

Hannes Androsch
Complexity Science Hub Vienna
Opening Remarks
Vienna, May 23, 2016

(The spoken word applies)

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I would like to congratulate the people who founded the Complexity Science Hub Vienna and everybody who organized tonight's celebrations.

I applaud the fact that six institutions have joined the Complexity Science Hub so far – such as International Institute for Applied Systems Analysis, the Austrian Institute of Technology, Vienna Medical University, Technical University Graz, Technical University Vienna as well as the Vienna University of Economics and Business and the Alpbach Technology Symposium.

The world is much more complex than we think, dear ladies and gentlemen. And it gets more complex every day. A single wrong decision – a malfunction or the failure of a system – can have devastating consequences for an entire society. That applies for sectors such as transportation, finance, health as well as political and social systems.

In order to manage potential dangers, it is of utmost importance to learn about complex systems – and to explore them. “Complexity Science” is based on the exploration of networks. It is the foremost goal to make these networks efficient, safe, resilient and sustainable. The very center of this new science are mathematics and the so-called “big data”.

The Complexity Science Hub is the first such institution in Europe – comparable centers exist in the USA in the Boston area and at the Santa Fe Institute, in Singapore and in Europe in Oxford and Zurich.

Although each one of our member institutions might have a different field of expertise and therefore different approaches to complexity and big data science, the methods and models that will be jointly developed at the Hub are useful for all member institutions and beyond.

Austria being one of the centers for research and technology in Europe has to put effort in the field of Complexity Science. Therefore, I

congratulate all member institutions for setting up the Complexity Science Hub, a joint institution that clearly serves our national interest. Looking at the scale in which data are being created and produced, there is a need to build competence in this area in Austria. It would be risky not to do so – for our country, our economic prosperity and our security. I would like to add that it is in our interest to be at the forefront of the development of tools for the interpretation of data and the fundamental understanding of complex systems.

Each of us is constantly producing data – and is perhaps not even aware of it. An additional role for the Hub lies in the field of developing standards of best practice on how we collect data, and how we extract information.

The Hub also initiates a proactive approach to prepare ourselves for a public debate about the value of data and the consequences of the constant increase of data. Ethical questions certainly play a role – particularly when it comes to make sustainable decisions related to areas such as healthcare and security systems.

I consider the international orientation of the Hub as another important factor. Along with our partners, we will open up new potential for cooperation and increase our ability to take part in the shaping of complexity science in the next decade and beyond – which is, as Stephen Hawking put it, the science of the 21st century.

I wish the Complexity Science Hub a successful start. This Hub makes Vienna much more visible as a “City of Science” and might attract internationally well-known colleagues to continue their research here. Always remember – talents attract talents.

Enjoy the evening!