Use of forecasting for education & training: Experience from other countries




Twinning-Project
MK2007/IB/SO/02, MAZ III

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Input to EU-Twinning-project workshop (ref. MK2007/IB/SO/02) :
“Support to the National Employment Policy: Macedonia”
Skopje, 11.11.2011

European Commission

"…**it is important to recognize that accurate and precise forecasts are not achievable**.

The key question to ask is not whether or not such projections are **accurate**, but whether or not they are **useful**." (EUROPAN COMMISSION 2008)

European Commission (2008) New Skills for New Jobs. Anticipating and matching labour market and skills needs. COMMISSION STAFF WORKING DOCUMENT {COM(2008) 868 final}, p.6, Internet: http://ec.europa.eu/education/lifelong-learning-policy/doc/sec3058_en.pdf

Purposes of forecasting in education

- **A main issue in education and training**:

  Decisions with varying **time perspectives**…

  …taken by different **actors/stakeholders**…

  …with different **perspectives & interests…**

  …produce a **strong need** for knowledge about different futures

duration of study: **9+4+(3-5)=<18y.**
duration of working life: **+/- 40y.**
duration of educational change: 2+

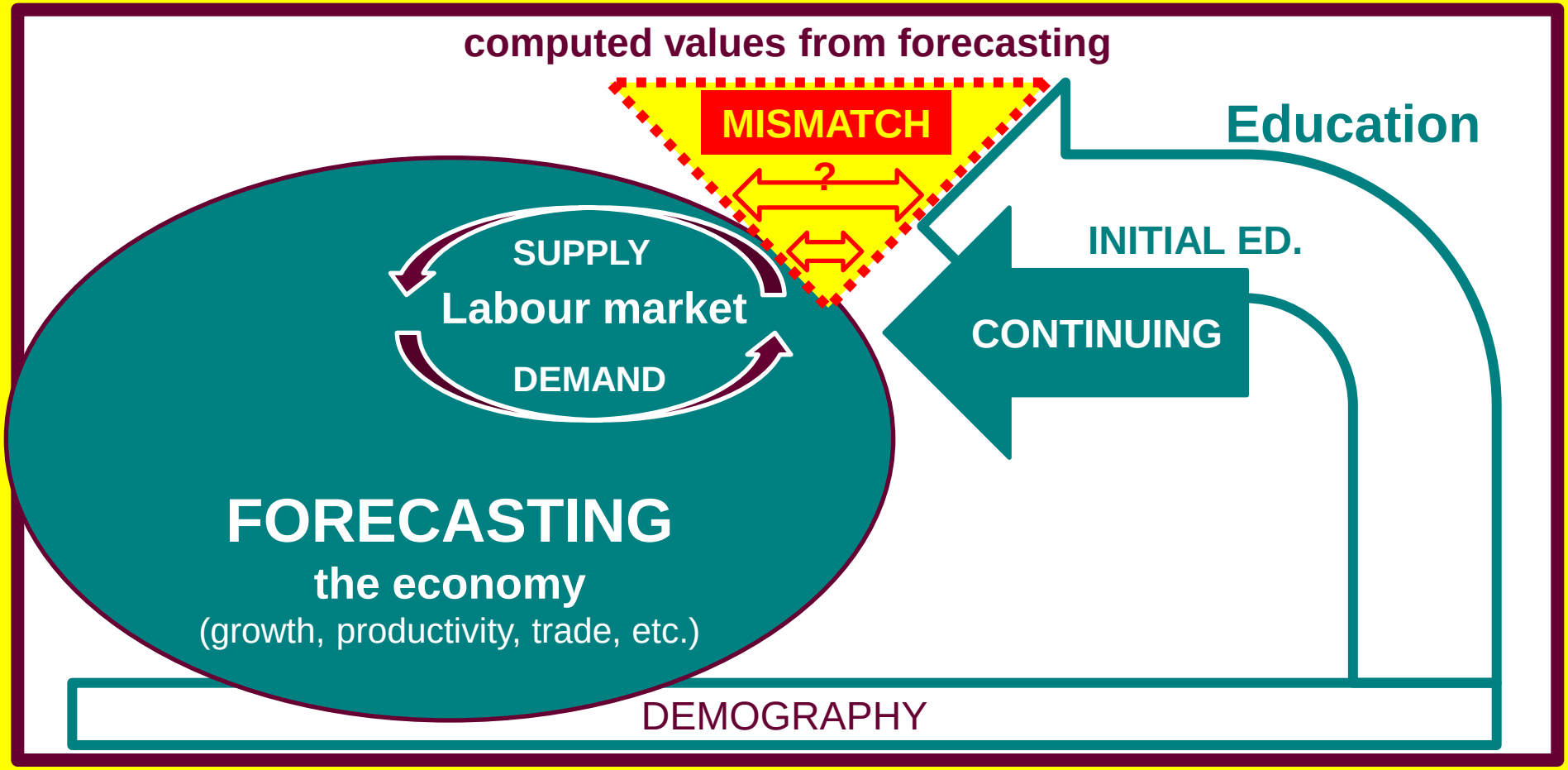
students [parents], teachers, providers, employers, social partners, policy makers
- students: longer term
- teachers/providers: static
- employers, policy: short term

- However,
  if we cannot know the future…
- …what then are the uses of forecasting?

- **MAIN MESSAGE:** uses are **learning among stakeholders** about the **present state** in education/employment and how the **dynamics** of the systems evolve

Basic structures of forecasting and its utilisation in education/training

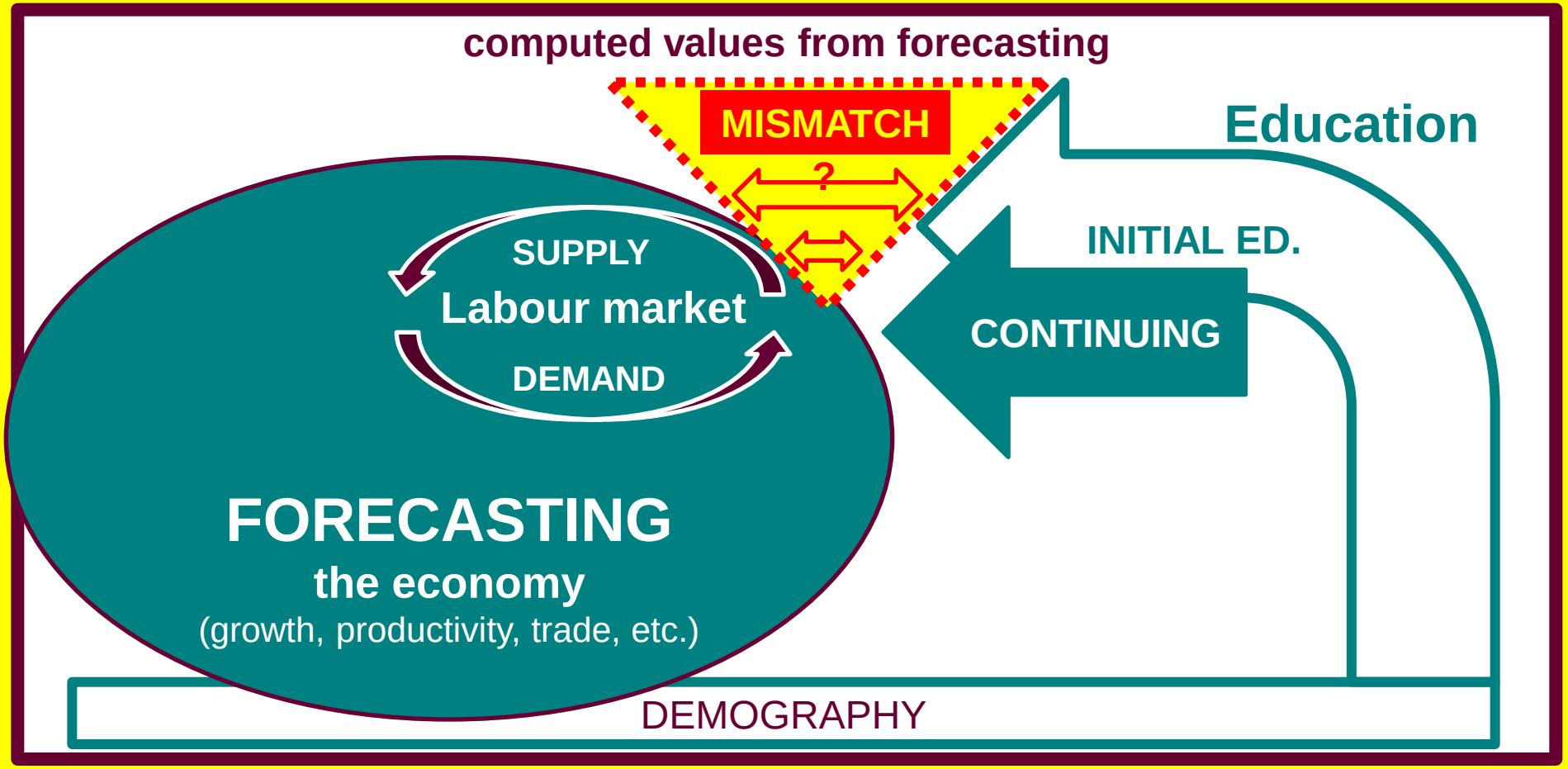
ANTICIPATION, FORESIGHT:



Basic structures of forecasting and its utilisation in education/training

ANTICIPATION, FORESIGHT:

- understanding, making sense of forecasting by DECISION MAKERS
- bringing in their knowlege and interests
- creating a communicative system of knowledge production



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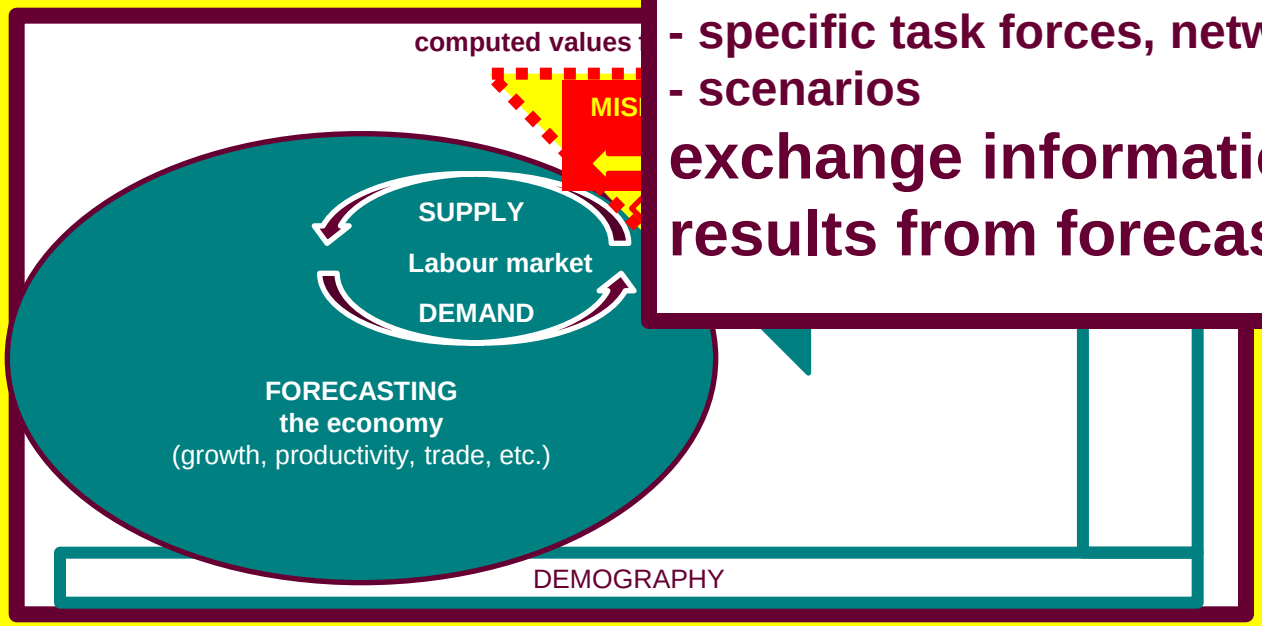
bringing in additional sources of information/knowledge

- informal knowledge of actors
- surveys, jobs analysis
- specific task forces, networks
- scenarios

exchange information/knowledge with results from forecasting activities



Preconditions for the use of forecasting for learning among stakeholders?

- **Precondition 1:**
  Forecasts must be **produced regularly and periodically** at short intervals (~3years), with the opportunity to compare the results with reality and to understand the divergences

- **Precondition 2:**
  The forecasts must be shared among the actors/stakeholders, their use depends on the **collaborative work of knowledge production** among the stakeholders, who must combine their informal knowledge with the knowledge produced by forecasting

- **Precondition 3:**
  The models and their assumptions must be **as transparent (and simple) as possible**, in order to avoid the trap of pretending some kind of accurate ‚alchemical' knowledge about the future

Paradoxes & contradictions in the use of forecasting for education & training

- ‚**paradox of non-use**‘: as long as no forecast is available it is strongly desired to have it; once it is available, it is mostly not used
  - key issue: conflicts about **credibility** of results among different stakeholders with different perspectives/interests

- **confusion about time frames**: mixing up of current and future problems/mismatches/demands
  - **current problems** have been produced in the **past; current changes** in education will affect the **future** and not solve current problems
  - difference of **initial** and **continuing** education/training typically not considered enough

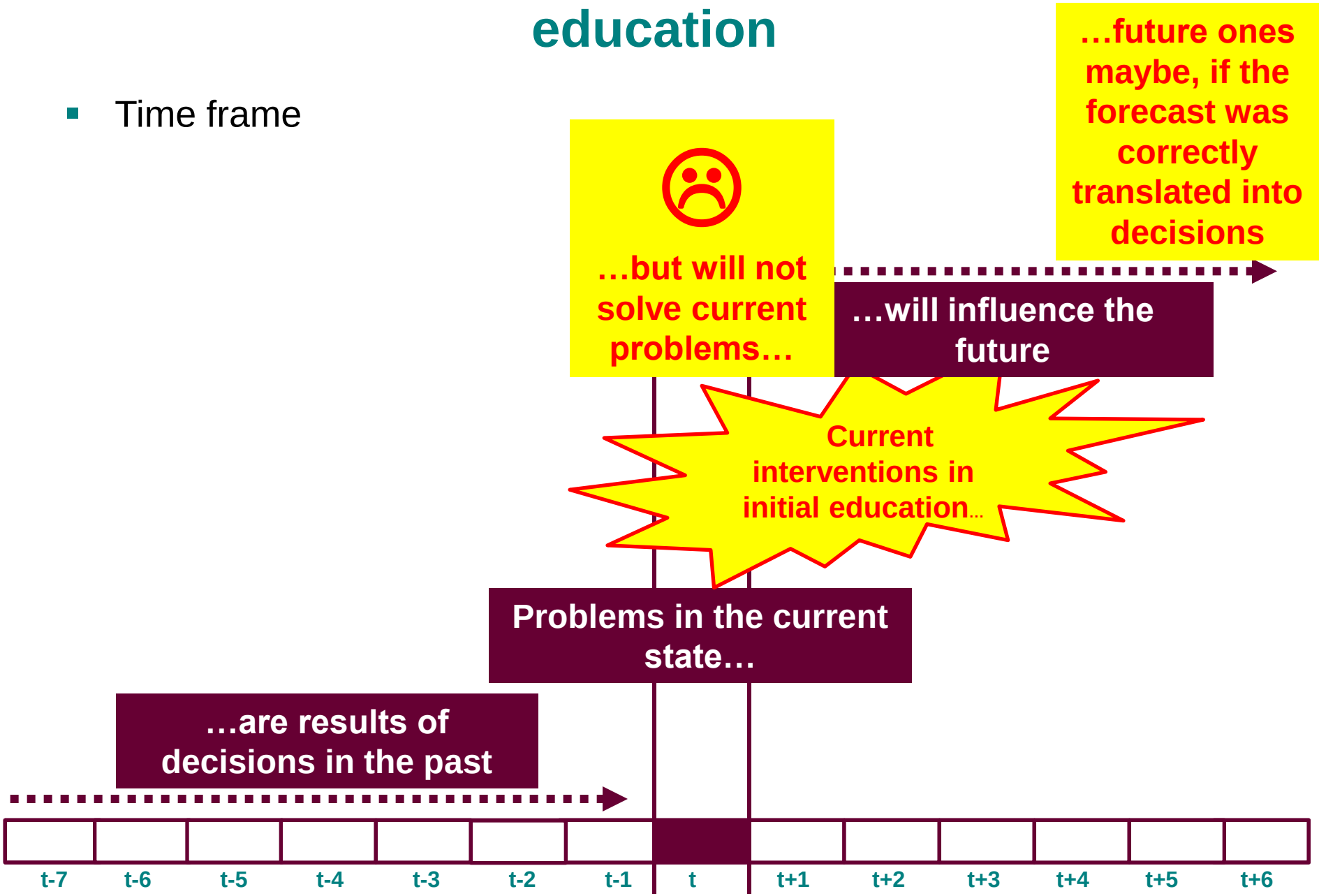
    current problems can typically only be solved by continuing education/training, however

    mostly initial education is called for solution (because this typically cannot work, implementation typically fails)

    paradigm case for this: teacher production cycles (high predicatability; not done in time; demand builts up and is filled otherwise; supply starts to increase late; lthen eads to oversupply; this moves to other areas; later the same cycle begins; Austria 1960/70s high demand, 1980s supply, 2010s high demand)

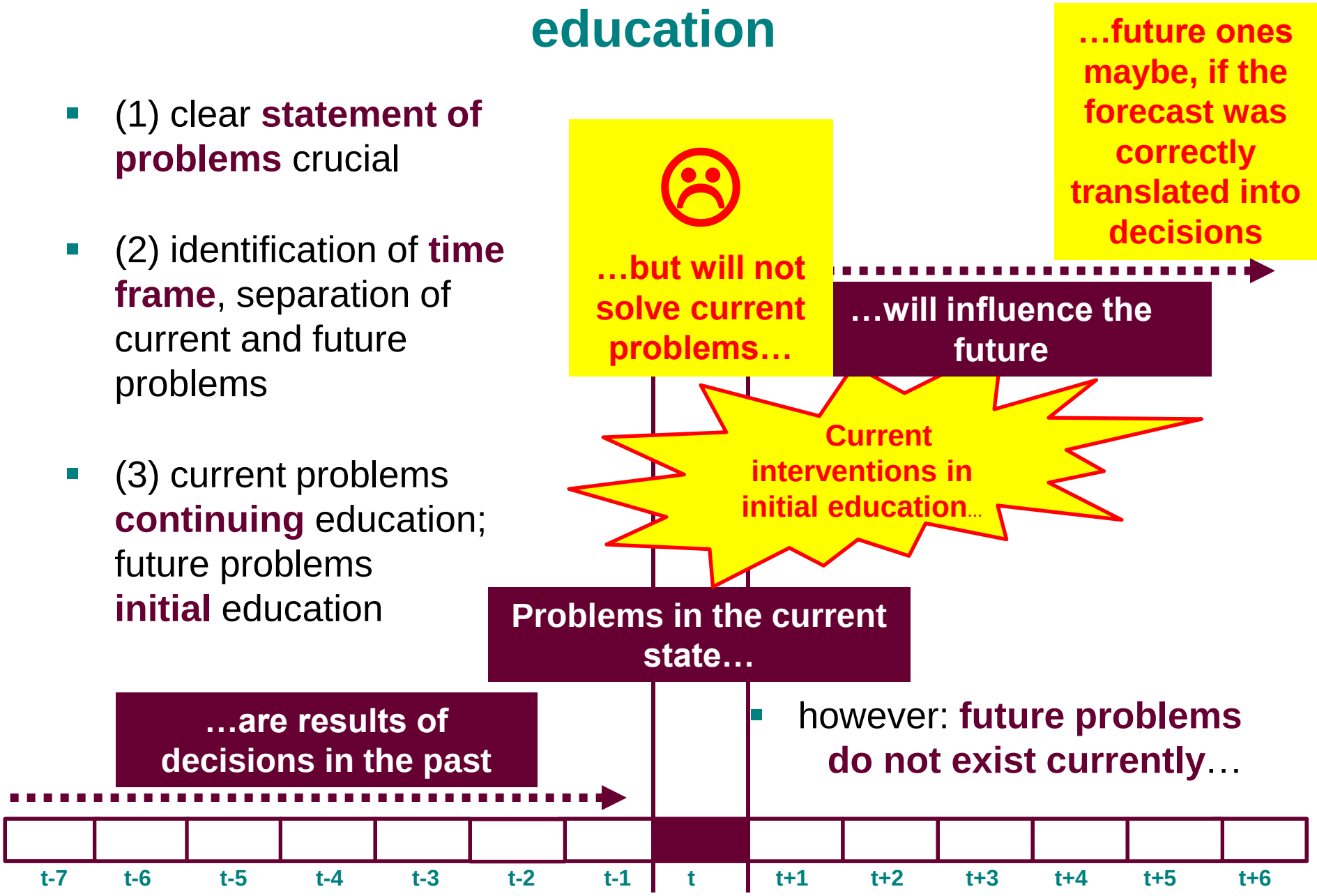
Logic of interventions in initial and continuing education

- Time frame



Logic of interventions in initial and continuing education

- (1) clear **statement of problems** crucial
- (2) identification of **time frame**, separation of current and future problems
- (3) current problems **continuing** education; future problems **initial** education



…forecasting is important to anticipate future problems…

- …but **not enough**: to be successful, the **decision makers** must identify the likely future problems and act according to them…
- …they must **integrate the forecasts** into their views and understandings (need of structures for cooperation)…
- …this is only possible if there is an **understanding of the current problems**…
- …and forecasting can contribute to this through several channels
  - forecasting needs a **consistent data base**, which also describes the past development and the current state
  - it shows how the system might evolve under a set of assumptions, and improves the **understanding of the dynamic**
- …in sum it might make things better, but it **does not make things easier**

…combination of forecasting with broader activities of foresight is necessary for use

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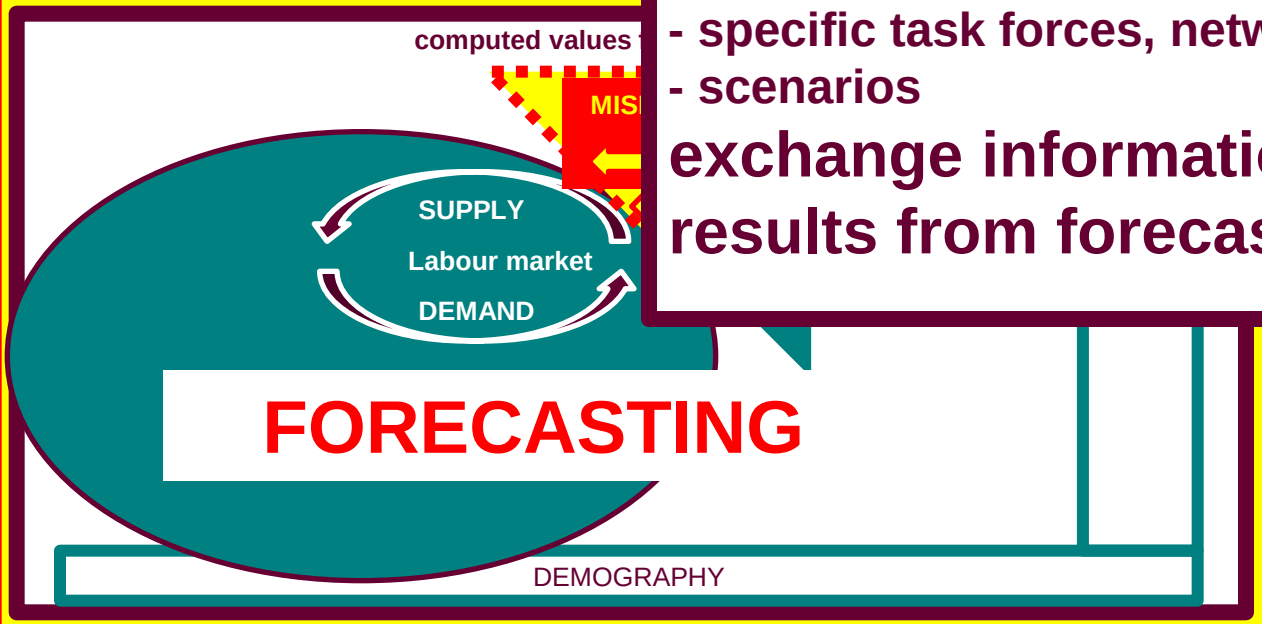

‚Foresight' as an approach of integrating forecasting into mechanisms of utilisation

- Foresight combines results of forecasting with the stakeholders in broader mechanisms of joint knowledge production

- Key points of foresight-methodology (Keenan et al. 2003):

FORECASTING

- **structured long-term** anticipation and projections
- **wide range** of influential factors, interdisciplinarity, different types of expertise
- **formal techniques, eliciting expertise, outcomes generated by the process**

ACTORS, STRUCTURES

- **interactive & participative** methods of exploration, wide variety of **stakeholders**
- new **social networks** equally/more important than formal products (reports, lists, action plans)
- **institutionalised structures** facilitating creation of networks & communication channels between different actors

GOALS, PRODUCTS

- products beyond scenarios & plans: guiding strategic **vision** & shared sense of **commitment**
- recognition & explication of implications of **present day** decisions & actions
- **long-term orientation** (ten years), objective: inform current decisions and generate insights towards more immediate developments

Experience from EU and elsewhere

- EU: Difficult to get a clear and valid picture, diverging appraisals
  - Practices differ in the linkage between knowledge generation and use; frequently elaborate knowledge is not used very much
  - sucessful examples are Denmark (social partners), Finland (extensive System), Ireland (elaborate forecasting and strategic bodies)

    partly also U.K and Italy
  - Different relationships between forecasting and foresight/anticipation:
    producer-oriented: producing and selling neutral information
    vs.
    decision-oriented: information part of frameworks of decision making

    Seems that even elaborate information is not well used, if it is not from the beginning part of decision making (France, Netherlands)

- Non-EU: ETF-Project in 8 very different countries shows
  - weak understanding of the current state; feelings of high mismatch, but lack of evidence
  - high demand and high expectations in forecasting in planning paradigm: ‚truth about future‘
  - big gap between education and employment; employers critizising education
  - confusion current and future problems

Overview EU

- Forecasts, projections widely produced, differently used:
  - part of broader anticipation system (Finland, Denmark, Netherlands),
  - In the background, problems of credibility (U.K., Germany),
  - prominent role (Ireland),
  - solely demand side, supply negelected (Austria, Ireland)
- Enterprise surveys also common
  - ‚*vacancies*', current gaps and mismatches
  - sometimes future problems and tensions
- Complex systems in some countries (councils, stakeholder agreements, etc.)
  - France: regional, sectoral observatories combining forecasts with surveys and qualitative information; planning in larger firms; agreements state-trade unions
  - Denmark: six inclusive ‚*regional growth fora*', ‚*national strategie for labour market monitoring*
  - Germany: research network for early identification of demand
- Scenarios seldom
  - U.K. as complement to forecasting which has credibility problems
  - Finland

Some more specific experiences from which one might learn

- **Austria: some forecasting, not utilised by education**
  Regular economic forecasting process; labour market only aggregate; periodical mid-term-forecasts of demand by ocuppations and educational levels by employment service; supply not included; results not used

- **Finland: elaborate system, good practice**
  Integrated activities at different levels, regular forecasting as an input, focus on decision making
  - regional activities of employment and labour market centres
  - national activities of development of education

- **Germany: elaborate producer-oriented system, weak utilisation**
  Example of research-driven activities, which are not easily brought into practice
  - Forecasting and several other activities without clear relationship to decision making

Finland: forecasting integrated into foresight

- "***In Finland all the regions implement and utilise long term, medium term and short term foresight activities, both quantitative and qualitative***. *The aim of the* ***core short time foresight*** *process is to interview enterprises (the TKTT model) and to arrange expert panels. The Research Institute of the Finnish Economy produces* ***medium term regional forecasts*** *(5 years) for production and employment by industry. The Ministry of Labour and The Finnish National Board of Education produce* ***longterm regional forecasts*** *for the relevant industry and occupation.*"
  (Kaivo-oja/Marttinen 2008, S.41)

Finland: overview

Table 4. Time spans and foresight methods in ministerial foresight activities

Time span	Quantitative methods	Qualitative methods
Long term (6-20 years)	Long term (LT) model, MITENNA model **FORECASTING**	Scenarios, Delphi, megatrend analysis weak signal analysis, future-workshops etc... **FORESIGHT, ANTICIPATION**
Middle term (3-5 years)	Regional econometric model (ETLA)	Cluster analyses
Short term (½-2 years)	Interviews with enterprises Barometers	Expert panels (SWOT/Delphi))

Source: Kaivo-oja/Marttinen 2008, S.39.

- Essential elements of foresight

  (1) formal organisation (roles & responsibilities),
  (2) decision making process (management structure),
  (3) resources (sponsorship).

  Components of regional foresight: anticipation, participation, networking, vision, action

- Aggregation to national level (examples)

  in 2005 Regional foresight co-operation groups for preparation of the Development Plan for Education and Research 2007-2012

  forecasts used by 34 National Education and Training Committees, with a national coordination group

- What to do in Macedonia?

The End

Material