

Managing Universities in Complex Times

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Management in the old days

- University leaders were *primes inter pares*, excellent scientists, who could act as role models
- It was often more an honour than an obligation – management was an issue on the side
- External management was mainly maintaining good PR and hence government funds
- Internal management was a matter of distributing funds, solving staff problems and making staff appointments
- Two reference points: spectacular scientific results and good education

Contours 3rd Generation University

1. The basis is (still) a good deal of fundamental research
2. Research is mainly transdisciplinary research carried out in Institutes, managed by academics
3. In research, education and commercialisation of know-how, there is considerable cooperation with industry. The 3 GU is an open university
4. International competition for students, academics and corporate research contracts
5. Two-tier university: mass university with special arrangements for the best and brightest (staff and students)

Contours 3rd GU continued

6. Recovery of academic creativity. Central role for the Design Faculty
7. Cosmopolitan university with English as *lingua franca*
8. Know-how exploitation becomes the third objective with a range of specific instruments. Know how exploitation or service to society will be integrated with research and education
9. Disentangled from the state: End of *direct* government contribution

Since 2000 four important trends

- New Higher Education Policies (HE)
 - New Innovation Policies
 - Knowledge-based companies seek collaboration
 - Acceleration of scientific and technological development
- Universities are at the cross-roads of these developments (and that makes the management so different)

1. New HE Policies

- We want more and better education for less money
- The cost of attending a US State College has increased by a factor 15/24 in 40 years while household income increased by a factor of 6.5
- At the same time, average study time went from 24 hrs/week in 1961 to 14 today
- Remedy: more for-profit universities? Competition decreases the cost but also the quality
- Remedy: higher fees? Students seek jobs and end up with large debts

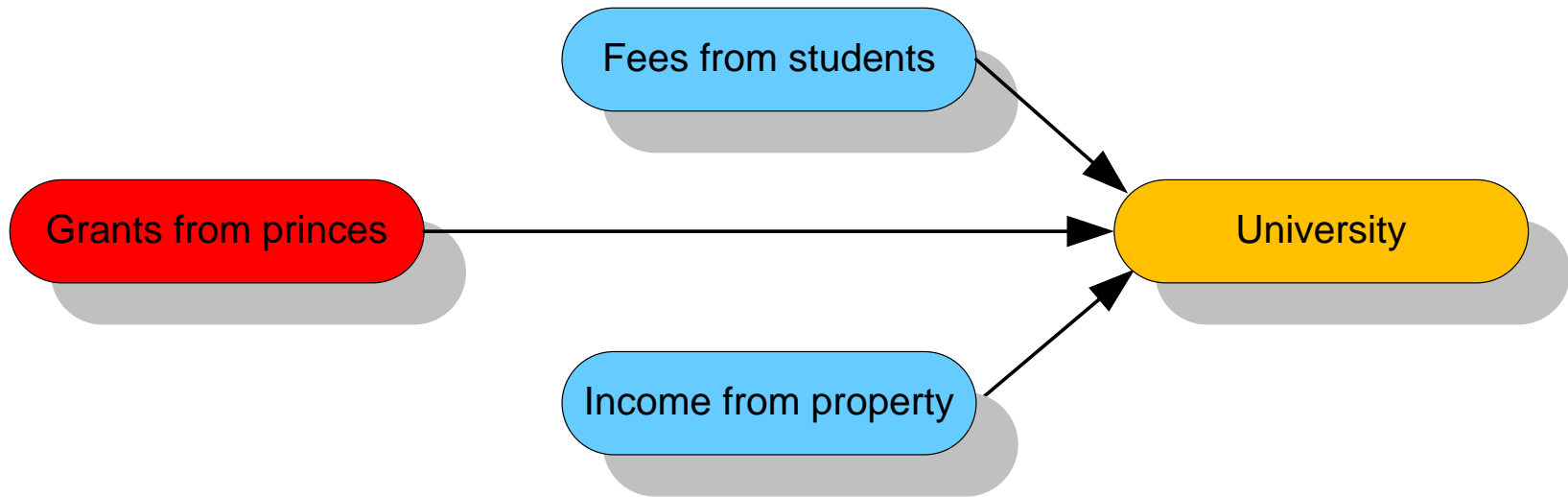
1. New HE Policies (2)

- Remedy: industrialisation of universities? In 1961 6% of the age group went to universities in the UK, now it is 40%. But industrialisation is against the very principle of universities
- Remedy: three tier structure, as in California? (research universities, undergraduate state universities and vocational community colleges). This has many advantages but you have to sacrifice an illusion
- Remedy: other ways of financing?

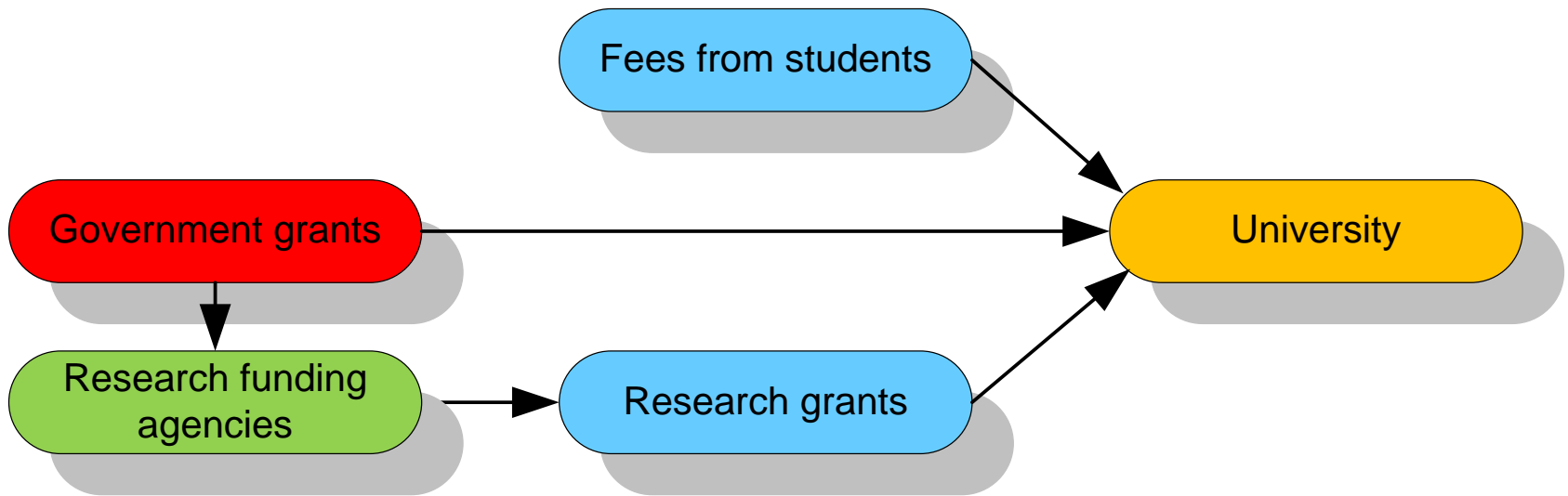
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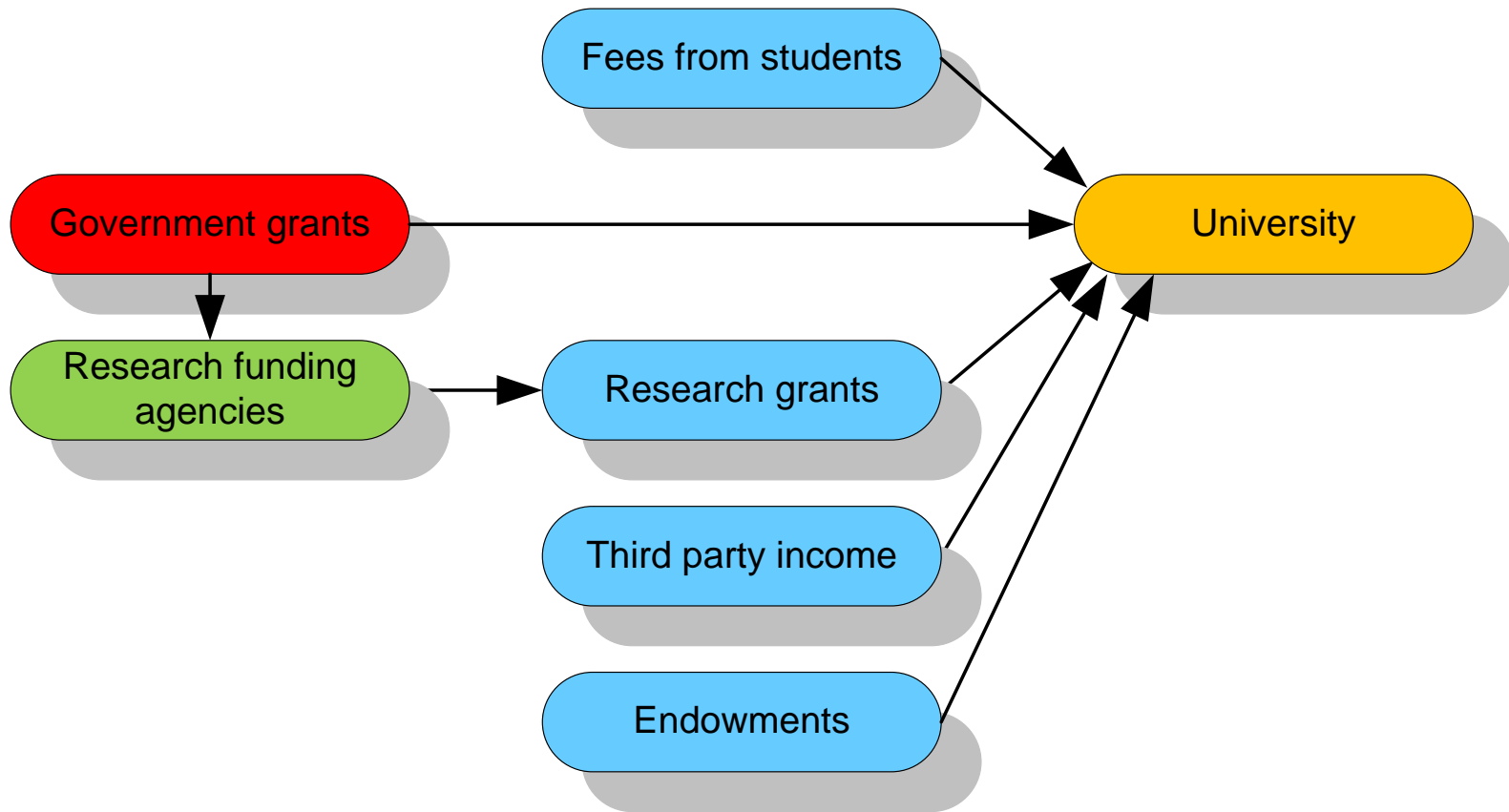
Financing the Medieval University



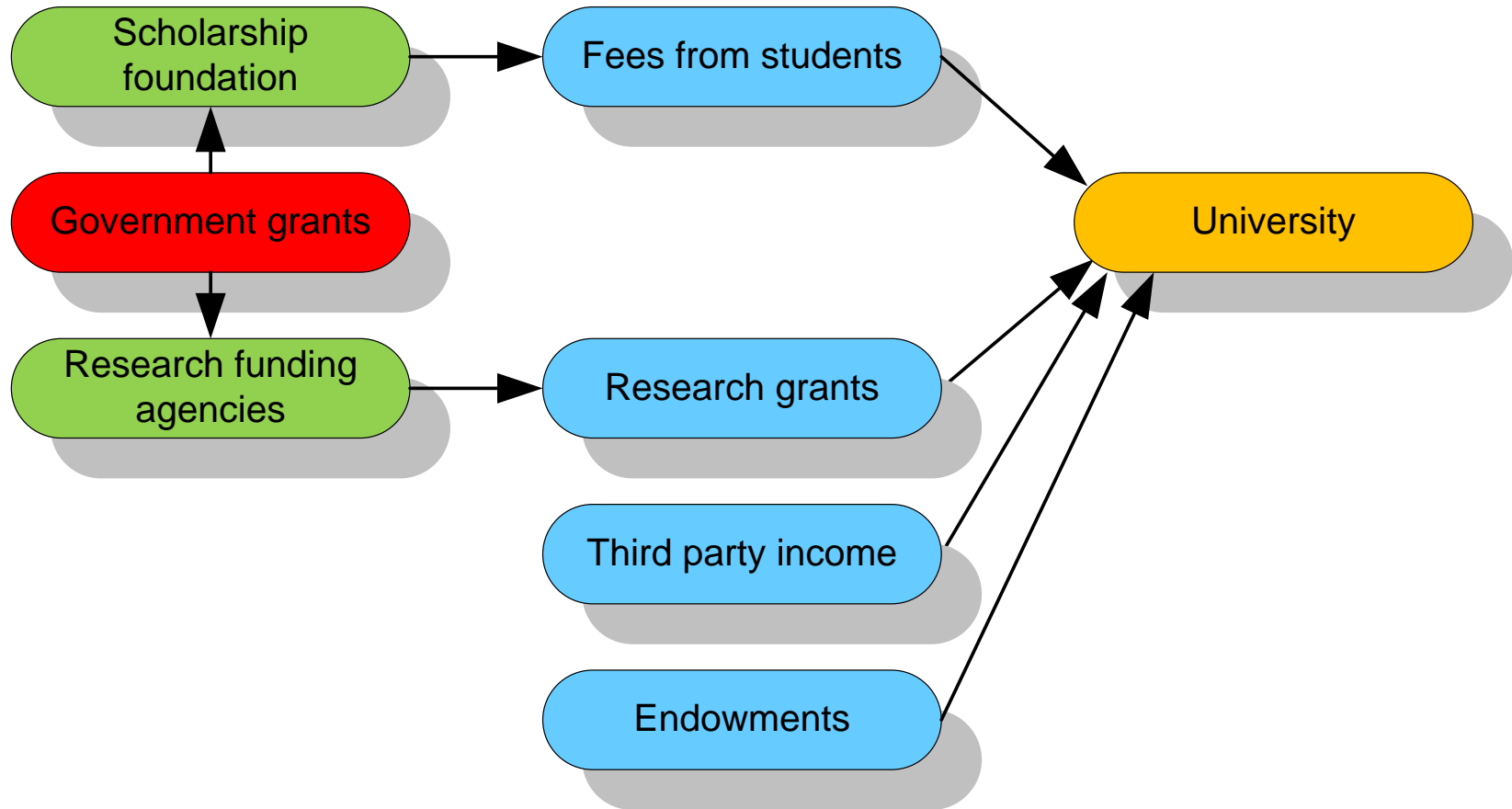
Financing the Humboldt University



Financing present universities



Financing the 3G University



2. New Innovation Policies

- A new look at the National Innovation System: To innovate, one needs:
 1. Technology
 2. Markets
 3. Finance
 4. Intermediaries
 5. Support organisations
 6. Entrepreneurs
- Question: what is lacking most in Poland (and many other countries)?

2. New Innovation Policies (2)

- 3GUs are 'NIS's in their own right and that is why Departments of Economics support them
- How do you stimulate entrepreneurship as an element of national culture? →
 - Courses in entrepreneurship as of young age
 - Role models
 - Senior citizens

3. Enterprises seek collaboration

- Volkswagen: *wir forschen gemeinsam* → contracts with many universities including in California
- Shell: chief scientists
- Proctor & Gamble: 60% of new products are the result of collaboration, target is 60% of sales
- Philips Electronics: High Tech campus
- Craig Venter: first synthetic genome, financed by Exxon Mobil (\$ 600 million)
- Conclusion: *no Nobel price without collaboration with industry*

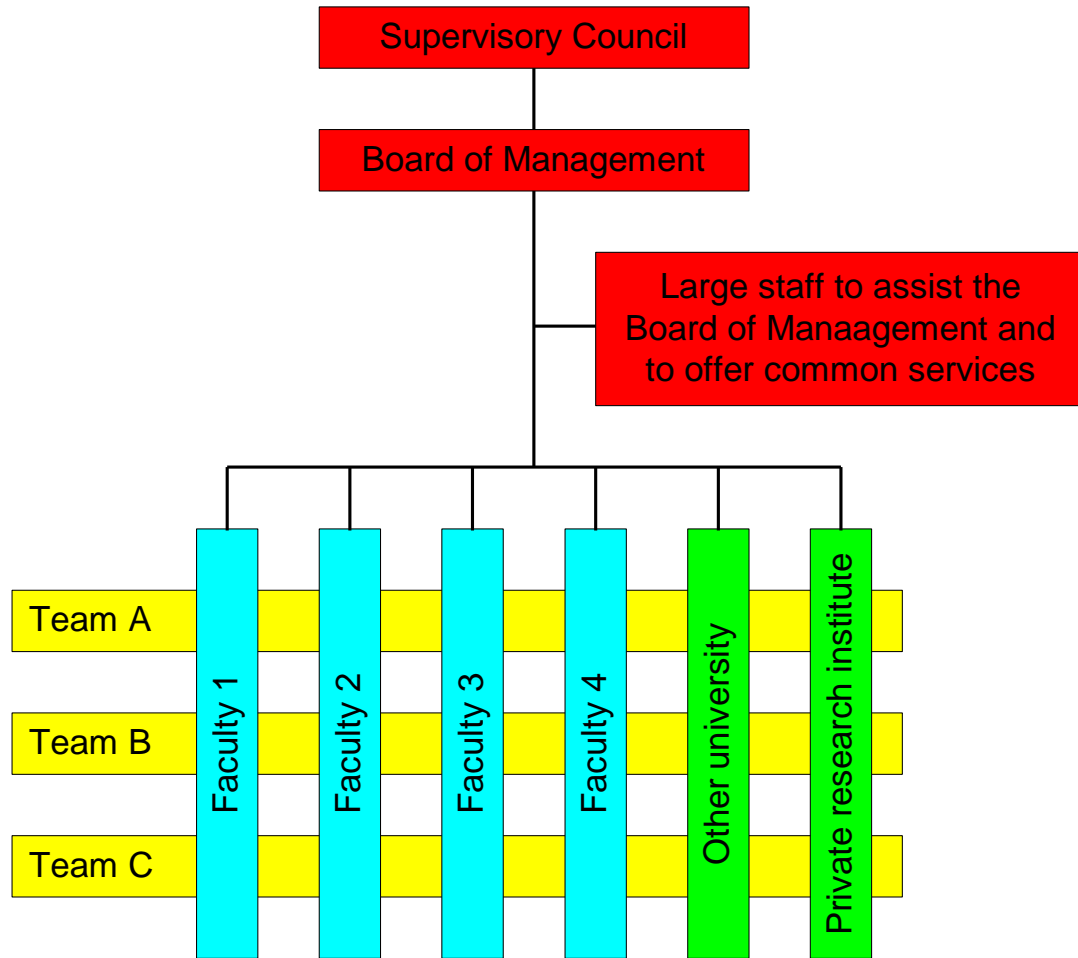
4. Accelerating Science and Technology

- CERN
- IBM Watson computer
- IOCs
- Robots
- Decoding your genome: 10 years and \$ 3 billion in 2002, less than a day and \$ 1000 today

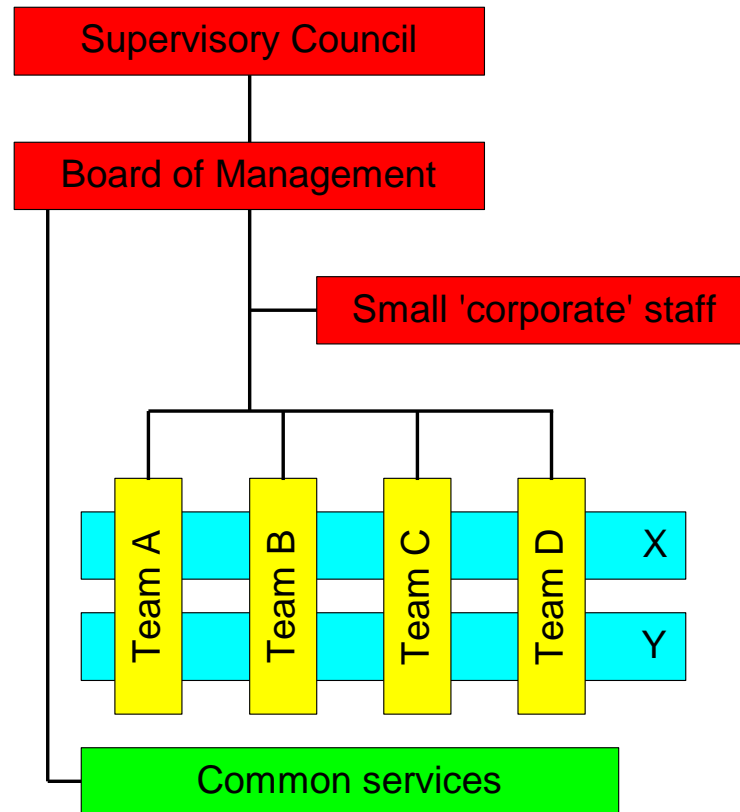
Challenges for universities – but how to meet them?

- a) Decentralisation and empowerment → high focus, interdisciplinary units
- b) This means: making choices. Comes in: strategic planning
- c) Professional approach of know-how commercialisation
- d) Proper organisational structure
- e) Management as a professional service firm

a) Traditional university structure



Third Generation University structure



NB. X and Y are mono-disciplinary professional societies replacing the faculties

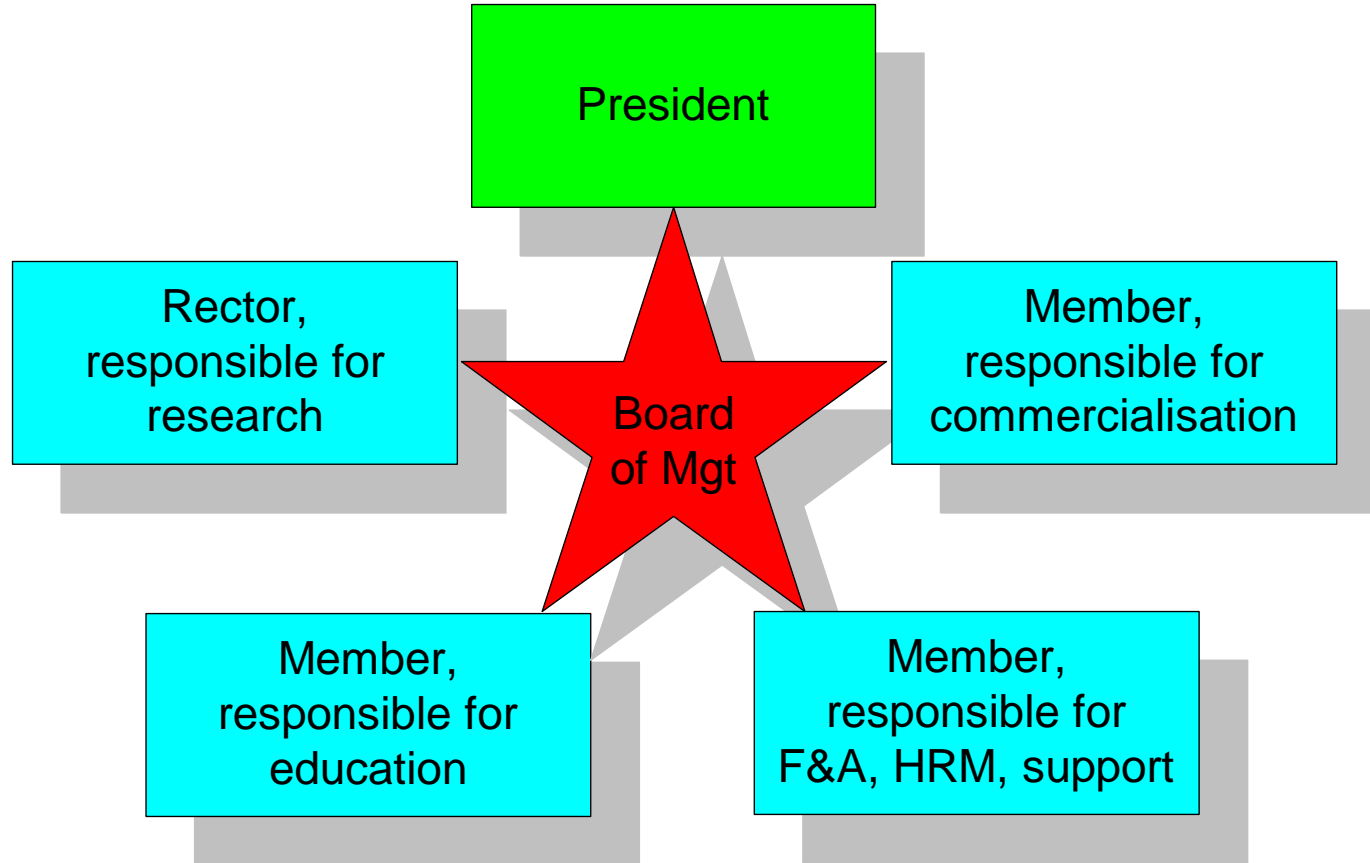
b) Strategic planning

- Used in industry since 1965 but not in universities
- Strategic planning is a method to allocate resources with an eye on long-term objectives
- It is based on analysis of the external and internal situations
- It is not just an analytical techniques but also a process, involving all management and possibly others
- The outcome is to terminate less attractive activities and to become strong in a few activities that offer perspective
- There is no need for a university to do everything

c) KFS know-how commercialisation

- Clear IPR policy
- One organisation for commercialisation (TTC) with proper expertise
- Clear rules on where the money goes
- Incubator and Technopark
- Courses in entrepreneurship with external lecturers
- Good networks, use the scientists

d) Organisational structure



e) Management

- PSFs versus industrial firms
- You can industrialise education but not research
- Hence: mass-education versus education that is integrated with research, in separate organisations
- Hence: replace quotation indexes by peer reviews