School of Earth and Environment
Sustainability Research Institute

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Climate services: a complex landscape of (potential) users

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Marta Bruno Soares

m.soares@leeds.ac.uk

Outline

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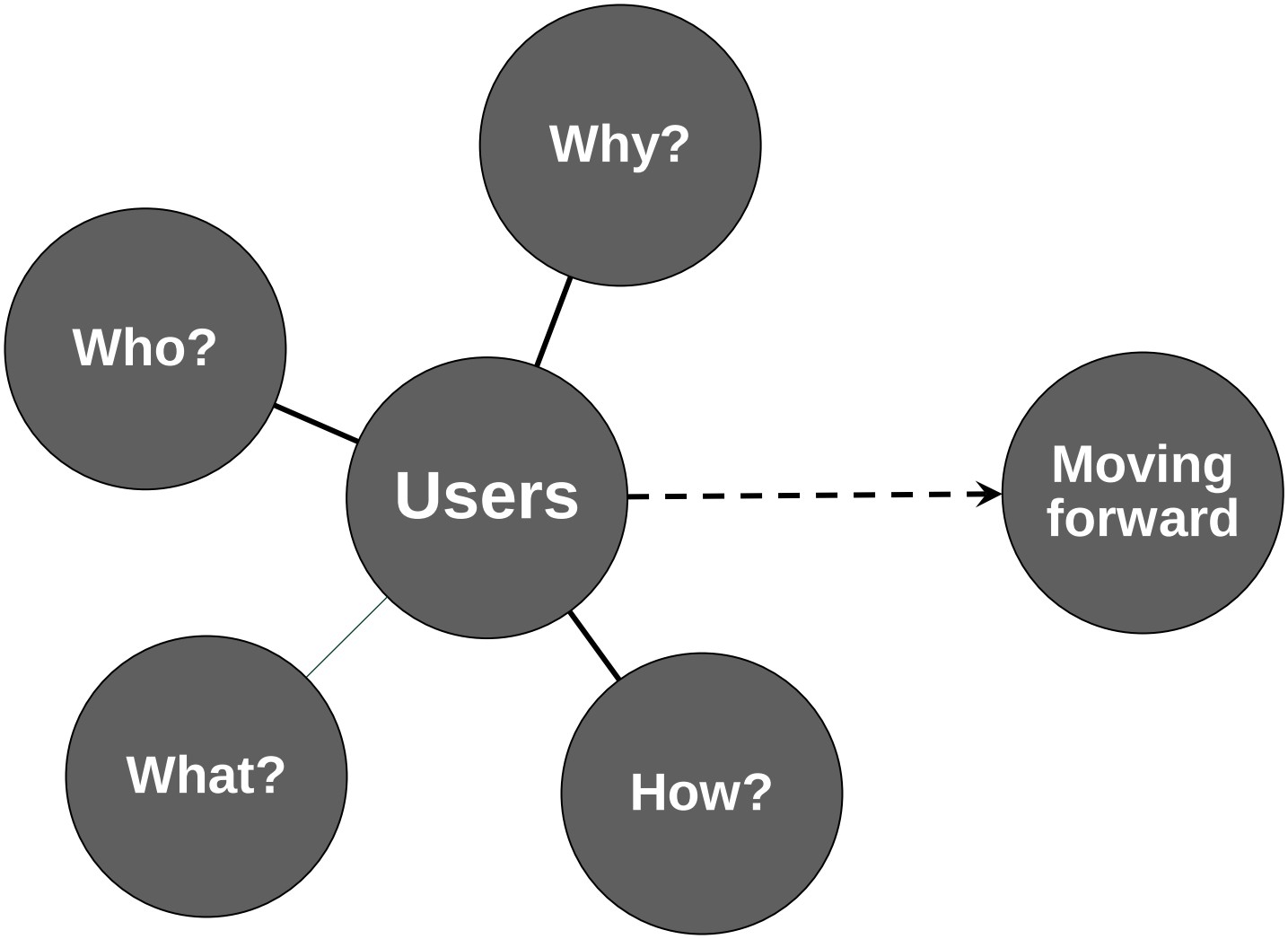

Why engage with the users?

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Why this concern about engaging with the users?

- Non-linearity between climate science production – use of information;
- Climate services – applied science *vs* basic research (Sarewitz and Pielke Jr., 2007);
- Engaging users to increase credibility, legitimacy and saliency – enhance usability of climate science (McNie, 2007, Lemos et al., 2012);

Image from: http://funnysalescartoons.com

Why engage with the users?

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- Understand their climate information needs;
- Use their knowledge and expertise;
- Gather relevant information e.g. how decisions are made and how climate information is used;
- Improve usefulness and enhance usability of information;
- Forge collaborations;
- Test & evaluate products/services;
- ...

Who are the users?

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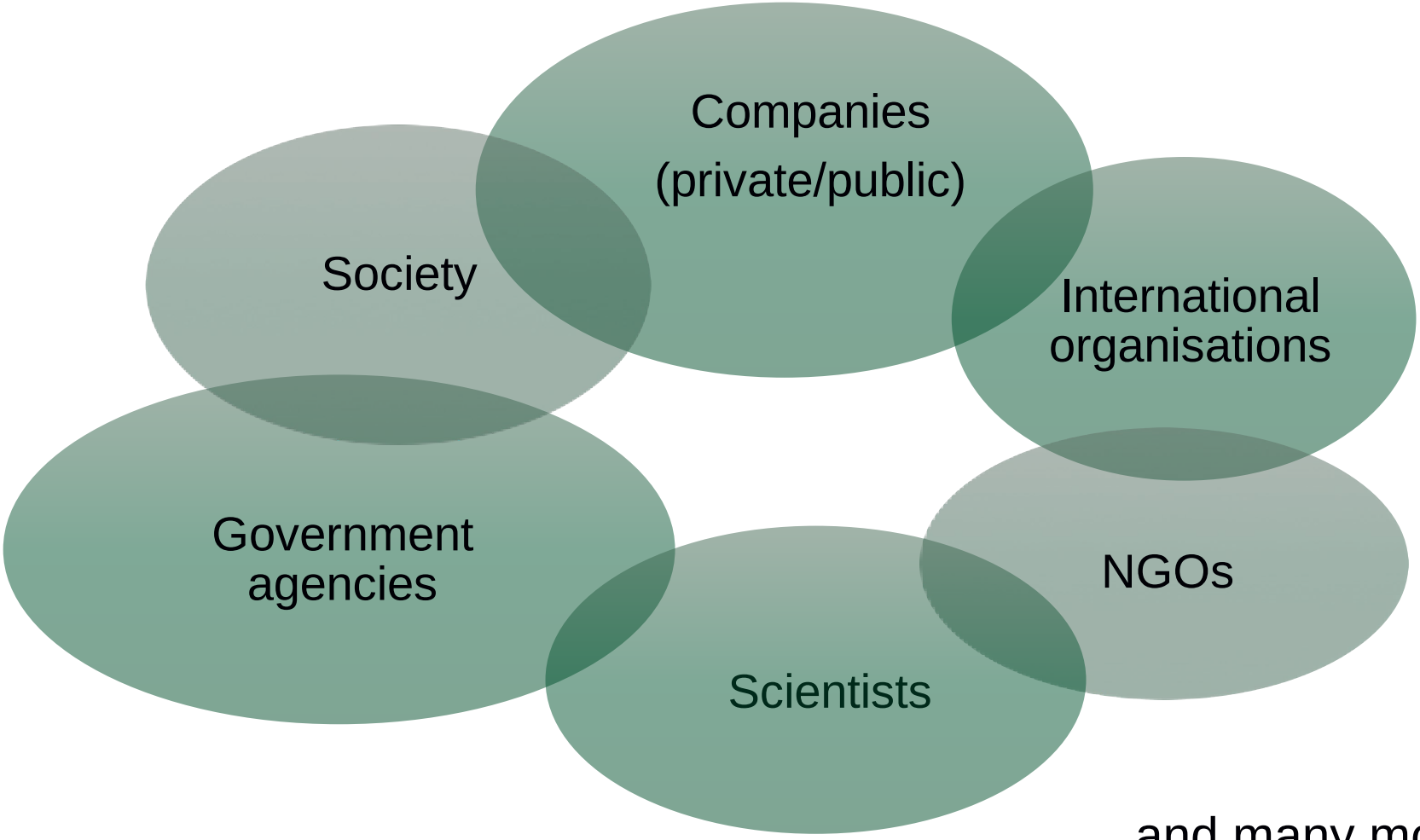

… and many more!

Who are the users?

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Heterogeneity and **complexity** of ‘users’ due to:

•Nature of the organisation (e.g. private *vs* government organisation); geographical/sectoral scope;

•Different regulatory/institutional contexts;

- Complex organisational structures & myriad decisions…
- Role of individual in the org.: ≠ perceptions of needs;
- In-house capacity, expertise and resources available;
- Relative importance of climate information

Different concerns, expectations, resources, knowledge, and demands from science!

What do they need?

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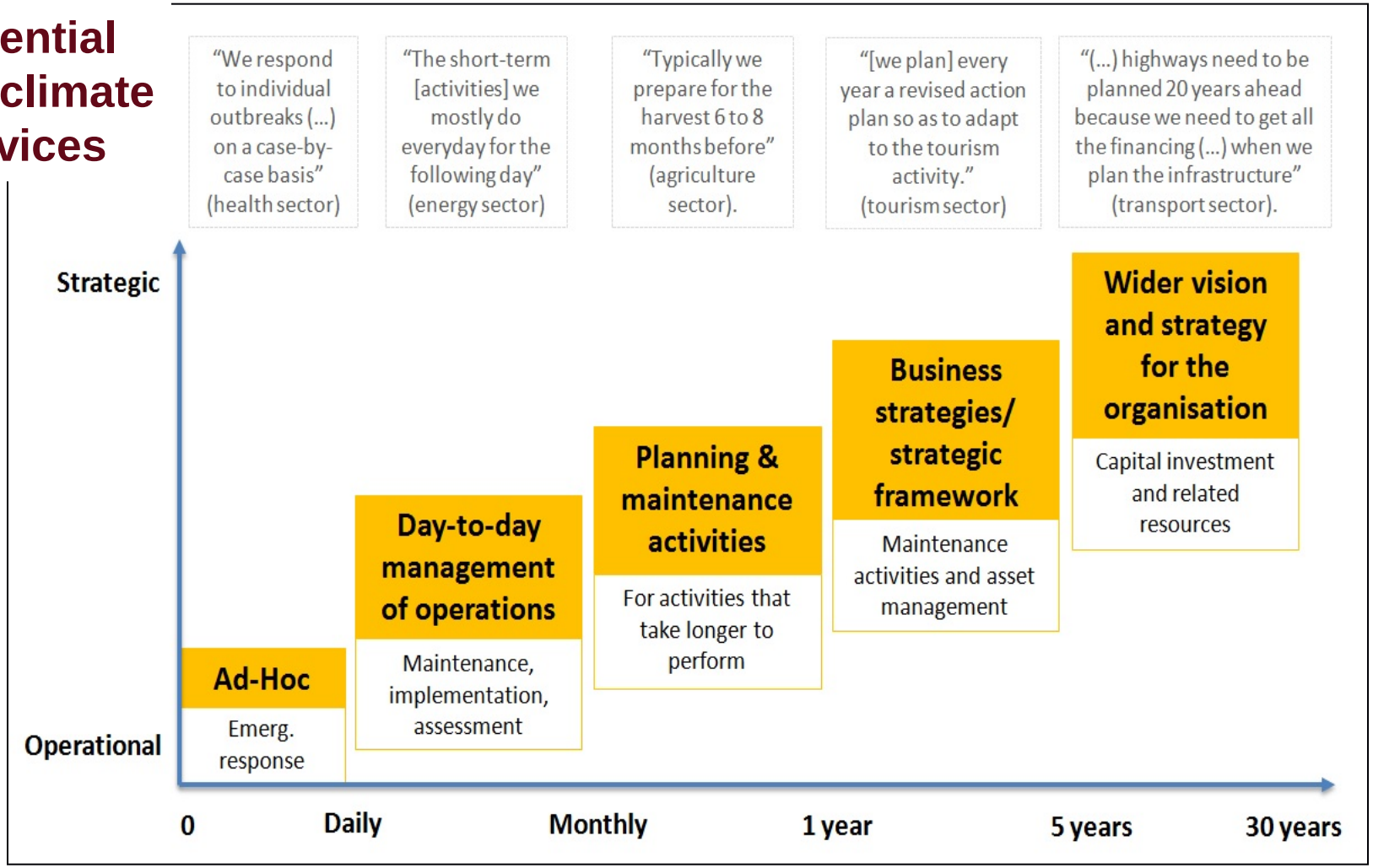
Potential for climate services



Dessai and Bruno Soares, 2015

What do they need?

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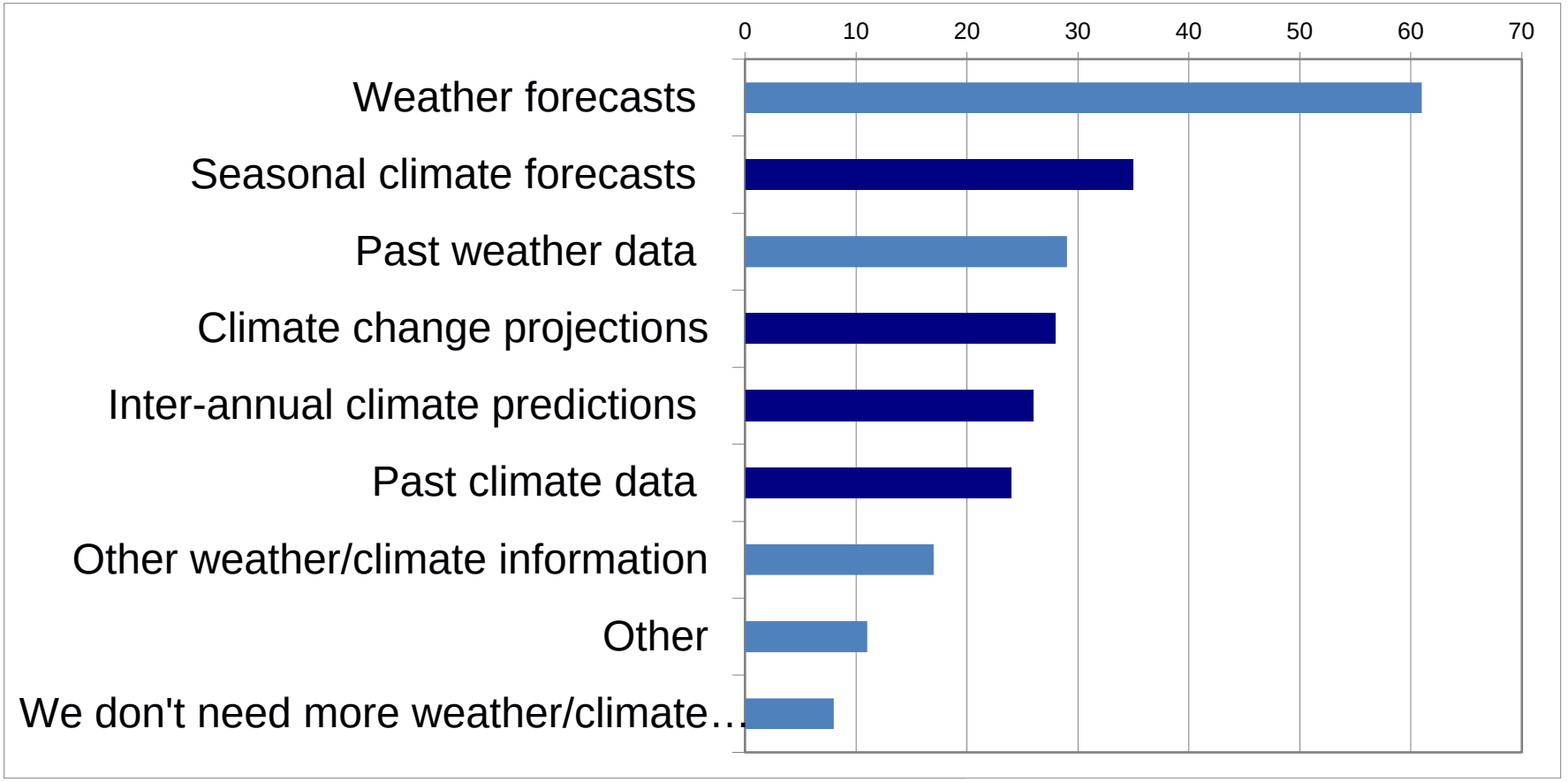
What other weather/climate information would be useful for your organisation to have in order to manage its operations and activities?



Dessai and Bruno Soares, 2015

What do they need?

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- **Continuum of information** – No need for virtual wall between weather and climate information (Bokoye et al., 2014); e.g. LMTool prototype
- Information that **fit their needs** (Lemos et al., 2012):
    - Spatial and temporal scales;
    - Usable information;
    - Timeliness of information;
    - Relevant and accessible;
    - Accurate and reliable;
    - Credible and salient…
- But needs differ in space and time within/across organisations!

How to engage?

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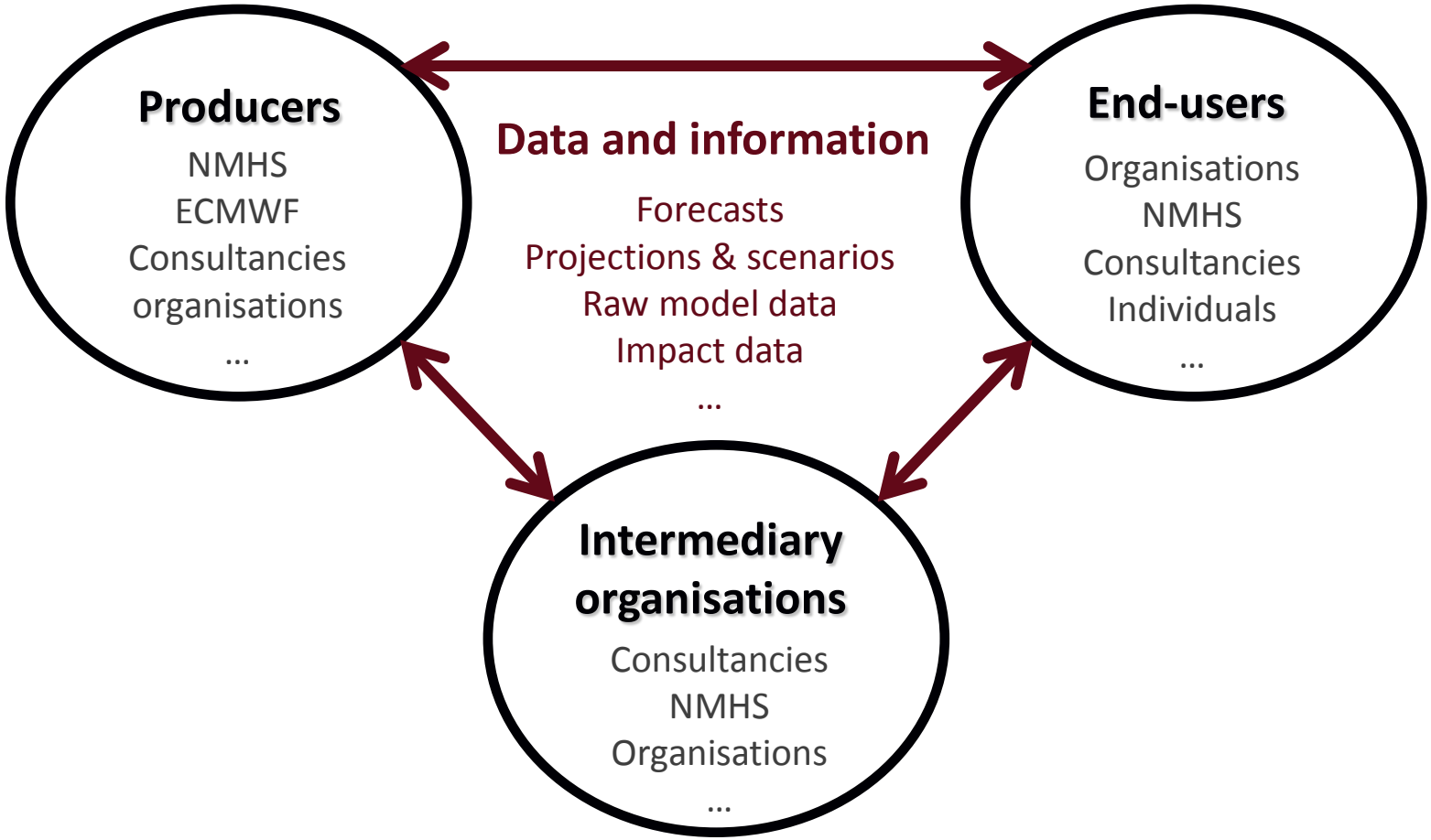
- Context: research-based, operational services, consultancy…
- Catalyst: co-production, service-driven, user-driven…



How to engage?

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Typologies of interactions:

- Long standing/on-going collaborations/partnerships (e.g. placements, sharing of data) (cf. Haines & Stephens, forthcoming);
- Direct interactions/relationships (e.g. contract-based; research-based agreements; sharing of data btw org.);
- Internal interactions (e.g. data collected/shared internally);
- No direct interactions (e.g. access to online data).

Different motivations, expectations, resources, use of climate information…

How to engage?

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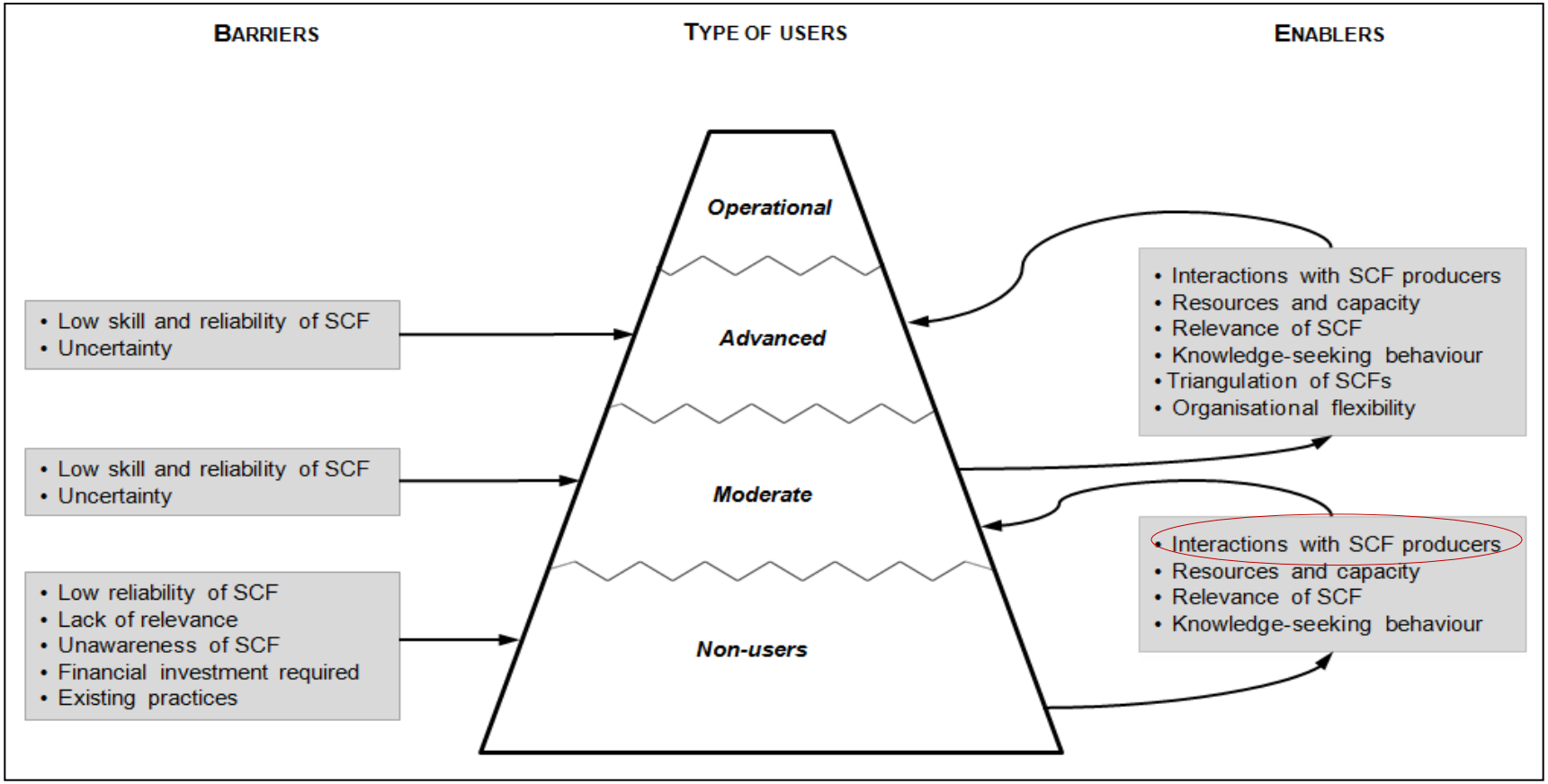

Bruno Soares and Dessai (2016)

Communication

- Language and terminology
- Complex (scientific) language
- Assumptions!
- Uncertainty of information

Knowledge, capacity and expertise

- Internal capacity and resources
- Knowledge of what's required
- Knowledge brokering/ translation

Managing expectations and tensions

- Scientific rigour *vs* usability of information
- Different cultural backgrounds and experiences
- Disagreements

Ethics

Core values to climate services (Adams et al., 2015):

- Integrity,
- Transparency,
- Humility
- Collaboration

How to engage?

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See more at **www.euporias.eu**

Moving forward

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- Diversity of existing interactions between users and producers (and everyone else in between) – how to make most of these in the context of climate services?
- Non-linear and complex use of climate information – not just about good science, need to understand context and factors enabling uptake and use of climate information;
- Importance of chains of provisions and feedback loops: value added to information (moving from data to knowledge); role of intermediary organisations/individuals in the chains of provision;
- Models of co-production? What works and what doesn't?

Moving forward

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- Further efforts on mapping users, interactions, and chains of information provision – synthesising existing information from range of EU projects and initiatives;
- How to go beyond the ‘usual suspects’ and reach other users?
- Users want a continuum of information - how to forge stronger linkages between (and within) climate and weather communities (cf. Bokoye et al., 2014);
- Developing a climate services‘market’ and catering for diverging needs –‘winners’ & ‘losers’;
- Organisation and multi-level integration of climate services in Europe? Linkages with adaptation services?

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Thank you!

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