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ECCA
EUROPEAN CLIMATE CHANGE ADAPTATION
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2025

Upscaling climate services: sharing approaches and insights

ECCA

Rimini, 17th June 2025

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Flow of the session

Welcome and ice breaker	Marta Terrado and Marta Bruno Soares	10′
Overview of climate services upscaling approaches across European research	Cristobal Reveco	15′
Insights from the field		
• Scaling up child- sensitive, child-friendly and child-centred climate services across countries	Emma Visman	10′ + 10′ Q&A
• Insights from scaling up climate services in the private sector	Isadora Jimenez	10′ + 10′ Q&A
• Leveraging innovation procurement (PCP, PPI) to accelerate the scale-up of new climate services	Melissa Campagno	10′ + 10′ Q&A
Wrap up	Marta Terrado and Marta Bruno Soares	5′

Background

What are climate services?

Climate services are the provision of tailored climate information, knowledge, tools and products to support individual and organisational decision-making in climate-sensitive contexts.

Sources: Doblas-Reyes et al., 2024; Street et al. 2015; Vaughan, C., Dessai, S., 2014; Hewitt, C., et al., 2017; Guentchev et al., 2023; Hartmann and Linn, 2008; World Bank, 2003; WHO, 2009; WHO, 2010, Simmons et al., 2007; Breaugh et al., 2021

Background

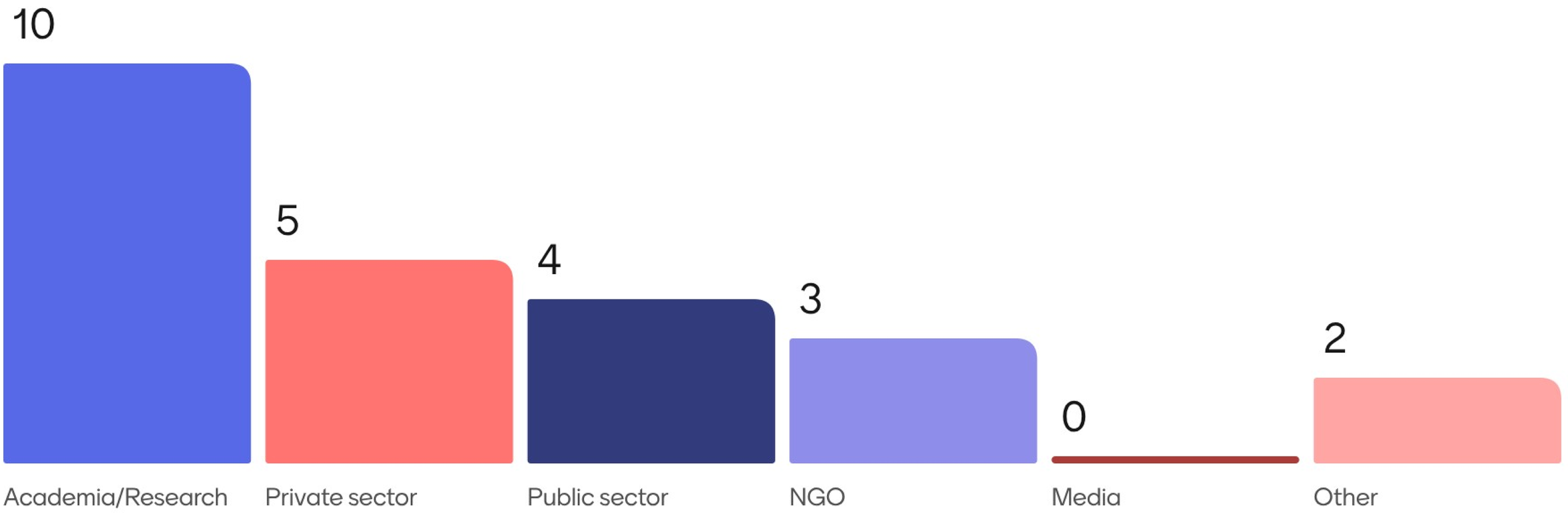
Why upscaling?

- No general consensus on the meaning of scalability, its dimensions and approaches to implement it
- Term ‘upscaling’ is used inconsistently and as a synonym of spreading, replicability or exploitation
- No clear metric on how to measure the success of upscaling climate services

Instructions

Please, indicate which sector you belong to

Who is in the room?



What do you think is the biggest challenge in upscaling climate services?

Relevancy to other users

Uoscaling breaks the co-design process

Different understanding of what upscaling means

Different users have different needs, so hard to do one size fits all

Costs

Tailored to Local context

Long term funding

political barriers

What do you think is the biggest challenge in upscaling climate services?

- Costs
- Garantee the adaptability to all territories
- Lack of percieved value
- Harmonisation
- Funds
- Lack of prioritization
- Identifying stakeholder needs
- Tailor Made

What do you think is the biggest challenge in upscaling climate services?

Funding for the long term sustainability And actually tailored to users Political will

Fundi6

Unclear definition of climate services

Not transferable workflows

Costs

Accessibility

Which characteristics should a climate service have to be upscaled?

Our speakers

Overview

Cristobal Reveco
Hereon

Insights from the field

Emma Visman
Save the Children International

Isadora Jiménez
Lobelia Earth

Melissa Campagno
G.A.C. Group

Overview of climate services upscaling approaches across European research

Cristobal Reveco
Hereon

What is upscaling and why is this term so important?

- **The disconnect between climate service development, adoption and use** positions the challenge of upscaling climate services at the forefront of research and practice.
    - Progress in climate service development and delivery versus usability gaps (Lorenz et al., 2017)
    - Despite increases in frequency and severity of extreme weather events, uptake of climate services remains low (European Court of Auditors, 2024).
- "Upscaling' refers to the ability to transfer, replicate, and/or institutionalise climate services across different organisational, geographic, or sectoral contexts (Hansen et al., 2019), thereby **making the services more valuable** by enhancing impact and improving climate-related decision outcomes.

Guentchev et al. 2023:

Horizontal upscaling refers to spreading through duplication to new or larger audiences similar to the established audience

Vertical upscaling refers to institutional change to allow for further innovation or fuller implementation

Functional upscaling considers the addition of functions or products, or diversifying strategy in response to decision-making context changes

“The challenge of upscaling climate services: towards a common framework”

This article is one of the results of a cross-project Thematic Working Group promoted by the EU Mission on Climate Adaptation, fostering the exchange and discussion between 39 different EU projects on climate services.

We conceptualise upscaling climate services as a **collective endeavour**, underscoring that meaningful interaction between actors is needed at different stages in the upscaling process.

MACRO LEVEL	Three overarching questions: *What to scale? Why to scale? How to scale?*	A perspective on upscaling for our examination of the upscaling process and associated challenges
MESO LEVEL	Governance, demand and practices	Three key aspects that further emphasise upscaling as a collective endeavour
MICRO LEVEL	Three scalability workflows	Parameters that support navigating through the upscaling process.

Macro level: Three overarching questions

Determining “what” to scale: Perceived user value. Demonstrated impact, usability, and alignment with user demand.

The "why" of upscaling: Enhancing societal impact, promoting institutional cooperation, reducing costs, and improving decision-making. Differing goals and consensus building.

The “how” of upscaling: Strategies to expand climate services sustainably. Coordinated efforts among diverse stakeholders. Success depends on trust-building, strategic communication, and co-development.

In practice, they are deeply interconnected.

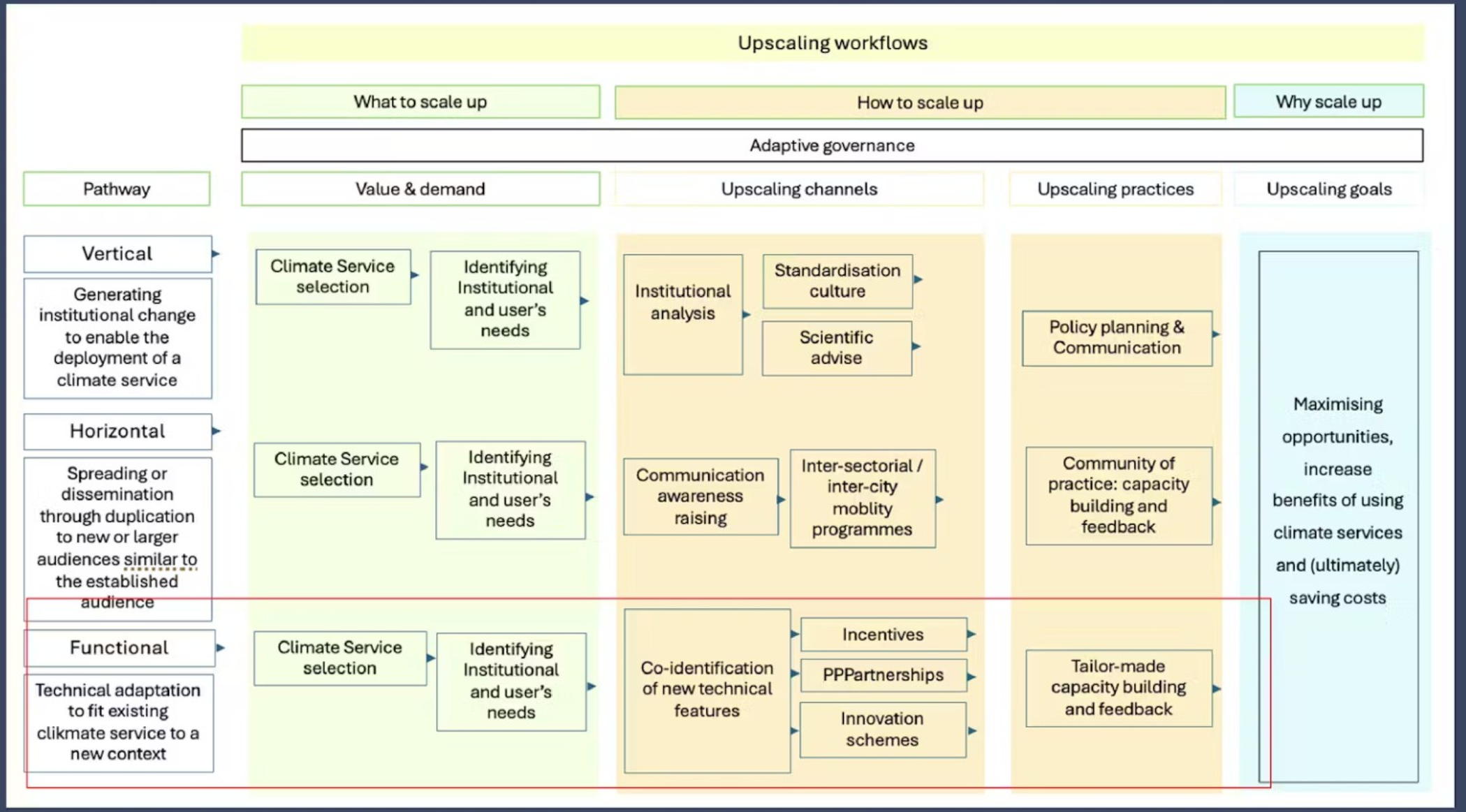
Meso level: Three aspects emphasising upscaling as a collective endeavour

Governance of upscaling: Adaptive governance that fosters coordination across sectors and levels, enables collaboration among stakeholders, and supports continuous learning and flexibility.

Demand for climate services is shaped by how their value is socially and contextually constructed.

Upscaling practices involve the coordinated, relational activities that enable collaboration, learning, and adaptation of climate services to new contexts.

Micro level: Three workflows to navigate the upscaling process



Scaling up child- sensitive, child-friendly and child-centred climate services across countries

Emma Visman

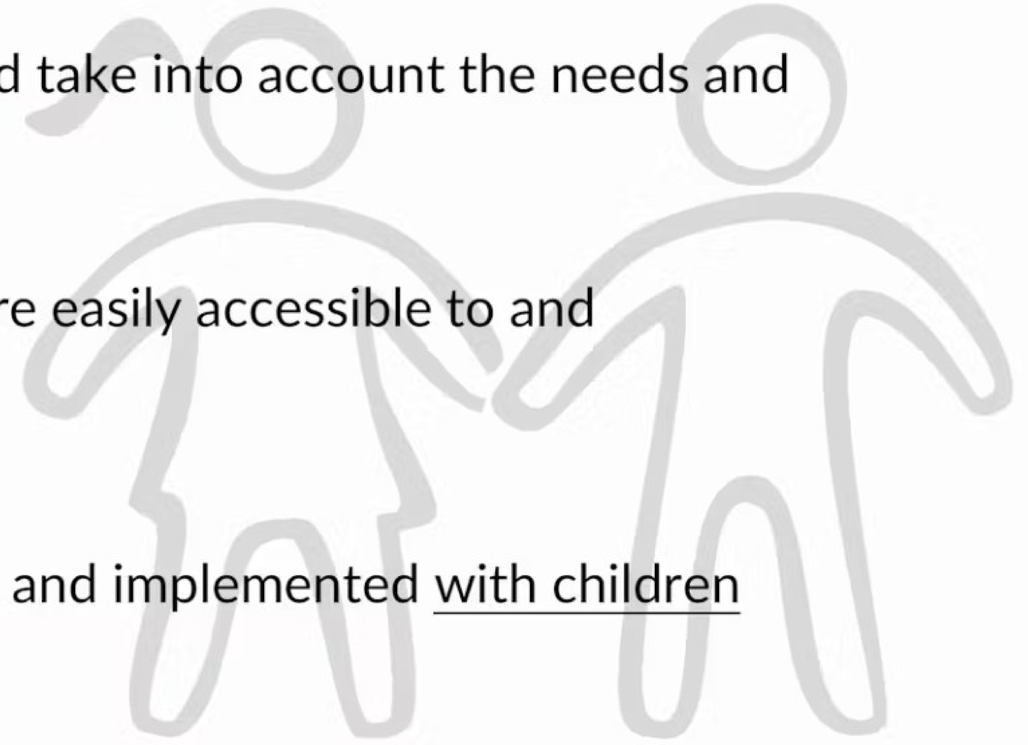
Save the Children International

Is our Climate Information Child-Centered?

Child-sensitive: Approaches that recognise and take into account the needs and abilities of girls and boys in all their diversity.

Child-friendly: Approaches and materials that are easily accessible to and understood by children.

Child-centered: Approaches that are developed and implemented with children and/or for and by children.



"Children, their families and communities cannot prepare for climate-related risks and change without access to timely, relevant weather and climate information and services. However there are currently few gender-sensitive, child-centred climate services, while consideration and engagement of children in NFCS (National Framework for Climate Services has not yet been addressed."

WMO 2024 State of Climate Services
2024 State of Climate Services

HOW IS SAVE THE CHILDREN ENGAGING WITH WEATHER AND CLIMATE SERVICES?

Strengthen capacities now to address current and growing risks under climate change.

Using WCIS to inform strategy, plans and decision making	Enabling 2-way communication with at-risk populations	Supporting co-production of climate products and services.

BRIEF: Enabling Child Centered Climate Services: Save the Children's Role

Enabling Child Centred Climate Services: Save the Children's Role

Save the Children

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Bringing child-focus to Malawi's National Framework for Water and Climate Services (NFWCS)

SC integrated into 2024-9 Malawi NFWCS plan

- Engaging youth in National Climate Outlook Forum (NCOF) and through youth forums
- Bringing to Education sector
- Supporting school Early Warning System (EWS)

Save the Children

How can children support inclusive communication and use of weather and climate information?

Disaster risk knowledge

Participatory risk mapping, identification of child specific risks

Warning dissemination and communication

Engage children in co-developing inclusive communication, link with school preparedness + local EWS

Source: Save the Children, Malawi

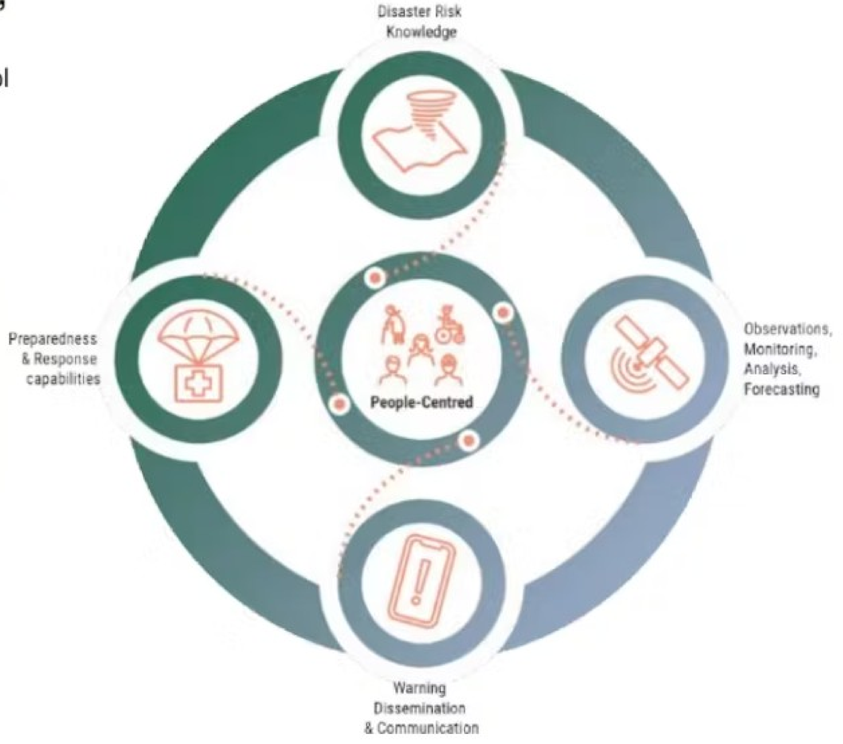
FEEDBACK & MEAL

Detection, observation, monitoring, analysis, & forecasting

Engage children and communities in data collection, e.g. school rain gauges

Preparedness and Anticipatory Action

nk with school + community safety drills, evacuation planning



Early Warnings for All

Potential for scale up

- **Including children, youth and the education sector in National Frameworks for Climate Services**
- **Strengthening linkages between climate services and existing frameworks that reach children and youth**, eg between Early Warnings for All and Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector (GADRRRES)
- **Enabling child-centred climate services inform NAPs, NDCs and wider programming and investments**

Insights from scaling up climate services in the private sector

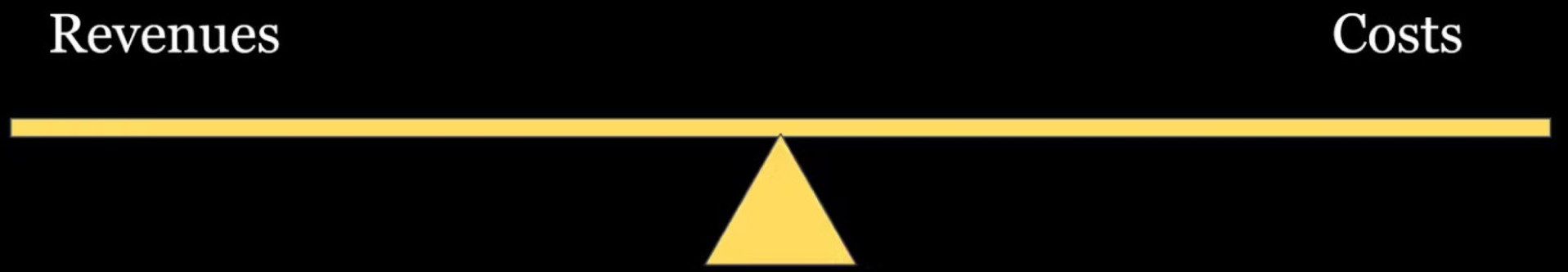
Isadora Jimenez
Lobelia Earth

Lobelia.

Service upscaling in the private sector

HARVARD BUSINESS REVIEW

Scaling a service means **adding revenue** at a **much greater rate than cost**.



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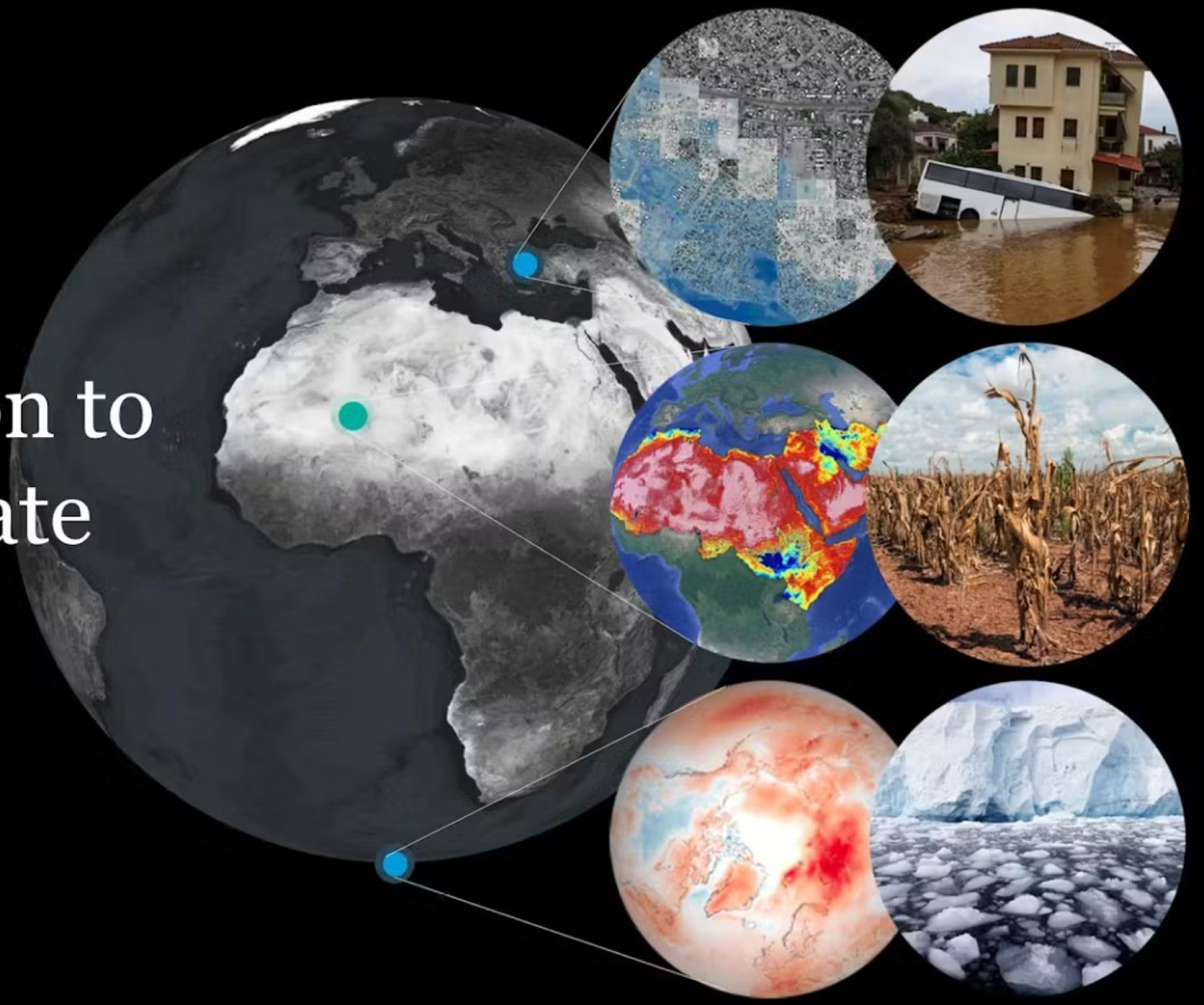
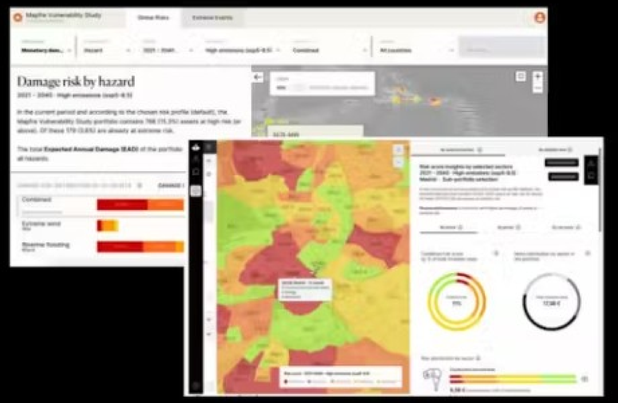
Earth Observation to address the climate emergency



Three types of services



Data as a service

Software as a service

Consultancy services

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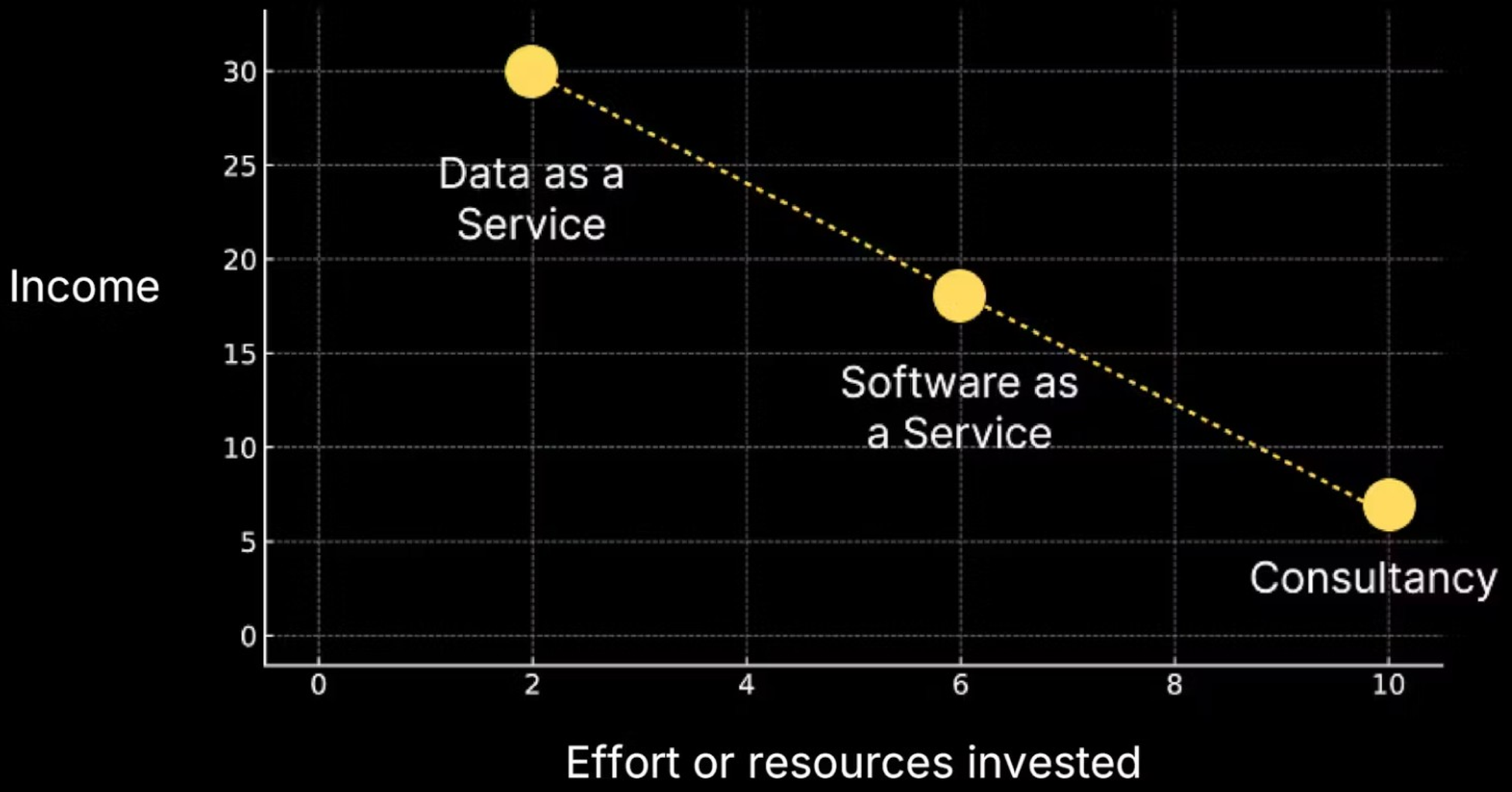
Service upscaling



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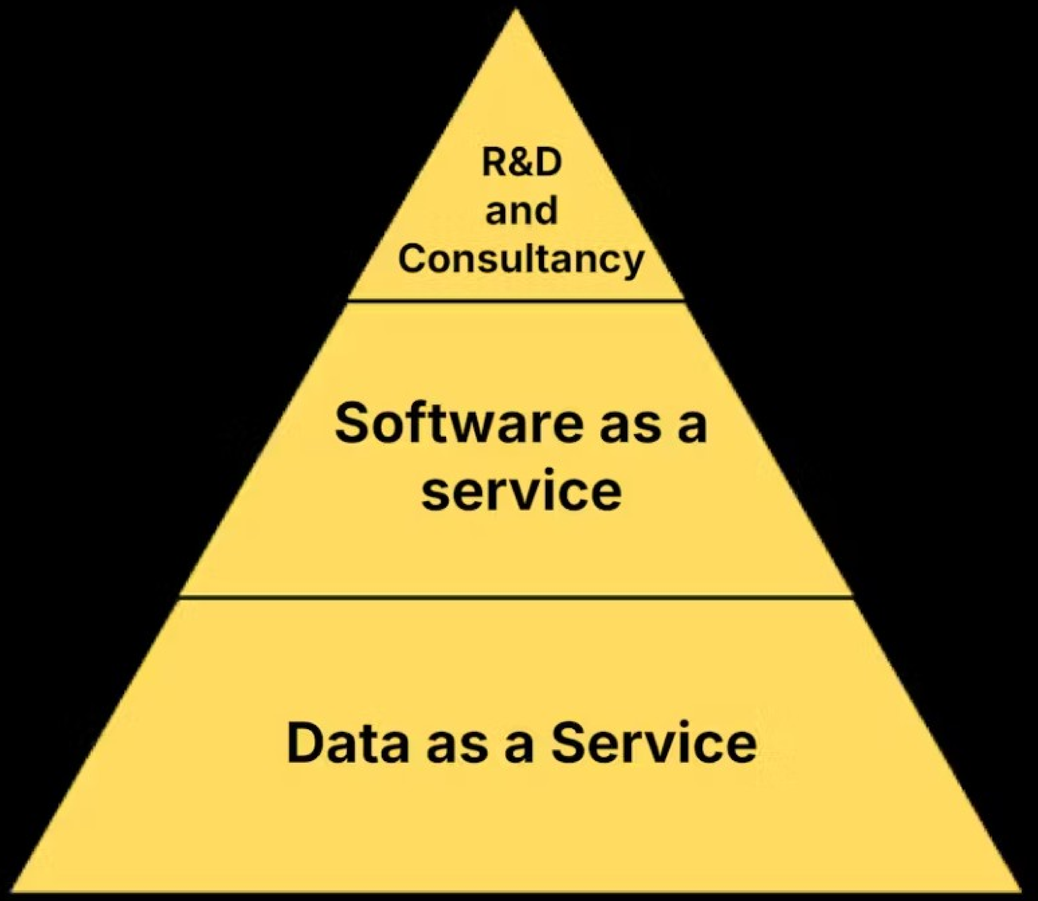
Upscaling Services at Lobelia

Effort or resources invested



Income

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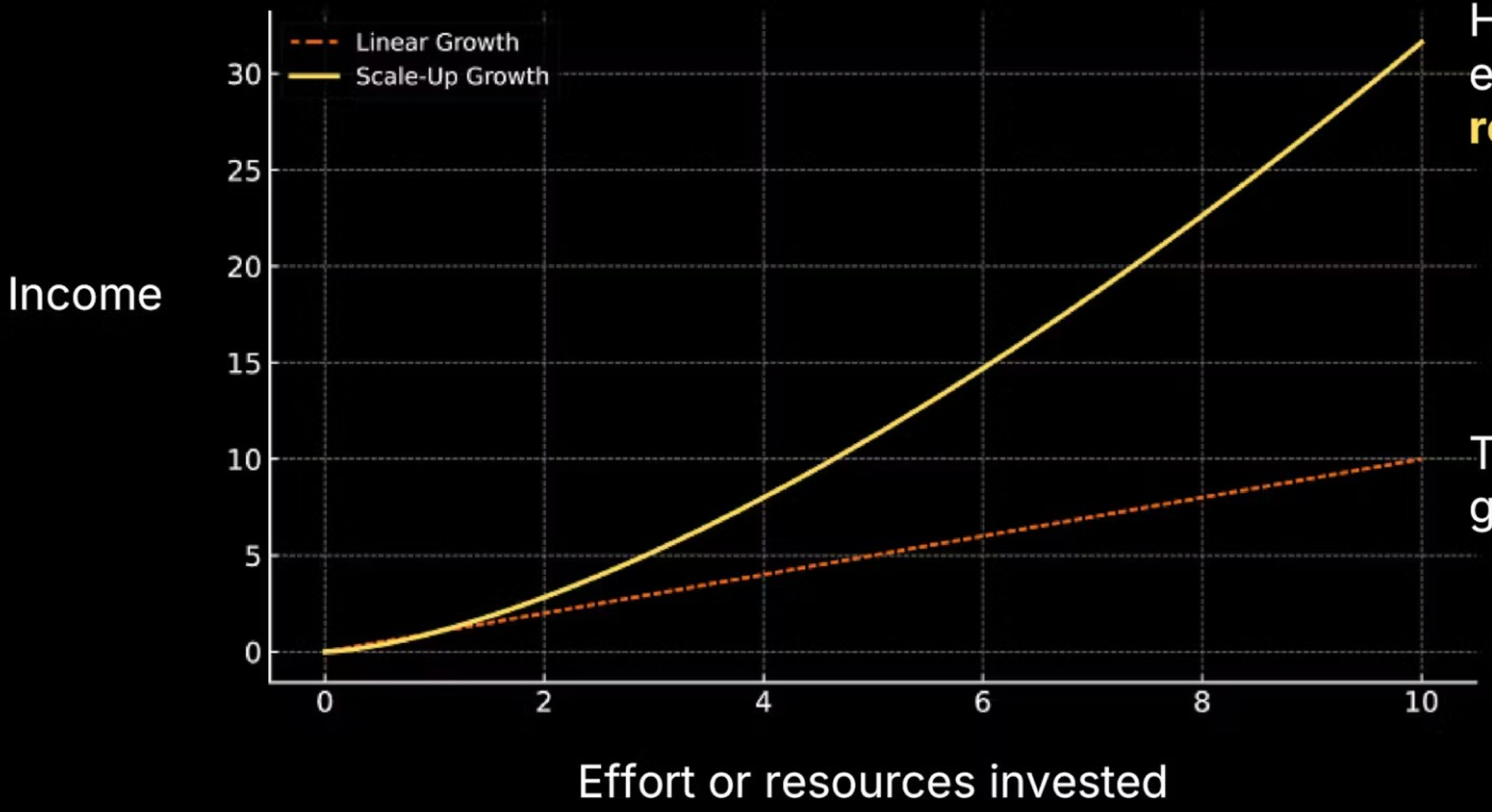
Service upscaling



Here we scale efficiency and **revenues**!

This is just growth

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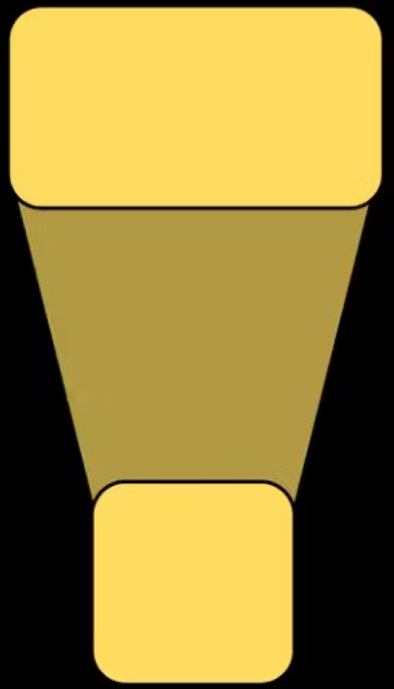
Service upscaling



1. **Operational**
   If a client buys, you must deliver asap

2. The more **automatic**, the better
   Repeatable, standardized offerings

3. **Technical scalability**
   Leverage scalable technology so the system can serve growing number of users

4. **Economically sustainable**
   Cost-efficient, and revenues grow faster than operating costs

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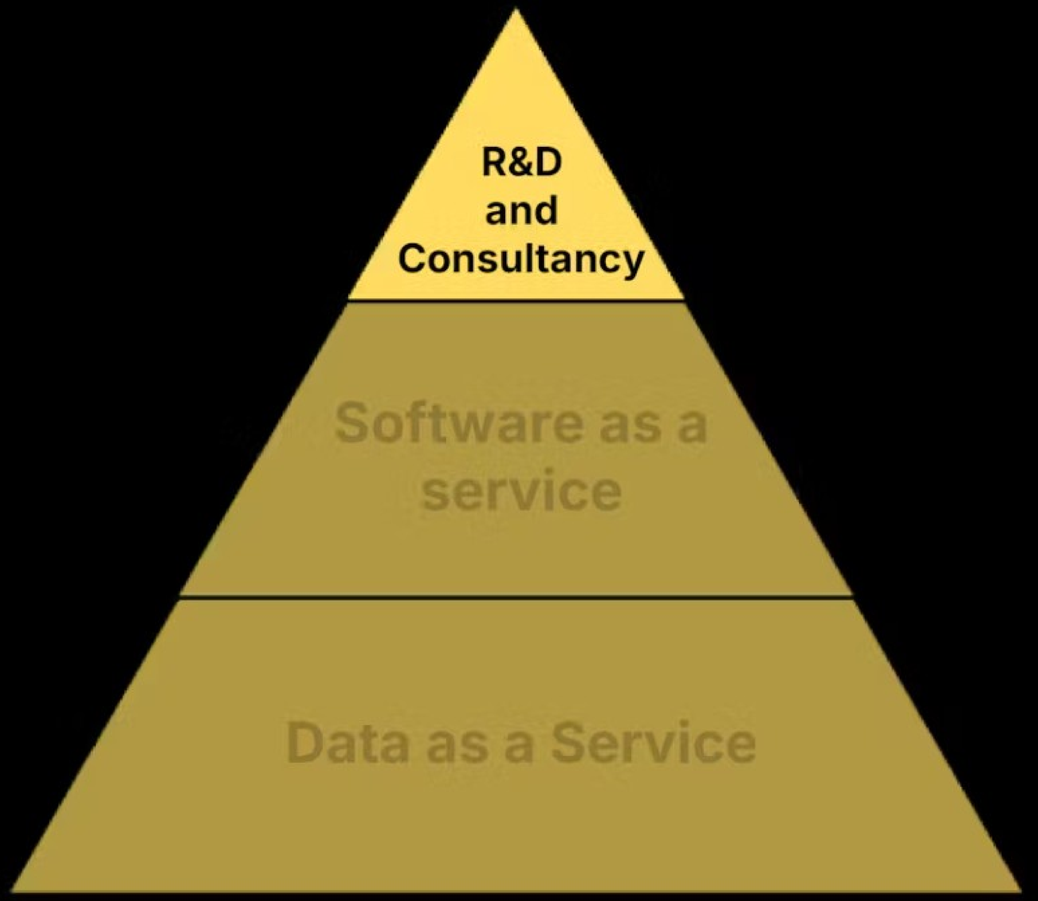
Why doing R&D or Consultancy?

Effort or resources invested



Income

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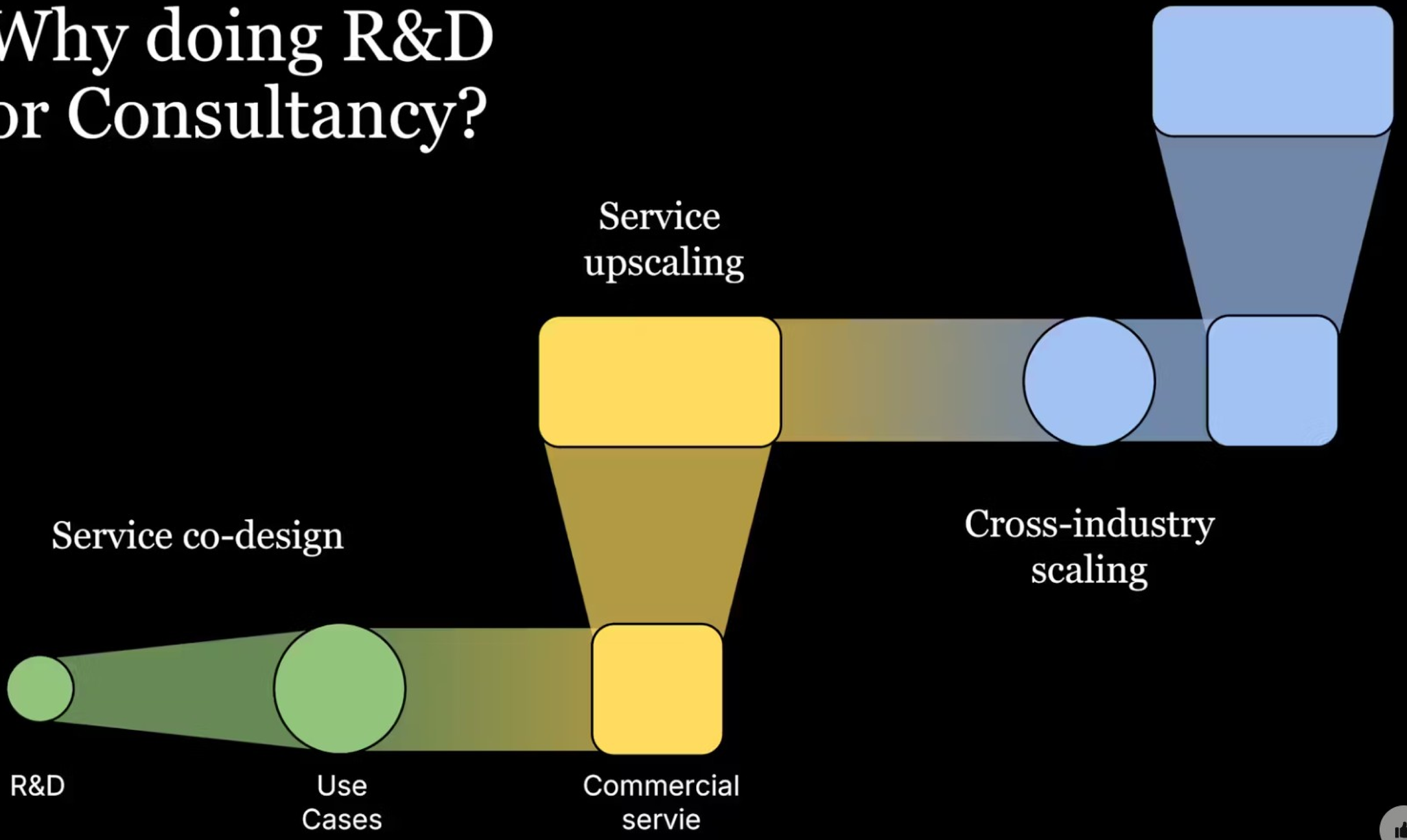
Why doing R&D or Consultancy?



Cross-industry scaling

Cross-industry scaling

Repurposing technology to solve a new problem:

- Market extension
- Innovation
- Positioning and reputation
- Market diversification

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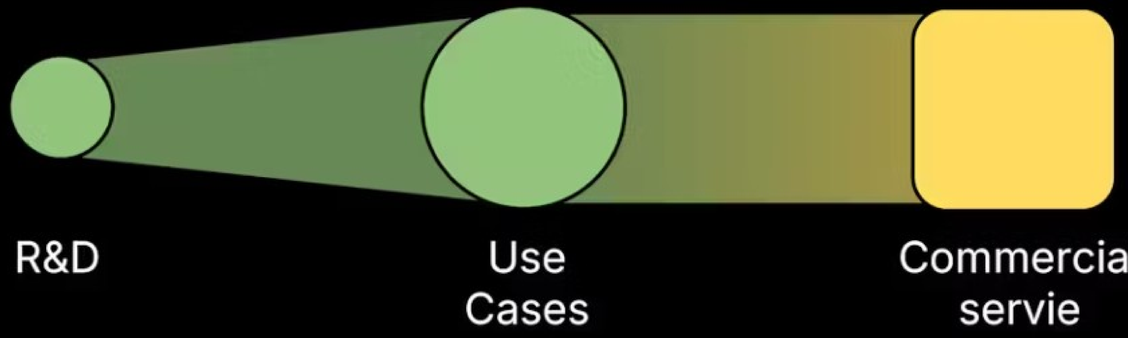
Service co-design



IMPETUS
Turning climate commitments into action

miraca

GreenEO°

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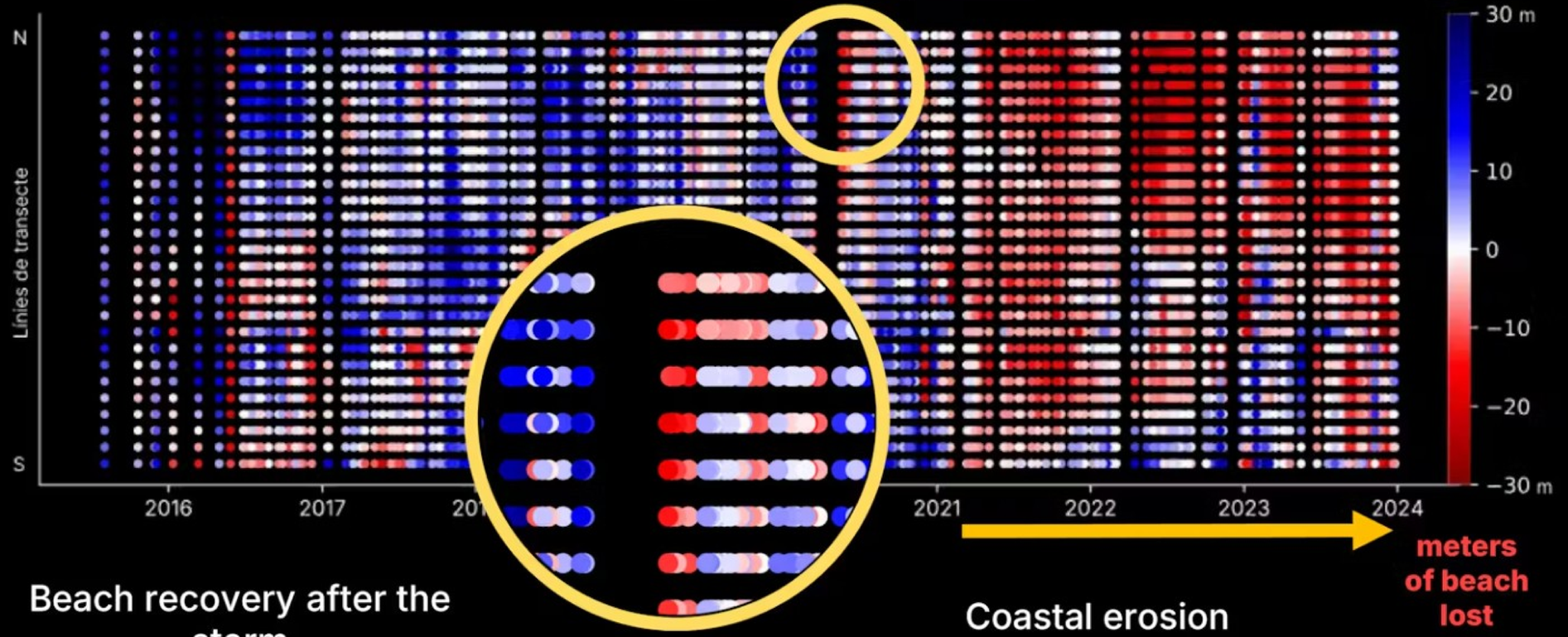
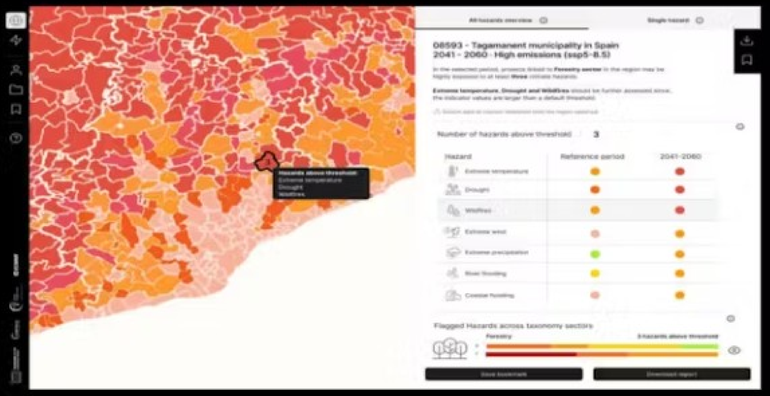
Developing new methodologies

IMPETUS
Turning climate commitments into action



First versions of dashboards



miraca

GreenEO°

Climate Change Service
climate.copernicus.eu

Climate information needs of Risk managers of Critical infrastructure

Satellite-based services for climate resilience

Climate hazard indicators aligned to the EU Taxonomy for private and financial sector actors

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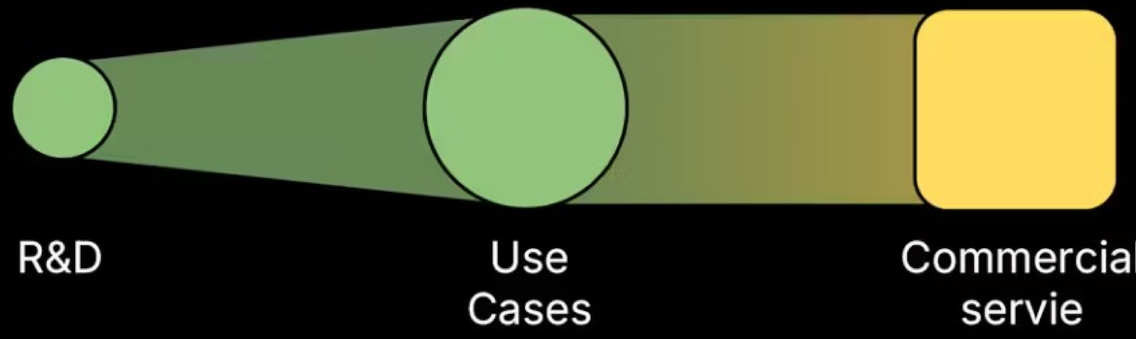
Final insight...



Keeping the focus on
which are the market needs
BEFORE deciding which R&D
and Use Cases define.

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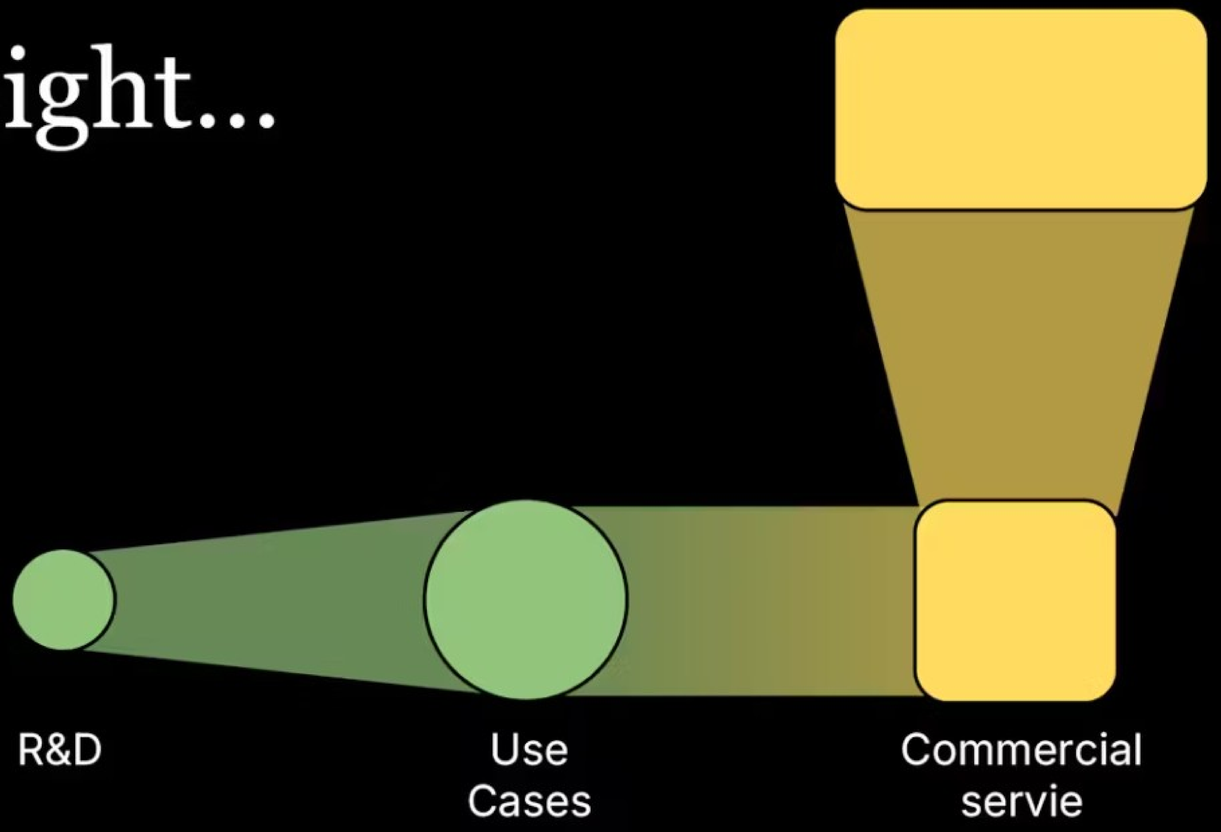
Final insight...



Keeping the focus on **which are the market needs BEFORE** deciding which R&D and Use Cases define.

Consider that the service must have potential to be **scalable**

Leveraging innovation procurement (PCP, PPI) to accelerate the scale-up of new climate services

Melissa Campagno
G.A.C. Group

What is Innovation Procurement?

PCP – Pre-Commercial Procurement	PPI – Public Procurement of Innovative Solutions
🔬 Goal: Develop a new solution through R&D	🛒 Goal: Deploy an existing but not widely adopted innovation
📈 Phases: 1. Design → 2. Prototype → 3. Test in real-life	✔️ Single Purchase: Buy an innovative solution after R&D is done
🤝 Co-creation between buyers and suppliers	👨‍💼 Early adoption by public sector
⚖️ Suppliers retain IPR → supports commercialisation	⚖️ Standard IPR terms – focus is on adoption
💡 No solution exists yet – high uncertainty	✅ A solution exists – but hasn't scaled yet

Zoom on the PCP instrument

PCP versus traditional Public Procurement

PCP	Traditional procurement
Exemption for R&D services under EU Directives and WTO rules: special legal framework (Horizon 2020)	Tendering procedures and legal framework: national procurement rules apply
High risk: high degree of innovation and R&D effort required. No solution 'on' or 'close to' market yet	Low risk: Low degree of innovation focused on solutions on (or close to) the market
Functional specifications focused on Long-term needs	Technical specifications addressing shorter-term needs
Competitive development: Public sector procurers to buy R&D from several suppliers in parallel, to steer development of solutions to meet their needs.	1 contract to 1 supplier awarded
Competitive development in at least 3 phases	Development in 1 phase
IPR – Risk/Benefit-sharing	Intellectual Property Rights (IPR) generated

Zoom on successful PCPs

- **SILVER:** 32 bids - 7 suppliers selected. On care robots for elderly (2012 - 2016). 7 Procuring Partners.
- **Select4Cities:** 28 bids - 10 suppliers selected. On platforms to enable large-scale co-creation and testing IoE services for Cities. Dec 2015 - Nov 2019. 5 Procuring Partners.
- **AI4Cities**: 97 bids - 41 suppliers selected. On AI accelerating cities transition to carbon neutrality. Jan 2020 - Dec 2022. 6 Procuring Partners.
- **SPACE4Cities**: expected around 60 bids - 20 suppliers selected. On satellite data solutions for urban management; Febr 2024 - July 2027. 6 Procuring Partners.
- **PCP WISE (**Jan. 2025 -) 12 buyers, 5 suppliers selected for Phase 1. On soil-water-vegetation intelligence warning, management and monitoring systems.

What make the PCP approach work?

- **Start with users**—city staff, planners, and citizens. Real needs are discussed early on.
- **Open the conversation to companies and experts**. In one project, over 1,500 people from 35 countries joined information events to learn and give feedback.
- **Keep it simple**. In one case, they narrowed requirements down to just 9 points—making it easier for startups to participate.
- **Welcome all kinds of innovation**: new tech, new ways of using it, better processes, and even new business models.
- **Support suppliers, not just fund them**—giving access to pilot areas, public data, and feedback.

PCP delivers measurable impact

✅ 71.5%	SMEs win PCP contracts
🚀 86%	PCP Phase 3 solutions reach market
💶 50%	Participants see revenue growth
🌎 33%	Cross-border awards (vs. 1.3% EU avg)
🧪 3 Phases	Design → Prototype → Real-life testing phases

How PCP can help Climate Services make a difference?

- Aligns climate tools with real public sector needs
- Embeds co-creation and testing in real-life environments
- Reduces R&D risks and accelerates market readiness
- Encourages interoperability and replicability
- Turns prototypes into scalable, operational services

What's needed?

- Integrate PCP in national/regional adaptation strategies
- Prepare public buyers to lead
- Support R&D actors to access PCP
- Build networks to align needs and solutions

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WRAP UP