



# EU MACS

aims to unleash

## the European Market for Climate Services

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Climateurope Festival Valencia 5-7 April 2017

# Main features



- 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
- Multi-disciplinary approach entailing
  - scientific, technical, legal, ethical, governance and socioeconomic vantage points
- Combines theory and application through explorative market development exercises
- Engages with stakeholders from **finance, tourism and urban planning**





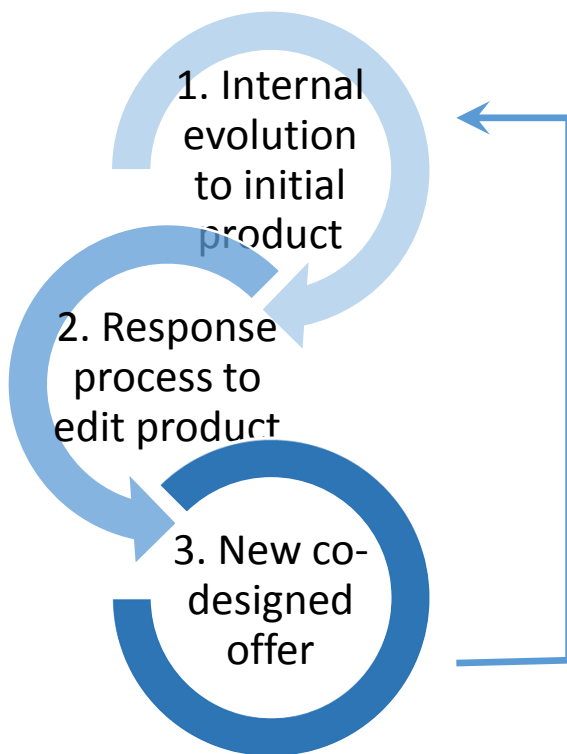
# EU MACS output



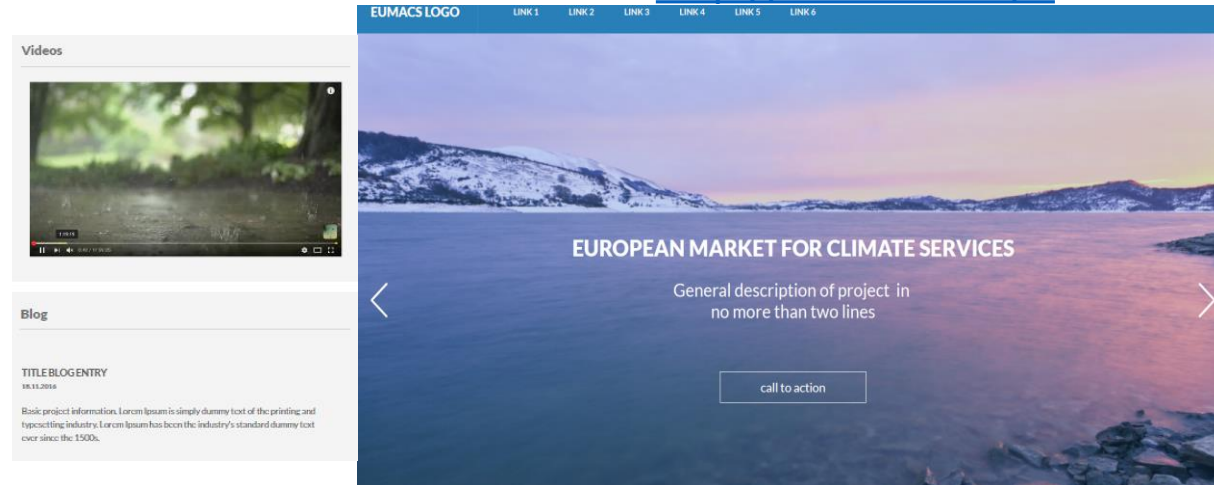
Deep stakeholder engagement from 3 sectors  
in co-design based CS explorations



## Interactive matching protocols



Website – <http://eu-macs.eu/#>



# Matching problems – market failures



- Lack of transparency (e.g. where do I find, conditions, ....)
- Asymmetry of information (providers and users grasp only own side)
- Inadequate incentives (user has no reason to act)
  - or mismatch between obligation weight and (perceived) benefit → minimized use
- Unclear/absent risk management (hard to insert climate information)
- Principal - agent problems (delegated obligations; cooperative acquisition)
- Product uncertainty
  - uncertainty features of the information (statistical properties; tractability)
  - uncertainty regarding the eventual suitability of information / service
- Transaction cost (search, selection, transfer, adaptation, use)
- Non-market (unpriced transfers; internal govt. transfers)
- Economies of scale & scope (surprises in future dynamics and structure)

# Market failures – some consequences

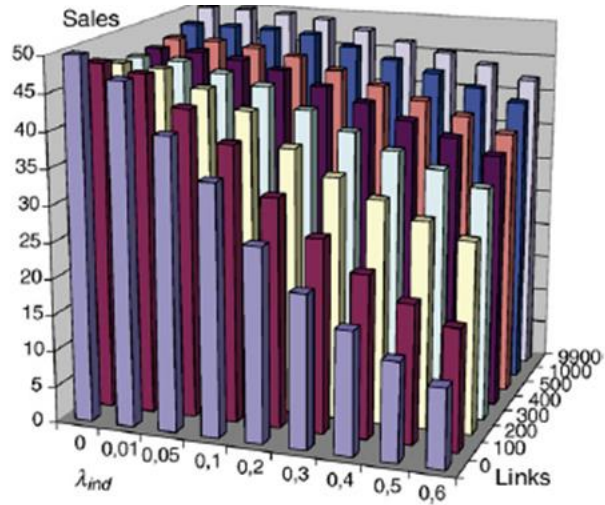


Fig. 5. Average (across 1000 random networks in every case) sales at trading session 500, measured in models with different  $\lambda_{ind}$  and number of random links, with 100 buyers, 100 sellers,  $\lambda_{soc}=0.4$  and  $q \sim \exp(1)$ .

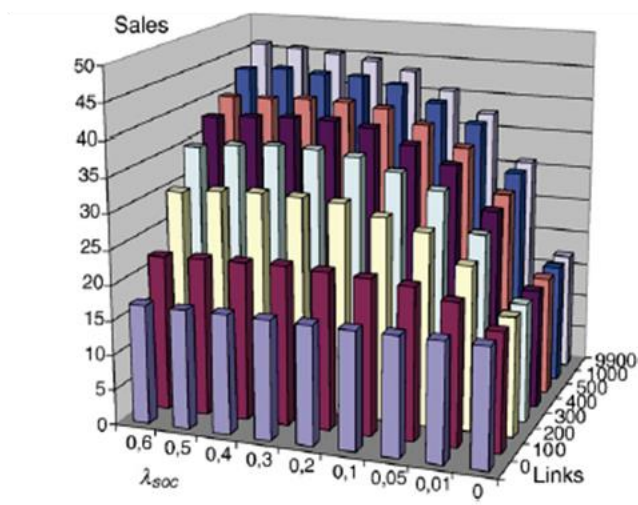
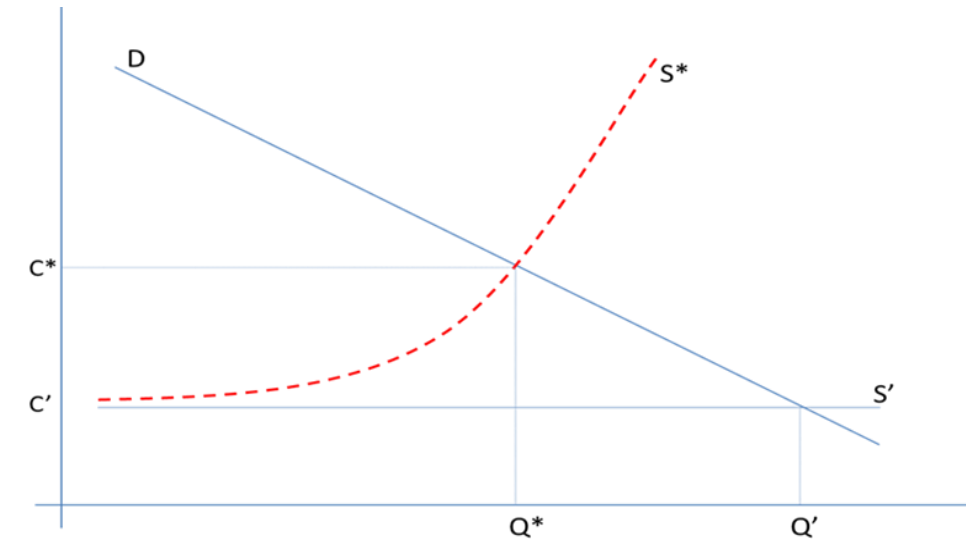


Fig. 6. Average (across 1000 random networks in every case) sales at trading session 500, measured in models with different  $\lambda_{soc}$  and number of random links, with 100 buyers, 100 sellers,  $\lambda_{ind}=0.4$  and  $q \sim \exp(1)$ .

Case: quality uncertainty and individual learning (R) / social learning (L);

Source: Izquierdo et al; J.of Business Research, 2007

Results indicate that e.g. **a community of users in combination with effective user experience information sharing facilities** may be useful; delineation of different communities may be difficult (national, thematic, ...??)



Implications of widening the scope of user costs beyond the unit-costs of supply



# Business models – more examples welcome



public

private

**basic budget**

designated tasks

**not for profit**

**public service contract**

**club**

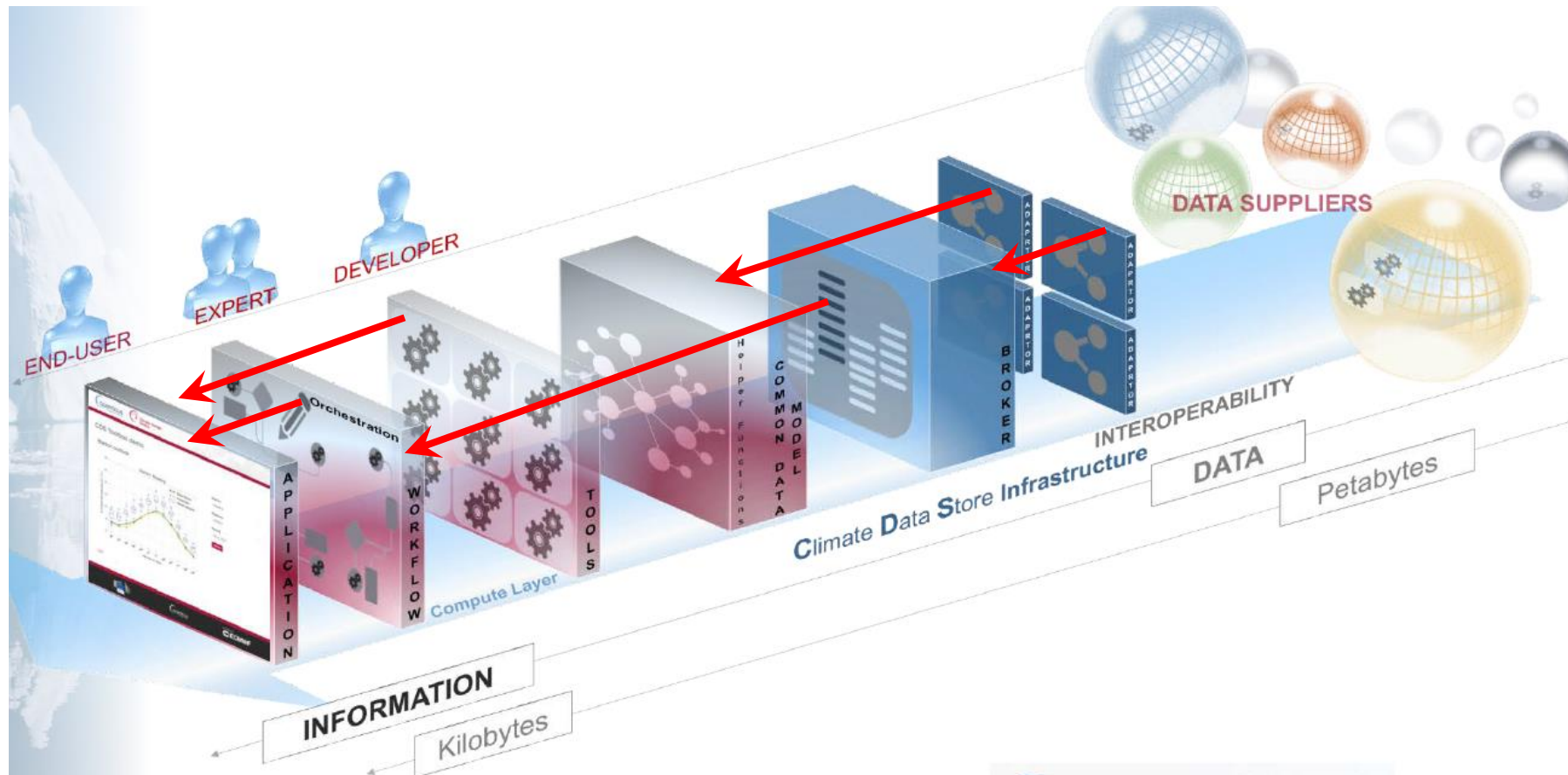
**partnership**

**piggyback**

**commercial consultancy**

opportunities

# Complex & variable value chains



Source: COPERNICUS C3S General Assembly 2017; presentation by J.N. Thépault

# Related projects & programmes



## **Sister project: MARCO**

- MARCO: market volume & observatory
- EU-MACS: market functioning & protocols

## **Seeking cooperation with:**

COPERNICUS C3S – SECTEUR and others

H2020 – SC5 – climate service explorations

JPI ERA4CS

Climateurope

PLACARD

Climate-KIC

EEA





## Next events



- ECCA 2017 (6-9 June Glasgow) – joint SECTEUR / MARCO / EU-MACS session
- EU-MACS seminar 19 June Helsinki (feedback from users on CS review)
- EMS-ECAMC 2017 (4-8 September Dublin) – climate services session
- EC 2017 Q4 – climate services networking event
- ....



<https://www.esurveycreator.com/s/EU-MACS>












# EU-macs

**Survey on barriers and enabling conditions on the European market for climate services.**

Bitte wählen Sie eine Sprache aus. / Veuillez s'il vous plaît choisir une langue. / Please choose a language. / Selezionare una lingua. / Lützen bir dıl seçin. / Por favor, seleccione un idioma. / Por favor escolha um idioma. / Kies een taal. / Välj ett språk. / Vennligst velg et språk. / Vælg sprog. / Valitse kieli. / الرجاء الاختيار لعتك.

- ☒ English
- ☐ Deutsch
- ☐ Español
- ☐ Suomi



Participant	Type of organisation	Country
FMI (coordinator)  FMI	Met-services; climate & adaptation research;	Finland
HZG-GERICS  Helmholtz-Zentrum Geesthacht Zentrum für Material- und Küstenforschung	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  unternehmertum Center for Innovation and Business Creation at TUM	Market start-up support for innovations	Germany
U_Twente  IGS INSTITUTE FOR INNOVATION AND GOVERNANCE STUDIES	Research in innovation mechanisms and policy	Netherlands
JR  JOANNEUM RESEARCH	Technical & social innovations for climate change issues	Austria
ENoLL 	Promotion and support of Living Lab applications	Belgium

# Preliminary messages



- Better matching of supply and demand deserves more attention, experimentation, sharing experiences, etc.
- Climate services seems upstream a distinct 'market', but downstream it gets often ever more embedded in other products and services
  - → far reaching consequences for recommendable actions
- Climate services market is dynamic and structure will evolve substantially
  - not always a 'market' solution needed - other exchange and sharing mechanisms may sometimes be more fitting
- Experiences of the past ~20 years with 'energy services' in relation to saving and greening energy could offer 'learning material'

# Thank You

Join in to better match climate services <http://eu-macs.eu/#>

