## CPO Report 2018

January 2018



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### Content

1.CPO Motivation & Drivers2.CPO DIN SPEC Standardization3.CPO accredited Certification

## **Executive Summary:**

- CPO is means for realizing Industrie 4.0 & Society 5.0\*
- CPO will be published as DIN SPEC Standard in Q1/2018
- CPO accredited certificates available from Q2/2018 on

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### Industrie 4.0 & Society 5.0 Aims

## **Openness is Enabler! Be Smart & Fast! CPO** is the means!

- Seamless connectivity
- Future-readiness
- Reduction of Complexity
- Agility & Flexibility
- Cost-reduction



### 30% of all costs are integration costs

## DAIMLER

The Code of PLM Openness (CPO) is the foundation for Daimler's PDM strategy and serves as the basis for the **externalization of business objects from all IT applications to a service-oriented middleware**. This is a key driver for an IT system landscape with different development speeds and release cycles, whereby the implementation of the Digital Twin, the introduction of model-based Systems Engineering as well as the delivery of IT for Autonomous Driving will be enabled.

Dr. Siegmar Haasis, CIO Research&Dev. Mercedes-Benz Cars Volkswagen

Volkswagen, like all other automotive OEM's, has invested highly in its existing IT systems. The migration to new systems – especially for large monolithic systems – requires huge efforts and costs. Hence the extreme importance for Volkswagen for the **assurance of interoperability, supportability, cost effective maintainability and scalability** of the implemented systems.

Matthias Keller, Head of PDM

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## Code of PLM Openness (CPO)

Means for realizing Industrie 4.0 & Society 5.0

- Seamless Integration Plug & Play
- Reducing Complexity & Costs
- Increasing Agility & Flexibility

Standard Criteria Catalogue for

 Interoperability, Infrastructure, Extensibility, Interfaces, Standards, Architecture, Partnership

Patronage of BMWi (Ministry for Economic Affairs)

 Standardized as DIN SPEC 91372 (as basis for ISO-Standardization)

#### Trust at the Market

Accredited Certification Program

Open for Everybody: <a href="https://www.prostep.org/en/cpo">www.prostep.org/en/cpo</a> cf. <a href="https://en.wikipedia.org/wiki/Code\_of\_Openness">https://en.wikipedia.org/wiki/Code\_of\_Openness</a> 

 Technical Aspects
 Non-Technical Aspects

 Capabilities
 IT Customer

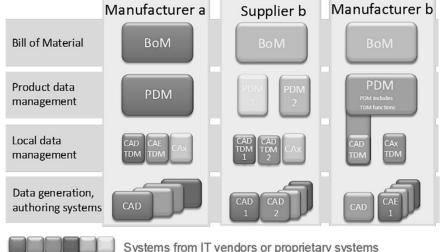
 Interoperability
 Portability

 IT System
 IT Customer

 Interfaces
 Standards

 Architecture
 IT Service Provider

 PLM-Openness
 Mapufacturer b



## **76 Committed CPO-Partners**

**IT Customers** 

- Adient
- Airbus .
- Altran
- BMW Ť
- Bosch •
- Continental
- Daimler
- Dräxlmaier
- EDAG Ford
- Fuji Heavy Industries
- Hino Motors
- Honda R&D
- Isuzu Motors
- Küster

- Mazda Motor ×.
- Mitsubishi Motors Nissan Motor
- Porsche
- Schaeffler
- Siemens .
  - SMP Group
  - Suzuki Motor
- thyssenkrupp Toyota Motors
- Volkswagen
- Volvo AB
- Yamaha ۰.
- Yazaki •
- ZF Friedrichshafen

- Actano
- Aras 1

- Autodesk
- AVL List
- **BETA CAE Systems**
- BOS
- Cideon
- **CONTACT Software**
- CONWEAVER
- Dassault Systèmes
- dSPACE
- ECS
- Elysium
- ESI ITI
- Eurostep
- Gamma Technology
- HCL

- **IBM** -
- **IPG** Automotive
- ISD

**IT Vendors** 

- Kronion
- MathWorks
- **Mentor Graphics** .
- 5 Modelon AB
- Müller-BBM -
- **Noesis Solutions**
- PROSTEP 2
- PTC
- Rocket Software 1
- SAP
- Siemens PLM
- TechniaTranscat
- Theorem

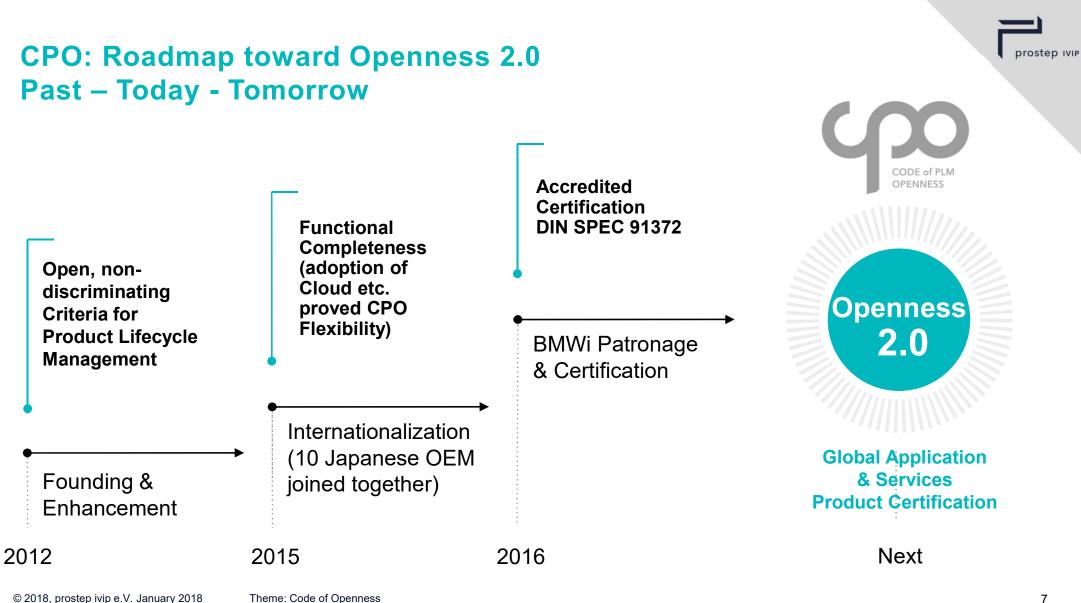
#### **IT Service Provider**

- Atos
- CADFEM
- :em
- enso managers
- InMediasP
- igs Software
- M.E.B.
- MetaRatio
- NTT Data
- Seeburger
- SSC-Services Ξ.
- T-Systems
- xPLM

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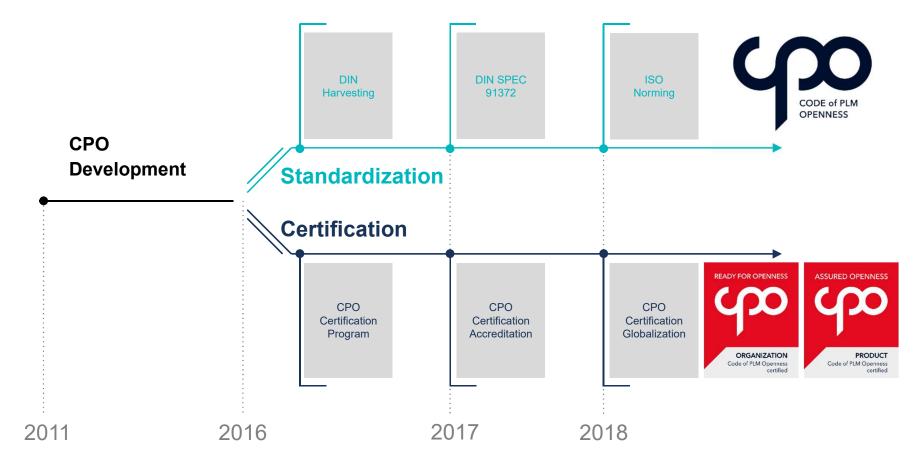
Theme: Code of Openness

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### **Roadmap: DIN SPEC & Accredited Certification**



Theme: Code of Openness

## **CPO DIN SPEC Standardization**

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## **CPO DIN SPEC Standardization**

DIN SPEC is a strategic instrument for establishing and disseminating specifications

- Fast way to assure national and international support /acceptance (standardization)
- Market players are used in relying on national and international standards
  - incl. certification bodies

DIN SPEC Standardization of CPO and Certification-relevant Documents:

- PSI 16 (CPO V1.4): DIN SPEC 91372-1 (public in 03/2018)
- Certification Handbook: DIN SPEC 91372-2 (public in 04/2018)
- CPO/Handbook Mapping: DIN SPEC 91372-3 (public in 04/2018)

Team: CPO Core Team + Certification Experts

		März 2018
	DIN SPEC 91372-1	DIN
IC\$ 35.240.50		
Code of PLM Openness ( IT Offenheitskriterien;		A
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## Status: Management Summary (Step 1)

### **Proceeding:**

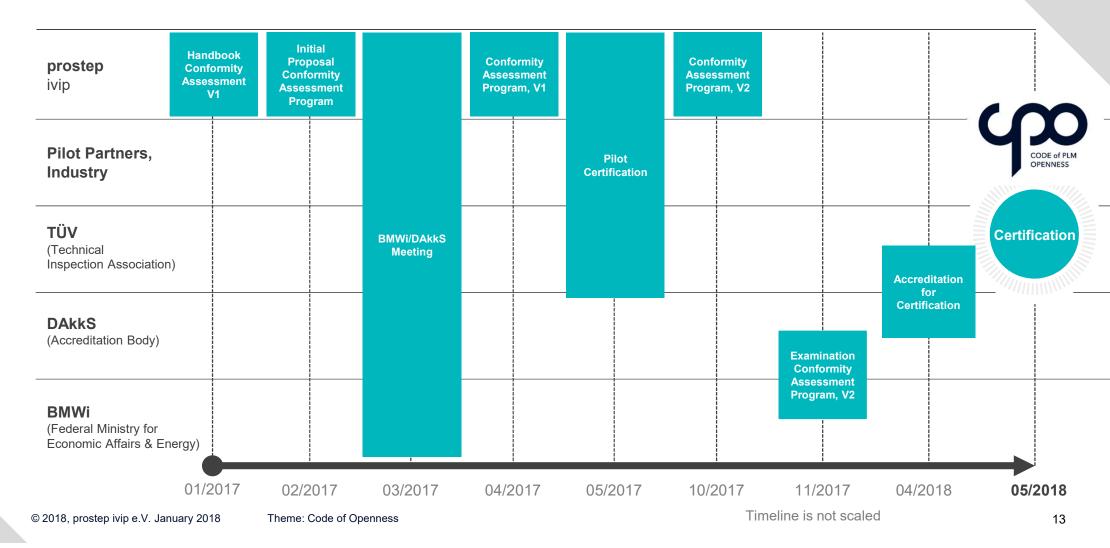
- Gaining support of German government (BMWi) and Accreditation Body (DAkkS)
- Developing a certification program (Step 1: Organization) for IT vendors, based on CPO
- Assuring high-quality and practicability of the program by conducting certification pilots
- Applying for accreditation of the program at the DAkkS
- Supporting certification on the market (same as with ISO 9000 etc.), from Symposium 2018 on

### **Review Piloting:**

- · Documents (certification ref. book, program, list of requirements) realized and communicated
- Pilot certification started
  - · Pilot partners (incl. place of audit, size):
    - CONWEAVER (Germany, SME)
    - HCL (India, big group)
    - PROSTEP AG (Germany, SME)
    - PTC (US, big group)
    - SIEMENS PLM (UK, big group)
  - Pilot audits results very positive
  - Lessons learned incorporated into Certification Handbook

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## **CPO Certification (Step 1) Roadmap**



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## **Outlook: Product Certification**

### CPO Certification follows 2-steps-approach:

Step 1: Organizational Certificate (define method, gather experiences, open market)

⇒ Ensure readiness of organizations to realize IT Openness (equivalent to ISO 9001 for quality management)

Step 2: Product Certificate (enhance existing documents, add specific technological KPI)

 $\Rightarrow$  Ensure IT Openness

### Status:

Step 1 is operational in 04/2018 (see slides before)

Step 2:

- First discussions started in CPO Core Team in 03/2017
- Strong alignment with Japanese OEM desired
  - Meeting with Japanese OEM on 01.12.2017
- Concrete specification phase of technological KPI will start in 01/2018
  - Decided at CPO Core Team Meeting on 23.11.2017



## **Latest Public Relation Activities**

# **Events & Blogs:** Symposium 2017



http://blog.prostep.org/2017/05/17/it-openness-certification/



https://www.beuth.de/de/publikation/it-systeme-fuer-plm/279072451

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Theme: Code of Openness

### Internet:

CPO Homepage: http://www.prostep.org/en/cpo

Wikipedia: https://en.wikipedia.org/wiki/Code\_of\_Openness

### White Paper:

CPO and Cloud: Impact Analysis

Standization: DIN SPEC 91372-1



## Thank you for your Attention

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## www.prostep.org

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