



## Challenges for NMAS in Collaborative Innovation in e-work and e-business

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Tunde Kallai

CEIA Association

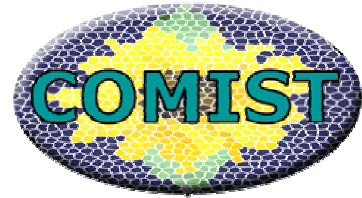
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## Presentation overview



1. Changing world of work and business, opportunities for NMAS
2. Position of NMAS in enabling infrastructures for e-work and e-business
3. Proposed contribution of the COMIST project
4. Some initial findings and observations: Poland, Hungary, Lithuania
5. Discussion: road ahead



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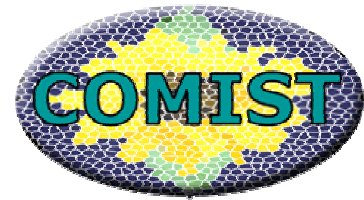
# 1. Changing world of work and business; opportunities for NMS





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# Forces influencing the changing world of work and business



- Globalisation, competition, outsourcing, re-location
- New forms of work organisation
- Demographic change
- European enlargement
- Work-Life balance needs
- Performance measurement, control
- Technological transformation



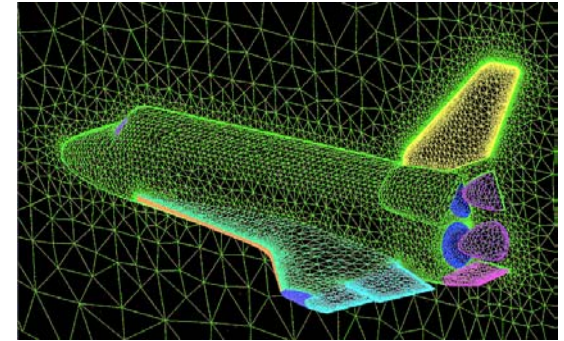
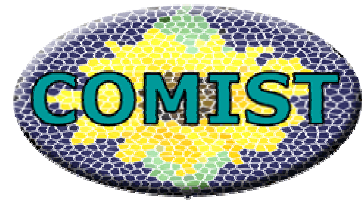
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## Enabled by technological transformation

- Internet, broadband networks
- Mobile and wireless
- Collaboration tools
- E-Business supply chains
- Enterprise resource management
- Ambient Intelligence
- Access, security and privacy

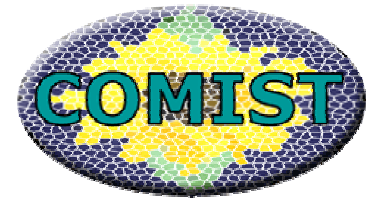


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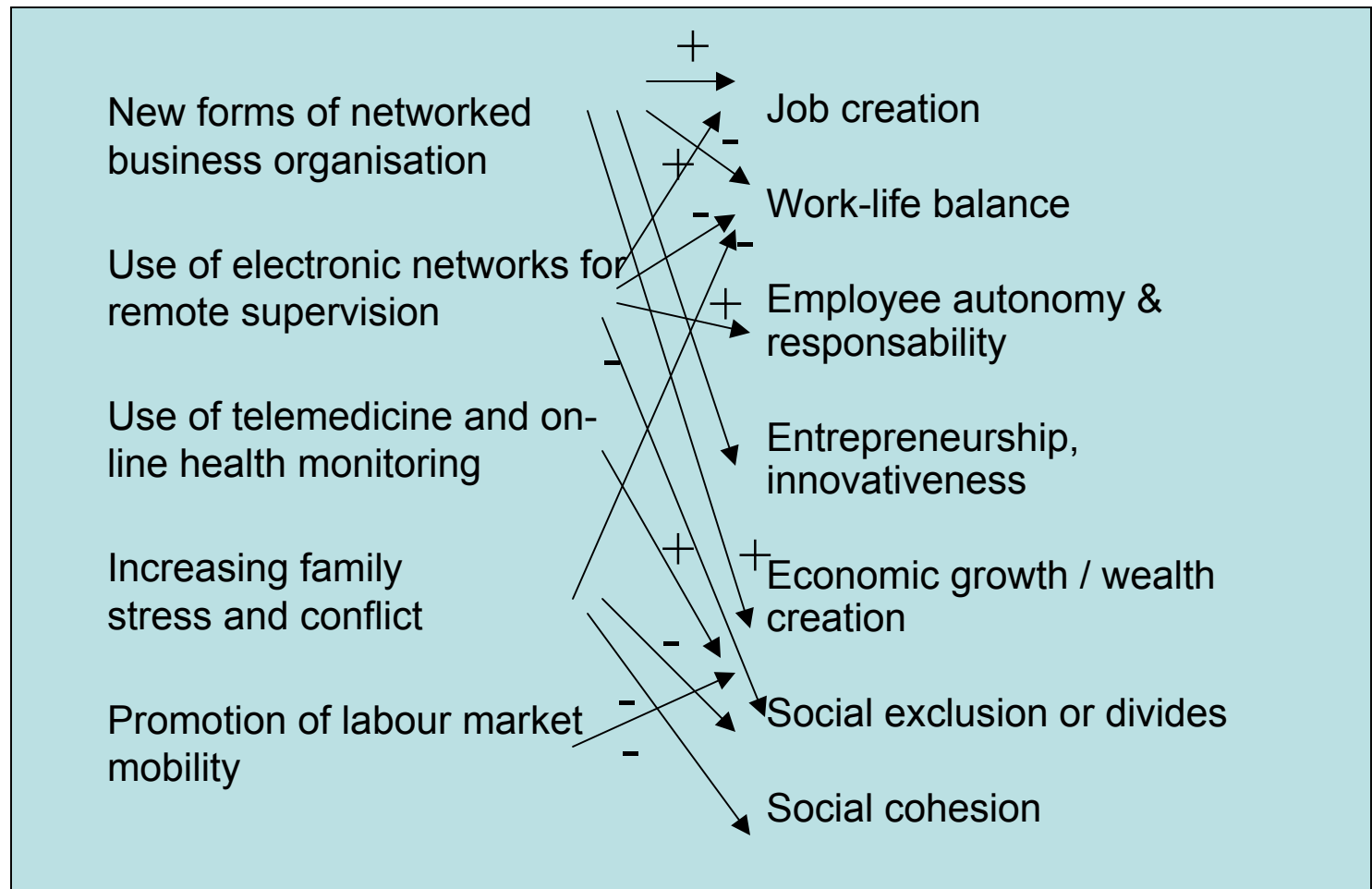




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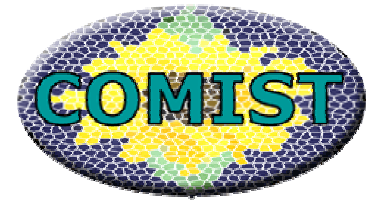
# KS trends: positive and negative impacts on working and business life 2015



Based on: EUFORIA Delphi, 2004

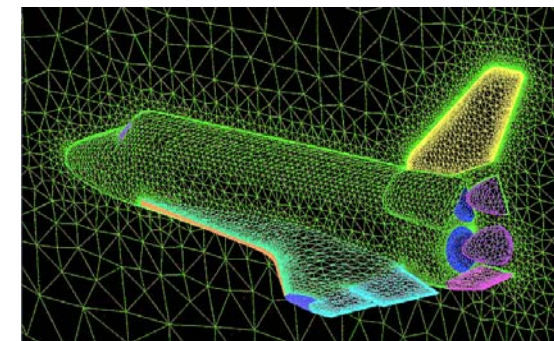


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# Challenges in engineering sectors (manufacturing, building, construction)

- **Characteristics** : product-based, involve complex processes and products, distributed stakeholders, multi-functional, multi-cultural
- **Needs** : Improve productivity - reduced time and cost, improve quality, increase mobile access to global competencies and information
- **Drivers**: Globalisation, customisation, service-centric products
- **Challenges** : new value and global chains, pressures but also new opportunities for advanced suppliers





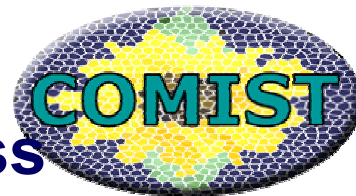
## 2. Position of NMAS in enabling infrastructures for e-work and e-business







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## **Studies about eWork and eBusiness in NMS**

- Alignment of NMS to EU-15  
INSEAD study for SAP (2004)**
- ICT and social cohesion challenges  
Study of Empirica (2004)**
- Digital Divide issues: e-Business  
Watch, European Commission (2004)**
  - eBusiness Watch (2005)**
- Foresight on ISTs in Europe  
FISTE project, JRC-IPTS (2005)**
- Re-location and e-working  
Emergence (2003)**
- Knowledge Society Development  
Paths (JANUS)**

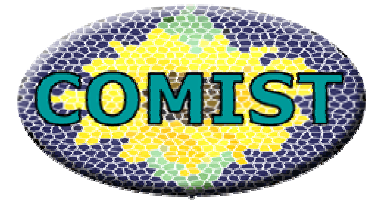


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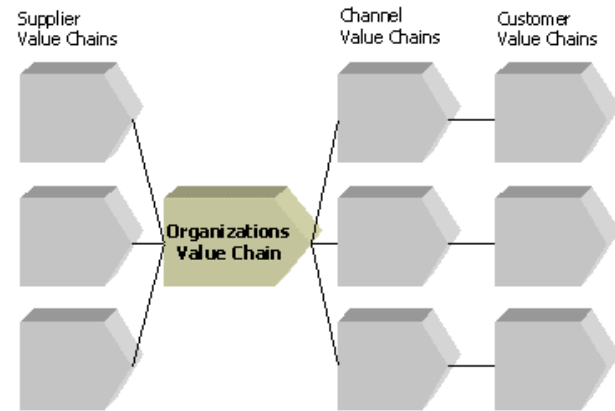


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# ICT and business modernisation

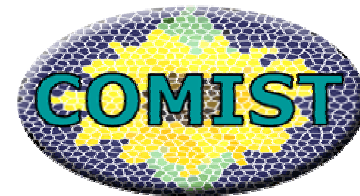


- So, how can ICT support the transformation of businesses and of innovation systems
- How can new “value systems” be created in the context of globalisation, and what is the role of NMS
- How can collaborative research and innovation be supportive in creating e-work and e-business environments
- How can it help NMAS economies
- What is the short term trend regarding re-location





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## Point of view of a EU-15 member state (Employer Association VNO-NCW)

- Enlargement will improve market conditions at European level (less rules, open access to markets, better protection of IPR)
- Worry is that NMS are not yet ready, e.g. new value added tax rules not in place
- There is and will be growing economic intertwinement between EU-15 and NMS
- NMS and ACs represent a big and largely unexploited market
- For most NL industry sectors, increase in production to be expected resulting from enlargement (better access). Could be considerable in agriculture, textile, metals
- For some sectors production decrease expected in NL, due to relocation of production and production increase in NMS. E.g. IT-related electronics > Hungary and Baltics
- High education level, low wage levels, experience in electronic production
- Supply infrastructure for many industries in NMS like Czech rep., Slovakia, Poland is very competitive



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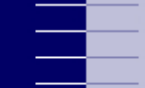


### 3. Proposed contribution of the COMIST project (FP6-IST-2004-3)



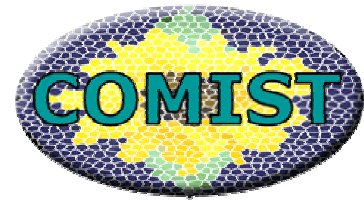
- Support the participation of NMS to IST in e-work and e-business innovation
- Through developing a strategy for collaborative innovation, strengthening the position of NMS
- Through creation of a collaboration and interaction environment: [AMI@Work](#) communities
- Through identifying opportunities for collaborative innovation
- Through establishing a collaboration-building infrastructure for partnering and project development
- Focus on NMS **SMEs** in **manufacturing, logistics, agro-food**





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# COMIST WP1: strategy for collaborative innovation



1. Vision building, roadmap and strategy development
  - Current situation, bottlenecks and challenges
  - Targets NMS to participate in IST
  - How to reach the targets: actions
2. Sectoral deployment strategies
  - Current situation, bottlenecks and challenges
  - Opportunities in **sectors**
  - Roadmap of actions

COMIST team:

TELIN, CEIA, ESoCE-NET, ITTI, ISDC,  
CKIR, ZRS-RAS

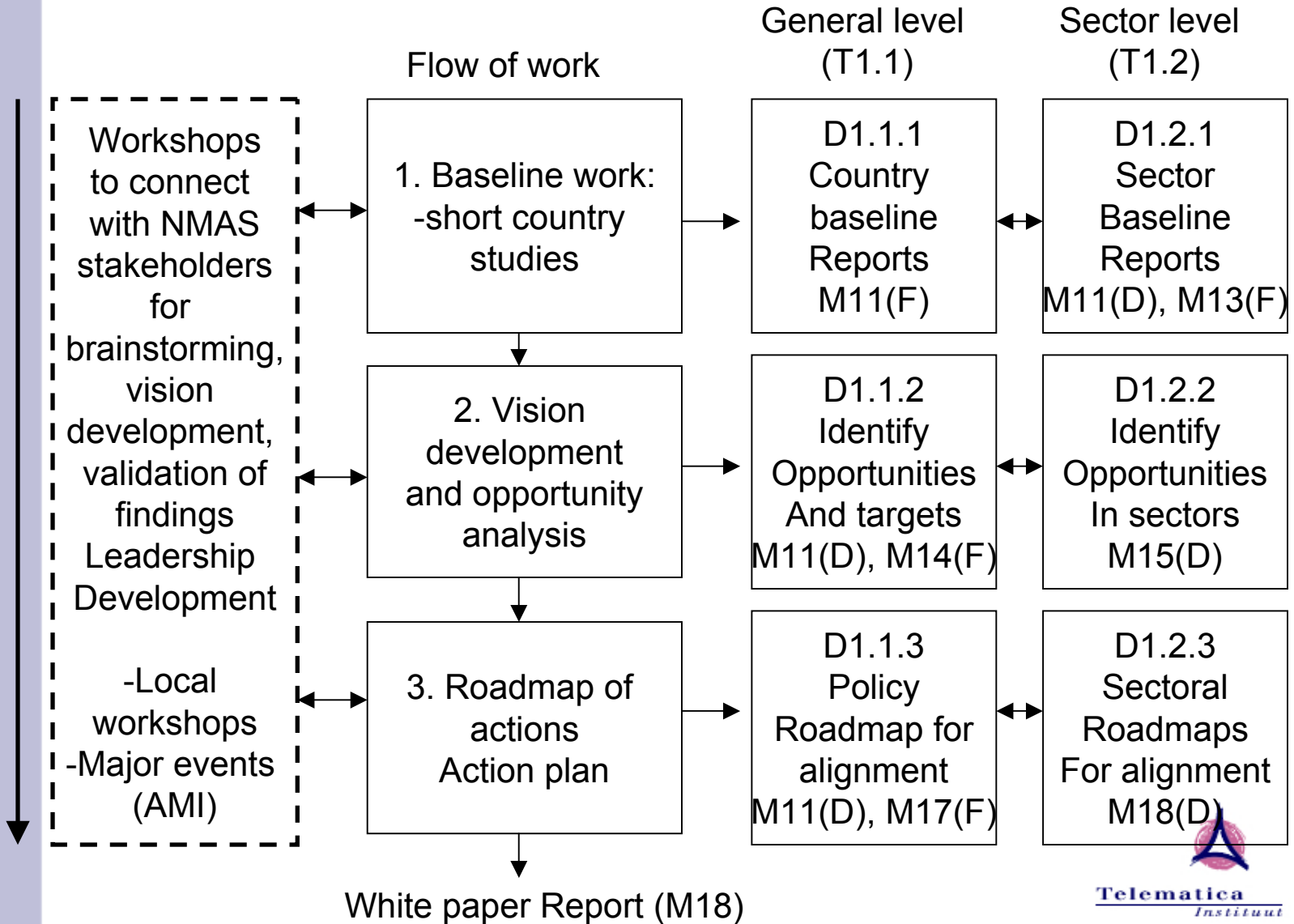
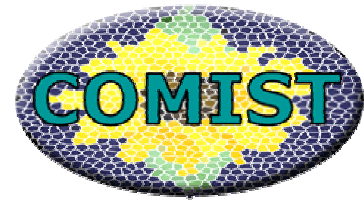


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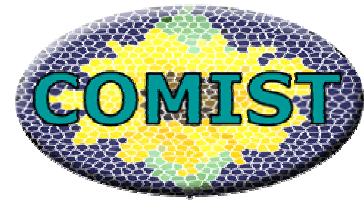
## WP1 Method of working





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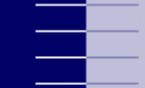
# WP1 White Paper contents



1. Introduction
  - Context
  - Objectives
2. Changing world of work and business
  - Globalisation value networks
  - Role of innovation / IST
  - Opportunities for NMAS – FP7
3. NMAS current situation
  - Current degree of alignment
  - Key challenges
4. NMAS country case studies: frameworks
5. NMAS opportunities
  - Manufacturing
  - Logistics
  - Agro-food
6. Preparing for FP7
  - New instruments (e.g. exploratory award ..)
7. Realising the opportunities: strategic roadmap to 2010

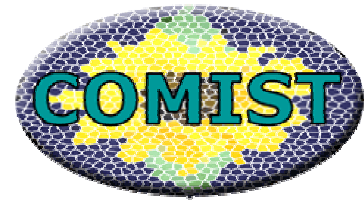


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## White paper remarks



- Competitiveness of regions
- Public-private partnerships
- Structural aspects (organise RTD, innovation systems etc)
- European innovation systems – **network of networks**
- Stages Phase 1 – 2 – 3
- Roadmap providing vision and perspective
- Current situations in NMAS: institutions etc

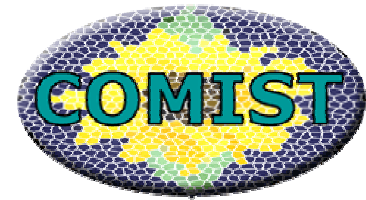


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# Working with the AMI@Work Family of Communities



*'horizontal' technology themes & SEEM*

*'vertical' challenging verification environments*

## Collaboration@Work

*Chair : Wolfgang Prinz, Fraunhofer FIT (DE)*

*EC : Isidro Laso*

## Knowledge@Work

*Chair : Anne Jubert, CRSA (FR)*

*EC : Paul Hearn*

## Mobility@Work

*Chair : Hans Schaffers, Telematica Inst. (NL)*

*EC : Michael Ziegler*

## SEEM@Work

*Chair : Flavio Bonfatti, Univ. Modena (IT)*

*EC : Oluf Nielsen*

## Rural@Work

*Chair : Nuria De Lama, Atos Origin (ES)*  
*EC facilitator : John Nolan*

## Engineering@Work

*Chair : Roberto Santoro, ESoCE NET (IT)*  
*EC facilitator : Teresa De Martino*

## Logistics@Work

*Chair : Kulwant Pawar, Univ. Nottingham (UK)*  
*EC facilitator : Florent Frederix*

## Well-being Services @Work

*Chair : Niilo Saranummi, VTT (FI)*  
*EC facilitator : Olavi Luotonen*

## Media@Work

*Chair : Timo Saari, CKIR, HIT (FI)*  
*EC facilitator : Leonie Schaefer*

Leadership@Work Special Interest Group

*Chair : Seija Kulkki, CKIR (FI), EC facilitator : Bror Salmelin*

LivingLabs@Work Special Interest Group

*Chair : Mats Eriksson, CDT (SE), EC facilitator : Olavi Luotonen*



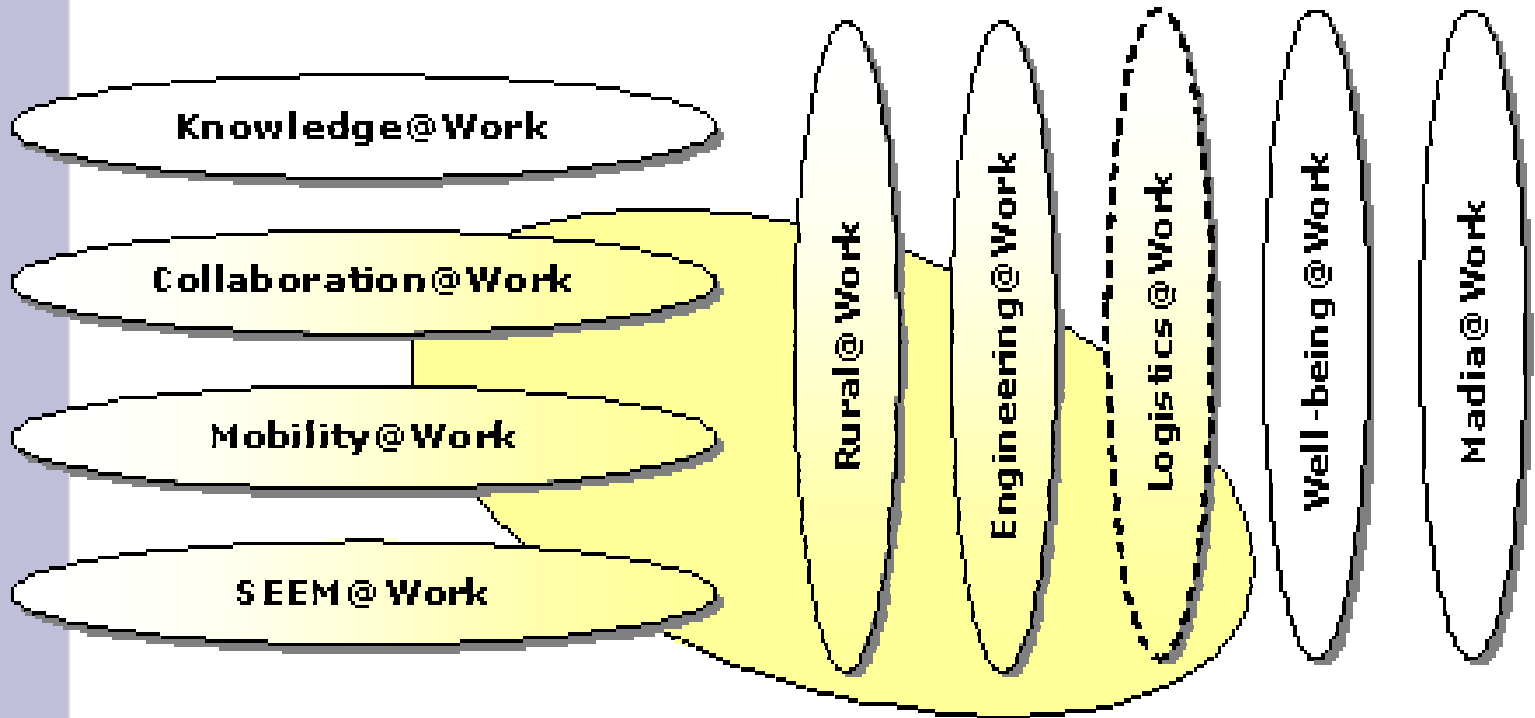
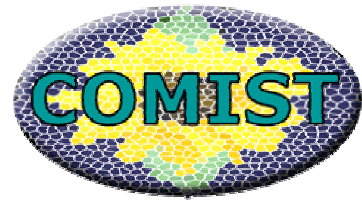
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# COMIST take this further involving NMS and ACCs

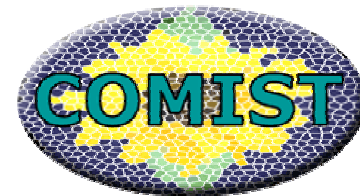


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# Main objectives and strategies for FP7



- Formulate strategic objectives and needs for NMAS to create value clusters, for the near future
  - Key opportunities (emerging value clusters)
  - Key enablers (e.g. cluster innovation strategies)
  - Linking IST strategically to value clusters
- Explore areas of common business and research interest NMAS and traditional EU countries
  - E.g. Manufacturing, Logistics, Agri-food clusters
  - Collaborative innovation, re-location of work, business, RTD
- Explore ways to working together on
  - Explore business opportunities and strategic RTD needs (manufacturing, logistics, agri-food)
  - Create White Paper, influencing FP7 and national strategies



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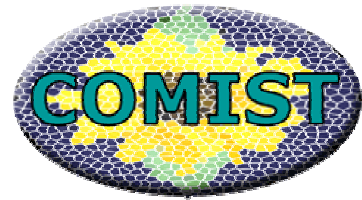
## 4. Some initial findings: Poland, Hungary, Lithuania





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## Hungary (report from CEIA)



- Hungarian Information Society Strategy and action plan
- Emphasis on infrastructure and electronic access to information, as well as to e-government
- Still very limited uptake of e-work, mainly due to availability of infrastructure, data protection issues, and attitudes of employers and managers
- Active industrial cluster building policy supported by government and business
  - Pannon Automotive Cluster (PANAC)
  - Pannon Wood and Furniture Cluster
- Promising opportunities for e-work related value clusters

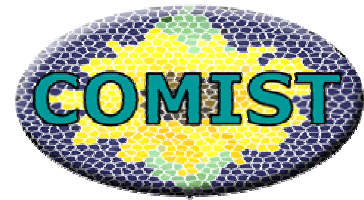


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## Lithuania (report from ISDC)



- Evidence of increasing popularity of eWork especially between SMEs
- E-banking gaining increasing popularity
- In 2004, computers were used in daily business of 90% of processing manufacture and services sector companies
- Slow uptake of electronic transactions among households
- Very limited spending on R&D, lacking policies to guide innovation
- Promising efforts to build networks of supporting companies and innovation, lack of “angel” networks



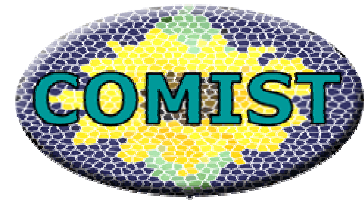
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## Poland (report from ITTI)



- E-Polska: general strategy and action plan for information society development of Poland
- Initial industry clusters: furniture, construction, biopharmaceuticals, electronics and IT; not yet good examples of IST facilitating cooperation among organisations in industry clusters
- eWork in initial stages, teleworking not popular
- Priorities: access to Internet, industry-academia relations building, R&D culture, education on ICTs

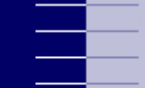


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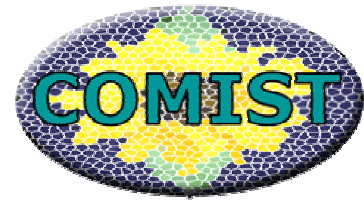
## 6. Discussion: road ahead and invitation to work together





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## Open discussion



- How can participation to IST contribute to innovation and wealth creation in NMAS
- What is or should be the linkage of IST participation with sector innovation and upgrading
- What is the role of new networking-stimulating developments like supply chain management and collaborative commerce
- What could be the advantages of networking and clustering as vehicle for e-work and e-business and where are examples emerging
- How can we learn from good examples from elsewhere
- What are the key priorities for the next few years

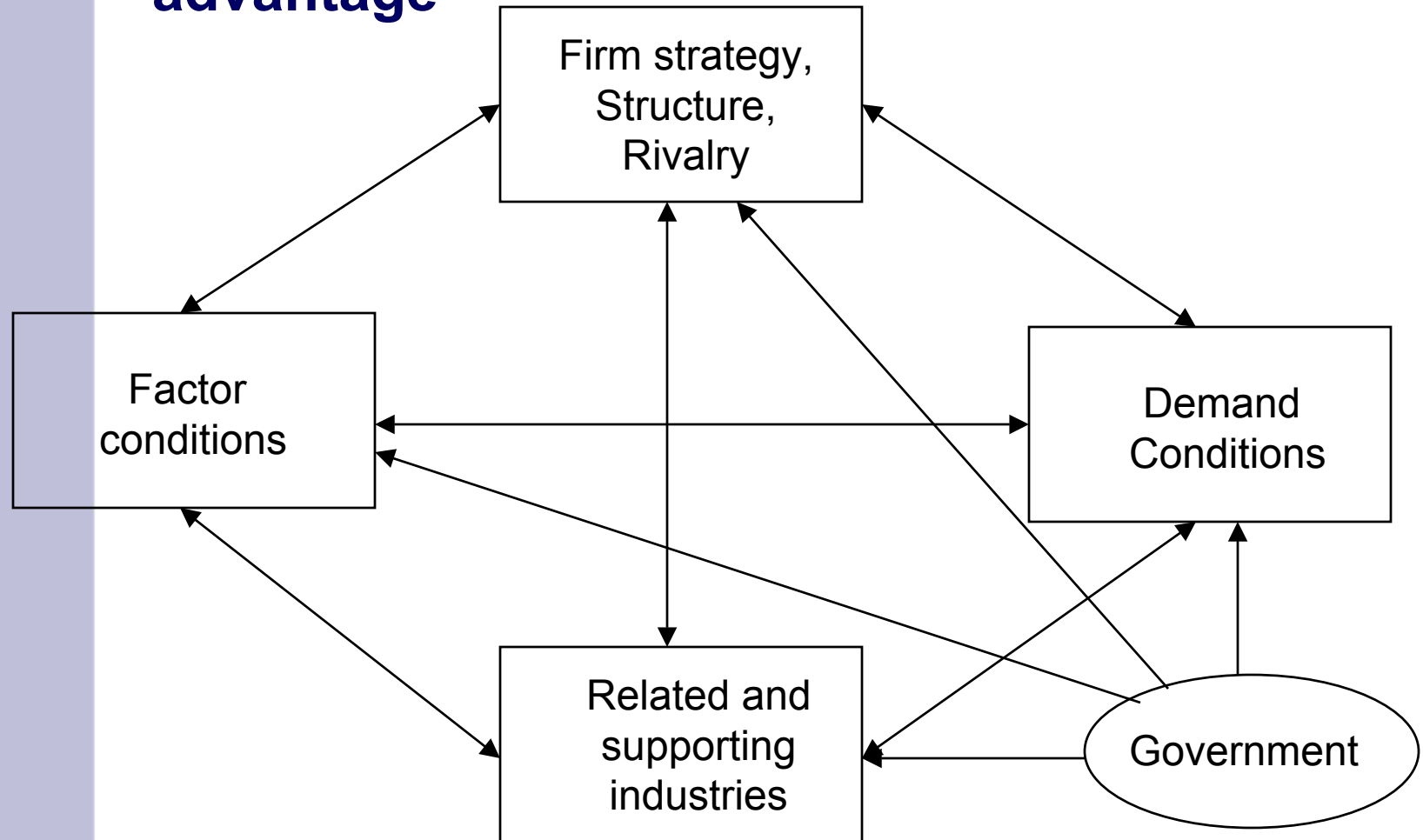
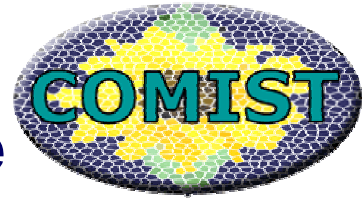


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# Government policy and competitive advantage



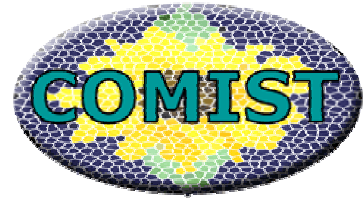
(M. Porter)



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[www.mosaic-network.org](http://www.mosaic-network.org)

<http://www.ami-communities.net>



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