

## **EU-funded project CyberWiz to secure critical infrastructures**

### **German security specialist Applied Security GmbH and Swedish risk management firm foresee AB work together in a Horizon 2020 programme funded by the European Commission**

The Horizon 2020 programme funded by the European Commission supports small and medium-sized enterprises, which develop disruptive technologies in different lines of business.

One of the most beneficial and important fields of technology in this programme is information security.

One of the key tasks in the struggle of defending computer networks against antagonistic threats such as malicious intruders and cyber terrorists is to find the weak spots in a network and to answer the question: “how long would it withstand an attack?” As there are networks whose failure could have catastrophic consequences – the so-called critical infrastructures like, for instance, power and water distribution, health care and food supply – it is of the utmost importance to find reliable and unbiased answers to the above questions.

The project CyberWiz aims to answer these questions. It combines the knowledge of the Stockholm-based risk management experts of foresee AB and of the German information security specialist Applied Security GmbH (apsec). Scientific support to the project is given by the Paluno Institute of Software Technology of the University Essen-Duisburg. Within the project the three participants develop the software securiCAD and a corresponding consulting concept, which gives the operators of critical infrastructures the opportunity to model their networks and to do an unbiased risk analysis by advanced simulation techniques. These simulation techniques are based on the well-known mathematical theory of Bayesian networks. In the simulation risks, vulnerabilities and the time until an attacker may succeed are estimated.

There are two clear benefits of this approach: the first is that the results are objective, based on mathematical rigorousness. The second is that the outcome of changes in the network, for instance, the introduction of a new firewall, can be simulated before actually doing so. Hence, the software helps to identify whether an investment in a new technique is justified or not and, thus, helps to save expenses.

The Horizon 2020 grants are designated to push disruptive technologies into the European market and CyberWiz is one of the most promising candidates to succeed.