

# From Urban Foresight to Urban Futures?

*Potentials and Limitations of  
Forward Looking Activities for  
integrated Urban Development*

**REAL CORP 2011**



POLICIES – Centre for  
Economic and  
Innovation Research

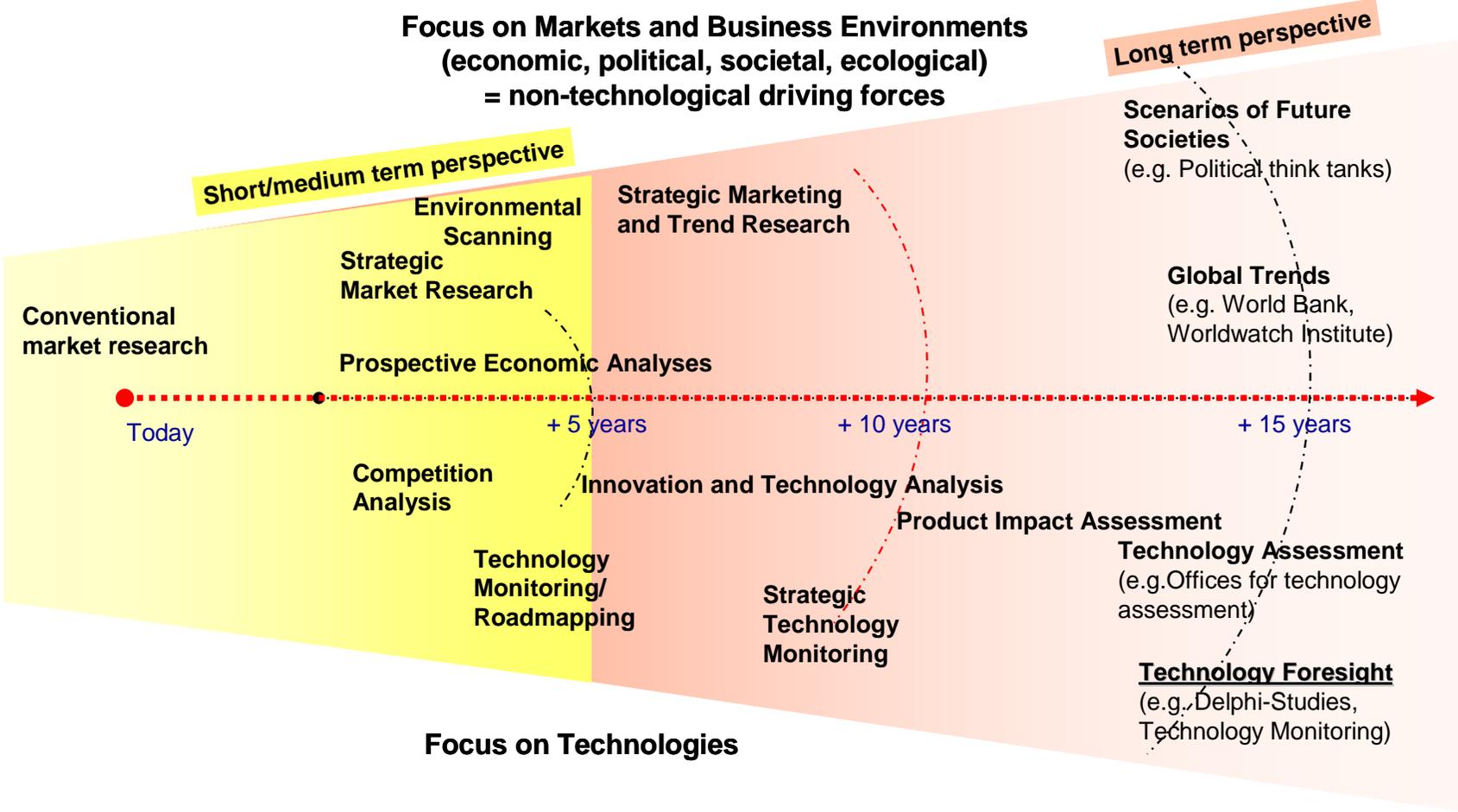
# Overview

- What is Foresight?
- What is Urban Foresight and why is gaining importance?
- A case study example of Urban Foresight
- Conclusions

# What is foresight?

- Two definitions as a starting point:
  - “the process involved in systematically attempting to look into the longer-term future of science, technology, the economy and society with the aim of identifying the areas of strategic research and the emerging generic technologies likely to yield the greatest economic and social benefits” (Ben Martin 1996)
  - “Foresight is a systematic, participatory, future intelligence gathering and medium-to long term vision building process aimed at present-day decisions and mobilising joint actions” (FOREN 2001)

# Foresight and other future studies approaches



Source: UNIDO 2006, adoptions JR POLICIES.

# Functions of Foresight

- Support decision-making:
  - Providing an more quantitative information base as input for strategic decisions for investments or actions. Also a more process oriented approach can support the creation of commitment to a decision.
- Ideation:
  - Inspire to new ideas, opportunities and providing information on possible new markets, policy measures, or other activities.
- Increase of anticipatory intelligence:
  - Providing information on future developments, possible actions can be reflected against to increase the insight of their future context.
- Create networks and mobilize stakeholders:
  - Creating a mutual mindset between possible partners around specific subjects, or even joint ventures.

# Foresight Approaches

- Generic approaches
  - In future studies, many approaches are used that not differ from other policy oriented research activities. These approaches can be seen as the building blocks of the methods. Examples are interviews, workshops, surveys.
- Foresight tools
  - These software or other formalized approaches, use formalized methods that are translated into highly structured tools that can be used to perform foresight and forecasting activities.
- Foresight approaches
  - These more integrative approaches aim at the organizing the discussions on the future. They include several ways and can use the generic approaches and tools. Usually a foresight will include a combination of approaches to achieve the objectives.
- Forecasting approaches
  - These more quantitative approaches often use modelling and other highly quantitative methods to create more predictive information about future developments.

# Approaches to Urban Foresight

- Urban Foresight as Technology Foresight with impact on urban spaces
  - technology foresight in conjunction with issues of urban development, examples:
    - Ambient Intelligence 2020 (IPTS 2003)
    - Intelligent Infrastructure Futures The Scenarios – Towards 2055 (OST 2006)
- Urban Foresight as Territorial Foresight
  - “territorial foresight is a systematic attempt at long-term observation of the future of science, technology, the economy and society in order to identify the emerging trends that can be expected to produce the greatest changes in the city and the territory” (Fernández Güell, 2006)

# Methods and Tools for Urban Foresight

## Quantitative Methods

- Extrapolation of time series
  - Probabilistic forecasting
- Stochastic processes analysis
  - Regression analysis
  - Econometric models
  - Simulation modelling
    - System dynamics
  - Cross-impact analysis
  - Cost-benefit analysis
  - Input – output analysis
    - Game theory

## Qualitative Methods

- Opinion surveys
- Experts interviews
- Focus groups / Expert panels
  - Delphi method
  - Scenario design
  - Iterative synopsis
  - Relevance trees
- Morphological analysis
- Catastrophe theory
- Historical analogy
- Incasting and Backcasting
  - Visioning

## Complementary Tools

- Environmental scanning
  - Brainstorming
- Mind mapping
  - Benchmarking
- Critical technologies
  - SWOT analysis

Source: Fernandez Güell 2010.

# The case of Linz 21

- **Background and Motivation**

- Linz is an old industrial town in Upper Austria that successfully managed structural change in the 1990s
- Nevertheless the city faces several challenges at the beginning of the 21st century (i.e. traffic, socio-economic change...)

- **Characteristics of the Foresight**

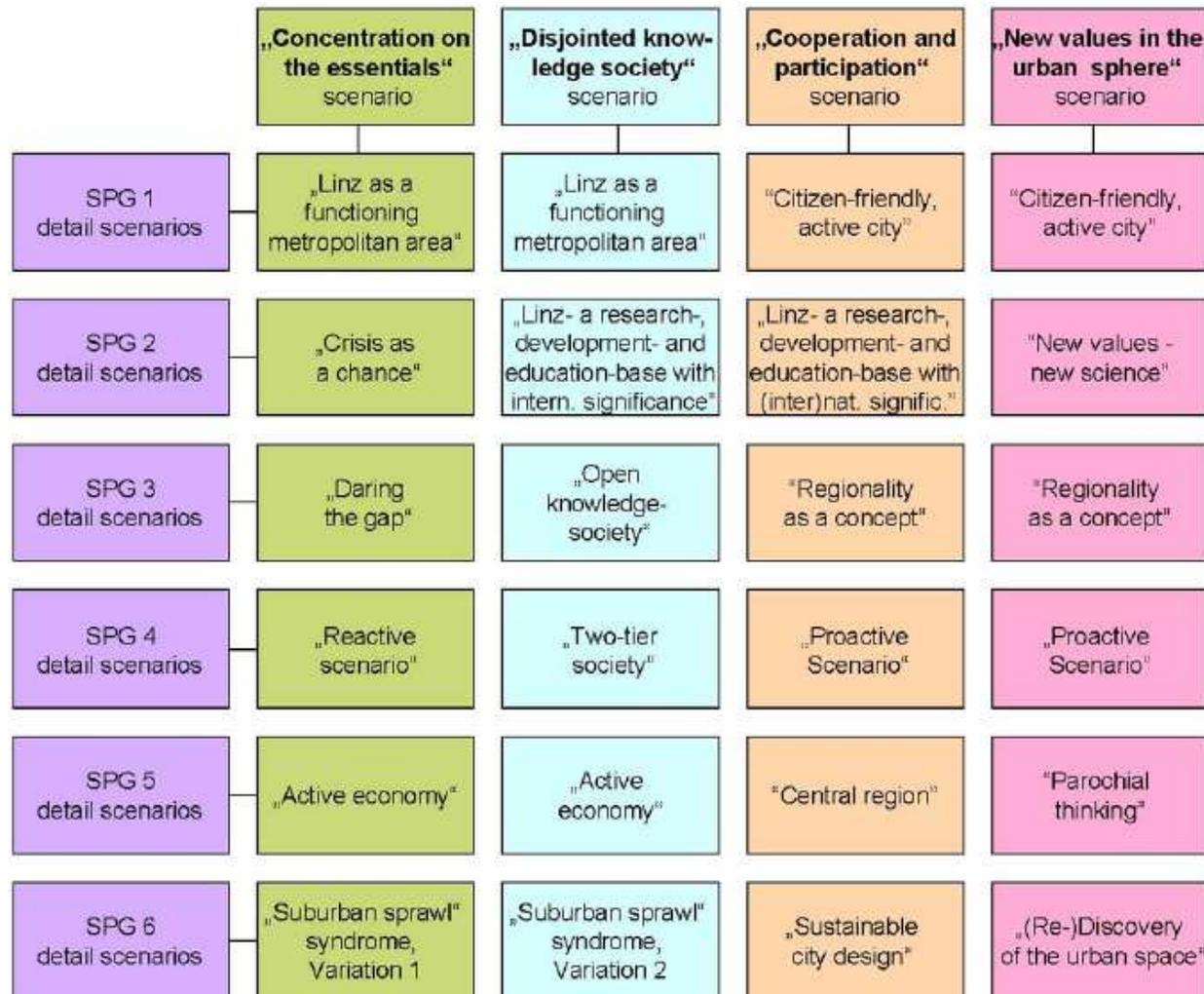
- Explorative qualitative scenario-based approach
- Process design and management by Ars Electronica Center and an external expert (i.e. Z\_Punkt)
- Participatory Process from 2002 to 2004
- Stakeholder driven: Involvement of more than 80 experts/stakeholders

# The process of Linz 21

PROCESS LINZ 21		
2004	May-July	Feedback round with public participation
	March	Final Report
2003	Nov.-Dec.	Revision
	<b>4. Feedback Round</b>	
	June	Fusion of detail scenarios to 4 refined scenarios
	<b>3. Feedback Round</b>	
	April-May	Enrichment of sub-scenarios on the basis of gs-outlines
	March	Reduction of scenario sketches from six to four
	Jan	Workshop, all alarms (Result: six global-scenario-sketches)
2002	<b>2. Feedback Round</b>	
	Nov.-Dec.	Construction of specific sub-scenarios in working teams
	<b>1. Feedback Round</b>	
	Oct.-Nov.	Development of trendsheets and key factors in working groups
	Sep.	"Method Toolbox" by Z_punkt
	June-Sep.	Formation and coordination meeting of the working groups
2002	June	Establishing of the Future Council
	May	Contract "Our Future: Linz 21"
2001	Oct.	The Linz City Council issues a directive to work out future scenarios

Source: Schulz-Montag et al. 2008

# The case of Linz 21



Source: Schulz-Montag et al. 2008

# The case of Linz 21

- Outcomes

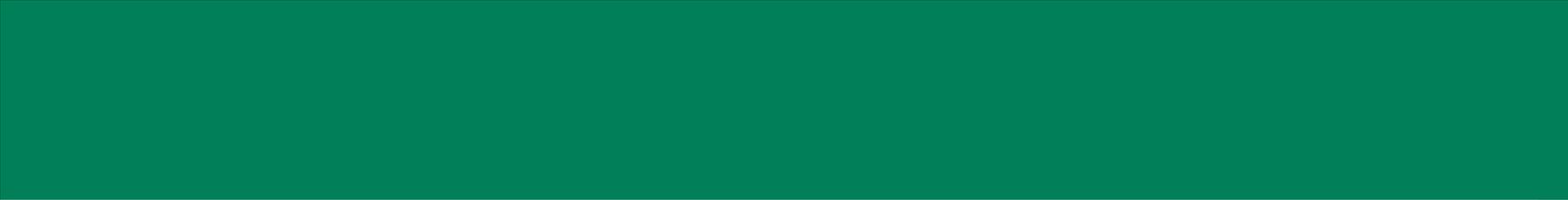
- Four global scenarios for Linz with 20 subscenarios for different subsystems
- Presentation to the public in 2004 with space for interaction
- ...So far mission statements for the future development of Linz still have to be formulated

# How can Foresight help in Urban Planning?

- **Provision of longterm vision beyond time horizons of urban development plans**
  - Foresight can work as complement to urban development plans
    - Provision of long term strategic orientations either qualitative (i.e. “green city”) or quantitative (how does socio-economic change affect the city in 20 years)
  - Foresight can form a basis for urban mission statements
- **Active involvement of citizens and stakeholders**
  - Participation of citizens through foresight methods (i.e. Workshops, Delphi Surveys etc.)
  - Participation through dialogue with citizens (i.e. web-platforms)

# What limitations does the concept face?

- **Data availability**
  - General availability of data
  - Geographical resolution of data
  - Availability of time series
- **Transforming longterm vision into strategic action**
  - Election cycles
  - Uncertainty and fuzzyness
  - Complexity of scenarios



Thank you for your attention

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