German industry launches standardization initiative for Industrie 4.0: “Standardization Council I4.0” founded

bitkom DIN DKE VDE DIN VDMA ZVEI: Die Elektroindustrie

German industry launches standardization initiative for Industrie 4.0: “Standardization Council I4.0” founded

Digitalization requires proactive standardization

The comprehensive networking of technical systems and processes taking place with the digitalization of industry and infrastructure is leading to an increasing merger of the physical and virtual worlds. The Internet of Things and Services is breaking down the barriers between often clearly distinct application fields like electrical engineering, machine building and IKT. This development requires regulations and structures that must be effective across the boundaries of previously separate technical sectors such as manufacturing industry, the energy system and the transportation infrastructure. Existing standardization structures have to deal with the challenges posed by the convergence of the systems and the resulting needs for universal regulations for interfaces and communication structures.

In the IT and Internet world, standardization is frequently supported by industrial groups organized in forums and consortia. On the other hand, consensus-based standardization has been established for decades and is supported in Germany by DIN and DKE and on the international level by ISO and IEC. This has proven to be an indispensible instrument for opening up markets, in particular for the strong base of small and midsized enterprises in Germany. Moreover, consensus-based standardization ensures a consistent set of standards. Both standardization approaches have their pros and cons. The objective of standardization (for example, safety, usability, interoperability and market acceptance, etc.) shall be the decisive criterion for choosing the better way.

Under these conditions, successful standardization for the digitalization of industry that reflects the interests of German business can only be proactive, cross-industry and include all relevant groups and standardization organizations, whether they are consensus-based or consortia. Furthermore, the consensus-based standardization bodies of DIN and DKE must collaborate with the standardization bodies of the IT and Internet world in order to provide industry with a platform that represents their interests. At the same time, this will ensure a consistent approach by the various participating organizations and associations in regard to standards. Both standardization approaches have their pros and cons. The aim of standardization (for example, safety, usability, interoperability and market acceptance, etc.) shall be the decisive criterion for choosing the suitable path.

In order to organize this cross-industry coordination and to bundle and focus the interests of German business, the industrial associations bitkom, VDMA and ZVEI – together with DIN and DKE and Platform Industrie 4.0 – established the “Standardization Council I4.0” at the Hannover Messe. The Council is strategically coupled to Platform Industrie 4.0, and implements the industry strategies developed by the Platform (including reference architectures and standards) to advance Industrie 4.0 standardization efforts. The Council is organizationally separate from the Platform Industrie 4.0 and is based with the DKE German Commission for Electrical, Electronic & Information Technologies of DIN and VDE e.V.

bitkom DIN DKE VDE DIN VDMA ZVEI: Die Elektroindustrie

For the small and midsized enterprises typical for the capital goods industry, this would enable their sustainable participation and collaboration in the existing legal and regulatory framework of national and international standardization organizations. The Council is comprised of industry representatives nominated by the associations bitkom, VDMA and ZVEI, representatives of the standardization organizations DIN and DKE, and representatives of research institutions and universities. In order to ensure efficient and focused work within the Council, industry has taken over a supervisory function through its associations.

The Council's main tasks lie in the coordination and initiation of new or existing standards for Industrie 4.0 and in a coordinated representation of interests vis-à-vis international consortia of the IT and Internet world. In addition, the Council organizes and develops the German standardization roadmap for Industrie 4.0. It is the central element of an overall standardization strategy, identifies standardization needs, and bundles the presented results. The Council determines the need for new standardization projects and assigns its nominated experts to draft these projects in the responsible international organizations or consortia where, as in the past, operative standardization work is carried out. This accelerates and optimizes, in the interest of German business, the convergence of office-floor and shop-floor communication through common standards.

This newly established "Standardization Council I4.0" will also support the actual implementation of Industrie 4.0 in testbeds. By working closely with the "Labs Network Industrie 4.0" association founded by German industry to organize testbed scenarios, new "concepts for Industrie 4.0 solutions" can be directly tested and validated in practice. The results and findings then flow directly into standards, and new standardization needs for practical applications can be directly addressed. This concerted standardization approach is so far unique worldwide, and has the potential to serve as a blueprint for other cross-industry technology sectors.

bitkom DIN DKE VDE DIN VDMA ZVEI: Die Elektroindustrie