living planet symposium | BONN 23–27 May 2022

TAKING THE PULSE OF OUR PLANET FROM SPACE

Assessing Earth Observation maturity at country level

Eleftherios Mamais | Evenflow SRL
Stefka Domuzova | ex Evenflow SRL
Monica Miguel-Lago | EARSC

26/05/2022

Why

is it important to know where a country stands?

- The current state of **EO activities at country level is not systematically assessed**
- Decision makers and other EO stakeholders can all **benefit from knowing more about where a country stands,** and even more, from knowing **where there is potential for progress**
- They can **direct investment** where its most needed (gaps) or suitable (strengths)

What

is the EO Maturity Methodology?

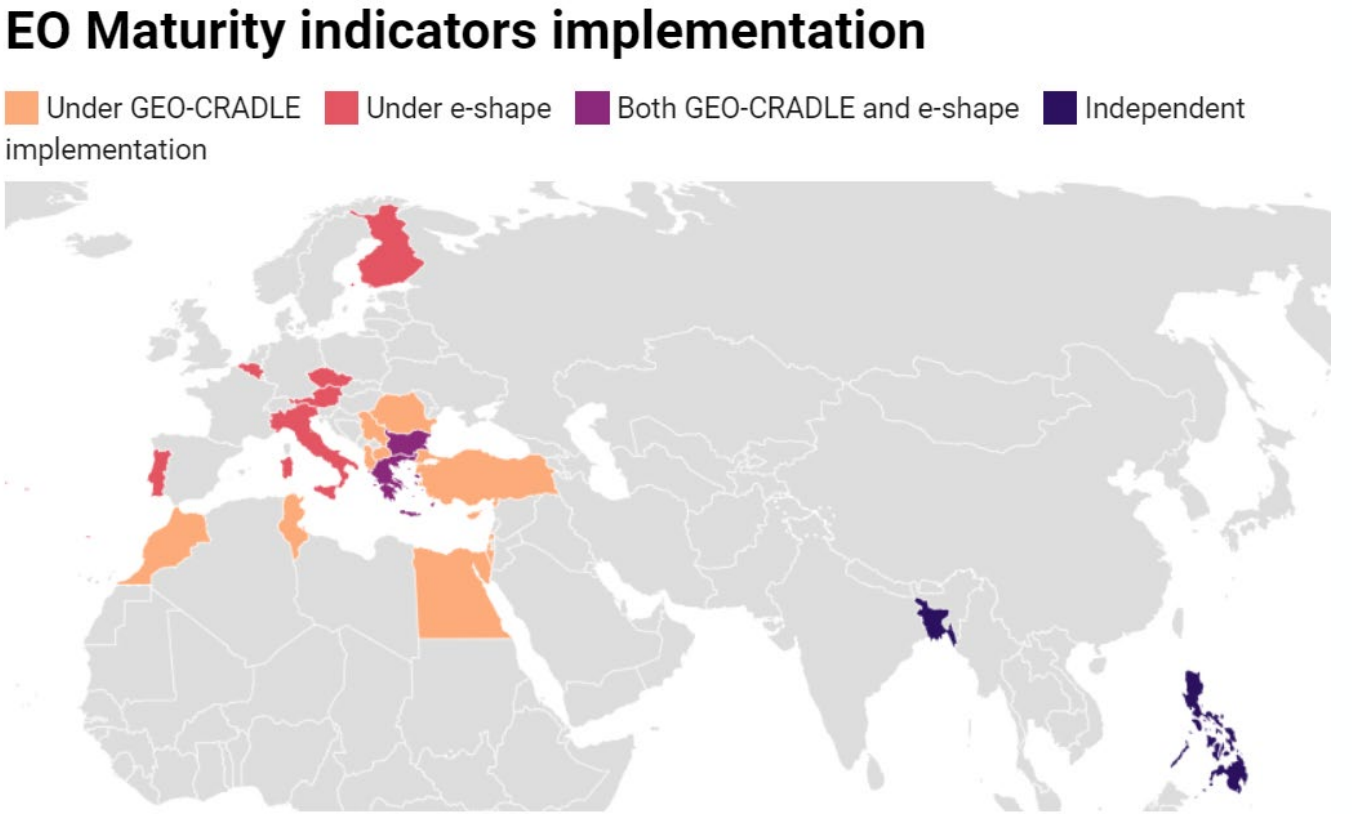
- Methodology allowing to **assess the maturity level of EO-related activities within a country**
- It consists of **multiple indicators** across **five pillars**: Stakeholder ecosystem, Infrastructure, Uptake, Partnerships, Innovation
- It is a **modular methodology**, i.e can be implemented in parts

Where *has the methodology been applied?*

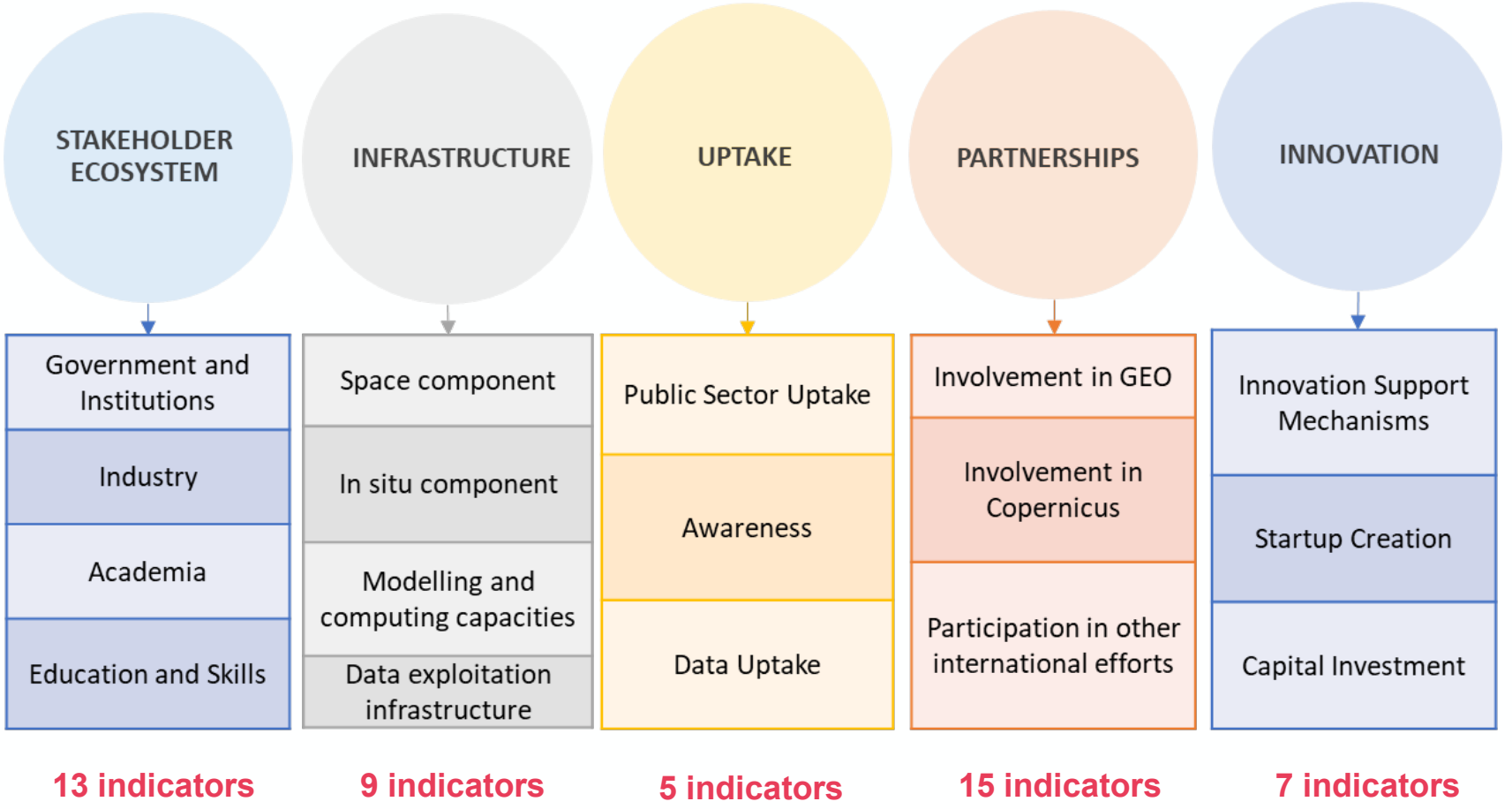
- Started with **11 countries under the GEO-CRADLE** project: Albania, Bulgaria, Cyprus, Egypt, North Macedonia, Greece, Israel, Romania, Serbia, Tunisia, Turkey

- Was **independently deployed in the Philippines and Bangladesh** as part of a DG DEVCO project – and **is now used in DG INTPA assignments in the Pacific Region and Sub-saharan Africa**

- Has been **implemented by e-shape partners in 9 countries**: Austria, Belgium, Bulgaria, Czechia, Cyprus, Finland, Greece, Italy and Portugal



How *does the methodology work?*



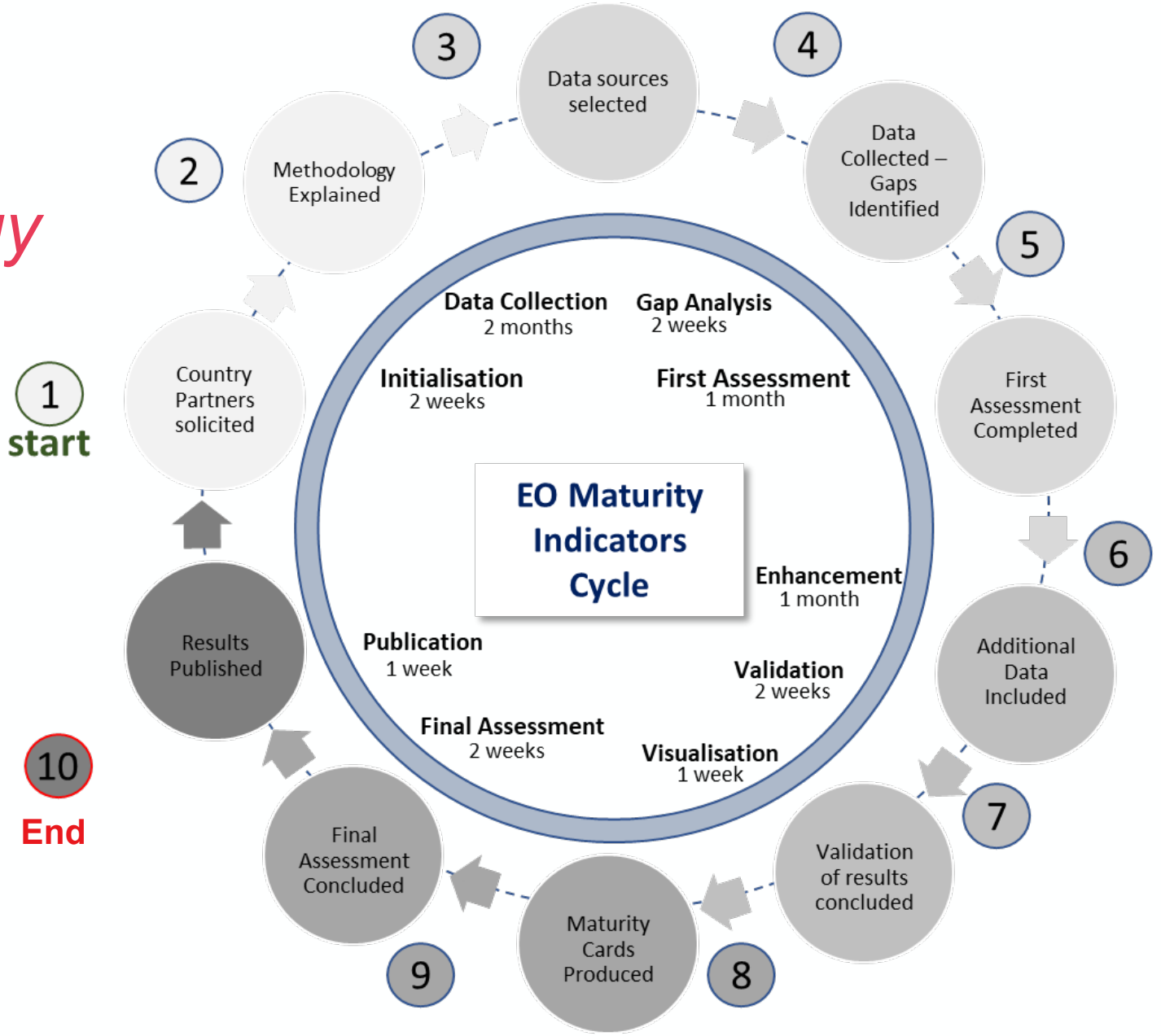
How *does the methodology work?*

- For each **indicator** implementing partners collect **relevant evidence**
- Analysis of the collected evidence allows assigning **maturity levels**

Group of indicators	#	Indicators	Description	0 - initial	1 - basic	2 - intermediate	3 - advanced	4 - optimised
Government and Institutions	1	Governance	Maturity and strength of the governance model at country level	Unspecified governance model.	Formally designated authority.	Formally designated authority, with geospatial departments present in in other ministries as well.	Clear agenda is implemented between authority and ministries-without international involvement and impact.	Clear agenda is implemented between authority and ministries - with international involvement and impact.
	2	Public Service Bodies	Number of entities at national, regional, local level using or producing EO data	Less than 5.	6 - 20	21-50	51- 100	Over 100.
	3	Staff	Employment numbers of people working on EO-tasks in governmental agencies and associated institutions	Less than 25.	26-200	201- 500	501- 1000	Over 1000.
	4	Budget	Volume of annual investment in EO-related activities (upstream, downstream, mid)	Less than EUR 10 M	EUR 10-50M	EUR 50-100 M	EUR 100-300 M	Over EUR 300 M
Participation in other international efforts	35	Involvement in ESA activities or equivalent	Level of involvement implied by the status of ESA member state or ESA cooperating state, and the information beyond these terms.	No involvement.	Involvement through a general Cooperation Agreement.	European Cooperating State.	ESA Member State contributing less than EUR 500 million/year.	ESA Member State contributing more than EUR 500 million/year.
	36	Involvement in SDG Reporting	Exploitation of EO as a tool to support SDG reporting (within the past 3 years)	No use of EO in monitoring/reporting of SDG´s [no SDGs actions]	Use of EO in reporting on at least in one SDG´s [1 SDGs action]	Use of EO in reporting on more than one action in SDG´s [2-10 SDGs actions]	Active use of EO for reporting on to different actions in SDG´s [11-25 SDGs actions]	Active use of EO for reporting on different actions in SDG´s in the last 3 years [over 25 SDGs actions]
	37	Involvement in other Global Agenda Initiatives	Exploitation of EO as a tool in relevant Global Agenda initiatives and conventions (other than SDGs)	No national strategy to tackle it.		Use of EO in reporting.		Specific EO mention in consolidated country roadmap.
	38	Involvement in UN Ecosystem activities	Country participation to UN EO-focused programmes and relations with UN institutions (UNITAR, UNOSAT, UN-OOSA, UN-SPIDER, UNEP, etc.).	No membership of UN bodies related to Space activities nor participation in UN activities [no participation UN bodies]	Participation in at least one UN [EO activity (events w/g´s) [at least 1 active participation in UN agency/organisation]	Participation (between 2-5 activities) or plans for links to reference UN sites to focus international efforts, facilitate traceability and enable the establishment of measurement 'best practices' and active participation at one of the UN offices [participation in 2-5 UN agencies/organizations]	Active participation in more than 6 of the UN offices [participation in >6 UN agencies/organizations]	Active participation or membership of more than 6 UN bodies / offices related to space activities: in the last 5 years [participation >6 UN agencies/organizations/10 years]
	39	Involvement in Spatial Data Infrastructure Efforts	Involvement with Infrastructure for Spatial Information (INSPIRE or other. Possibly monitoring of n. of reports about the implementation and use of their infrastructures for spatial information)	TBD	TBD	TBD	TBD	TBD

How

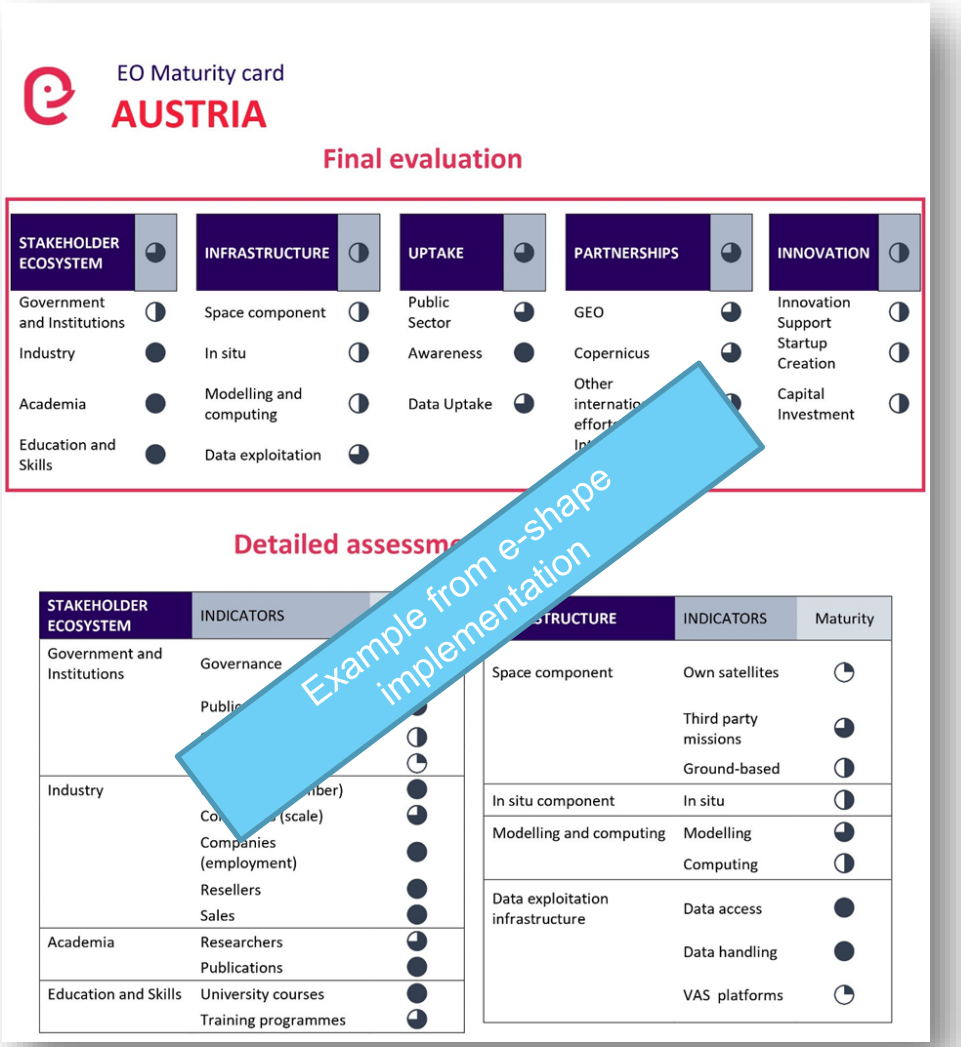
does the methodology work?



Takes about **6 months from start to end for full assessment**, depending on commitment of implementing entity and access to data

What *does the methodology yield?*

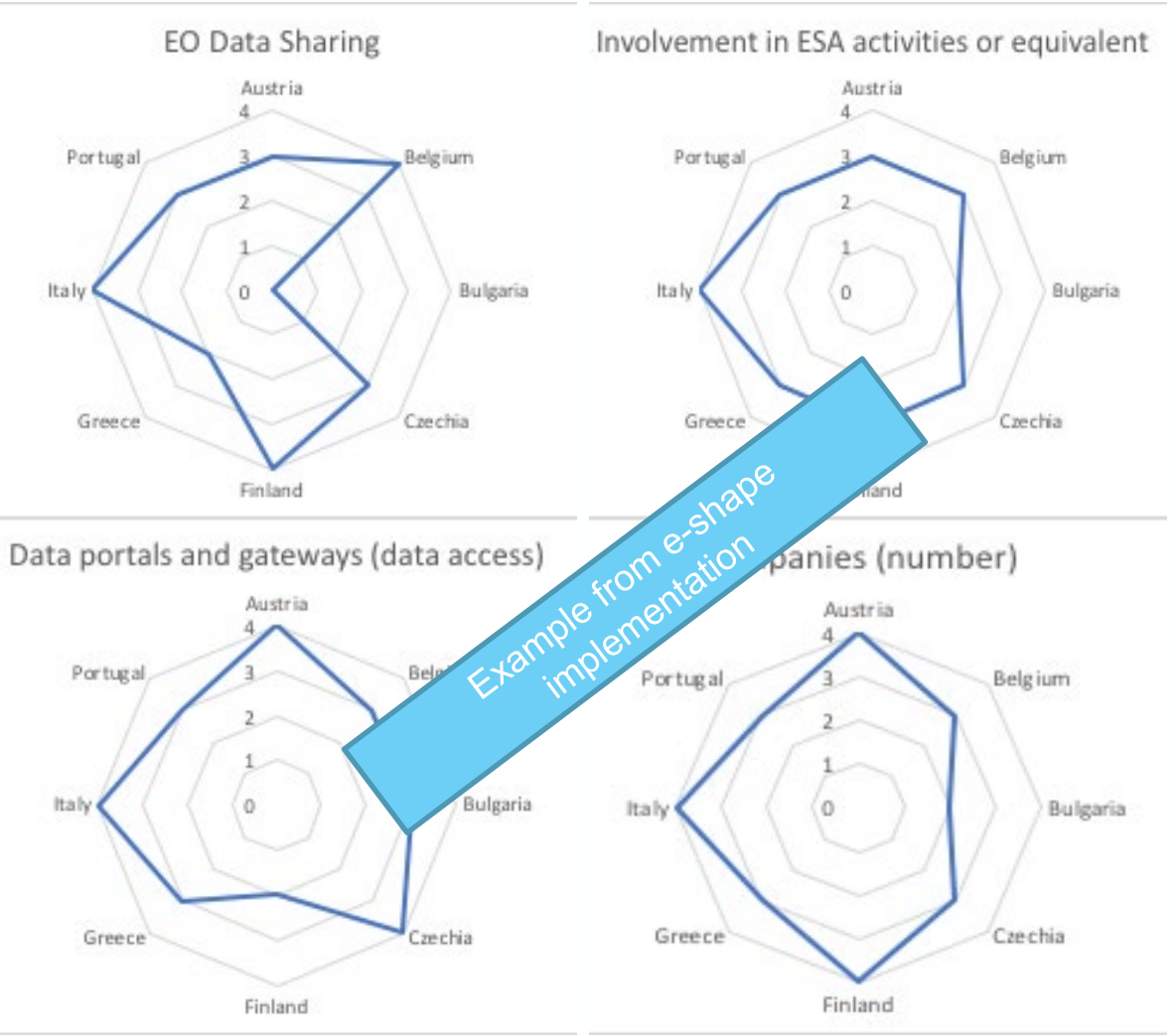
- At the end of the process, simple yet powerful visualisations in the form of **maturity cards** are produced
- These cards present the **current maturity of the country** across the different pillars and for each group and its indicators
- These cards provide decision makers and EO value chain actors with concise information that can allow them to **identify gaps and future opportunities for investment**



What *does the methodology yield?*

- Whilst **not meant as a tool for comparison**, the methodology allows to **identify patterns** and their underlying factors

- Looking at the same country over time, the methodology helps to **pinpoint progress** and tie it back to effective decisions/interventions



How

Will the methodology evolve?

- Through a potential **pilot initiative** next GEO WP
- Through follow up actions by implementing countries – in particular focussing on **“micro-methodologies”** for individual indicators
- Through **greater involvement of EO governance** actors in collecting data

How

Can you get involved?

- Undertake the implementation of the **complete methodology in your country**
- Bring together local actors to **provide inputs against different indicators** or help create **databases of local intelligence**
- Support the **evolution of the methodology**

Additional resources and acknowledgements

Thank you!

For additional information contact:

Lefteris Mamais lefteris@evenflow.eu

Monica Miguel-Lago *monica.miguel-lago@earsc.org*

Or visit: https://e-shape.eu/index.php/capacity-building/assessing-the-maturity-of-eo-activities-at-country-level

The e-shape project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 820852.