Augmented Reality, IoT and the Connected Product Experience

Slavko Snjegota, Development Architect, SAP 3D Visual Enterprise

Auckland, March 7, 2017

Art of The Possible 2017

Visual Product Configurator

Ski-Doo configuration example using Microsoft Hololens

- Accurate real-size 3D visual representation
- Interactive configuration selection
- Natural user interaction with the virtual model
- Configurable parts with multiple choices
- Colour selection
- Accessories selection

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SAP Does Visual!

- Visualisation of Digital Twins and IoT data on any device
- Real-time IoT data monitoring
- Analytics, predictive maintenance
- Virtual training with visual work instructions
- Collaboration on design, consumption, maintenance…
- Product configurators
- Customer engagement tools

"Digital twins are becoming a business imperative, covering the entire life cycle of an asset or process and forming the foundation for connected products and services"

Thomas Kaiser, Senior Vice President of IoT

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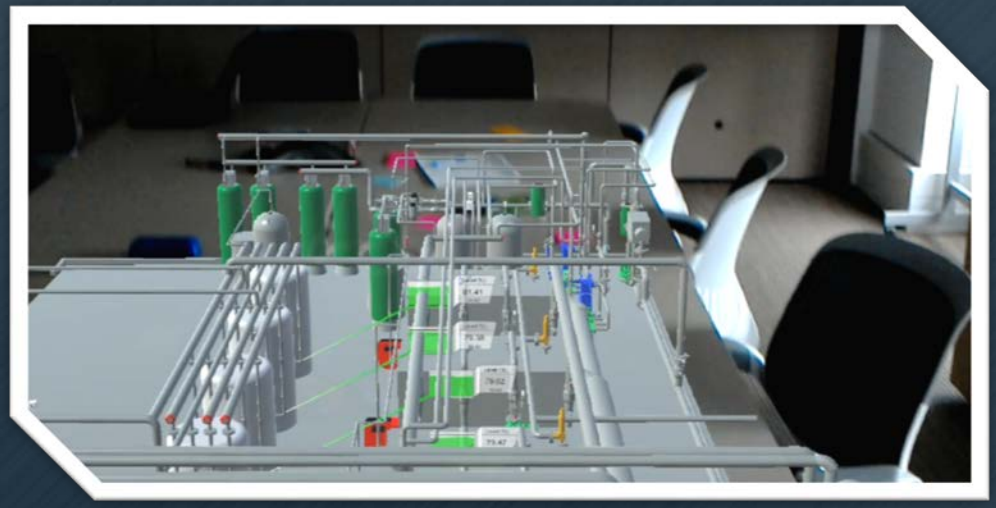
IoT data monitoring with Digital Twins

Power generator example

- Visual 3D representation of a remote installation
- Real time IoT data monitoring
- Visual warnings
- Switching to detailed view of problematic part

Boiler plant example

- Visual representation of a remote facility
- Real time IoT data fed into visual data
- Visual warnings for out-of-bounds data
- Selective data display



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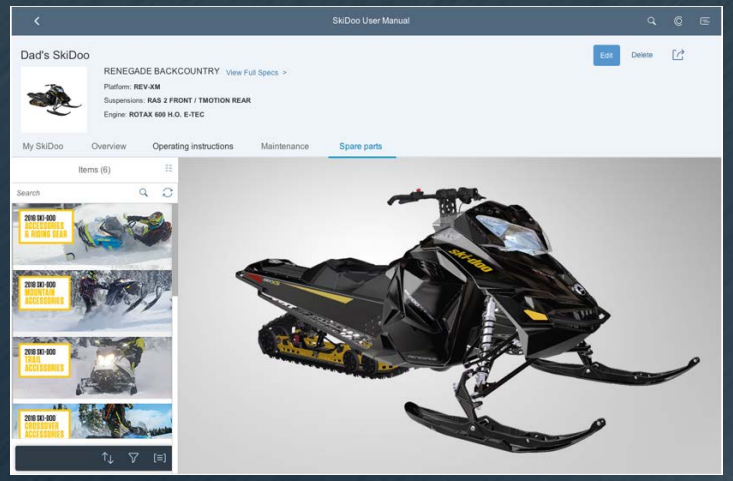
Transforming the humble user manual into a customer engagement tool

Classic user manuals

- Every manufacturer has to create, maintain and deliver User Manuals
- In a world of highly configurable products and digital native customers, this is an expensive, and often wasted effort with limited use (paper manuals are discarded or lost when you most need them).
- And it is one-way, non-interactive. No up-sell, accessories, consumables or spare parts.

Customer engagement tool

- Always available on any device
- Configured for your particular product
- Interactive and visual
- Can offer new upgrades and accessories
- Service reminders



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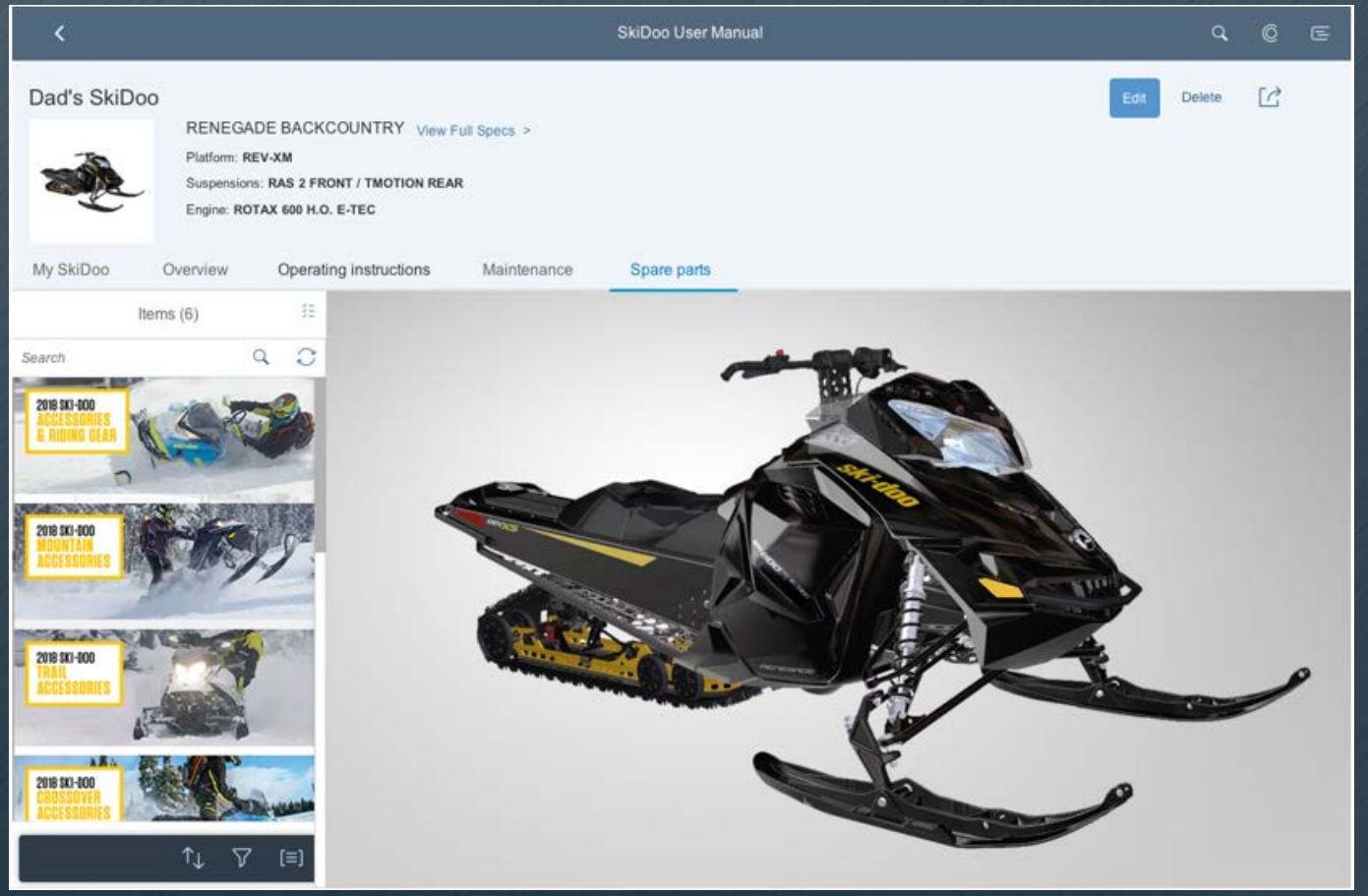
Interactive Connected User Manual hosted in SAP Cloud Platform

Enabling the intelligent user manual

- Available and connected
- Modern, Fiori UI design
- On your phone, tablet or headset
- Will know which model you bought
- Will know if it needs a service
- Provides access to spare parts and warranty information
- Provides video or animated operational or maintenance procedures



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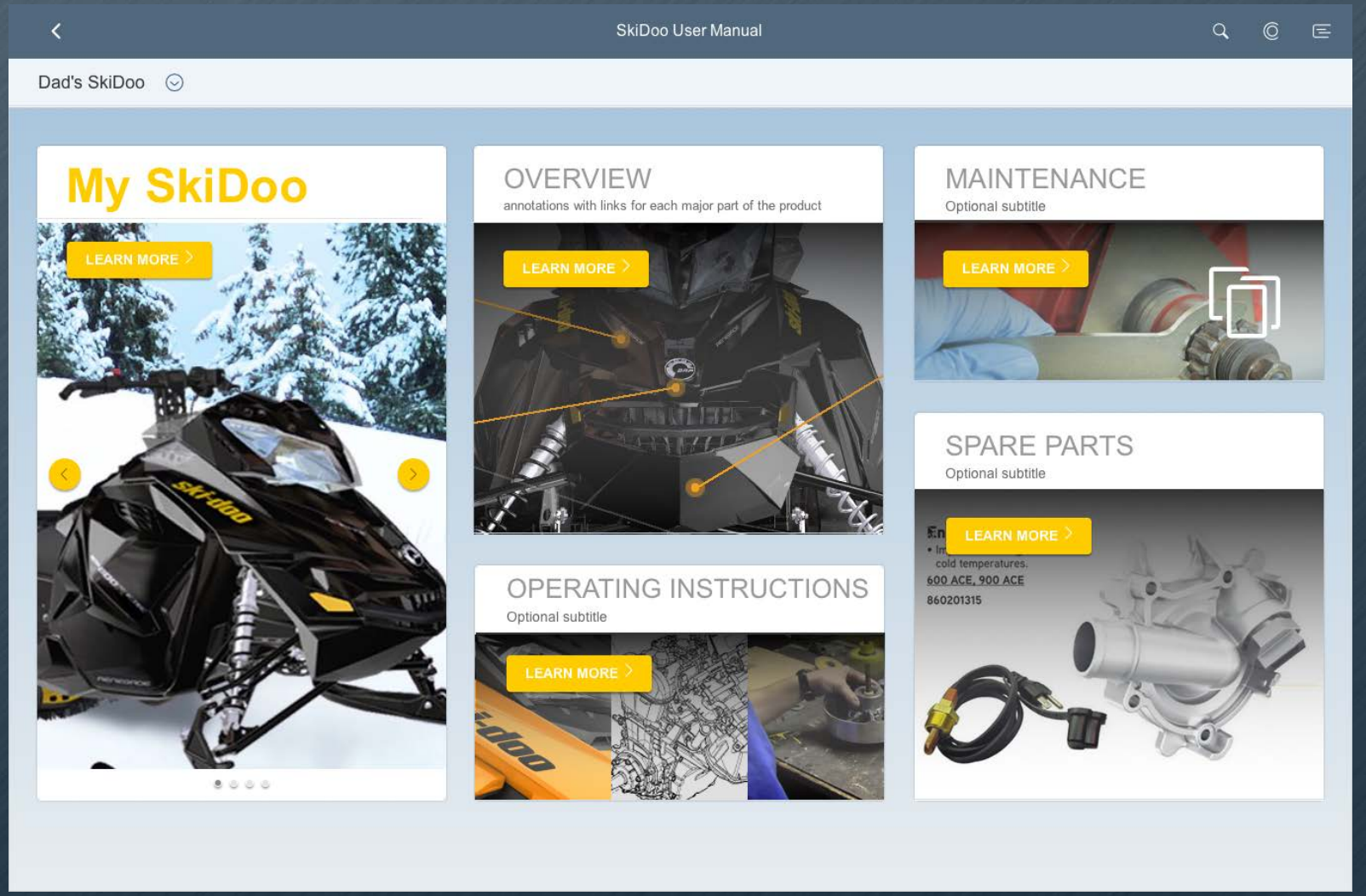
Interactive Connected User Manual hosted in SAP Cloud Platform

Enabling the intelligent user manual



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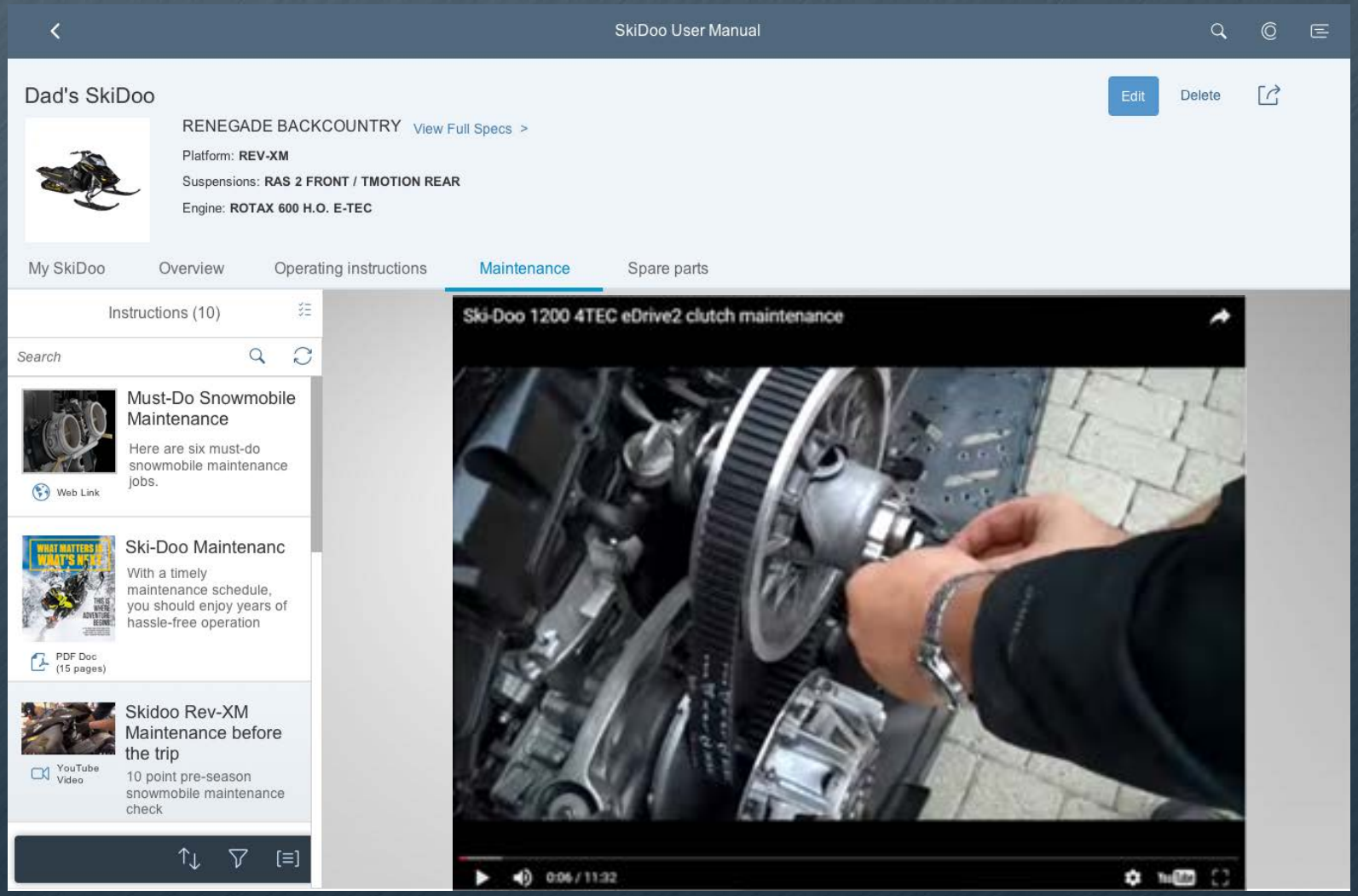
Enabling the intelligent user manual



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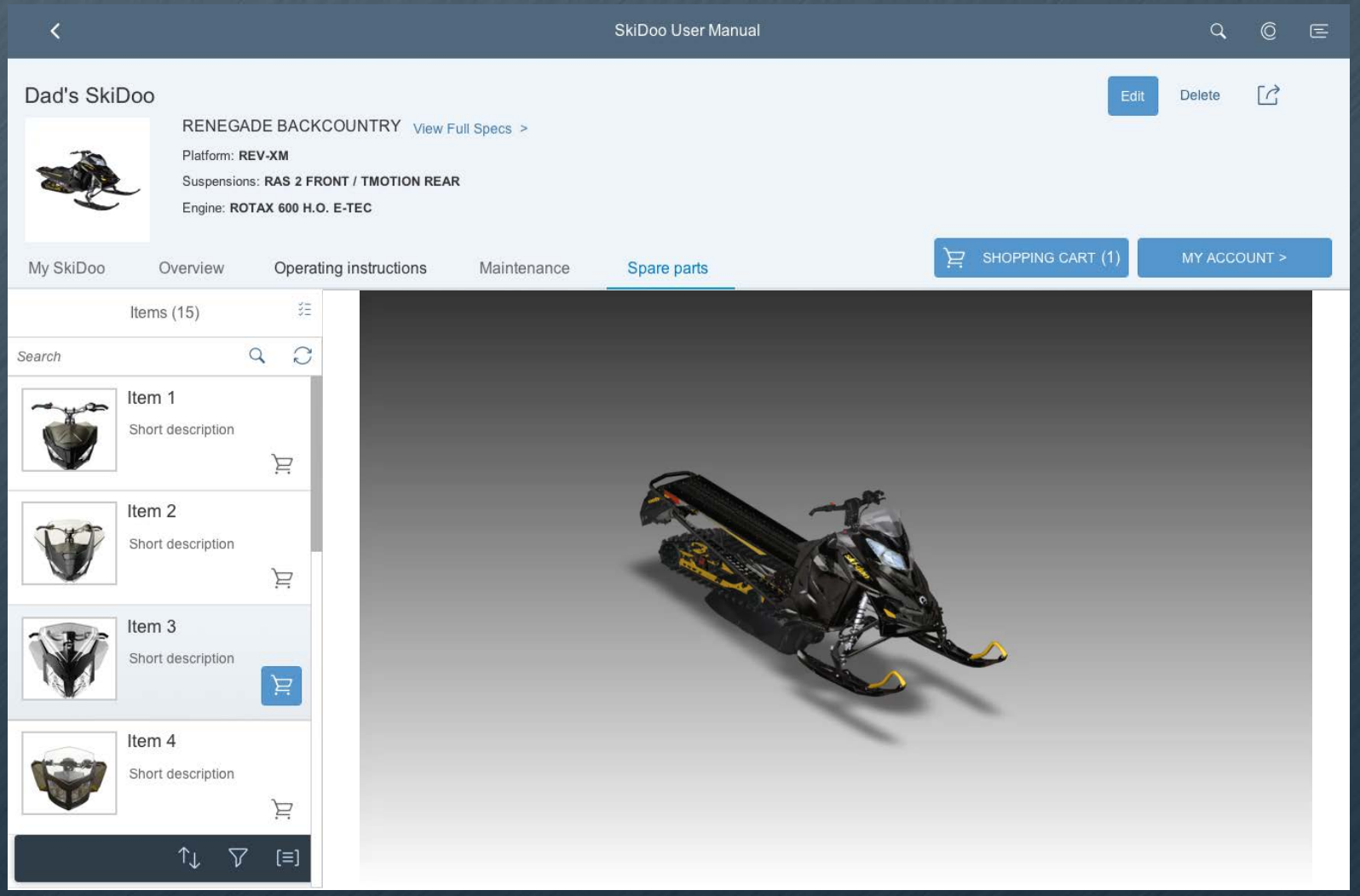
Enabling the intelligent user manual



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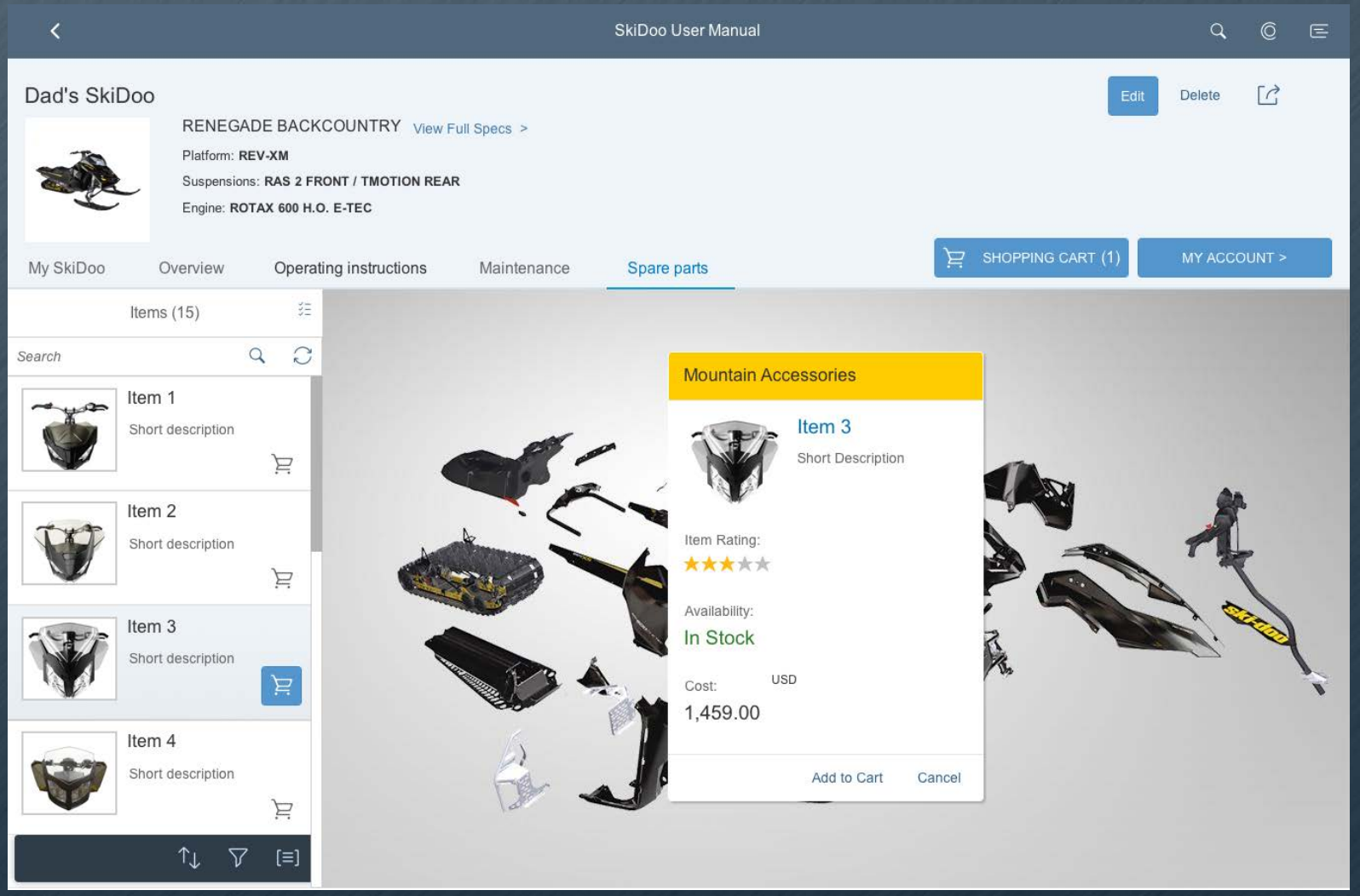
Enabling the intelligent user manual



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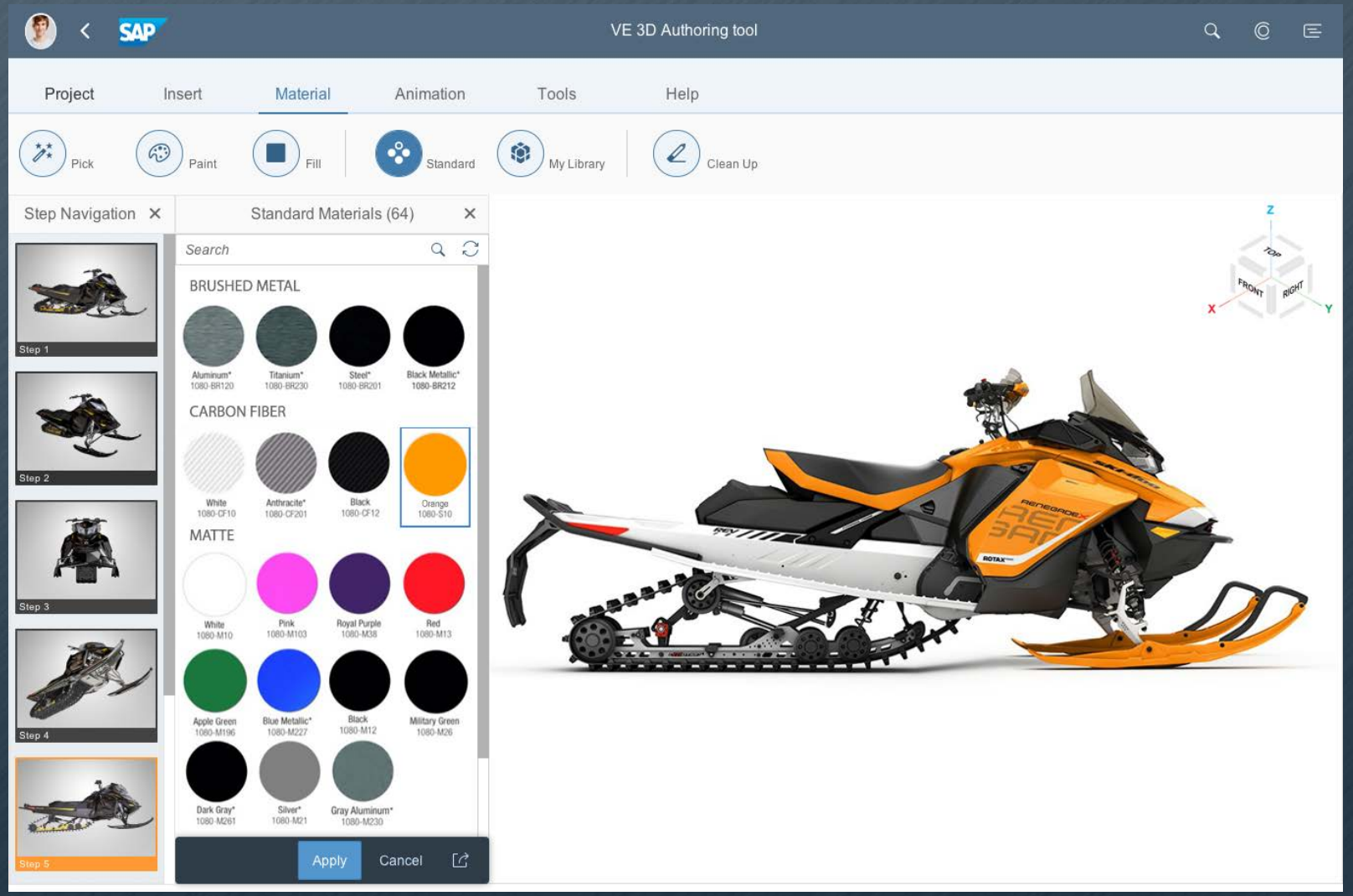
Communicating Product Information

Simplified technical authoring for cloud and AR consumption: user manuals, simple configurators

Assign materials



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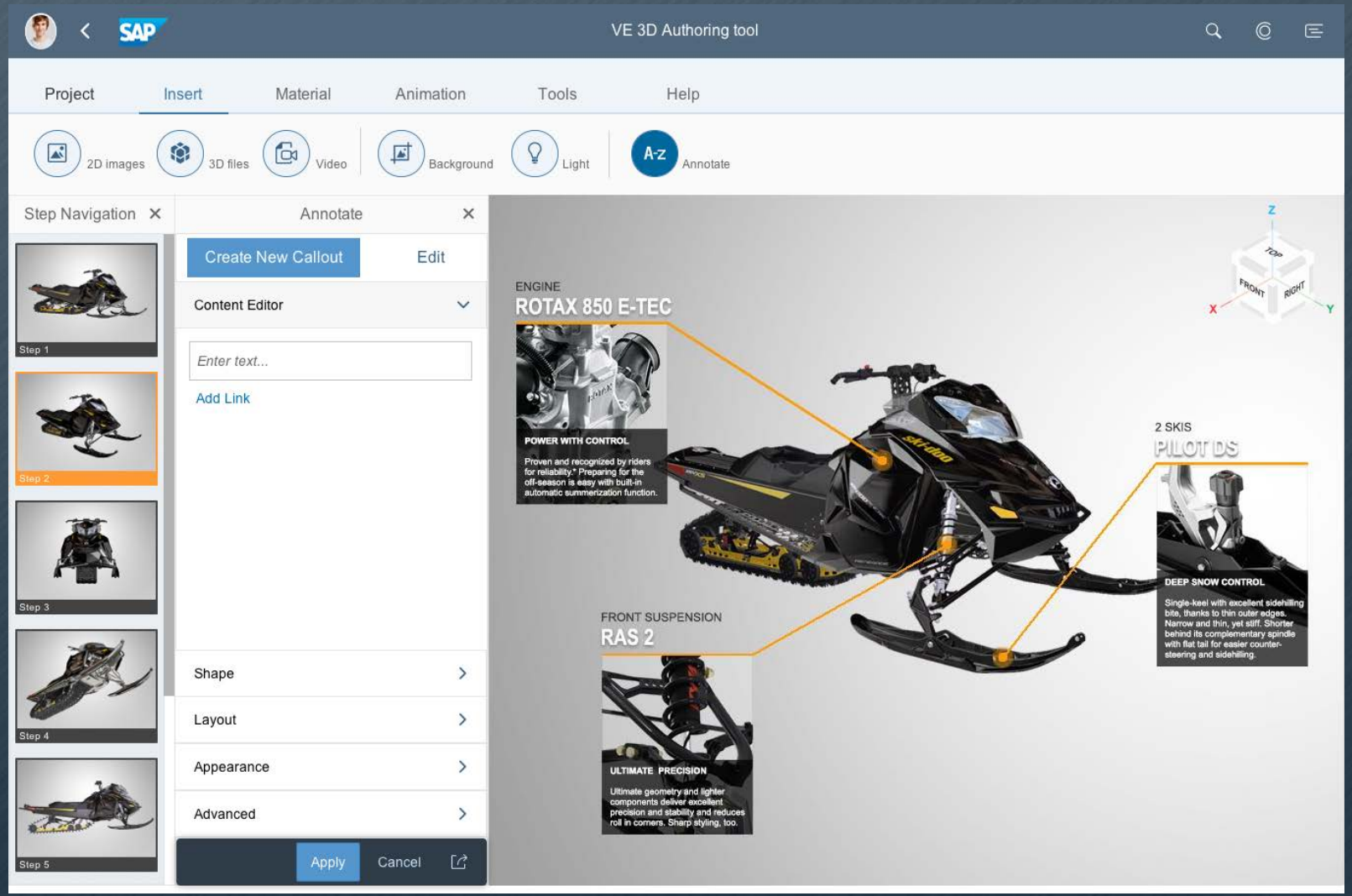
Communicating Product Information

Simplified technical authoring for cloud and AR consumption: user manuals, simple configurators

Annotate



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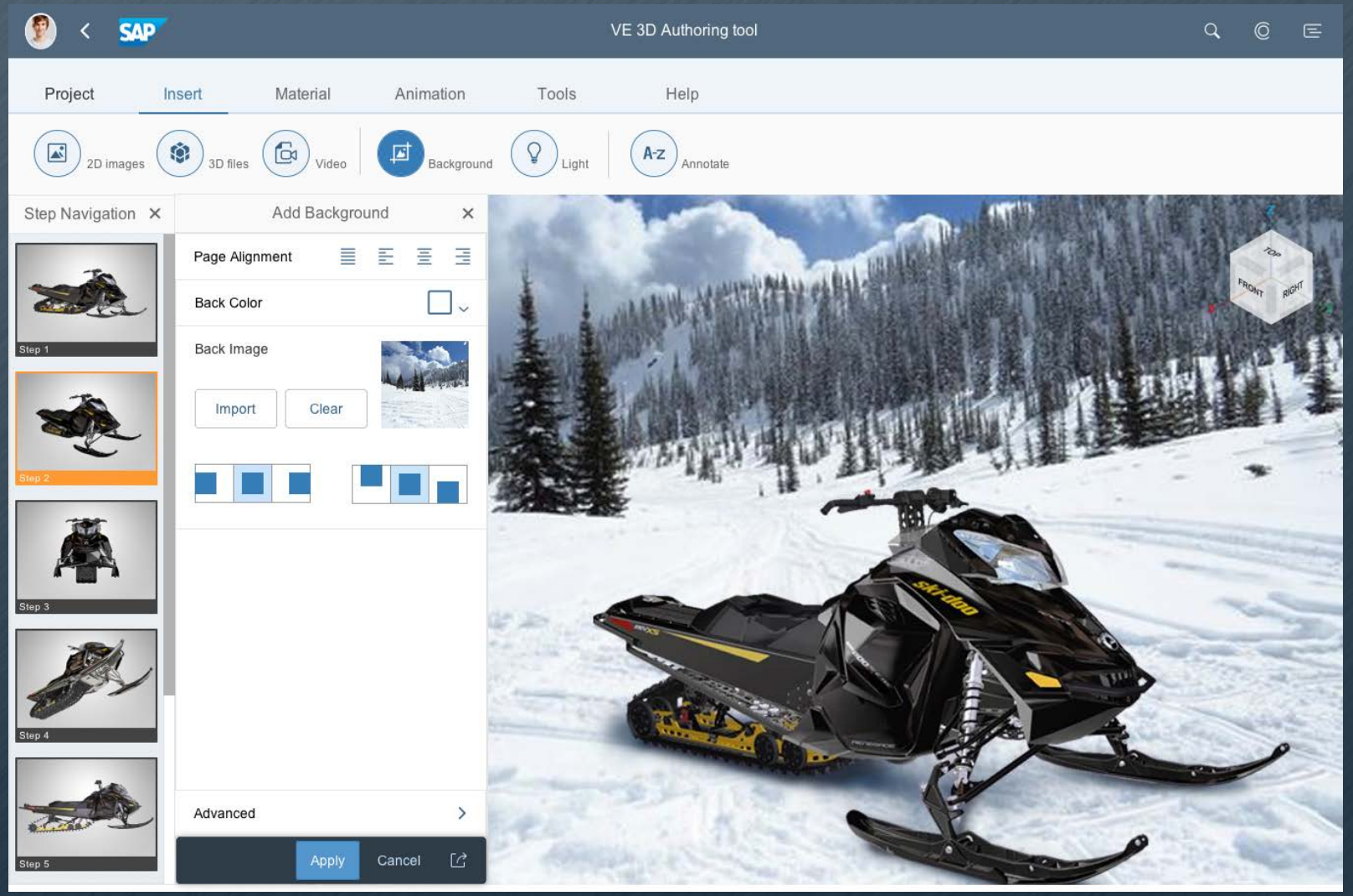
Communicating Product Information

Simplified technical authoring for cloud and AR consumption: user manuals, simple configurators

Backgrounds



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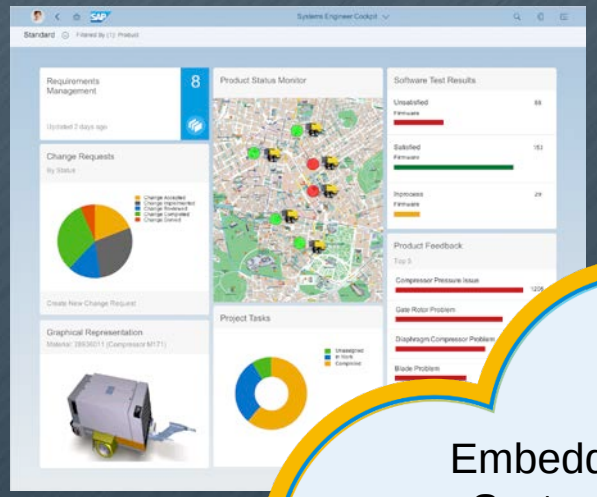
Connected Products

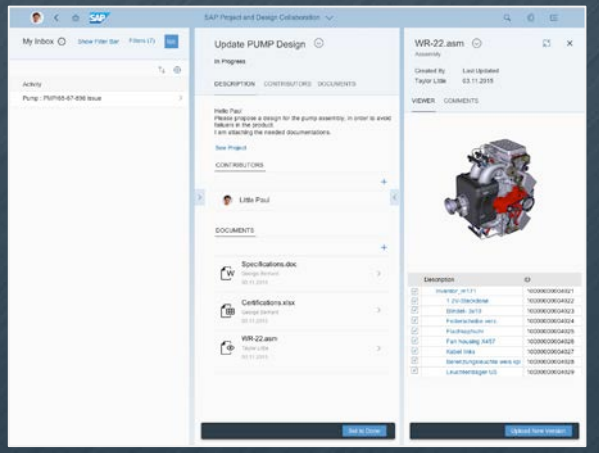
Storyline

- **Integrate software** as part of the Smart Connected Product
- Seamless **systems engineering**
- Ensure **compatibility** between the software and hardware
- Closing the process gaps between engineering and the **digital twins**
- **Share, submit and collect** engineering documents
- Execute task structure **across company boundaries**

Systems Engineer Cockpit
Embedded SW
Requirements Management
Functional Structure Management
Where Used Analysis
Compatibility Management
Test Validation
IOT Analytics



Collaborative Engineering and Document Collaboration
Collaborative 3D Visual Design Review
Simple Task/Worklist Management
Change Management Integration



SAP S/4HANA add-ons
SAP S/4HANA
Cloud and on premise
ECC
SAP NetWeaver

Embedded Systems
Project and Design Collaboration
SCP Services
SAP Cloud Platform
SAP HANA

Manufacturing Cloud Services
IoT/AIN
SAP Ariba

Want to Influence SAP Product direction?

The Visual Enterprise team vision is to transform industry with Digital Twin visualisation and Interactive Connected user manuals

- We plan a Connected Product Experience on SAP Cloud Platform
- Next: Customer Engagement Initiative to test concepts and design product
- This is great opportunity for innovative customers to work with us and influence SAP product direction

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Thank you

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