The role of the Universities in the Europe of Knowledge

Work Group Innovation/Technology Transfer

Prof. Dr. H.-H. Schröder (RWTH Aachen)

Innovation requires the successful completion of two complementary processes: **generation** of (new) knowledge which results in **inventions** and **application** of (new) knowledge which results in **new processes and products** (to be interpreted in their broadest terms). While in the short run knowledge generation may be neglected (or even discarded) this is not possible in the long run because otherwise the knowledge base for innovation will be depleted. Depending on their starting-point two generic types of innovation processes – **knowledge enhancement** driven innovations and **need driven** innovation processes – may be distinguished. Consequently strategies for an optimised positioning of universities in a Europe of Knowledge with respect to innovation may be divided in

- strategies for an optimal positioning in knowledge generation

and

- strategies for an optimal positioning in knowledge application.

In designing these strategies the proper balance between the role of universities in the knowledge generation and the knowledge application process(es) has to be considered.

Innovation requires both the **capability** and the **motivation** to innovate. Strategies for an optimized positioning of universities in the national innovation system thus may contain **enabling mechanisms**, as well as **incentive mechanism.** Enabling mechanisms are directed to influence universities' capability to innovate, while incentive mechanisms are directed to influence their motivation to innovate.

The combination of these mechanisms and the generic knowledge processes generation and application outlined before results in table 1. Based on this table strategies to optimize the positioning of universities in a Europe of knowledge with respect to innovation can be designed and discussed. Table 1 also gives some examples for potential measures.

<table>
<tr><td>Process / Mechanism</td><td colspan="2">Knowledge Generation</td><td>Knowledge Application</td><td></td></tr>
<tr><td rowspan="2">Enabling Mechanisms</td><td rowspan="4">Improved mobility of university staff</td><td colspan="2">Adequate funding levels
Deregulation and reduction of bureaucracy</td><td rowspan="4">Increase in university-industry migration</td></tr>
<tr><td>Specific Programmes Targeted at the Development of (interdisciplinary) core competencies</td><td>Specific Programmes Targeted at Knowledge Transfer to Application Sectors</td></tr>
<tr><td rowspan="2">Incentive Mechanisms</td><td colspan="2">Adequate funding structures (on institutional as well as individual level)
Improvement of the socio-political environment</td></tr>
<tr><td>Establishment of new scientific career paths</td><td>Improved Internalization income resulting from application</td></tr>
</table>

Table 1: Generic Strategies for an Optimized Positioning of Universities in a Europe of Knowledge