

[General](#) Details Positioning in V-Model Relevance and Benefit for MBSE Risks and Impediments

Additional Resources

Editor	Peter Gerber
Additional experts	
Short Description/ Transmitted Information	<ul style="list-style-type: none"> • Neutral language/data model for any kind of knowledge, not restricted to mechatronics or software systems • W3C Semantic Web standards
Application Scope	<ul style="list-style-type: none"> • Collaboration • Validation
Maturity	<ul style="list-style-type: none"> • Productive Usage
Goals	<ul style="list-style-type: none"> • General knowledge representation with automated processing • Provision of logically consistent models for any domain
Penetration	<ul style="list-style-type: none"> • Widespread Domains
Visibility	<ul style="list-style-type: none"> • Approx. 50%
Promoting Bodies	<ul style="list-style-type: none"> • ...
Type	<ul style="list-style-type: none"> • ...
IT Standard Classification	<ul style="list-style-type: none"> • ...
Data Format	<ul style="list-style-type: none"> • ...
Relations to other standards	<ul style="list-style-type: none"> • XML, OWL
Overlap with other standards	<ul style="list-style-type: none"> • UML, SysML, AutomationML, OPC UA, ReqIF, etc. (unrestricted)

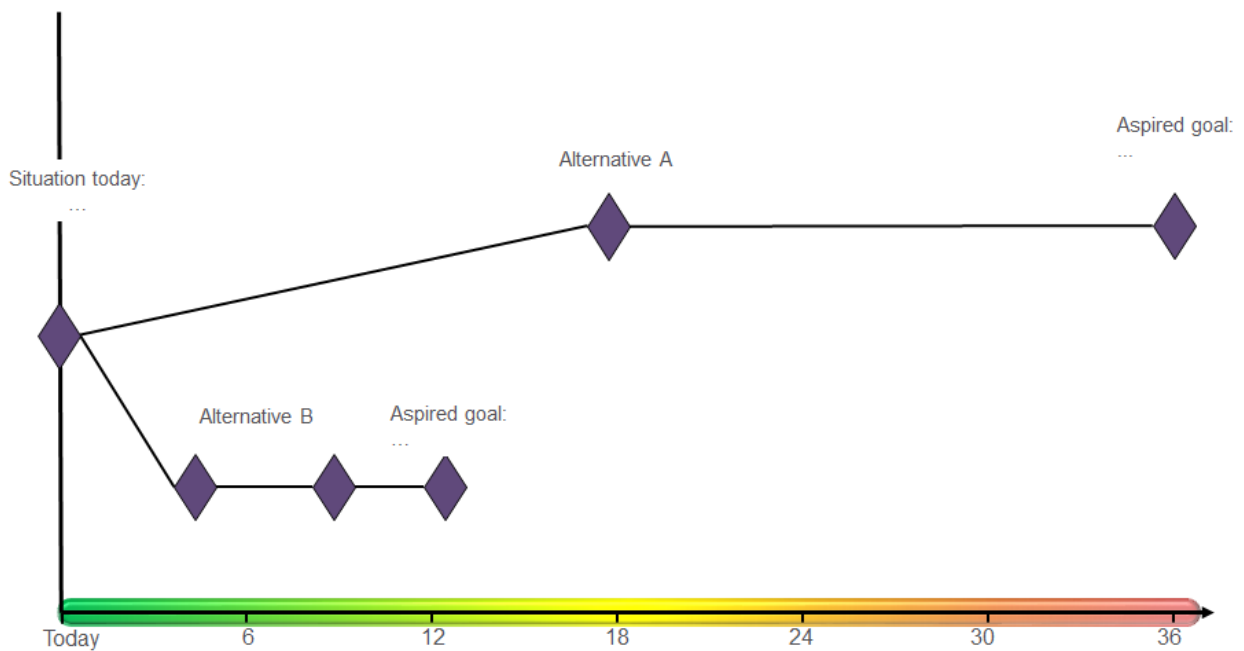
Available accompanying documentation (Software vendors)	• <u>1</u> ..
Available accompanying documentation (Industry Users)	• <u>2</u> ..
Available accompanying documentation (Management)	• <u>3</u> ..

General [Details](#) Positioning in V-Model Relevance and Benefit for MBSE Risks and Impediments

Additional Resources

Reasons from Industry (example):

- Increase consistency, clarity and efficiency of multi-disciplinary model engineering by providing an underlying general-purpose, machine-readable semantic model and language that allows for automated interlinking and integration of different models
- Enable standardized automated processing and linking of knowledge from multiple domains
- Improve efficiency of communication, collaboration, exchange and management of knowledge across domains, business segments and organizations (interoperability)
- Increase efficiency in both systems engineering and software engineering
- Support automation in data/model exchange and processing
- W3C domain-independent standard enabler for logically consistent semantic models

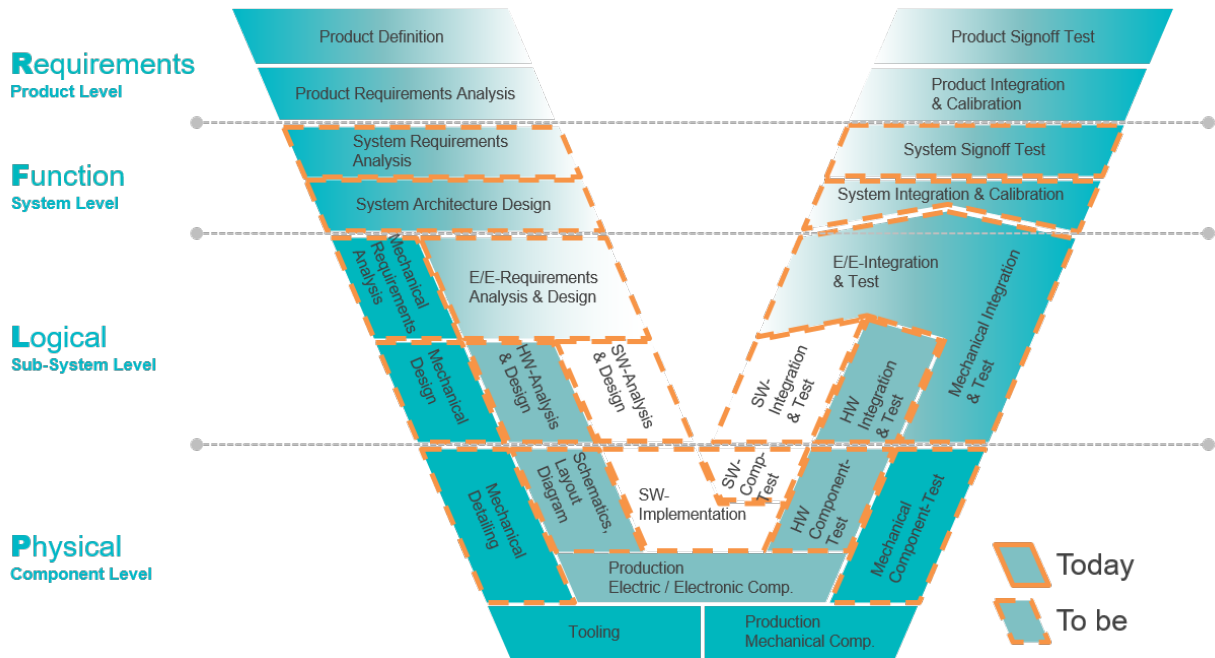


General [Details](#) [Positioning in V-Model](#) Relevance and Benefit for MBSE Risks and Impediments

1 <https://open-services.net/>
 2 <https://open-services.net/>
 3 <https://open-services.net/>

Additional Resources

Positioning of RDF in V-Model



General Details Positioning in V-Model [Relevance and Benefit for MBSE](#) Risks and Impediments

Additional Resources

- RDF is a standard model for representing information in the Web. It enables modeling of a semantic net

General Details Positioning in V-Model Relevance and Benefit for MBSE [Risks and Impediments](#)

Additional Resources

1 What happens if we do nothing:





- Slow pocedere , Company specific incompatible semantic models
- Models remain processable only with specific tools despite high standardization efforts while still being restricted to single (sets) of use cases
- High efforts for individual software development regarding model engineering and management
- Industry 4.0 etc. promote semantic models for interoperability, with RDF/OWL as an important building block, thus separated development streams could lead to fundamental inconsistencies and hinder continuous model exchange

2 Risks:

- Too few experts available for required enablement of today's SW applications
- Insufficient coordination of activities result in incompatible methodologies and approaches
- Intended engineering efficiencies in cross-enterprise collaboration can't be achieved

General Details Positioning in V-Model Relevance and Benefit for MBSE Risks and Impediments

Additional Resources

Datei	Geändert
 image2019-10-1_13-16-38.png ⁴	Nov. 24, 2020 by Peter Tabbert ⁵
 image2019-10-1_13-12-33.png ⁶	Nov. 24, 2020 by Peter Tabbert ⁷
 Positioning of RDF in V-Model.png ⁸	gestern um 9:29 vorm. by Peter Tabbert ⁹
 Fact Sheet_ Ressource Description Framework (RDF).pdf ¹⁰	vor weniger als einer Minute by Peter Tabbert ¹¹

4 https://intranet.prostep.org/download/attachments/22806700/image2019-10-1_13-16-38.png?api=v2

5 <https://intranet.prostep.org/display/~petertabbert>

6 https://intranet.prostep.org/download/attachments/22806700/image2019-10-1_13-12-33.png?api=v2

7 <https://intranet.prostep.org/display/~petertabbert>

8 <https://intranet.prostep.org/download/attachments/22806700/Positioning%20of%20RDF%20in%20V-Model.png?api=v2>

9 <https://intranet.prostep.org/display/~petertabbert>

10 <https://intranet.prostep.org/download/attachments/22806700/>

[Fact%20Sheet_%20Ressource%20Description%20Framework%20%28RDF%29.pdf?api=v2">Fact%20Sheet_%20Ressource%20Description%20Framework%20%28RDF%29.pdf?api=v2](#)

11 <https://intranet.prostep.org/display/~petertabbert>