Key Group Figures 2017

- € 230.7 billion sales revenue
- 10,875,000 vehicles produced in 2017
- An average of approximately 44,000 vehicles produced every working day
- 123 production plants worldwide
- 642,292 employees
- 355 models
Process and system development must be transformed in order to remain fit for the future

Capabilities
- Function-oriented product development
- Digital twins
- Production-oriented product design

Situation
- New business processes (e.g. digital PEP with focus on digital protection)
- New business methodologies (e.g. system engineering)
- Actual IT-landscape (e.g. monolithic structures)

Necessity to merge relevant processes and IT systems
Change run sometimes fast

New York - 1900
Only 1 Car

New York - 1913
Only 1 Horse
JT Strategy (presentation @ JT Day 2016)

Vision

Usage of one continuous, neutral and standardized data format JT

Mission

Implementation of JT in Product Development and Digital Manufacturing process chains, transition from 3D-viewing format to a strategic process format

Target Fields

Design processes:
Methods and processes of JT usage as a process- and exchange format are defined, standardized, committed and accepted

Data Management:
JT is an established geometry format in all process-relevant PDM-systems

Data Usage:
JT can be used directly (read and write) in all process-relevant authoring and downstream systems

JT Data Format:
One consistent JT version and one unique data format is defined with all stakeholders

Fundamentals

► Active participation and contribution in JT committees
► Usage of JT ISO-Standard
► Avoidance of proprietary development / enhancements
► Process change to JT if functional and/or monetary advantage is expected
► Reveal synergies and use them
► Usage of group standards
Goals of the new IT-development with JT-Backbone
The JT strategy is an important success factor in achieving the company's goals

Reach More People
Reach more user and delight them

Reach Higher
Realize a better return on your investment

Reach Across Business Processes
Frame your future with choice technology
The magic triangle
The balanced triad of people, process and tools is the basis of success
The wave of IT-investigation
Today, the dissolution of organizational shackles is far more difficult than the replacement of technology

Wave 1: up to the 90s
- monolithic systems
- low use standard SW

Wave 2: until 2010
- Multi-Tier
- Corporate SOA

Wave 3: today
- decoupling systems
- service architecture

Volkswagen is mostly performing in Level I and Level II in the CAD, BoM and PDM areas.
Service platform strategy
Future landscape is based on group wide standard services and brand specific Business Technology Services
Decoupling as an integration strategy
The decoupling and specialization of technical services enables stronger specialization per service at lower cost.

AS IS
- Show JT
- Import JT
- Export JT

TO BE
- Create JT
- Read JT
- Show JT
- Export JT
The new tasks for IT
from IT project management to result-oriented process improvements

- Higher added value and the importance of new technologies for the company as a whole
- Agree standards and structures for consistent cross functional and multi domain data integration
- Define and implement standards for data security
- Enabler und innovator partner for business processes
- Provide end-to-end service levels
The new tasks for the business
from single requester to process owner with clear target picture

- Instead of formulating individual requirements, the business must define an overall target picture with clear identification of the value contribution to this target.
- Business has to develop a special skill profile that combines IT and strategic business competence.
- Those responsible for processes in the business divisions should no longer outsource their responsibilities within the framework of PMTO activities to central departments. » Put them in the driver’s seat! «
Organizational structure „project-/process house“
Bringing experts together in teams increases the speed of finding solutions

1. **Lead (1)**
   - Brand takes over responsible with support of
     - Process Owner
     - Technical Solution Architect
     - Coach

2. **Core-Team (n)**
   - Experts from group take over role
     - Scrum Master
     - Business Architect
     - IT Architect
     - Developer
   - Expert from brands take over role
     - Scrum Team

3. **Extended Teams**
   On demand role integration if „Subject matters“ experts in the role of
   - Process Manager
   - Key User
   - Data Manager
   - Infrastructure Manager
   - Security Manager
   - Purchase Manager
   - Legal Manager
Information flow across all brands and integral process partners

The management of information flows must be carried out with the highest priority.

By integrating all business areas, a "data hub" is created for all component-related data.
How to Foster the alignment between business and IT
What a company needs to be able to do to be successful

“Business-capability mapping is the process of modeling what a business does to reach its objectives (its capabilities), instead of how it does it (its business processes).” – Denise Cook

Capabilities, the link between the disciplines. Drive technology enablement and enterprise transformation decisions.

Source: FIK/D, Volkswagen Group IT
Example Production@Audi
Assembly planning

- To ensure assembly planning, complete vehicles and production cycles must be loaded as JT data
JT Enhancement
Added Value for Wiring Harness Design and Downstream Processes

Challenge:
- Geometric representation for electrical harnesses contains only half the truth.

Solution:
- A special translator embeds the VEC - which contains the whole harness information - into the harness JT which subsequently can be analyzed with a dedicated viewing component docked to a standard viewing tool.

Use cases where the geometric position of the electrological function is relevant can be reviewed in context of the vehicle geometry.
We increase our speed in terms of profitability, innovative powertrains and sustainability