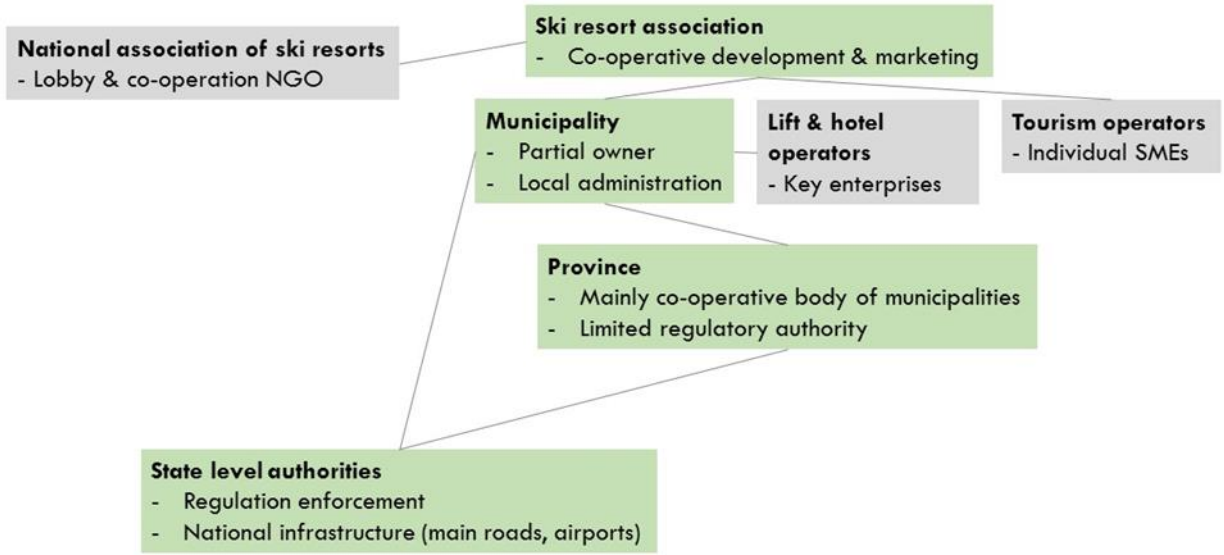
Austria: detailed stakeholder mapping



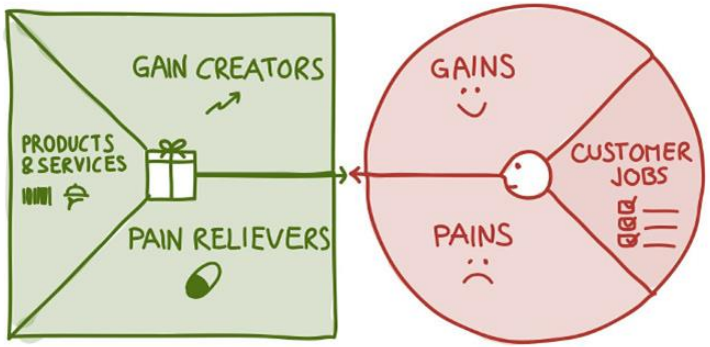
Austria: CS market mapping



Lapland: detailed stakeholder mapping by resort



Interaction with Tourism 3



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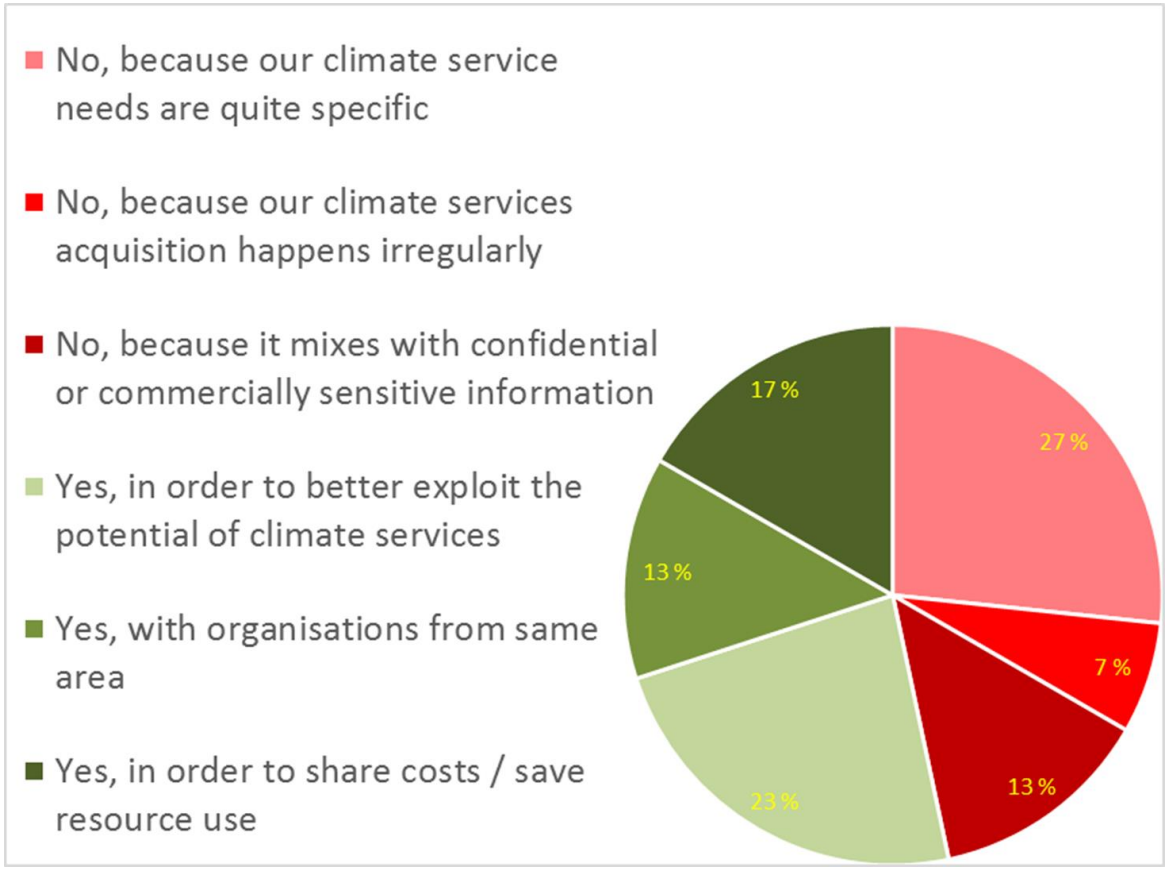
	USER NEEDS
Applicability & Format	– High resolution: information at local/regional level – Simple & compact – easily understandable – Consultancy services most relevant
Short-term	– Improved weather forecasts (and seasonal forecasts) – Tourism associations/ Hospitality: activity recommendations based on weather forecasts
Strategic planning	– Ski resorts: modelling improvements (e.g. foehn events, extreme precipitation, snowmaking) – Public administration: advise on adaptation strategies and investments planning (e.g. cycling infrastructure)
Research	– General market trends, travel behavior - in relation to climate (change) – Impacts on summer and shoulder-season tourism – Connections between tourism and related areas, such as agriculture, transport, environment

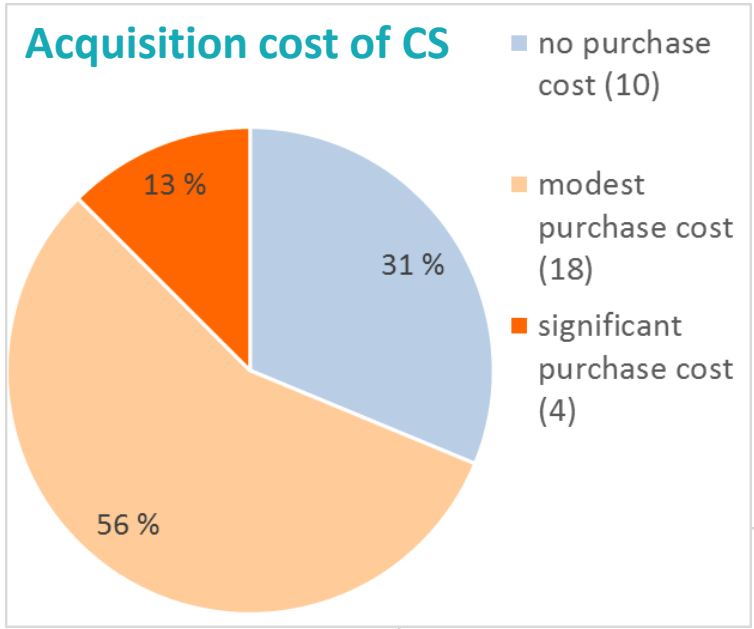
	BARRIERS
Awareness	– Risk denial and lack of risk awareness – Unawareness of existing climate services and their benefits of use
Priorities	– Climate is only one issue tourism businesses have to deal with and requires additional resources besides their daily business – Lack of financial pressure – Absent long-term risk management/ Short business decision cycles – Higher interest in short-term services
Capacity	– Limited resources to use or interpret climate data and to provide business/region-specific data. – Financial constraints
Applicability of CS	– Too coarse spatial resolution – Lack of user-friendliness (too complicated scientific language)
Lack of trust	– Conflicting messages in the media cause skepticism – Uncertainty of climate scenarios and lack of knowledge how to interpret climate data

resource cost may be more in use than in acquisition even If climate service is charged

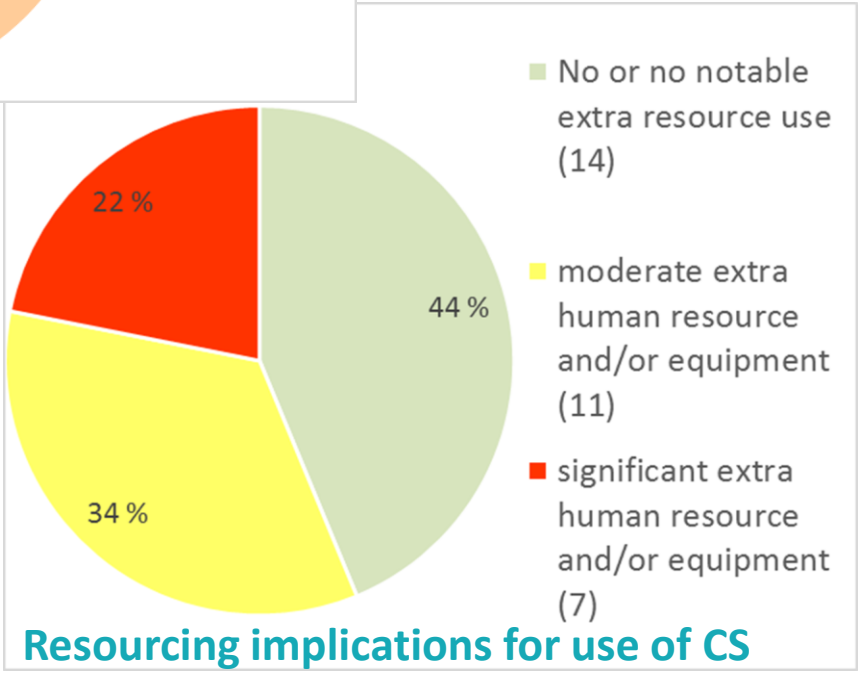
Preparedness for joint acquisition of climate services



Acquisition cost of CS



Resourcing implications for use of CS



Most prominent obstacles

EU-MACS results based on:

- Interactions with stakeholders (surveys, workshops, interviews)
- Obstacle list review
- Rating exercise by EU-MACS experts

Demand:
(preliminary) impact projections are of minor importance compared to many other risks
inherently short term oriented business model (ruling out adaptation CS)
no clue about how such information could be used in decision making (i.e. no risk management)
lack of awareness of climate change or (seasonal) climate variability or climate information (as regular input for decision making)
lack of incentives (e.g. if costs are (expected to be) fully compensated)

Supply:
available CS information is not really packaged as service (but e.g. rather as R&D project output)
CS product portfolio is totally or largely out of scope for the user group
insufficient resourcing of CS product development and delivery

Matching:
mismatch of provider's and user's 'language' and conceptions
uncertainty about the eventual relevance of the CS for the user's decision process ('fit for purpose')
temporal and/or spatial resolutions do not match with other user's data
insufficient guidance and/or embedded consultancy

Preliminary Identified instruments

Instrument categories	Public and sector policies	Measures at organisation level
Financial incentives ○ subsidies ○ sanctions ○ public procurement	Climate communication fund; Public service contracts on CS; Promoting / supporting brokerage services (e.g. start-up subsidy)	Sponsoring networking between business – experts – policy makers; Promoting / supporting brokerage services (e.g. start-up VF)
Obligations ○ Accountability ○ Disclosure ○ Minimum standards	Regulated climate proofing (incl. resilience level); Societal risk assessments; Public service contracts on CS;	Sectoral guidelines and standards (such as endeavoured in the TFCD process)
Information ○ Training ○ Campaigns ○ Open access ○ Communities of practice ○ Quality standards	Regulated climate proofing (incl. resilience level); CCIAVD as part of business education; Ambitious open data policy; W&CS marketing packages; CS Best Practice programmes	Sponsoring networking between business – experts – policy makers; W&CS marketing packages; CS Best Practice programmes
Hybrid ○ Feebates (performance dependent) e.g. related to progress in uptake ○ Sanctions combined with standards / open access / disclosure rate	Public service contracts on CS; Exploration of new business & resourcing models ('fremium'; P&U clubs; etc.); Promoting / supporting brokerage services;	Promoting / supporting brokerage services;

Still in preparation: CS Policy Scenarios

Transformation ambition levels facilitating:

1. Service niches
2. Market niches
3. Regime shifts

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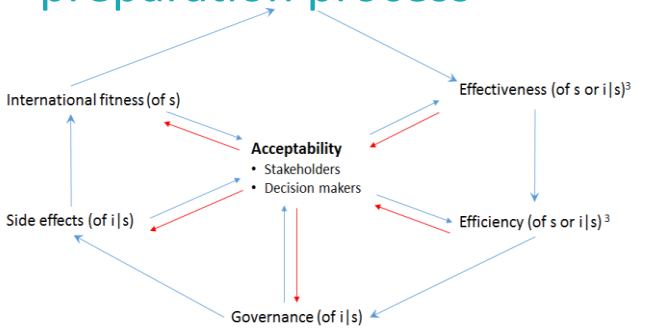
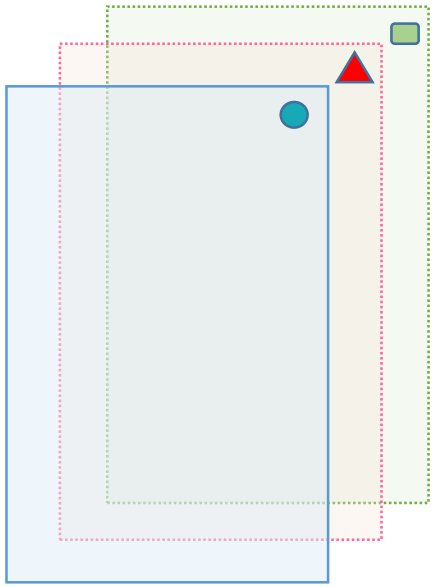
Acceptability aware policy preparation process





Policy scenarios

- open data
- market separation
- charging
- obligations & accountability
- …etc..

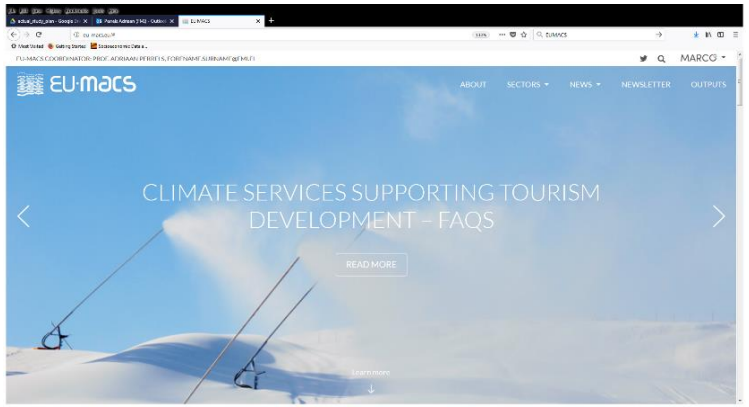
Conclusions (selection)

- The greater part of current climate services (CS) related activities is realized under ***non-market conditions***; yet there are signs of change
- *Public* CS providers should pay sufficient attention to ***business model development,*** in connection with proper understanding of viable positions in the value chain (**role creativity!**) - also users can organize themselves by region / sector, as well as user-provider groupings
- ***Benefits*** of climate services need to be better demonstrated and communicated
- Consequent and comprehensive ***open data policy*** is key enabler, but needs careful reflection on ***charging*** and public-private domain delineation
- Given the novelty of CS for many users joint promotion of different CS (seasonal, adaptation oriented, …) is not helpful for the promotion of CS uptake
- Well communicated and **harmonized standards and quality assurance** will promote uptake of CS, especially if it includes links regarding **climate ↔ non-climate data**
- **Funding limitations** seem more crucial for **regular CS delivery** than for CS development; at the demand side funding (WTP) depends on clarity of expected benefit

EU MACS Consortium

Participant	Type of organisation	Country
FMI (coordinator)	Met-services; climate & adaptation research;	Finland
HZG-GERICS	Climate services & research	Germany
CNR-IRSA	Hydrological research & consultancy, incl. adaptation	Italy
Acclimatise	Climate services provider	United Kingdom
CMCC	Climate research and services	Italy
U_TUM	Market start-up support for innovations	Germany
U_Twente	Research in innovation mechanisms and policy	Netherlands
JR	Technical & social innovations for climate change issues	Austria
ENoLL	Promotion and support of Living Lab applications	Belgium

EU MACS media & contacts



Website: http://eu-macs.eu/#

TWITTER: http://eu-macs.eu/#


European Market for Climate Services

#3

NEWSLETTER March 2018

In this issue

Welcome
by Peter Stegmaier

The stakeholder perspective: interview with Esko Kivisaari

Reports from recent events
JPI Expert Workshop in Venice
Climate Services at work in Brussels
EU-MACS Workshop in tourism in Graz

Upcoming activities and call for papers

Updates on project activities

Recent publications

Welcome

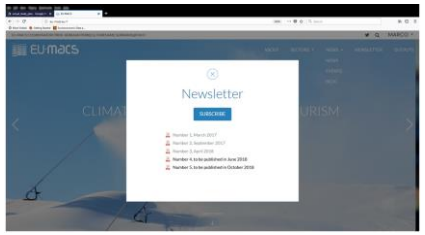
By Peter Stegmaier, University of Twente

Climate services are still a niche phenomenon. Service innovations tend not to be utterly smooth in the beginning. There is still a lot of experimentation with user practices, business models, products, regulatory structures, infrastructure, and technology, which makes it hard for them to compete on the market against established services or forms of 'strategic intelligence' (the latter we call 'incumbent regime').

The specific market itself might even be not yet fully developed - or very small and already dominated by the few services that were able to establish themselves in their niches. Newcomers will thus hardly gain a share, but rather have to find their own niches. Especially when innovations include sustainability promises, market niches and user demands may not be ready yet, since the innovations may differ radically from the prevailing. Moreover, clever niche management will require to link niches at some point.

To explore climate services-related trends and processes that can have a potential to foster niche development, we carried out an explorative study (see next page) on the EU niche governance and procurement of innovation for climate services in global context, emerging (soft) standards, conventions, and ethical frameworks. We looked into neighbouring niche developments (e.g. ecosystem services, climate engineering, platform capitalism with FinTechs and InsurTechs), into relevant technological innovations (e.g. block chain, online information brokerage, internet of things, citizen sciences).

Newsletter:
http://eu-macs.eu/....



Publications:

- http://eu-macs.eu/outputs/#
- Climate Services – special issue with MARCO
- (spring 2019)
- Urban Climate – special issue (spring 2019)

Further questions:
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Thank you