



EUROPEAN
CLUSTERS ALLIANCE



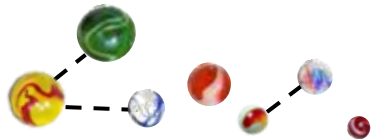
- **Morning sessions**
September – November 2020
- **Clusters in National Recovery Plans**
Meetings at national level
- **Promoting Industrial Ecosystems growth and resilience**
- **Pact for skills**
- **European collaborative environment / Alert system for new disruptions**
- **Clusters Flagship Project**
- **Dialogue with European / national / regional institutions**
European Parliament, other Commissioners?

September 2020

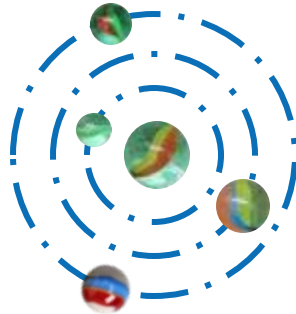
MONDAY	MARTES	MIÉRCOLES	JUEVES	VIERNES	SÁBADO	DOMINGO
31	1 Welcome back session	2 Clusters in the European Recovery Plans	3 IE: Construction	4 Partnerships of Industrial Modernization Platforms	5 Recap session	6
7 S3 week	8 S3 week	9 S3 week	10 S3 week	11 S3 week	12 Recap session	13
14 IE: Tourism	15 IE: Aerospace & Defense	16 Clusters in the European Recovery Plans	17 IE: Electronics	18 IE: Proximity & Social Economy	19 Recap session	20
21 IE: Mobility - Transport - Automotive	22 IE: Energy intensive industries	23 IE: Renewable Energy	24 IE: Agri-food	25 IE: Textiles	26 Recap session	27
28 IE: Health	29 IE: Digital	30 Clusters in the European Recovery Plans	1	2	3	4

**We need to study a complex reality
and quickly identify disruptions
and possible solutions**

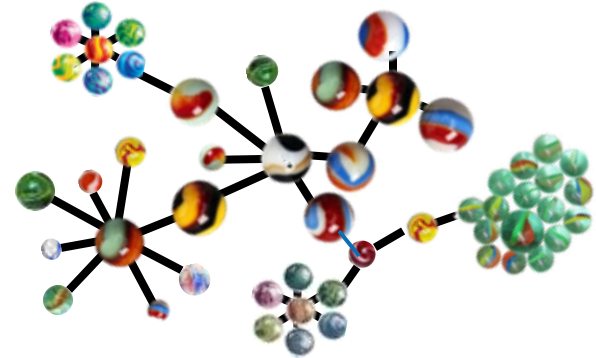
**Stage 1
Islands of Excellence
driven by individuality**



**Stage 2
Industrial Value Chains
driven by specialization**



**Stage 3
Co-Evolving Ecosystems
driven by synergy**



Keystone Agents

Relatedness between different sectors directly or indirectly related.

What is often crucial are the companies that are in between fields.

We need resilient and flexible ecosystems

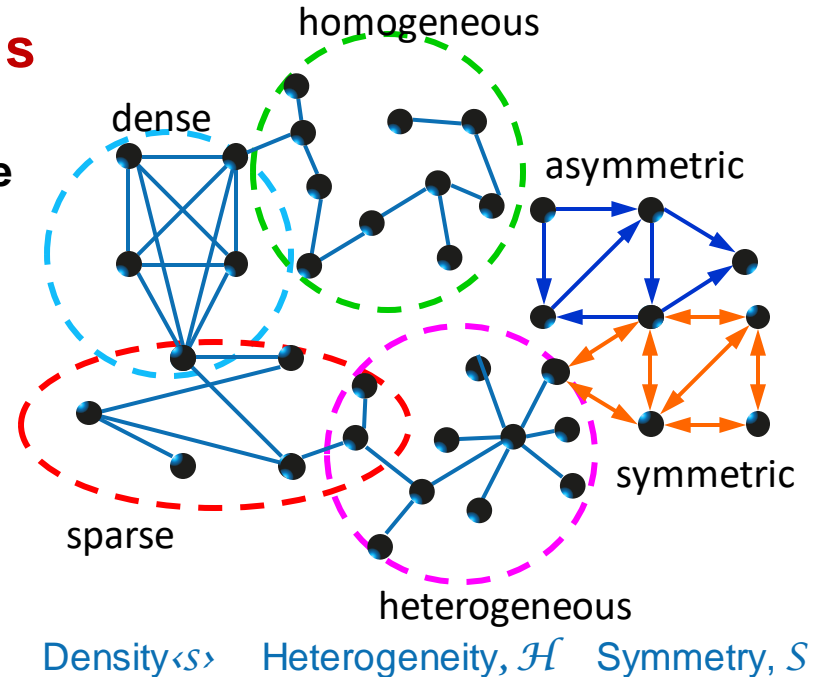
Structural and Intrinsic Determinants of Resilience

- Resilience is an intrinsic property of the network!
- Network Density $\langle S \rangle$, Heterogeneity, \mathcal{H} and Symmetry, S determine Resilience, $\beta_{\text{eff}} = \langle S \rangle + S\mathcal{H}$ (Gao et al. 2016, Nature)

Criticality

- Driven vs. Self-Organized

Source: Athanasios G. Konstandopoulos. CERTH





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