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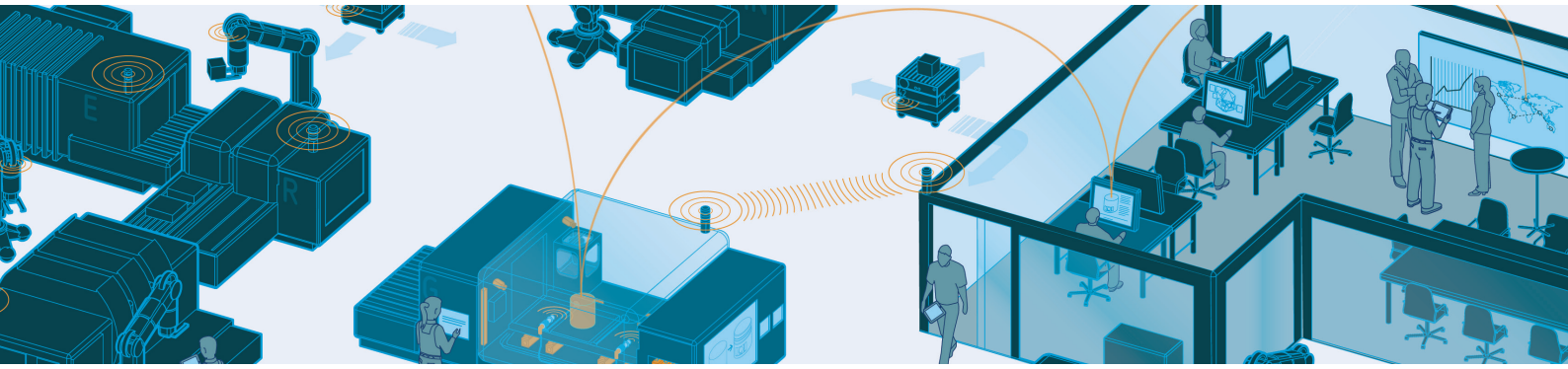


Industrie 4.0:
Product criteria for Industrie 4.0 technologies

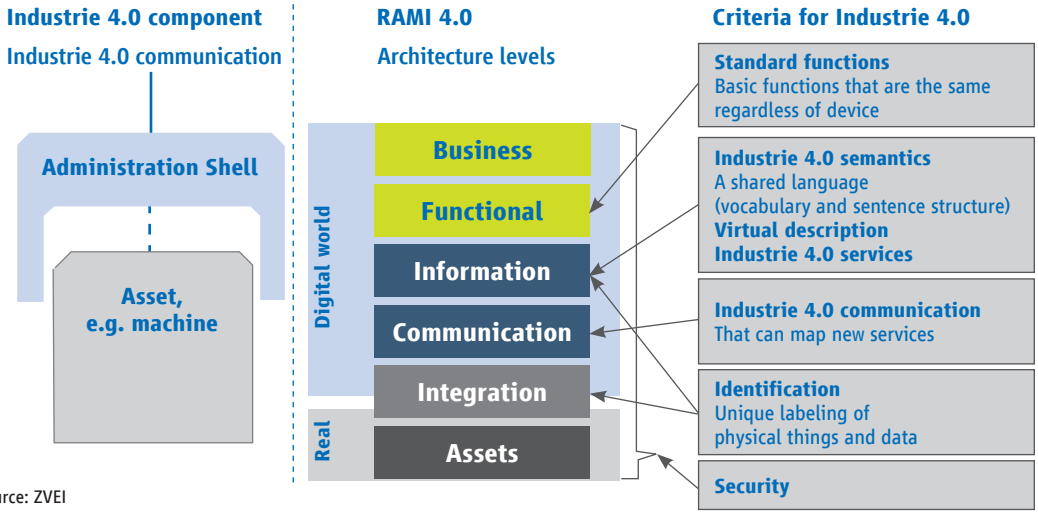
Which properties does a product need in order to be Industrie 4.0 compatible? The Reference Architecture Model Industrie 4.0 and the Industrie 4.0 component provide a basic method and orientation. Nonetheless, answering this question has been difficult until now. Currently there are an immense number of terms and labels that appear to confirm the Industrie 4.0 or IoT capabilities of products.

Therefore, based on the Reference Architecture Model Industrie 4.0 (RAMI 4.0) and the Industrie 4.0 component, ZVEI is developing manufacturer-independent product criteria that will provide buyers with information regarding the Industrie 4.0 capabilities of products in the future. The product criteria are designed so that they not only provide an orientation aid for buyers, but will also become guidelines for manufacturers when developing future Industrie 4.0 product generations. They also highlight the need for research and standards.

The Industrie 4.0 product criteria

The criteria are based on RAMI 4.0 and in particular on the properties of the Industrie 4.0 component (see figure 1). They are divided into three categories that build on one another: Industrie 4.0 Basic, Industrie 4.0 Ready and Industrie 4.0 Full. To be placed in one of these three categories, a product must fulfil all the properties of the category in question. The distinguishing features of the properties are the cross-manufacturer approach and service orientation.

Figure 1: Product criteria are based on RAMI 4.0 and the Industrie 4.0 component



Source: ZVEI

Contact:
Gunther Koschnick
Managing Director
Automation Division
Phone: +49 69 6302-318
E-mail: koschnick@zvei.org

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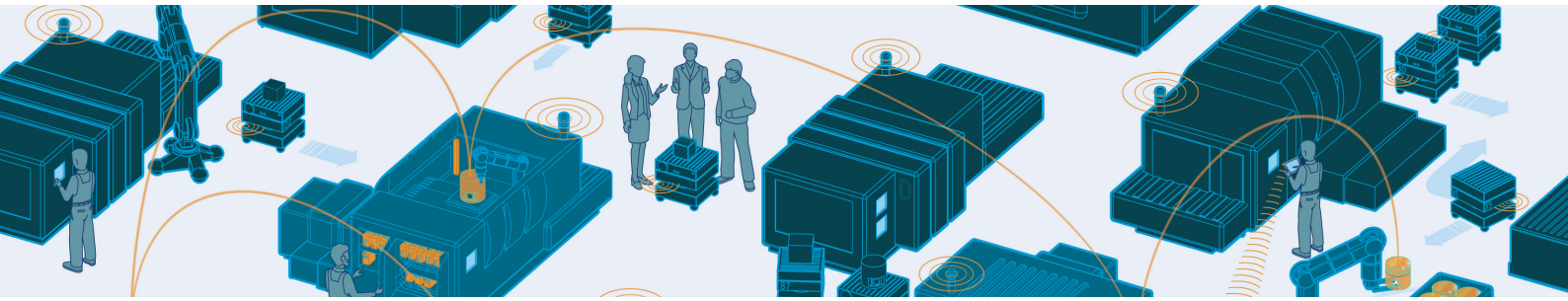
Author:
Martin Hankel,
Bosch Rexroth

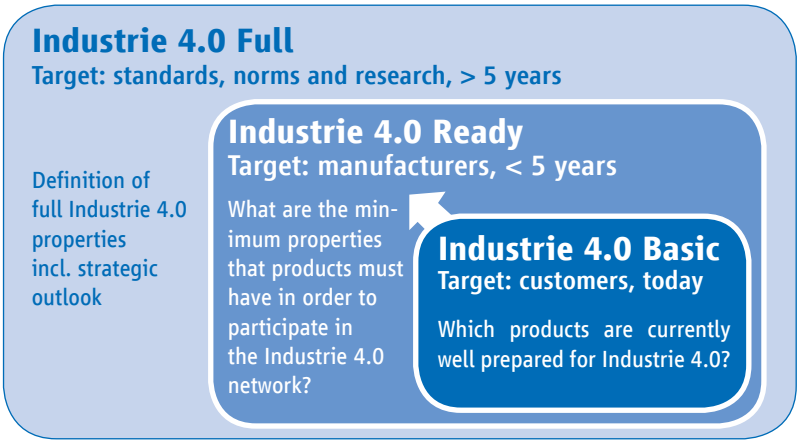
ZVEI:
Die Elektroindustrie



Further Information:
For more details on Industrie 4.0 please visit our website www.zvei.org/industrie40

- **Industrie 4.0 Basic** is the basic category and includes products that are suitable for Industrie 4.0 according to today's standards.
- The **Industrie 4.0 Ready** category provides information on which properties products could have in the future to be Industrie 4.0 compatible. These criteria will most likely become relevant in the next 1–5 years.
- **Industrie 4.0 Full** is the category for products with maximum Industrie 4.0 characteristics. The criteria in this category are still extremely vague and are in the process of being defined. For this reason, from today's perspective they have an anticipatory character and serve to provide a preview of a future Industrie 4.0 and thus of upcoming standards and norms.

Figure 2: Product criteria for Industrie 4.0



Source: ZVEI

What are the benefits of Industrie 4.0 product criteria?

The product criteria provide an initial cross-manufacturer, general, and manufacturer-independent orientation and information regarding what is particularly important when it comes to categorizing an Industrie 4.0 product. They provide cross-company, and therefore future-proof prescribed wording. They provide direction for manufacturers regarding which products are already well prepared for Industrie 4.0 as well as which properties could be particularly important for Industrie 4.0 compatible products in the future.

Using Industrie 4.0 product criteria

The criteria relate to products, not to entire solutions.

The manufacturers check for themselves whether their products meet the criteria and can then assign their Industrie 4.0 label. They decide for themselves whether to use the designation 'Industrie 4.0 Basic'.

The criteria have consciously been kept extremely simple and we do not have plans to provide certification. They can be used free of charge and every company has free access to the specifications.

Next steps

ZVEI will examine the criteria for all three categories annually and revise them if necessary. At this time, the criteria will be adapted to the current conditions and developments. This will make it easy to take new developments into account. Industrie 4.0 Basic will increasingly move towards Industrie 4.0 Ready over the next few years. Thus, in the future, Industrie 4.0 Ready will describe the common requirements for an Industrie 4.0 product. Industrie 4.0 Full describes the maximum characteristics for Industrie 4.0 products.

An initial publication of the criteria is planned for November 2016, meaning a first orientation will be available for 2017. In 2017, we will perform the first check so that the first update can be published in November 2017.

ZVEI - German Electrical and Electronic Manufacturers' Association
Lyoner Strasse 9 • 60528 Frankfurt am Main, Germany • Phone: +49 69 6302-0 • Fax:+49 69 6302-317 • E-mail: zvei@zvei.org • www.zvei.org