



---

STATE AUDIT  
OFFICE OF HUNGARY

## **The Pilot Project in the field of key national indicators describing the processes of knowledge-based economy and society**

**Prof. Dr. Gusztáv Báger  
Senior Advisor to the President**

The 2nd Meeting of the INTOSAI Working Group on KNIs  
21-23 April 2009 Beijing

28 April 2009

---

2

---

## **Main subjects**

- 1. Conceptual outline of the pilot project**
- 2. Conceptual framework of knowledge-based economy and society (KES)**
- 3. Brief summary of activities of international organisations**
- 4. The Hungarian case**

28 April 2009

---

---

## **1. Conceptual outline of the pilot project**

### **1.1 Aims of the pilot project**

- **Outlining the focus areas (model) of KES**
- **Comparative analysis of the existing major indicator systems (of OECD, European Union ect.)**
- **Empirical case studies**
- **Proposals for establishing „the best” system of indicators for SAIs**

28 April 2009

---

---

## **1. Conceptual outline of the pilot project (Cont.'d)**

### **1.2 Participants of the project**

#### **1.2.1 Functions of international organisations**

- **Help outlining the focus areas (model) of KES**
- **Help comparative analysis of major international key indicators**
- **Contribution to the preparation of case studies**
- **Promote the development of „the best” system of indicators**

28 April 2009

---

---

## **1. Conceptual outline of the pilot project (Cont.'d)**

### **1.2 Participants of the project**

#### **1.2.2 Tasks of the country experts**

- **Preparations of the case studies based upon**
  - \* **The adaptation of system of indicators of international organisations**
  - \* **Statistical, audit-related or other system of indicators applied in the country**
- **Proposals for the best system of indicators for the use of SAIs**

28 April 2009

---

---

## **1. Conceptual outline of the pilot project (Cont.'d)**

### **1.3 Next steps of the pilot project**

- **Establishing partnerships between the country SAIs and the international organisations**
- **Finalisation of the conceptual outline of the pilot project**

### **1.4 Implementation of the pilot project: in 2009-2010**

28 April 2009

---

---

## 2. Conceptual framework of the KES

### 2.1 One concept:

*„In the Information society, knowledge is the basis of education and culture and constitutes the most important production factor. Information and communication technology (ICT) promotes interaction and exchange of information between individuals, business enterprises, and other organisations, as well as the provision of services and access to them.”*

(Source: National Information Society Strategy, Helsinki, 1998)

28 April 2009

---

---

## 2. Conceptual framework of the KES (Cont.'d)

### Why Finland quoted?

- Because Finland is one of the leader for transforming into an internationally attractive, human-centric and competitive knowledge and service KES
- Finland regularly elaborates KES strategies and evaluates their implementation
- There exists a well-supporting institutional set up for KES development

28 April 2009

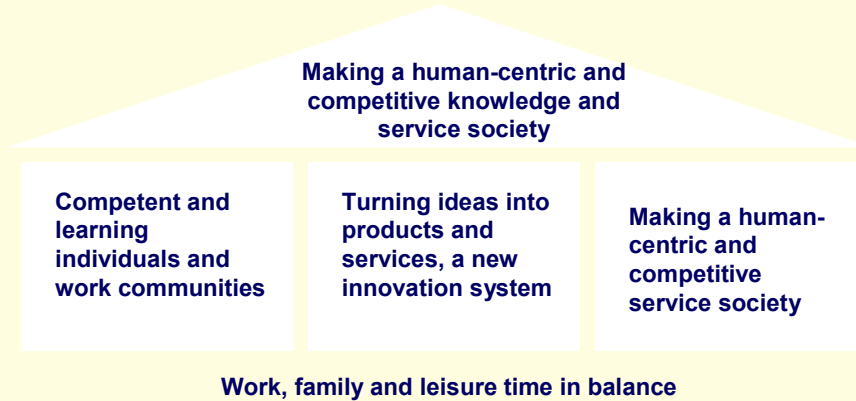
---

---

## 2. Conceptual framework of the KES (Cont.'d)

### 2.2 The main focus areas of the KES

#### 2.2.1 The tree pillars of the KES



28 April 2009

---

---

## 2. Conceptual framework of the KES (Cont.'d)

### 2.2 The main focus areas of the KES

#### 2.2.2 Making a human-centric and competitive service society

- Utilisation of ICT improves the productivity of companies in the service and production sector
- Electronic public services appear to be more customer-oriented
- Implementation of ICT makes easier of daily life of citizens and enterprises in the SME sector

28 April 2009

---

---

## **2. Conceptual framework of the KES (Cont.'d)**

### **2.2 The main focus areas of the KES**

#### **2.2.3 Turning ideas into products and services**

- **Innovations arise in networks as the result of multidisciplinary cooperation**
- **Networked cooperation between education, research and product development functions in a strategy-oriented and successful manner**
- **The establishment of multidisciplinary and international clusters of strategic competence in science, technology and innovation activity**

28 April 2009

---

---

## **2. Conceptual framework of the KES (Cont.'d)**

### **2.2 The main focus areas of the KES**

#### **2.2.4 Competent and learning individuals and work communities**

- **The ability of individuals and work communities to renew and continuous development of knowledge and learning are the foundation of competitiveness and well-being**
- **The development of digitalisation, convergence of service production and globalisation of business lead to a situation in which individual competitiveness is emphasised alongside national and organisational competitiveness**

28 April 2009

---

## **2. Conceptual framework of the KES (Cont.'d)**

### **2.3 Basic characteristic features of a narrower concept of KES**

- **The emergence of knowledge production and distribution as a new sector**
  - **The wider use of information and communication technologies**
  - **The increased role of technical development, innovation and knowledgeable workforce as crucial factors of knowledge-based growth**
- **Their contribution be accounted for more than 50 %**

28 April 2009

---

## **3. Brief summary of activities of international organisations**

### **3.1 OECD indicators**

- **Development of indicators started in mid-1990s**
- **Characteristics of „knowledge indicators”**
  - ❖ **No „recipes” for translating inputs into outputs of knowledge**
  - ❖ **For inputs no traditional national accounts**
  - ❖ **Lack of relevant systematic price system**
  - ❖ **New knowledge creation is not always a net addition to the stock of knowledge**

28 April 2009

---

---

### 3. Brief summary of activities of international organisations (Cont.'d)

#### 3.1 OECD indicators

- Comprehensive manuals on knowledge indicators
  - Frascati Manual on R&D measurements
  - Oslo Manual on guidelines on innovation
  - Patent Manual
  - Canberra Manual on human resources
- Databases (STAN, ANBERG) for member countries
- Technology Achievement Index (TAI) as a composite indicator

28 April 2009

---

---

### 3. Brief summary of activities of international organisations (Cont.'d)

#### 3.2 Activities of the *World Bank* (WB)

- Four pillars of the KES
  - ✓ Education, training
  - ✓ Efficient innovation systems
  - ✓ Supporting infrastructure
  - ✓ Stable business environment
- Methodology of WB Institute on human resource development indicators
- Emphasis on life-long learning and its financing
- Indicators on level of innovation

28 April 2009

---



---

### 3. Brief summary of activities of international organisations (Cont.'d)

#### 3.3 KES as a targets of all nations by the *United Nations*

- Info 21 Program of the UNDP
- UNECE studies on the European preparations for the KES

#### 3.4 Indicators used in the *European Union*

- Aims of the Lisbon Strategy (2000-2010)
  - A common European information space
  - Increased innovation and investment in the ICT field
  - A European information society that promotes inclusion

28 April 2009

---

---

### 3. Brief summary of activities of international organisations (Cont.'d)

#### 3.4 Indicators used in the *European Union*

- Groups of indicators of the European Innovation Scoreboard (EIS)
  - α Innovation drivers
  - α Knowledge creation
  - α Innovation and entrepreneurship
  - α Application
  - α Intellectual property

28 April 2009

---

---

## 4. Hungary in the light of the EIS indicators

### 4.1 Research project on the KES undertaken by the Research Institute of the State Audit Office of Hungary

- Great attention has been given to international comparisons, to the EIS indicators in, particular
- Indicators and their comparative values could be seen in the written version of the presentation (Table 3)

### 4.2 Some conclusions

- The EU is behind the USA and Japan in most fields
- Hungary outperforms the EU, USA and Japan in three fields
- Hungary is among the tail-enders in most fields

28 April 2009

---

---

**Thank you for your attention**

28 April 2009

---