

COST IS0605 Action: ECON@TEL

WG4, Vienna meeting on 05 May 2008

**ICT Technology  
Foresighting**  
*by Zsuzsanna KÓSA, Hungary*

*From „slicing the big elephant”  
towards drivers and scenarios*

# The foresighting project

National Council for  
Communications and  
Informatics in 2005  
established a project for  
ICT forecasting

To inform proactively the  
decision makers about  
the technology trends

Systematic desk top  
research has been done  
by 5 experts

## Results:

- Future impacts of ICT technologies
- Information providing to decision makers
- Consultation with the professional community
- Forecasting methodology

## Website:

[www.nhit-it3.hu](http://www.nhit-it3.hu)

# First step: define the areas of scope

## ***Technology supply***

- Physical basis
- Communications
- Enduser devices
- System design
- Applications
- Content Management
- Developing and maintenance

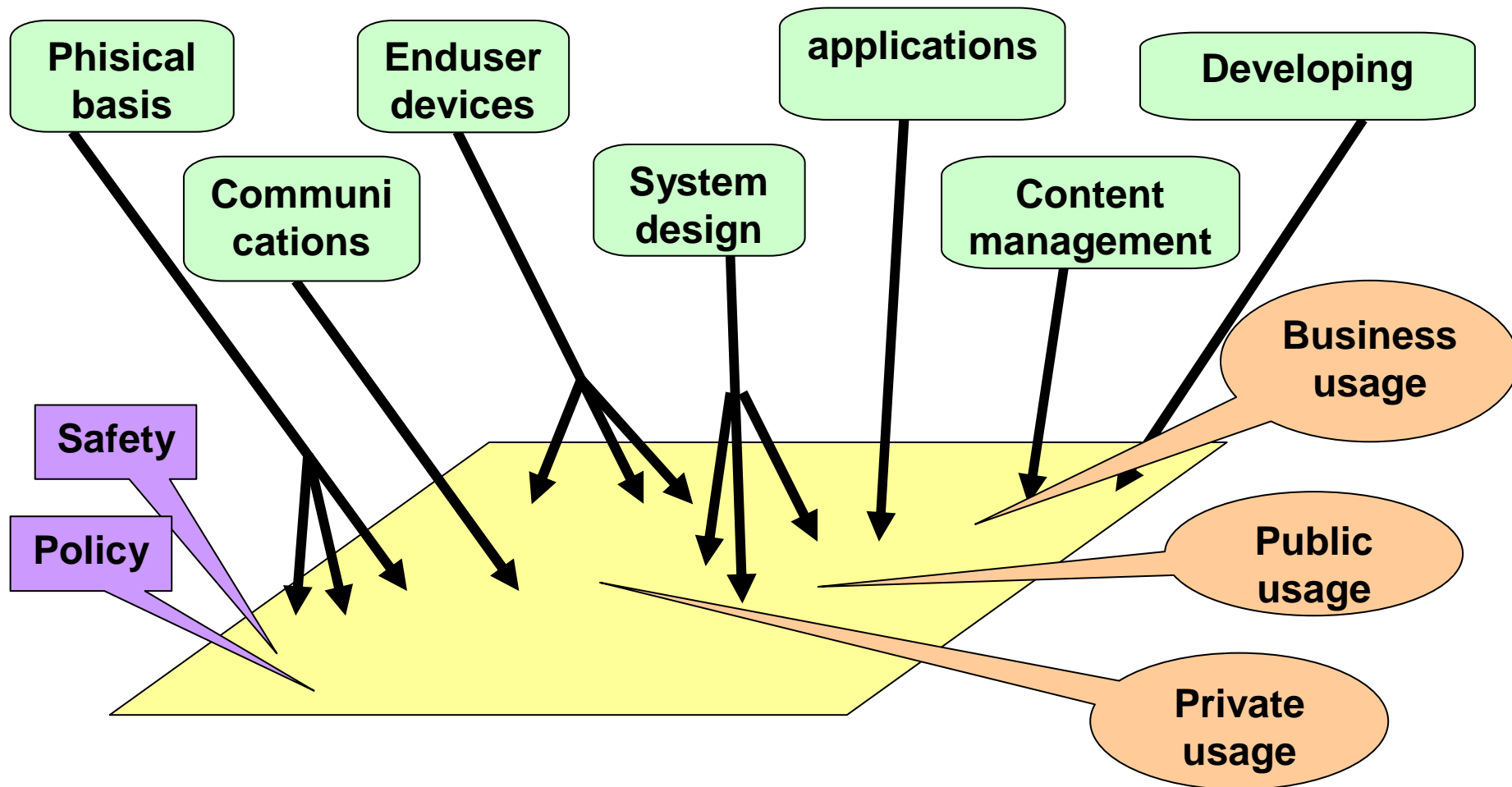
## ***Demand side:***

- Business usage
- Public usage
- Civil and private usage

## ***Horizontal topics:***

- Safety and security
- Policy and regulation

# Main issues of the 12 areas



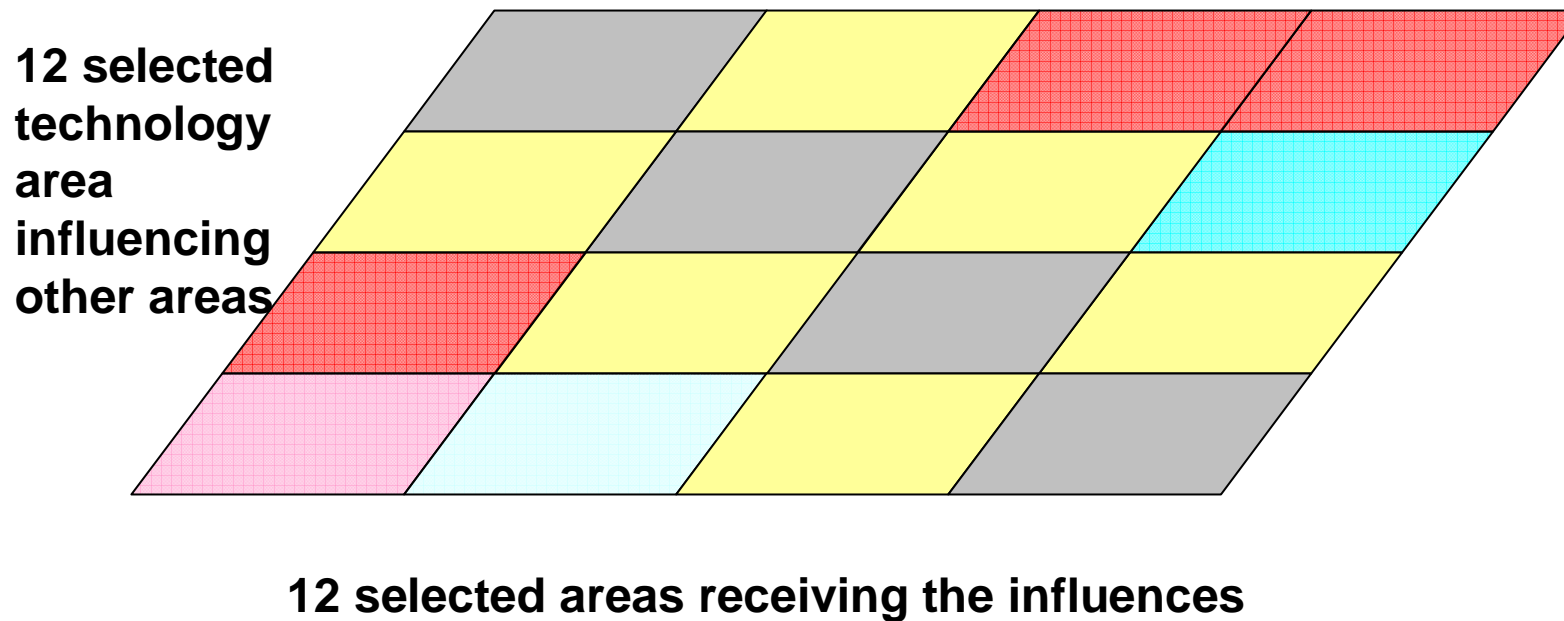
*Each area shows the actual and future questions to solve*

# Cross effect analysis

## Possible cases:

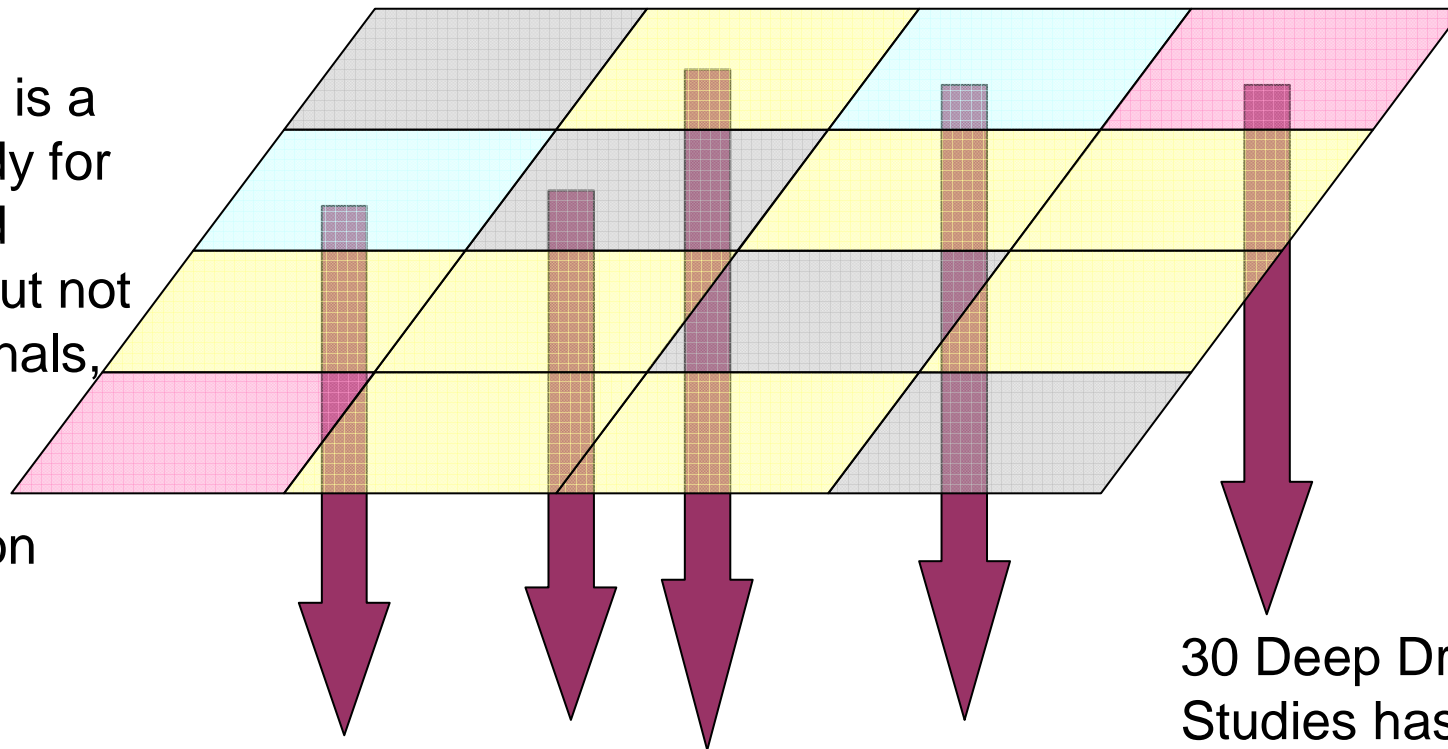
- no or weak cross effect,
- rather strong one direction influence\*
- mutual but asymmetrical influences\*,
- mutual and symmetrical influences\*.

**\* Where to drill deep?**



# „Deep Drill” Studies

Deep drill is a short study for interested readers but not professionals, providing further information sources



30 Deep Drill Studies has been done

***Forecasting in a focused technological area for 10-15 years***

# Template for „Deep Drill” Studies

## *Thesis: the message*

- Scope of the study
- Current status of the area
- Research projects now
- Most probable future
- Technological preconditions
- Expectable effects
- Domestic development
- Summary

## *Enhanced template later:*

Driver analysis

T -Technology

E -Economy

S – Social (and Politics)

Influence analysis

T -Technology

E -Economy

S – Social (and Politics)

## *Approach:*

*The most probable future, not the most desirable!!!*

# List of the deep drill studies

## Physical Basis

- Unlimited bandwidth and storages
- Biology and Informatics
- Nanoelectronics, Plasmatronics

## Communication technologies

- Next Generation Networks
- IP based television
- **Radiofrequency identifications**
- **Flexible man-machine interface**
- **Enduser devices**
- ICT implants

## Systems based new components

- **Personal identification**
- Systems based on sensors
- Agent technologies
- Embedded systems
- Mobile robots

## Software and security

- „Open source” softwares
- Security focused planning
- Privacy enhancing technologies
- Long term archivation

## Applications

- IT Utility
- Service based applications
- Business intelligence
- Computerised text analytics
- Semantic technologies

## Content management

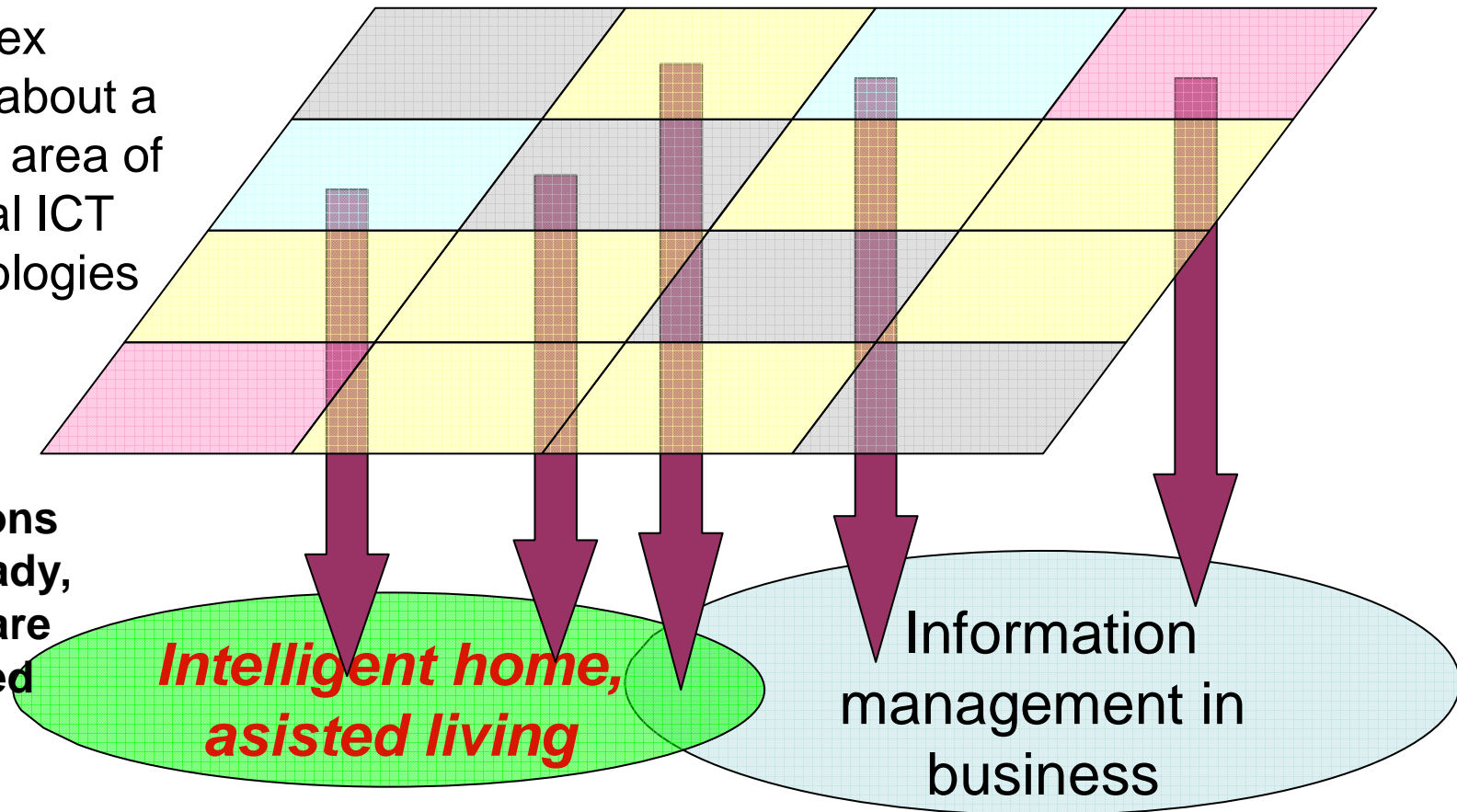
- Web 2.0
- P2P and its influences
- Collective content providing
- Virtual presence and virtual worlds
- Online multiplayer games



# Vision of usage

A vision is a complex study about a usage area of several ICT technologies

2 Visions are ready, more are planned



# Vision and Scenarios

## ***Usage areas:***

- Scope and status
- Demand functions
- Technology supply
- Driver analysis  
(P.,E.,S.,T.)
- Forecasting drivers
- Influence &  
uncertainty

## ***Main vision:***

- Most probable future  
according the stable  
drivers

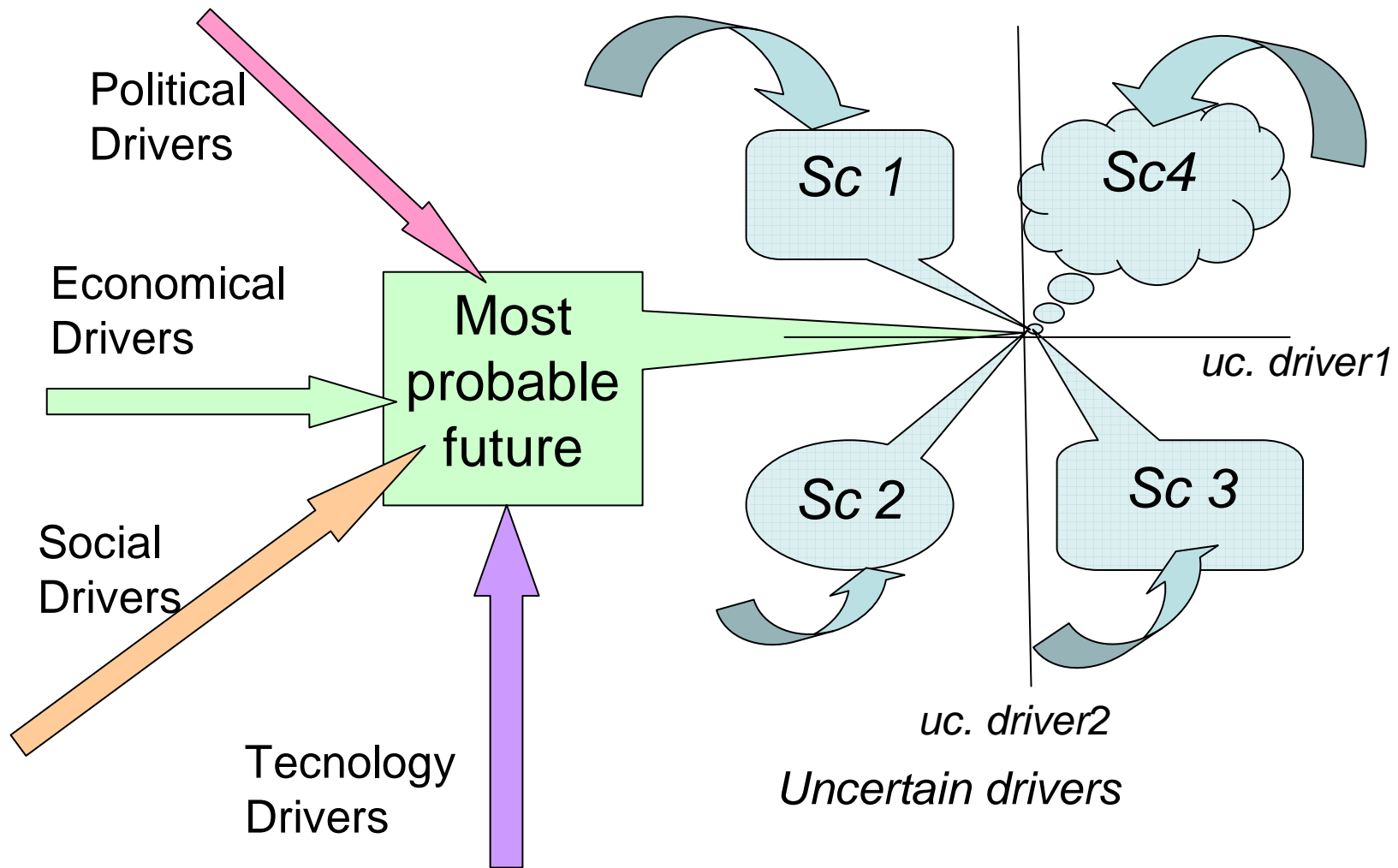
## ***Scenarios:***

- Future diversity based  
on uncertain drivers

## ***Illustrations:***

- Narratives or future  
milestones

# Scenarios within the vision



# Other activities

## **Panorama:**

- Newsletter with short news commented (why is it interesting for us)
- Bimonthly on the website and also on paper
- Sent to decision makers to about 100 addresses (middle management in public administration)
- It is also in English

## **There is a professional community of 40 people**

- New studies are presented and discussed in this community
- Every month there is a meeting
- The materials are finalised after this presentation