TUD

COST

and

Transport and Urban Development

SUCCES STORIES AND THE FUTURE OF TRANSPORT AND URBAN DEVELOPMENT - TUD

by Professor Cristina Pronello
Chair DC TUD

COST is supported by
the EU RTD Framework Programme

ESF provides the
COST Office through an EC contract

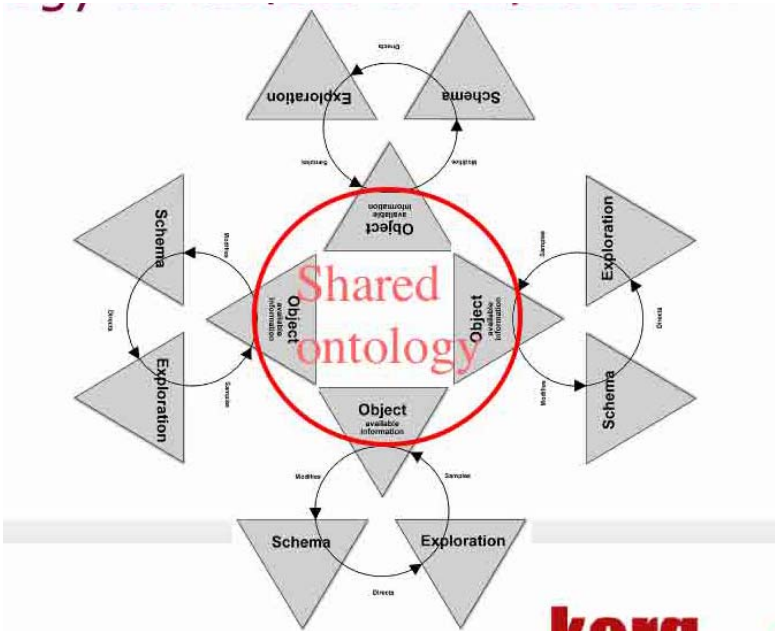
THE PRESENT: Early Stage Researchers' Activities

- ~ 25% Early Stage Scientists in COST Actions
  - 358: 35 %
  - C25: 30 %
- 20% of TUD COST Actions managed by scientists under 40 years old.

- Collection date (OC-2010-1)
  - 55 % of pre-proposals = Early stage researchers
- Early Stage scientist network (10 participants)
  - C20
  - TU0602

Scientific "breakthroughs"

- Towntology (C21)
  - Integration of all civil engineering related fields
  - Output: New concept of urban ontology to improve communication between civil engineering projects



Scientific “breakthroughs”

- Urban Knowledge arena (C20)
  - Integration of academia & practioners
  - Output: New approach of urban planning (integrated and participative versus master plan)

Huge impact in Sweden; the chair is invited to be involved in urban planning at national level following the release of the outputs of the cost actions

Socio-economic impacts

- In-vehicle information systems and road safety (352)
  - Integration of a few European car manufacturers (BMW, Renault, Mercedes, etc.) & road autorities
  - Outputs:
    - Rules for road traffic and vehicle equipment
    - Rules for drivers' education and training for the appropriate use of In-Vehicle Information Systems

  - Impacts
    - Contribution to European standard
    - Improve road safety

Outputs (352)

- Interaction between 4 different types of IVIS (In-Vehicle Information Systems) and the Driver

Mobile phone

"Infotainment" & Internet

Navigation (GPS etc.)

Impacts (352)


I WAS TEXTING WHEN MY POP SPILLED ON MY LAPTOP, WHICH MADE ME DROP MY IPOD. SO YOU SEE, OFFICER, IT WASN'T MY FAULT. BLAME TECHNOLOGY.
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Hello, Sir. Are you answering this call on a hands-free mobile phone?
Em...
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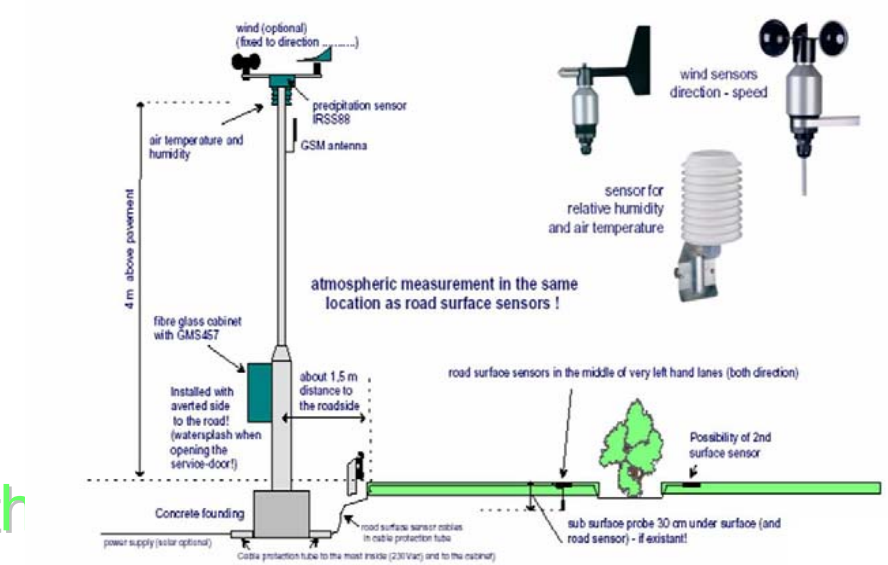
353 - Winter Service strategies for increased European road safety

- Network
  - Researchers in road pavements, civil engineering, climatology, meteorology, economics…
  - Integration of road authorities & operators as well as manufacturers of winter management tools & engines

Outputs (353)

- Winter Maintenance Management Systems (WMMS) uses
  - sensors & nanotechnology
  - satellite supported GIS and otr measuring equipment
  - fast data transfer and decision making evaluation software tools
  - models for local weather forecasting



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Socio-economic impacts

- Structural Glass- Novel Design Methods and Next Generation Products areas (TUO905)
  - Objectives: better predictions of complex loads on glass structures, material characterisation, incorporation of risk analysis and post-fracture performance, and production of novel glass assemblies

  - Expected impacts:
    - European standard
    - Strengthen Europe's leading position in the glass products market
    - Improve safety of glass products & buildings
    - Reduction in embodied energy

Socio-economic impacts

- Integrated Fire Engineering and Response (TU0904)
  - Forum of experts from research community, practitioners, building control and fire fighting authorities
  - Objective: to utilise the latest opportunity of the fire engineering based on fire dynamics, structural fire engineering, active/passive fire protection, environmental protection and human response to disasters

- Expected impacts:
  - Contribution to European standard
  - Reduce and prevent damages from fire

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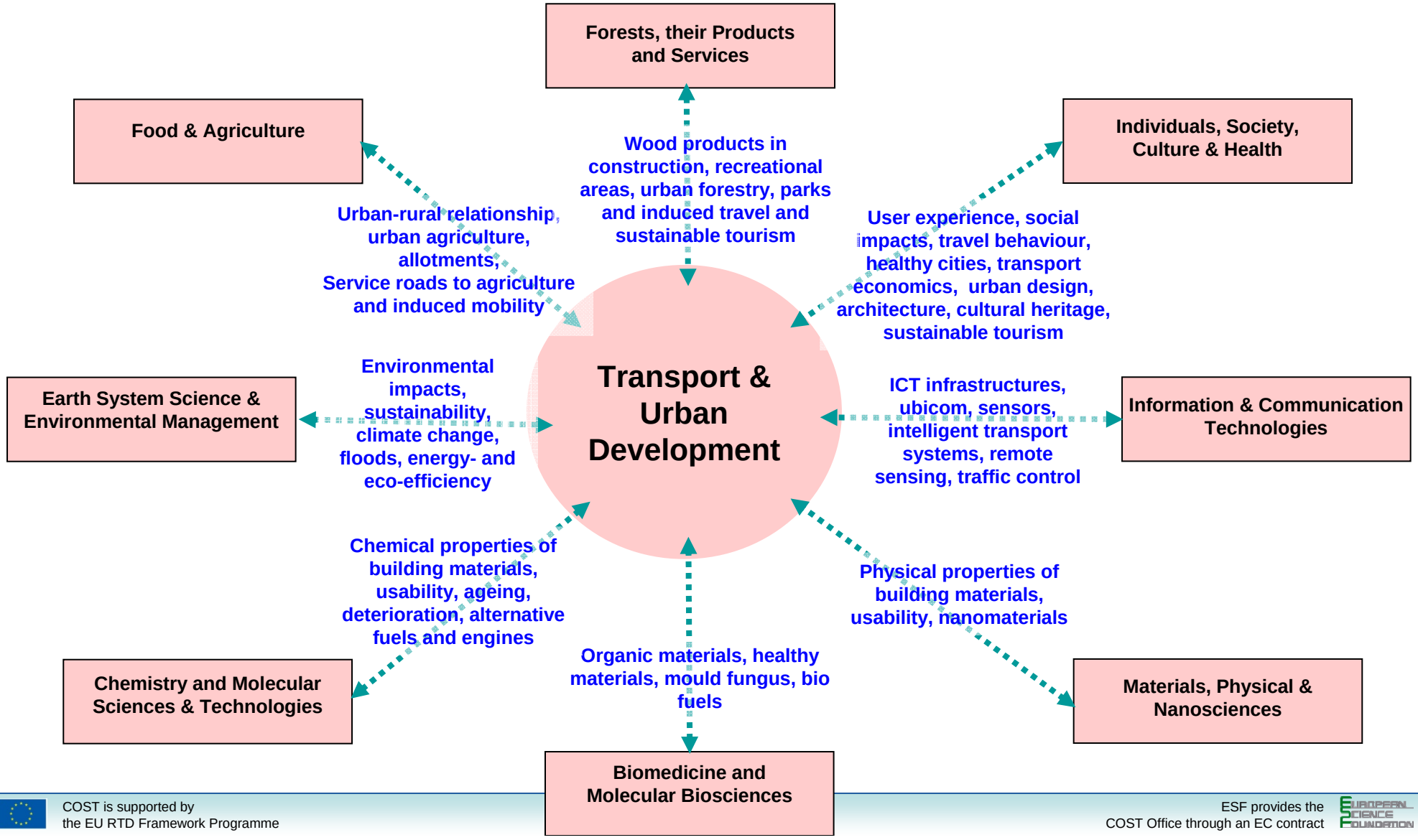
The TUD framework



The FUTURE of the research in TUD: context

- A vast majority of European citizens are living in urban areas
- Urban issues will therefore also have their place in future research agendas
- Past Framework Programmes paid attention to urban issues (FP5, Civitas in FP6 and FP7)
- More recently, the relevance and impact of research and innovation on urban issues → European Economic Recovery Plan published in December 2008

The FUTURE of the research in TUD: starting point

- At present a proposal is being discussed to select “The City of the Future” as one of the spearheads for developing joint programming- activities between the Member States of the European Union
- The scientific field covered by COST TUD, the flexibility of the COST mechanisms as well as its bottom-up basements places COST TUD in a unique position to coordinate and identify niche of research to address the challenges of the future cities

We are building future research in TUD

- A workshop aiming at gathering authoritative experts in the field of activities of TUD in order:
  - to map the problems and challenges regarding the (built) urban environment and urban mobility;
  - to reach a shared vision of the future and be able to derive an action plan and issues for a strategic research agenda
- The invited experts will be policy makers and other stakeholders on the one hand, and representatives of the research community on the other hand

The FUTURE of the research in TUD: solution

- The workshop is subdivided into 4 blocks:
  - a global and holistic view on developments in urbanised areas and their future problems and challenges;
  - a more in depth analysis along the lines of different functions cities perform;
  - the role and contribution of science and technology;
  - Panel discussion and elements for an action plan and strategic research agenda

The FUTURE of the research in TUD: solution

- 4 groups of participants will be invited:
  - policy makers: DG TREN ("Green paper on urban mobility, CIVITAS), national governments, European Parliament…
  - end users (including local authorities): POLIS (European cities), UITP (public transport) ...
  - research community: universities, COST-participants, research institutes (e.g. ECTRI-network, EURFORUM, …)
  - COST representatives: CSO, COST secretariat
- Plus: non COST selected participants coming from USA, Australia, Japan, etc.

The FUTURE of the research in TUD: solution

- GLOBAL CHALLENGES
  - Definition of vision/challenge/scope
  - Challenges of European cities
  - Challenges of Megacities
- THE FUNCTIONS OF THE CITIES
  - Economic function of the city
  - Living and surviving in Cities or Cities as human systems
  - The city as a policy object

The FUTURE of the research in TUD: solution

- SHAPING THE FUTURE: CONTRIBUTION FROM RESEARCH
  - The future of research on urban issues
  - Planning our urban future
  - European Strategic Agenda on Urban Mobility
  - Standards and Research, a key issue for Europe's competitiveness
- SOLUTIONS FROM SCIENCE AND TECHNOLOGY TO SOCIETAL CHALLENGES
  - Green Cities / SMART Cities
  - Sustainable Architecture, Construction and Materials

THE MORAL OF THE STORY

- **THE FUTURES OF THE CITIES**

AND AN INDEPENDENT COST CAN BUILD OUR FUTURE

- **OUR FUTURE**

DON'T FORGET IT !!!