

Integrated – Transformational and Open City Governance

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Workshop Aims

- * Key question addressed - how do we advance towards a smart and integrated urban governance in the most effective way?
- * An underlying theme of the day is connection and integration – and a prime challenge remains development of a common language of communication and a common understanding of issues - as we propose here and elsewhere to support effective discussion and to generate relevant outputs from our workshop

Wp2 context

- * provides a basis for the development of applications to support participatory engagement and open data co-creation
- * directly derived from stakeholders requirements and survey of governance processes from selected cities
- * aims to model the planning processes followed by the project cities to identify how open data can be effectively used in citizen engagement through ICT tools and provide essential inputs for decision-making
- * two stages:
 - * cycle 1 - scenario-based approach using specific business process modelling
 - * cycle 2 - using review of processes of other cities to identify planning process commonalities to define a generic open governance models for wider adoption of the tools

Integrated Planning

- * Key Questions:

- * What is the nature of the drivers of change in cities today which impact on the governance model and define the need for integrated management and integrated intelligence?
- * How do we best develop planning scenarios to demonstrate the interconnected nature of city planning intelligence requirements – and to deliver policy win-win potentials - for example re-naturing cities and green infrastructure etc
- * How can we most effectively build a transformational governance model based around a range of planning scenarios that reaps the full benefit of ICT investments and which delivers common solutions for all cities

urban management challenges

- * **Urban Management – multiple challenges**
 - * finite resources and resource efficiency
 - * climate change impacts and environmental vulnerability
 - * demographic change and social cohesion
 - * economic and financial crisis
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- * Hence management complexity and **need for innovative ideas on transformational governance of cities – an integrated governance that can manage this complexity**

challenge and drivers of change

- * Evolution of society - a dynamic and changing context – presenting new challenges - citizens more aware of rights, better access to information on public services and so higher expectations of service levels
- * Economic and budgetary pressures - force governments to reduce costs providing renewed momentum for re-organisation of public administrations
- * Technological innovations - such as open data and take-up of social media data - create more information and knowledge exchange as well as enhanced connectivity, openness and transparency
- * For city planners - interconnectedness and complexity of urban issues in era of sustainable urban development - too great a challenge for expert top-down management alone

new governance paradigm

- * All drivers of change promote a new paradigm of urban governance based on integrated urban governance and bottom-up engagement of all stakeholders - ***Integrated urban governance*** and planning of the cities and regions of Europe is universally identified as crucial to the economic recovery and sustainable development of Europe
- * But questions arise how best to construct the new paradigm that addresses challenges and takes advantage of the technological opportunity for transformation of urban governance – a question central to the development of smart city governance initiatives across Europe today

transforming the local governance model



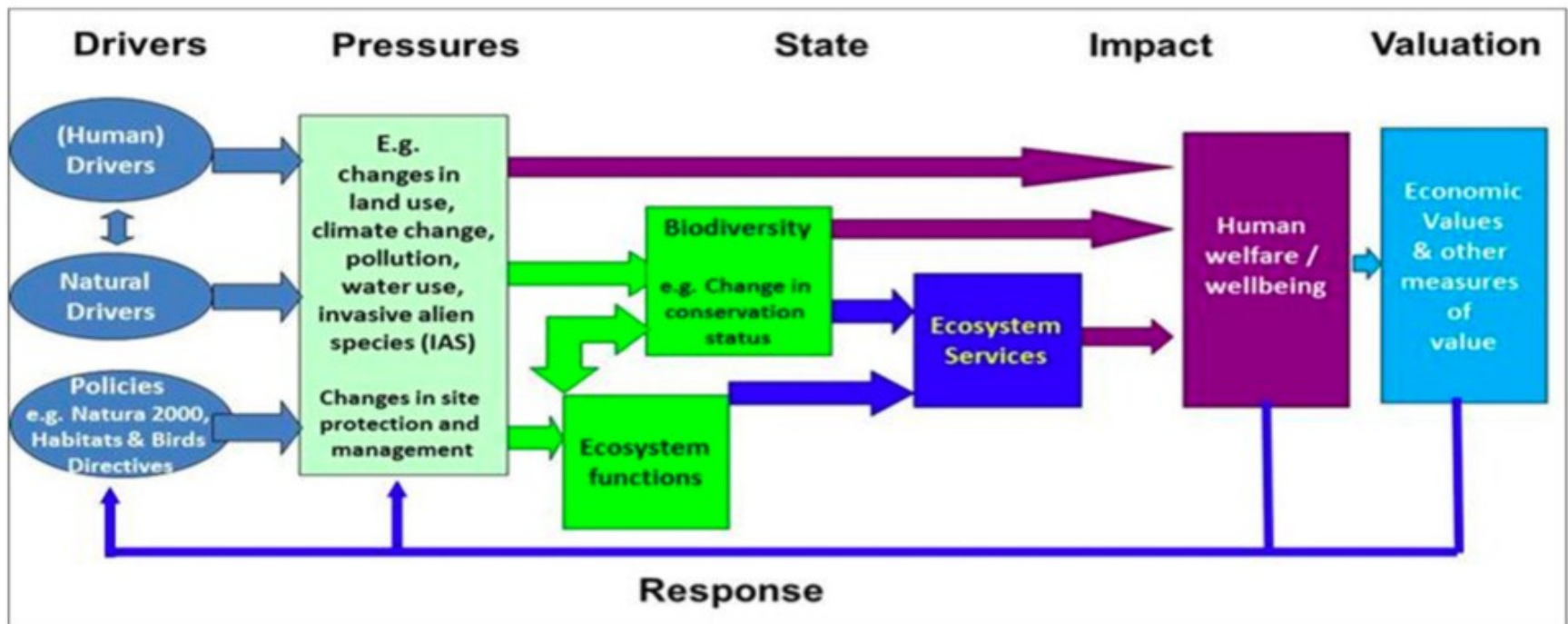
transformational governance - the potentials

- * Innovative solutions for transformational governance of cities
- * Concept to reality – delivering practical solutions for cities throughout Europe
- * Supporting integrated planning – seeking win–win solutions in terms of policy objectives
- * Building on strategic planning frameworks - engaging the urban community
- * Common problems and common generic solutions – solutions for cities throughout Europe – key to business model
- * Realising the potentials..... the new paradigm

paradigm construction

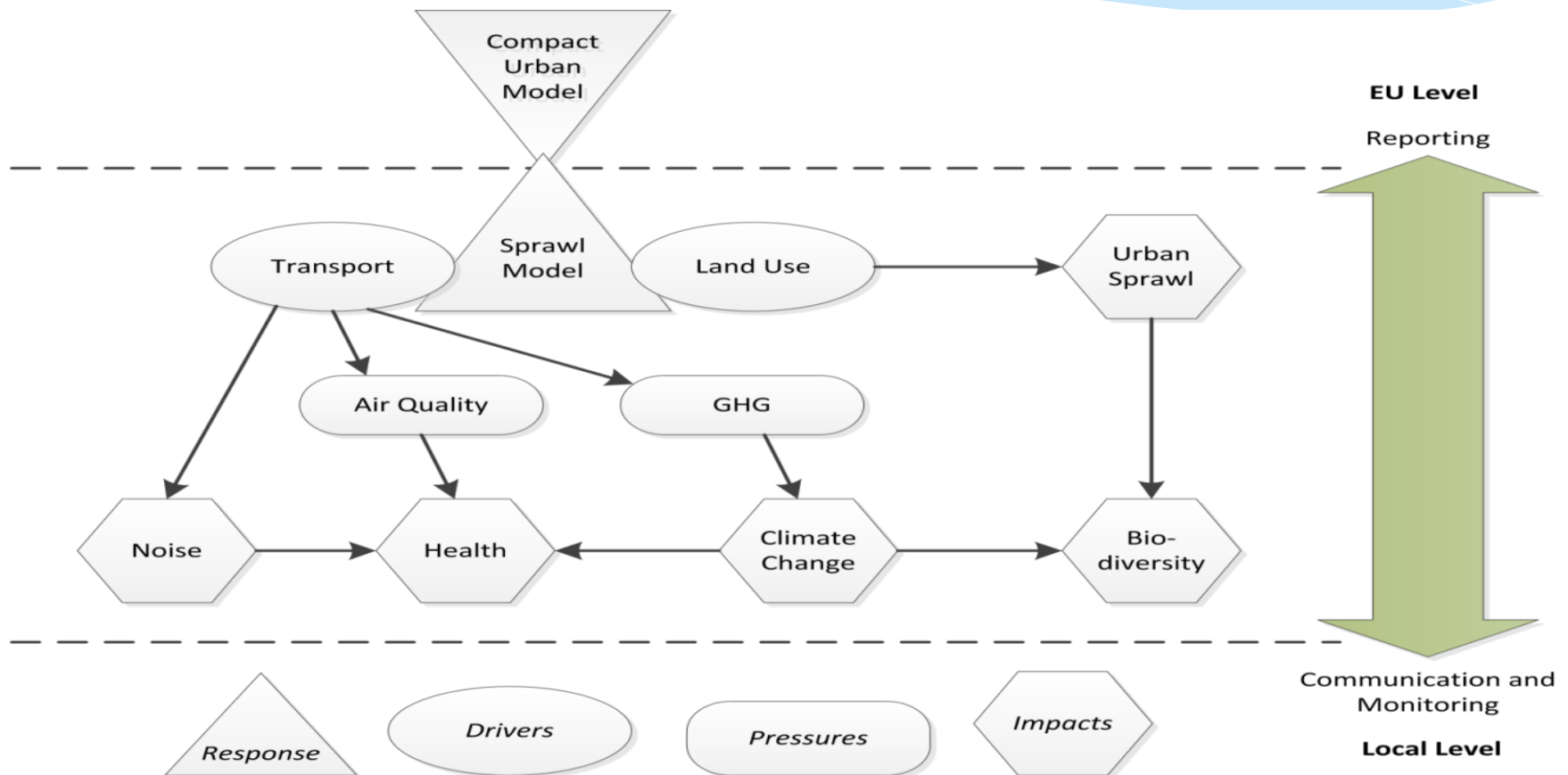
- * Start with user-defined need – but this is complex as the new paradigm of urban governance and user-defined information need must be based on a transformed governance system – no ICT investments in broken systems
- * Furthermore redesigning the governance systems is not the day job for planners – and at the same time technology solutions abound and there is a danger that technology fixes shine only to disappoint and do not do the job required
- * Elaborating user requirements for more integrated and more intelligent governance is therefore a major challenge – involving all stakeholders and which forms a central purpose of this workshop supporting multi-stakeholder engagement

planners world - complexity



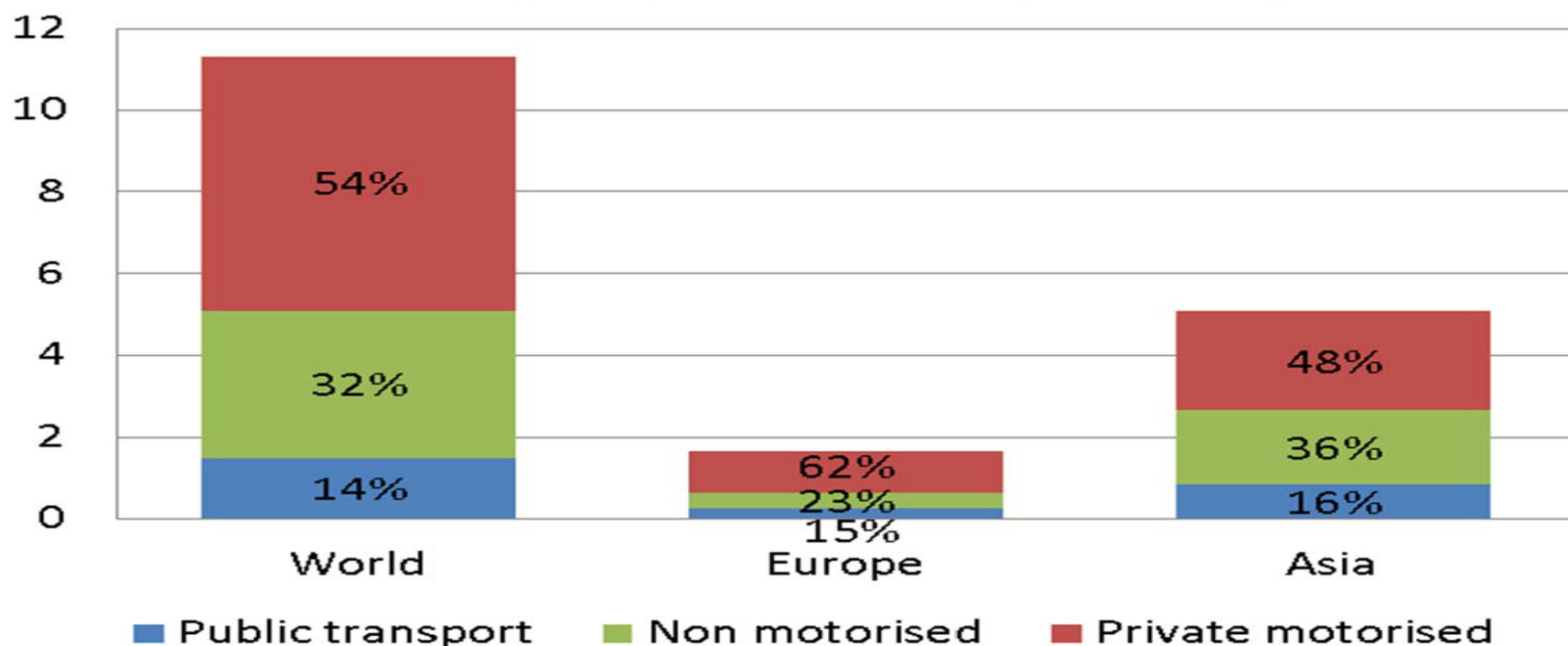
Source: Adapted from Braat and ten Brink et al. (2008)

urban complexity + integrated urban management



urban mobility 2020 – business as usual

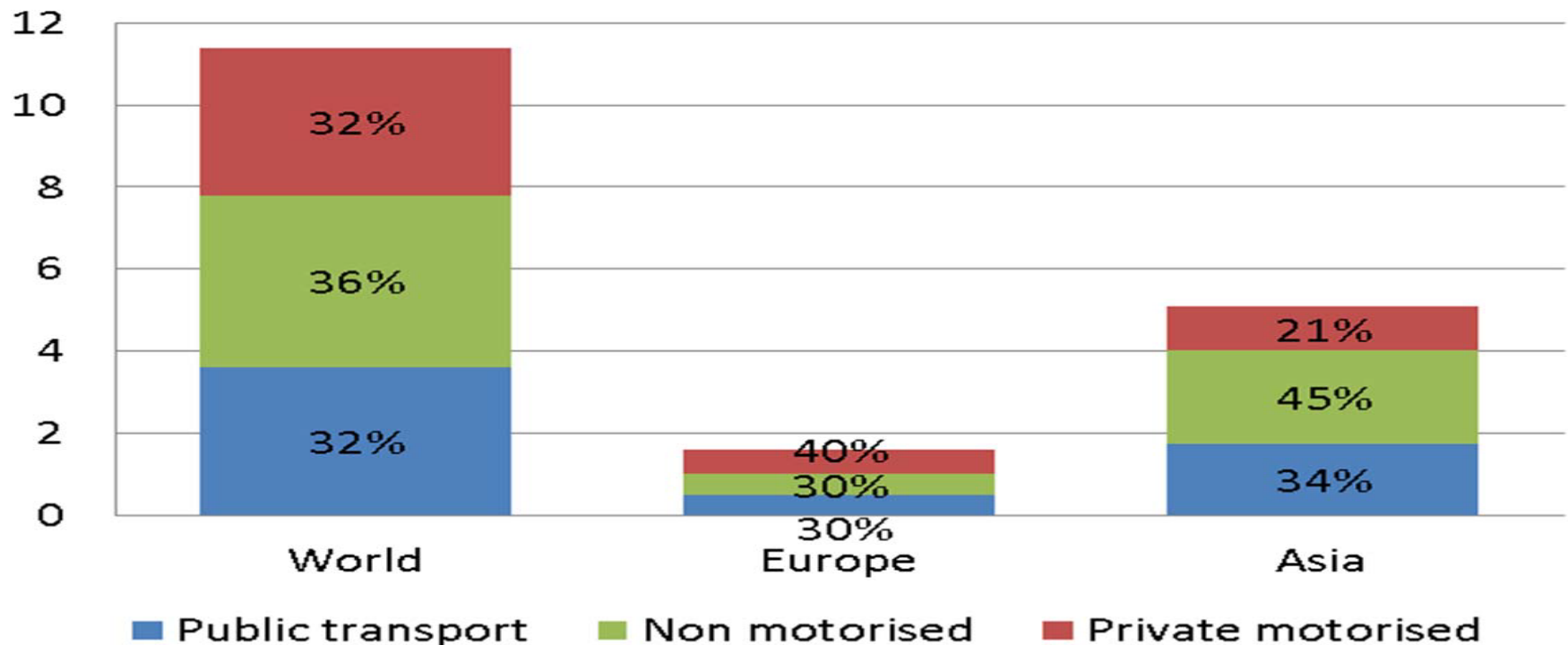
Daily trips in cities (billions)



Win-win potentials - urban mobility

2025 = PTx2

Daily trips in cities (billions)



energy consumption for urban mobility

	2005	2025 PTx2	% change
World	700 MToe	720 MToe	+3%
Europe	140 MToe	110 Mtoe	- 21%
(% world total)	20%	15%	
Asia	124 Mtoe	208 Mtoe	+68%
(% world total)	18%	29%	

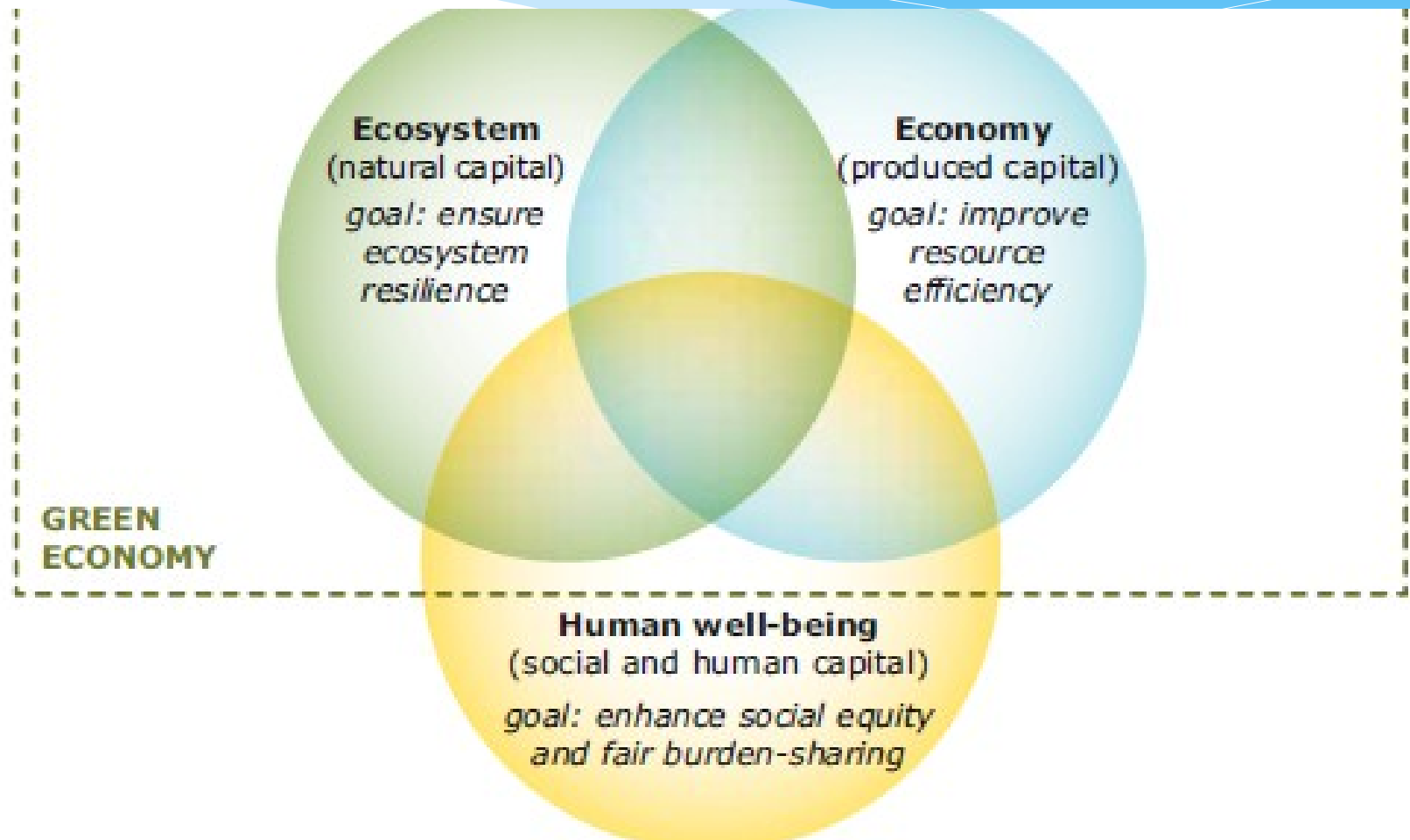
Win-win potentials – nature based solutions

- * **Nature-based solutions** to societal challenges are inspired and supported by nature (**living solutions**) They are **adaptable, multi-purpose** and **resource efficient** and provide simultaneously **environmental, social** and **economic** benefits:
- * improve city **resilience** to **CC** and natural **disasters** contributing to both **CC adaptation** and **mitigation**;
- * restore urban **biodiversity, ecosystems** and their **services**;
- * improve human **health**, air and water **quality**, reduce **noise**;
- * improve **quality of life, well-being** and **social cohesion**....

urban planning requirements

- * Urban planning is central to managing complexity (socio-economic and environmental) in territorial context - and securing win-win potentials
- * **Requires:**
 - * Information and intelligence and assessment methodologies
 - * Communication, visualisation, simulation
 - * Integration of information and analysis (cross departmental/multi-scalar)
 - * Engagement of stakeholders and co-production of plans (bottom up)
- * **All supported by ICT tools and methodologies**
- * **Intelligence - communication – integration – assessment - decision**

urban planning - conceptual frames for integration



integrated governance process

- * attainment of inter-connected policy goals requires integrated governance process:
- * Horizontal integration – scenarios showing the need for integrated inter-sectoral, inter-departmental collaborations regarding the specification and implementation of policy and territorial decision making at city-region scale - *plus*
- * Vertical integration - across the scales of governance from neighbourhood to city-wide to EU levels - planning strategies are specified and implemented simultaneously at different levels of governance – impacts monitored at both city-region and EU levels

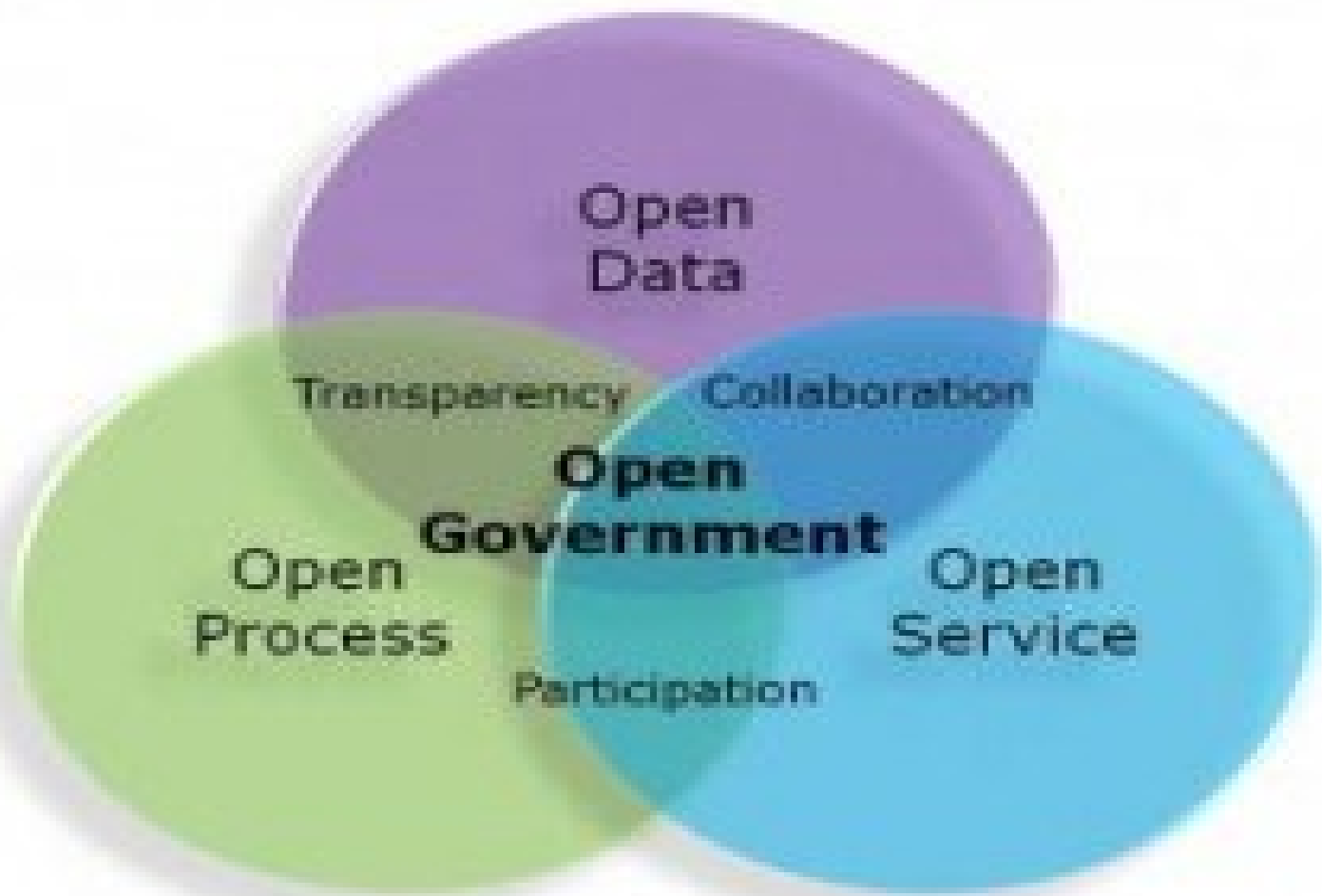
spatial planning - operationalising intelligence

- * **Intelligence - communication – integration - assessment – decision**
- * **policy cycle** – operationalising and mobilising intelligence - integrating governance
- * **assessment** of socio-economic and environmental impacts of alternative territorial development options
- * **stakeholder engagement** regarding alternative development options (co-design and innovation in solutions)
- * **political decision making** and plan implementation (democracy, legitimacy, trust)

policy cycle – operationalising intelligence



Open Governance – conceptual frames - ICT perspectives



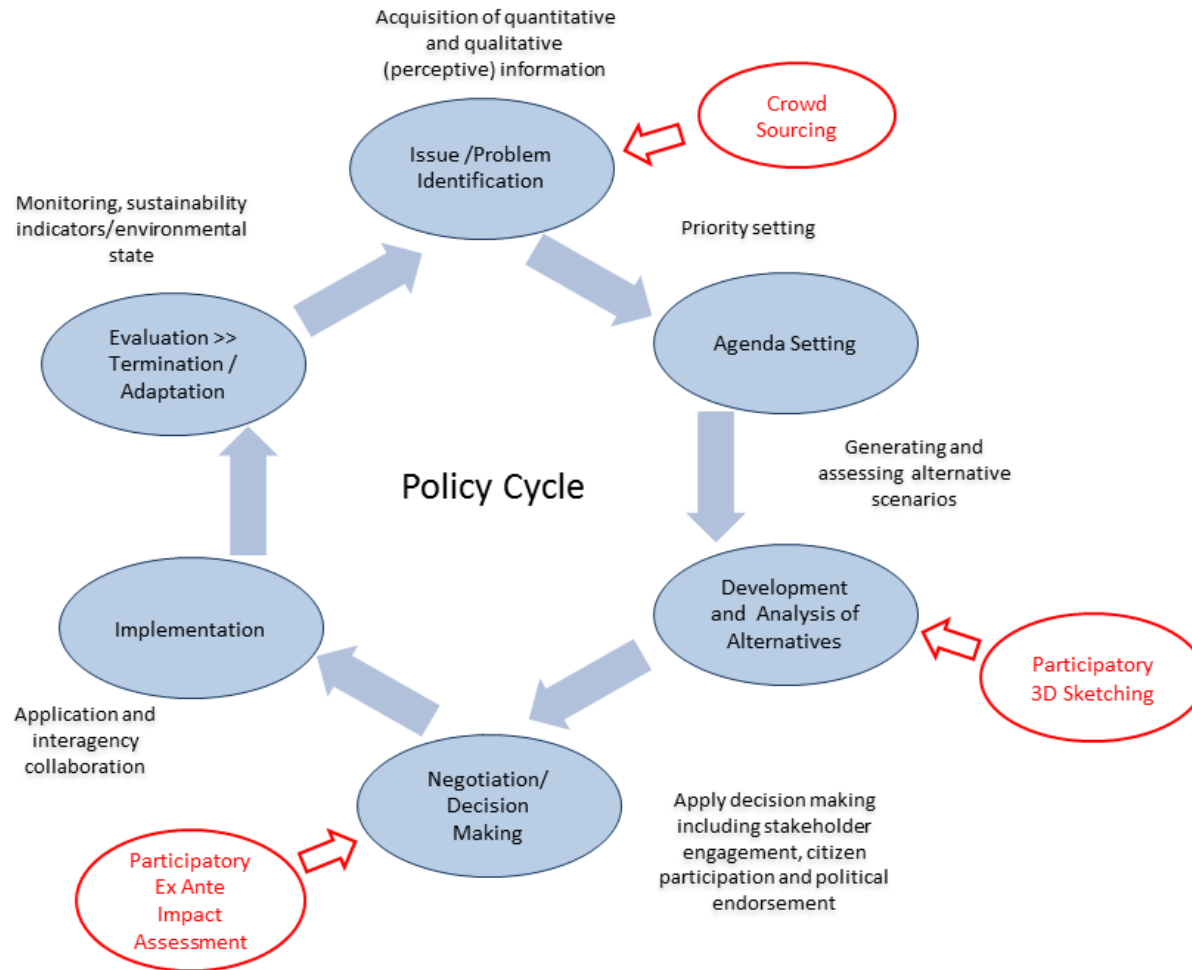
Open Governance - principles

- * **Open government** paradigm driven by opening public data and services and facilitating collaboration for the design, production and delivery of public services
- * Making government processes and decisions open to foster citizen engagement improving the **quality** of decision-making and promoting greater **trust** in public institutions
- * **Open processes**, activities and decisions enhance **transparency**, **accountability** and trust in government. ICT facilitates bottom-up, participative and collaborative initiatives that tackle specific societal problems
- * **Open government** improving the **efficiency, effectiveness and quality** of public services by introducing new processes, products, services and methods of delivery enabled by ICT

co-creation and co-design

- * **Effective collaboration** across government departments and with non-governmental actors is essential to good governance
- * Requires working across portfolio boundaries to jointly achieve **integrated responses** to the issues of policy development
- * Effective **collaboration with societal actors** in public service delivery and policy-making can also help governments improve response to user needs and release their **problem solving capacity**
- * Effective engagement with societal actors can also empower citizens to **actively participate** in the decisions that affect their lives - to be involved in the co-creation of services, including **design and delivery**, as well as in **finding solutions** to societal challenges
- * ICT is a key enabler to facilitate all of this

transformed by co-production potentials



Citizens and policy cycle

- * Allowing participatory sensing of neighbourhood environment including co-creation of citizen based data
- * Supporting participatory involvement and co-creation of planning decisions making use of open data
- * Assessing effects of planning decisions based on citizen and expert judgement
- * Developing knowledge co-creation across municipal departments, citizens and other stakeholders – fostering mutual commitment for risky decisions
- * Exploring potential of open data to link new public and private services to cities and citizens

designing apps - principles

- * cross-fertilisation of project indicators, tools and methodologies in the framework of integrated urban planning - opens the opportunity for transformation from production of simple information sources to active territorial intelligence - supporting decision-making
- * common planning scenarios allow meaningful comparisons with the situation in other cities – and on this basis can identify commonalities and so build the common ICT solutions that support common applications for all cities
- * so driving the business model

designing apps - planning scenarios

- * urban planning scenarios developed at different scales of urban governance - reflect the complexity of the real world – and connectivity between policy objectives and win-win potentials including at different scales:
- * **potential development areas** – alternative site options assessment (city-neighbourhood perspectives)
- * **green infrastructure**/re-naturing cities/ecosystem analysis (city-wide perspectives)
- * **urban sprawl and densification** (city-region perspectives)
- * **EU to local** - integrating all levels of governance (pan-European perspectives)

green infrastructure -1

- * **city policy requirements** – cities seeking to improve green open space provision and green infrastructure development for a variety of political objectives:
- * improve open space provision in neighbourhoods with young families
- * improve cycling and recreation facilities – locally and citywide to support development of healthy active urban population and development of urban mobility non-motorised alternatives
- * provide climate change adaptation measures reducing heat island effects (tree cover) and providing urban ventilation corridors
- * support biodiversity planning objectives

green infrastructure -2

- * green infrastructure planning objectives must be set in the strategic planning framework that extends across the administrative boundaries from city centre to hinterland
- * focus here is on the *connectivity* of the network of green (and blue) infrastructures, and the definition of green routeways linking city centre to countryside
- * gaps in the network must be filled to ensure connectivity that is essential to meet the requirements of the policy.
- * gaps in the network only filled at the local level – where neighbourhood planning is essential to the realisation of city-wide planning objectives

green infrastructure -3

- * Solutions to support and develop both planning and implementation of the green infrastructure policy at all levels of governance in an integrated perspective
- * At the local level integration of green open space with the urban atlas street tree information, as well as socio-economic (young families) and proximity (to green open space) indicators to define priorities for green infrastructure neighbourhood planning
- * At the citywide scale of integration of green open space with green tree assessments combined with connectivity/accessibility indicators to define city wide green corridors supporting the recreational and mobility needs of the population
- * And at the EU level solutions based on the urban atlas offer pan-European comparability of green cities strategies across Europe, offering potentials for EU level interventions to support local actions including targeted cohesion fund urban development investments leveraging national and EU funds for local benefit



Thank you!

Main drivers

- * **Societal** Behavioural/societal aspects taken into account in policy design
- * Lack of transparency in corporate and public governance entails low trust by society
- * Citizens and young people's involvement in decision-making processes
- * **Technological** Expansion of social networking, Web 2.0, Web 3.0
- * Complex systems can force new attitudes in governments response to citizens' needs: close the gap in technology use
- * **Economic factors** Need for stimulating sustainable economic growth
- * Increased risks and economic/financial crisis

Overall scope

- * A growing need for research and innovation for future public services that will be a catalyst for growth and sustainability
- * • ICT tools for collaborative governance and policy modeling show great opportunities for empowerment of citizens and increased transparency in decision-making
- * Examples:
- * System Models addressing decisions in a global networked context.
- * To better understand interdependencies between economic, social, and ecological systems in order to allow coherent decisions across different domain
- * To improve the interface/link between modellers and societal stakeholders.
- * ICT tools that allow engagement of stakeholders in the process of gathering data and analysing impact of models on policy decisions

ICT for Governance and Policy Modelling

- * **Policy Modelling and Simulation**
- * Evidence-based policies for growth and investment strategies. E.g: next generation of economic models that take into account linkage of economic, social and ecological issues, in particular in view of the current financial crisis and need for action in climate change.
- * Innovation in public service through the use of ICT
- * Build on web2.0/web3.0, social networking, crowd sourcing, collaborative technologies
- * Solve complex large scale policy problems in a distributed fashion

ICT for Governance and Policy Modelling

- * **ICT tools for:**

- * Innovative data mining functionalities to identify the emerging societal trend as a result of the economic environment, E.g. Big data for social use
 - * Further advance crowd-sourcing techniques to engage citizens in sharing knowledge and expertise to collectively solve complex, large-scale problems in a distributed fashion. E.g.: tools to allow new forms of interaction between stakeholders and modellers; validation of models, visualisation of model results....
- * Exploit the vast reserves of public sector data for new services

Expected impact

- * Improved take up of policy making tools by decision makers in public administrations
- * ■ Improved validation of the potential impacts of policies through evidence
- * ■ Stronger evidence of productivity gains and reduction of costs in the provision of public services
- * ■ Evidence of the younger generation contributing to policy formation/development through social media
- * ■ Increased take up of open and public data for provision of public services.

Two pillars for research and practice

- * **Policy informatics: support of evidence-based policies in highly connected systems**Advanced simulation of interconnected systems
- * **Big Data on interlinked social, economic and ecological systems.**

- * **Societal informatics: support of policy action and societal change - From models to action**Social media and participatory ICT to encourage participation of stakeholders in acquiring/analysis of scientific evidence and thereby creating trust in scientific evidence.



Thank you!