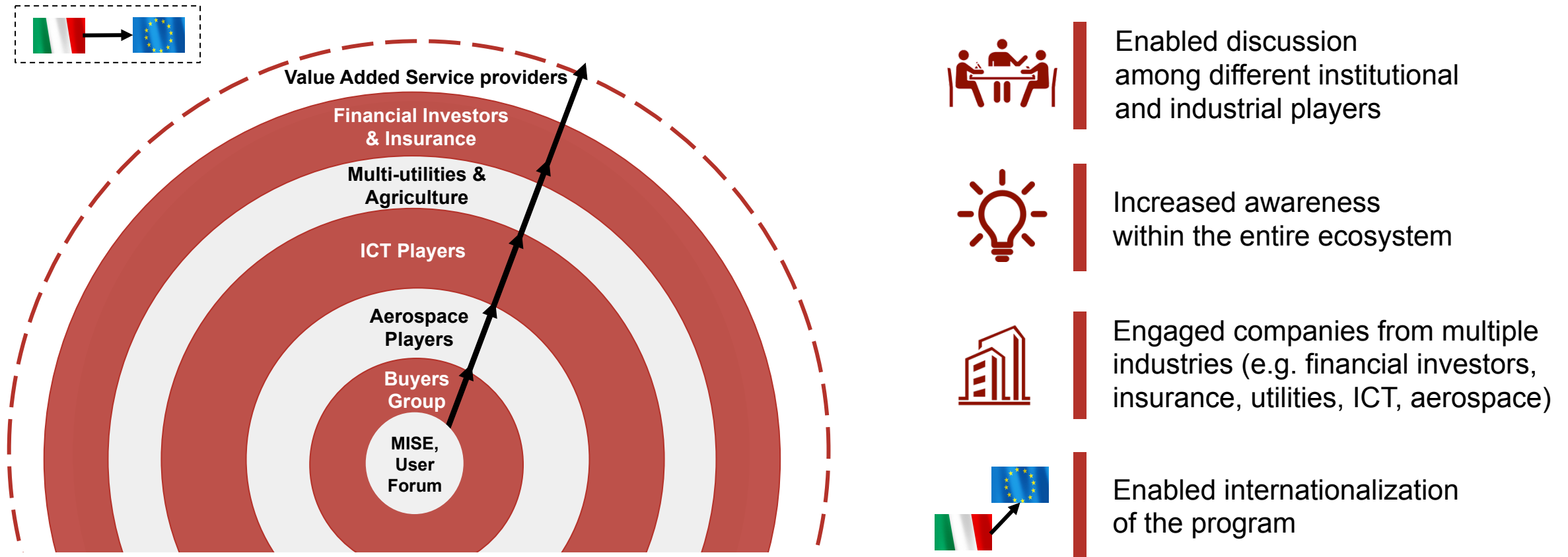


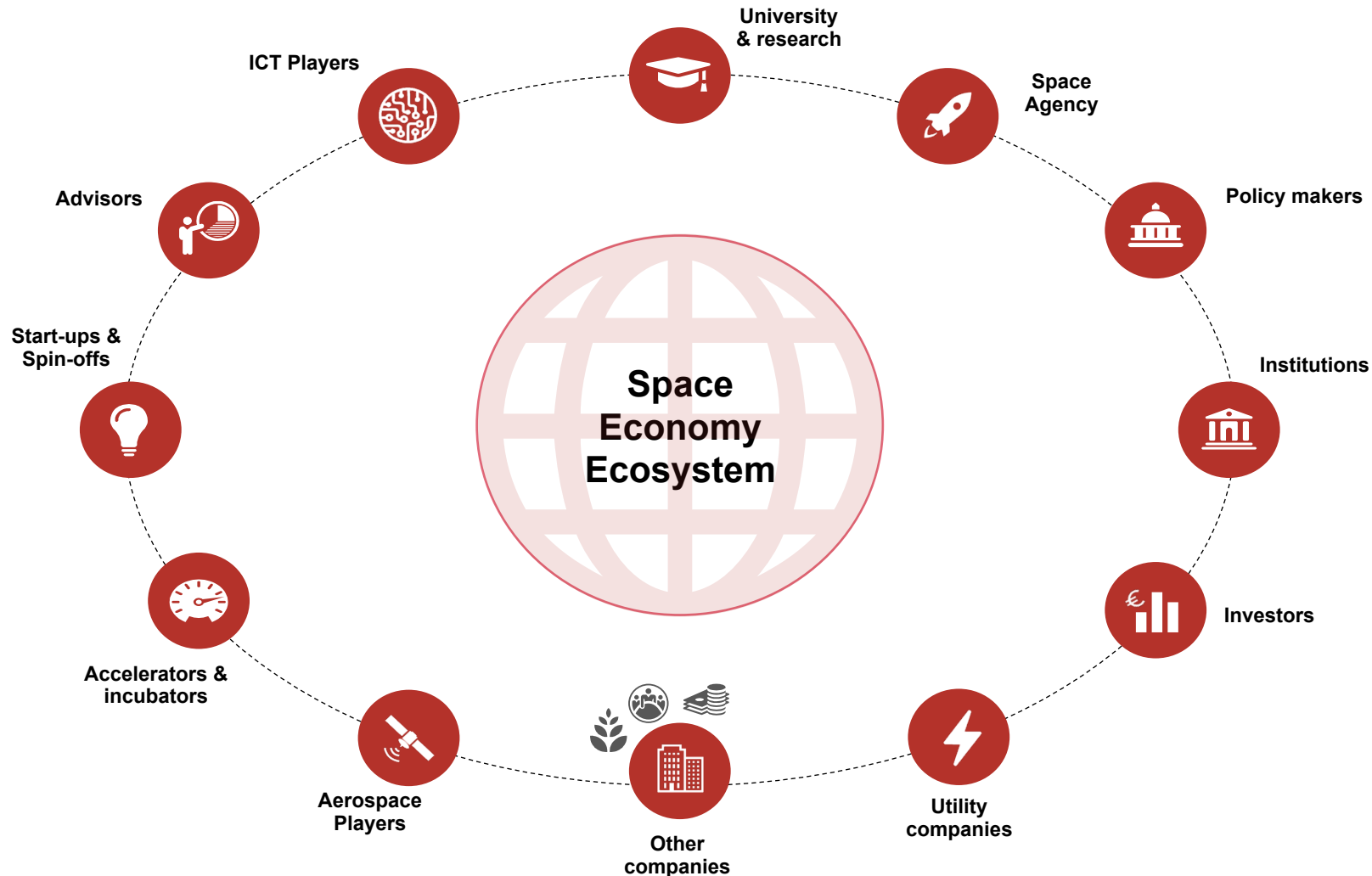
Introduction to  
*Tavolo di Valorizzazione* and  
Copernicus Marketplace

# Tavolo di valorizzazione events aim to engage industry player to boost the expansion of the Italian Space Economy ecosystem

## Player involved and achievements of Tavolo di Valorizzazione

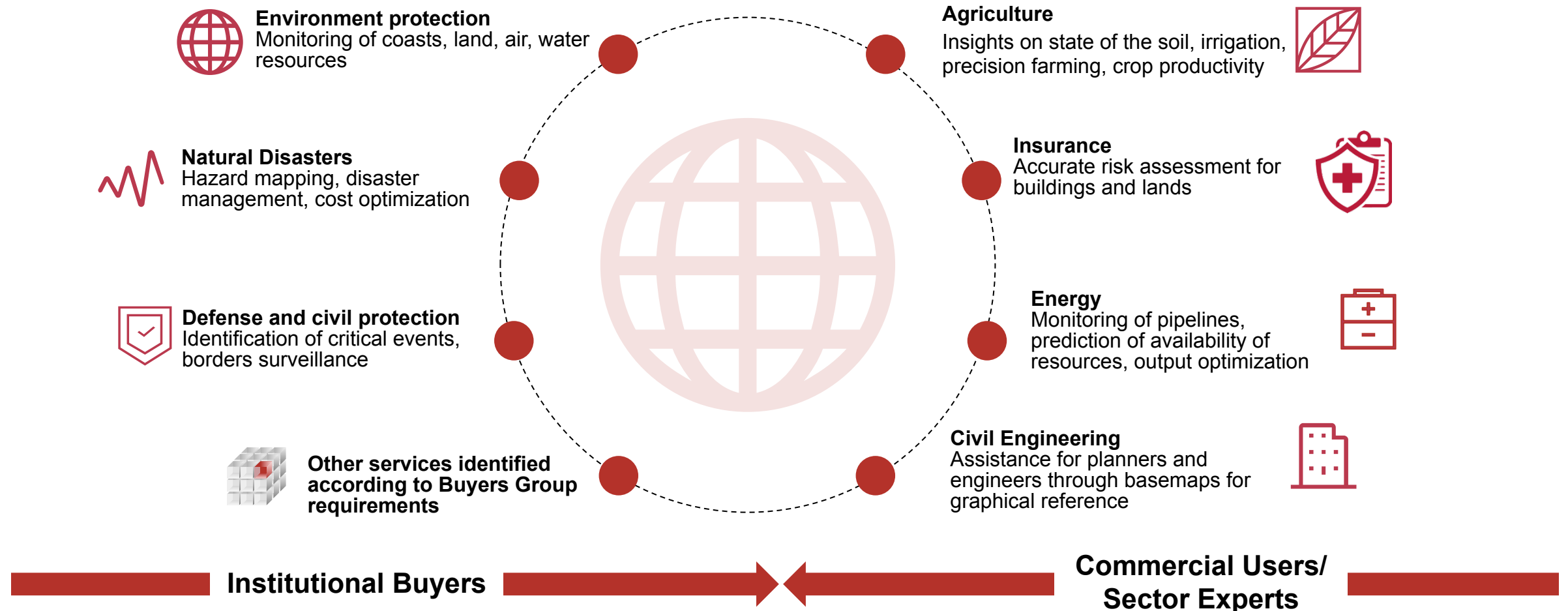


# Players attending vaalorization table represent different stakeholders of the Space Economy Ecosystem



# In addition to the services identified for institutional buyers, players should develop services for commercial users















## Examples of services for institutional buyers and commercial users



# Different technologies and know-how are required for the development of Copernicus Marketplace and services

## Required technologies and know-how

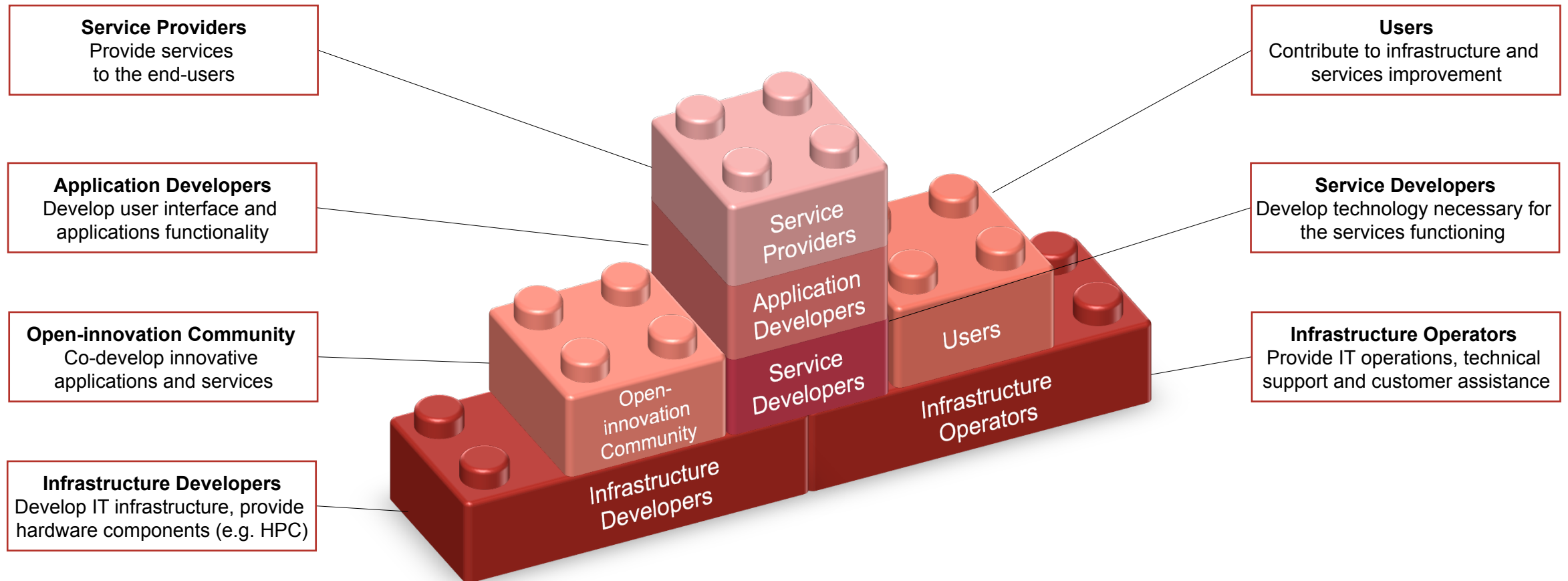
Not exhaustive

Technology	Marketplace	Services
Algorithms and models	Analyses and modelling for general applications 	Advanced modelling, reporting for specific applications 
Technological Infrastructure	Web platform development 	Software development 
HPC/Networking	Servers, cloud computing 	Cloud computing 
Blockchain	Blockchain for transactions security 	Blockchain for data protection 
Know-how	Marketplace	Services
System Integration	Aggregation of IT components and services 	Software integration 
Big Data & Analytics	Provision of interactive tools and insights 	Provision of reports and analytics 
Operational expertise	Services aggregation 	Consulting and technical assistance 

Importance Limited  High 

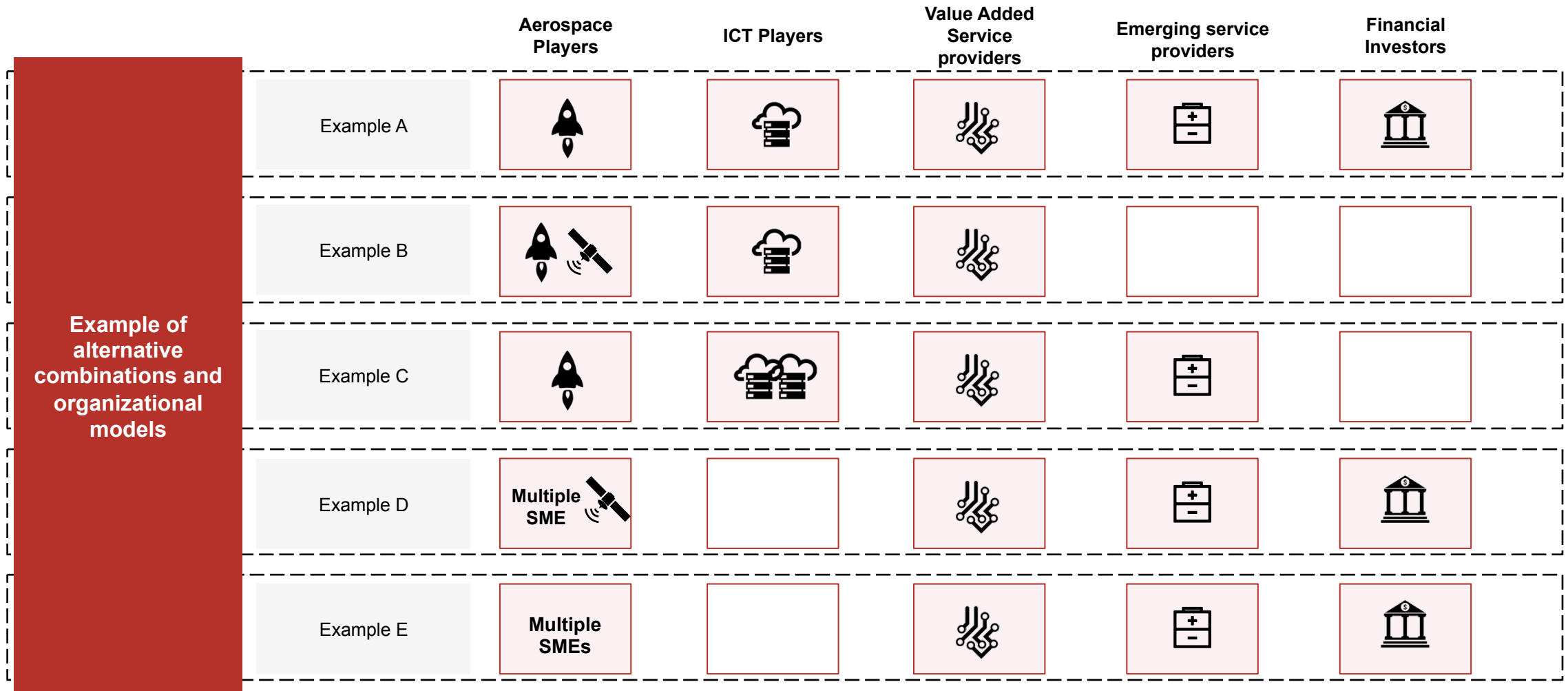
# Development of the initiative will be carried on by different subjects with the aim to accelerate the entire space economy ecosystem

## Subjects involved in Copernicus Marketplace development



# CoMaP development will be carried out by multiple players, that can alternatively combine through different models

## Alternative combinations and organizational models

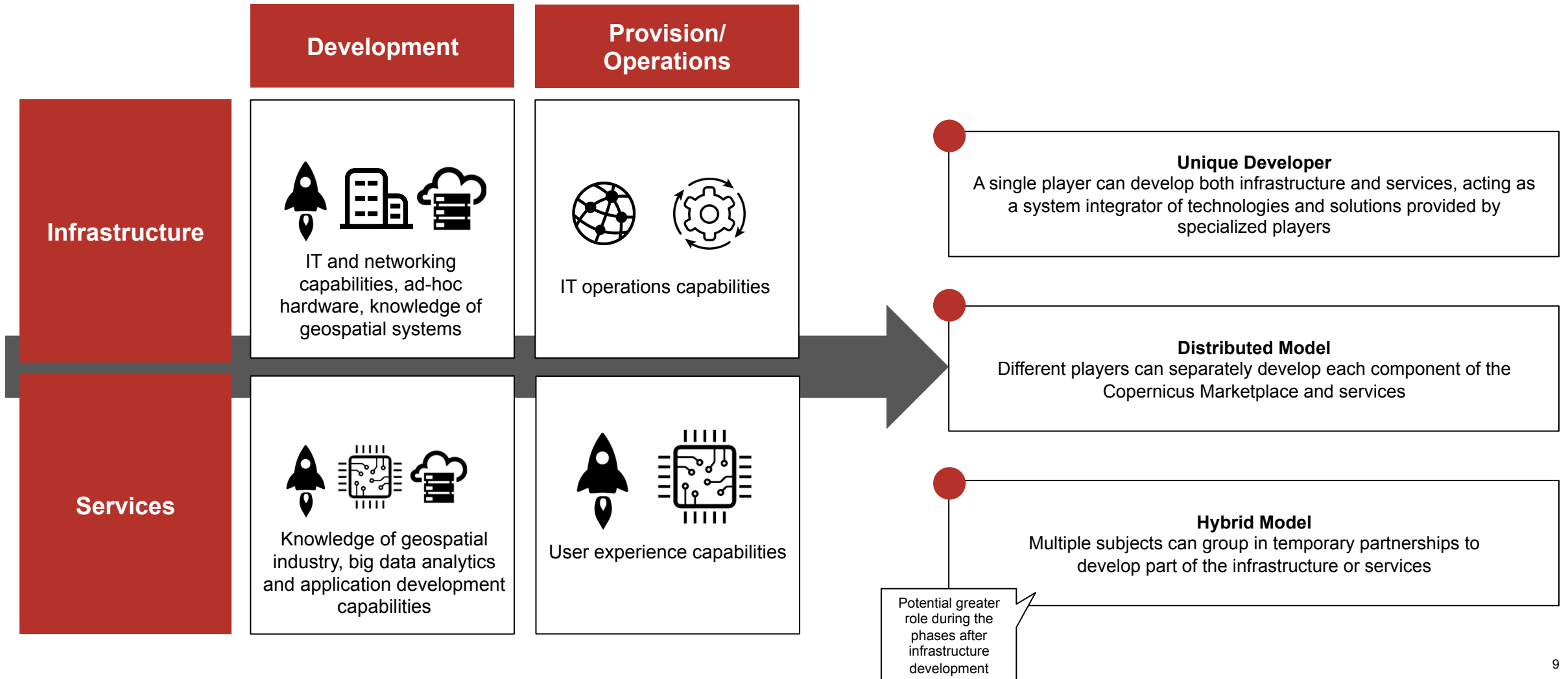


Example of alternative combinations and organizational models

# Players can arrange in multiple ways and play different roles in the development of CoMaP according to their capabilities

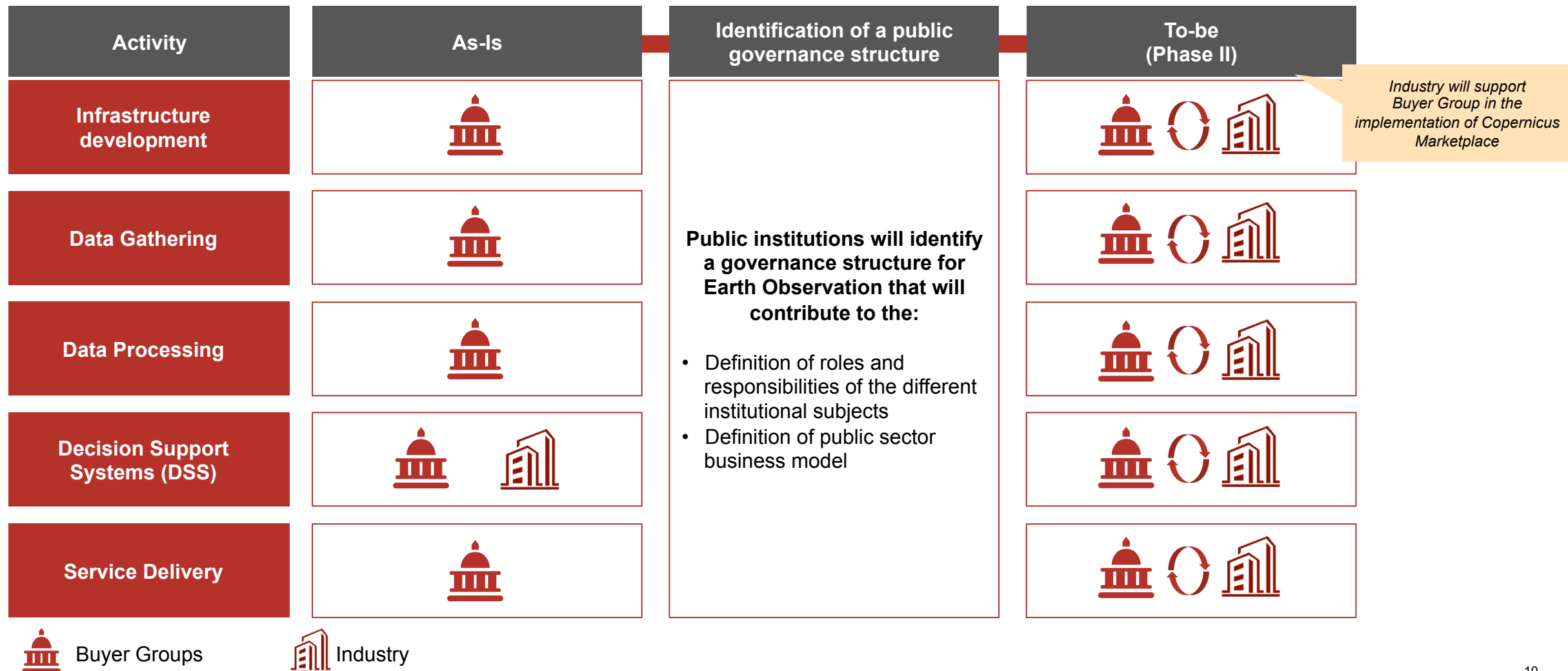
## Infrastructure and services development

## Alternative development models



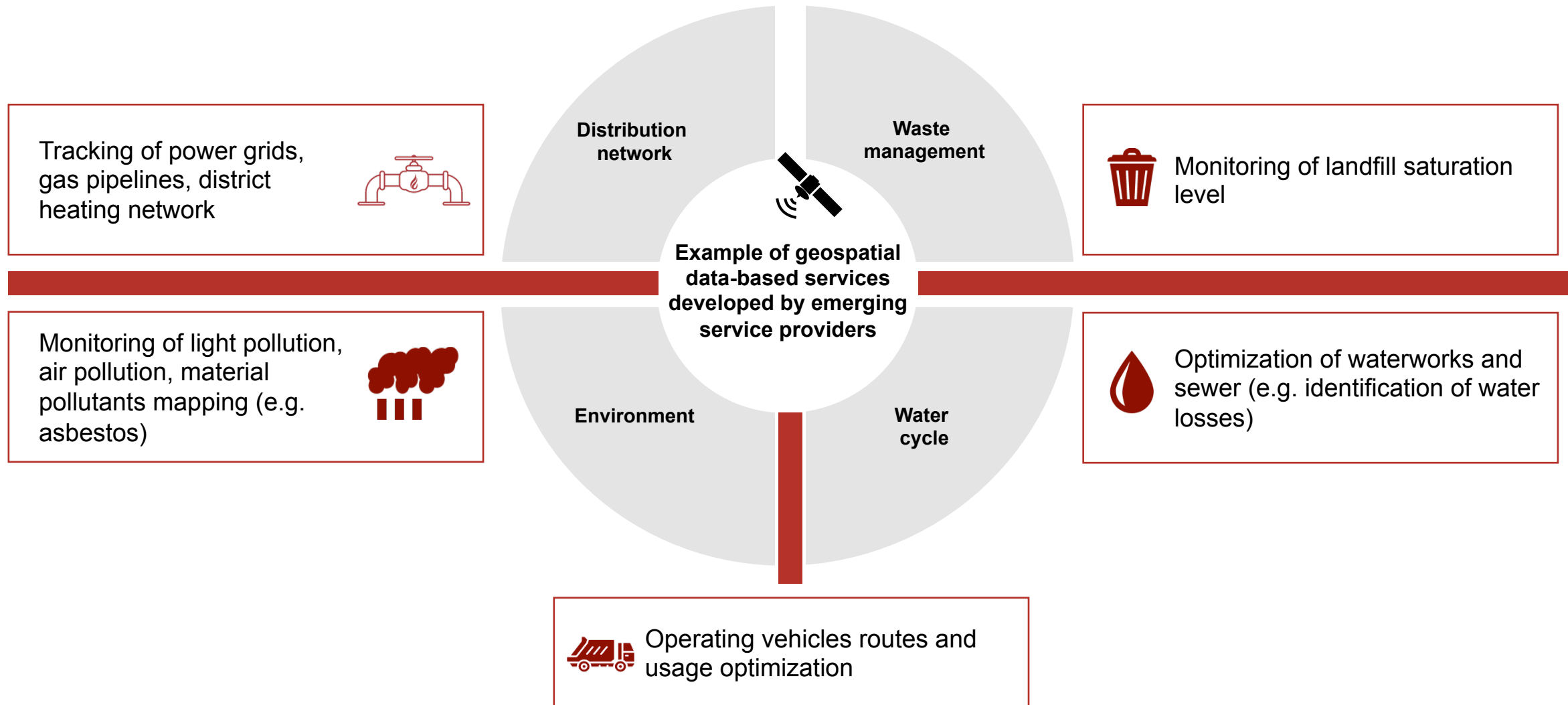
# Buyer groups currently rely on competence centers for EO-services, while in the future will be also supported by the industry

## Business model definition and subjects involved



# Emerging service providers are developing different services based on geospatial data, together with GIS companies, startups and SMEs

## Emerging service providers case study (Multi-utilities)



# Institutions and private investors can support CoMaP development thanks to a multitude of programmes already active

## Financial instruments for economic sustainability plan

Type of funding	Funding instruments	Funding source and programmes
Public Guarantees	Direct guarantee, Counter-guarantee, reinsurance	Fondo Nazionale di Garanzia per le PMI
		InvestEU
Blended finance	Grants and loans	European Innovation Council
Risk financing	Equity	Private equity and venture capital funds
		Public investment funds (e.g. Fare Venture)
Debt financing	Guarantee for mini-bonds, reverse factoring, working capital financing	Various public institutions (e.g. Ministry)



# Financial institutions can leverage different financial instruments, with different risk exposure

## Project Finance Approach

	Financial Institutions & Venture	CoMaP industrial players	Public Institutions/ Investor	Key Accounts	Public Institutions/ Buyers Group
Equity	✓	✓	✓	✓	
Debt	✓		Possibility to guarantee debts		
Anchor Tenancy/ Revenue guarantee			✓	✓	✓
Grant			✓		

# Key assumptions must be met for the development of business cases for Copernicus Marketplace investment

## Business Case Assumptions



**Overall amount of public financing is capped by regulation**

Max public contribution cannot exceed 50% of development costs



**Profitability of public investment needs to be guaranteed**

Initiative must generate a saving of public resources in comparison to the scenario of development solely borne by the public sector



**Public contribution is provided through different programmes**

Total funding is provided by a mix of alternative funding programmes (PMR and others) having different conditions



**A solid plan to capture private demand is needed to ensure sustainability**

Private sector demand is necessary to achieve profitability, since buyers group's *anchor tenancy* is capped

# Valorization round table has enabled the discussion among different subjects and allowed the achievement of different results

## Valorization round table results achieved and open points

### Results achieved



Introduced  
Copernicus  
Marketplace  
project



Increased  
awareness  
in the  
ecosystem



Engaged  
different  
players  
from the  
industry



Enabled  
international  
expansion of  
the program

### Open Points



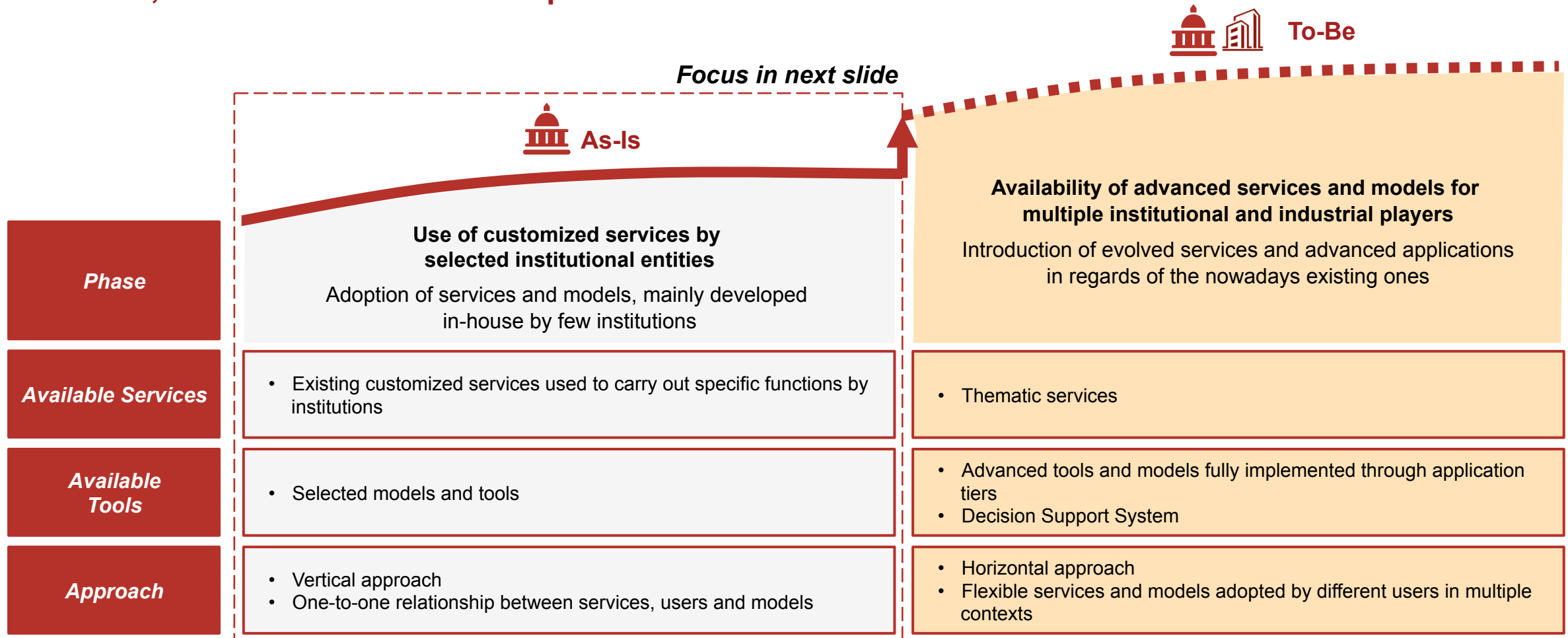
Definition of  
business  
model



Co-  
development  
between  
providers  
and  
customers

# In the Business model Existing services, tools and models will be gradually replaced by new and advanced ones or improved when feasible

## Services, Tools and Models Development Path



# Copernicus and Esa are fostering the development of space-connected startups through different initiatives

## Initiatives to foster open-innovation ecosystem in the space domain



Incubation programme to support **innovative and commercially promising business applications** based on Copernicus data and services

**20**

Number of **start-up** incubated yearly

**50k**

Grant fundings for each startup selected



Network of **incubation centres** with the aim to **turn space-connected business ideas** into commercial **startups**

**180**

**Start-ups** incubated yearly

**20**

Number of ESA **Business Incubation Centers** in EU



**24-48h non-stop events** for teams with the aim to develop **prototypes** of new software **based on Copernicus Earth Observation data**

**10**

Events planned yearly in different European countries

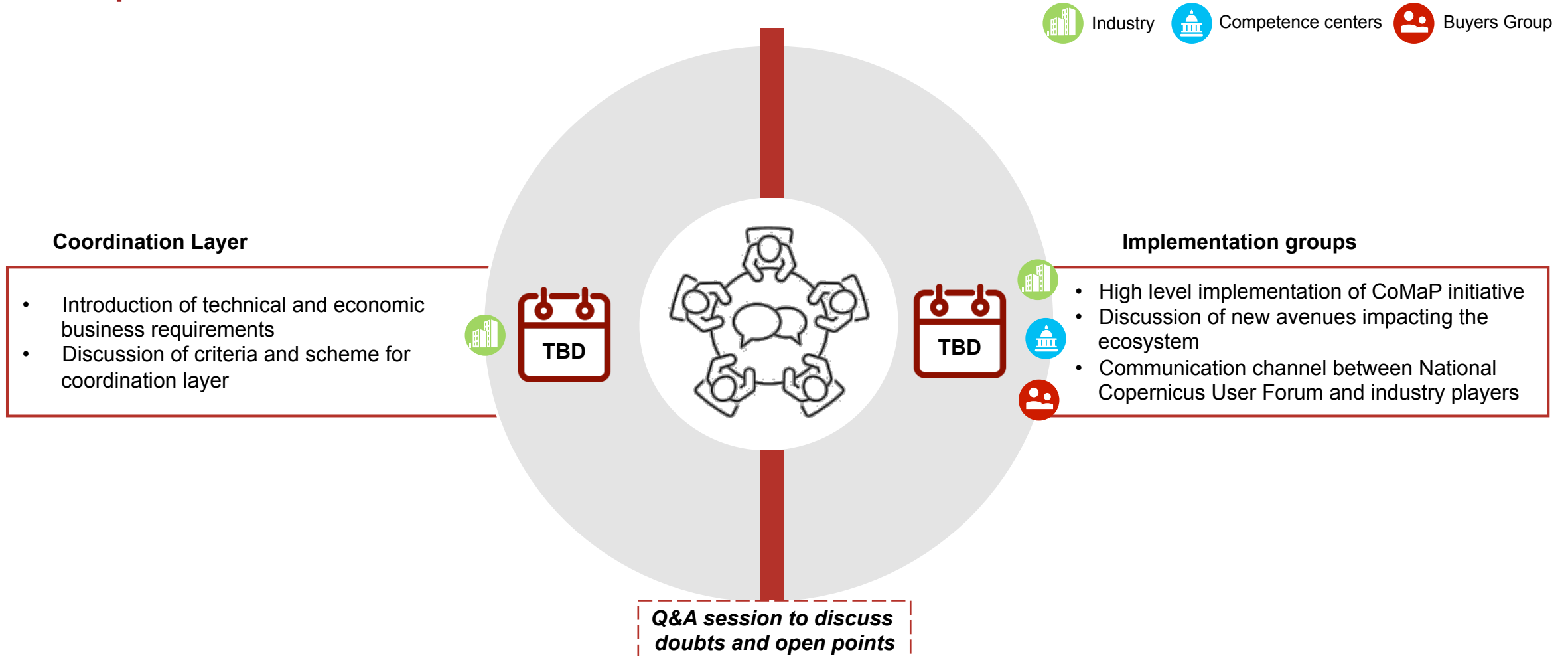
**3k**

Cash award for the winner and access to Copernicus data and incubation programme

**Latest event has been held in Italy (Vicenza) on Feb 15<sup>th</sup>-16<sup>th</sup>**  
*The winning team (S^3) has developed a prototype that allow end-users (institutions and citizens) to have access and validate data and forecasts related to the environment (e.g. air pollution, soil temperature) in specific areas*

# Next upcoming implementation groups will support players

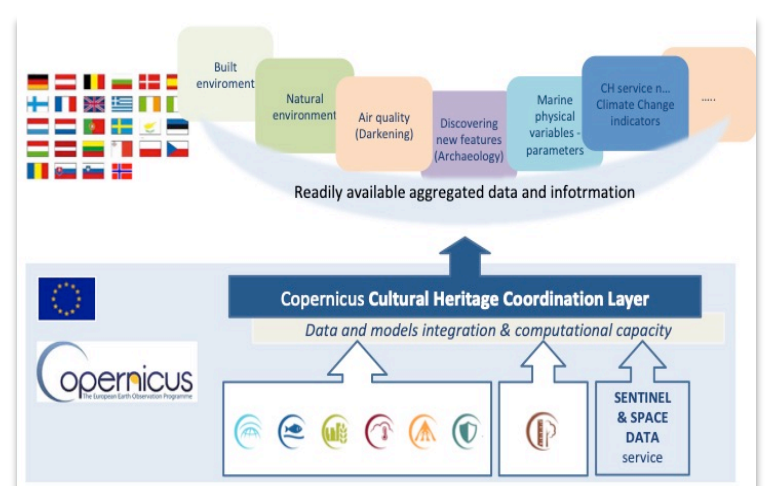
## Next Steps



# I *coordination layers* favorirebbero l'utilizzo di dati e prodotti Copernicus e la realizzazione di servizi nazionali per i *core services*

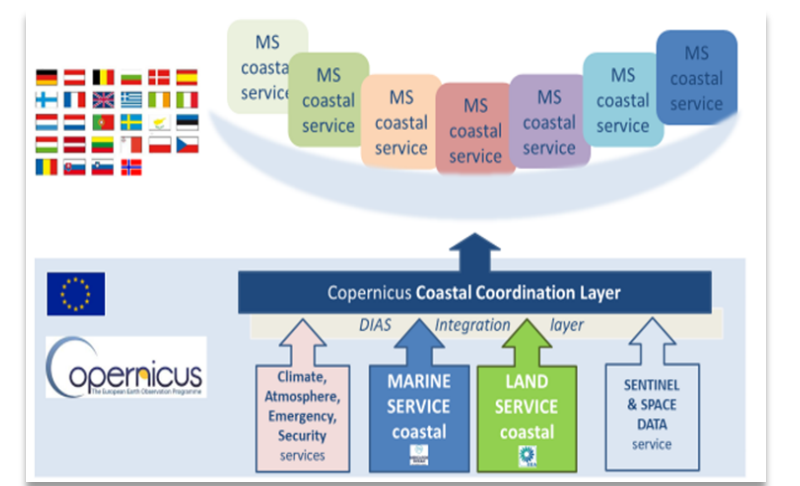
## Principali necessità dei Copernicus Coordination Layers

### Facilitare l'utilizzo di dati e prodotti Copernicus



Facilitare l'utilizzo di dati e prodotti di diversi *core services* necessari allo sviluppo di servizi in una determinata area tematica (e.g. *Fascia Costiera*)

### Definire servizi in base alle esigenze nazionali



Facilitare la definizione su base nazionale di servizi adattati alle esigenze dei diversi stati membri dell'Unione Europea nell'ambito della singola area tematica

# Lo User Forum Nazionale coordinerà gli *implementation group* attraverso il tavolo della valorizzazione definendo obiettivi ed attività da perseguire con gli stakeholders



## Obiettivi

- Supportare il posizionamento nazionale sui “coordination layers” (e.g. ground motion)
- Abilitare lo sviluppo dell’ecosistema italiano della Space Economy
- Promuovere il confronto tra i principali attori istituzionali e di mercato attraverso tavoli e workshop
- Facilitare l’incontro tra domanda e offerta di servizi innovativi basati su dati e immagini geospaziali



## Attività

- Identificazione dell’ecosistema, delle catene del valore e delle principali aziende all’interno delle singole aree tematiche
- Analisi dei bisogni/requirements dei principali players coinvolti
- Individuazione di potenziali servizi innovativi (sviluppo ed erogazione)
- Organizzazione di iniziative selezionate di open-innovation e co-design
- Identificazione di possibili fonti di finanziamento (e.g. tender europei, etc.) per supportare lo sviluppo dei programmi

# Gli *implementation group* vertiranno su quattro principali aree tematiche del Nuovo Mirror Copernicus con possibili applicazioni



## Fascia Costiera

- Prodotti descrittivi della **fascia costiera**: batimetria, topografia, linea di riva, trend erosive/accretivi
- Prodotti descrittivi della **copertura e dell'uso del suolo** e degli habitat
- Prodotti di **input fluviali** in situ e da satellite, validazione degli input di nutrienti, portate dei fiumi e quantitative di acqua dolce, materiali disciolti in particelle, sviluppo di modelli di previsione specifici per fiumi



## Beni Culturali

- **Valutazioni ambientali** a medio e lungo termine
- **Mitigazione del rischio di danno** per siti di grandi dimensioni e parchi archeologici
- **Sistemi di monitoraggio e preallarme** per un'efficace protezione del patrimonio culturale
- **Identificazione di siti del patrimonio sconosciuti**, non registrati o non gestiti su terreni pubblici e private
- Sviluppo di AI per produrre informazioni integrate pronte all'uso



## Green Deal

- Servizi a supporto delle **iniziative di "farm-to-fork"** e **agrometeorologia**
- **Punto di accesso unico** per le informazioni utente
- Servizi per migliorare la **gestione delle risorse idriche**
- Riduzione del **degrado del suolo** e miglioramento della fornitura di servizi ecosistemici
- Protezione della **qualità del suolo**
- Integrazione e **confronto di fonti** di informazione multiple
- **Informazioni multiple** relative alla stessa area di interesse



## Insight Situational Awareness

- **Punto di accesso unico** per accesso ai servizi
- Sviluppo e rafforzamento di **iniziative di citizen science**
- **Raccolta attiva di dati ambientali e socioeconomici**
- Fornitura di **informazioni personalizzate** a cittadini e consumatori sul loro **impatto ambientale**
- Sviluppo di AI per processi di cambiamento comportamentale

**Coinvolgimento di upstream, downstream e servizi di base**