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**Paper title:** Network facilitating innovation policy – the case of Hungarian cyber security ecosystem

### **Abstract:**

Stereotypically Central Eastern Europe (CEE) is full of creative, problem solving, or even problem hacking people. One can decide to accept this true or not, but it is widely accepted that cyber security can be one of the key sectors for the CEE region to boost and facilitate, not just regulate and fend off cyber space activities.

In this paper I follow the logic of network facilitating policy and innovation-enabling policy approach, where actors from every sector build horizontal linkages to the systems of innovation. This helps to boost innovation capacity of a certain geographical areas or sectors (building clusters) and help to appear on the international stage.

The Triple Helix Model – and its extended versions - deals with ecosystem as well, based on collaboration of state, universities and business, so do with media and culture-based society. This neo-institutional model is “focusing on interinstitutional networking and exchanges”.

In Hungary role of state-related actors are clarified in law, and national cyber coordinator has a role to facilitate all the other actors. On the other hand, there are many bottom-up and horizontal linkages which are not (fully) integrated to the Hungarian cyber security ecosystem.

My research question is the following: How does the Hungarian cyber security ecosystem look like in the Quintuple Helix Model?

To answer this question (1) I put actors to the Model, which role are decelerated in a law, then (2) I add universities, businesses, NGOs and other relevant actors with using snowball method. (3) To draw linkages I use Internet-based desk research, content analysis (with special attention to government strategies, like Hungarian Digital Wellbeing Program) and I conduct interviews.

This methodology shows us a preliminary scope of actor relations in Hungary. Strength of linkages and their role in institutional learning would be a useful topic for a further research.

From these first stage results one can see that there is a vivid community and a lot of potential, and with handling missing linkages and communication, building horizontal and vertical bridges (networks) could help a lot to perform better.

Mazzucato (2016) talks about market-creating framework, the evaluation of mission-oriented and market-creation policies and a perspective, called system of innovation what is a primarily need to build horizontal linkages between actors.

I use this theory in my conclusion as I summarize that using her mission-oriented framework in the activity of the national cyber coordinator and using network-based policies could put cyber security to a leading sector in Hungary.

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**Points for Practitioners**

Conducted research shows which state, university, business and NGO-related cyber security actors exists in Hungary, and whether they have connection or not. This snapshot can reveal what linkages one can use, and where they are missing to build them and make a network-based innovation ecosystem in this field. This can help for policy makers to form market-creating and mission-oriented policy framework.

**Keywords**

Quintuple Helix Model; cybersecurity; innovation; policy