

**Long Term Cybersecurity research
Summaries of projects granted in the first NWO call for proposals (2012)**

Project number	CYBSEC.12.002 / 628.001.002	
Main Applicant	Prof. dr. ir. W.M.P. van der Aalst	Technische Universiteit Eindhoven Faculteit Wiskunde en Informatica Informatica
Project title	Privacy Compliance and Enforcement (PriCE)	
Scientific summary		
<p>Data protection legislation in the EU empowers users to control the access and usage of their data as well as imposes very stringent requirements on the collection, processing and disclosure of personal data.</p> <p>Furthermore, nowadays, IT systems operate in unpredictable environments, where different individuals access services and devices in different capacities. In contrast, the current security and data protection mechanisms are very rigid. The basic notion of enforcement relies on the idea that infringements (i.e., deviations from policies and procedures) are violations and as such should not be permitted. Moreover, current security mechanisms neglect the existence of business processes and do not take advantage of the opportunity to analyze the event logs and business processes to support the IT system in the security decision-making process.</p> <p>This project aims to develop the foundations of a novel approach that empowers users to control their data and enables organizations to comply with user policies as well as with legal requirements. This will be achieved by defining:</p> <ul style="list-style-type: none"> (i) a user-centric system in which users can specify security and privacy policies that regulate the access and usage of their data and in which they are fully aware of the consequences and risks of the specified policies in terms of security, privacy and accountability; (ii) cryptographic protocols and mechanisms that can keep the data persistently encrypted, while still ensuring data availability; (iii) a flexible infrastructure for infringement identification and anagement; (iv) a policy learning mechanism for policy refinement. 		
Applicable NCSRA themes		
<ul style="list-style-type: none"> • Identity, privacy and trust • Data & policy management • Secure design & engineering 		