



# Serious games

Сериозни игри в различни контексти в  
образованието и бизнеса

Няколко примера от нашия опит

# TRENDS in Technology for 2012

Attention Economy

Community

Convergence

Game on

Health Style

Homing

Individualization

Knowledge society

Life Science

Outernet

Shy Tec

Sustainability

Timeless time

Vitualization

Younger

## TREND UNIVERSE 2012

THE MEGA-TRENDS WITH THEIR CORRESPONDING  
MACRO-TRENDS FROM TRENDBOOK 2012

[WWW.TRENDBOOK2012.COM](http://WWW.TRENDBOOK2012.COM)

# Trend Universe 2012



# The future of gaming in education

- The value-added of computer games in education
  - Active-based learning
  - Complex competences building
  - Integrated learning solutions – learning paths, assessment&feedback - LLL;
- Social learning
  - Collaboration
  - Competition

# SG as TEL environments

- Serious games are useful to train learners to complex skills:
  - **taking decisions,**
  - **making complex choices,**
  - **anticipating future actions**
  - interacting with other (simulated) characters
- Building successful SG include synchronization of multiple elements (game mechanics, appealing graphic environment, engaging scenarios), and thus achieving good mix of learning elements is very difficult.



**Transformative, Adaptive,  
Responsive and engaging  
environment**

**TARGET - EEU**

TARGET-EEU aims at delivering responsive

**TECHNOLOGY-ENHANCED LEARNING**

environment that enhance

**rapid competence development**

of knowledge workers.



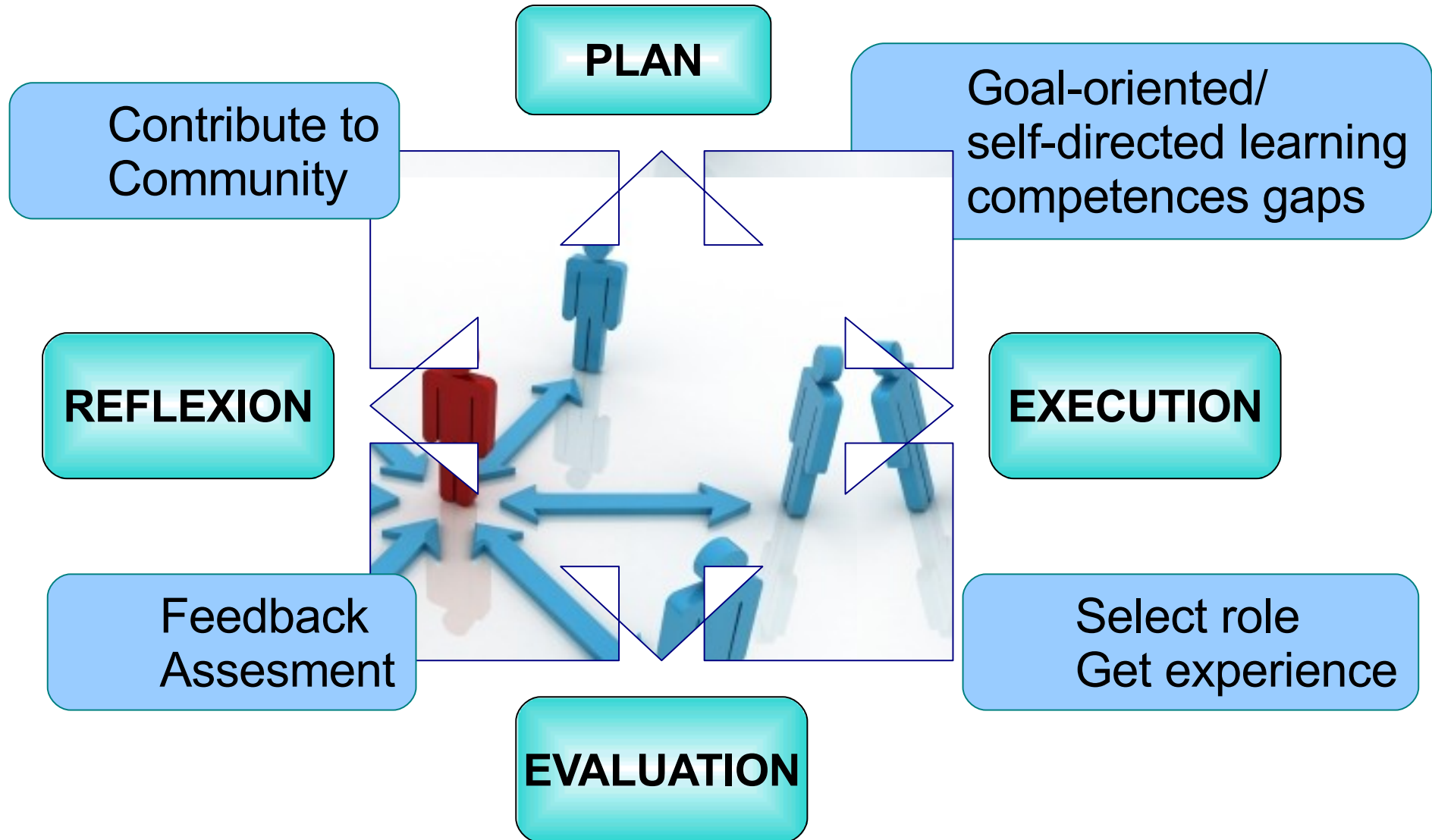
# TARGET-EEU

## **Time-to-Competence**

- Develop a new genre of TEL environment that supports **rapid competence development**
- The TARGET platform is based on serious game combined with virtual world technology, which confronts individuals with complex situations in the form of game scenarios.



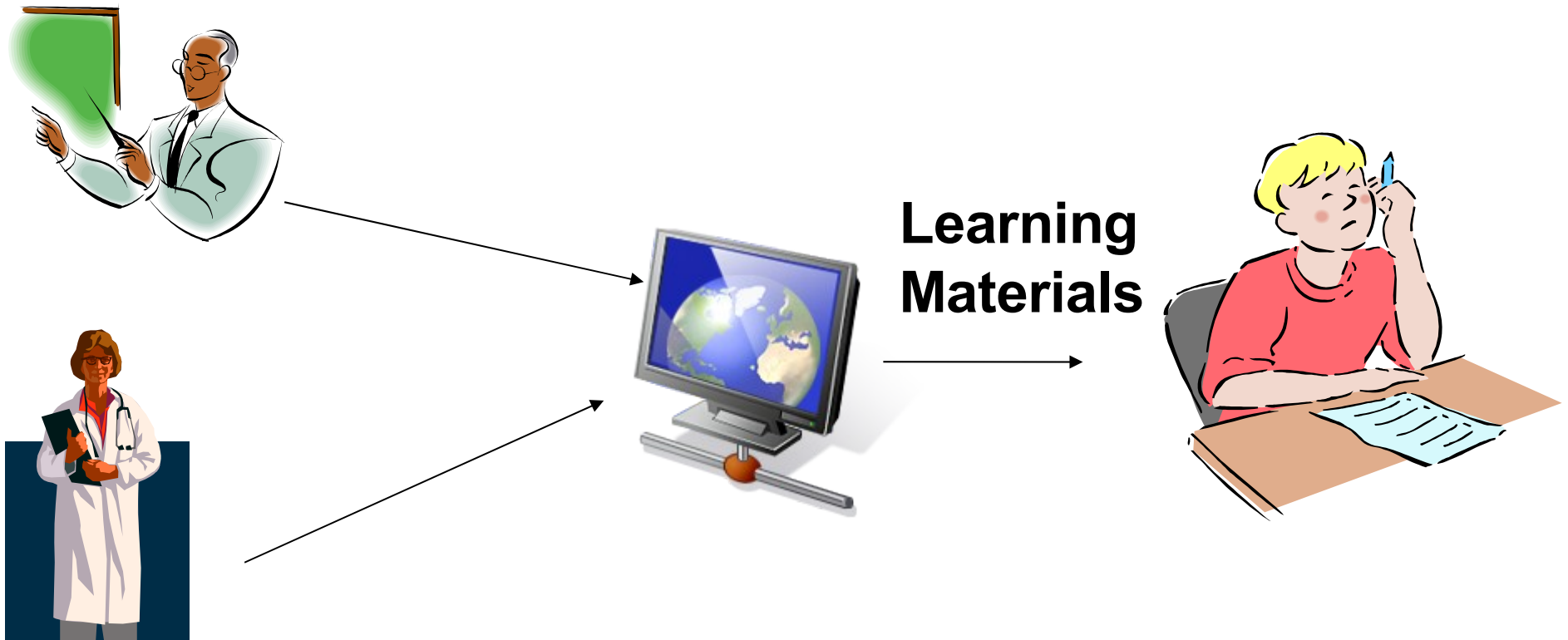
# TARGET Learning Process





# Codify knowledge

- In traditional TEL systems subject matter experts provide **explicitly** the learning materials as text, audio or video content.



- In SG, knowledge is developed **implicitly** through trial and error method.



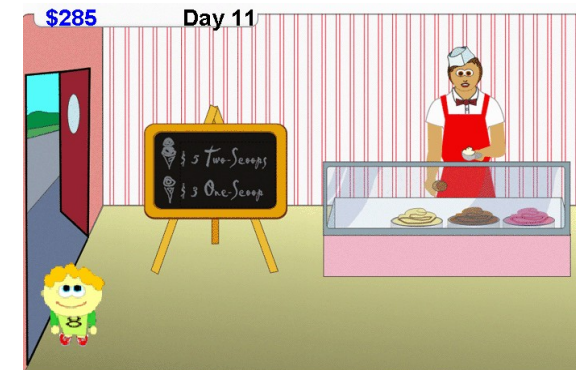
**LEARNER**



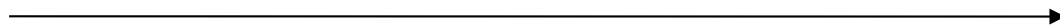
**EXPERT**



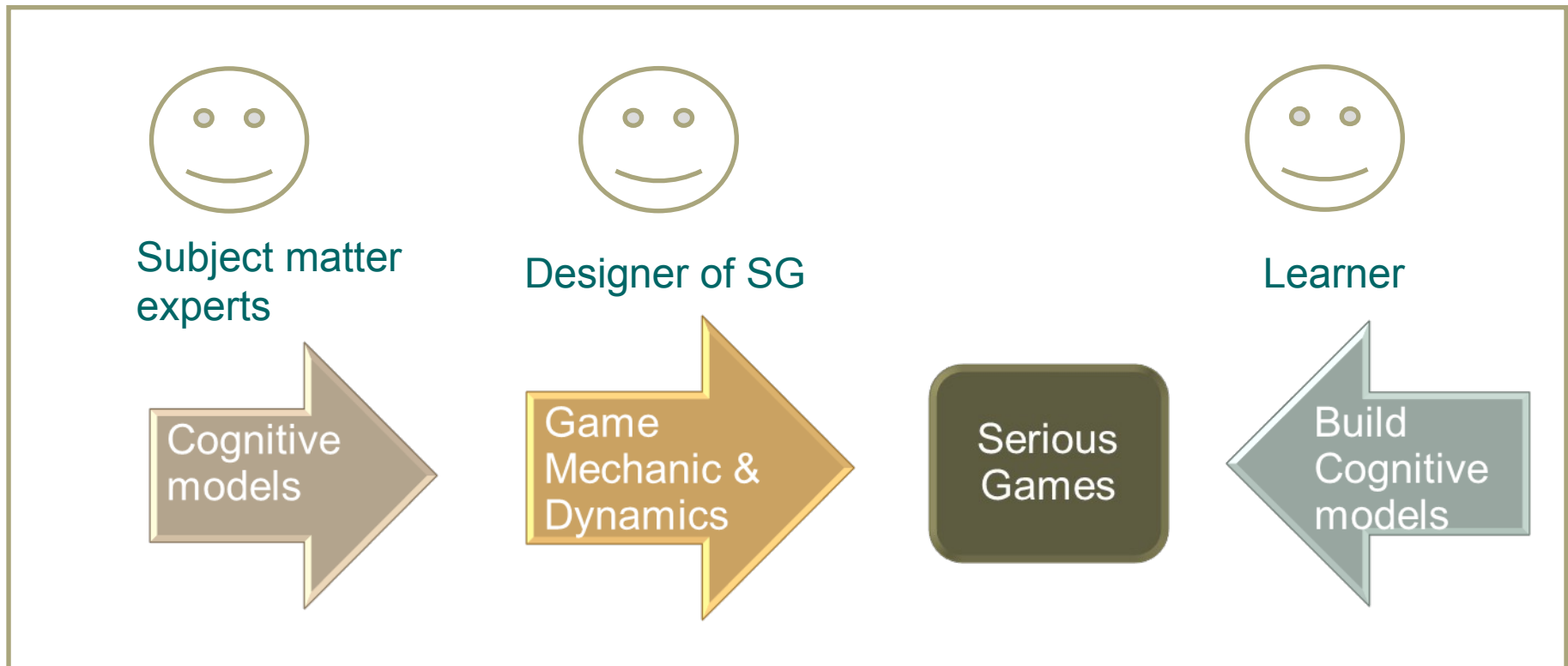
**METHODOLOGY**



**SERIOUS  
GAME**



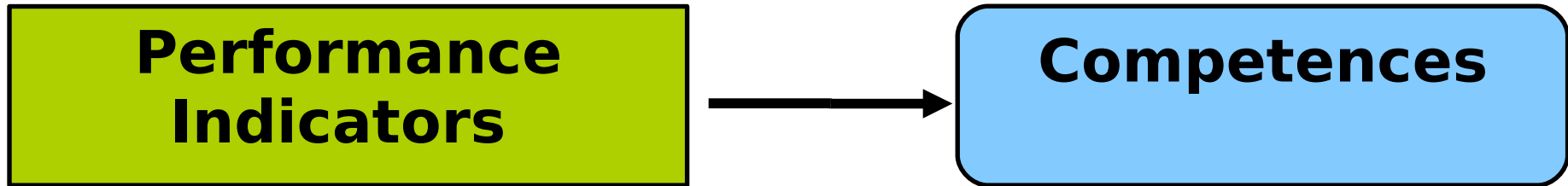
# Design of SG should incorporate Expert competence models



# Competence Assessment

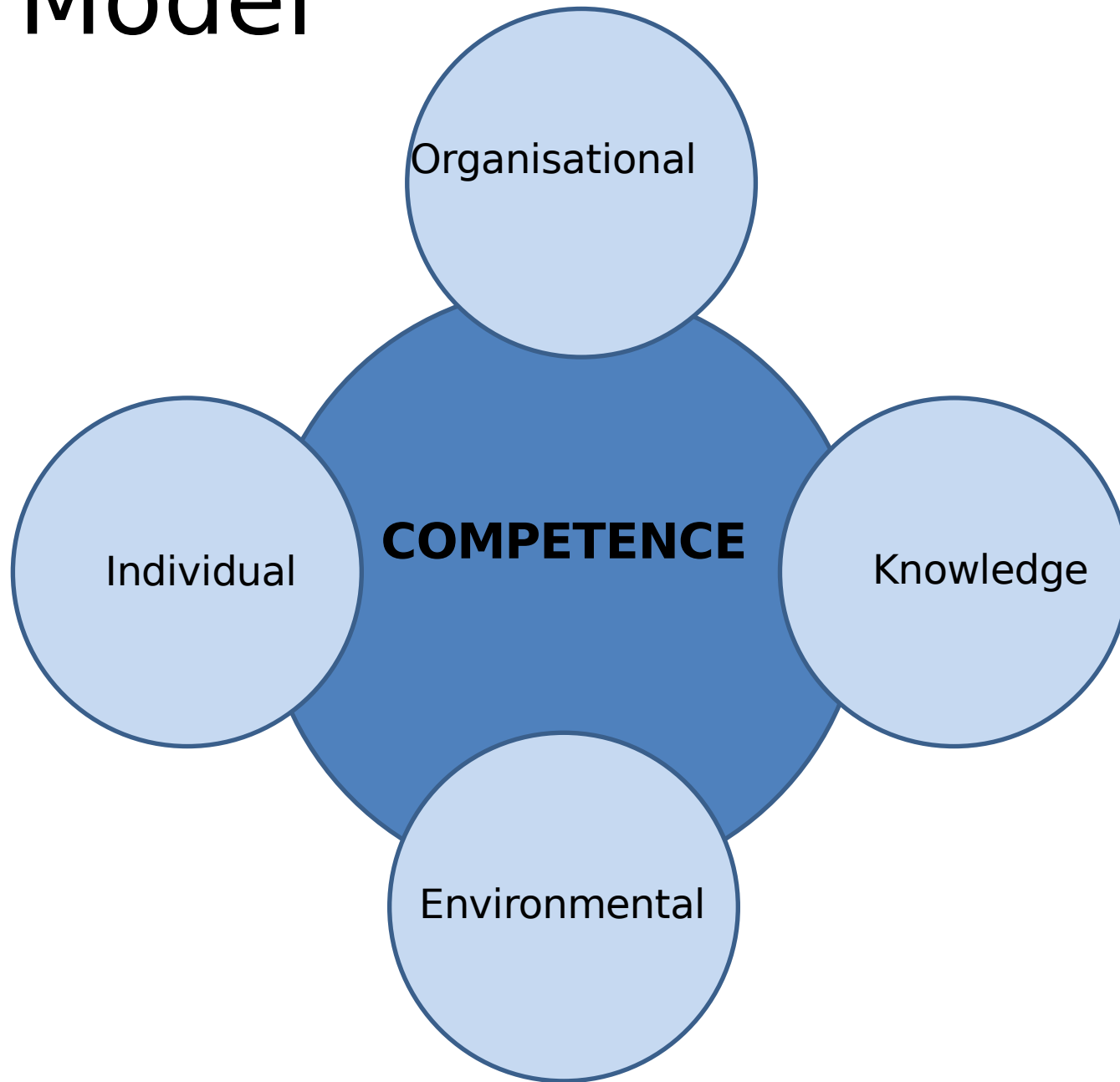
Observing:

Assessing:

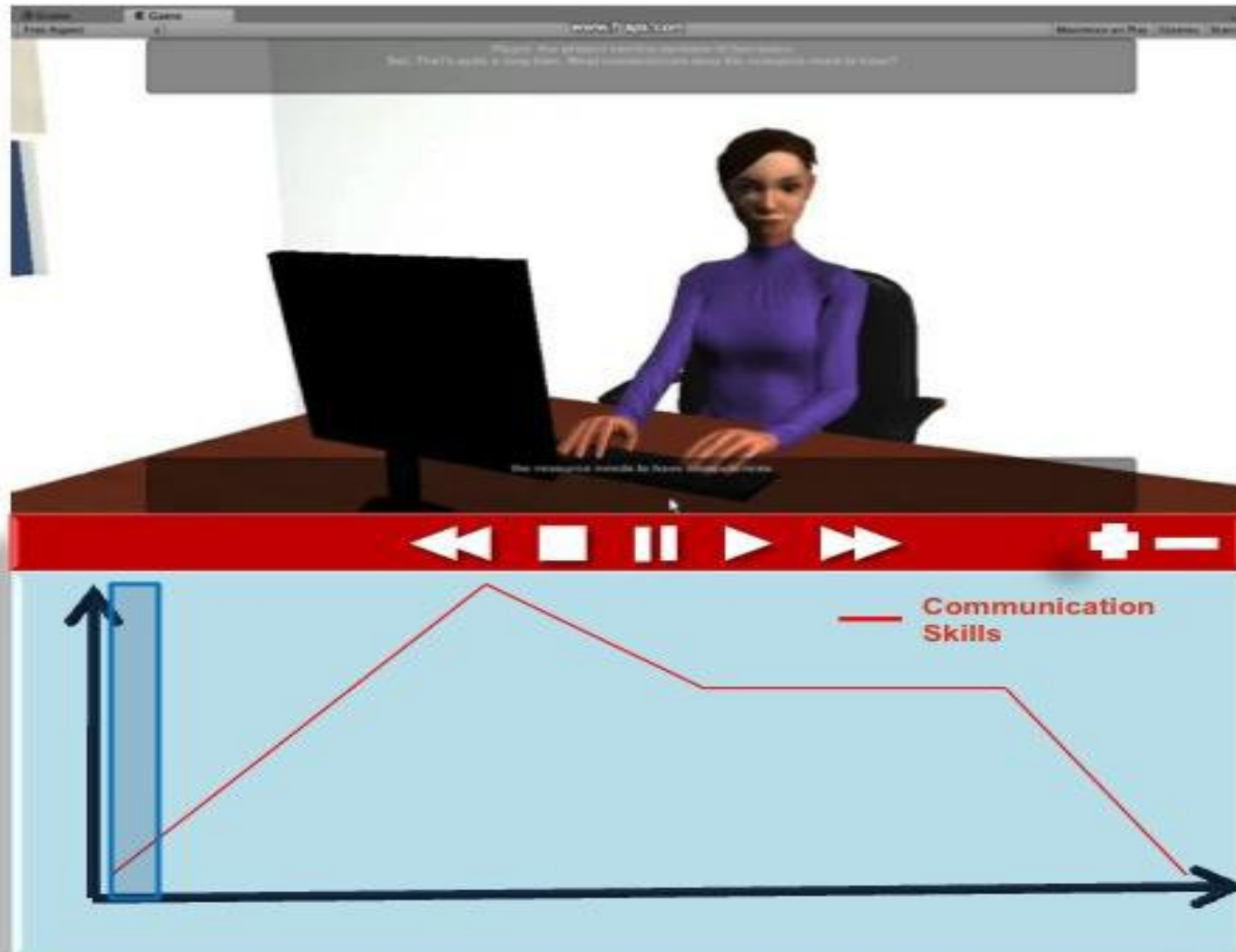


- Within the (social)-constructivist Paradigm, there is no simple mapping between observable PI and underlying competences
- The mapping (interpretation-function) is mediated by the „Context“

# OKEI - Model



# Mock-up of the TARGET Competence Performance Analyzer





# PRIME

**FP6-IST Project entitled PRIME:  
Providing Real Integration in Multi-disciplinary  
Environments (No. FP6-IST-016542).**



# PRIME

- Providing Real Integration in a Multi-disciplinary Environment (PRIME)
- European IST project (FP6-016542)
- Aims to give business professionals in strategic manufacturing a learning environment where they can experiment with new ideas and learn the effects of their decision making.





# PRIME Specifics

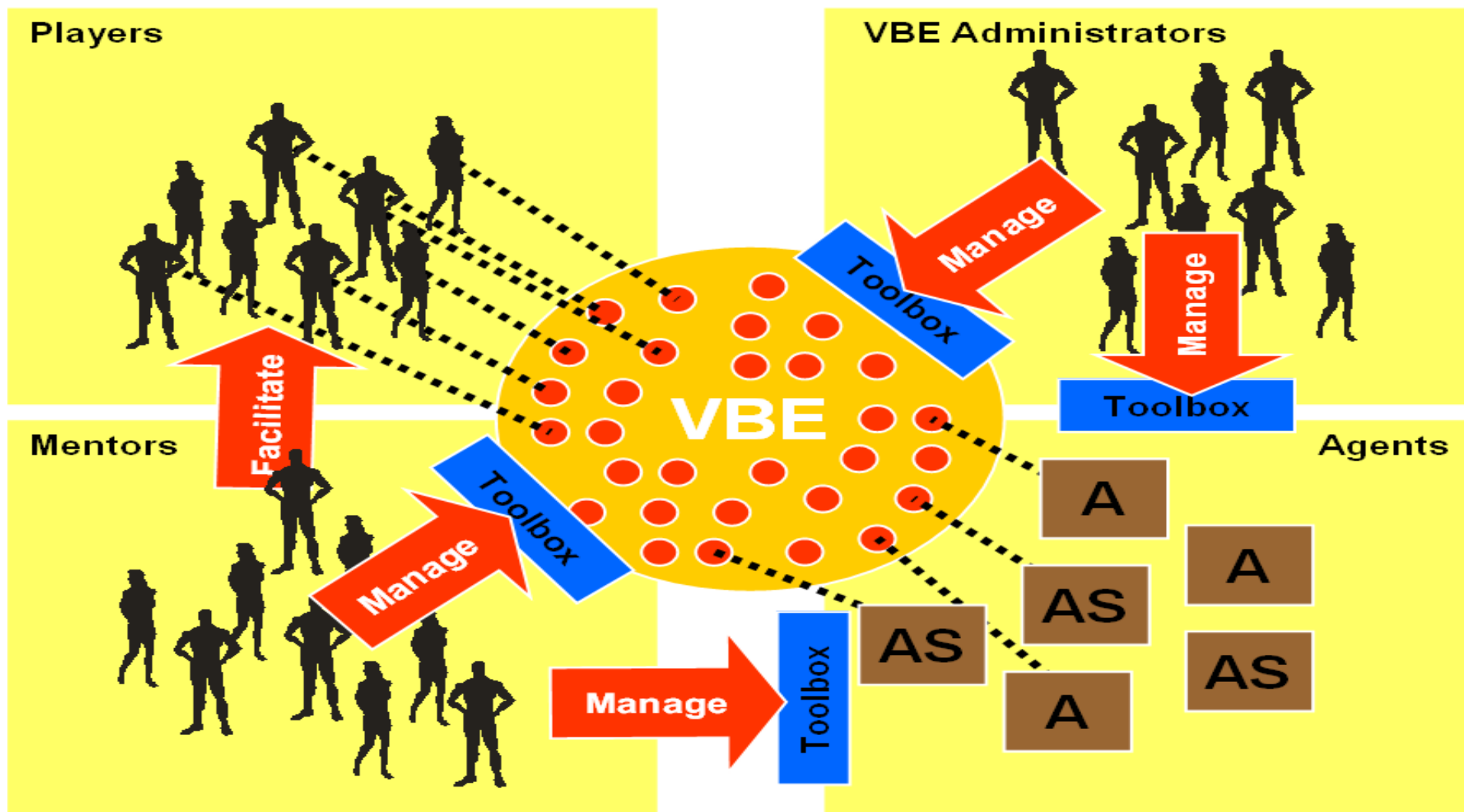
- Believable virtual reality is better than strict simulation
- Critical Incidents Technique
- Software Agents



# Critical Incidents in Serious Games

- The approach can be used in two ways:
- **Competence Analysis.** The analysis is done by measuring the player's success while dealing with predefined set of scenario, containing critical incidents corresponding to the desired competencies.
- **Competence Development.** When the competencies to be developed are identified, appropriate scenario set is composed and included in the game. In result, the player is involved into situations, which stimulate the development of desired competencies.

# PRIME Serious Game (FP6)



# INTELS & YENTEELS in Learning



# **InTeLS & YENTEELS games**

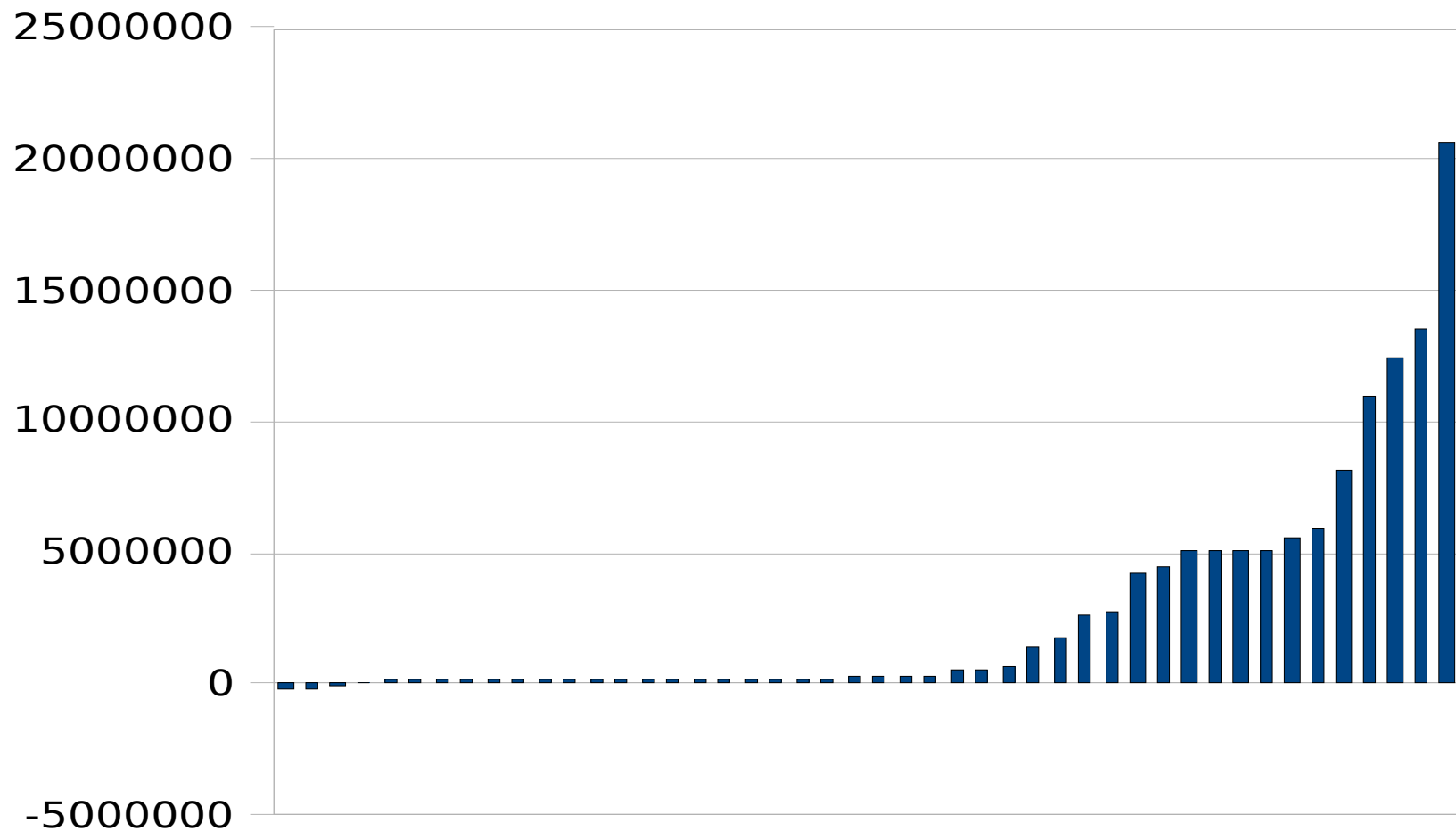
The e-learning suites, including the games, are available on the sites, developed for both projects by Pixelearning, UK, translated in Bulgarian and maintained by Virtech Ltd.

<http://www.intels.biz>

<http://www.yentels.com>

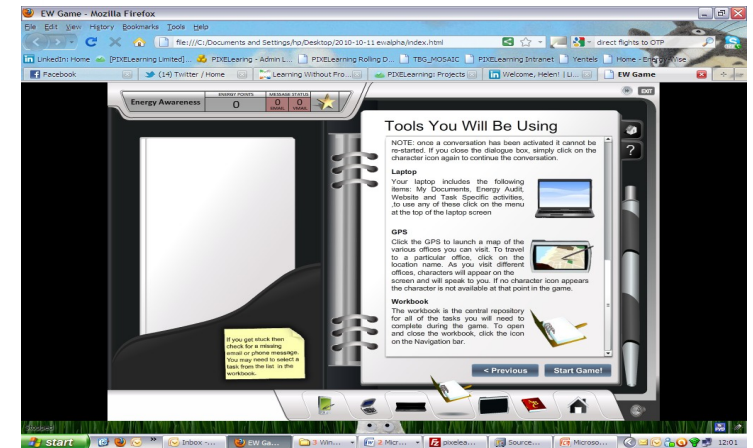
# Some results in SU exploitation

- Intels Game played by 46 students in SU, May 2011
- Figure of reached Sales





# Energy-wise Serious Game



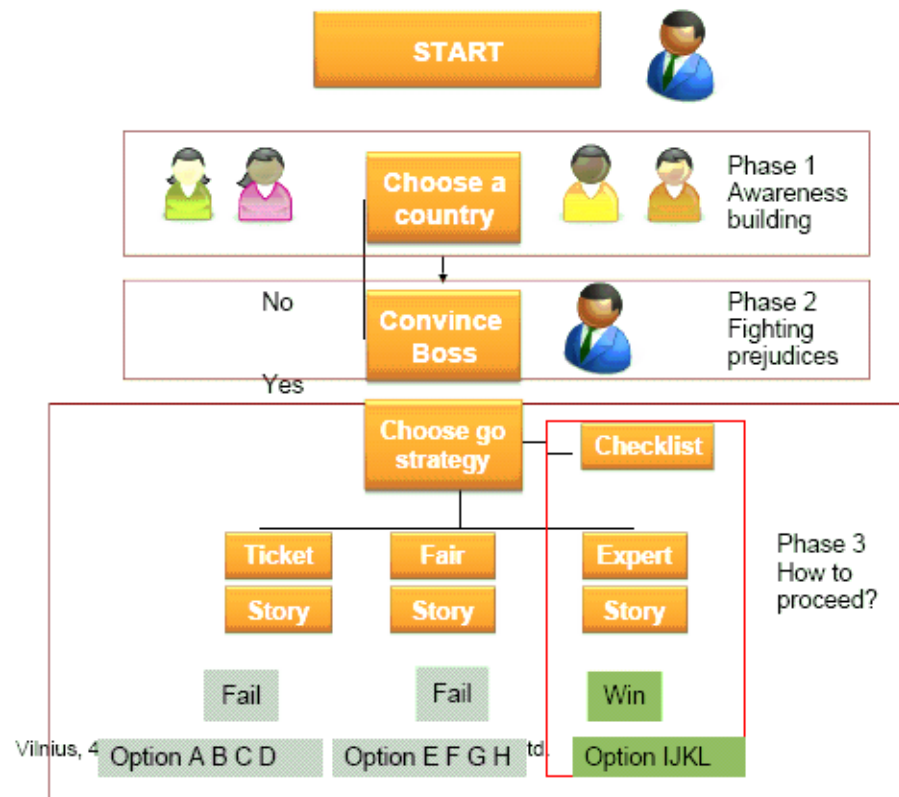
Education and Culture DG 13

Lifelong Learning Programme



# BRIC ITT

- БРИК-ИСТ - програма за обучение по международна търговия със страните от БРИК





# Other Educational Serious Games

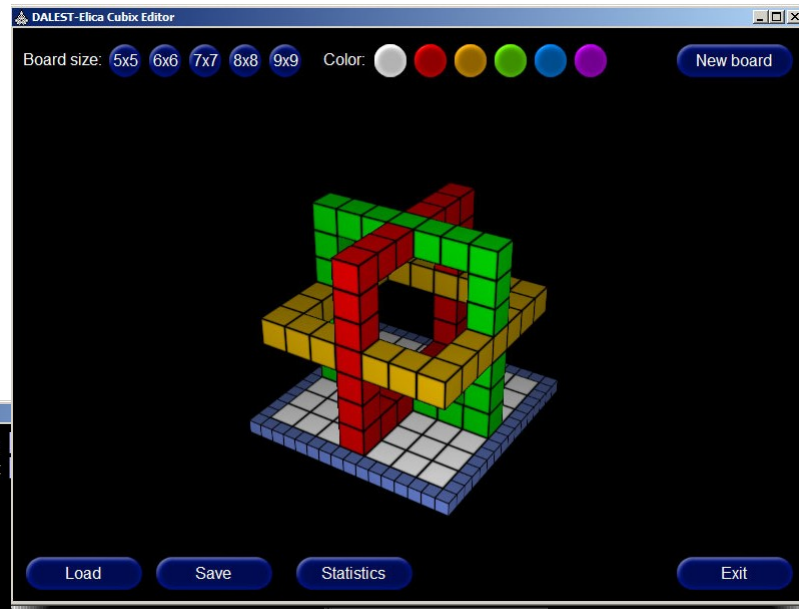
- EU Socrates Project **DALEST**  
(Developing Active Learning Environment for STereometry)
  - A set of educational, interactive and dynamic 3D game-like mathematical microworlds
- EU Lifelong Learning Project **InnoMathEd**  
(Innovations in Mathematics Education on European Level)
  - Development of pupils' key competences and their ability to use ICT for learning processes in mathematics

# Other Educational Software

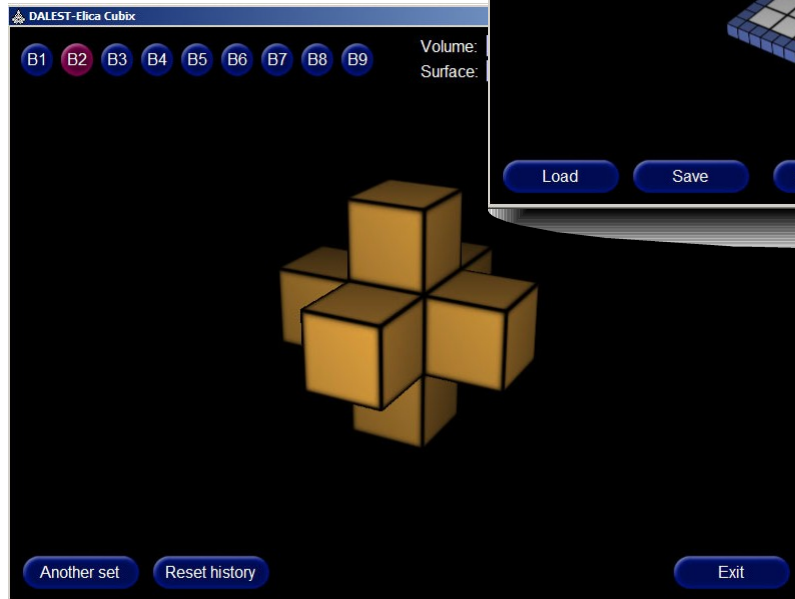
- Project **ELICA**  
(Educational Logo Interface for Creative Activities)
  - A platform for development of educational software in virtual 3D microworlds
- Project **VirtualMechanics**
  - A microworld for experiencing engineering of virtual mechanical devices

# Cubix Applications Snapshots

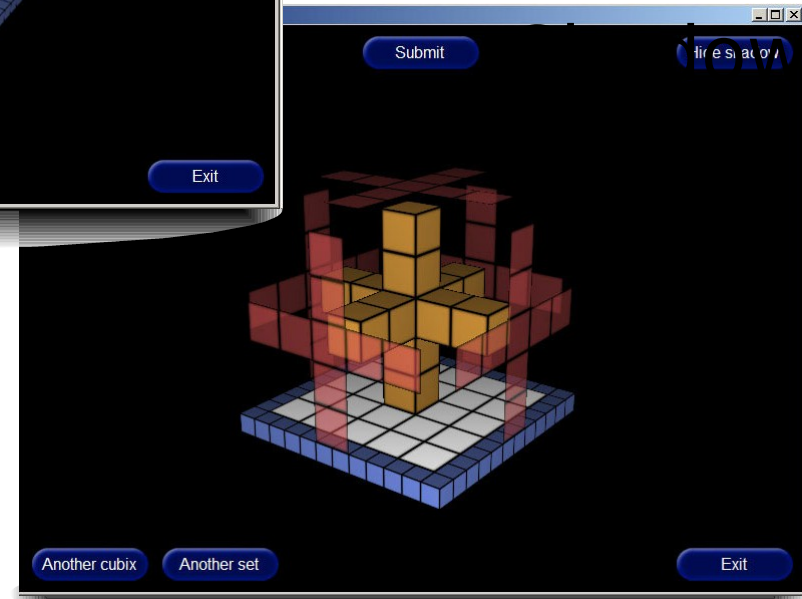
## Cubix Editor



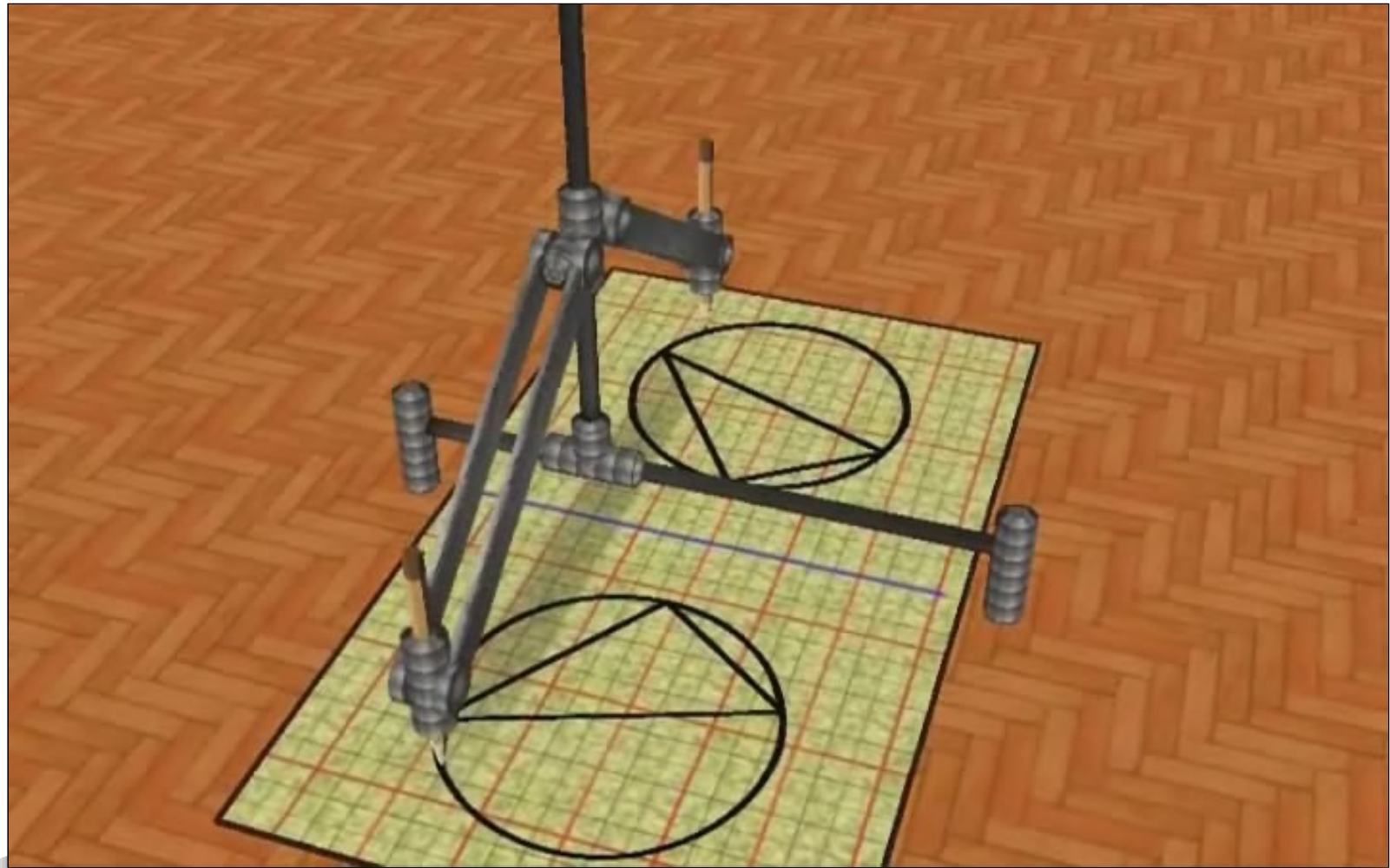
## Cubix




## Cubix



# Video Browsing of Devices



( CLICK IMAGE TO START ANIMATION )



# Благодаря за вниманието!

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