Business models, resourcing and quality of Climate Services

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Outline

- Introduction to Task 1.2: main objectives
- Identifying the main players by type: methodology
- The business model of CS: core characteristics
- Evolution of CS overtime: an example
- Word Cloud analyses: some hints
- Barriers and opportunities of CS market

Task 1.2: main objectives

Task 1.2 aimed at collecting knowledge about and assess the value of **the markets of climate services**, making an inventory of business models, types of cost recovery and financial and human resourcing for both CS providers and users.

Main question #1	Main question #2
Understand the main players and the business models they use	*Assess their value network, the barriers encountered and the available opportunities*

What are Business Models?

The "*representation of a firm's underlying core logic and strategic choices for creating and capturing value within a value network*" (Shafer, Smith, & Linder, 2005).

It's a **market device** (Doganova & Eyquem-Renault, 2009)…

It's a **productivity enhancement** factor (Tikkanen, Lamberg, Parvinen, & Kallunki, 2005)…

It's a **competition trigger** (Chesbrough, 2010)…

CS as a sustainable innovation

Sustainable innovation: invention that “takes into account environmental, social and economic considerations in its development and use” (Larson, 2011).

Sustainable business models for CS are crucial to:

- overcome market barriers
- linking stakeholders and users
- act as mediators between science and market

Insights from the literature

Despite positive trend, still poor linkage between providers and users (Vaughan et al., 2016; European Roadmap for Climate Services, 2015).
Providers are mainly public and research-oriented organisations

Why?

- Inadequacy of business model used (Brasseur & Gallardo, 2016)
- Information asymmetries (Vaughan and Dessai, 2014)
- Communication issues (EU Roadmap, 2015)

The market players: methodology

By looking at resourcing, distinction between:

1. Publicly-funded projects
2. Private sector
3. Co-production partnerships

Public funded projects

- **CORDIS database** using key words
- **Copernicus Climate Change Service (C3S)** with focus on "providers" and **Climate-ADAPT** database (using "climate services" as key word).
- **Others**: The World bank, the Global Framework for Climate Services, the CGIAR Research program on Climate Change, Adaptation and Food Security, the OECD Climate Fund Inventory → lack of consistency with other EU sources.

Private actors and co-production partnerships

- **Stakeholder consultation** with sub-sample of public funded projects
- **Main focus** on European actors
- Co-production partnerships: Multi-stakeholder initiatives with shared responsibilities and benefits between public and private actors.

The market players: the sample

30 mins interview per stakeholder;
28 interviews realised

Public funded projects

Providers and suppliers of:

- Climate projections and climate observations (global models)
- Climate projections (downscaled models at regional and local level)
- Impact evaluations (combining socio and agronomic data)
- Methodology development (indicators and/or protocols)
- New product development (e.g. sensors)

Supply-driven

Private actors and co-production partnerships

Main fields of work:

- Insurance and re-insurance
- Financial services (asset management)
- Oil&Gas
- Energy
- Strategic and environmental consultancy services

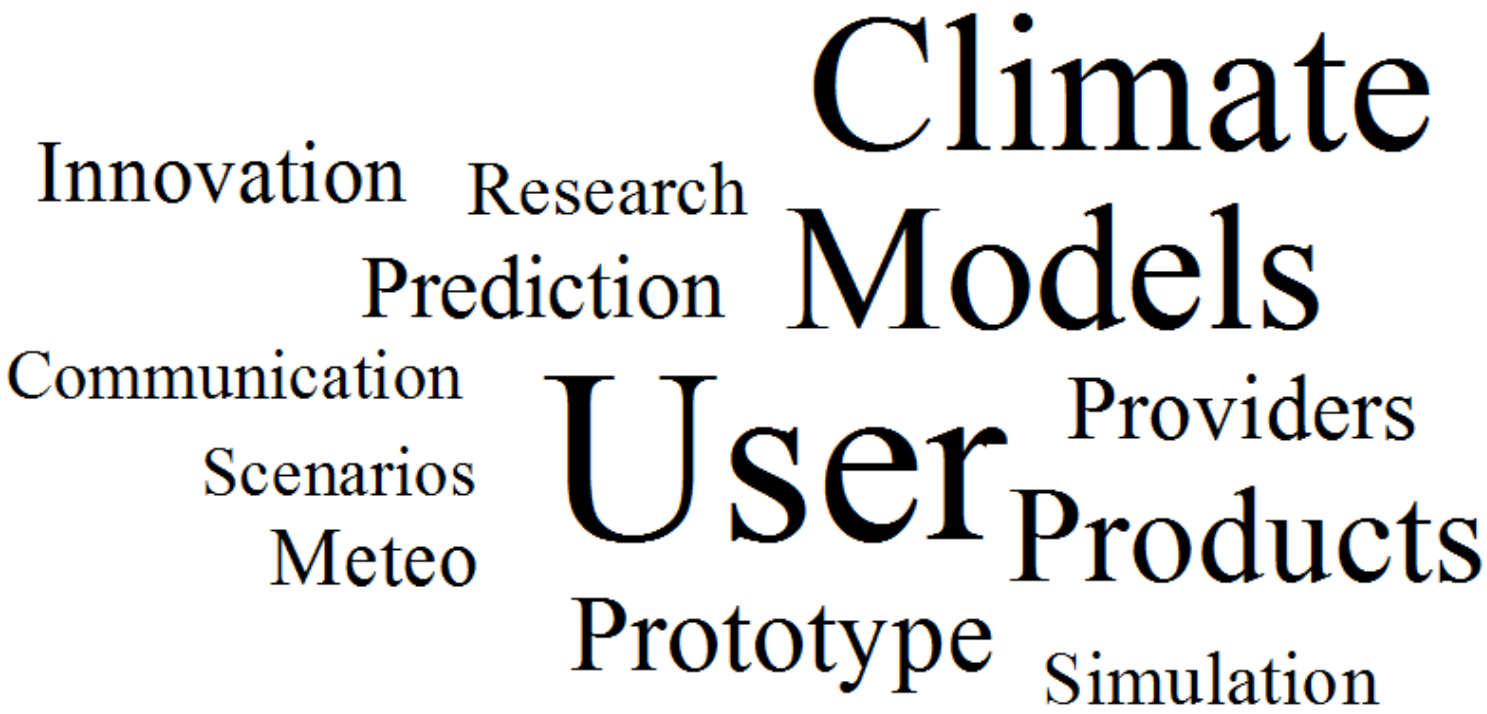
Demand-driven and user-centered

Towards a user-centered value proposition

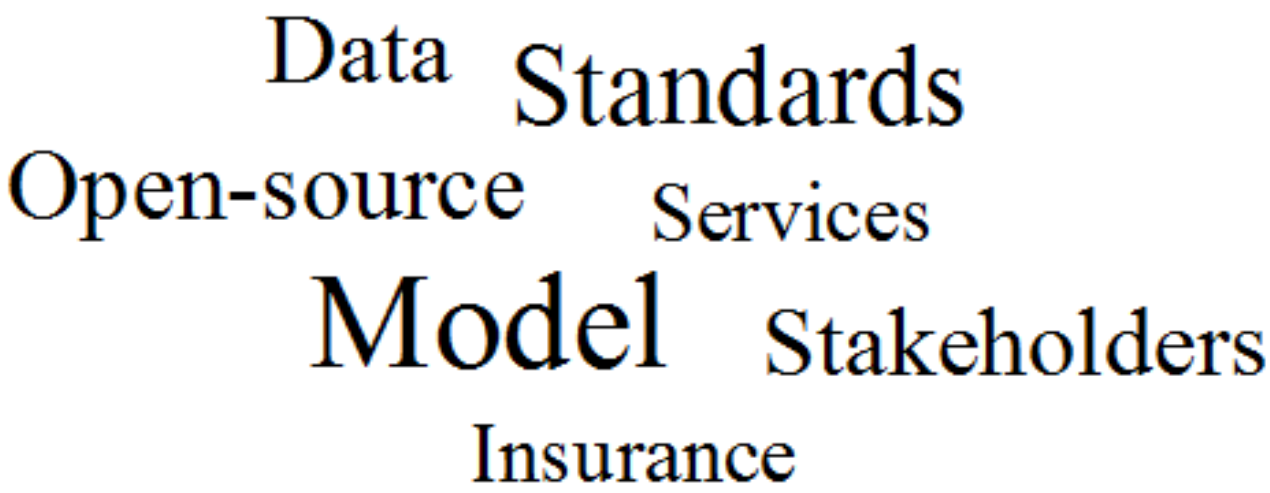
"The set of activities of a determined product or service. It highlights the contribution of each specific initiative in generating added value to a specific field of operation"

	Public projects	**Private sector**	**Co-production partnerships**
Approach	Supply-driven (mainly)	Demand-driven	Mixed, more user-centric
Mission	Advancement of CSs for common good	Profit-oriented	Profit-oriented + creation of synergies
Deliverable	Research outputs; prototypes	On-demand products and services ; supply-driven demonstrators	Methodologies, standards development + commercialized products

The public sector: word cloud analysis



Co-production partnerships: word cloud analysis



From input to outputs: suppliers and users

	Public projects	Private sector	Co-production partnerships
Input	In-house (from consortium) inputs, Copernicus, primary data	CDP, disclosed by clients, UNFCCC (for models)	In-house (from consortium) data and models + disclosed by clients
Targeted users	Policy-makers, decision takers, district, city and regional regulators	Typically publicly listed or multinational firms	Private sector and policy-making
Financials	EU calls, Climate-KIC, national and regional dedicated funds	Commission-based services, under payment	EU calls, call for tenders + commission-based services, license schemes

An evolutionary market: over time trend

CLIM-RUN
Climate Local Information in the Mediterranean region Responding to User Needs

2011-2014

EUPORIAS

2012-2017

EU·macs

2016-2018

- Stronger support in CS market development
- Progressive shift from top-down to bottom-up approach
- Development of standards and shared protocols on top of research activities
- Increasing private sector interest and engagement
- Higher quality of information, models and tools

From a potential to an existing CS market

Market barriers: insights from EU-MACS

Are we on the same page when talking about Climate Change?

Publicly-funded projects

- "User fatigue": lack of long-term commitment
- Technical complexities (model downscaling)
- Lack of standards
- Lack of common glossary (risk, hazards, resilience?)
- Metrics and metadata

Private sector & PPPs

- Data reliability
- Transparency and credibility + access
- Lack of long term political commitment
- Shifting the language towards a business-oriented logic

Quality assurance – key features

Dilemma:

- The CS user determines eventually what is *satisfactory quality*
- The CS provider knows better what is *attainable quality* and the implications of data quality
- User and provider often mean different things by quality

Approaches:

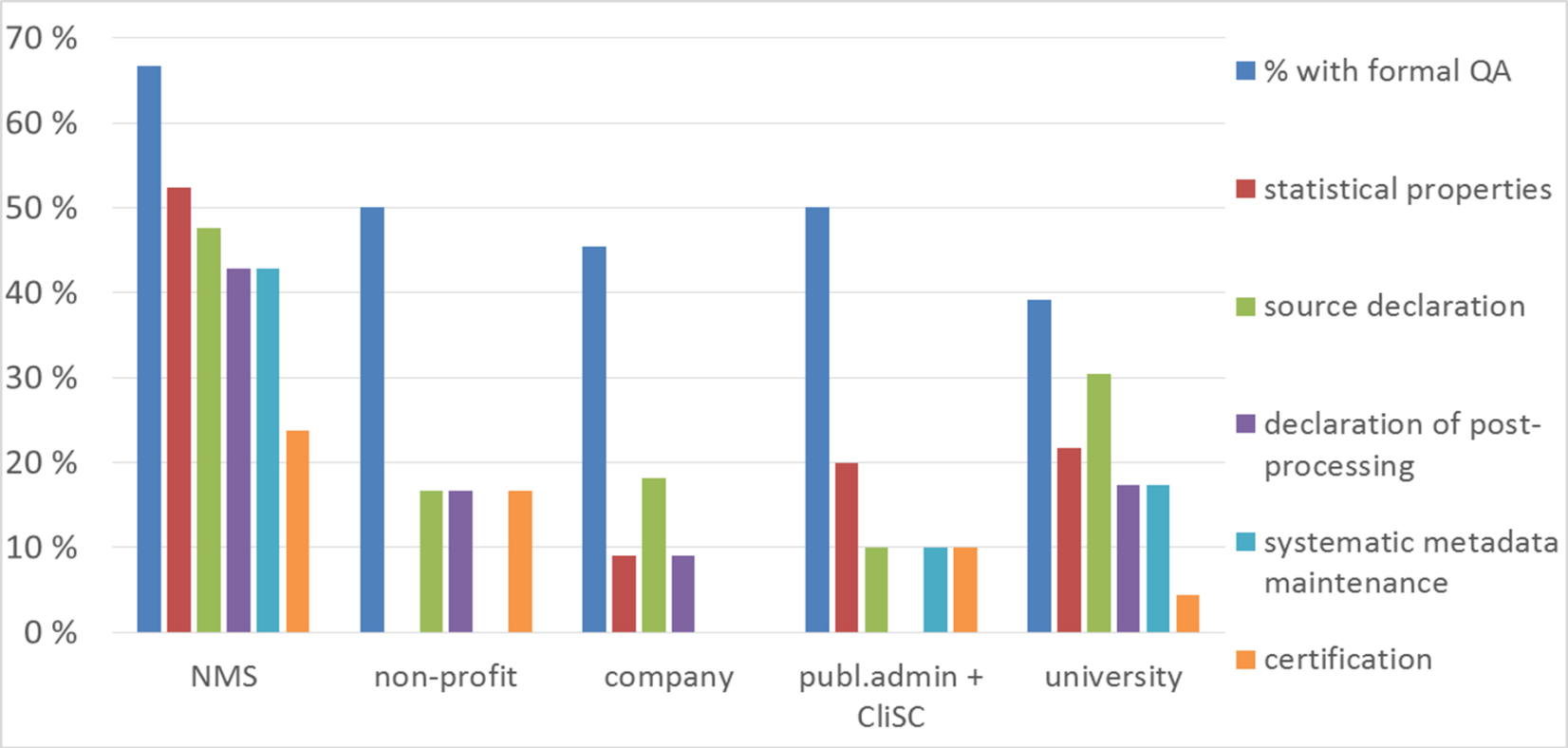
- 'closed' approach: optimize internal control
  - Suits data provision oriented CS provider; added intelligence for QA
- 'open' approach: co-design by provider and user
  - Suits CS embedded in consultancy, education, etc.; QA metrics needed

Importance

- One-sided and poorly communicated QA sustains user's uncertainty about CS product appropriateness → notable reason for non-use

Current use of QA

- There is room for improvement in uptake of QA of data
- QA involving non-climate data merits exploration
- In need for metrics for QA of non-data elements of CS



prevalence of QA in general and of particular QA aspects in different types of CS providers
Source: EU-MACS D1.2

Thank you

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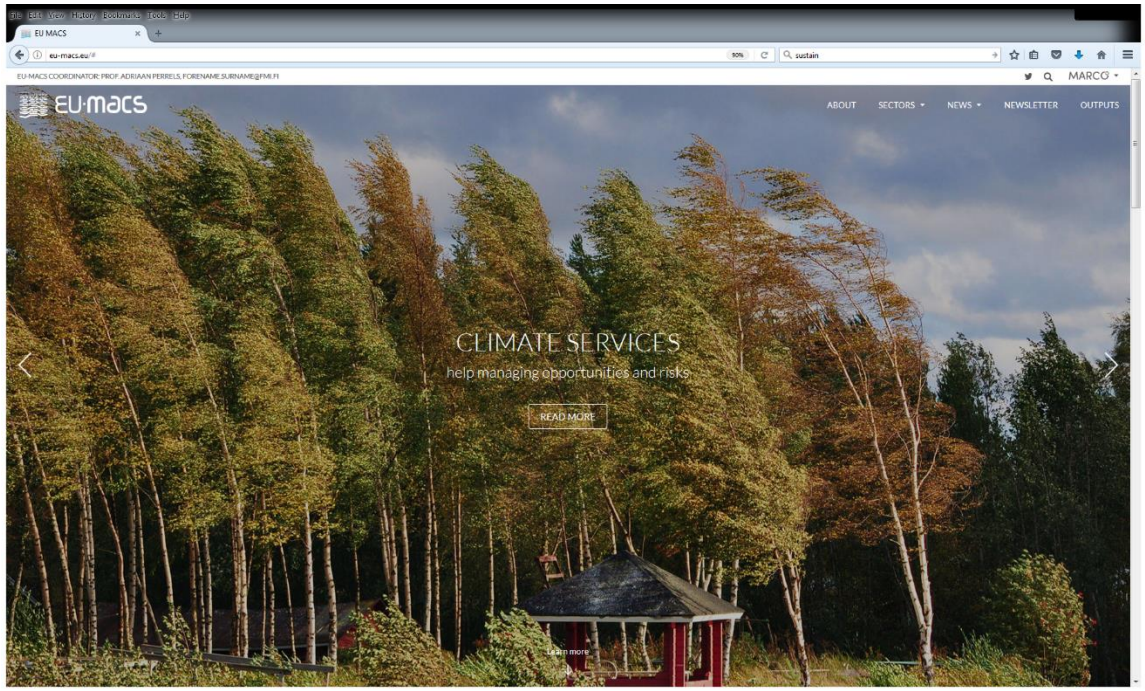
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