

BIM in the HVAC Industry

Konrad Werning

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Vision – How we see ourselves

- The ARGE sees itself as a driver of digital industry processes.
- The ARGE as an innovation leader and bearer of know-how provides services that continuously generate market benefits for its members.
- The ARGE establishes standards and creates optimized processes and systems in cooperation with its market partners.
- The ARGE makes sure that the market partners obtain top-quality data and services in a fast and easy manner, and in a timely fashion.

➔ EXPERT IN DIGITAL INDUSTRY PROCESSES IN HVACR

- **Business form:** e. V.
- **Founded in:** 1988
- **Headquarters:** Paderborn
- **Staff:** 15
- **Members:** 116

Our members

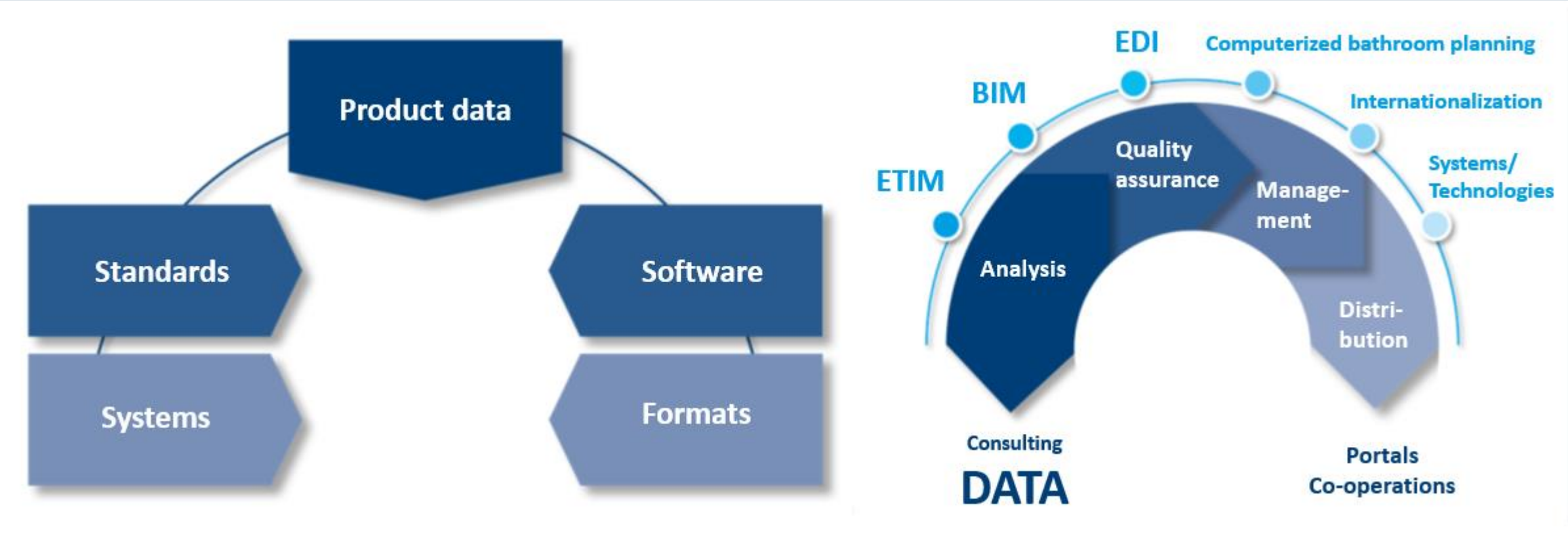


30 years of experience

Competence in digital HVACR



Building digital competence



BIM from the ARGE point of view

BIM is a co-operative working method by means of which information and data can be collected consistently, managed, and communicated transparently, and which serves as the basis for the representation of a building's life cycle (source: BMVI).

BIM capability of data means a combination of 3-D geometries and alphanumeric information to facilitate the integration of such data in a planning process at any time.



BIM from the ARGE point of view



- Data creation
- Data validation and management
- Data distribution
- Market observation
- BIM trends also outside the HVAC industry
- Coordination within the HVAC industry with market partners

➔ Full Service Organization

Status quo:

- Content, range and depth of the BIM-relevant product features have yet to be formulated.
- Software- and IT-system interfaces need to be adapted.
- The digital synthesis that BIM is actually based on has not yet been put into general practice.

The ARGE-CADENAS cooperation

The objectives:

- Fast and easy generation/processing of BIM-capable data
- Operation/further development of an ARGE BIM portal
- Cost-optimized distribution
- Data provision in the formats required by the market



The ARGE-CADENAS cooperation

Services include

- Data generation and advice for ARGE members
- Software for data provision (data creation done by the industrial company)
- ARGE BIM portal for data distribution and website integration
- Acquisition of own login- and registration mechanisms
- App development
- BIM CAD plugins
- Member-specific workshops



Data import & export possibilities

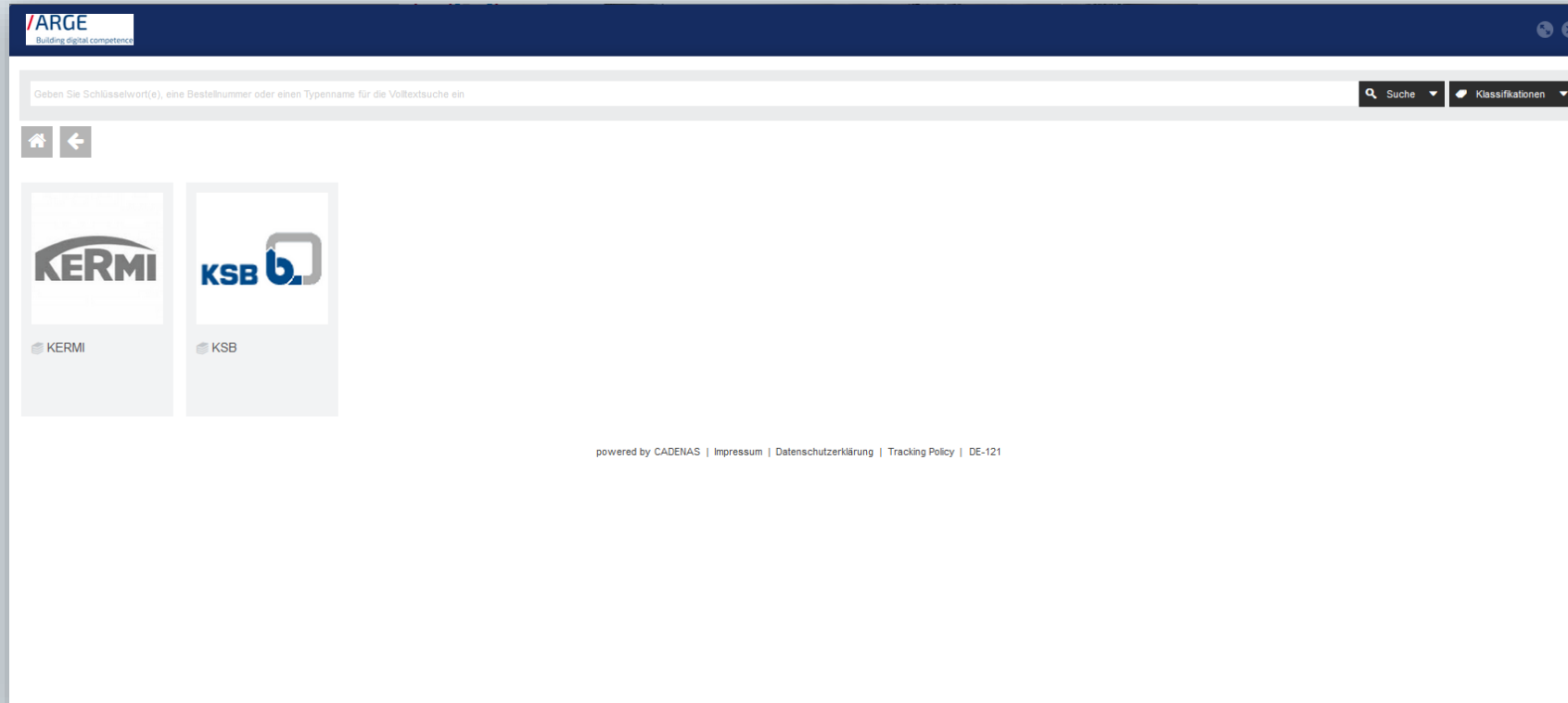
Import possibilities (text attributes + geometry):

1. BMEcat + STEP
2. CSV + STEP
3. VDI 3805
→ Format about to become a standard in the HVAC industry
4. Autodesk Revit data
5. Combination of BMEcat + data modelling
6. Data modelling and master data creation

Export possibilities from the portal (excerpt):

- RFA (Revit)
- GSM (ArchiCAD)
- NDW (Allplan)
- SKP (Trimble Sketchup)
- 3ds
- DWG 2-D and 3-D (AutoCAD)
- DXF 2-D (AutoCAD)
- IFC (interchange format)
- VWX (Vectorworks)
- VDI 3805 (SB)
- and many more*

The ARGE BIM portal



The ARGE BIM portal
embedded in the
HVAC industry portal
operated by the ARGE

The ARGE BIM portal

The screenshot displays the ARGE BIM portal interface. At the top, there is a search bar with the text "Geben Sie Schlüsselwort(e), eine Bestellnummer oder einen Typenname für die Volltextsuche ein" and a search icon. Below the search bar, there are navigation icons for home, back, and a German flag, followed by the product name "PumpDrive 2 B" and a breadcrumb trail: "KSB > Produkte > Automatisierung > PumpDrive".

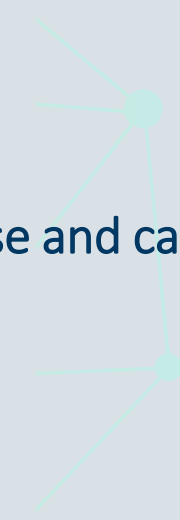
On the left side, there is a table titled "Auswählbare Produkte: 12" showing a list of product variants with their respective dimensions. The table has columns for the product name and its dimensions (LENGTH, WIDTH, HEIGHT, PD TYP, C).

Product Name	Dimensions
PMPDRV Pump Drive	PumpDrive 2
PD Pump drive size	B
LENGTH Lenght	290.000 mm
WIDTH Width	211.000 mm
HEIGHT Height	166.000 mm
PD TYP	2.000 mm
C	155.000 mm

On the right side, there are two buttons: "CAD herunterladen" and "PDF Datenblatt". Below these, there is a section for the selected product "W20291W13-400" with a "Download" button. At the bottom, there are tabs for "3D" and "2D" views, and a 3D model of the PumpDrive 2 B device is displayed.

Configuration of the products and download of BIM-capable data in more than 40 formats

- Requirements on product data are constantly increasing.
 - Uniform requirements (standardization) are an essential prerequisite for BIM.
 - The industry has to be actively involved in BIM.
- The ARGE accompanies and supports the industry. It sets the course and can respond flexibly to market situations.



CADENAS, as a partner to the ARGE, lays the technological foundations for the creation and distribution of BIM-capable data from the industry.

Thank you very much for your attention!

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Discussion round

