

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

Additional Resources

Editor	Michael Stoye
Additional experts	see: http://ecad-wiki.prostep.org/doku.php?id=contributors:start
Short Description/ Transmitted Information	<ul style="list-style-type: none"> • Comprehensive universal data format for the complete electrical network • Capable to build a tool-independent digital product model supporting the design paradigm of a “logical mock-up” (LMU)
Application Scope	<ul style="list-style-type: none"> • Data Exchange • Collaboration • Archiving
Maturity	<ul style="list-style-type: none"> • Productive Usage
Goals	<ul style="list-style-type: none"> • Reduction of design effort while complexity rises • Change management with full traceability • Independence from tool vendors
Penetration	<ul style="list-style-type: none"> • Individual domains
Visibility	<ul style="list-style-type: none"> • Approx. >80% (Germany)
Promoting Bodies	<ul style="list-style-type: none"> • VDA • ProSTEP iViP
Type	<ul style="list-style-type: none"> • VDA Recommendation • Prostep iViP Recommendation
IT Standard Classification	<ul style="list-style-type: none"> • Interoperability Standard • Modeling Standard • Integration Standard
Data Format	<ul style="list-style-type: none"> • Text Format (ASCII / XML)
Relations to other standards	<ul style="list-style-type: none"> • none

Overlap with other standards	<ul style="list-style-type: none"> • Kabelbaumliste (KBL) → see: <ul style="list-style-type: none"> • https://de.wikipedia.org/wiki/Kabelbaumliste • https://ecad-wiki.prostep.org/specifications/kbl/
Available accompanying documentation (Software vendors)	<ul style="list-style-type: none"> • Implementation Guidelines • Recommended Practices • Testing Files <p>see ECAD-Wiki: ecad-wiki.prostep.org¹</p>
Available accompanying documentation (Industry Users)	<ul style="list-style-type: none"> • Whitepapers • Best Practices
Available accompanying documentation (Management)	<ul style="list-style-type: none"> • Promotion Day (WEKA Bordnetzkongress Landshut, VEC-Day)

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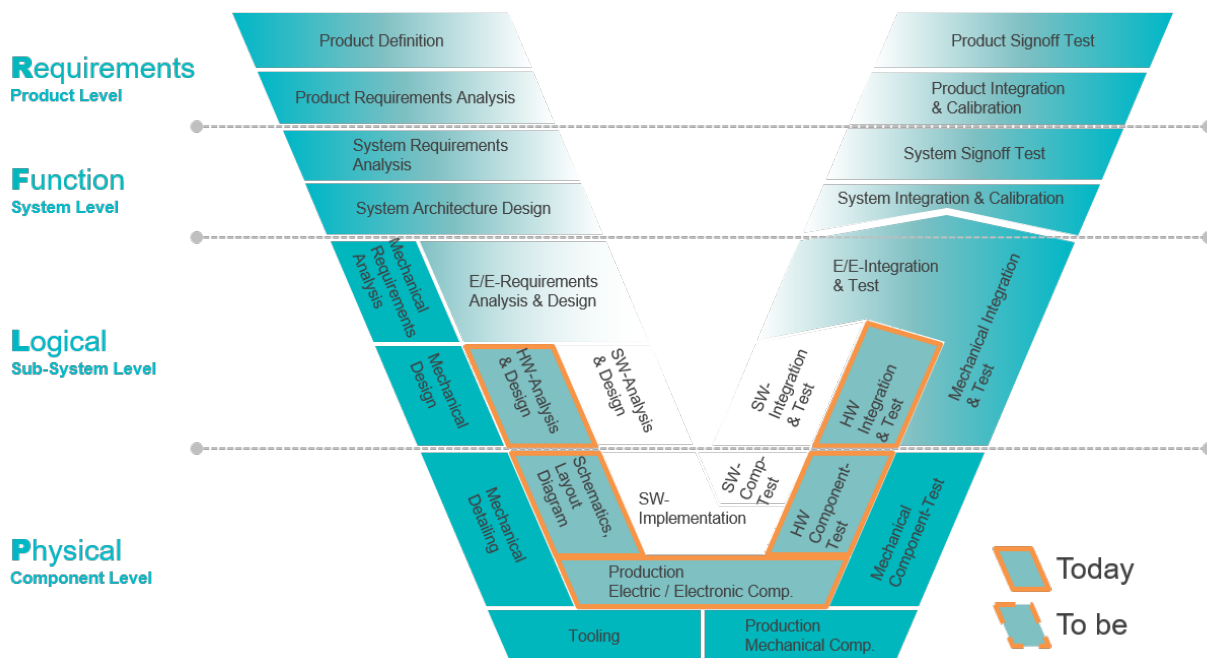
- The VDA recommendation 4968 “Vehicle Electric Container (VEC)” defines an information model, a data dictionary, and an XML schema derived from and compliant to the model. The intention of the model was to cover a wide range of use cases and application scenarios. For this reason the specification had to be kept generic in some degree and in some aspects. However, for specific scenarios and / or use cases a more detailed description on “how the different pieces fit together” is possible. To avoid dialects in the different VEC implementations, further guidelines or recommendations are necessary. This collection of implementation guidelines contributes to the unambiguous interpretation of the VEC standard. For various wiring harness definition or electrical system aspects and scenarios the correct instantiation is shown and specific hints for correct usage are given. Further information and specification documents can be found here: <http://ecad-wiki.prostep.org/doku.php?id=tutorials:vec:start> The ECAD IF performs test rounds with implementing system vendors to allow an easy access to and assure an accurate and compatible implementation of the VEC model.

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¹ <http://ecad-wiki.prostep.org/>

Positioning of VEC in V-Model



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- Comprehensive universal data format for the complete electrical network
- Capable to build a tool-independent digital product model supporting the design paradigm of a “logical mock-up” (LMU)
- Enables traceability processes on digital representation of the electrical network
- Enables a bidirectional transformation between the design domain and the manufacturing domain, which reduces the effort of design change propagation

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What happens if VEC will not be implemented and industrialized?

- Tool-independent digital product model supporting the design paradigm of a “logical mock-up” (LMU) will fail
- Dependencies from vendor-specific solutions will increase

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Datei	Geändert
 image2019-10-9_14-55-9.png ²	Nov. 25, 2020 by Peter Tabbert ³
 Positioning of VEC in V-Model.png ⁴	gestern um 9:43 vorm. by Peter Tabbert ⁵
 Fact Sheet_ Vehicle Electric Container (VEC).pdf ⁶	vor weniger als einer Minute by Peter Tabbert ⁷

² https://intranet.prostep.org/download/attachments/22806791/image2019-10-9_14-55-9.png?api=v2

³ <https://intranet.prostep.org/display/~petertabbert>

⁴ <https://intranet.prostep.org/download/attachments/22806791/Positioning%20of%20VEC%20in%20V-Model.png?api=v2>

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

⁶ <https://intranet.prostep.org/download/attachments/22806791/>

[Fact%20Sheet_%20Vehicle%20Electric%20Container%20%28VEC%29.pdf?api=v2](https://intranet.prostep.org/download/attachments/22806791/Fact%20Sheet_%20Vehicle%20Electric%20Container%20%28VEC%29.pdf?api=v2)

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