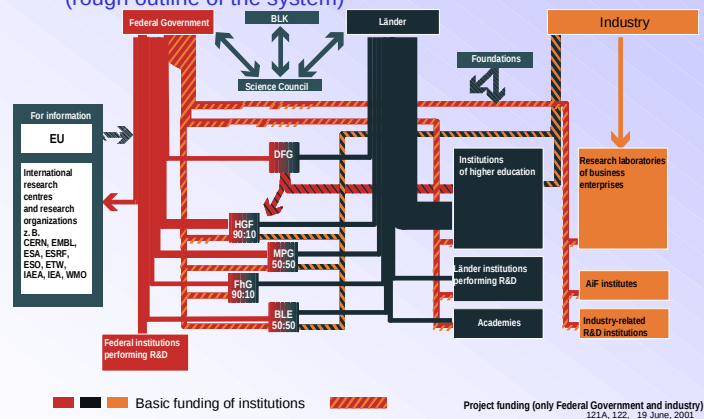


German Research Policy - Guidelines and Priorities

Engelbert Beyer
Head of Division
Economic Analyses
Federal Ministry of Education and Research (BMBF)

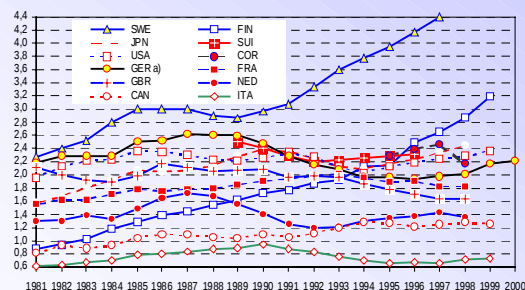
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Structure of research funding in Germany (rough outline of the system)



R&D-Intensity in the German Economy

R&D expenditures as percentages of the Net Added Value



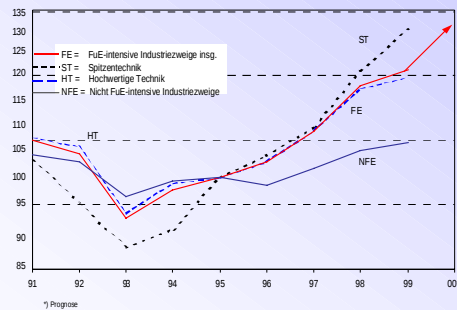
a) Bis 1990: Föderales Bundesgebiet. b) Aufwendungen für FuE-Aktivitäten, die innerhalb eines Landes durchgeführt werden. Für die Schweiz und Korea sind FuE-Angaben nur für die Jahre 1989-1990 bzw. 1995-1998 erhältlich.

Quellen: OECD: Main Science And Technology Indicators. - Berechnungen und Schätzungen des NW.

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Net Production

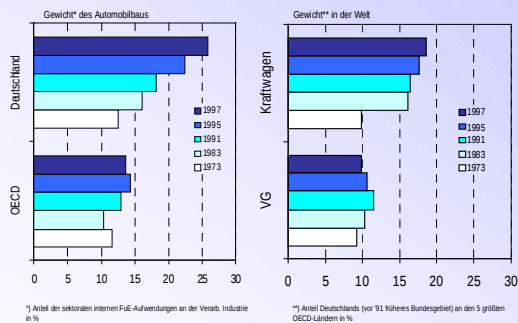
Fachliche Unternehmensanteile, 1995 = 100



Quelle: Statistisches Bundesamt: Internet Datenbank; Zahlen u. Fakten, Statistik des Produzierenden Gewerbes. Berechnungen und Schätzungen des NIW.

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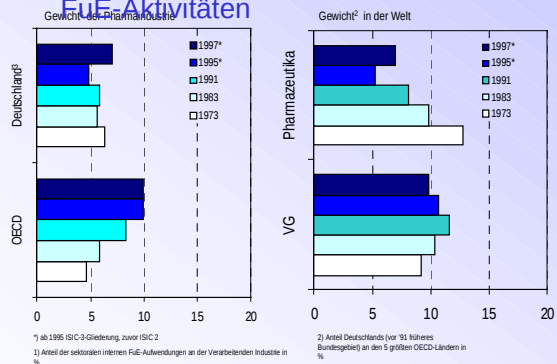
FuE-Aktivitäten im deutschen Auto-mobilbau



Quelle: OECD, ANBERD Database (DSTIEAS Division). - Berechnungen und Schätzungen des NIW

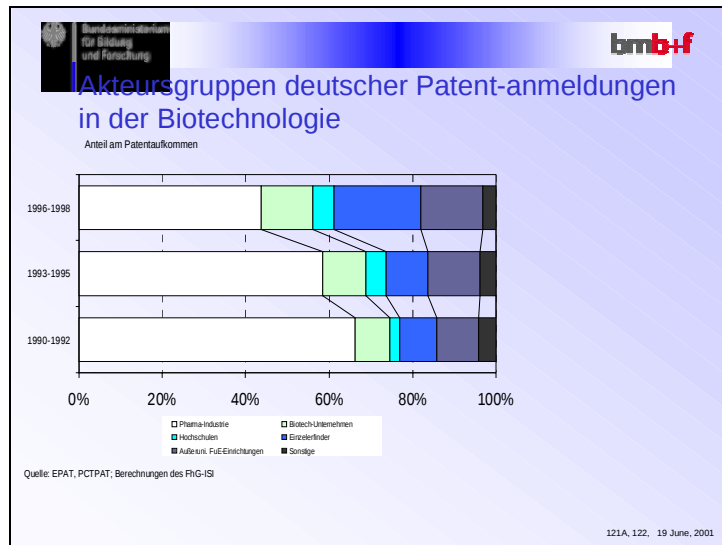
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FuE-Aktivitäten

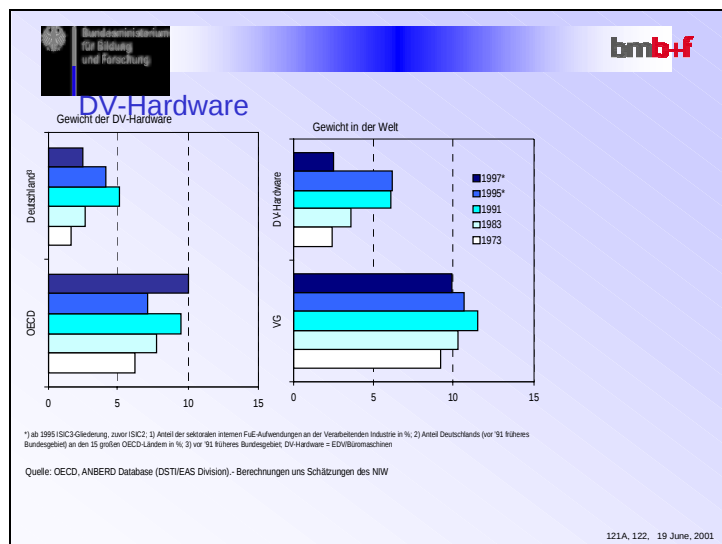


Quelle: OECD, ANBERD Database (DSTIEAS Division). - Berechnungen und Schätzungen des NIW

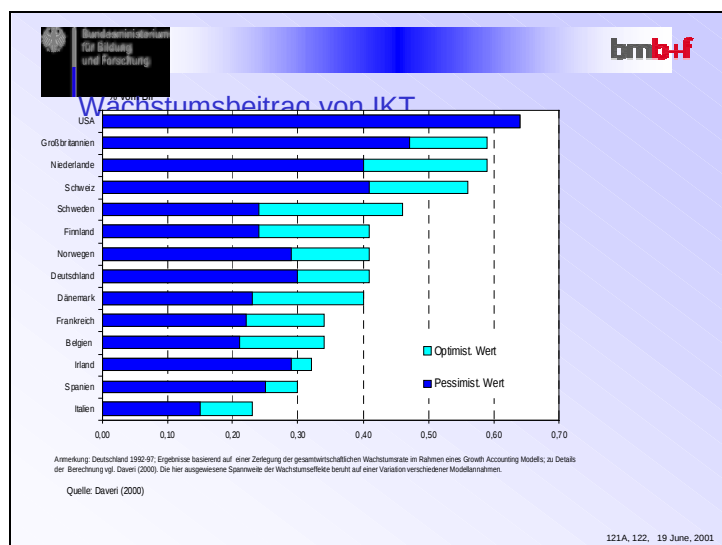
121A, 122, 19 June, 2001



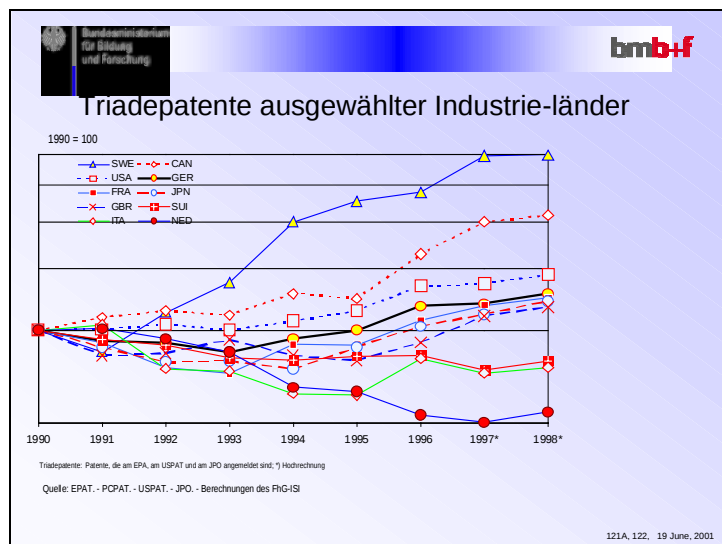
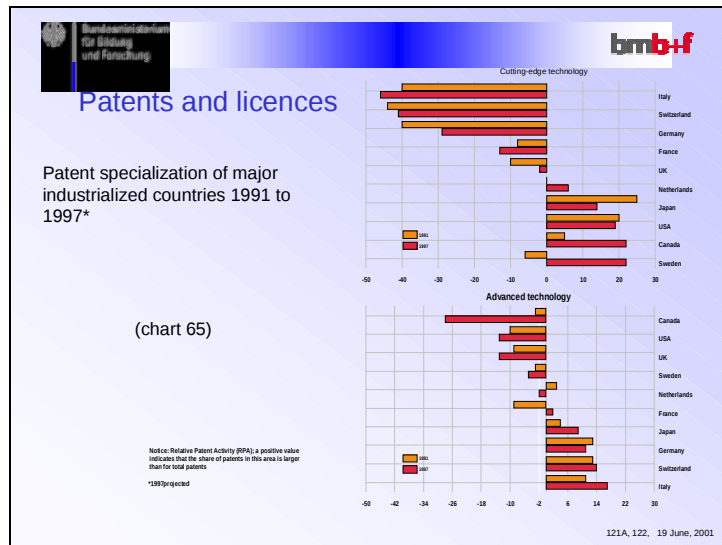
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121A, 122, 19 June, 2001



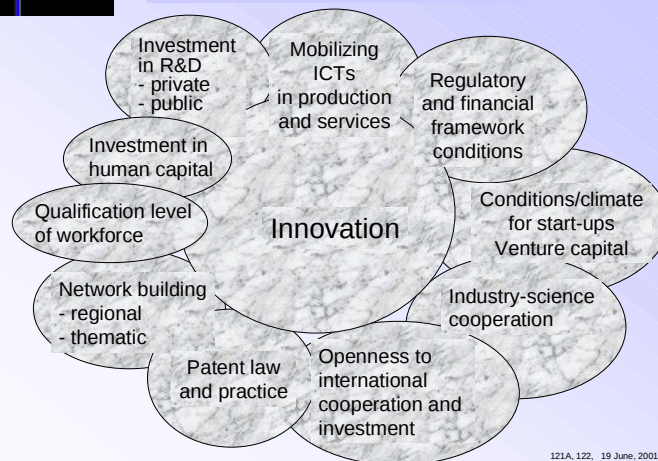
- Main challenges facing Germany**
- ⇒ Internationalization of competition and of many areas of society
 - ⇒ European integration - single market, joint problem solving; European research area
 - ⇒ Transition to the knowledge society
 - ⇒ Need to increase innovation capacity and employment opportunities
 - ⇒ German unification process - R&D and education as keys to restructuring and modernization
 - ⇒ Bridges to Central and Eastern Europe and NIS, and to the Mediterranean countries
 - ⇒ Links to other world regions
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Evaluation of systems, institutions, programmes and projects

- ⇒ Evaluations in the process of German unification
- ⇒ Comprehensive system evaluation
 - ◆ Fraunhofer Society
 - ◆ MPG, DFG and university research
 - ◆ Helmholtz Association
 - ◆ Leibniz Science Association
 - ◆ German institutes abroad
 - ◆ Industry-integrating support by the Federal Ministry of Economics and Technology
- ⇒ Consequences: performance orientation, flexibility, autonomy, networking and mobility

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Key factors of innovation

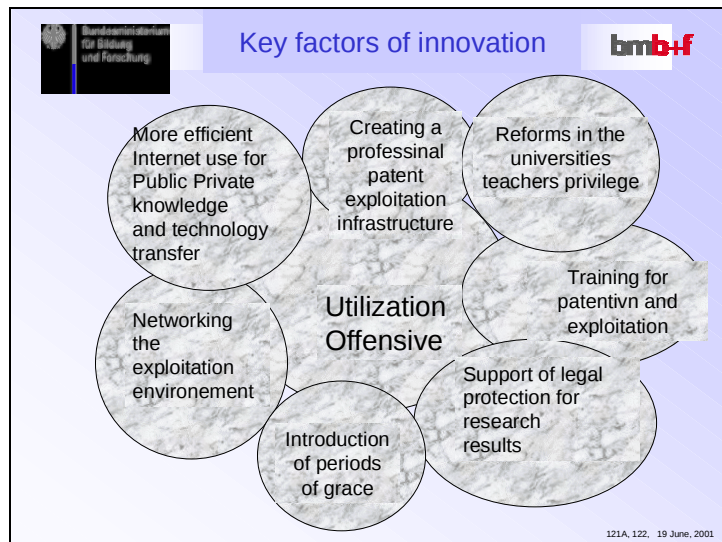
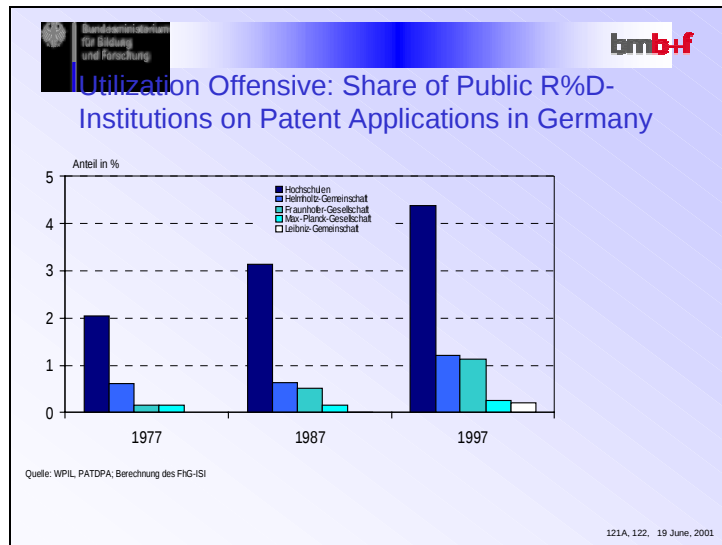


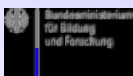
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Policy initiative : Knowledge Creates Markets

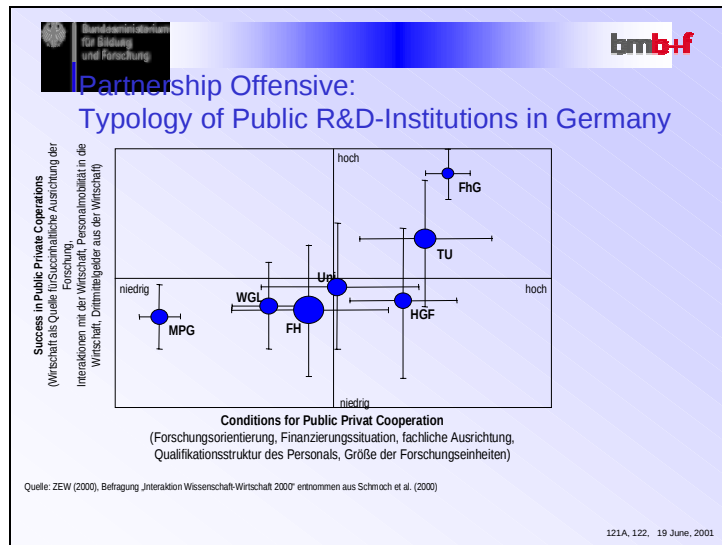
- ⇒ Quicker transformation of knowledge into new products and processes
- ⇒ Four main areas of action:
 - ◆ utilization offensive: quicker marketing of new research results
 - ◆ spin-off offensive: mobilizing science spin-offs
 - ◆ partnership offensive: creating incentives and favourable conditions encouraging science and industry to pool their efforts
 - ◆ competence offensive: supporting companies to make more and better use of academic knowledge in intramural innovation process

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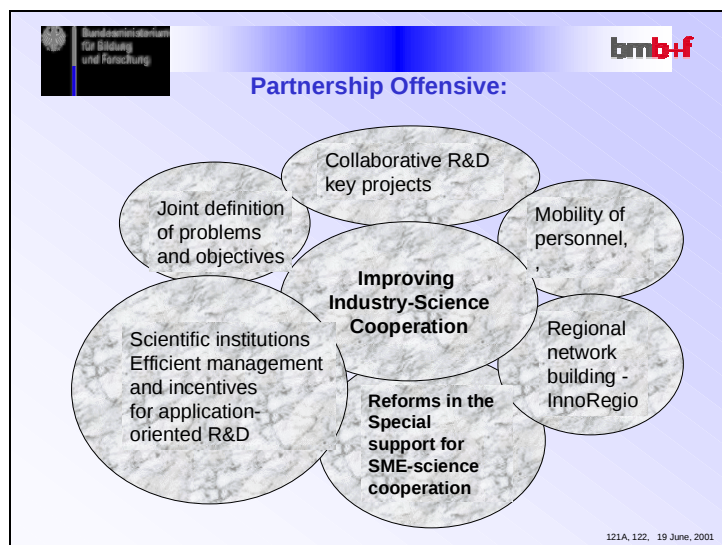


- 

- ### Spin-off offensive: EXIST programme for launching start-ups
- ➡ Creating a sustainable culture of entrepreneurship in teaching, research and administration at universities and *Fachhochschulen*
 - ➡ Increasing knowledge spill-over into economic value added
 - ➡ Fostering the large pool of potential entrepreneurs and business ideas at universities
 - ➡ Increasing the number of knowledge-based/high-tech start-ups and generating new jobs
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- Partnership Offensive:
Developing the research system by structural reforms**
- ⇒ Reform of employment law for university teachers and researchers
 - ◆ performance-based remuneration structures
 - ◆ career opportunities for young scientists - junior professorships
 - ⇒ Reform of higher education funding by *Länder* governments
 - ⇒ Directing Helmholtz centres by programmes and programme budgets
 - ⇒ Merger of the GMD (National Research Center for Information Technology) with the FhG (Fraunhofer Society)
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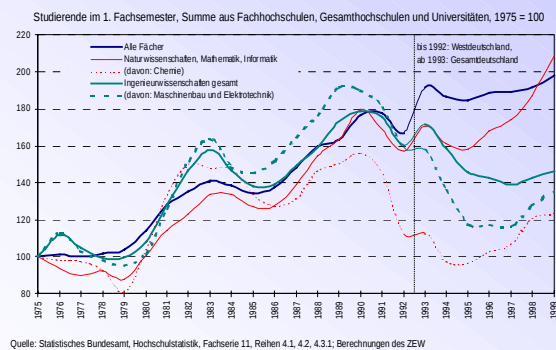


Competence Offensive: Research needs education

- ➔ Supporting young scientists
 - ◆ Doctoral studies (postgraduate research groups, PhD study programmes)
 - ◆ Emmy Noether programme
 - ◆ Junior professorships
 - ◆ Opportunities for applicants from abroad
- ➔ Using opportunities - women in science and research
- ➔ Education Forum - a joint reform initiative
- ➔ Tackling the shortage in technical and engineering fields
- ➔ Improving Innovation management capabilities

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Number of starting students at universities in Germany



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Priorities in research funding

- ➔ Information and communication technologies
- ➔ Biotechnology und health research
- ➔ Environmental and climate research
- ➔ Materials research
- ➔ Energy research
- ➔ Innovation research
- ➔ Space research and technology

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