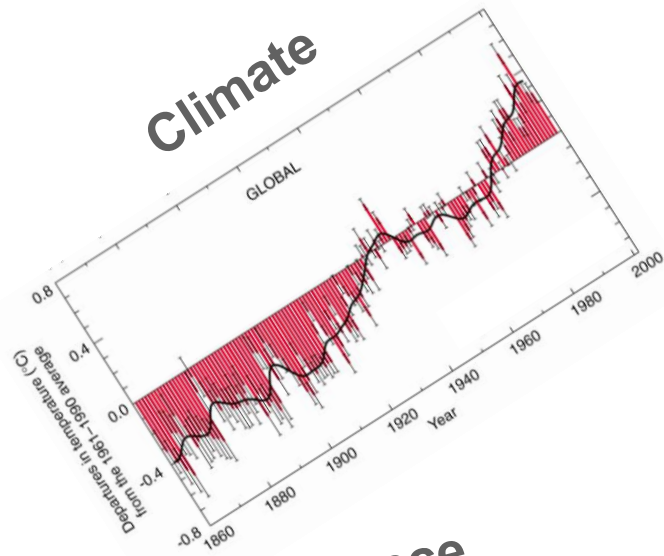


VOLVO

**Attracting young people to science and
technology. An industry perspective**

Jan-Eric Sundgren

European industry facing major challenges



Financial crises

Economist.com

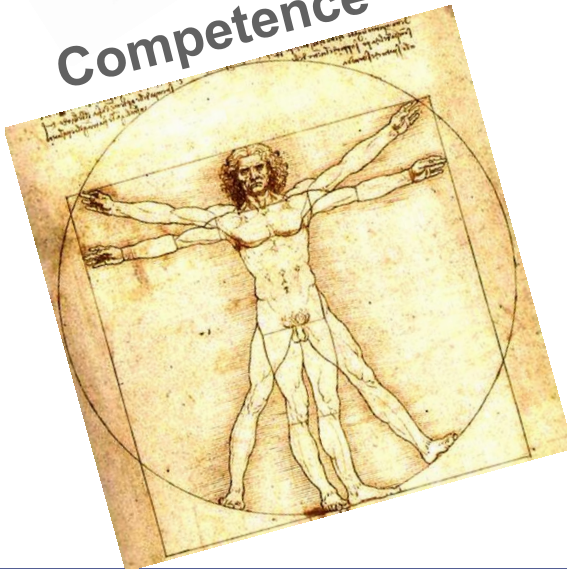
The world economy
Redesigning global finance
13 November, 2008

A detailed illustration of a complex mechanical system, possibly representing global finance or industry. It features a central globe, various gears, pipes, and mechanical components. The scene is set in a workshop-like environment with a large wheel and other machinery.

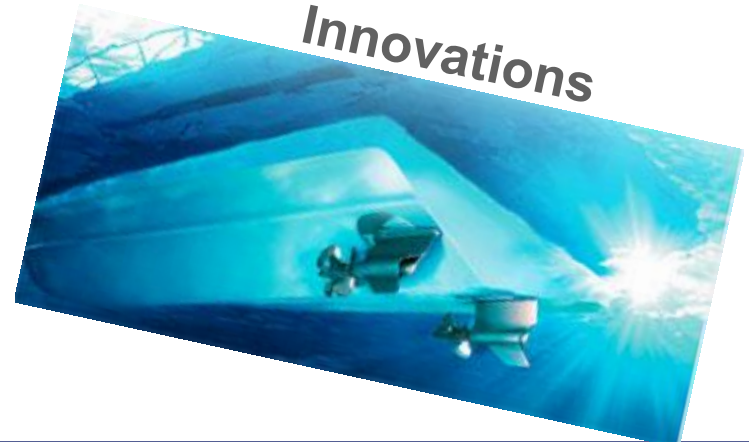
Competitiveness



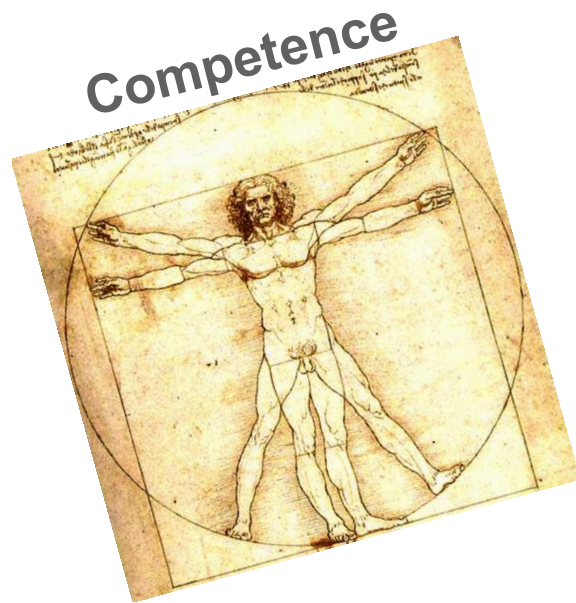
Competence



Innovations

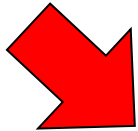


Facing major challenges



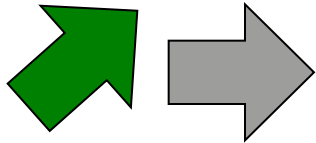
Competence supply

Trends: Europe



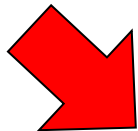
Demography

Number of 18-year-olds **down 21%** from 1993 to 2022



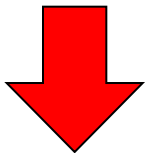
Access to tertiary education

Number of students accessing tertiary education **stabilising**



Proportion of graduates in Mathematics, Science and Technology, MST

Proportion of graduates in MST **down 11%** from 1998 to 2006

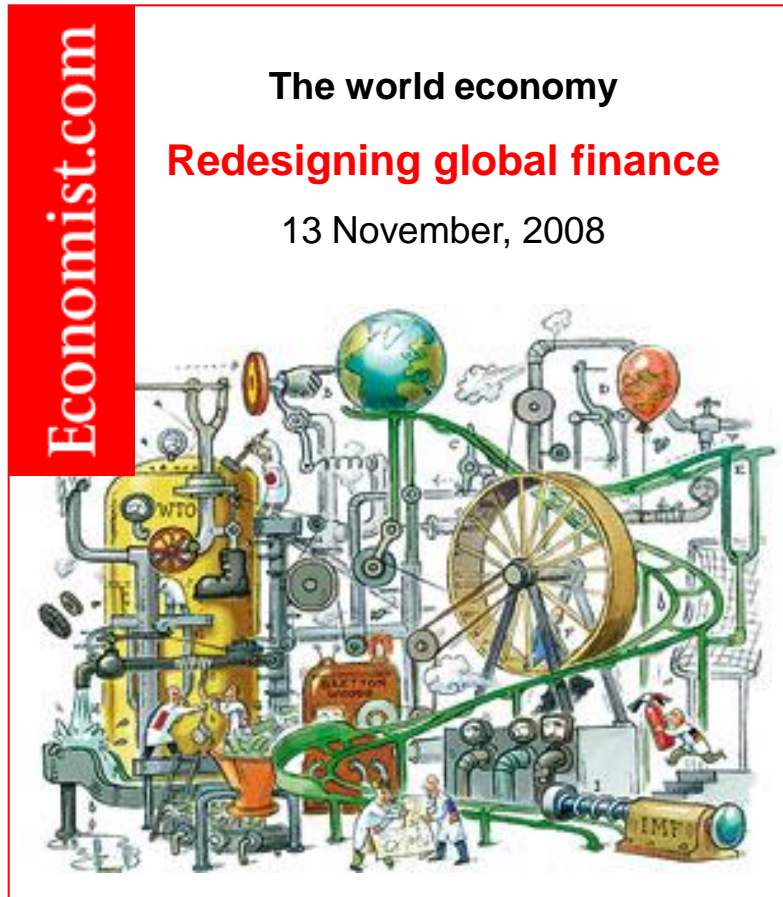


Hesitant attitudes to education and work in MST

ROSE places many European countries at the bottom

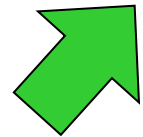
Data sources: Eurostat, 2009; Sjøberg, S. & Schreiner, C. 2008

Impact of the financial crises?

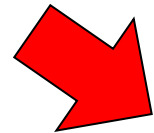
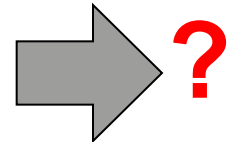
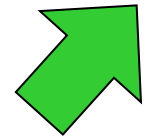


Crisis

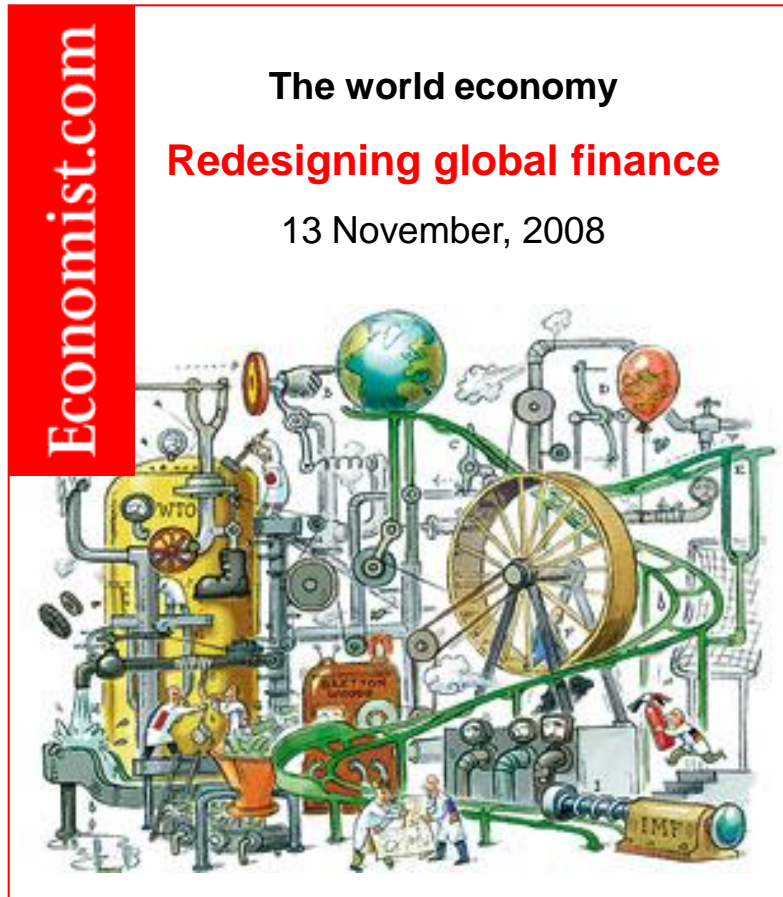
Students accessing MST tertiary education



Post Crisis ?

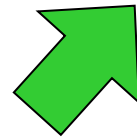


Impact of the financial crises?

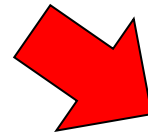


Crisis

**Students accessing MST
tertiary education**



Post Crisis ?



The ERT perspective



- Informal forum bringing together 50 CEOs and chairmen of major multinational companies of European parentage
- Companies of ERT Members are widely situated across Europe, with sales to EU customers exceeding Euro 1 000 billion, thereby sustaining around 6.6 million jobs in the region



Chairman

Jorma Ollila - Nokia

Vice-Chairmen

Peter Sutherland - BP

Leif Johansson - Volvo

Paul Adams - British American Tobacco

César Alierta Izuel - Telefónica

Nils S. Andersen - A.P. Møller - Maersk

Paulo Azevedo - SONAE

Jean-Louis Beffa - Saint-Gobain

Franco Bernabè - Telecom Italia

Wulf Bernotat - E.ON

Carlo Bozotti - STMicroelectronics

Peter Brabeck-Letmathe - Nestlé

David Brennan - AstraZeneca

Martin Broughton - British Airways

Antonio Brufau - Repsol YPF

Gerhard Cromme - ThyssenKrupp

Rodolfo De Benedetti - CIR

Thierry Desmarest - TOTAL

Bülent Eczacıbaşı - Eczacıbaşı Group

John Elkann - Fiat

Jürgen Hambrecht - BASF

Antti Herlin - KONE Corporation

Zsolt Hernádi - MOL

Franz Humer - F. Hoffmann-La Roche

Pablo Isla - Inditex

Henning Kagermann - SAP

Gerard Kleisterlee - Royal Philips Electronics

Bruno Lafont - Lafarge

Thomas Leysen - Umicore

Peter Löscher - Siemens

Gary McGann - Smurfit Kappa Group

Gérard Mestrallet - GDF Suez

Alois Michielsen - Solvay

René Obermann - Deutsche Telekom

Benoît Potier - Air Liquide

Eivind Reiten - Norsk Hydro

Wolfgang Ruttenstorfer - OMV

Güler Sabancı - Sabancı Holding

Paolo Scaroni - Eni

Louis Schweitzer - Renault

Paul Skinner - Rio Tinto

Jean-François van Boxmeer - Heineken

Jeroen van der Veer - Royal Dutch Shell

Ben Verwaayen - Alcatel-Lucent

Jacob Wallenberg - Investor

Hans Wijers - AkzoNobel

Secretary General

Wim Philippa

Europe will face large scale competence disparities in the MST area

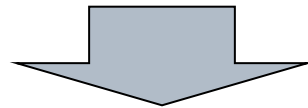
European stakeholders need to coordinate efforts



Competence Supply A Critical Challenge



- **Negative attitudes** in industrialised countries towards education and work in maths, science and technology
- **Declining student proportion** in MST education in OECD



- **Poorer quality of education**
- **Weakened competitiveness**
- **Recruiting and retaining employees - expensive and difficult**

Competence Supply

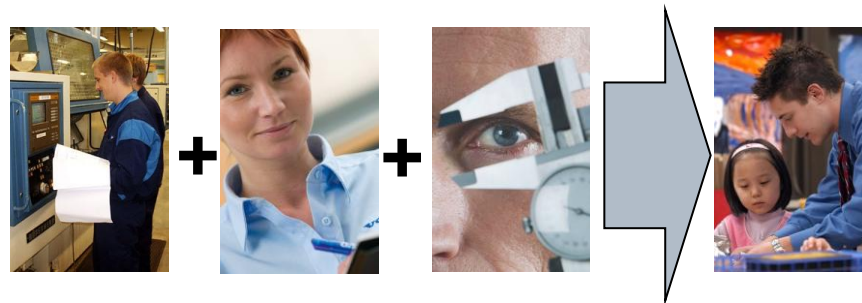
A Critical Challenge

What can industry do?

Competence Supply

Industry can provide schools with

- **Work Related Content**
- **Role Models**
- **Information on the use of different subjects in daily work life**



Schools and businesses need support to succeed in working together

NÆRINGS LIV
i skolen

Build on what already exists

Jet-Net
Jongeren en Technologie
Netwerk Nederland

Wissensfabrik
Unternehmen für Deutschland



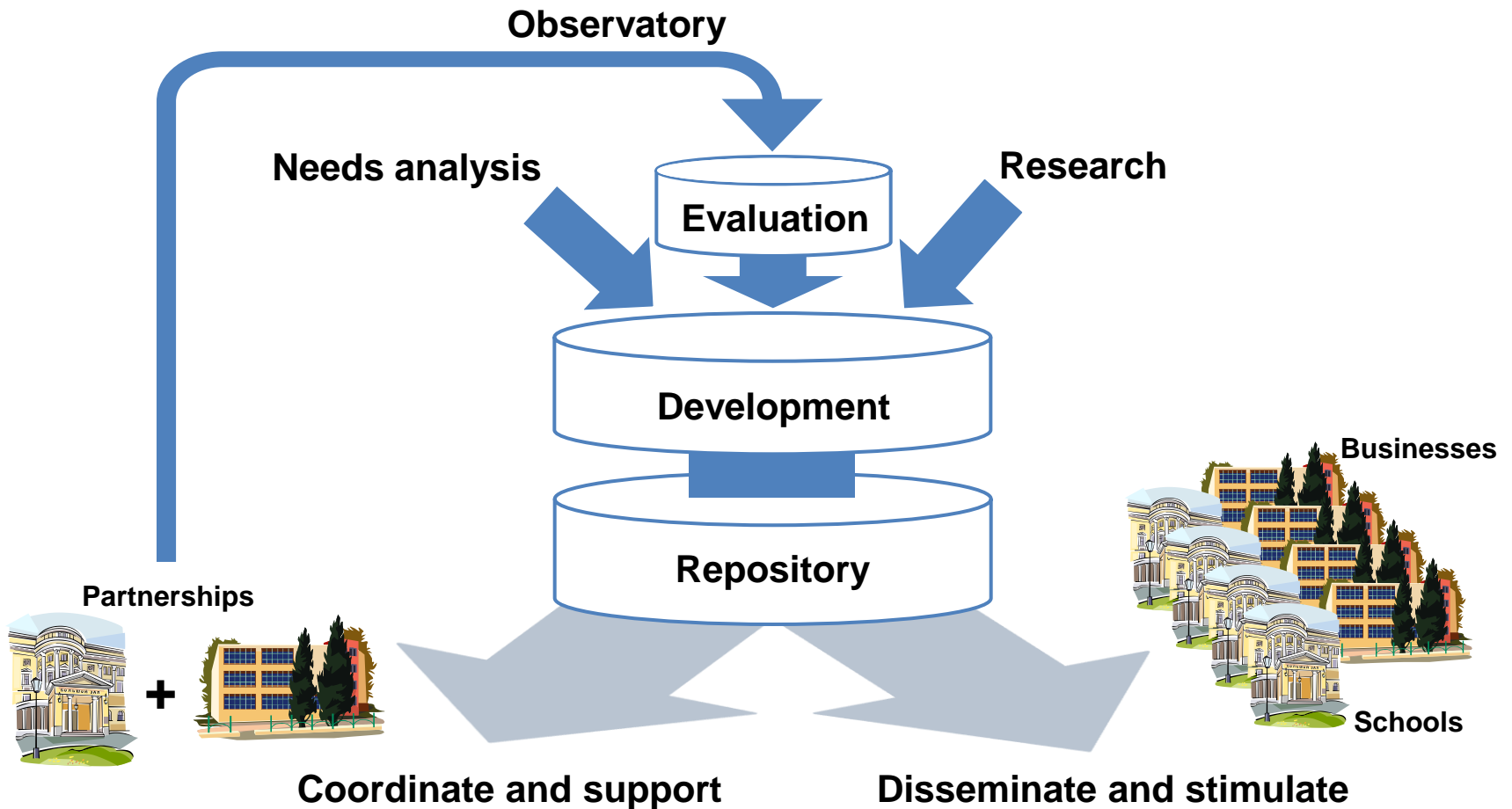
C.gENial
Fondation pour la culture
scientifique et technique

Science
Team
KALUNDBORGEEN

- Improve coordination, evaluation and use of research and empirical results
- Create support infrastructures like Jet-Net in every European country

A European Coordinating Body

Objective: Increase interest in MST education and careers



The ERT message

- **Education essential for European competitiveness**
- **Partnerships between education and business have a key role to play**
- **Partnerships need support and encouragement**
- **ERT members are prepared to further engage in partnerships to aid in achieving EU targets**
- **A European Coordinating Body would provide substantial support to partnerships across Europe**
- **Europe needs to take action now, despite the current economic climate**

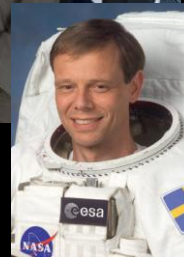


Teknik- delegationen

Appointed by Swedish government to address issues of declining interest in MST



Johan Ancker, Teknikföretagen
Leif Johansson (chairman), AB Volvo
Philip Kapper, Student Norra Real
Camilla Modéer, Vetenskap & Allmänhet (VA)
Anna-Maria Wiberg, Student Uppsala universitet
Helen Dannetun, Linköpings universitet
Anne-Marie Fransson, IT- och Telekomföretagen
Maria Khorsand, SP Sv. Tekn. Forskningsinstitut
Björn O. Nilsson, Kungl. Ingenjörsvetenskapsak. (IVA)
Peter Gudmundson, Kungl. Tekniska Högskolan (KTH)
Paula Bäckman, Balthazar Science Center
Karin Glader, Student Chalmers
Ursula Hass, Blekinge Tekniska Högskola
Peter Larsson, Sveriges Ingenjörer
Christer Fuglesang (new member since October 2009)



AB Volvo

Jan-Eric Sundgren

15 5 November, 2009

VOLVO



Clarify situation

Increase awareness

Recommend

”Teknikdelegationen”