

## BME-UBT Joint transformative Research Centre

### ***"Transformative Research: The Artistry and Alchemy of the 21st Century"***

Dr. Arden L. Bement, Jr. Director, National Science Foundation  
[http://www.nsf.gov/news/speeches/bement/07/alb070104\\_texas.jsp](http://www.nsf.gov/news/speeches/bement/07/alb070104_texas.jsp)

In our approach one of the basic functions of the science is to discover the objective virtual (future) needs of the society and to develop the theoretical and methodological background for the satisfaction of these needs. In support of the discovery of future social needs and to develop frontier science research programmes the **Budapest University of Technology and Economics (BME)** and the **University for Business and Technology (UBT)** established the BME-UBT Joint Transformative Research Centre (TRC). The transformative research is able to look at the horizon of “traditional” sciences.

Regarding to the concept of „transformative research” we decided to use the definition of US National Science Foundation:

(In a “window”)

*"Transformative research is ... research driven by ideas that stand a reasonable chance of radically changing our understanding of an important existing scientific concept or leading to the creation of a new paradigm or field of science. Such research also is characterized by its challenge to current understanding or its pathway to new frontiers."(Link)*

The transformative research activities that are in emerging now and the transformative research centres that create an efficient operational framework for them will not only enhance the efficiency of “science production” by leaps and bounds, but – as it is to be further elaborated below – may as well catalyse thoroughgoing social changes. And what EU as a whole will be most impacted by is the accelerating European economic and political integration.

**The TRC aims to realize the functions listed below.** The BME and UBT leave an opportunity for the extension of those functions to meet changes in needs. The declared functions of the TRC at the time of its launch are the following:

- A. The generation of transformative research (TR) ideas, and the evaluation and qualification of TR initiatives;
- B. The establishment and implementation of TR programs, and the management of third party TR programs based on contractual agreements;

- C. The methodological support of TR programs initiated by the institutions of the parties and the third parties;
- D. TR idea generation and feedback of TR programs and methodological developments with full respect of related intellectual property rights to support the development of the scientific, technological and innovation base of the institutions of the Parties, their contractual partners, and the integration of the Balkan states;
- E. Participation in academic research at the institutions of the Parties, and support of the implementation of a new culture to meet the requirements of our age.

The TRC works subordinated directly to the **Rectors**, under the control of two **Executive Co-Directors** appointed by the Rectors. The TRC operates on a virtual organizational-infrastructural base.

(In a window)

*A **virtual organization** is a group of individuals whose members and resources may be dispersed geographically, yet who function as a coherent unit pursuing shared goals through the use of cyberinfrastructure. Virtual organizations may be known by a range of names, including: collaboratories, distributed work groups, virtual teams, online communities, and science gateways. Common characteristics across different types and classes of virtual organizations include:*

- *Distributed across space, with participants spanning localities and institutions;*
- *Distributed across time, allowing synchronous as well asynchronous interactions;*
- *Dynamic structures and processes, at every stage of the organizational lifecycle;*
- *Information and Communication Technology enabled, via collaboration support systems including e-mail, teleconferencing, telepresence, awareness, social computing, and group information management tools; and,*
- *Engaged, with simulations, databases, instrumentation, analytic tools and services which require interaction among organizational members (link)*

The establishment and operation of TRC will arrange the achievements of scientific and research development into hitherto unprecedented synergic constellations, which, in turn, will trigger significant trends of development and unprecedented innovation results. At the same time we would like to underline, that transformative research results often do not fit within established models or theories and may initially be unexpected or difficult to interpret; their transformative nature and utility might not be recognized until years later.

During this effort our fundamental - preliminary research-based - assumption will be that guaranteeing the spread of best practices and communication through **transformative research communities** which communities will catalyse the development of **transformative research driven innovation programmes**.

**Contact:**

Dr Nagy Károly

TRC Co-Executive Director

Head of European Research Collaboration at **UBT**

[karoly.nagy@ubt-uni.net](mailto:karoly.nagy@ubt-uni.net)

[www.transformativeresearch.eu](http://www.transformativeresearch.eu)