



KNOWLEDGE BASED SOCIETY

**(European Information Society for Growth and
Employment)**

NORBERT KROO

HUNGARIAN ACADEMY OF SCIENCES

BUDAPEST, 20.10.2005



**WE EXPERIENCED IN THE 20TH CENTURY
UNPRECEDENTED CHANGES AND MUCH
MORE IS EXPECTED TO COME!**

GLOBAL TENDENCY: INCREASING COMPETITION

BOTH SCIENCE AND SOCIETY ARE CHANGING

CONSEQUENTLY THEIR RELATION IS ALSO CHANGING

INFORMATION TECHNOLOGIES PLAY A DECISIVE ROLE

IN THIS PROCESS



EUROPEAN
UNION

GROWING SIGNIFICANCE OF KNOWLEDGE

RADICAL (GLOBAL, NATIONAL, REGIONAL) CHANGES

KNOWLEDGE BASED SOCIETY (ECONOMY)

**RESOURCES (LABOUR, MATERIALS, ENERGY, CAPITAL,
KNOWLEDGE)**

NEW PRACTICES IN RESEARCH

NEW PRIORITIES

DRIVING OUT TECHNOLOGIES

NEW IDEAS--- RESEARCH

NEW POTENTIAL REVOLUTIONS (BIO-, NANO-, INFO-)

GLOBALIZATION

SUSPICIOUS SOCIETY



HUNGARIAN ACADEMY
OF SCIENCES

R&D RECOGNIZED AS A KEY TO COMPETITIVENESS AND NEW (HIGH TECH.) JOBS

INCREASED RESEARCH POTENTIAL NEEDED

HUMAN CAPITAL (700,000 NEW RESEARCH POSITIONS)

PROPER INFRASTRUCTURE AND INSTITUTIONAL SYSTEM

STRONG INFORMATION TECHNOLOGY BASE

(GEANT, NIIF, PUBLIC NETWORKS)

STRONG (BASIC) RESEARCH BASE

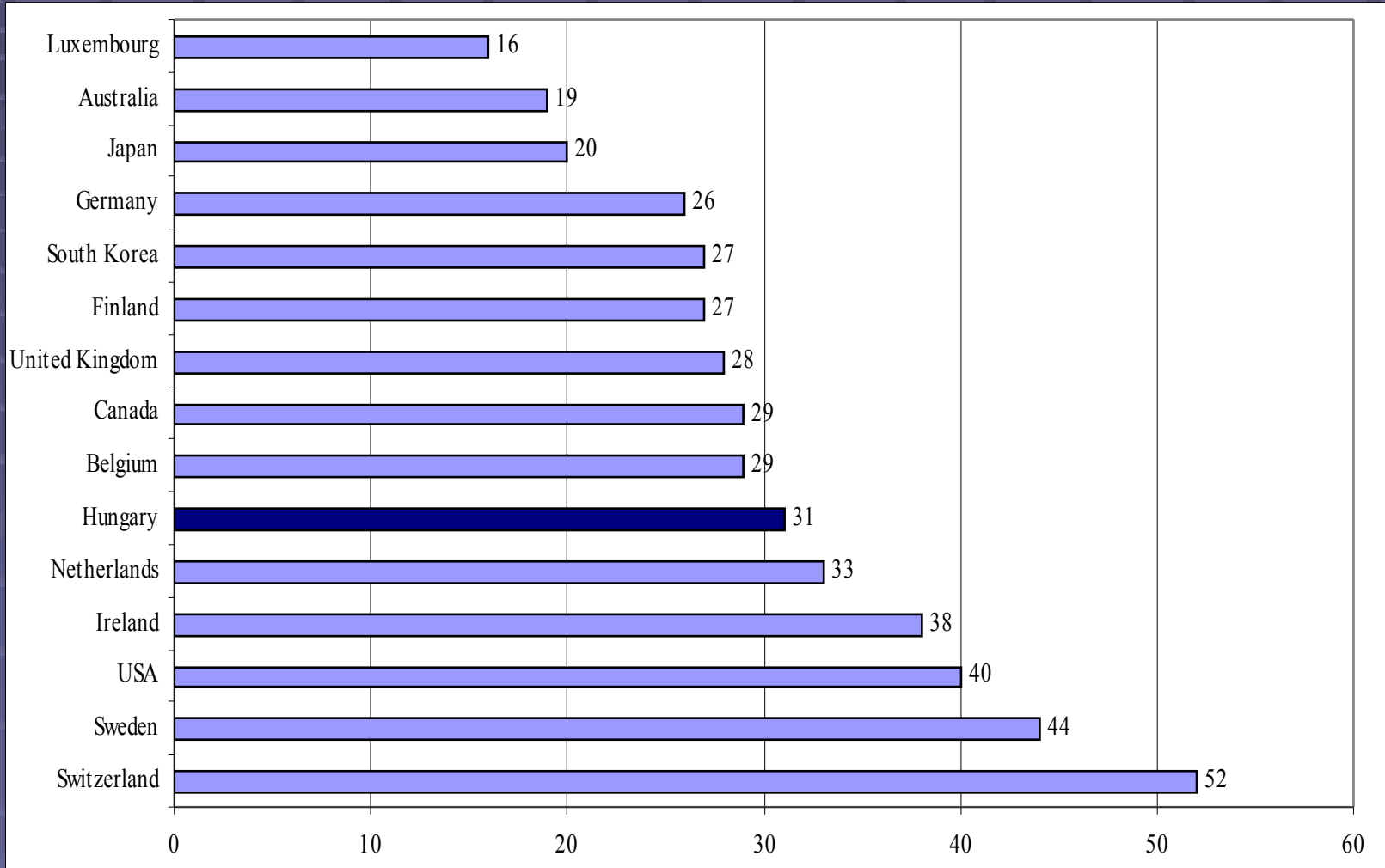
ERC (excellence – competition on European level)

HIGHER R&D SPENDING

IMPROVED ACADEMIA - INDUSTRY RELATIONS



KNOWLEDGE BASED ECONOMIES





CHANGING SCIENCE-SOCIETY RELATIONS

THE INCREASING ROLE OF R&D IN COMPETITIVENESS

THE NEED FOR DEEPER KNOWLEDGE

INFORMATION SOCIETY WINNERS AND LOSERS

SOCIETY IS UNABLE TO ACCEPT (UNDERSTAND) THE

ACHIEVEMENTS DUE TO THE LACK OF PRELIMINARY

BASIC KNOWLEDGE

INCREASING DEMAND FOR INSTANT SCIENCE RESULTS

(TV, ETC.) BASED ON THE MISUNDERSTANDING OF THE

NATURE OF SCIENTIFIC RESEARCH

SCIENCE IS COMPLICATED, FEEDING SIMPLE ESOTERICIS

PARADOXES TO BE DEALT WITH:



THE KNOWLEDGE PARADOX

THE SIGNIFICANCE OF SCIENCE INCREASES (1) AND THE INTEREST OF THE YOUNG GENERATION DECREASES (2)

AD 1. MULTIDISCIPLINARY DEVELOPMENT OF SCIENCE

INTERACTION WITH THE ECONOMY

SHORTER AND NONLINEAR INNOVATION CHAIN

KNOWLEDGE AS ECONOMICAL DRIVING FORCE

SIGNIFICANT SHARE OF SCIENTIFIC KNOWLEDGE

SKILLS APPLICABLE IN OTHER AREAS

AD 2. HARD WORK WITH MODEST FINANTIAL REWARDS

MANY OTHER CAREER PATHS

„PROBLEMLESS” CURRICULI IN HIGH SCHOOLS



THE TIME PARADOX

**THE TIME NEEDED TO ACQUIRE KNOWLEDGE INCREASES
AND THE OBSOLESCENCE TIME OF IT DECREASES**

COMBINATION OF LEARNING AND WORK

the role of research institutions and industry

THE ROLE OF INTERNATIONAL INFRASTRUCTURES

life abroad, family problems

LIFE-LONG LEARNING

NEW LEARNING TECHNOLOGIES BASED ON INTERNET



THE COMPETITIVENESS PARADOX

THE ROLE OF R&D IN COMPETITIVENESS INCREASES BUT
DECISIONMAKERS ARE TEMPTED TO FORGET ABOUT IT

HOW THE ECONOMY PROFITS FROM RESEARCH?

RESULTS OF BASIC RES. GET RIPE FOR APPLICATIONS

RESEARCH FOR GENERAL GOALS (CANCER)

RESEARCH FOR CONCRETE GOALS (HIGH SPEED

COMMUNICATION NETWORKS)

BYPRODUCTS OF BASIC RES (WWW, LANDING ON MOON)

CONTRACTS FOR COMPANIES (ACCELERATOR MAGNETS)



CHANGING EUROPEAN LANDSCAPE

- * EXPECTED DOUBLING OF THE R&D BUDGET OF THE EU
- * THE NEW APPROACHES IN FP7
- * ERC, EIT, GEANT, GALILEI, GRID, ETC.
- * THE 3% ISSUE
- * THE IMPACT OF THE ENLARGEMENT PROCESS

NEEDED TO FOLLOW THESE RECENT CHANGES



THE MINISTRY OF INFORMATICS AS AN IMPORTANT SPONSOR OF R&D IN THIS FIELD

NIIF

VIRTUAL ENCYCLOPEDIA

INTERNET NETWORK SAFETY

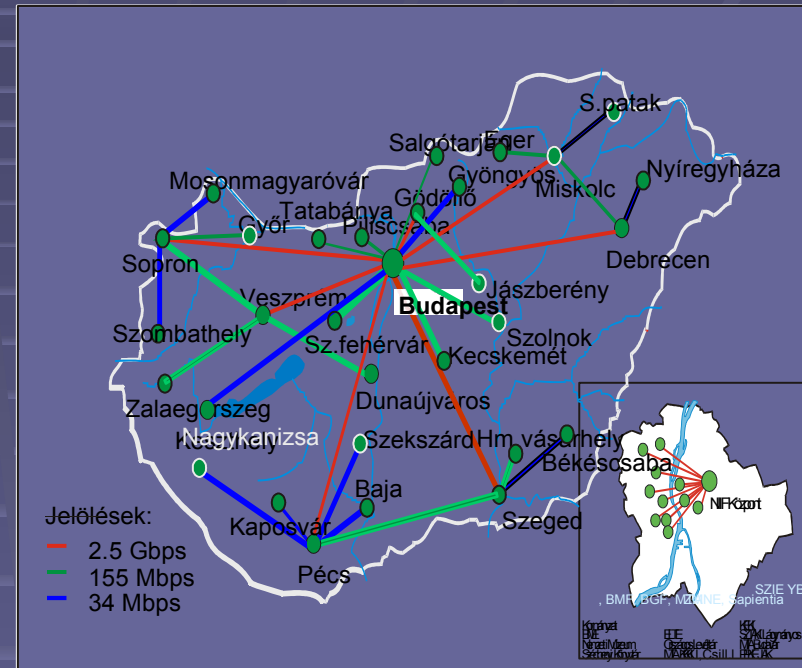
GRID DEVELOPMENT

DATABASE DEVELOPMENT

E- GOVERNANCE

INFO. SOCIETY LIBRARY

INFO. SOCIETY EDUCATION AND RESEARCH GROUPS



THE HUNGARIAN ACADEMY OF SCIENCES

THANK YOU FOR YOUR
ATTENTION

