

Deliverable D3.1: *Prototype Use Case Scenarios*

What is the contribution of this deliverable to the overall goals of BEST?

→ Please refer to the document “BEST Results: Overview” to get an overall picture of the relationship between BEST deliverables and project objectives.

Deliverable D3.1 illustrates the capabilities of BEST semantic containers through prototype use-cases in a SWIM enabled environment. The prototype enables experimentation and evaluation by using semantic technologies in a SWIM enabled environment. The experimental prototype development will then be described in deliverable D3.2

The use-cases developed in this deliverable:

- are used to demonstrate the capabilities of the semantic container concept defined in D2.1 (Techniques for ontology-based data description and discovery in a decentralized SWIM knowledge base) and D2.2 (Ontology-based techniques for data distribution and consistency management in a SWIM environment)
- are used by D3.2 to produce experimental prototypes to evolve the semantic container concept (D2.1) and the use cases (D3.1).

Current Status of the Deliverable

Completed, but awaits final approval by funding authority (SJU).

What items does the deliverable contain?

When we talk about a “Deliverable” in BEST, we mean not only the formal document describing the work done, but also any associated technical artefacts such as software, models, ontologies, diagrams etc.

See also: “Explanatory Notes” following the table.

Item#	Brief Description	What it can be used for
1	Motivation: Semantic Data Container (chapter 2)	Establishes an understanding of how the idea of a Semantic Data Container Concept was born. Introduces the definition of Semantic Data Container Concept based on D2.1 and illustrates the possibilities through use-cases.

2	Operational Scenarios (chapter 3)	This chapter describes the operational scenarios that will be adopted to support the development, configuration and deployment of prototype applications that will support the demonstration activities to be performed within the BEST project
3	Prototype Use Cases (chapter 4)	This chapter lists the use cases derived from operational scenarios to be supported and implemented by the prototype applications in order to achieve the previously stated goal. In addition it describes the main benefits of semantic containers.
4	Future Work (chapter 5)	Exploratory research gives a wider view. Therefore, this chapter discusses things that are beyond the scope of this deliverable but should be mentioned for future work.

Explanatory notes:

1. Item 2 assume that SWIM is already rollout and fully established, the enhancement through the semantic data container can be seen as an additional improvement to SWIM
2. The use cases selected in item 3 are chosen to be realized as experimental prototypes in D3.2

What details can I find in the deliverable document?

Details about what?	Reference
Semantic Data Container Benefits	Chapter 2
Demonstration of the Semantic Data Container Concept	Chapter 4
Illustration of the applied Development approach to SWIM	Chapter 5

How can I access parts of the deliverable that are not part of the formal document?

B. Neumayr, E. Gringinger, C. G. Schuetz, M. Schrefl, S. Wilson and A. Vennesland, "Semantic data containers for realizing the full potential of system wide information management," 2017 IEEE/AIAA 36th Digital Avionics Systems Conference (DASC), St. Petersburg, FL, USA, 2017, pp. 1-10.

<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8102002&isnumber=8101896>

<http://project->

[best.eu/downloads/Semantic%20Data%20Containers%20for%20Realizing%20the%20Full%20Potential%20of%20System%20Wide%20Information%20Management.pdf](http://project-best.eu/downloads/Semantic%20Data%20Containers%20for%20Realizing%20the%20Full%20Potential%20of%20System%20Wide%20Information%20Management.pdf)

I. Kovacic, D. Steiner, C. G. Schuetz, B. Neumayr, M. Schrefl, S. Wilson "Ontology-based data description and discovery in a SWIM environment," 2017 Integrated Communications, Navigation and Surveillance Conference (ICNS), Herndon, VA, 2017, pp. 5A4-1-5A4-13.

<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8011928&isnumber=8011878>