# ISWC 2014 Industry Track
# iNowit, linked data as key element for innovation in emergency response

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Bart van Leeuwen combines his 15 years firefighting experience with 17 years of netage.nl ownership. This combination allows him to highlight a new perspective on operational information delivery.
With the ever larger amount of available data and changes in tactical approaches to firefighting new and fresh thinking is needed. As a “outside the box” thinker he helps fire departments to approach their information problems in a different way. In this process, technology is not the answer, it's an enabler and should be treated as such.
Currently he leads an innovation project where proven information management technology is combined with new paradigms like semantic web technology to deal with information flows in a smarter and agile way.

## Introduction
The iNowit Project for safety regions in the Netherlands was started in 2013, one of the key elements is the use of Linked Data for terminology and data exchange as a driver for innovation.

*Its a hot summer night somewhere on the Dutch German border, under the surface of a nature area something is smoldering, a moor fire, covering both Dutch and German territory and requiring the emergency services to work in a coordinated way together to prevent the nature area going up in flames.*
*Connecting emergency response organizations on information level across country borders is a huge challenge. Having multiple disciplines in multiple jurisdictions communicating in different languages in the heat of the moment is a very interesting use case of semantic web technology and linked data.*

## iNowit 2013
In the Netherlands the safety regions together with the national police are responsible for small and large scale emergency response on Dutch territory. In 2013 the Dutch 'safety board' , responsible for the safety regions, commissioned the iNowit project to boost innovation for information management in both incident situations and day to day operations. One of the key components is using linked data as a way to exchange formal definitions and as a data integration platform.

Netage was responsible for the initial implementation of the linked data elements of the platform:

- 'Firebrary' , Fire Library, a SKOS-XL based terminology exchange platform.
- A OSLC based API to interact with the terminology in the Firebrary.

During the project we not only gained experience with the technical details but also the more organizational problems of creating a centralized terminologies. The first implementation of the Firebrary was delivered in December 2013 and used by internal projects at various fire departments. The remarks and experiences gained since then are now the basis for the iNowit 2014 project.

**iNowit 2014**
One of the primary motivations for starting the Firebrary project has been to be able to map and compare definitions across disciplines and borders.
During large scale incidents GIS tools are used to position the operations on the map by the means of symbols. Even between disciplines the same country the symbols are not universal or not even of interest for all the disciplines.

*For traffic coordination the police is only interested if a fire truck blocks the road, not what the exact type of truck is.*

The problem with current GIS tooling is that the presentation , the symbol on the map, and the information, the data in GIS store, are completely separated. This means that it is very hard to change the representation based on the type of user. If we are able to utilize the Firebrary for matching and exchanging definitions of the underlying data we can draw maps which make sense to the discipline that looks at it.

Together with the updates to the Firebrary this years iNowit project will focus on making the connection between the presentation and data layer work better through linked data. Where the standard approach with GIS and Linked Data is the use of GeoSparql we will focus on bringing some linked data to the presentation layer through standards supported by general GIS tooling. This way the current investments in both Geo warehouses and GIS tooling will not be to waist but more advanced interfaces can leverage the extra bit of linked data.

The Dutch iNowit project also aimed on interacting with cross border initiatives focusing on linked data and semantic web technology in emergency response:
Disaster and Disaster 2.0 both funded by the European Union FP7 framework and the W3C Emergency Information Community Group.

During the talk I would like to highlight the current developments and the actual places where the linked data parts of iNowit are actually used.

**Remark**
At the time of writing the iNowit 2014 project has not yet been started. We are looking forward in sharing the actual work during ISWC 2014