

MOBILITY ENERGY ENVIRONMENT



The future moves us.

Andrea Ricci

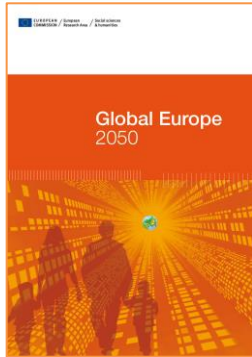
Luxembourg, April 23rd 2015

Workshop: What European territory do we want?



INNOVATION FOR SUSTAINABILITY

The territorial dimension in 3 EU foresight projects



- **Global Europe 2050**: the role of Europe on the international scene => R&I needs for a European renaissance

ec.europa.eu/research/social-sciences/pdf/global-europe-2050-report_en.pdf



- **PASHMINA**: plausible (and desirable) shifts of the overall socio-economic paradigm

www.pashmina-project.eu



- **FLAGSHIP**: transition pathways towards global, sustainable well-being

www.flagship-project.eu

Common features

- Scenario-based approach
- Macro-level visions
- Participatory process
- Integration of qualitative methods (storylines, wild cards) with quantitative tools (models, indicators)
- Main objective: questioning the mainstream, providing food for thought to policy makers, overcoming deeply ingrained mental/disciplinary models

Global Europe 2050: approach

- Expert Group (≈ 25), highly multidisciplinary
- Six meetings: unconstrained, bottom-up contributions with loose, interactive guidance
- Purely normative visions
- Scenario building; unstructured, “shape as you go”
- Scope: 5 main macro-themes
 - Geopolitics and governance
 - Demography and society
 - **Territorial and mobility dynamics**
 - Energy, resources, environment and CC
 - Economic and technological prospects

Global Europe 2050: three Scenarios

Scenarios

“Nobody cares”
(muddling through)

“EU under threat”
(decline/dis-integration)

“EU renaissance”
(further integration)



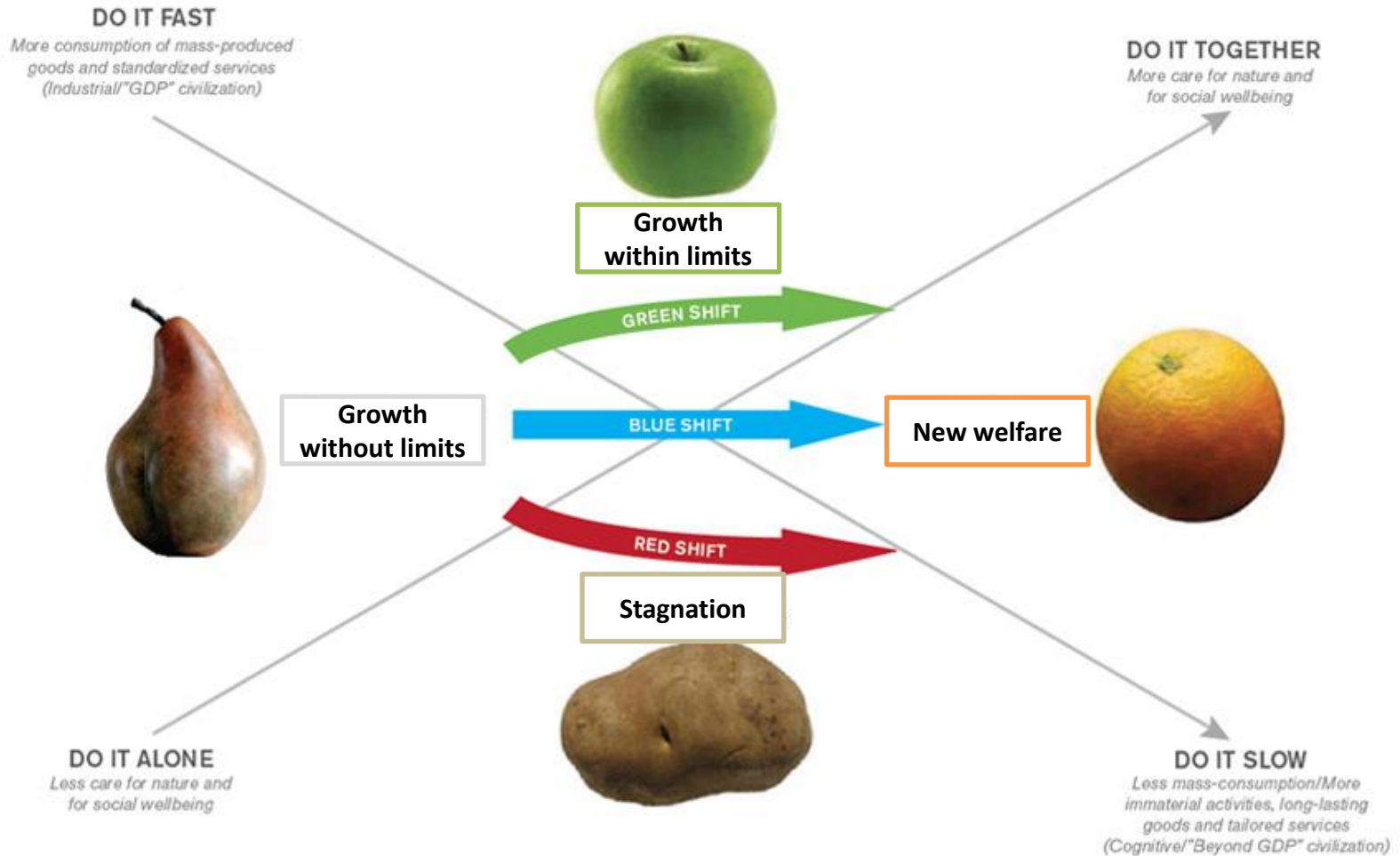
Global Europe 2050: three Scenarios

Scenarios	Territorial and mobility dynamics
“Nobody cares” (muddling through)	Global urbanization continues at unprecedented levels, mostly outside Europe
“EU under threat” (decline/dis-integration)	Increasingly vulnerable and unsustainable cities, in Europe as well
“EU renaissance” (further integration)	Balanced territorial development of a polycentric Europe, greater cohesion and smart and sustainable cities and mobility, thanks to tremendous progress in ICT-based services

PASHMINA: approach

- *Highly structured scenario space: “speed Vs togetherness”*

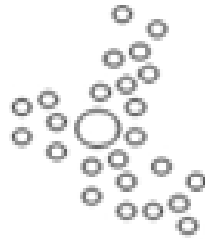
PASHMINA: four scenarios



PASHMINA scenarios: transport energy nexus

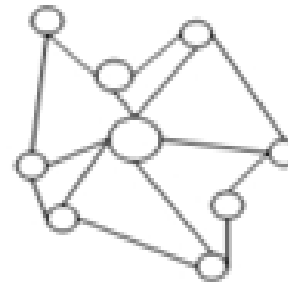
**Urban sprawl
fast, alone**

Urban sprawl



**City network
fast, together**

City network



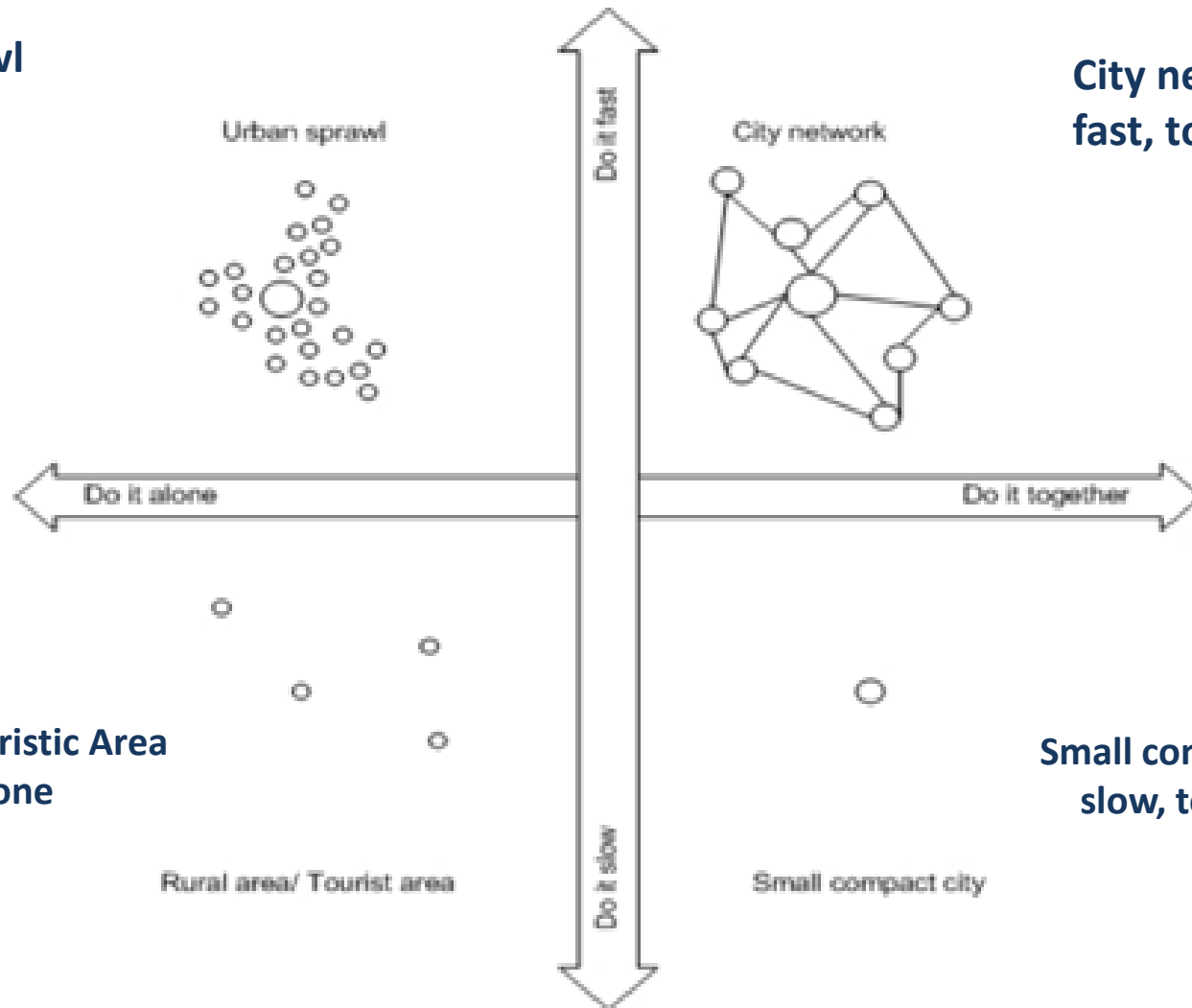
**Rural area/touristic Area
slow, alone**

Rural area/ Tourist area



**Small compact City
slow, together**

Small compact city



PASHMINA: approach

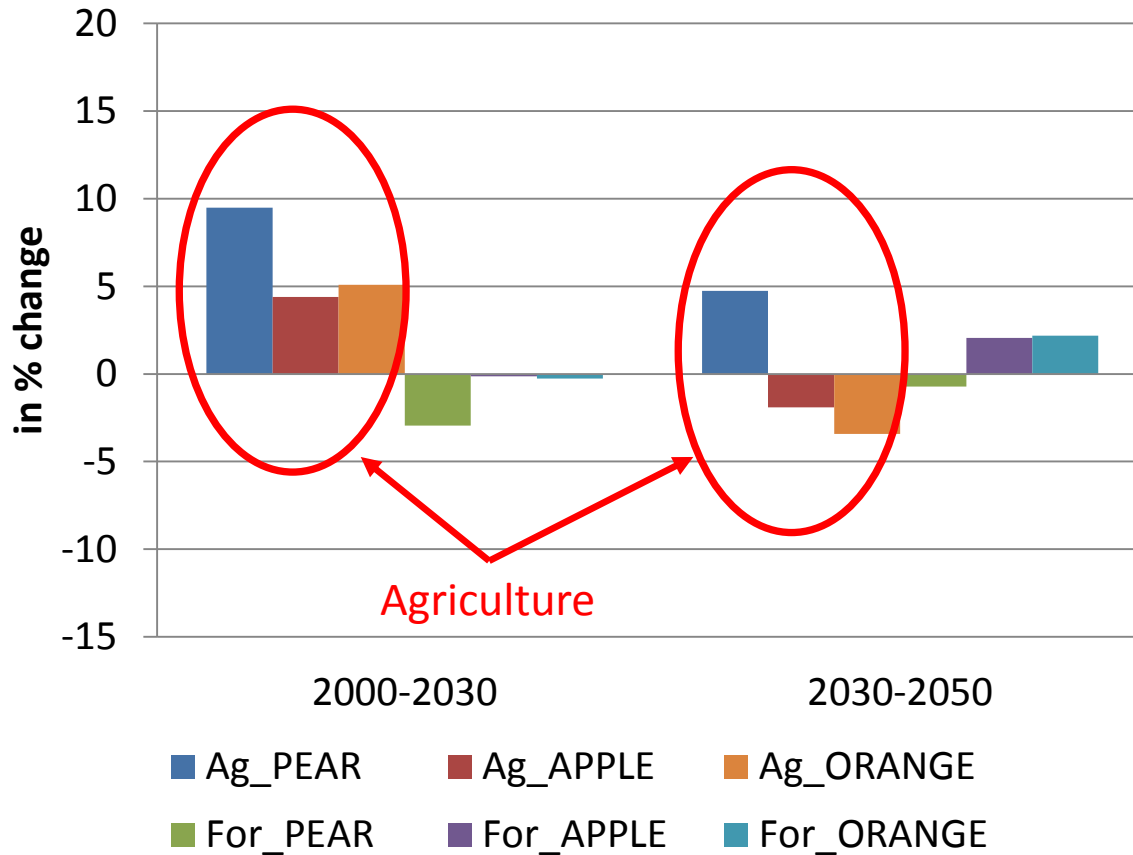
- *Highly structured scenario space: “speed Vs solidarity”*
- Extensive Delphi (2 rounds) with hundreds of stakeholders (research, industry, policy, CSO)
- *Normative combined with (validated by) explorative*
- Scope:
 - Transport-energy-environment nexus in the urban context
 - Landuse competition and territorial functions

PASHMINA : transport energy nexus

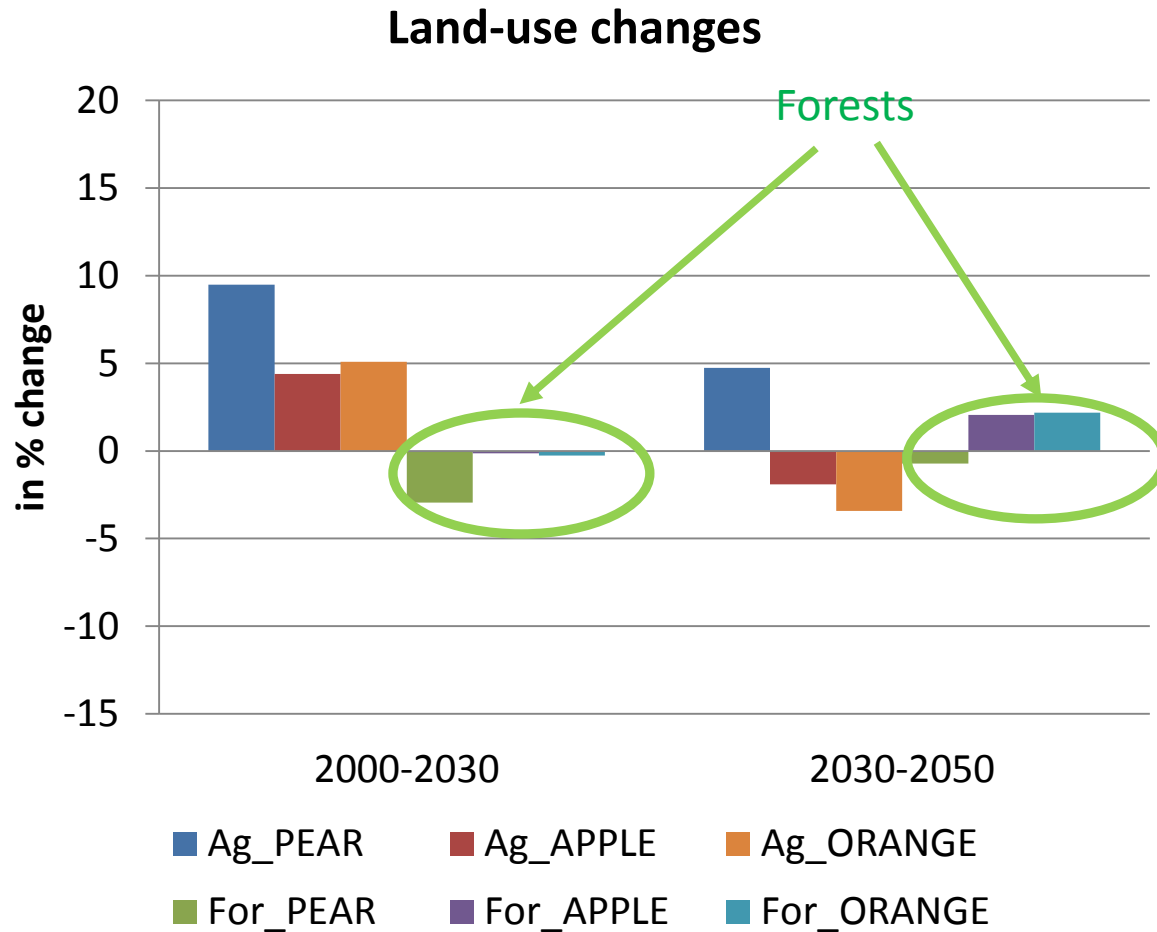
- Local transitions essential, driven by local authorities, citizens and NGOs
- Deep changes in behaviours toward thriftiness
- Urban sprawl regresses; 1st rings of core cities densified
- Spatial networking among big cities and with medium cities nearby
- Hybrids, electric vehicles and biofuels: gCO₂/car-km down by 75%
- Zero-energy building concept generalized
- New technology clusters around photovoltaics and smart grids

Pashmina Scenarios: implications for landuse

Land-use changes



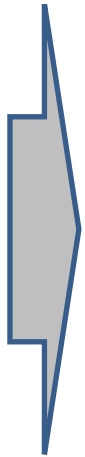
Pashmina Scenarios: implications for landuse



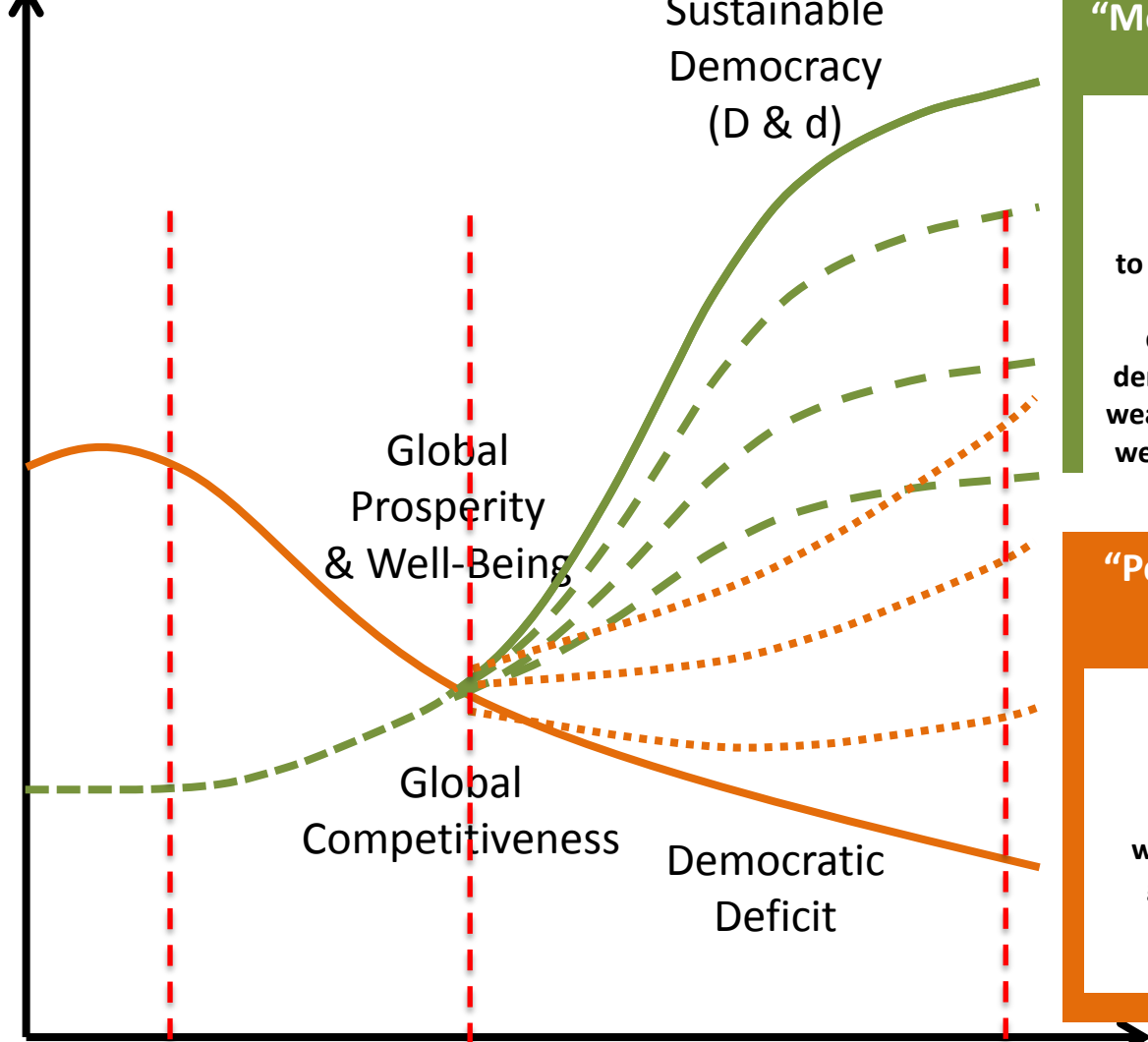
FLAGSHIP approach

- Iterative process of storylines development, progressively validated through workshops and webinars (policy makers primarily)
- Normative combined with (validated by) explorative
- Scope:
 - the implications of “Grand Societal Challenges” for global and territorial governance
 - Focus on pathways to transitions: the three horizons perspective
- Two scenarios, both plausible and (possibly) desirable
 - Moving forward: the “perseverance scenario”
 - Looking beyond: the “metamorphosis scenario”

Policy paradigm changes



Fit to sustainable development goals



“Metamorphosis” vision

LOOKING BEYOND

to a global circular economy development, democratization of wealth creation and well-being policies

«Before-the-fact»
anticipatory changes

“Perseverance” vision

MOVING FORWARD

with the current global growth paradigm and policies

«After-the-fact»
reactive changes

2020

2030

2050



INNOVATION FOR SUSTAINABILITY

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- Interpreting/transcribing the global storylines in specific (sectoral and territorial) contexts

FLAGSHIP TG Approach

	Perseverance Scenario	Metamorphosis Scenario
Estonia: Energy Supply	Technological innovations and energy infrastructure (EU)	Technological innovation complemented with changing lifestyles and way of thinking (EU)
Bulgaria: Energy Supply	Development of domestic natural gas resources (National government)	De-centralisation of heating supply to households and businesses (Heating thermal pumps and biogas technologies for small communities, especially in rural areas)
Bulgaria: ICT changing society	Open Public Data Initiative, mainly for administrations (National level with local footprint)	Digital Education for Kids from Disadvantaged Communities (roma, immigrants, poverty etc. – communities)
Lisbon: E-Governance	<ul style="list-style-type: none"> - Open Source Urban Traffic Management System - Network of networks online platform 	<ul style="list-style-type: none"> - Urban Regeneration - Socio-economic transition
SWSPIZ: Smart specialisation	R&D programme: led by regional universities and business organisations	Green Future Project: Green technologies, environmental management, solutions for the implementation (led by regional authorities)
ISIS: production – the agri-food sector	Smart Agriculture. Market dominated by larger farms, technology advanced, linked with the large distribution network. Standardized products and practices	Multifunctional agriculture A new cultural model toward food consumption emerge, all citizens participate and public authorities frame it. Healthy and quality products produced with diversified practices by small, medium, and large farms.

Lessons learnt - legacy

- Global Europe
 - Unstructured, bottom-up => richness, but internal consistency!
 - Eye opener: BAU is not an option
 - R&I governance reforms if macro-challenges to be addressed?
- PASHMINA
 - For R&I community: learn to represent/model discontinuities
 - For policymakers: no such thing as an “obvious best case”!
- FLAGSHIP
 - Translating global, wide scoped storylines into local, sector specific scenarios and policies
 - How to ensure coherence/consistency between levels of government?

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Thank you

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