



The search for the perfect balance

Morten Dæhlen
Department manager/Professor
Department of informatics, University of Oslo
Sematic Days 2010



UNIVERSITETET
I OSLO



The history of informatics

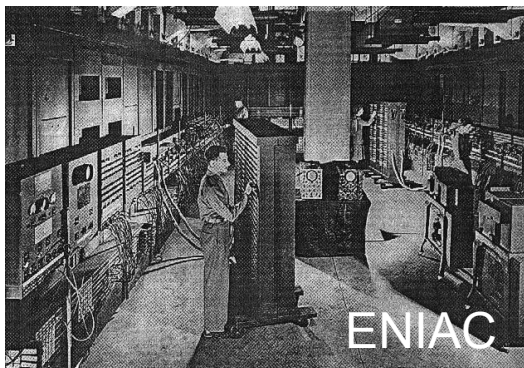
2010



What's next



Blaise Pascal



ENIAC



The dream (*-1820)

The mechanical calculator
(1820-1946)

From the electronic calculator
to the computer (1946-1968)

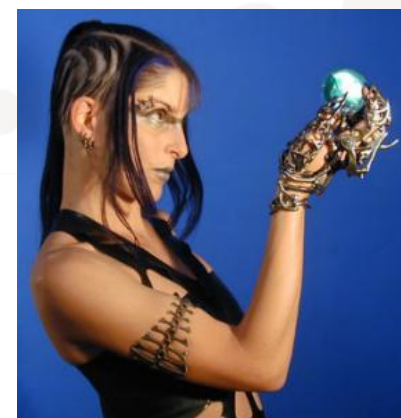
The computer – a tool for
many (1968-1991)

The computer – a tool for
“all” (1991-2010)

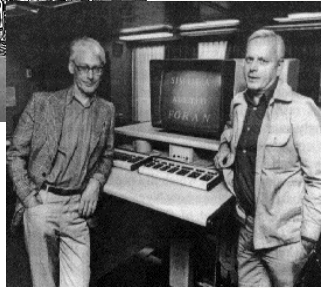
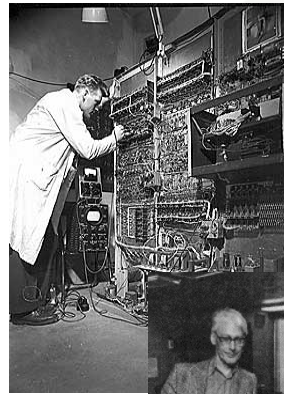
Data systems
everywhere (2010-*)



Ada Lovelace



Another look!

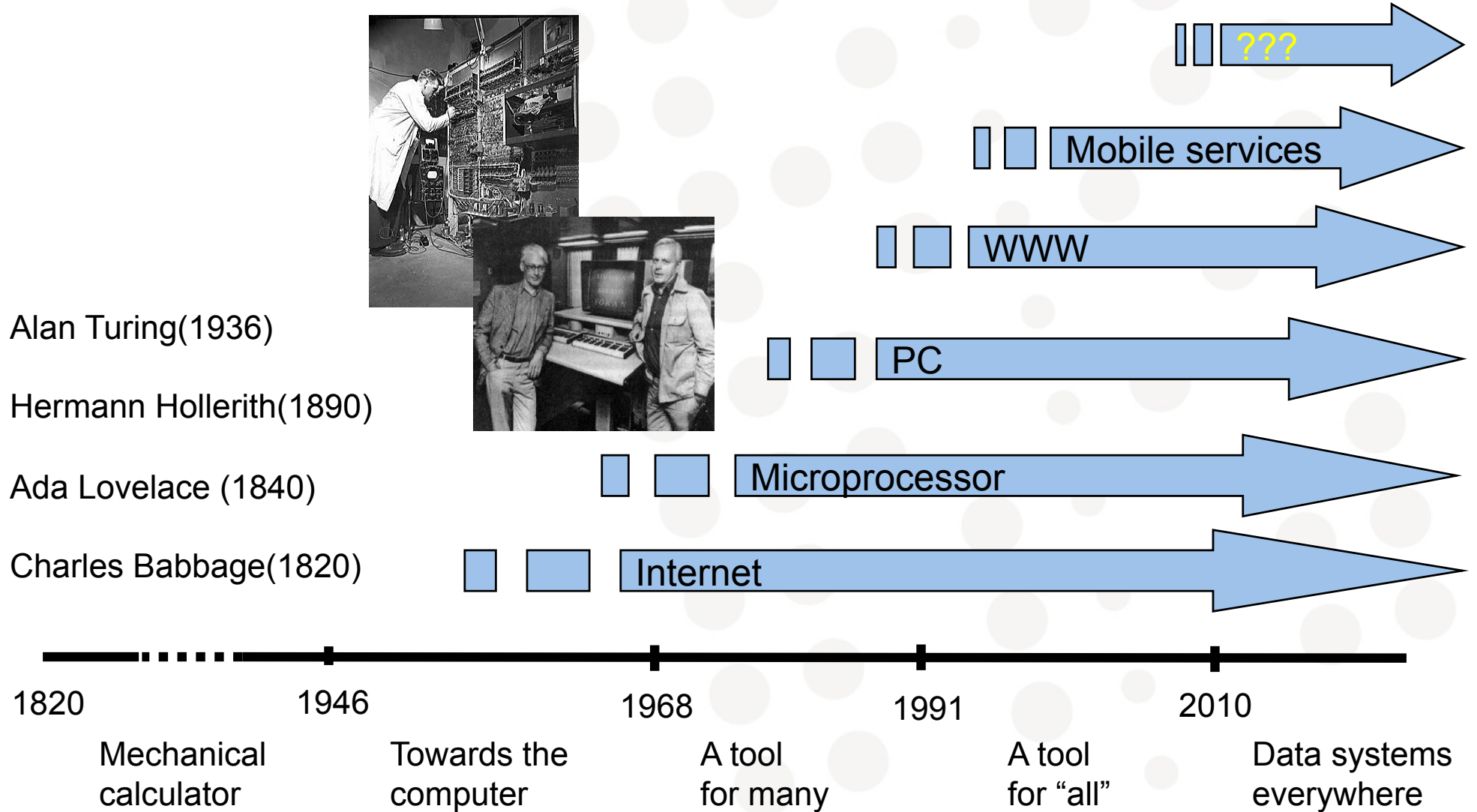


Alan Turing(1936)

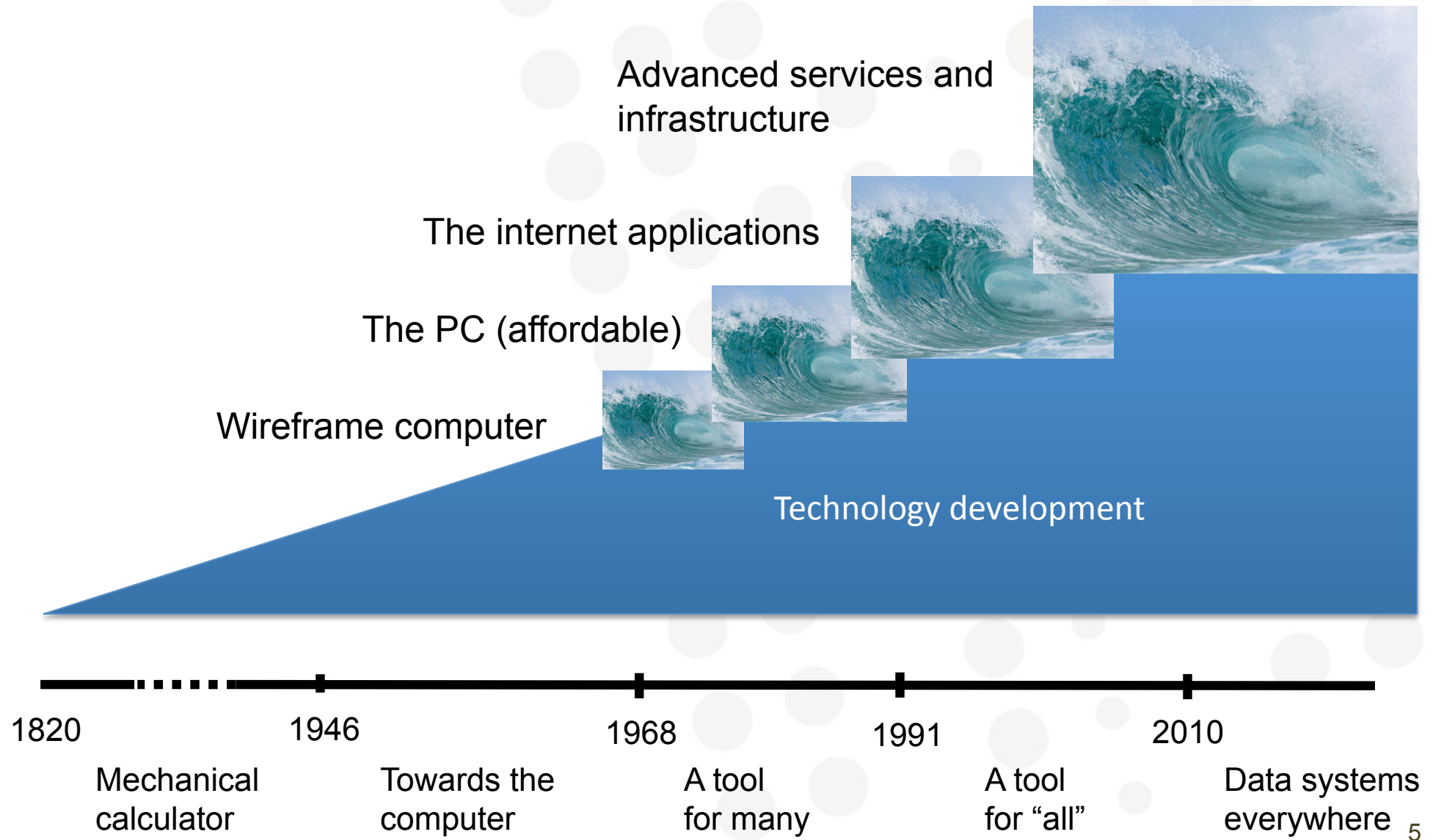
Hermann Hollerith(1890)

Ada Lovelace (1840)

Charles Babbage(1820)



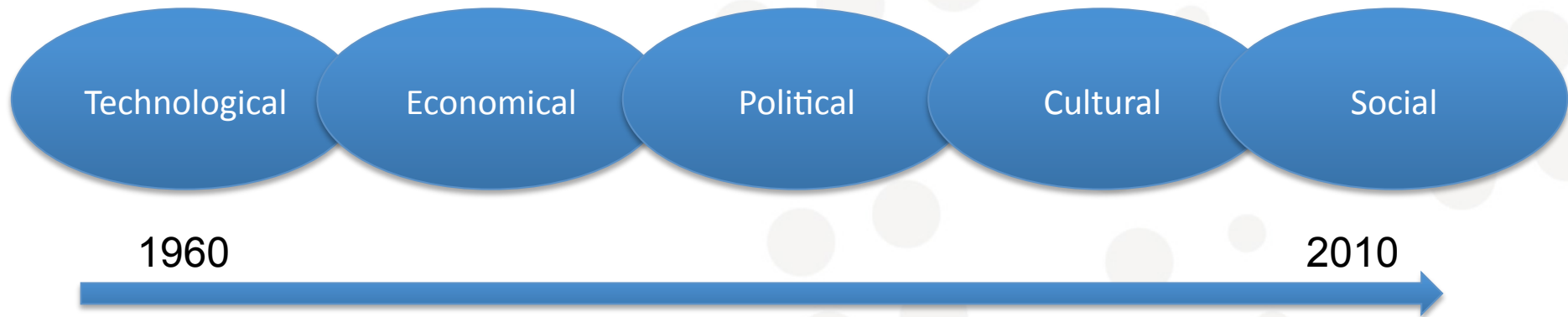
The four waves of extraordinary growth in use of ICT!



Data systems are (almost)
everywhere in society

ICT (informatics) is the science on
how data systems are constructed and used

ICT (informatics) is today the science in the realm of all sciences with the largest impact on the development of society.



6/7/10

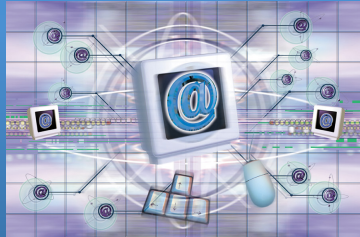
Driving forces



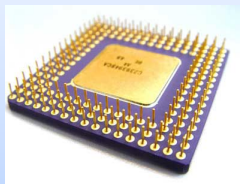
The market



Public needs



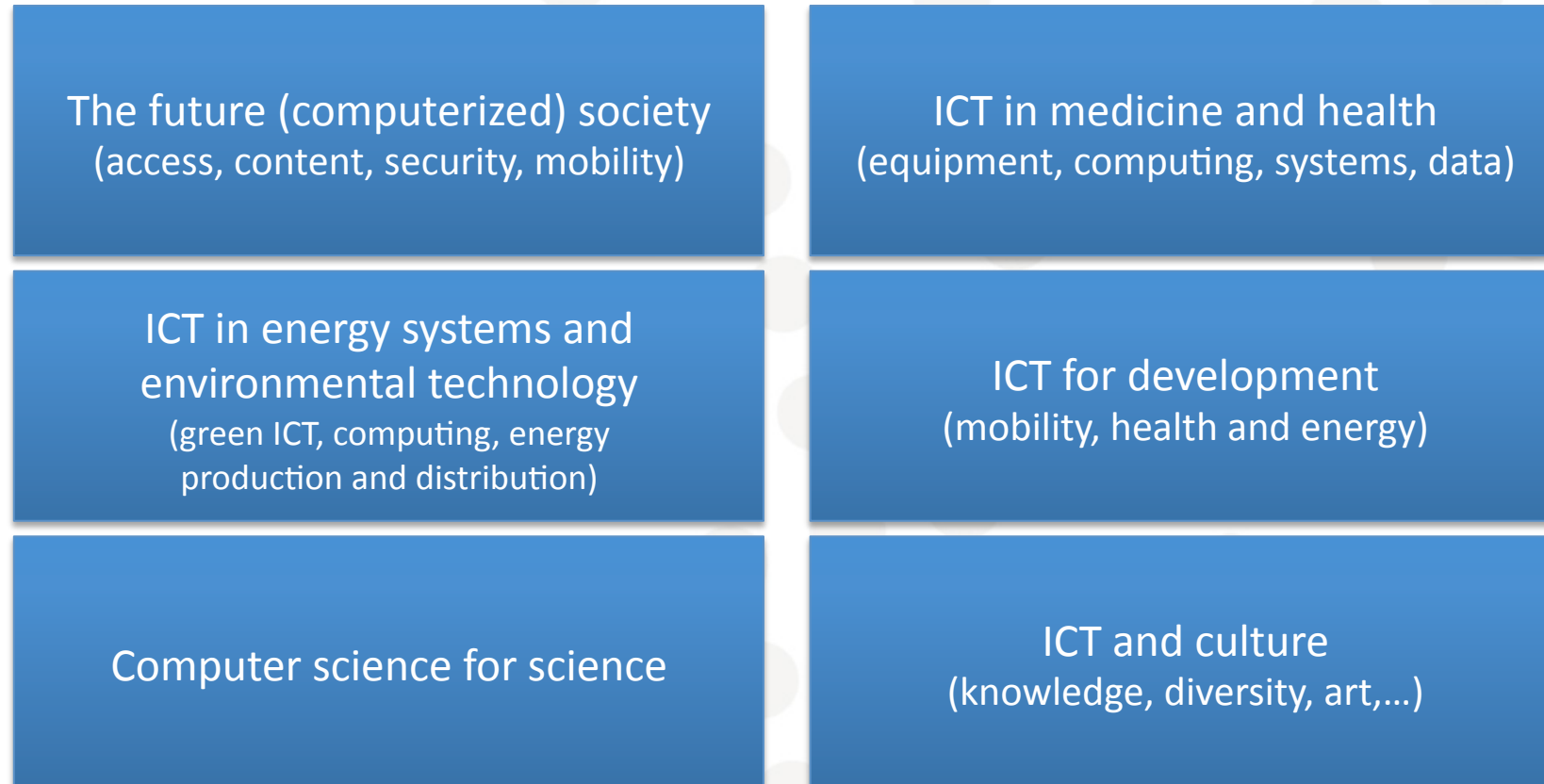
Commons



The flow of technology
and its maturity

What's next?
(or do I really know anything about it?)

Major areas



The future (computerized) society

Always on (both people and things)

The flow of data

A new programming paradigm

Exponential growth (Moore law)

From gaming to “serious” applications

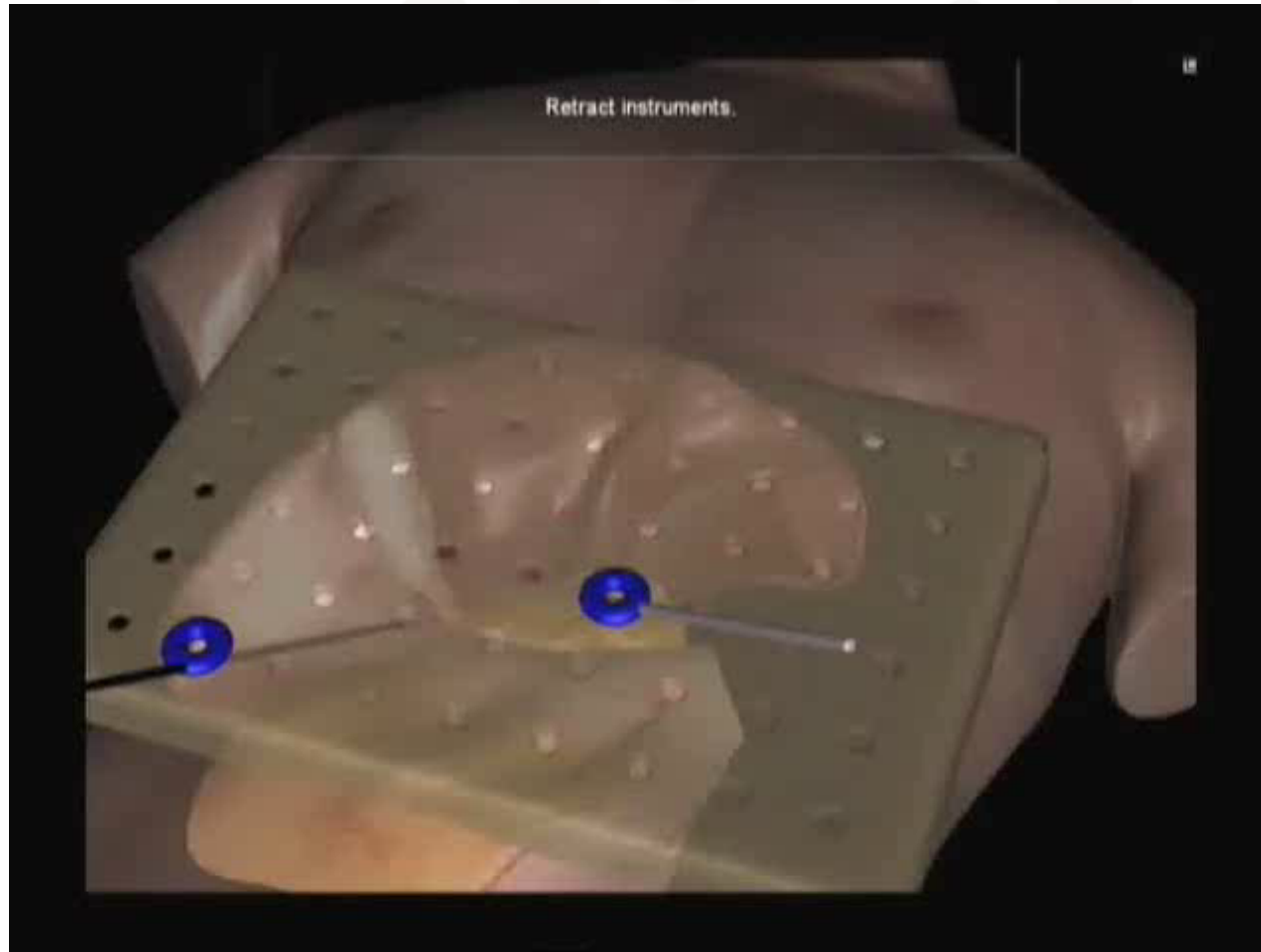


Communication engine

Physics engine

Graphics engine

From gaming to “serious” applications

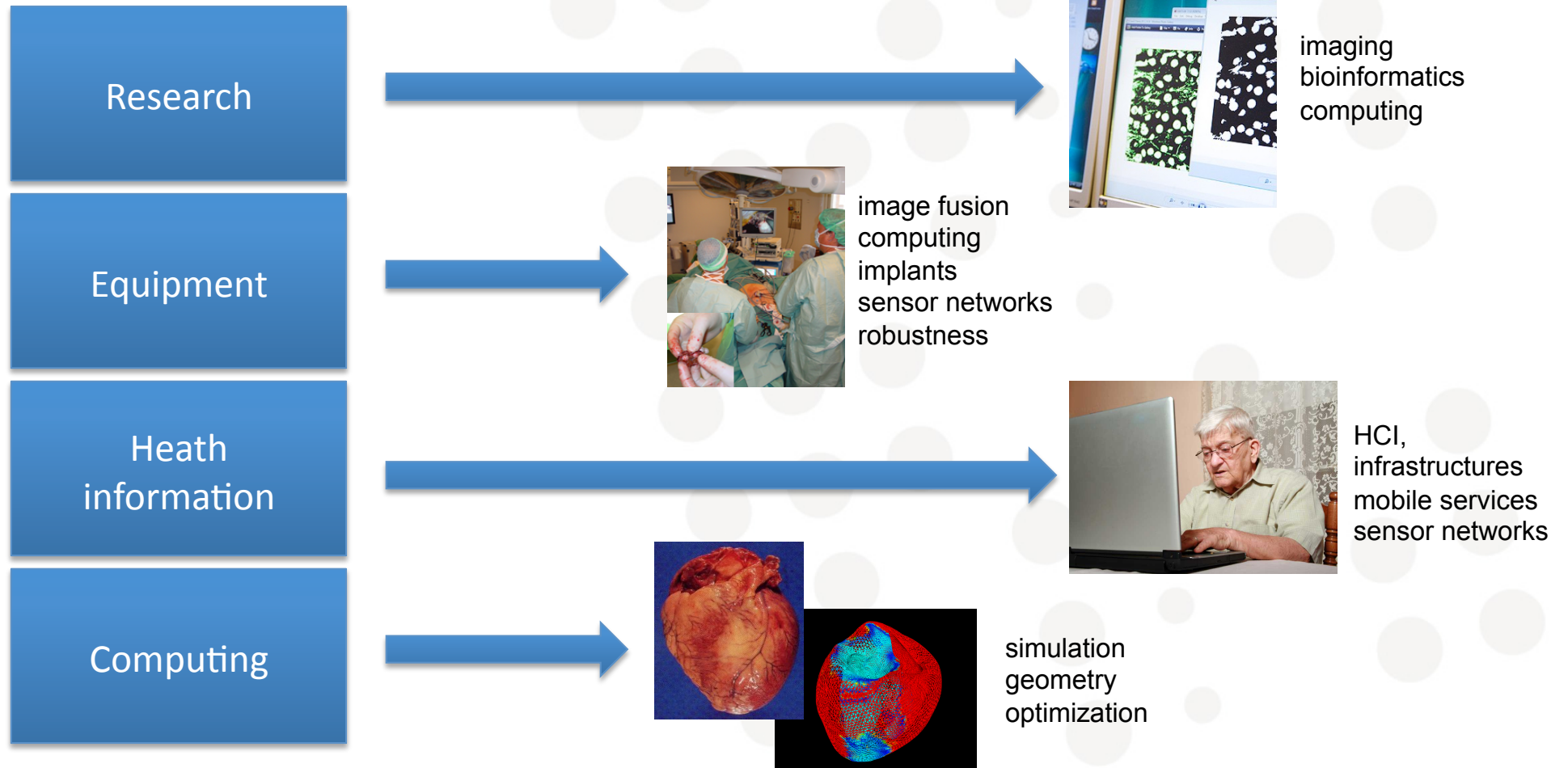


Communication engine

Physics engine

Graphics engine

ICT in medicine and health



ICT and Culture



Music, Mind, Motion, Machines

ICT in energy systems and environmental technology



Satellite surveillance
(spectral) image analysis



Green ICT - Low effect
nanoelectronics
(for sensors and data transmission)

ICT4D (ICT for development)



Health Information systems
(health information analysis, WHO/NORAD)

Mobile health services
(local health care, NORAD/EU)

Solar energy, mobile services and health
(building new infrastructure)

Department of Informatics at UiO



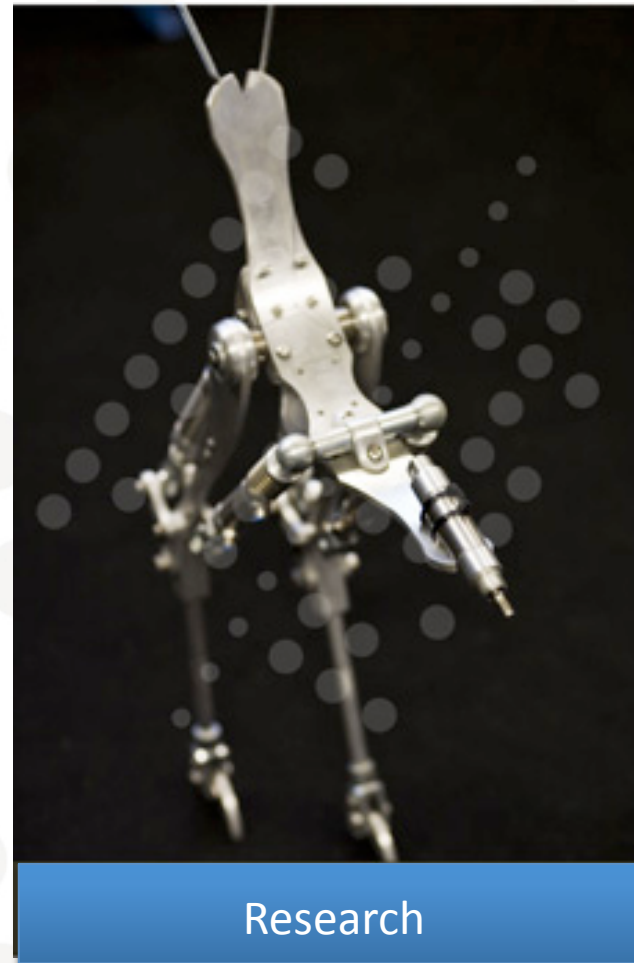
- 2000 student on courses every year
- 850 bachelor students
- 450 master students
- 200 PhD-students
- 110 courses + seminars
- 5 education programs
- 250+ employees
- Research collaboration on all continents
- >60 partners in industry and public sector
- Growth in EU-projects
- Research based innovation

Rank 1. in Nordic countries, 6 in Europe and top 50 world wide (<http://www.arwu.org/SubjectCS2009.jsp>)



UNIVERSITETET
I OSLO

The search for the perfect balance



Shaping the workforce of tomorrow

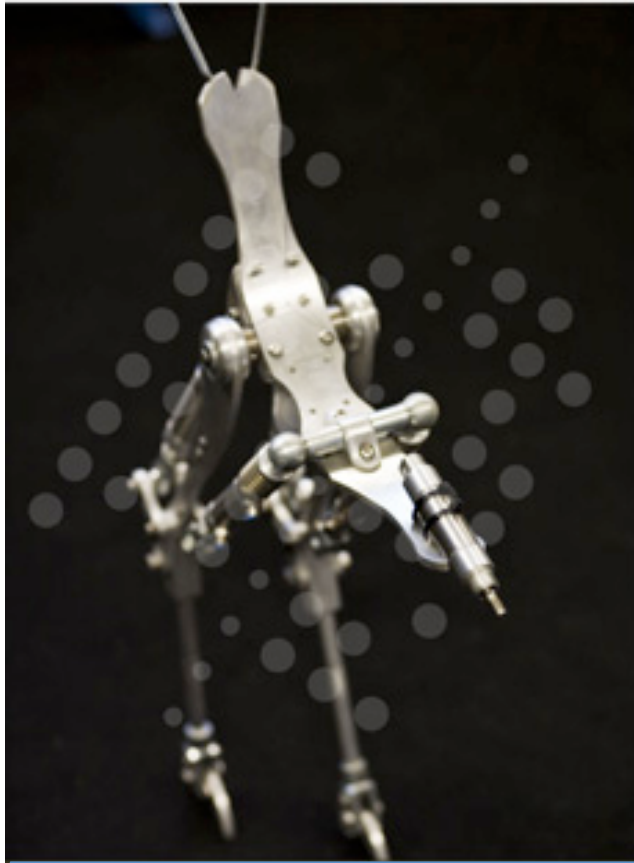
Research-based education

Core
informatics

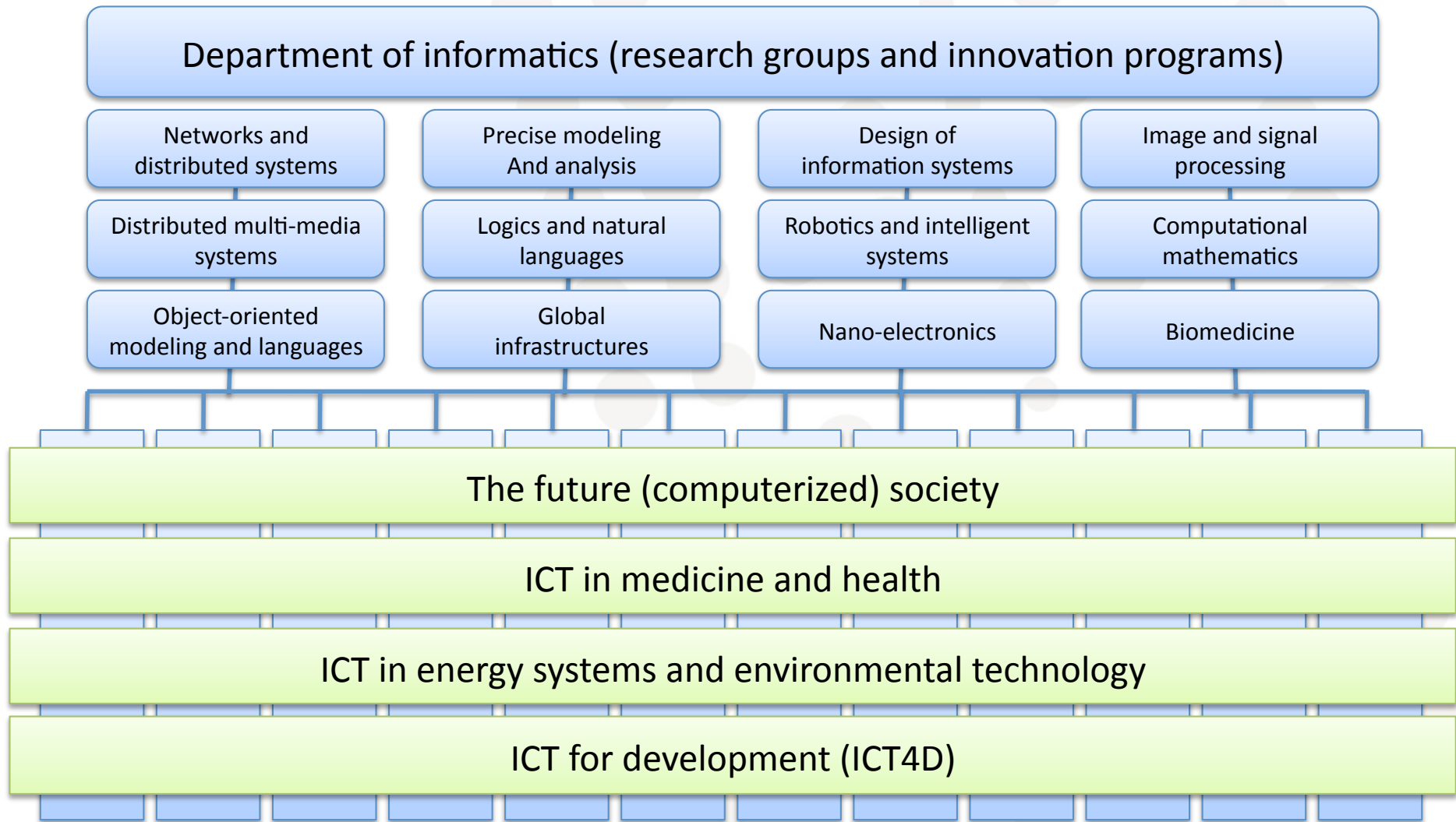
Interdisciplinary
efforts

Research and education on high international level

Research for sustainable development



Research



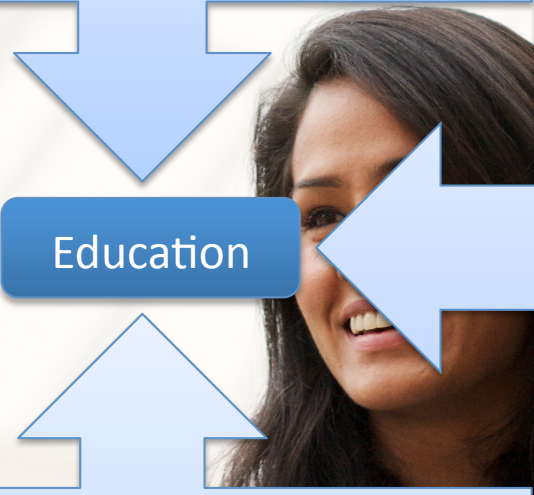


6/7/10

23

What are the large international trends?

Where are we and where should we be excellent?



What do we need in this region? (Norway+)

What are important for young people and how do young people think?

Department of informatics (education programs)

Mathematics
Science of

Informatics;
computing, imaging,

Informatics;
languages and

Lingvistics

Applicants fall 2010
Bachelor +30%, master +40%

Technology
Economy

Informatics;
nanoelectronics
and robotics

Informatics;
design, use,
interaction

sciences
New medias





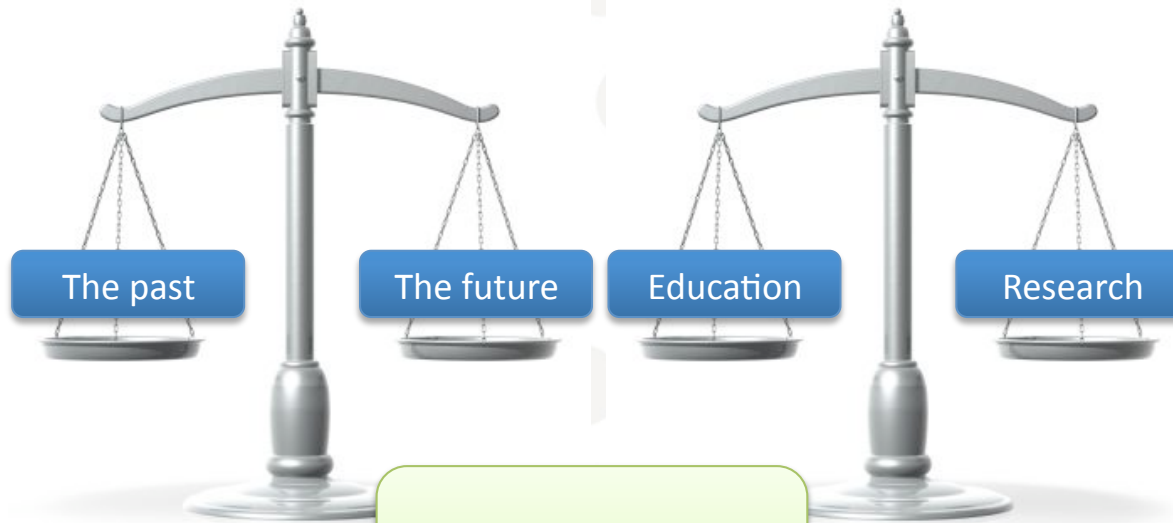
28 000 sqm

Facilities for 2500 (bachelor)students

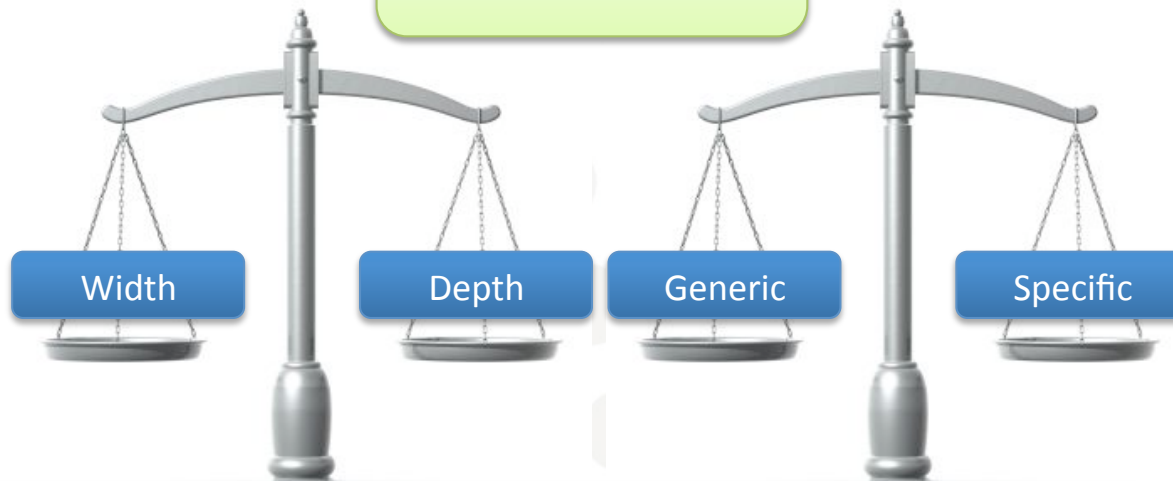
Laboratories and flexible project areas
for faculty staff, guests, PhD- and master-students (800)

The largest ICT investment in Norway ever

Moving there in January 2011



Thank you!



<http://www.ifi.uio.no> <http://morten.ifi.uio.no>

June 7, 2010

27

The search for the perfect balance