Implementing business rules for Agile Development Process in the Semantic Web.

# Abstract

This thesis examines implementing Business Rules of the Agile Process using Semantic Web technology. The capability of Semantic Web to support Business Rules is needed to gain the use of Semantic Web in organizations and industries. This thesis aims to build the bridge between business and software engineering by exploring the use of Business Rules to sustain the Agile Development Process.

# Introduction

* Veel projecten mislukken (Van Cauter, 2015) (Clancy, 2014)

Scientific papers (references) and newspaper (references) mention frequently the failure of an ICT project. One of the issues is the gap between business and informatics(references). Projects are driven by ICT cells or managers, who not always have a feeling for the business tasks to be executed. A change from Waterfall or Rational Unified Process (RUP) to Agile, the methodology that supports more changes and forces the business to be actively involved could help to develop the needed support (Van Cauter, 2015).

Large software companies, the main players on the software market, have a hierarchical management and this management needs to follow ordered developments by using processes and roles as project manager. This hierarchy and the idea of having a plan for the whole delivery does not match the Agile philosophy, where collaboration self-organized teams is a key element.

The eager to work Agile and loose structure directs teams to adopt the Agile Development Methodology without knowing how to implement it. The habit and lack of guidance from an Agile expert risks creating not sprints but mini waterfall projects with a shortcut on analysis. The business values and objectives of the sprint are lost through software thinking instead of business thinking. A similar kind of issue is the challenge to map Business Rules in a non-technical language to Semantic Web Standards (Spreeuwenberg & Gerrits, 2006)

Our interest in Agile and Business rules, the missing link between Business Rules and Semantic Web raises the research question:

Could the Agile Methodology be described by human readable business rules implemented in the Semantic Web and its interfaces to publish violations on the Web?

To answer this question we need to examine:

1. Can formal academic models like Fresnel be used to map business rules defined with Semantic Web technologies to user interfaces that support and enforce executing those rules?
2. How can Business Rules avoid unwanted actions of the user when applying the Agile Development Process?
3. Can user executable actions for the Agile Development Process be published?
4. Can a system error for the Agile Development Process be published?

# Bibliography

Spreeuwenberg, S., & Gerrits, R. (2006). Business Rules in the Semantic Web, Are There Any or Are They Different? *Reasoning Web*, 152-163.

Van Cauter, L. (2015, November 26). *Klassieke vergissingen bij ICT projecten van uitdagingen tot aanpak*. Retrieved Februar 25, 2016, from KU Leuven Instituut voor de Overheid: https://soc.kuleuven.be/io/opleidingen/pdf/20151126-lies-van-cauter.pdf