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Regional Studies Association Winter Conference

Growing smart, inclusive and sustainable economies: a complex adaptive eco- system approach

Barbara Colledge

Aim

Development of an holistic framework

city region analysis

complex adaptive eco system approach

Frame of analysis

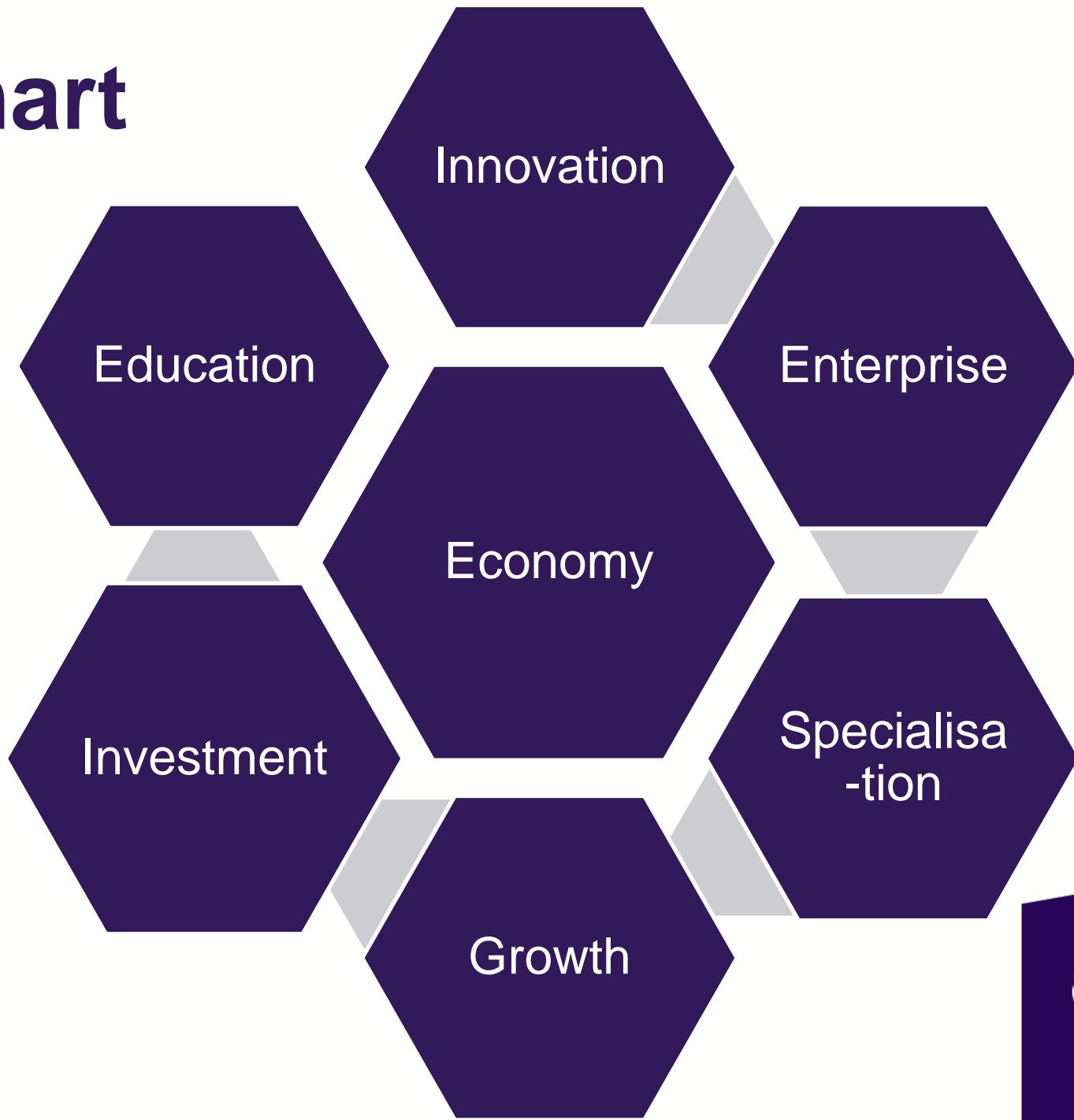
- exploration of the dimensions of smart, inclusive and sustainable economies
- development of a framework utilising the complex adaptive ecosystem model.
- consideration of the institutions and agents of this complex adaptive ecosystem

smart, inclusive, sustainable economies – Europe 2020

Economy

Growth

smart



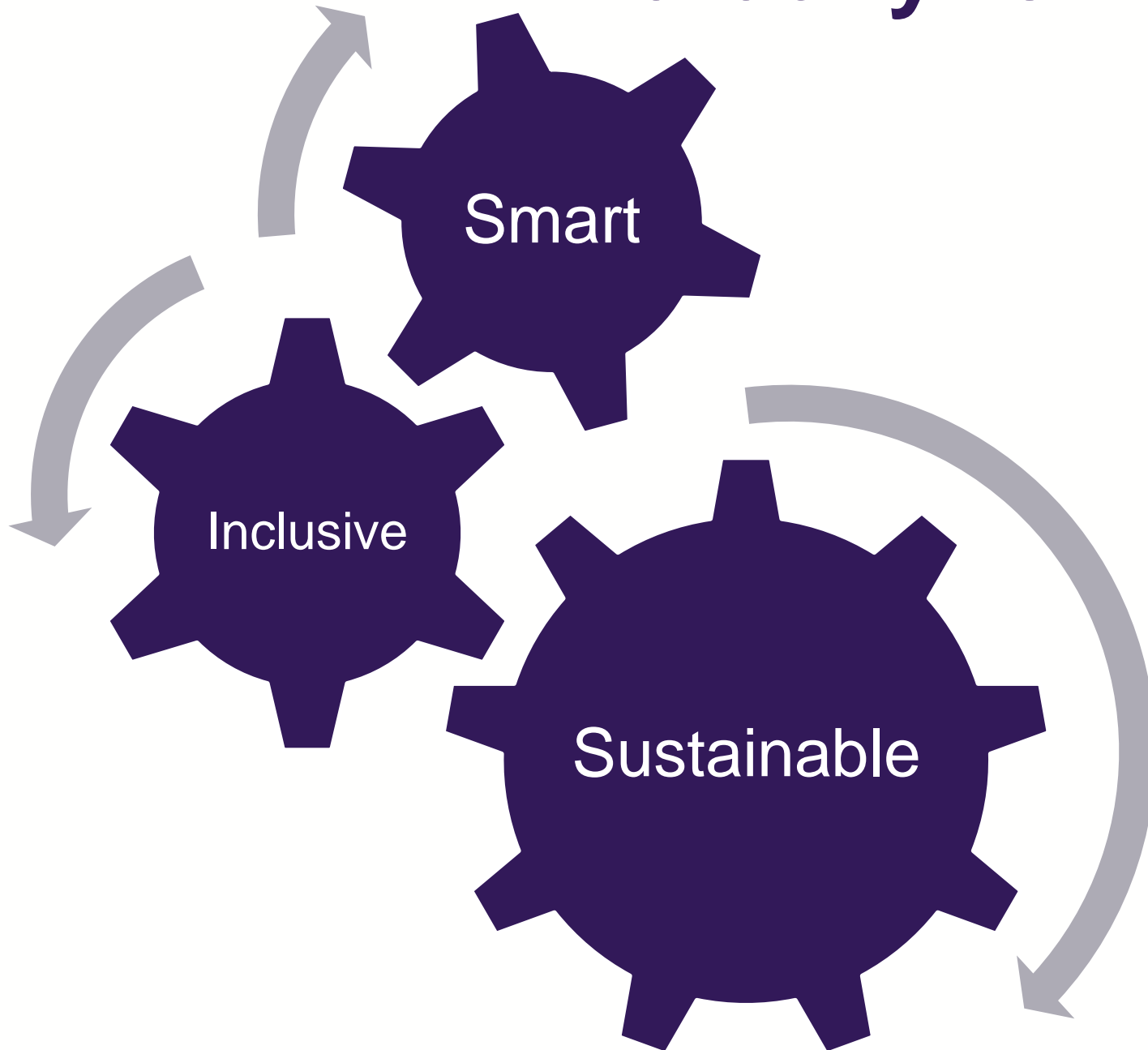
inclusive



sustainable



mutually reinforcing



An integrated framework

Sustainable development – EES and Time

Sustainable communities/societies

Sustainable cities and regions

Complex adaptive eco systems

Integration and Co-ordination

Influences

- spatial, locational or context factors (Martin 1999)
- socio-institutional contexts and embeddedness of regional economic development (Martin 1998).
- Institutions (Amin & Thrift; Healey)
- Political interests & power hinder or influence action (Storper 2013)
- cultural contexts influence outcomes (Storper 2013)
- Complex adaptive eco systems (Martin & Sunley 2014)

Dimensions

- Constant evolution (Brenner)
- Integrated system (Martin & Sunley)
- Institutions
- Agents and Networks
- Power and Politics
- People – actions, values, ambitions
- Time and Space
- Place
- Process
- Constant evolution
- System

Martin and Sunley 2014 Towards a Developmental Turn in Evolutionary Economic Geography

Development Systems Theory

- ***Developmental system***: organism-environment co-evolve
- ***Deep Contextualisation***: entities and influences
- ***Constructionist interactionism***: Multiple interacting causes
- ***Contingent Developmental History***: spatial, historical, interaction
- ***Extended Inheritance***: reconstruction at each generation
- ***Emergence***: form emerges from interaction of components and environment
- ***Self Organisation***: pattern and order of system

Evolutionary Development Biology

- ***Robustness***: ability to maintain functionality when disruption occurs
- ***Plasticity***: Ability to adjust to respond to mutations and environment
- ***Niche Construction***: ability to modify, shape or control own environment to ensure evolutionary success
- ***Evolvability***: capacity to evolve, variation to enhance survival or reproduction

Territorial organisation

- Brenner N. (1998) 'Between fixity and motion: accumulation, territorial organisation and the historical geography of spatial scales'
- Places (cities and regions) and State
- Lefebvre and Harvey
- *"Each geographical scale is a complex, socially contested territorial scaffolding upon which multiple overlapping forms of territorial organisation converge, coalesce and interpenetrate" p5*

Dimensions of Framework

- **Economic, Social and Environmental**
- **Place/Context**
Dimensions: Location, Infrastructure and Technology, Spatial and Scalar, Connectivity. History
- **Temporal Dimensions:** Time Horizons (short, medium or long term), Life-cycles, Trajectories (Past, Present and Future)
- **People Dimensions:** Skills, Culture, Behaviours, Beliefs and Perceptions, Connectivity
- **Governance**
Dimensions: Leadership, Power, Institutions, Territorial State, Connectivity

Development of Framework

- Holistic framework to integrate these concepts and dimensions
- Applied at city-region level initially
- Proposition – can apply at different scales given territorial organisation and capital - including level of institution or firm

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