Global Summit 2025 New Orleans

Speed up your MBD

Jan Stothfang

Jazz up your Knowledge | Innovate in Harmony | Transform Tomorrow

Jan Stothfang

CEO at B&W Software

- 20 years of ProE and Creo admin experience
- 10 years CEO at B&W
- MBD enthusiast

www.linkedin.com/in/jan-stothfang-aa4500140/

jan@buw-soft.de

B&W Software

PTC Development Partner

- Independent Provider of PTC Creo add-ons
- Based in Erlangen (Germany)
- 16 employees

https://www.linkedin.com/company/28443662/

jan@buw-soft.de

What to expect in the next 40min

- Introduction
- Motivation
- MBD – How to Start?
  - Classify models
  - Prepare model infrastucture
  - Manage Meta Data
  - Annotate
  - Color Code
  - Export
- Live presentation
- Outlook

Motivation vor MBE / MBD

Enterprise

Manager

- Time to market
- Save money
- ROI

Administrator

- Harmonize
- Standardize
- Simplify

User

- Speed up
- Use automation
- Minimize standard tasks

Software provider

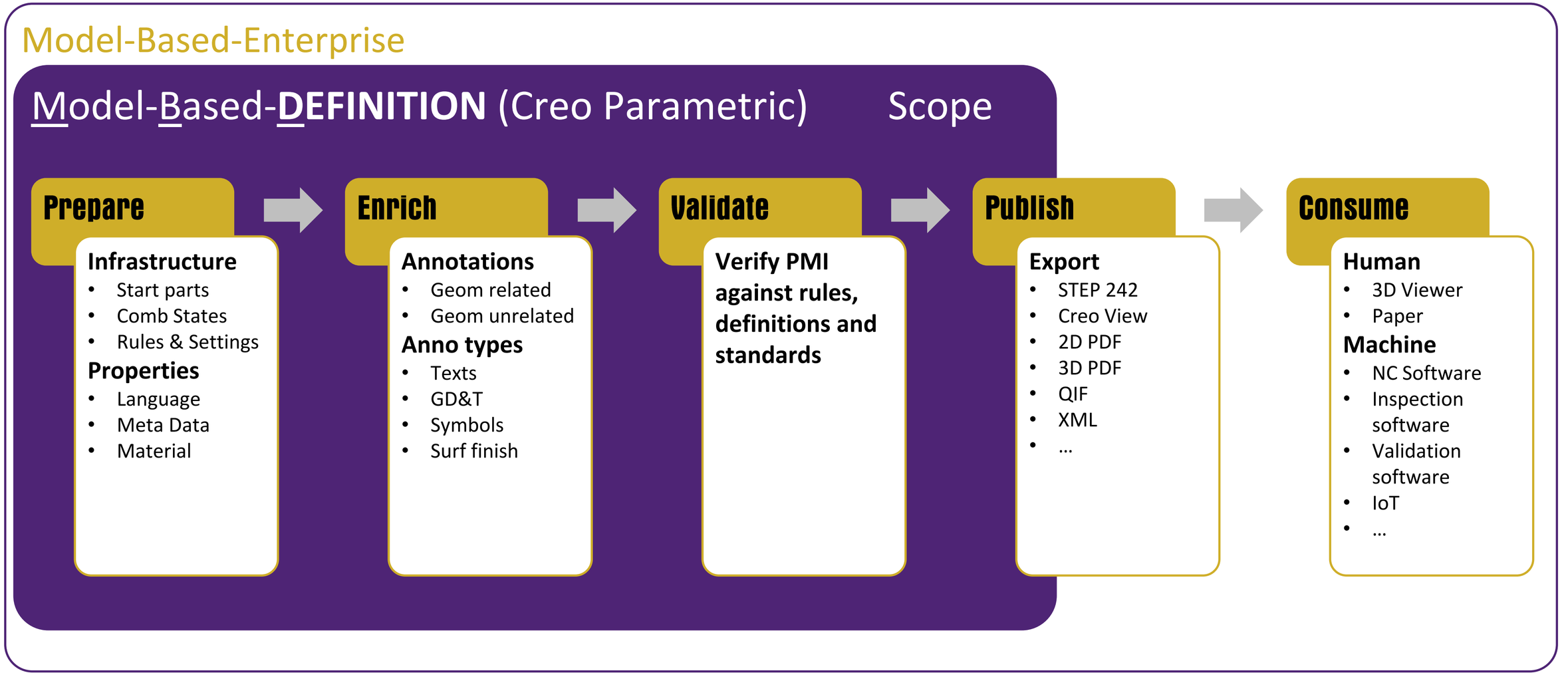
- Improve MBD workflow by providing a software platform that is
  - Flexible and easy to use
  - Connected and easy to set up and administer
  - Affordable

MBD

How to start?

Scope

Simplified MBD/MBE Process



MBD – Workflow

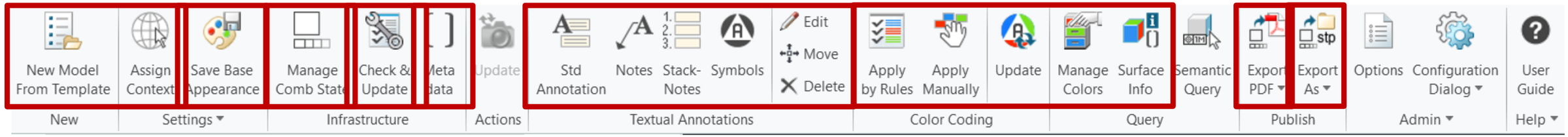
How to start a MBD model in Creo?

- Start from scratch
  - Use a ‚Template‘
  - You are fine ☺ (…for the moment…)
- Re-use an existing part
  - From Library, copy from existing, download from internet, …
  - You may miss a lot of items like Combined States, Layers, Orientations, Parameters, …

Immediate questions

- What if the template changes or does not satisfy my requirements?
- How many templates do I need?
- How do I add all my missing items?
  - How do I even know what I need?

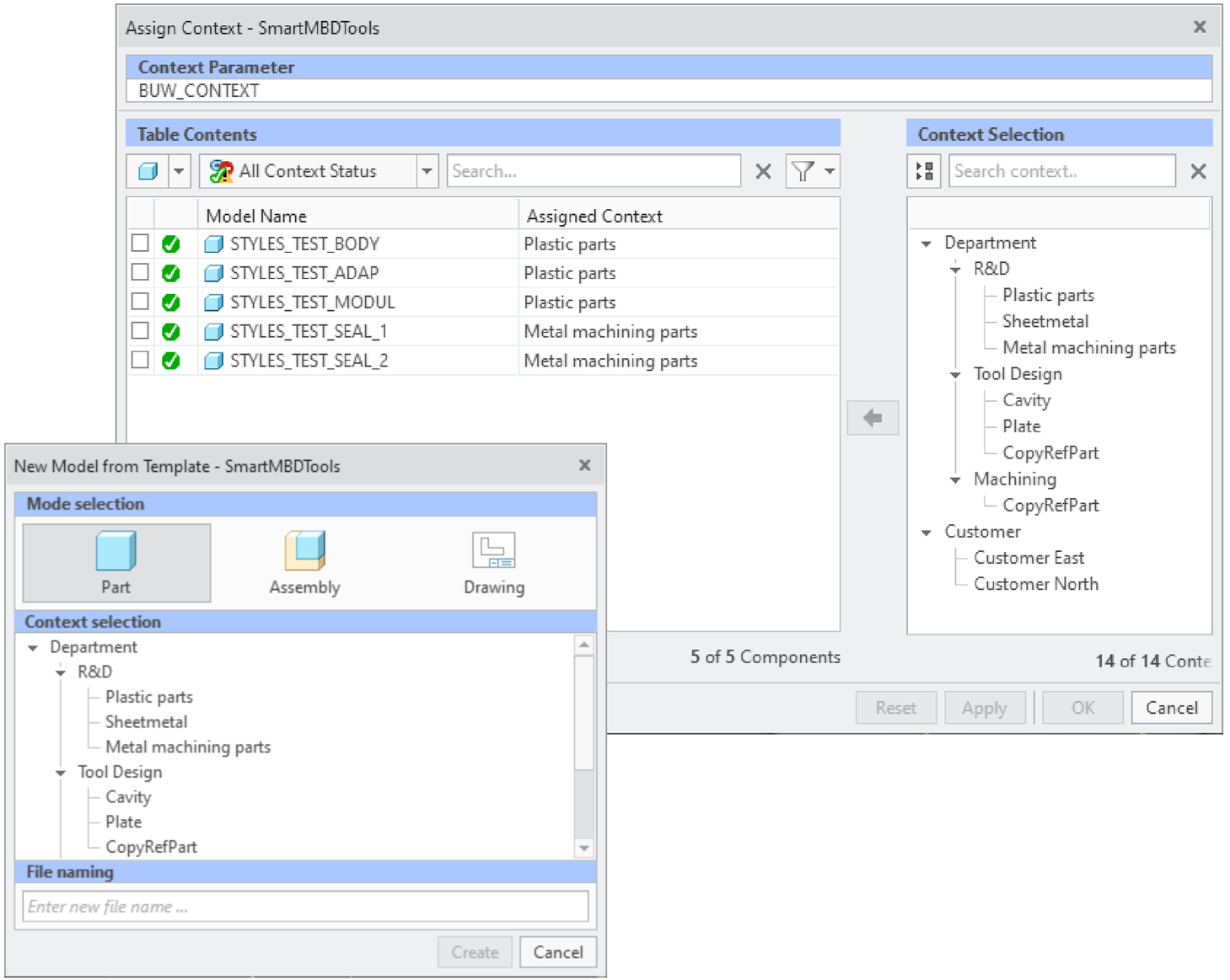
SmartMBDTools



- Context Management
- Combined State Management
- Check & Update
- Meta Data Management
- Textual Annotations
- Color Coding
- 2D PDF Export

Context Management

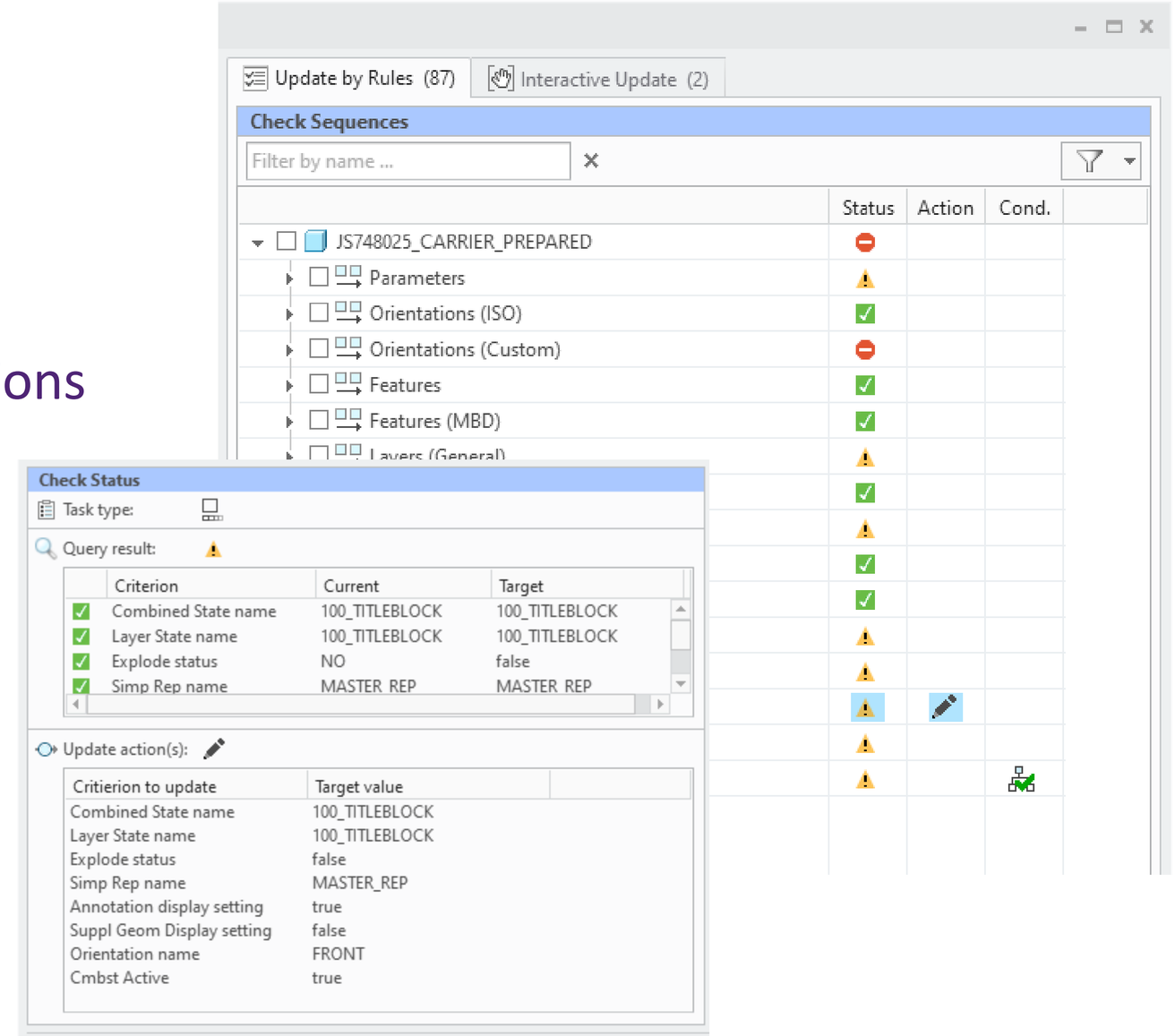
- Capabilities
  - New Model from Template
    - Add model parameter and its dedicated value
    - File name validation
  - Assign Context
    - Change value of Context parameter
- Benefits
  - More specific automation and user support
  - Simplify workflow for new models and drawings



Check & Update

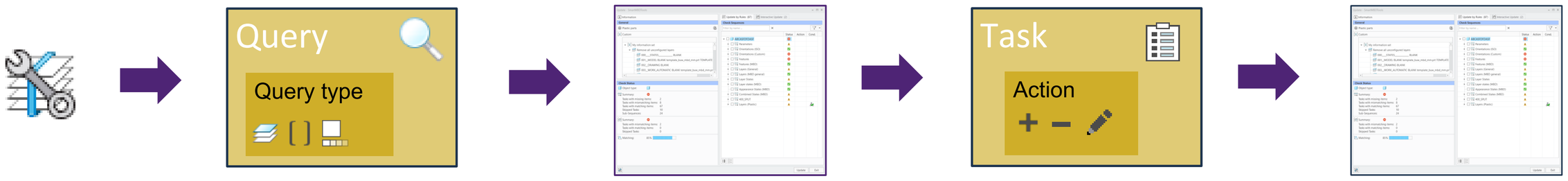
- Capabilities
  - Context depending rule sets
  - Checking for multiple object types
  - Updating according to results
  - Condition evaluation
  - 2D and 3D check and update functions
  - Batch mode (seperate license)
  - Gate keeping mechanism

- Benefits
  - Automatic updating legacy models
  - Improve data quality



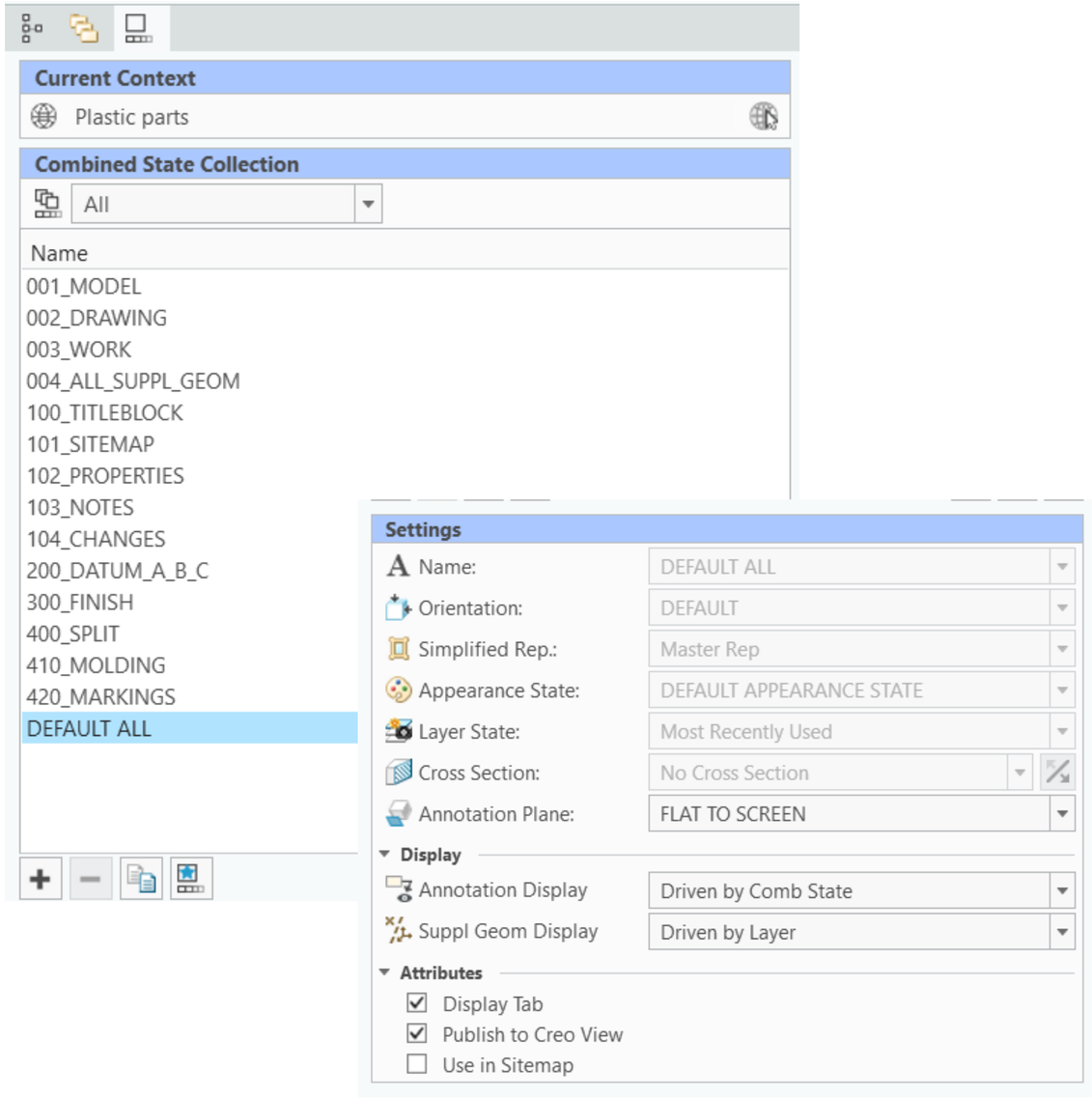
Check & Update

- Workflow
  - User starts Check & Update
    - (optional) Command sequence is executed
    - Model is checked according to Queries (depending on Context)
  - User dialog is presented
    - Tasks & Actions are listed
  - User selects tasks and starts updating process
    - Software runs the Update Tasks
  - User dialog is presented with results



Combined States Management

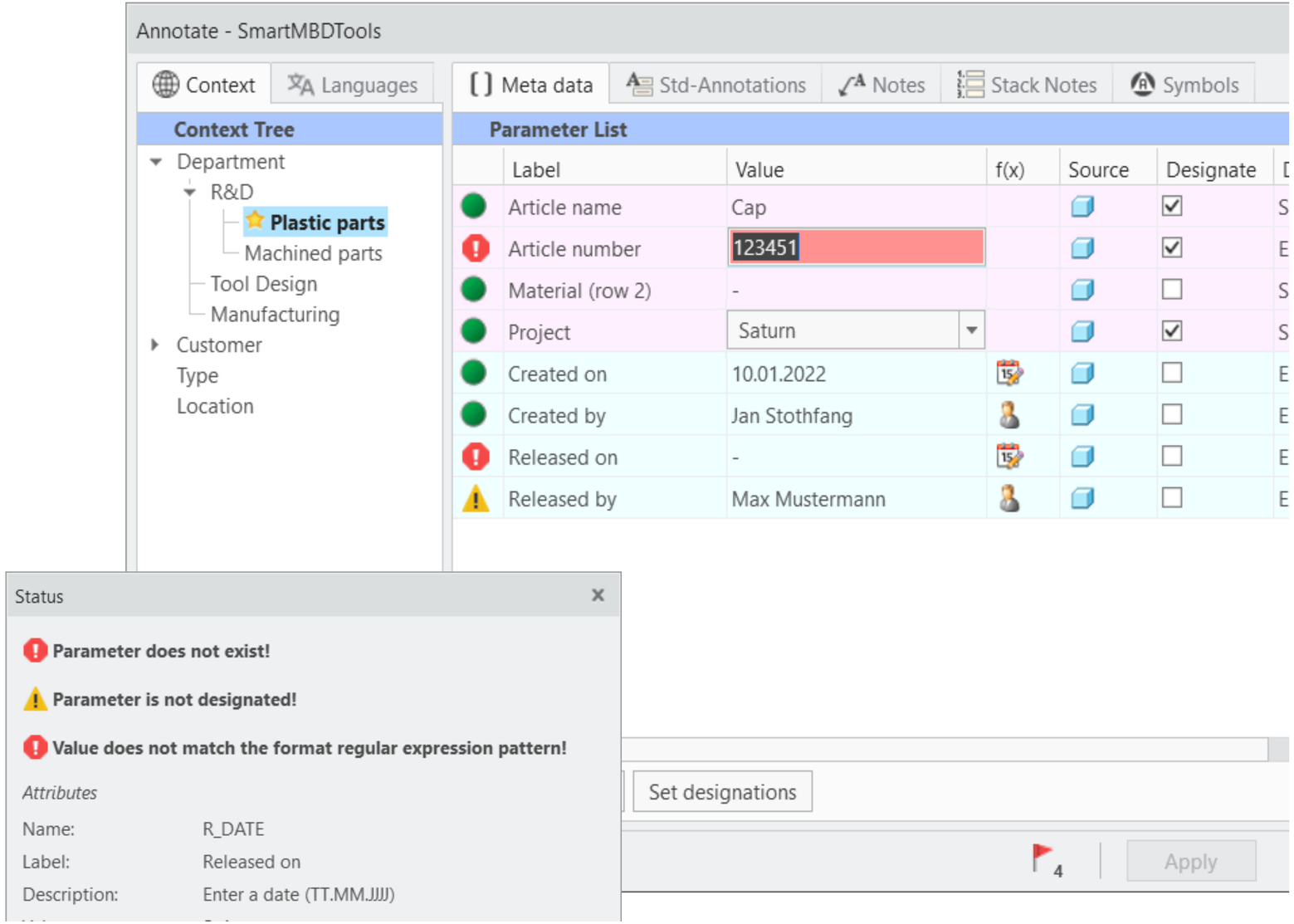
- Capabilities
  - In Navigator pane
  - Combined State creation support
  - Filter mechanism (Collections)
- Benefits:
  - Improved workflow and overview
- Work in progress
  - Update to configured settings
  - Sitemap support
  - Support for dedicated annotation planes and features



[ ] Meta Data Management

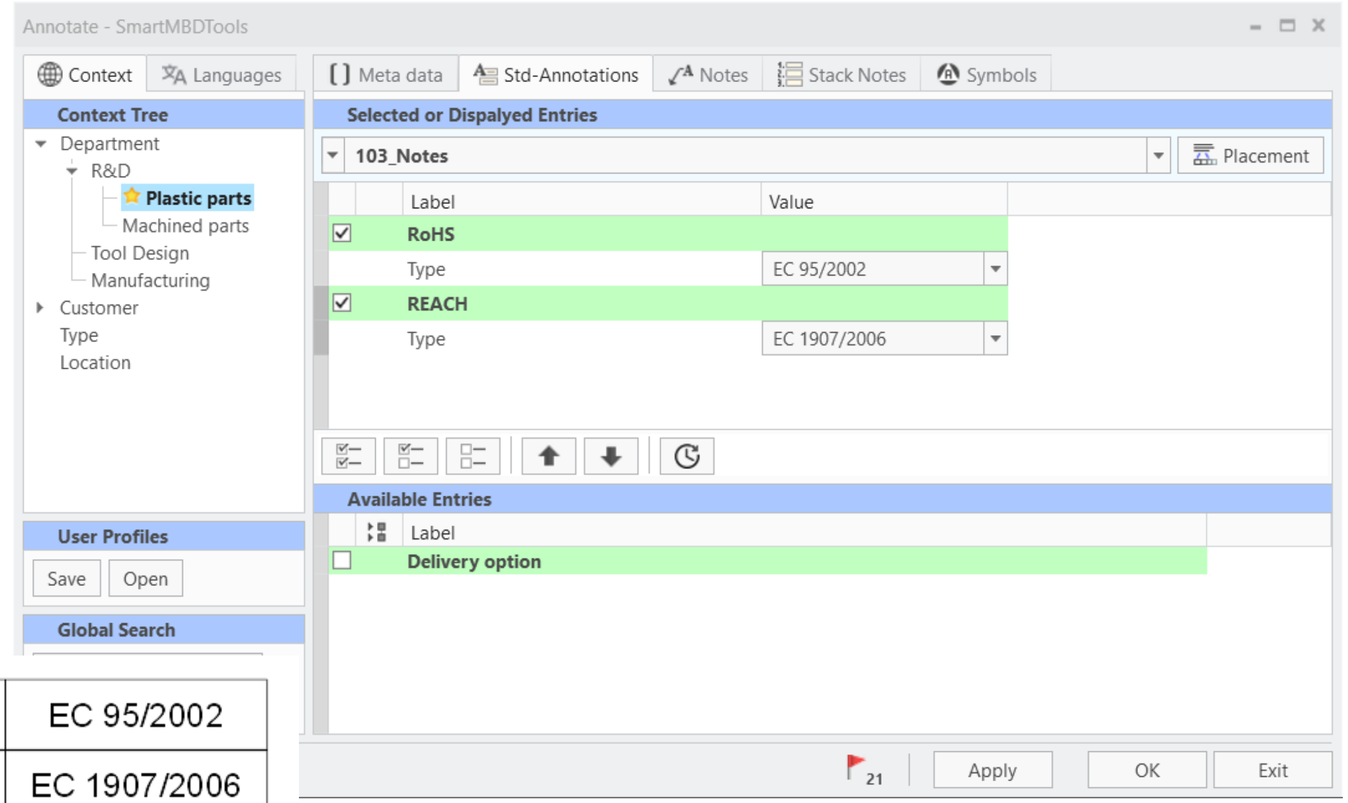
- Capabilities
  - Context dependent list
  - Create missing params
  - Set designations
  - Provide selection lists
  - Value checking
  - Value functions

- Benefits:
  - See above



Annotate – Std Annotations

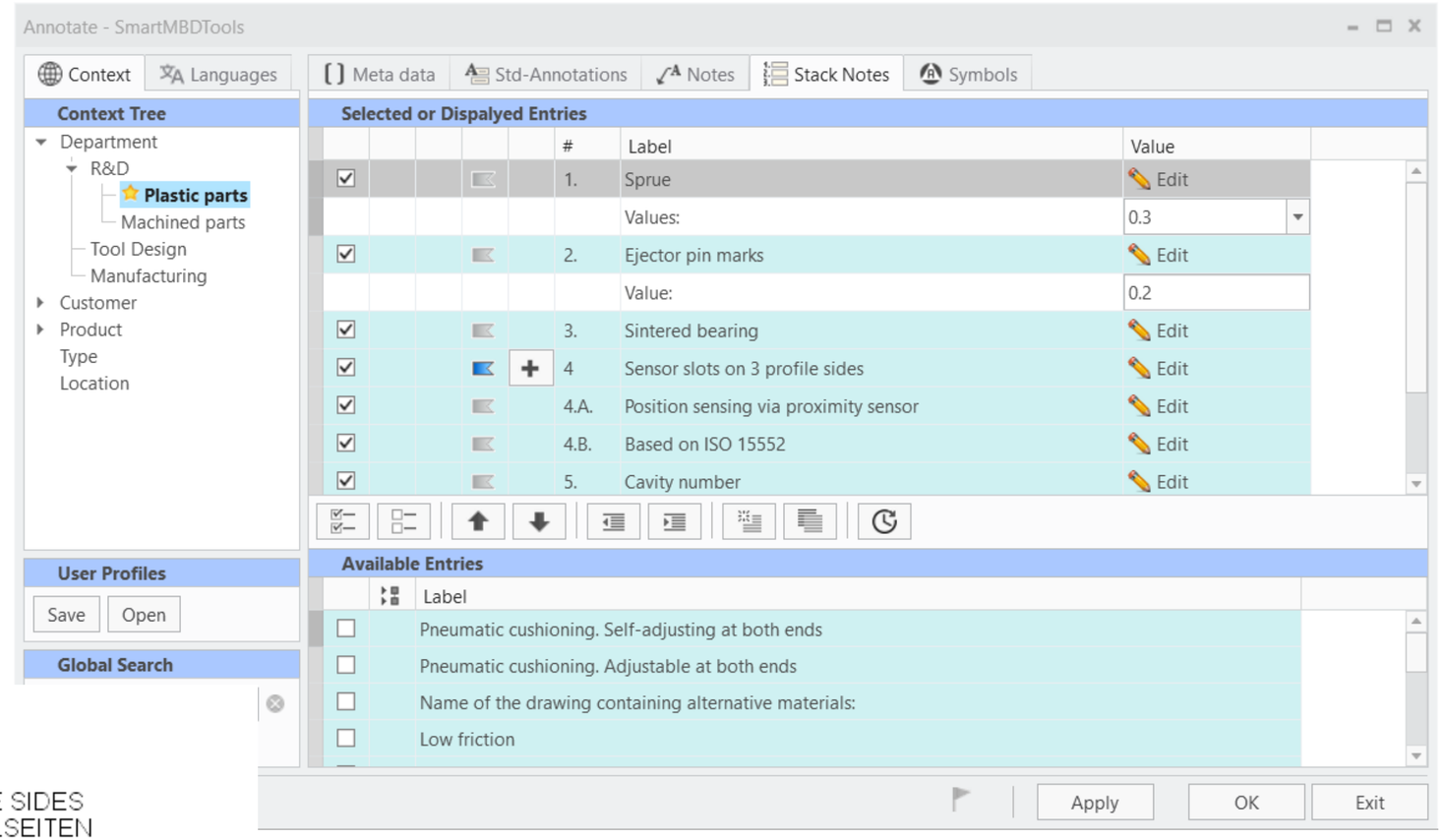
- Capabilities
  - Automatic placement to predefined locations
  - Flat-to-screen
  - Based on Creo symbols
    (fully customizable and reusable)
  - Value input or selection
  - Sorting
  - User profile support
  - 2D and 3D
  - Multi-Language support



Material RoHS compliant *Material RoHS konform*	EC 95/2002
Material REACH compliant *Material REACH konform*	EC 1907/2006

Annotate – Stack Notes

- Capabilities
  - Numbered notes list
  - Based on Creo notes
  - Custom notes
  - Flag support
  - Automatic placement (3D)
  - Flat-to-screen
  - Multi-Language support



3. SINTERED BEARING
SINTERLAGER

[4] SENSOR SLOTS ON 3 PROFILE SIDES
SENSORNUTEN AUF 3 PROFILSEITEN

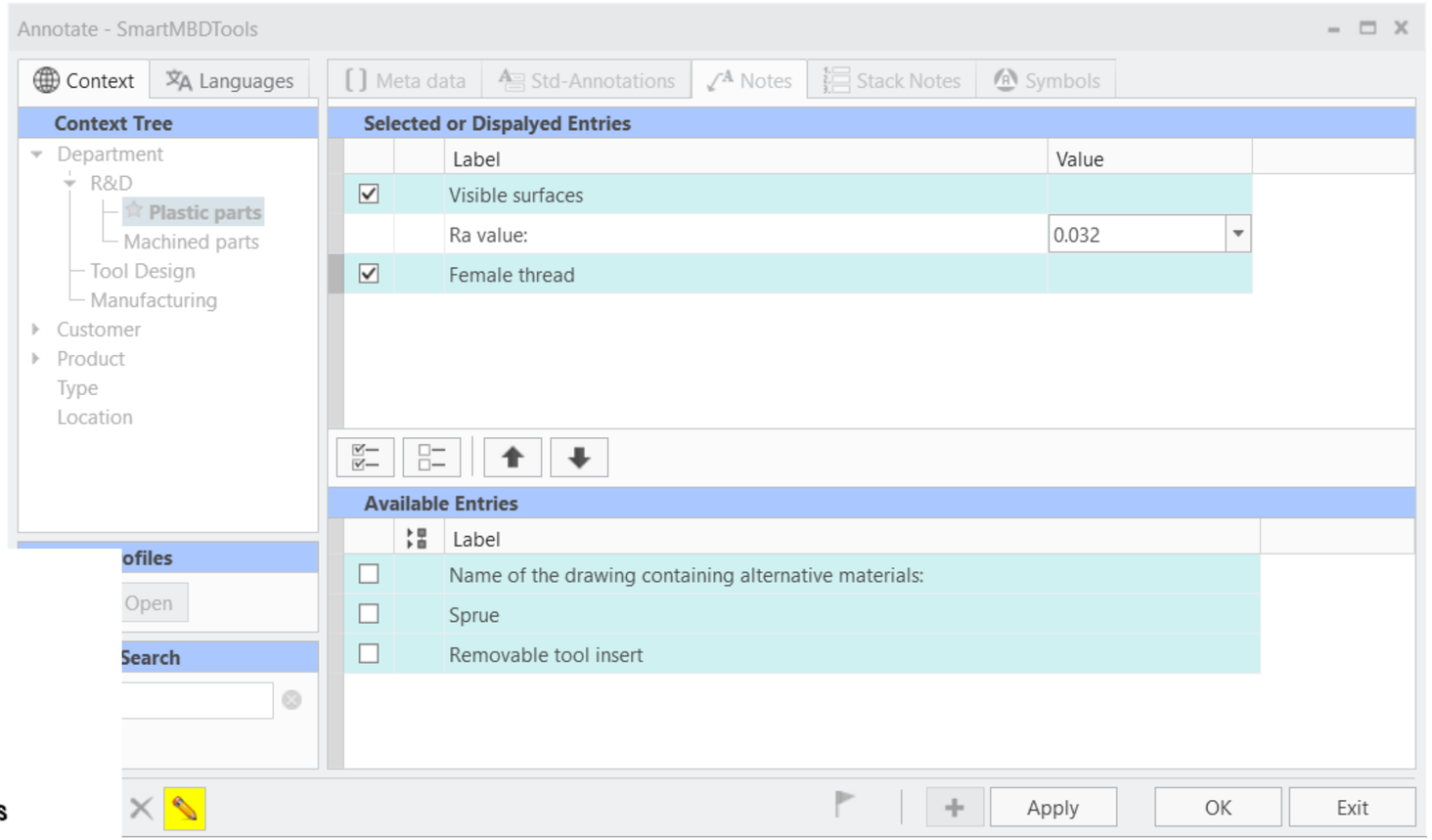
4.A. POSITION SENSING VIA PROXIMITY SENSOR

4.B. BASED ON ISO 15552
BASIEREND AUF ISO 15552

5. Cavity number
max. 0.1 mm raised
Formnestzahl
max. 0.1 mm erhöht

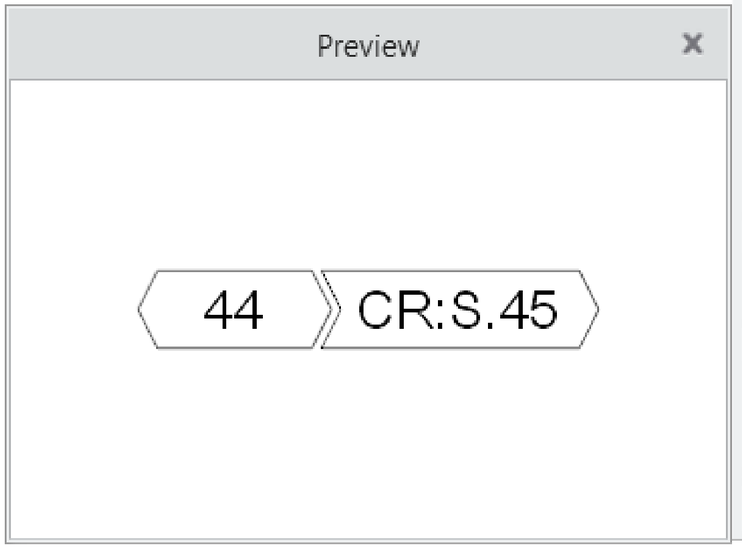
Annotate – Notes

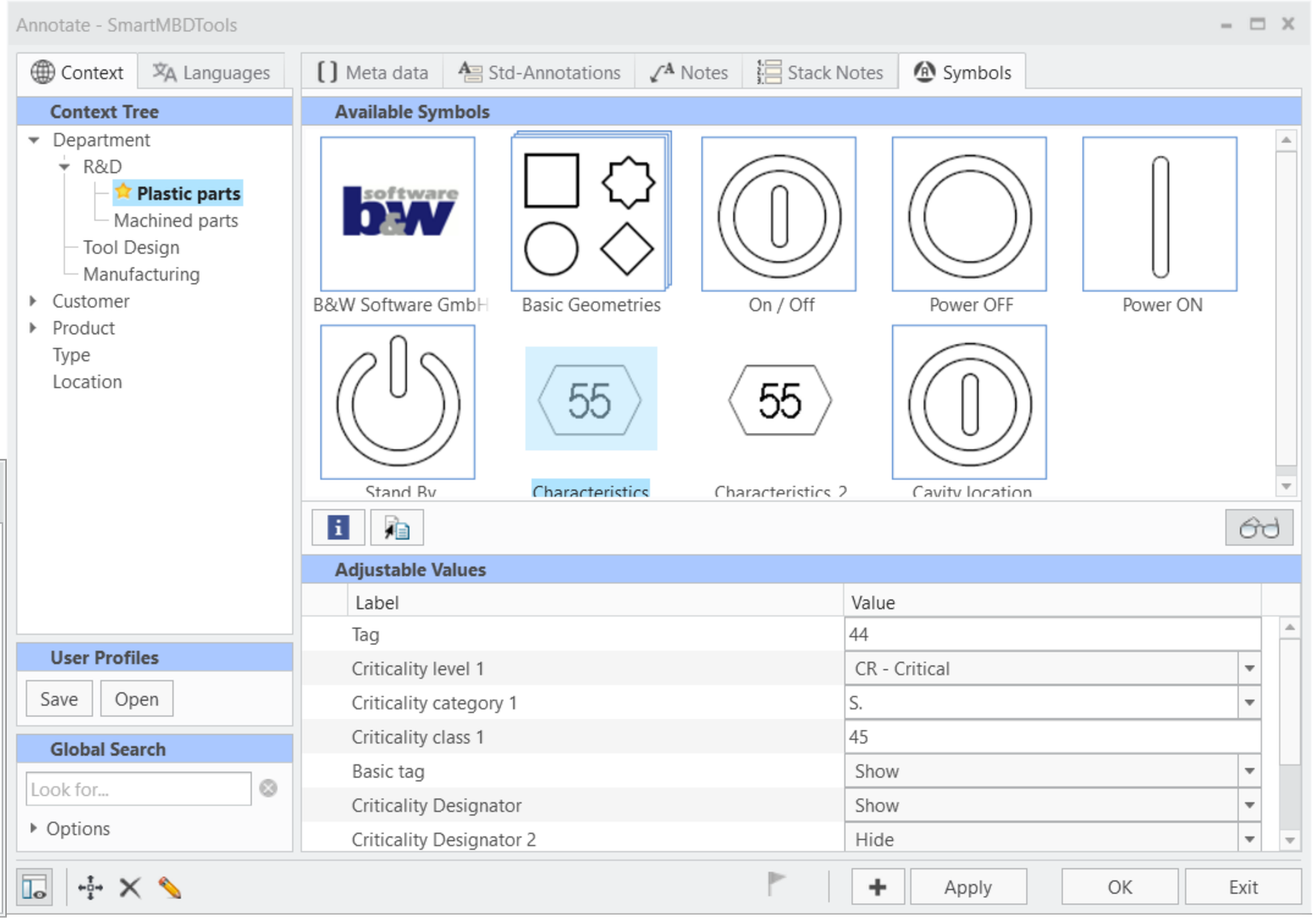
- Capabilities
  - Manual placement (2D and 3D)
  - Attached / unattached
  - Based on Creo notes



Annotate – Symbols

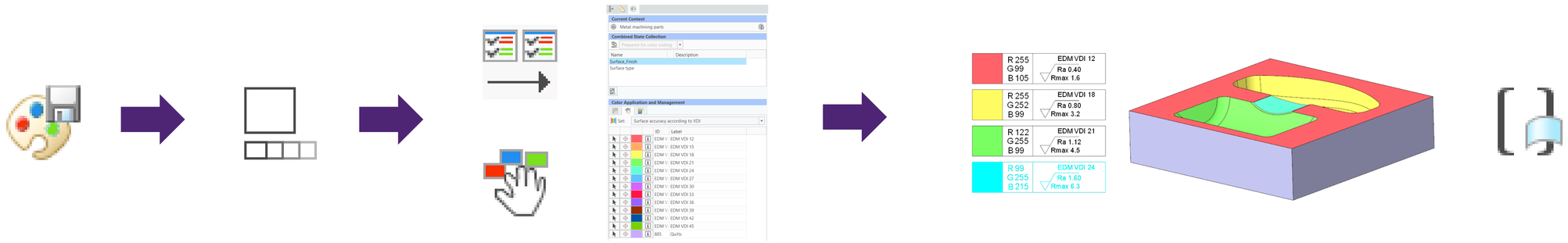
- Capabilities
  - Graphical selection
  - Value selection lists
  - Multi-Language support
  - Immediate preview





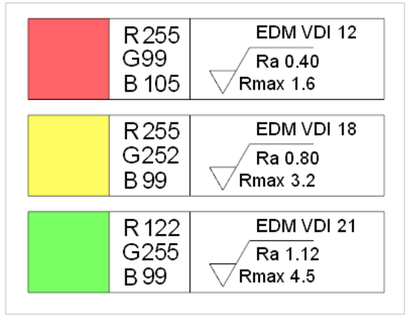
Color Coding

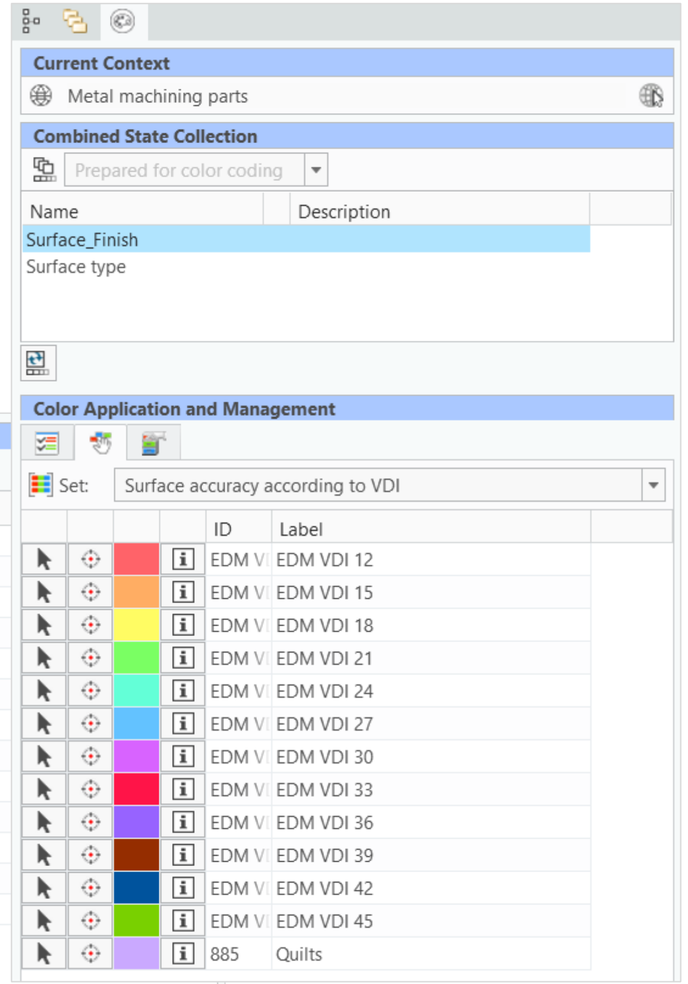
- Workflow
  - User saves Base Appearance (original color state)
  - User selects a ‚configured‘ Combined State
  - User chooses Rule-based and/or Manual surface selection
  - Software performs automatic actions
    - Surface coloring
    - Associative legend symbols
    - Surface parameters



Color Coding

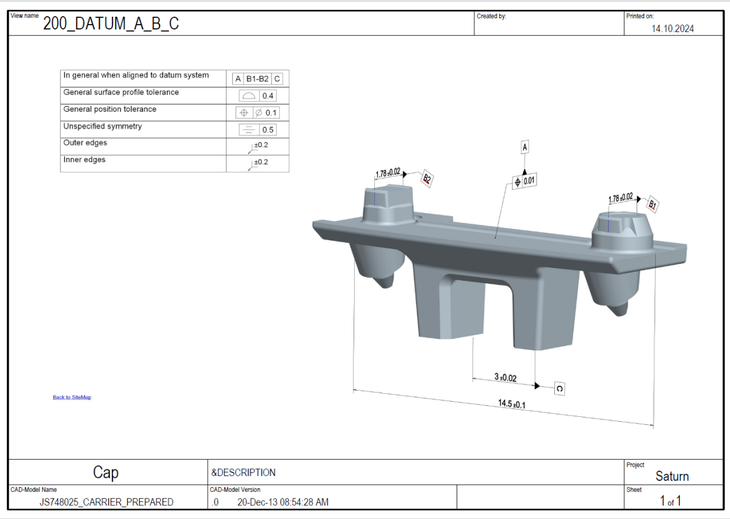
- Capabilities
  - In navigator pane
  - Rule-based selection
    - Rules depending on Context and Combined State
    - Wide variety to define rules
  - Manual selection
    - Regular and advanced selection tools
  - Automatic actions
    - Color application
    - Associative legend symbol creation
    - Surface parameter application

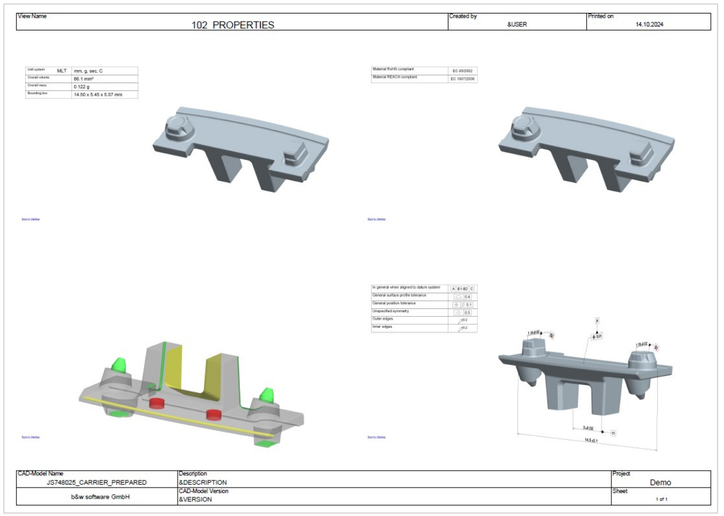


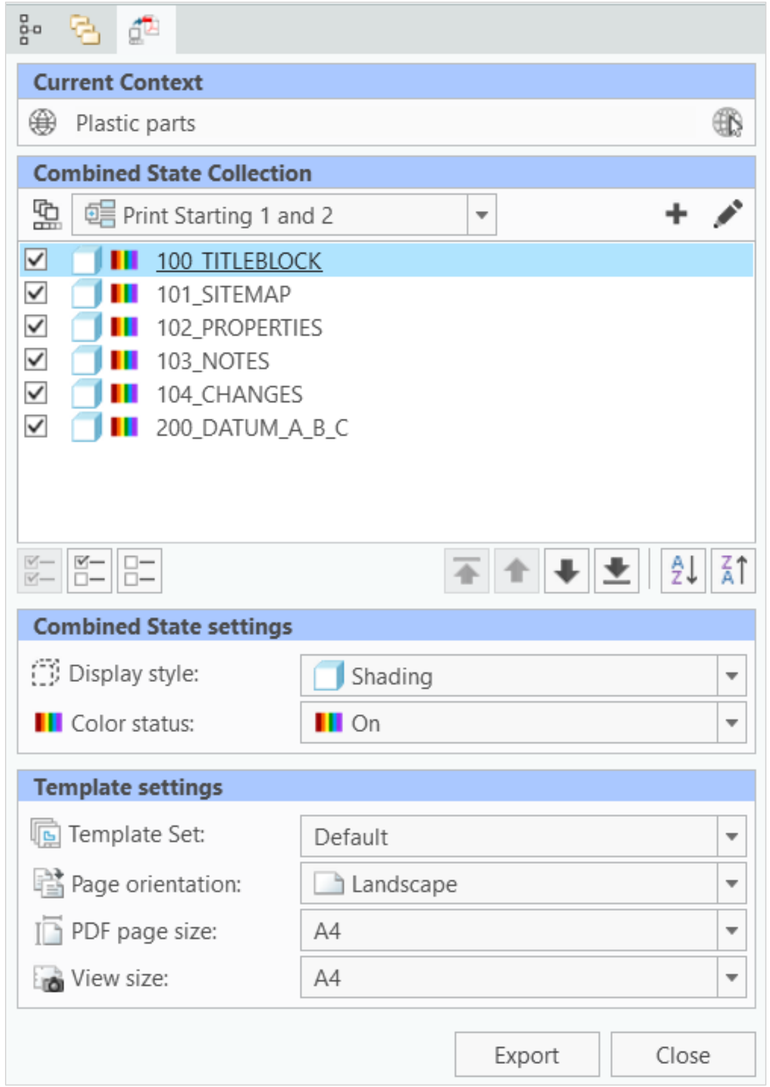


2D PDF Export

- Capabilities
  - Export from selected Combined States
  - Placement: One per sheet or multiple per sheet
  - WYSIWYG
  - Template support for Parameter callout based on Context



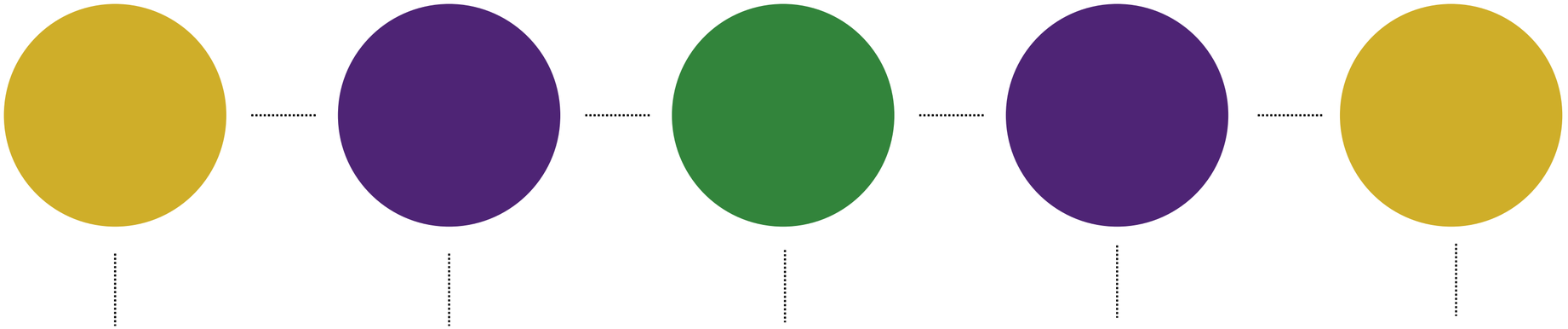




Live demo

Outlook

- Full Integration of Annotate module (configuration side)
- Capability enhancements to the current modules
  - 3D tables
  - Advanced bore recognition
  - More Export Capabilities (data packages)
  - …
- Potentially add more modules
  - PMI Verification
  - … any needs?



Thank you!

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jan@buw-soft.de

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