

TRIPLE HELIX ASSOCIATION

TOMSK STATE UNIVERSITY
OF CONTROL SYSTEMS AND RADIOELECTRONICS

NATIONAL RESEARCH TOMSK STATE UNIVERSITY

ASSOCIATION OF ENTREPRENEURIAL UNIVERSITIES

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TRIPLE HELIX XII
INTERNATIONAL CONFERENCE

**«THE TRIPLE HELIX
AND INNOVATION-BASED
ECONOMIC GROWTH:
NEW FRONTIERS
AND SOLUTIONS»**

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Henry Etzkowitz

President of the Triple Helix Association

- The future is everyone's to share. No single country or region holds the monopoly over innovation. Breakthrough innovations develop in many countries around the world, enhanced by interaction among government, industry and universities.

Today the university is the key factor giving momentum to development. A place with a great number of highly educated people is where the double helices of University–Industry and Government–University meet and create the Triple Helix of innovation-driven entrepreneurship.

For over 20 years the Triple Helix Association has been focusing the efforts of the academic community on study of the interaction between research institutions, industrial enterprises and government agencies. If built wisely, the resulting synergy drives technological innovation and economic growth of the region.

The main goal of the Triple Helix Association is to promote scientific knowledge and practical achievements associated with all aspects of interaction among academia, business and government to advance research, innovation and competitiveness.

The events organized and managed by the Triple Helix Association include scientific conferences, symposia, networking events for academic and research institutions and other participants in the Triple Helix process. Our goals are: to promote the Triple Helix model through publications, academic journals and mutually beneficial projects; support application of academic models in practice, foster international academic mobility and training of students, researchers and experts.

Before Tomsk, Amsterdam, New York, Rio de Janeiro, Copenhagen/Lund, Turin, Singapore, Glasgow, Madrid, Stanford, Bandung and London hosted the International Conference of the Triple Helix Association. I am happy to see Russia joining this global innovation club. I believe that the Triple Helix model will be key to recovering from the crisis, ensuring sustainable innovation-driven development. Home to several major Russian universities, Tomsk is the perfect place for universities developing their entrepreneurial profile, for new high-tech companies and for modern government to thrive.



Alexander Uvarov

Chairman of the Russian Chapter of the Triple Helix Association, Ambassador of the Association to Russia. Vice Rector of TUSUR University

– In 2014 Russia will for the first time host the International Triple Helix Conference. The conference is a unique venue where international policy makers, researchers and experts can discuss the future of the innovations sector in the post-crisis world.

Among the topics to be discussed are the new role of entrepreneurial universities in enabling sustainable economic growth, the behavior of business which is the fastest player to react to economic uncertainty, and the best practices of cooperation between government, universities and industry in formation of the innovation sector of economy.

TUSUR University joined the Triple Helix Association in 2010 when it presented the Russian edition of Henry Etzkowitz's book "The Triple Helix: University-Industry-Government Innovation in Action" in Moscow and Tomsk. In 2010 TUSUR University acted as a co-organizer of the Triple Helix Conference in Stanford.

TUSUR University is one of the leading and most dynamic engineering universities in Russia. We are working towards developing as an entrepreneurial university with training of new-generation of innovation-minded professionals and expert entrepreneurs as its main priority. We lay emphasis on focusing our research on addressing the future needs of the economy and society.

TUSUR University brings the ideas of the Triple Helix into practice through our Education, Research and Innovation Network of enterprises founded by our alumni, through the IT and Electronics Cluster of Tomsk Region created together with the regional government, through project-based learning in the heart of our academic process. We hope that our experience will become a valuable contribution to the research process of the Triple Helix model. We also expect our development as an entrepreneurial university to benefit from this unique global networking opportunity.

Bringing together over 300 researchers and experts from 50 countries every year, the conference will drive us forward in our main endeavor – transition to innovation-driven economy.



Eduard Gatzhinsky

Rector of National Research Tomsk State University

Founded in 1878, Tomsk State University is what helped Tomsk transform from a small merchant town into a major center of education, science and culture for the vast territory of the Northern Eurasia. Becoming home to the first university in Siberia has changed the profile of the whole region, created the unique environment, stimulating and favorable to scientific thinking. That is why today Tomsk is known around the globe not for its exhaustible gas and oil resources, but for its human resources which are potentially limitless.

Tomsk State University has always been among the best universities of this country, and in 2013 it was included in the state-funded Global Competitiveness of Leading Russian Universities Program. Our goal is to transform the classical university where the academic process has always been based on results of fundamental and applied research, into a modern, world-class research university. It is impossible to create an efficient university management system, to bring in talented students and faculty, concentrate resources unless in some aspects we develop as an entrepreneurial university as described by the Triple Helix concept

Russia devotes significant financial resources to support of innovation-driven entrepreneurship: creates new business incubators, encourages entrepreneurial associations, commits to the cluster approach. Our goal is to make these investments as efficient as possible – and it would be extremely difficult to achieve without proper methodology, without systematic work, without cooperation among those who develop innovations and those who bring them into practice.

Our cooperation in the Triple Helix Association offers us an excellent opportunity to join the global effort to develop the methods and models which will become the foundation for universities of the future. This work will help create a training system for the innovation sector of the economy where apart from professional knowledge, graduates will have all the knowledge and skills necessary for entrepreneurship – the ability to take risks and act in situations of uncertainty, commitment and responsibility to themselves and their companies. The more there are people like that, the higher is the standard and quality of living in our society.

Establishment of Tomsk State University 136 years ago was what drove transformation of this region from a trade hub into a center of culture, science and education. Today Tomsk Region has impressive experience in interaction among government, universities and business.

Today our research and technology drive the emergence of new production methods and bring the region to the forefront of high-tech entrepreneurship. The conference of the Triple Helix Association in Tomsk is an important element of this process.

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**CURTAIN OF TRIPLE HELIX AND COMMUNITY UNIVERSITY PARTNERSHIP:
COMMUNITY- UNIVERSITY COLLABORATION ON TRANSFER OF TECHNOLOGY
IN HIGHER EDUCATION TOWN**

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Keywords: *capacity, collaborative, cohesiveness, CUP, triple helix*

The university has resources and expertise of knowledge that contribute significantly to increase capacity of region development. The University also provides a knowledge base for industry and suppliers of research and development for communities through education, research, and socio-economic development of the region. However, the university does not merely have ability to produce science and technology, but also ability to deliver and disseminate knowledge to businesses and communities. As development agencies, universities is an important element in regional innovation system and planning to solve global economic challenges, so that effect and mechanism of strength local agencies is important to know how process of regional innovation strategy.

Community University Partnership (CUP) is one of framework to support share of knowledge that creates transfer technology and entrepreneurial interactions. Individual and group learning in a CUP are social and collective learning process, so this partnership as social bonds among various other parties in region. Partnerships are collaboration, learning and cross-pollination between university, community, government, industry, and growing fantasy or new resources. University has the capacity as a source of knowledge and technology, but often too preoccupied with the university itself, less immediate concern with campus environment, or the flow of communication in technology transfer to the surrounding community and industry is very limited. University more enjoy and fun with science and technology at function produces in the world (world wide and beyond), but surroundings are a lot of potential and problems that require solving and resolution.

Actually there are a number of opportunities and problems that require a role for university in form transfer of technology efforts to provide alternative solutions to social, economic and environmental as well as answers to the problems faced by surrounding community. The critical point contribution of universities-community partnership is role of the university not only as agent of generative of growth in regional development, but also accelerate regional development through transfer of technology to community.

A fundamental question is how the transformation and transfer of technology contains a breakthrough, preserve local knowledge, create new jobs, and encourage innovation for the benefit of campus environment is reciprocal. Learning capacities of various

organizations in regional innovation system as a core competency of an region is important, especially more so for development of region in the Higher Education Town (HET). Trust and cooperation among businesses is essential cultural norm in order to glue of interactive learning in regional innovation system, as well as local cultural cohesion in interaction of the actors in the region, especially local development. The process of institutional interaction is fundamental in creating, maintaining, and communicating knowledge and technologies that contribute to changes in cultural, social, economic of communities. University partnerships with communities (CUP) is embodiment of mission of higher education, by providing access to community. Through CUP, consensus can wake bridging the university and community relations and promote greater cooperation for regional economic growth.

This paper describe the transfer of technology process and CUP in HET in order to see how trend of improving the capacity of innovation, learning effectiveness, and strengthening social cohesion in campus region, so that the relationship between government, universities and community can contribute for welfare of local development. The study was conducted by action research with study of searching focus on transfer of technology activities in business incubator and livestock science or animal husbandry. To reinforce the objectivity of the research was conducted triangulation of data and information that has been obtained. The results of further research is encapsulated in description and explanation of process activities and transfer of technology format and transformation have been happened.

This article is part of research that explains importance of curtain of triple helix and CUP interaction in transfer of technology. It determine on effectiveness of local capacity development and local economic development in Higher Education Town (HET)., in case Jatinangor, West Jawa, Indonesia Findings and interpretation, University role as producer of knowledge and technology enhance local capacity development, in local case for incubating local entrepreneur and preserving a pure breeds of sheep very unique biodiversity of local sheep. Based on collaborative action process between actors in HET, transfer of technology increase local capacity and cohesiveness which local community and members of faculty from universities, and role as a curtain, thus building a complementary relationship and mutual adjustment. This study found that CUP in local capacity development (LCD) can be measured through the degree of internalization of knowledge (ownership, congeniality, commitment, satisfaction use acquire knowledge), institutional (information, soft infrastructure development, availability of finance, beaucratic system), business networks and local learning facility, organization capability and knowledge, and competitiveness of business (business start-up development, labor force, outside investment) as stated Schoot Uiterkamp, and B.J. Pennink, B. (2012).

Transfer of technology give impact point and create the LCD in the form of labor force, increase income, enhance productivity, and pull outside investment. Involvement, commitment, and motivation are element of cooperation as well as a condition of local agency and university would played role in Community University Partnership in

***CURTAIN OF TRIPLE HELIX AND COMMUNITY UNIVERSITY PARTNERSHIP:
COMMUNITY- UNIVERSITY COLLABORATION ON TRANSFER OF TECHNOLOGY
IN HIGHER EDUCATION TOWN KEYWORD: CAPACITY, COLLABORATIVE,
COHESIVENESS, CUP, TRIPLE HELIX***

transfer of technology. Performance perpetrators of triple helix interactions and regional innovation system determine the degree of transformation of technology and growth of regional economic. Effectiveness of interaction of transfer of technology can be seen on impact point and local capacity development variables. Partnership strategy in a region is one form of innovation of regional economic development. Implementation strategy of communicative and network space, and transfer of technology that be conducted by collaborative action between university for local community role on formulating interaction academic, government, and community. Based on these ideas, for further research, we have to know in depth about level of impact and reciprocal transformation process of dissemination knowledge (business incubator, livestock) between members of universities, local government, industry, and local community.