

BRAIN *Depot*



"The best brains, at low cost" In Austria's Research Centers

Interview with Prof. Günter Koch

Vienna Magazine: Professor Koch, Austria does not exactly have a reputation, in Austria itself and abroad, for being a research-oriented country. Is this reputation justified or not?

Koch: If we start by considering the research done in Austria as a complete package, I would want to suggest a two-fold answer: For one, the

facts justify the reputation. The Austrian Republic is investing approx. ten percent less into research than the other European states on an average. I'd like to give you some specific figures: Austria is now investing 1.7 percent of the gross domestic product into research. In Sweden and Switzerland, this figure is in excess

of 2.5 percent, and in Bavaria it is as high as five percent.

The research budget of the Republic of Austria totals about ATS 40 billion, which is roughly equivalent to the budgets of big individual companies in the area of research, such as Microsoft or United Technologies. Austria also lacks research-intensive individual com-

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panies; software companies like PSE, a Siemens subsidiary, are the rare exception. Only the universities' total spent on research is above average.

The reputation is not justified in the light of the potential existing in Austria. Austria is an ideal location for research. Its level of education is one of the highest in the world.

Vienna Magazine: So then how do you explain this reputation?

Koch: Austria has always had a hard time utilizing knowledge and benefiting from it in economic terms. I think this has mental, psychological reasons and it is also due to the foe image of capitalism. Just to give you an example: Only a business enterprise is in a position to convert research into economic action. Business enterprises are needed as catalysts for research. But in Austria, many people are afraid of entrepreneurship because people who did not succeed in their businesses are considered losers for life. True, this attitude accounts for a lower number of bankruptcies in Austria as compared to other countries, but also an even lower number of business start-ups and successful young businessmen and women. Compare this situation to the United States, where you have venture capital funds that consciously approach those failed businesspeople and, assuming that they learned from their first mistakes, ask them to venture a second start.

The lack of thinking in business terms is so deeply ingrained in the Austrians, however, that even well intentioned initiatives miss the core of the problem. More than once, I have watched politicians, with the

best intentions, making available sponsorship to young businesspeople, believing that they should be supported. But in doing so, they are again subjecting the entrepreneurs to a regulatory mechanism, which ends up being detrimental to the business because they want nothing more than freedom.

Krumpak: But, conversely, I would also say, in view of the new drive generated by the New Economy in Austria, that a huge opportunity is opening up for international companies ... a market niche ... to utilize this potential.

Koch: I would agree with that. Nowhere else is it as easy as here to get competent people, at the best possible value for the money. And, incidentally, the Austrians themselves do not even pay attention to this exceptional status because, for one, they take it for granted and two, they are prone to complaining anyway. I never understood this self-critical attitude, by the way.

Krumpak: To reinforce these points, I just want to add that Austria is really not asleep. It's just that nobody has realized the huge number of already-existing technology firms yet, for example. One of the reasons for this is that many companies are virtually servicing only customers in other countries. The other reason is that they are not included as an industry in Austrian statistics. We have put together a study for Greater Vienna which reveals a sales figure of ATS 155 billion presented by the technology industry last year, if computers, software, control technology and medical technology etc. are combined. This means that technology



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has already advanced to the leading industry in Vienna.

Koch: Apropos ignorance: All 600 members of the German Bundestag, i.e. the German parliament, were asked what the current technology boom is all about. According to the study, only 10 out of the 600 members of the Bundestag gave a satisfactory answer to this question. I'm assuming that the corresponding results for the Austrian parliament would not be significantly different.

Vienna Magazine: If you were asked to list the specific strengths, the competitive advantages of Austria, what would these be?

Koch: In the first place, I would cite materials technology, represented in economic terms by those companies actively supplying the automotive and aerospace industry.

In the second place, I would cite aesthetics and presentation, in gen-

eral, but also in the associated technologies, e.g. multimedia applications.

Austria generally comes off well in those technologies that deal with faster and improved sequencing of processes ... processes that test, regulate and control. It comes off less well in the area of ready-to-use software applications. Here companies like Fabasoft or Update.com are the exception rather than the norm.

Mechanical engineering is another area where Austrians don't do so well. My explanation is that I've noticed, whenever I find myself in dialogue with Austrian mechanical engineers, the topic is always immediately changed to materials; in this area, we have excellent people. Another area with future potential is the level of intangibles, comprehensive things like organization, user behavior, marketing. We are having difficulties with those.

Vienna Magazine: As the chief scientific officer of the main research institution in Austria, how would you describe the strengths of the Austrian Research Center Seibersdorf?

Koch: Well, to define our size first, we have around 700 employees, including the research arsenal. Our sales figures are in the neighborhood of ATS 1.2 billion, and we receive research investments of approx. ATS 400 million from the federal government which is not linked to sovereign assignments.

In my opinion – purely subjective – the research areas of global significance at Seibersdorf include materials and automotive technology, systems research and the life sciences.

In more concrete terms, we are leaders, for example, in the area of image recognition, e.g. testing systems for bank notes, and also in equipment for person identification in the search for criminals. We have developed micro jets for space research which can be used to keep satellites in position by way of small recoils against solar winds. We are also front-line players in the areas of dioxin measurement and doping measurement.

And, in closing, I would like to emphasize one last thing: I am convinced that a country in Austria's position can no longer be satisfied with the idea of bringing research into the country or keeping it there. It is of utmost importance not to miss the bus, that is, in particular, the United States. To achieve this, Austria has to be a research turntable between West and East. And that means: we have to go out to the international research centers, while simultaneously sourcing out our research in the neighboring countries as well, where it makes sense, not just for reasons of cost. We are taking a small step in that direction this year in starting an outpost institute of powder metallurgy research at Penn State University in Pennsylvania. A modest beginning, with only three staff members, but as I said, this is only the beginning.

This was a conversation between Dr. Michael Fembek (Vienna Magazine) and Günther Krumpak, President of ASB, an information turntable for technology information in Austria.

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