

# **Looking at the future of our societies**

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# Background experience

- ❑ PASHMINA (FP7): Paradigm Shifts  
Modelling and Innovative approaches
- ❑ Global Europe 2030/2050 foresight

# PASHMINA (FP7)

Paradigm Shifts Modelling and Innovative Approaches

- Questioning the dominance of the economic growth objective (feasible? desirable?)
- Ecological economics framework (focus on the interaction between economic and ecologic systems)
- New paradigms  
↓
- New/enhanced tools
- New indicators



**Do it fast**  
More consumption of mass-produced goods ("industrial GDP" civilization)

**Do it together**  
More care for nature and social well being



**Growth within limits**



**Growth without limits**

**Blue shift**

**New Welfare**

**Red shift**

**Stagnation**



**Do it alone**  
Less care for nature and social well being

**Do it slow**  
Less mass consumption –  
Dematerialization –  
("cognitive GDP" civilization)



# Growth without (beyond) limits: no shift

- Continuing hyperconsumerism and globalization
- New tech wave (ICT, nano, bio) – Technofixes
- Considerable EE increase, largely offset by lifestyle
- Continuing urban sprawl and car dependence
- Overall energy consumption increases
- CCS grows, Fossil phase-out “moving target” 21st century (50% in 2050, 35% RES, 15% Nuclear)
- Post-Kyoto failure – GW
- Agriculture yields increase (GM)
- Environmental damage from agriculture increase
- Local food production not achieved (in many DCs)
- Increased corporate power, “lobbycracy”
- Increased inequality (between and within countries)

**Totemic measure of progress: GDP**



# Growth within limits: towards a low carbon economy

- Global “Climate capitalism”
- Massive decarbonization of economy
- New and expanded ETS, CDM and other carbon markets (taxation, Personal Carbon Allowance, voluntary carbon offsets etc.)
- Increase in EE (industry, vehicles, household)
- Breakthroughs in electricity (Smart Grids)
- Growth of RES (50% in 2050, 10% with CCS, 10% Nuclear)
- Eco-labels, -design, etc. pervasive
- Networks of transport and cities
- Major investments in R&D
- Sustainable management of forests, agricultural land and water, and increase in agriculture yields
- Reduction of post harvest losses and meat consumption (in affluent economies)
- No significant reduction in unemployment, inequalities

**Totemic measure of progress: GDP + GHG**



## Stagnation: towards a resource-constrained world

- Failure of the energy transition
- No (quick) post-Kyoto regime
- High dependency on scarce (energy and land)
- Reduced choice/freedom in production and consumption
- Pressure to prioritize “old industries”
- Climate impacts become more visible
- Increase of carbon prices, nuclear
- Danger of “carbon lock-in”
- Carbon market, GHG reduction (but delayed)
- Expansion of fossil fuel production
- Loss of biodiversity
- Migration and climate induced migrations
- Global inequality rules the world, NGOs ineffective

**Totemic measure of progress: GDP + environmental costs**



# New welfare: prosperity beyond growth

- Full shift from fossil to RES (some gas to fill inter)
- Societal (lifestyles) + technological innovation (i) reduce overall energy consumption and (ii) e
- From CDM to “Climate Marshall
- Steady-state economy, re
- A-polar, globally inte
- Different mea (access to well being needs)
- Polycent
- M
- Individual travel
- Food sovereignty
- the “commons” and commons-based peer production
- “free/open source” sector
- Reduction of inequalities

**Totemic measure of progress:  
Well-being/sustainability indicator(s)**

# Internet for the future



**Within limits**

Do it fast

Do it together

- "Top-down" approach and enforcement of Intellectual Property Rights (IPR)
- Increasing integration of ICT and other infrastructures (smart grids)
- Distributed/ambient intelligence
- "Customers" empowerment



**Beyond limits**

- Increasing customization
- "Robinson Crusoe" effect (do it yourself)
- "Fast" social networking to coordinate individual actions
- Freedom *from* nuisances
- "Security *from* others"

- Increasing peer-to-peer relations as opposed to hierarchical (crowdsourcing, end of IPR)
- *Habeas mentem*: Increasing awareness & cognitive autonomy; Internet media pluralism
- "Slow" social networking to build collective intelligence & responsibility of sustainability challenges
- Freedom *of* action and citizens empowerment (Web 2.0)
- "Security *with* others"



**New Welfare**

Do it alone

- Democracies degenerate into plutocracies and techno-authoritarian regimes
- Increasing media control and concentration
- No freedom of expression, personal traceability



**Turbulent decline**

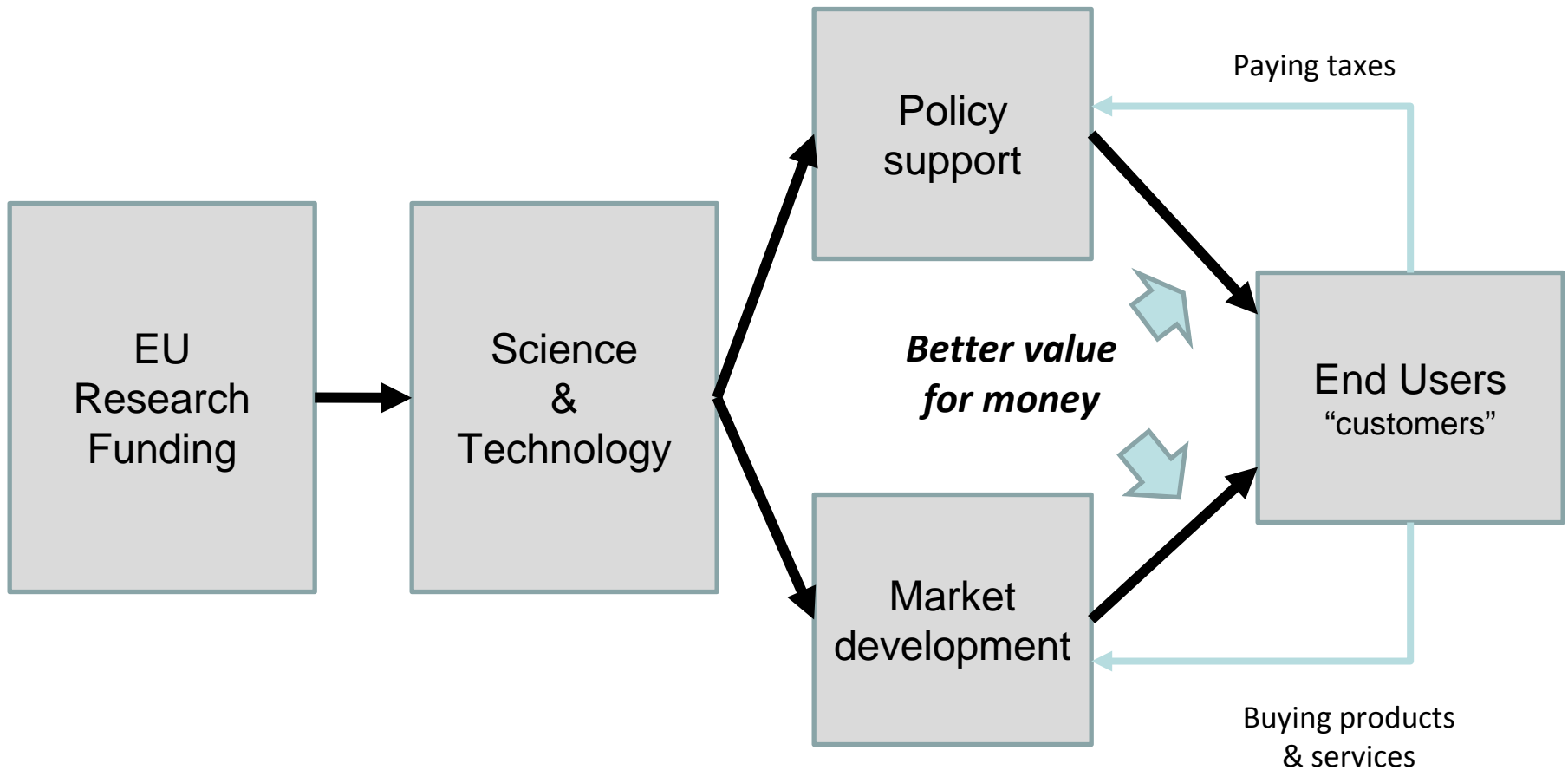
Do it slow



# Working with citizens

“Let thousand people learn, think and apply knowledge in their local context”

## THE CONVENTIONAL VIEW: FROM RESEARCH TO END USERS ...

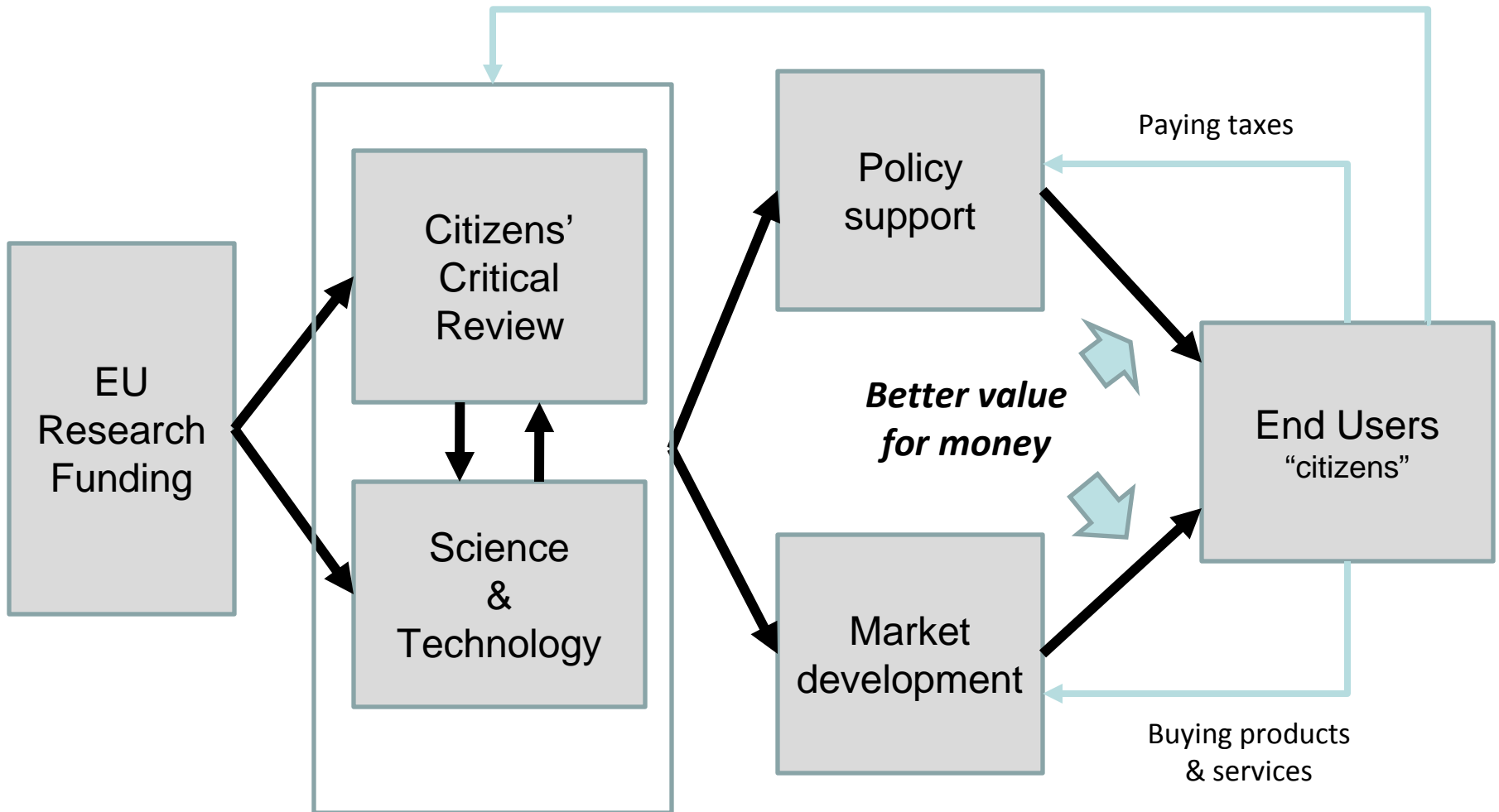


# Working with citizens

“Let thousand people learn, think and apply knowledge in their local context”

... CONNECTING CITIZENS TO SCIENCE (AND POLICY)

Knowledge brokerage and participatory foresight



*Thank you for your attention!*

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