



# Implement Agile Development Process with Business Rules on the Semantic Web

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# Waarom

- IT mislukkingen 20-30% (Taherdoost & Keshavarzsaleh 2015)

- Agile

- business en it werken samen (Van Cauter)

- kennis (Soundararajan et al. 2012)

- tools (Azizyan et al. 2011)

- Bedrijfsregels

- Functionele business vereisten (Joosten & Joosten 2005)

- Georiënteerde ontwikkeling (Kardasis & Loucopoulos 2004)

- Semantic Web (Bos 2013, Slootweg 2016)

- Semantic Forms en Fresnel (Rutledge et al. 2016)



# Vraagstelling

**How and to what extent can business rules be implemented with Semantic Web reasoning processed with a semantic wiki interface support the scale agile development process?**

- Hulp bij gebruik scale agile → keuze agile framework
- Hergebruik ontologie
- Interface voor gebruikers interactie
- Overzicht op vooruitgang product ontwikkeling



# Hoe

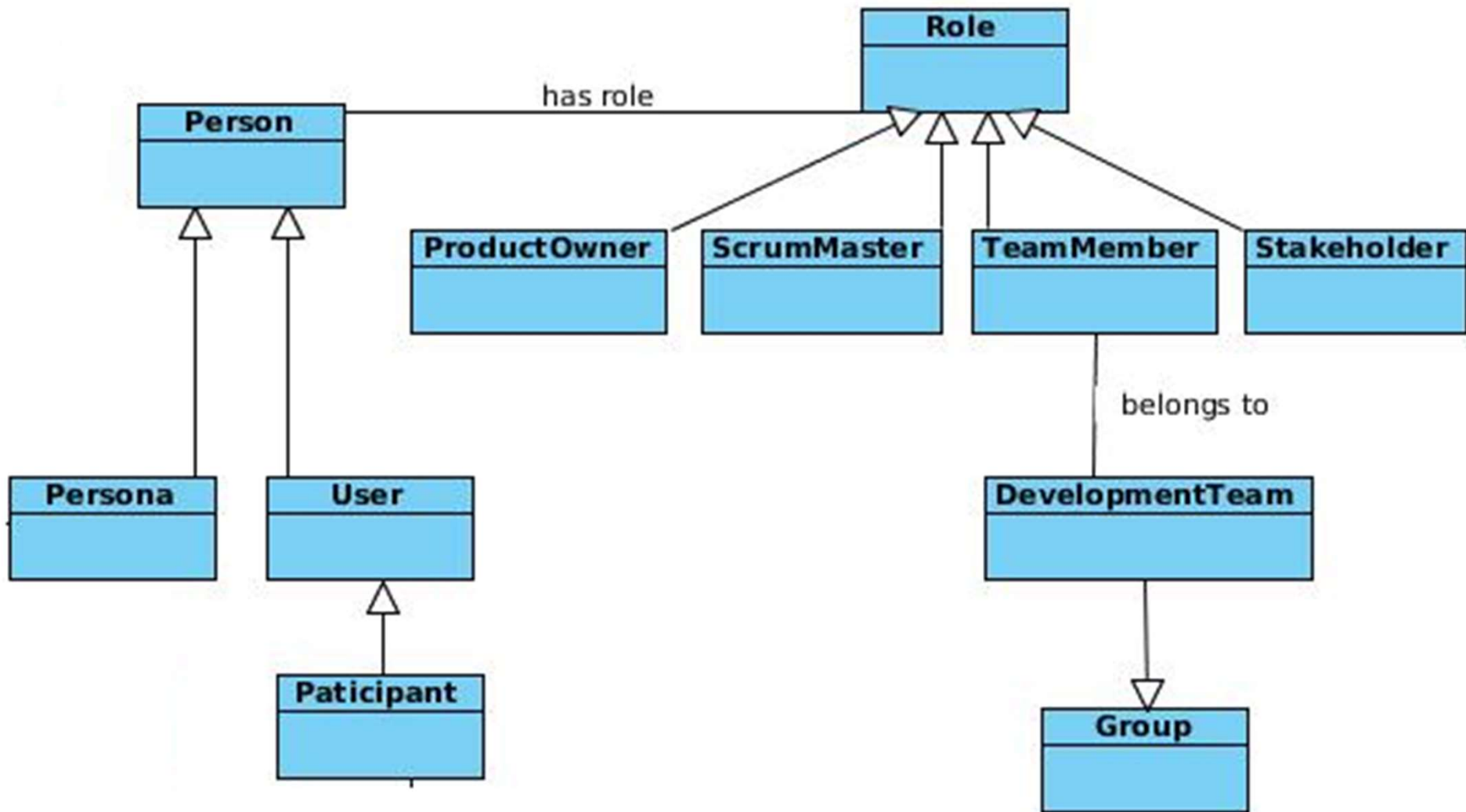
- Methodologie LeSS (van Leeuwen 2015)
  - Bestaande regels (LeSS)
  - Bestaande scrum ontologie K-Crio (Lin et al. 2011)
- Tim Berners-Lee linked data (Bizer et al. 2009)
  - Standalone prototypes (Fitsilis et al. 2014)
- Semantic MediaWiki (Kleiner 2015)
  - Ask query, semantic template (Bao et al. 2009)
- Fresnel Forms (Rutledge et al. 2016)



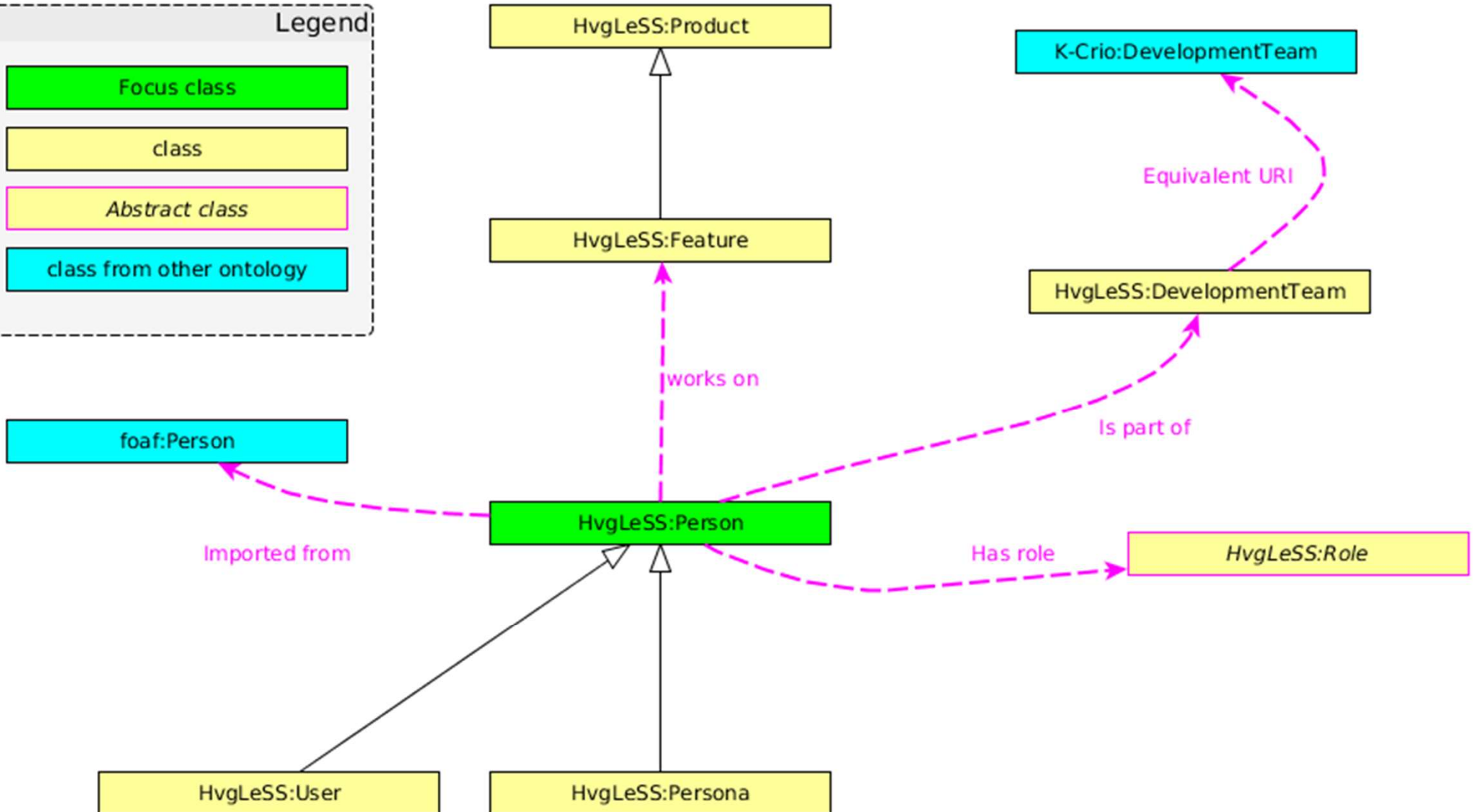
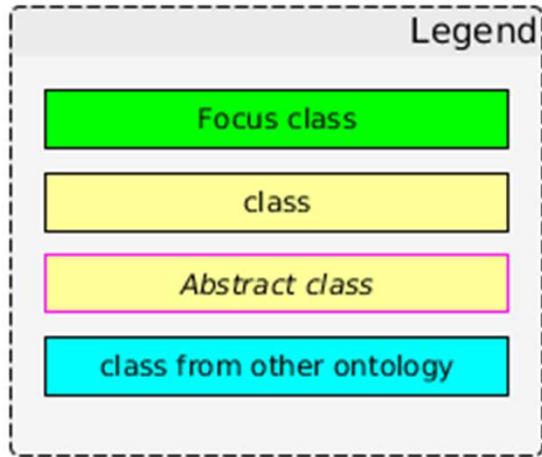
# Impressie

[/media/beheerder/USB DISK/AF presentatie/video AF Hilde.mkv](#)

# Domein HvgLeSS:Role



# HvgLeSS:Person



# Rol afhankelijk zicht - Sprint

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## TestUI for LeSS

View on the current sprint by product owner

	name	descr	item type	priority	status	sprintbacklog
Item5	item 5	test this item with the option of type	User story	Prior1	Status in development	SprintBacklogA1
Recording video	Recording video	be in the position of a video that demonstrates the use of LeSS rules in MediaWiki	User story	Prior1	Status to test	Sprintbacklog developteam1 sprint 37-38
Item6	Item 6 the first spike	Have the category spike	Spike	Prior1	Status in development	SprintBacklogB1

### Responsibility of the sprint backlogs

The responsibility of the different sprint backlogs are for the following teams (limited to 2 in our POC because we created only 2 teams):

	name	responsible
Sprintbacklog developteam1 sprint 37-38	Sprintbacklog development team 1 for the sprint week 37-38	DevelopmentTeam1
SprintBacklogB2		
... further results		

Witte

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## TestUI for LeSS

View of items to develop in the current sprint through the eyes of a stakeholder

name	descr	status
item 5	test this item with the option of type	Status in development
Recording video	be in the position of a video that demonstrates the use of LeSS rules in MediaWiki	Status to test

Jos

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## TestUI for LeSS

The user Jos has not the role stakeholder nor product owner. The view of the role of the user is not yet implemented.



# Rol afhankelijk formulier - Item

## Edit FormItemViewScrumMaster: ItemTestForms

Warning: This page already exists, but it does not use this form.

Story points:

RelatedTo:

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### Item12

Overview of the information for Item12 [\[edit\]](#)

**Name:**

<b>As:</b>	Persona2
<b>I want:</b>	Test for item 12 by the use of the form.
<b>So that:</b>	looking if it is shown in our item12 page.

**Story points:** 100

<b>Priority:</b>	Prior2
<b>Status:</b>	Status writing

**Sprint backlog:**

**Criteria:** DoD1

**Risks:** Test for Risk

**Related to:**

Depending on:

Product owner responsibility	
<b>Change information</b>	Item12/PO
<b>As</b>	Persona2
<b>I want</b>	Test for item 12 by the use of the form.
<b>So that</b>	looking if it is shown in our item12 page.
<b>Priority</b>	Prior2
<b>Bug</b>	false

Global responsibility	
<b>Change information</b>	Item12/ALL
<b>Name</b>	Item 12
<b>Status</b>	Status writing
<b>Type</b>	User story
<b>Criteria</b>	DoD1
<b>Risks</b>	Test for Risk
<b>Related to</b>	

# LeSS Bedrijfsregels

Rule of one single product owner does not hold

Only one product owner per product is allowed by LeSS.

Following persons has the role product owner for product *Impl LeSS*:  
Hilde, Jeroen, Koen

Change the roles so that only one person is product owner for the product *Impl LeSS*.

Rule of minimum one scrum master holds

Minimum of one scrum master is found for the product

Users following the LeSS methodology [\[edit\]](#)

	Is user	Has lessrole	Is part of	Works on
Hilde	Hildevg	product owner		Impl LeSS
Jeroen	Jeroen	product owner		Impl LeSS
Jos	Jos	scrum master	DevelopmentTeam1; DevelopmentTeam2	Impl LeSS
Koen	Koen	product owner		Impl LeSS



# Besluit

- ✓ Ontologie opstellen in Semantic MediaWiki
- ✓ Rol afhankelijk zicht op wiki pagina
- ✓ Rol verantwoordelijkheid afhankelijk formulier
  - Hard coded
- ✓ Bedrijfsregels voor closed world assumption



# Vervolg

- HvgLeSS gebruik in Semantic Web
  - Export van SMW naar RDF triples
  - Bevraging en redenering
  - Fresnel → rol afhankelijk beeld
- Evaluatie HvgLeSS ontologie
- Semantic MediaWiki
  - Rol afhankelijk formulier – pagina variabel
  - Event-condition-action regels
  - Open world assumption