

Forge in Produktion und Industrie

Peter Schlipf

Sr. Manager Forge Advocacy & Support | @PeterSchlipf



AUTODESK® FORGE

Über den Sprecher



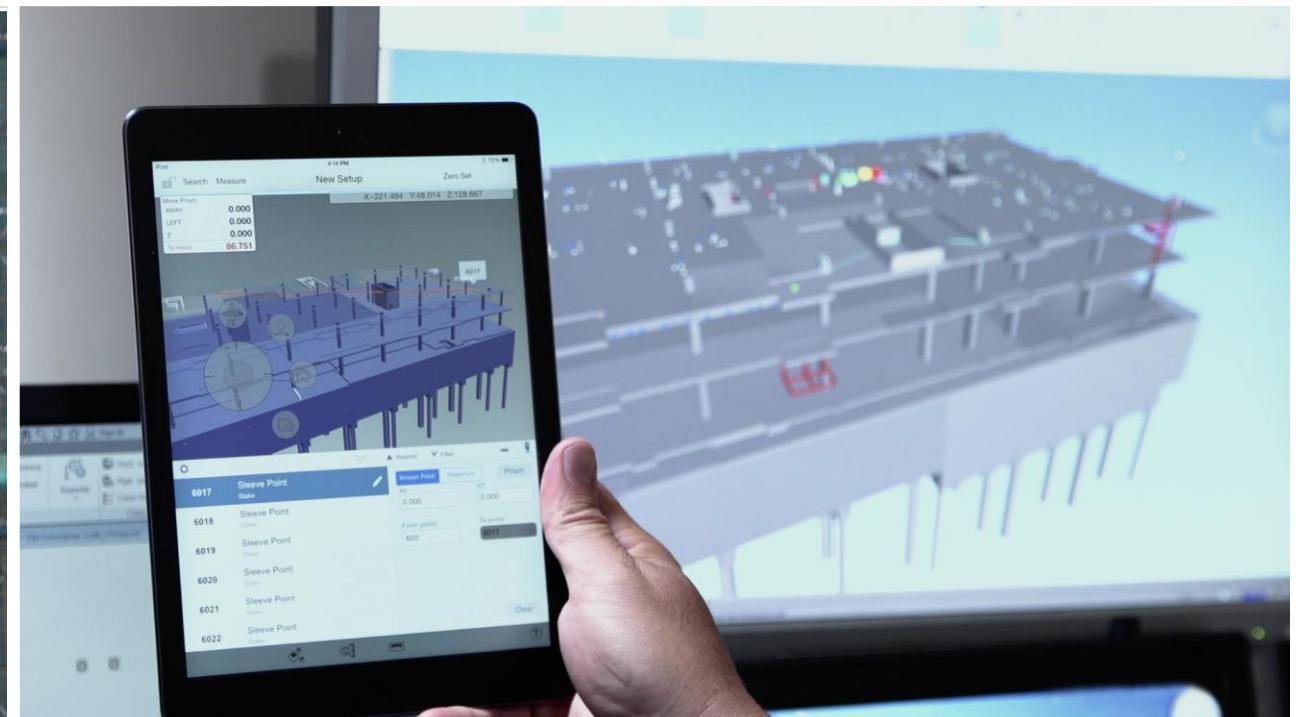
Peter Schlipf ist im Autodesk Forge Team
Experte für alle Forge Geschäfts- und
Preismodelle, Partner- und Kundenfragen und
das EMEA Forge Eco-System.

Bei Autodesk seit 2001 – in verschiedenen
Rollen in der Vertriebsorganisation,
seit 2012 Teammitglied im Forge Development
Advocacy & Support Team (DAS).

Twitter @PeterSchlipf

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Die Welt geht online



THE FUTURE OF
MAKING THINGS

創造の未来

Gallery Pop-up Tokyo





Image courtesy of Tesla Motors, Inc.



Image courtesy of Gensler.



The Martian © 2015 Twentieth Century Fox. All rights reserved.



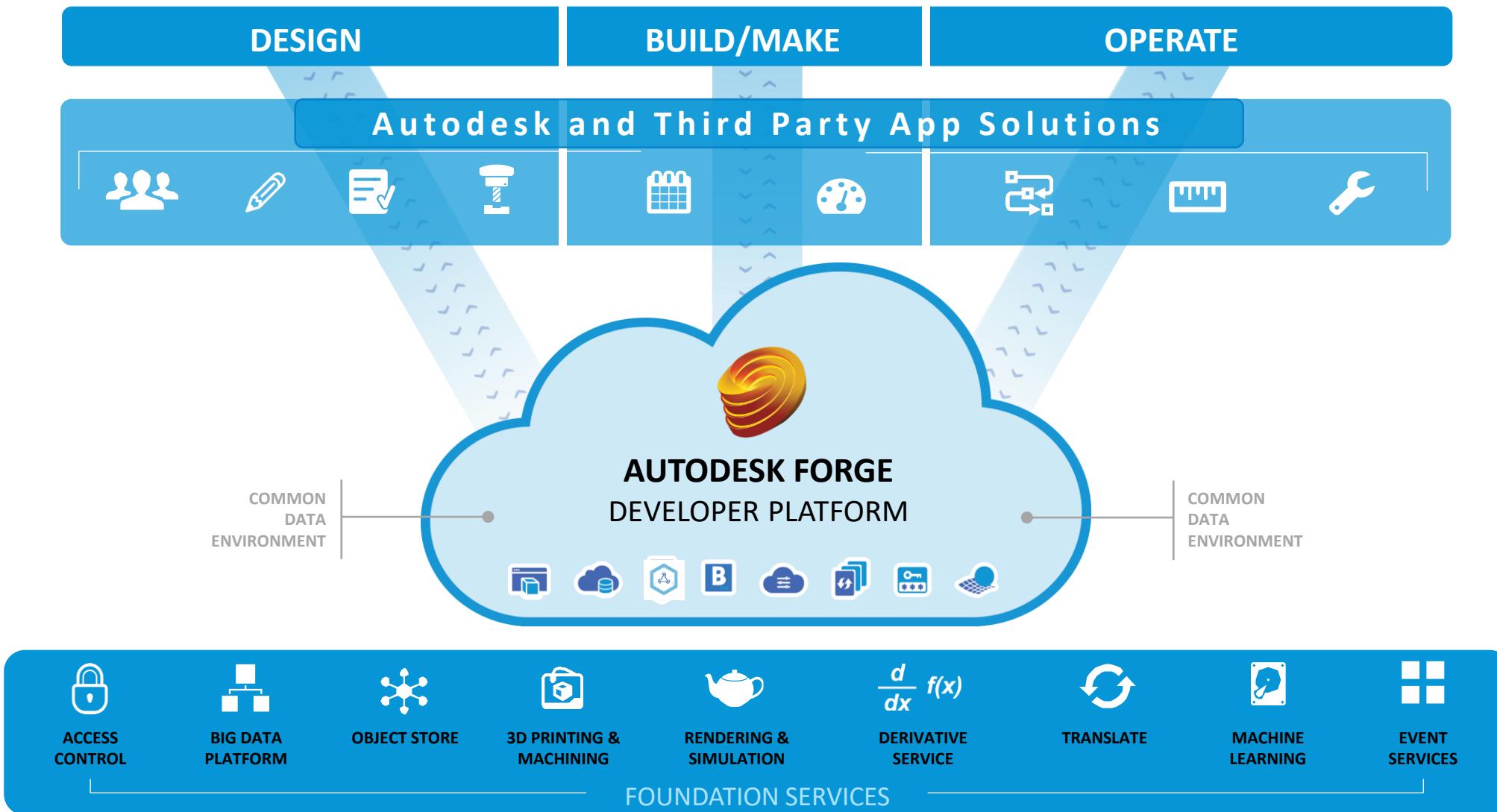
Forge für Industrie und Produktion

- 1) Forge im Kontext des Ansatzes „The future of making“
- 2) Erfahre mehr über Autodesk Forge und Apps Entwickler als Ökosystem
- 3) Lerne die digitale Transformations-Plattform Forge im Überblick kennen,
- 4) Die wesentlichen Interessenten für Forge in den Organisationen
- 5) Lerne anhand vier ausgewählter Lösungsbereiche reale Projekte kennen.
 - a. Online-Kataloge
 - b. Herstellung
 - c. Betrieb
 - d. Digitaler Verkauf
- 6) Leite Ideen für deine eigene Produktion ab.
- 7) Vertiefe das Wissen mittels Ressourcen und Support beim Start

Autodesk Forge und Apps Entwickler im Team

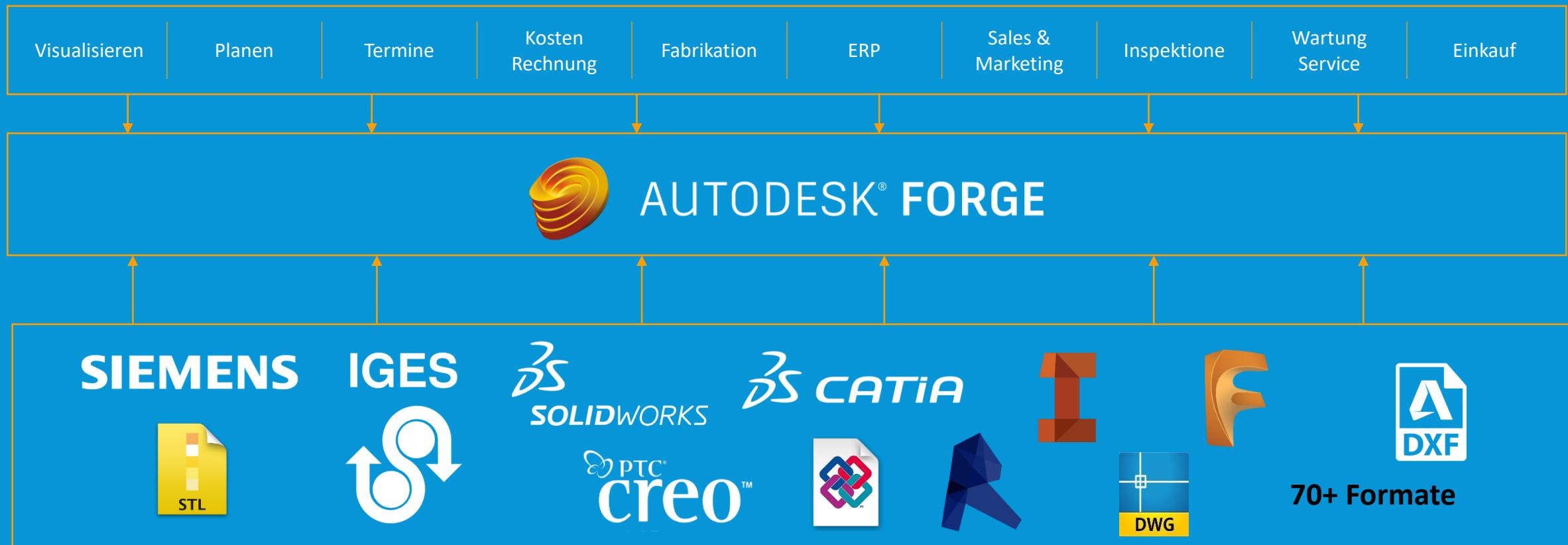
Ein Tech-Ökosystem

Das Forge Ökosystem



Fertigung und Industrie

Die Autodesk Forge Plattform verbindet.



Ein Schritt zurück, wie hat alles begonnen...

Ein Produkt



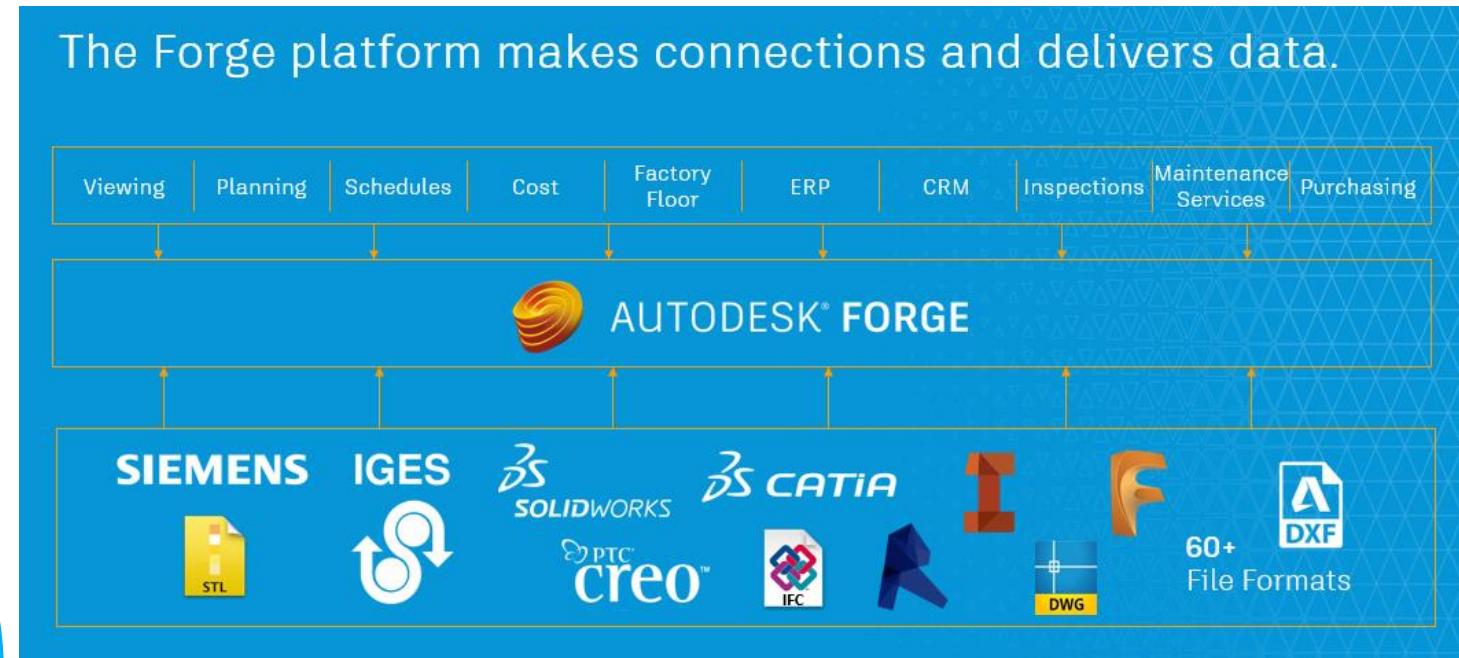
A360
Viewer

Im 2.Schritt

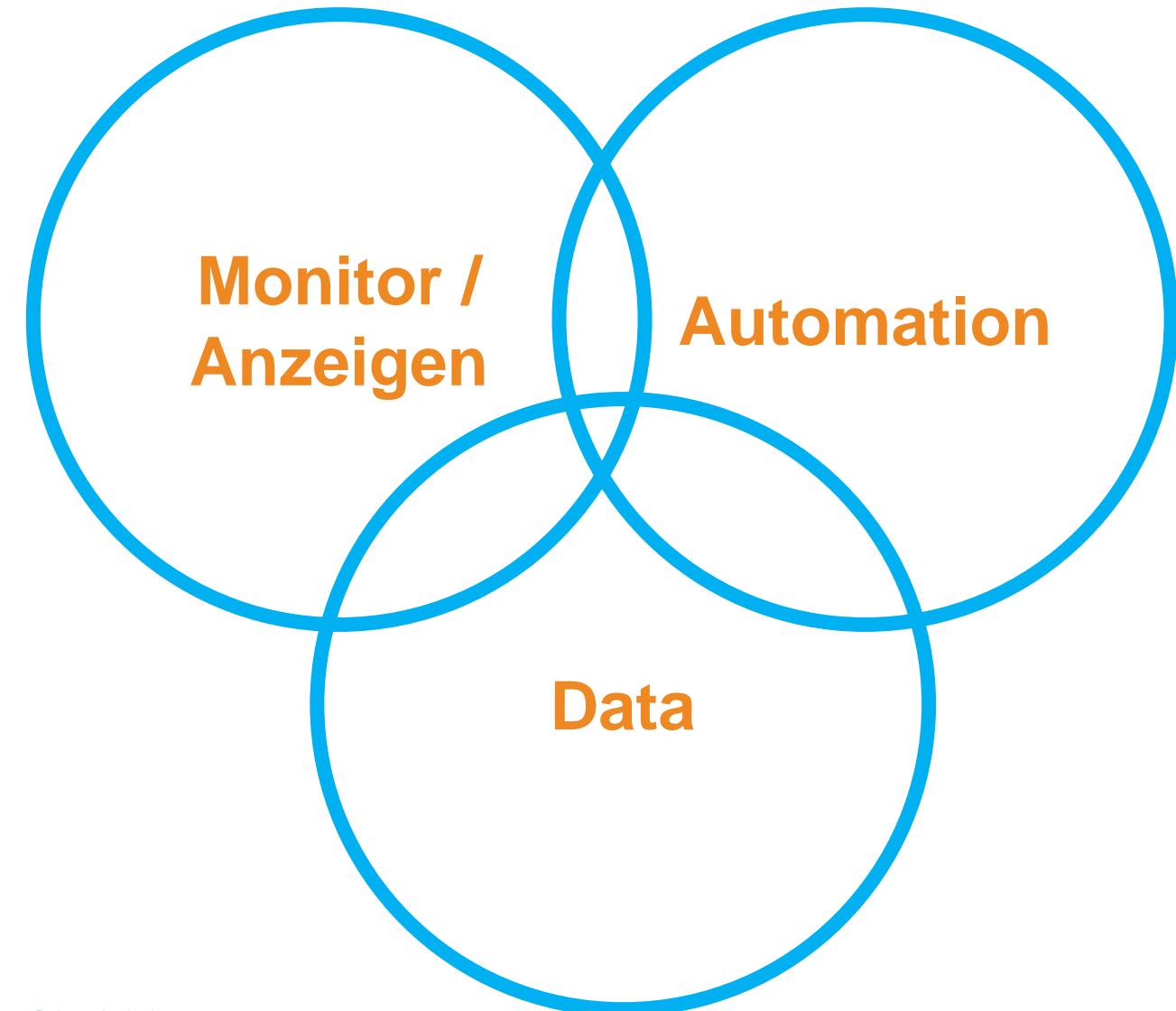
Eine Plattform

Monitor /
Dashboards

Daten



Und heute :



Eine digitale
Transformations
Plattform

Für Design ,
Produktion und
Betrieb

Die Digitale Transformation





FORGE

Web services APIs



<HTML>
HTML



{ CSS }
CSS

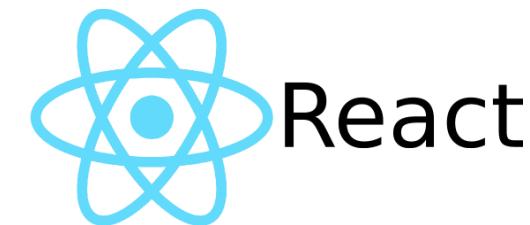


(JS)
JavaScript



RESTful API

GET PUT POST DELETE



React



Bisher waren typischerweise unser Ansprechpartner:

Leiter CAD und
Konstruktion

Manager Engineering

Heute sprechen wir aber auch mit :

Leiter CAD und
Konstruktion

Manager Engineering

Manager Innovation
Chief Technology Officer
Direktor Digital Transformation
Betriebsleiter
EDV-Leiter
COO
CEO
Board

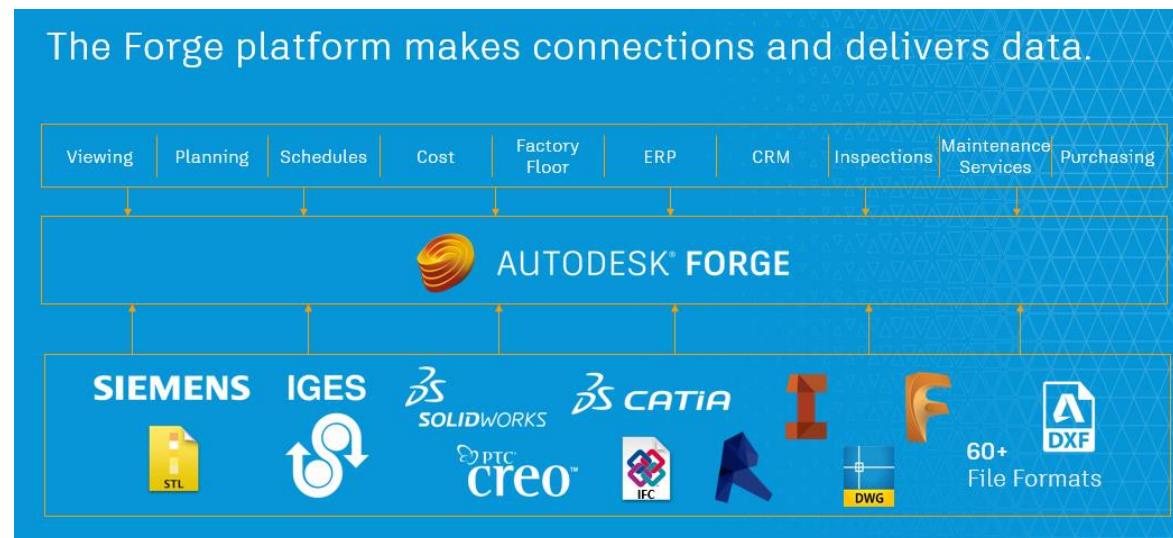
Und diesen Teams geht es genau darum :



A set of web service APIs



RESTful API
GET PUT POST DELETE



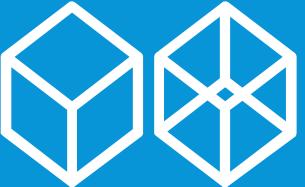
Plattform



Kunden und Partner programmieren mit Forge



Daten Visualisierung
& Analyse



Digitaler Zwilling



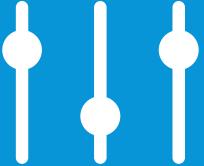
Augmented & Virtual Reality



SaaS Integration



Digitaler Verkauf



Konfiguratoren



Design Automation

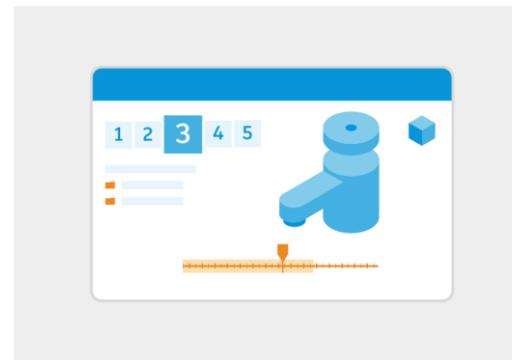


Photo to 3D

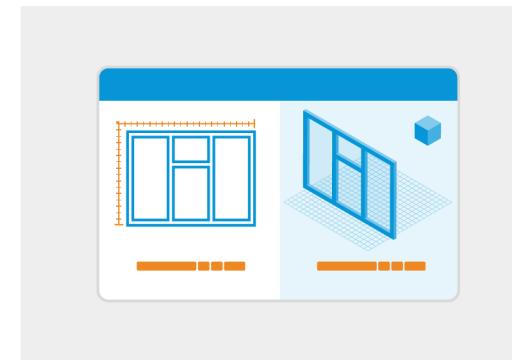
Focus : Vier Bereiche wo unsere Kunden Forge einsetzen:



Online (Ersatzteil-)
Katalog



Herstellung

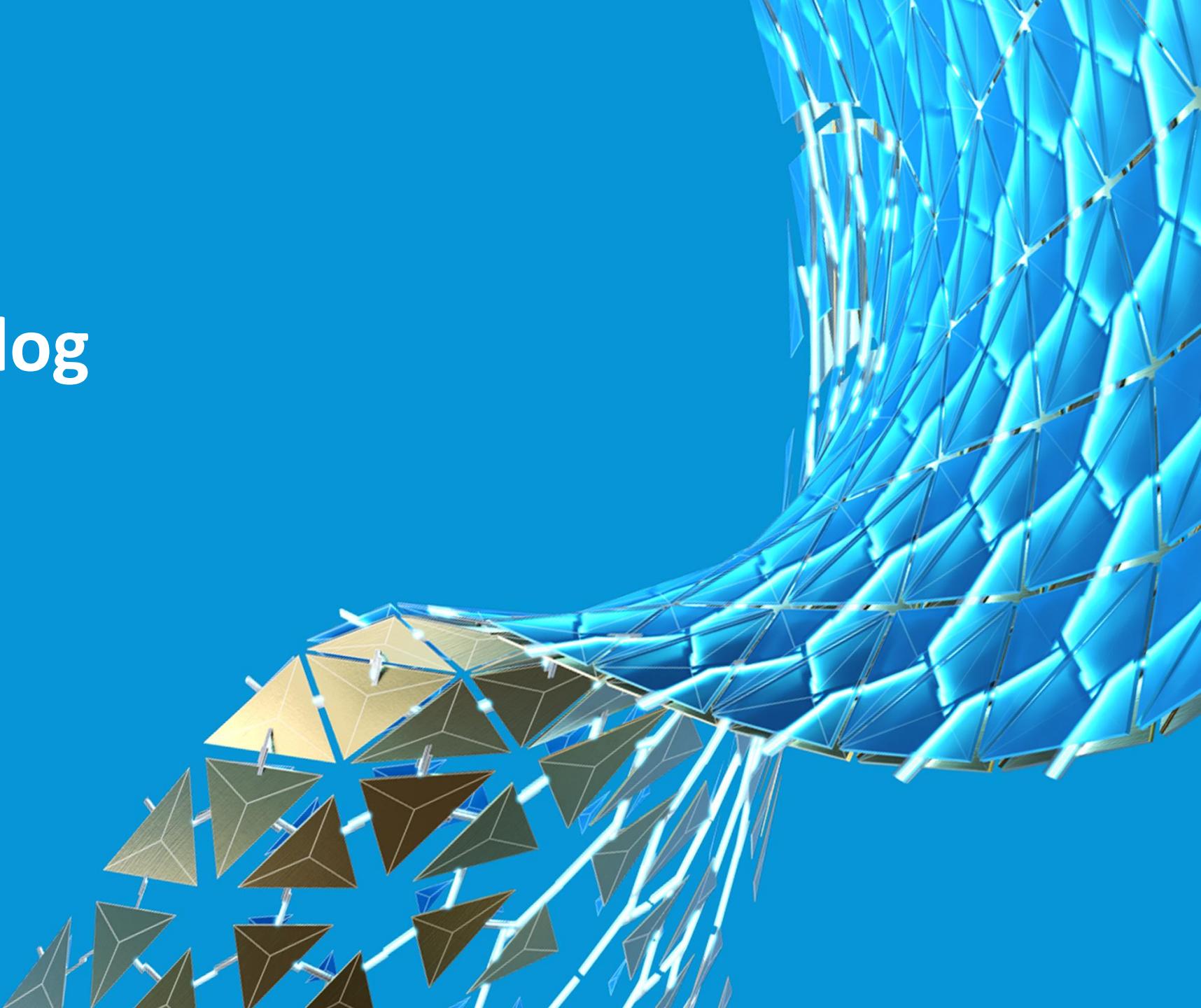


Betrieb



Digitaler Verkauf

Ersatzteil Katalog

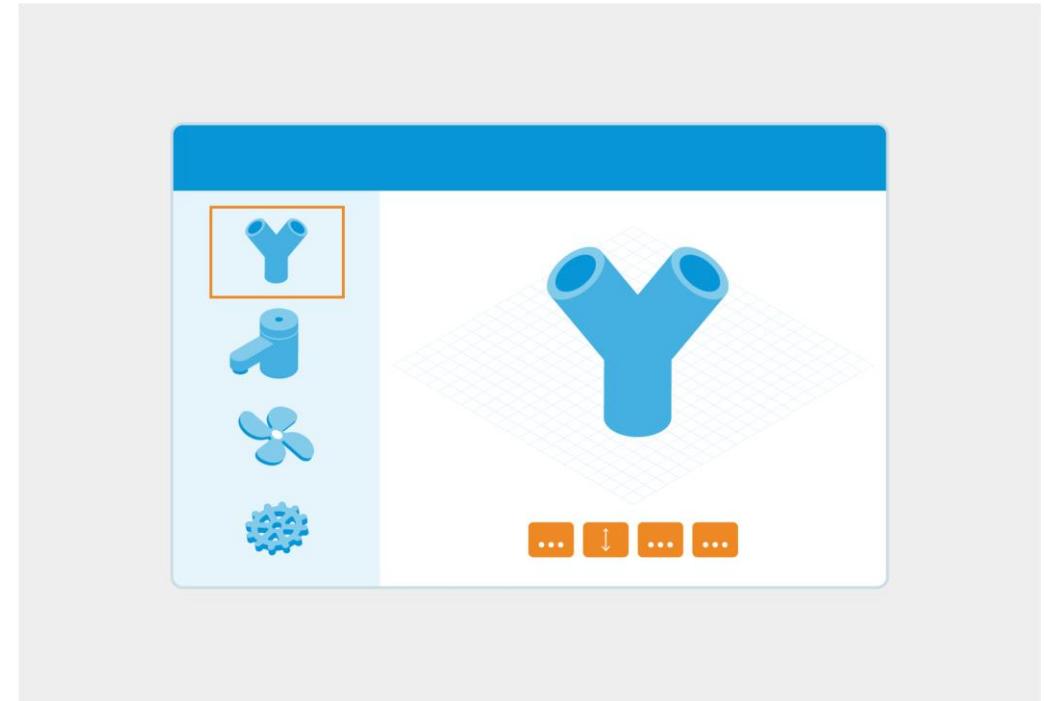


Die Herausforderung

Sie wollen....

1. Produkte vermarkten – schneller als der Wettbewerb
2. Web-Katalog Kosten minimieren
3. Kunden Erlebnis optimal gestalten

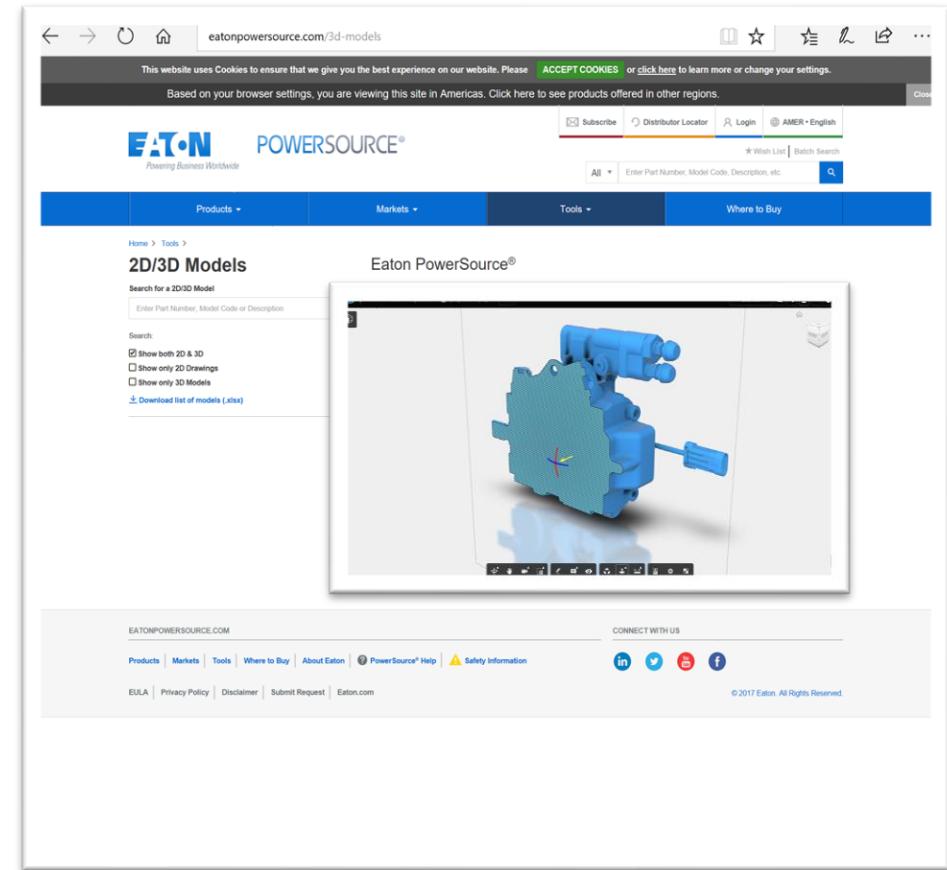
Mobile Plattformen – keine Installation



Vorteile:

1. Echt-Zeit Darstellung
2. Kosten Optimierung
3. Plattform Unabhängig
4. Bedienung und Komfort
5. Wettbewerbseffekte

- Kundenkontakte
- Kapitalseite
- Operative Kosten Reduzierung



Eaton

Beispiel NSP / Online Ersatzteile



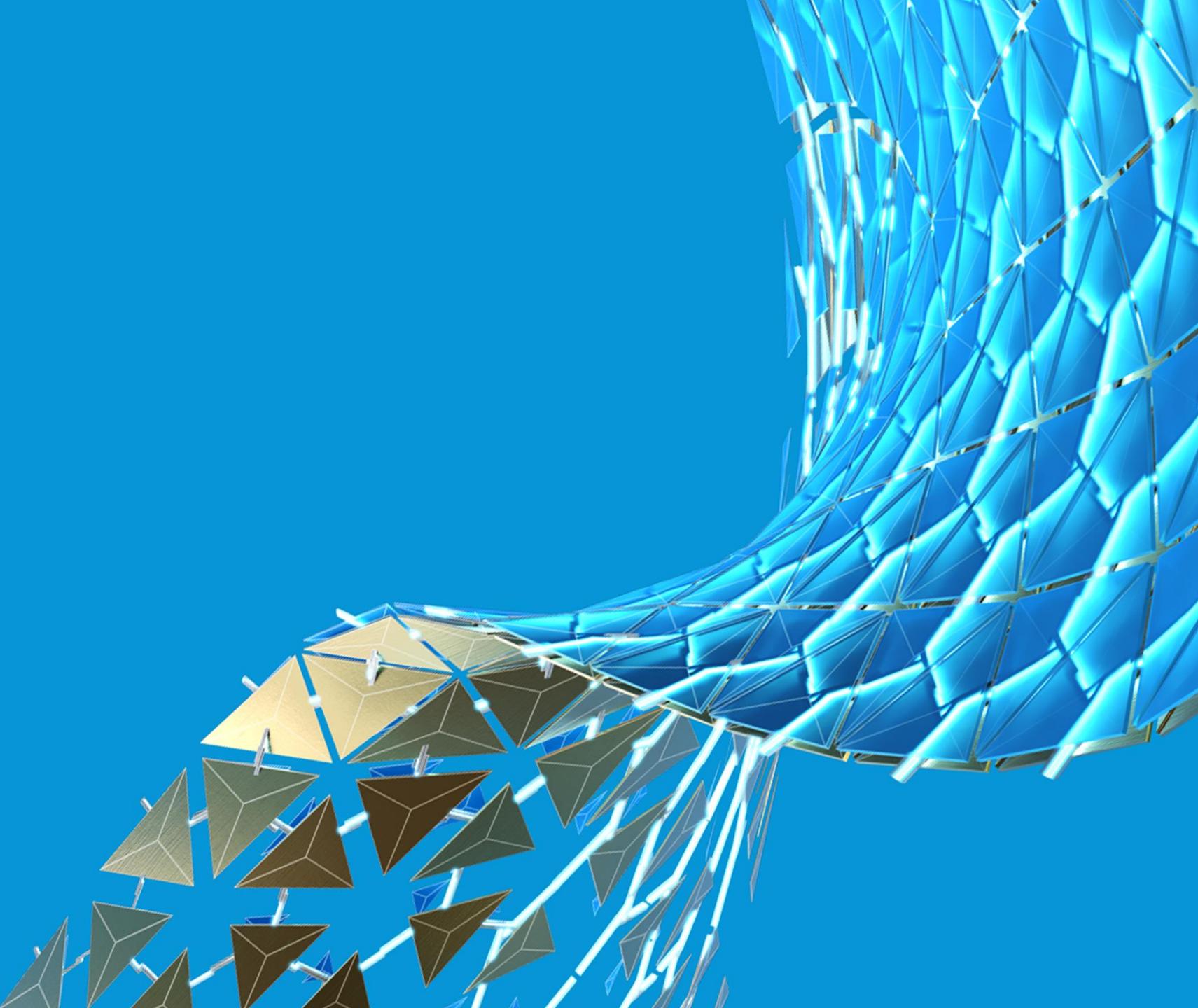
Beispiel Codeo / Online



Beispiel Cadshare / Online Ersatzteile



Herstellung



Steelcase



ptc



creo®



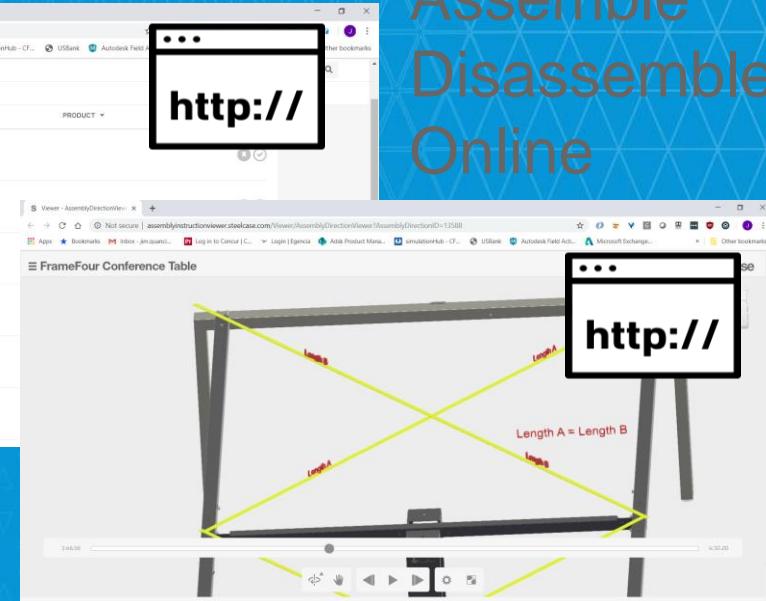
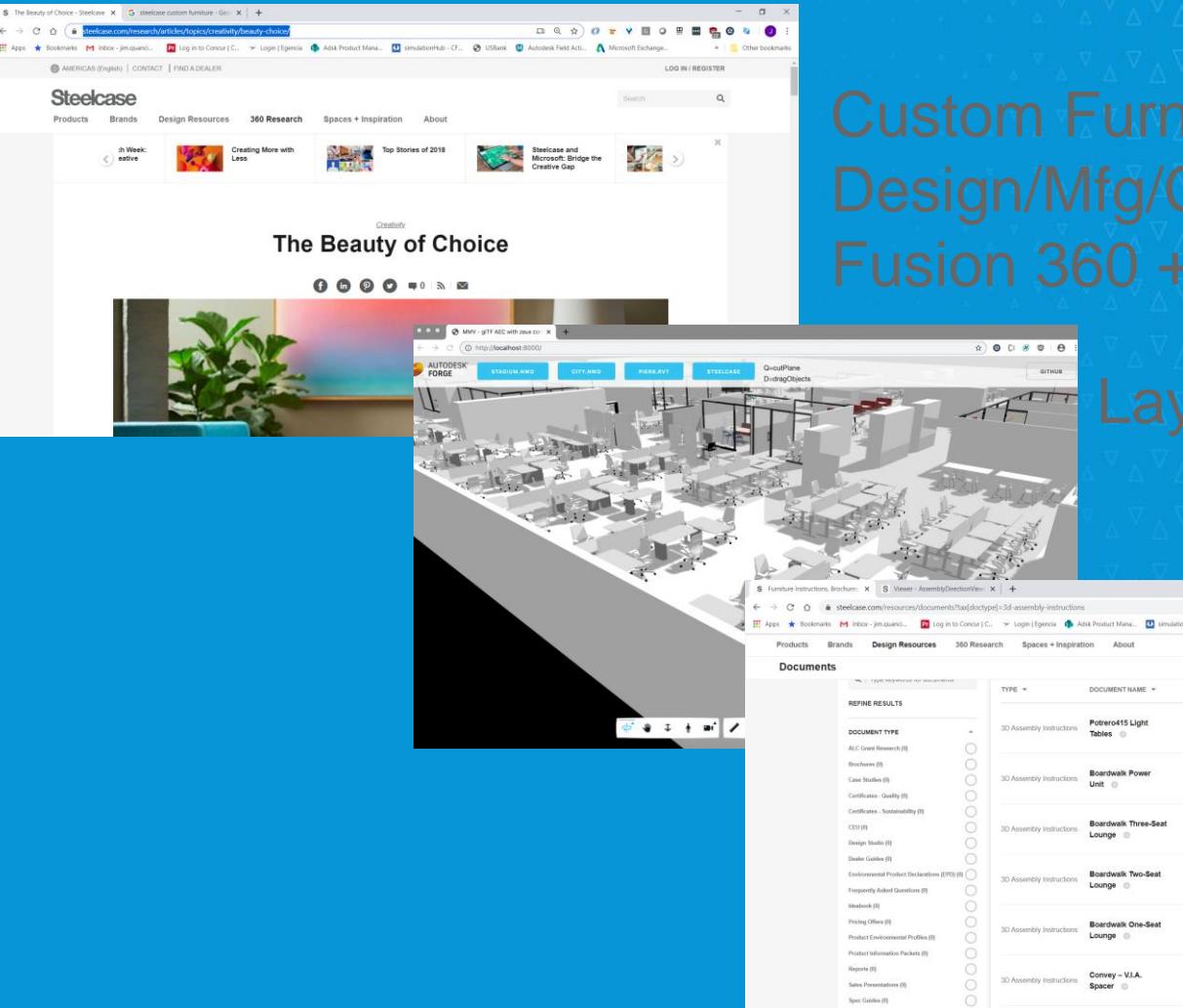
windchill®

12,000 Mitarbeiter
HQ Grand Rapids, Michigan
Umsatz US \$ 3.4 M





Herstellung



Produktion



Herstellung

The screenshot shows the Autodesk Forge RCDB interface. On the left, a sidebar titled "Model" lists components of a "Seat_Chassis:1" assembly, including "Ground Rails D-200363:1", "Rail Glides D-201535:1", "Lifter Front D-200982:1", and others. The main area displays a 3D exploded view of the seat chassis. A callout bubble highlights a dimension of "39.5 mm". To the right, a "Database" panel lists materials like ABS Plastic and Acetal Resin, along with their suppliers and prices. Below it, a "Cost Breakdown" section shows the percentage of total cost for different materials: Steel (82.37%), Rubber (16.33%), and Stainless Steel (0.74%). A pie chart at the bottom right visualizes this data.

Forge | RCDB

forge-rcdb.autodesk.io/database?id=57efaead77c8eb0a560ef465

Autodesk FORGE

Model

Search

Seat_Chassis:1

- Ground Rails D-200363:1
- Rail Glides D-201535:1
- Lifter Front D-200982:1
- D-201099:1
- Lifter Rear D-200685:1
- Chassis Spring Asm D-20083...
- D-200347:1
- D-200347:2

Done

Database

Material	Supplier	Price (/kg)	Currency
ABS Plastic	The Plastic inc	4	ARS
Acetal Resin, Black	Material World	5	BRL

Cost Breakdown

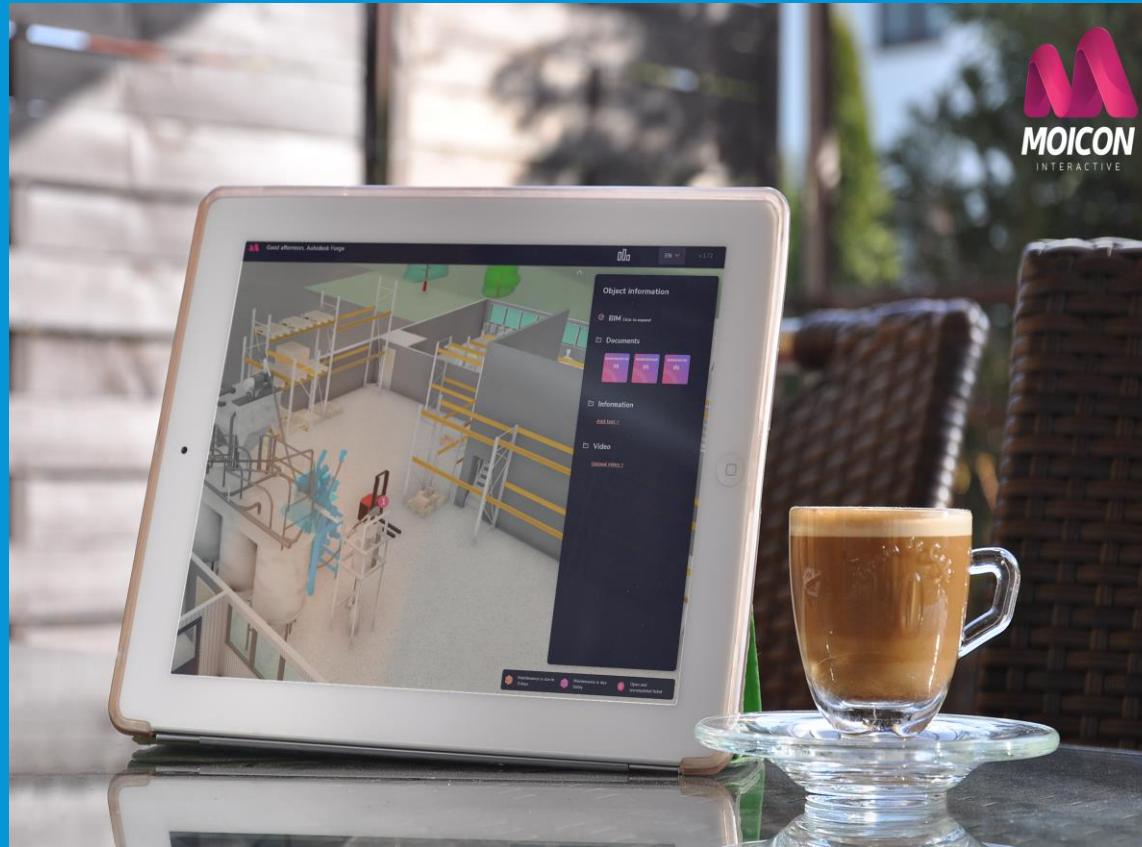
Material	Percent Total	Cost
Steel	% 82.37	\$USD 265.44
Rubber	% 16.33	\$USD 52.63
Stainless Steel	% 0.74	\$USD 2.38

16%

82%

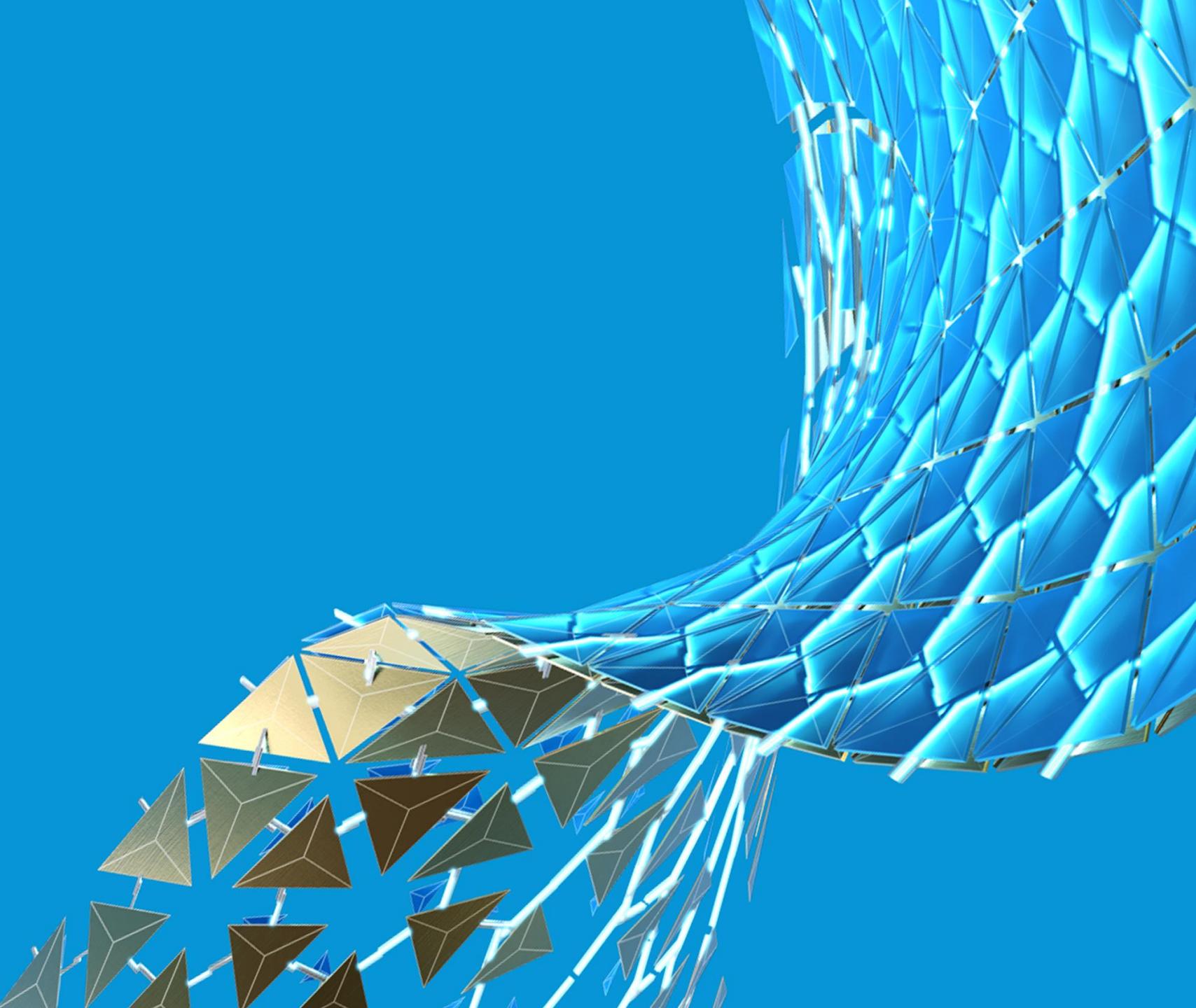
AUTODESK FORGE

Anlagen Fernüberwachung Partner Moicon



http.

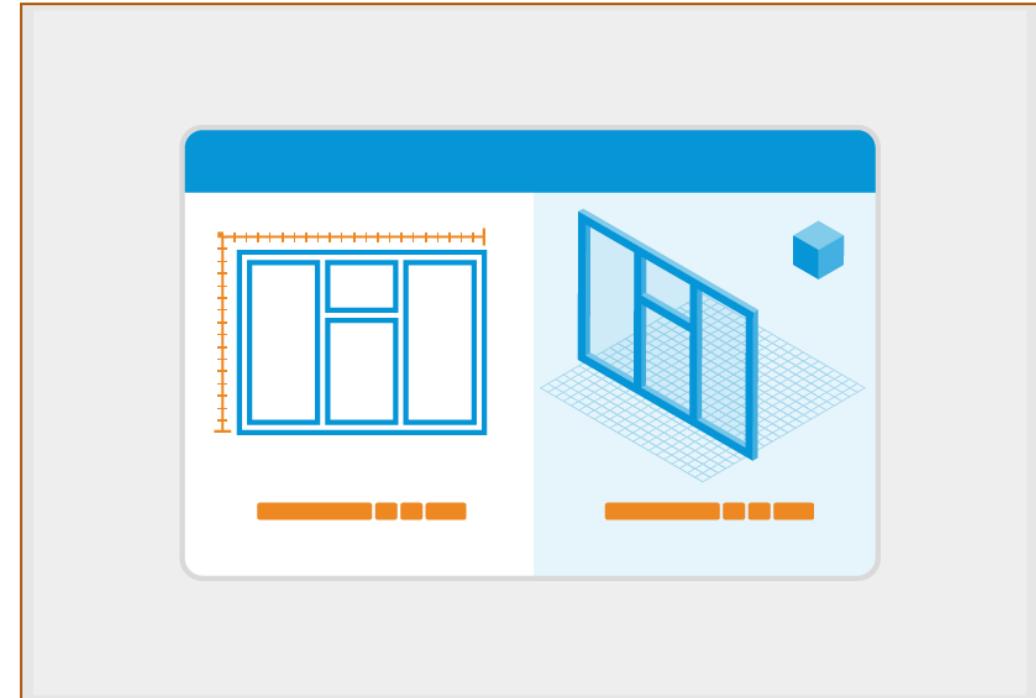
Betrieb



Herausforderung

Sie möchten...

1. Anzeige APM (application performance management) data
FEHLER VERMEIDUNG
2. Kontext Information über Ort und Risiko Komponenten
3. Visualisierung Instrumentierung um besser Gefahrstellen zu identifizieren
4. Störungsmeldungen

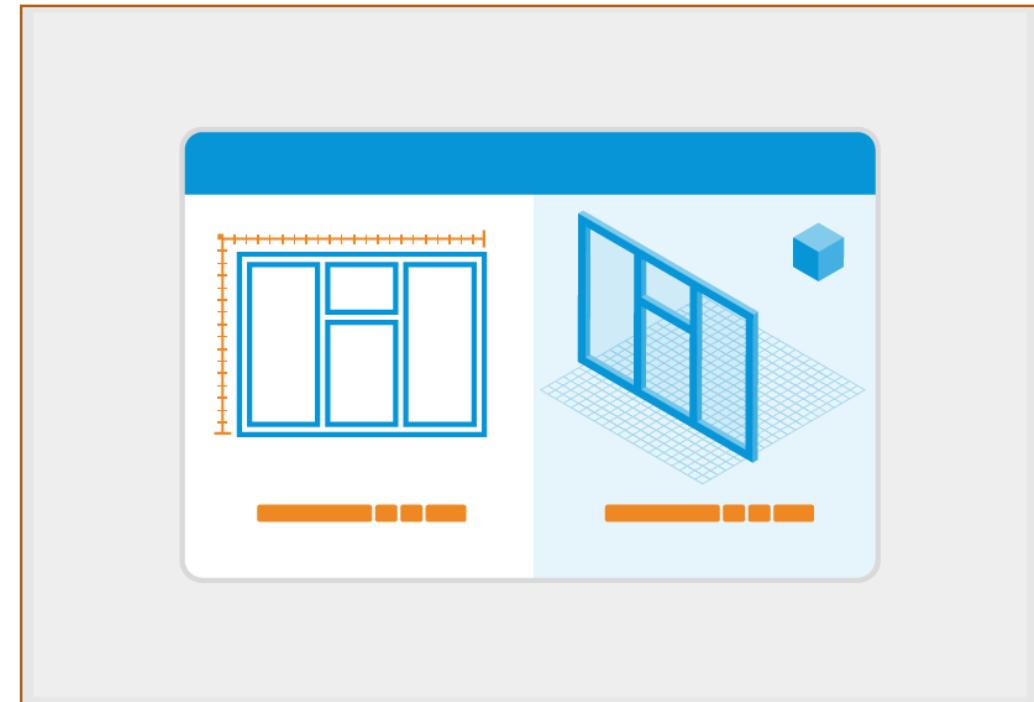
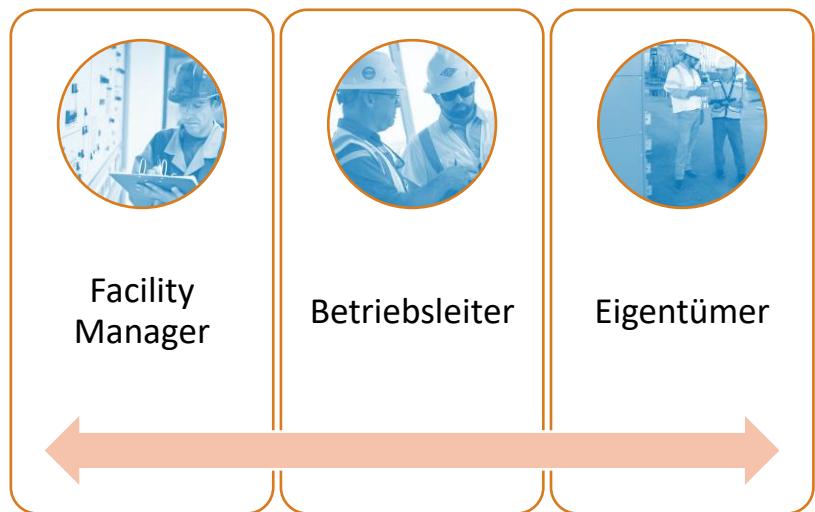


Die Forge Lösung

Digital Twin der Anlage

Forge basierte Lösung bringt APM data in die cloud , integriert mit weiteren Ressourcen um eine robuste visuelle und virtuelle Facility Management Situation zu erreichen.

Wer profitiert:



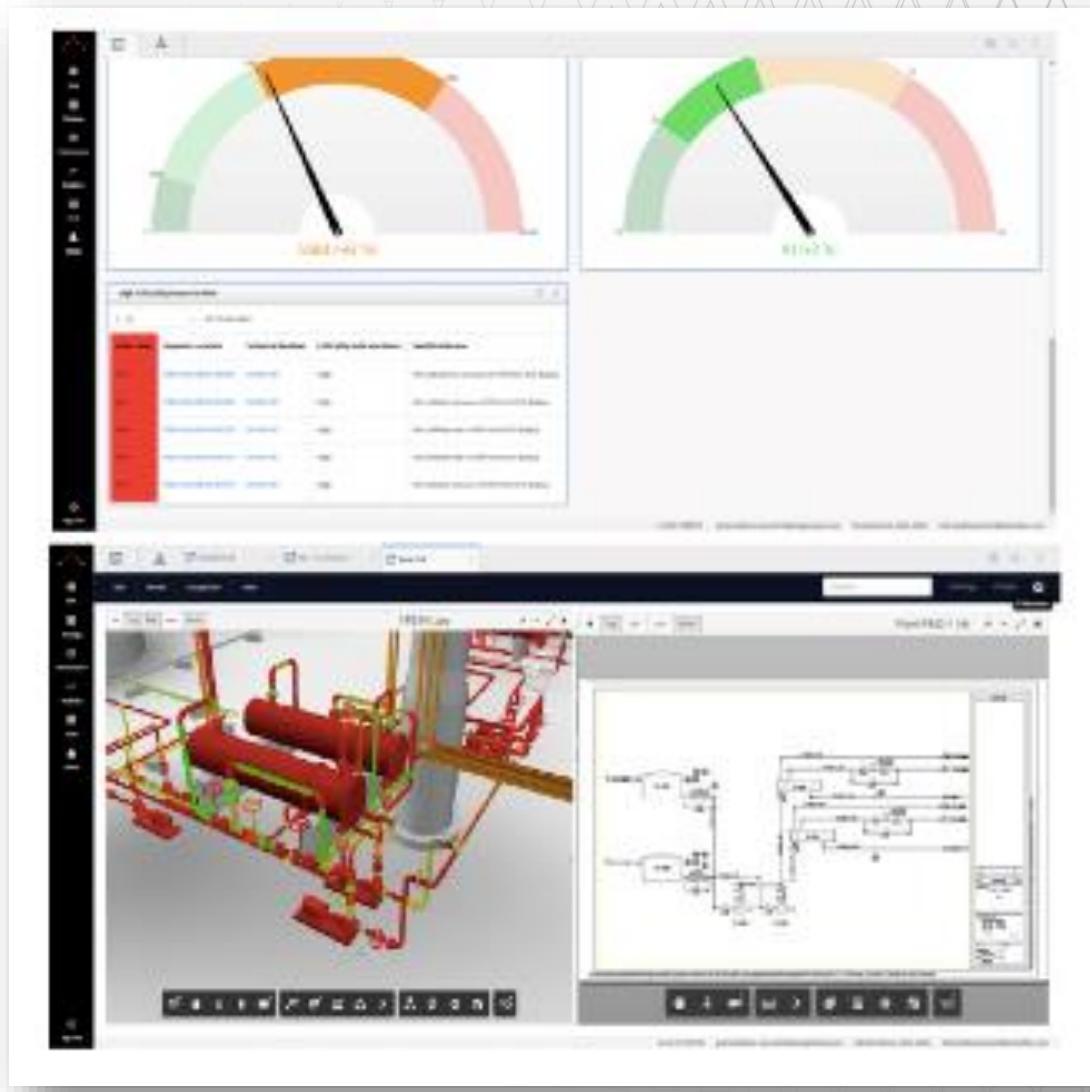
Vorteile

2D/3D Context Visualisierung Daten

- Intuitives Erkennen von Risiko
- Visuale Analysis
- Support Service Kräfte

Engineering Kontext

- GIS Information
- Service Training Leitfaden
- Technische Spezifikation



Virtuelle Anlage in 2D und 3D



http

Machinen Überwachung , Bsp Turbine

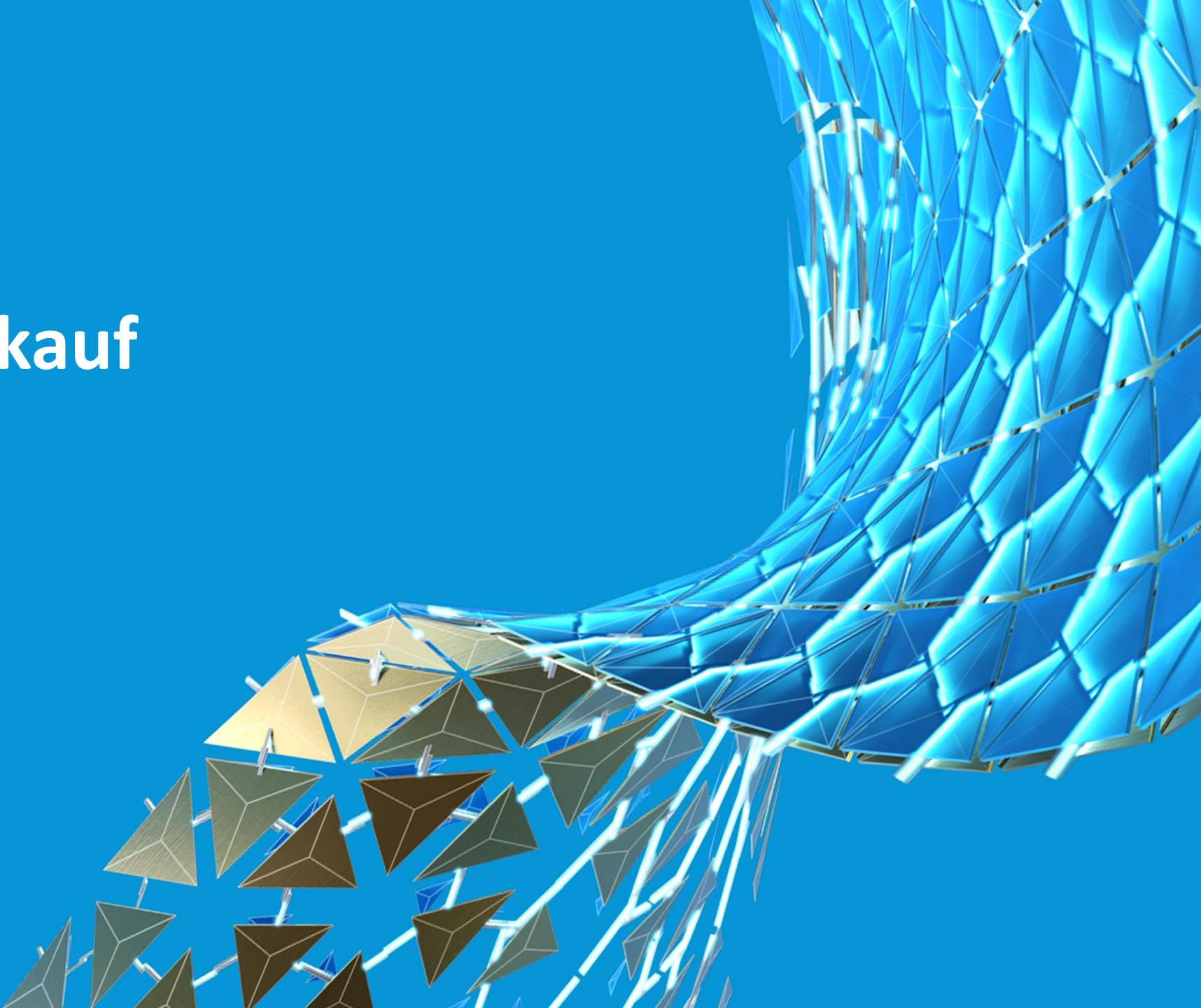


http.

Anlagen Fernüberwachung



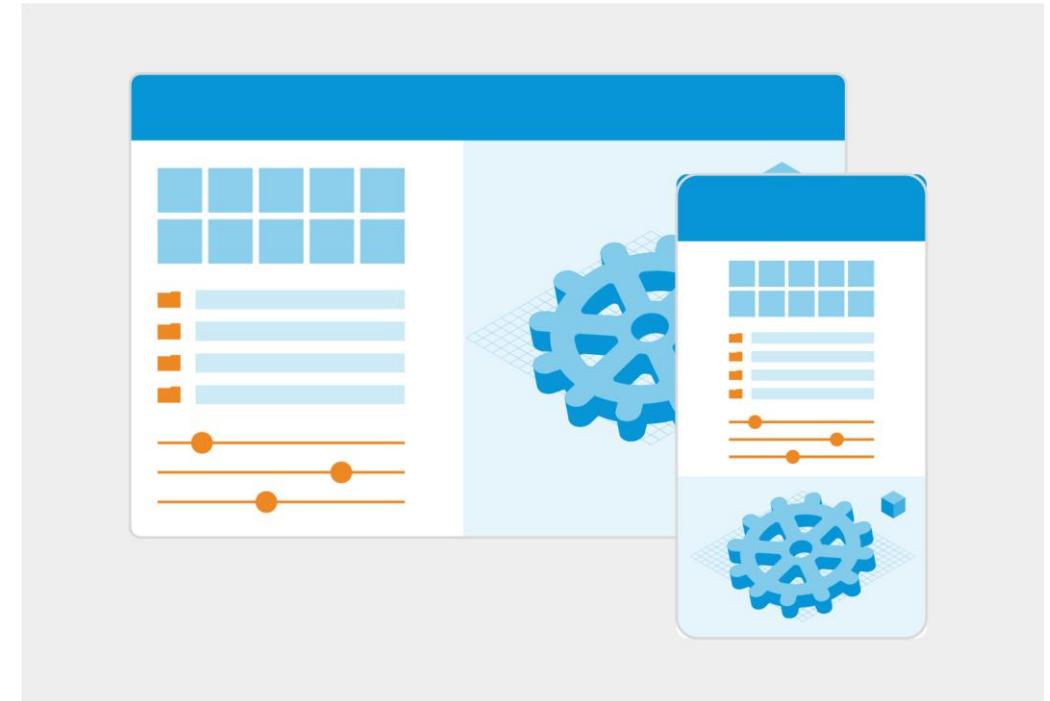
Digitaler Verkauf



Die Herausforderung

Sie möchten...

1. Klassische und digitale Vertriebswege kombinieren
2. Innovative Bedienung und Design um Käuferwünsche zu treffen
3. POS , Service , Produkt-Individualisierung



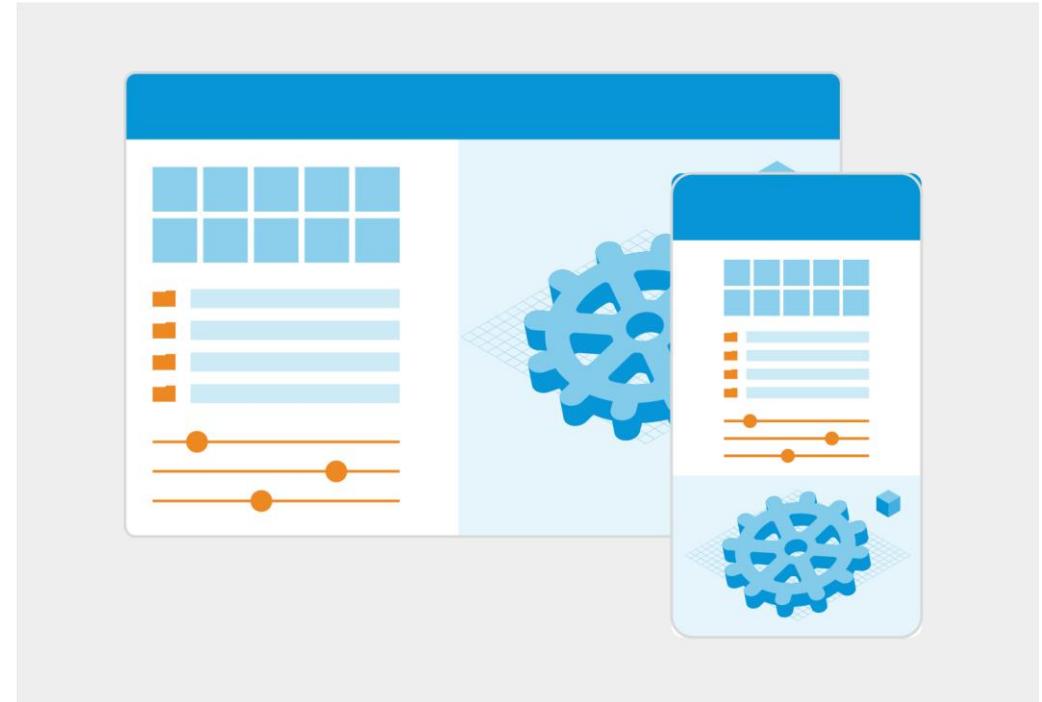
Visuelle Konfiguration

Forge ermöglicht 3D Modelle statt flacher Bilder.

Echtzeit statt Wartezeit

Exakte und aktuelle Produktdaten

Wer profitiert:



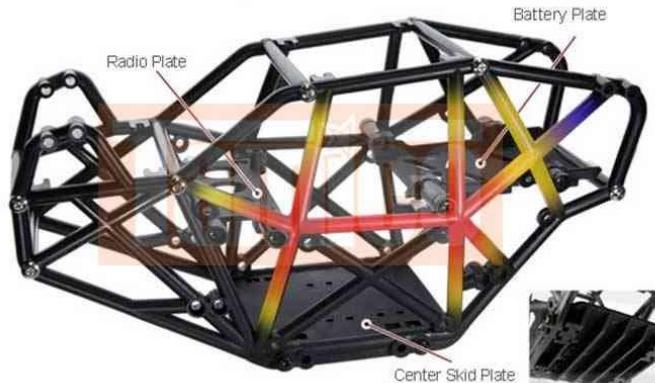
Benefits

- Skalierbares Web Marketing
- Interaktiv
- Kundenspezifisch
- Geschwindigkeit
- Wettbewerbsvorteil
- Vertriebskosten

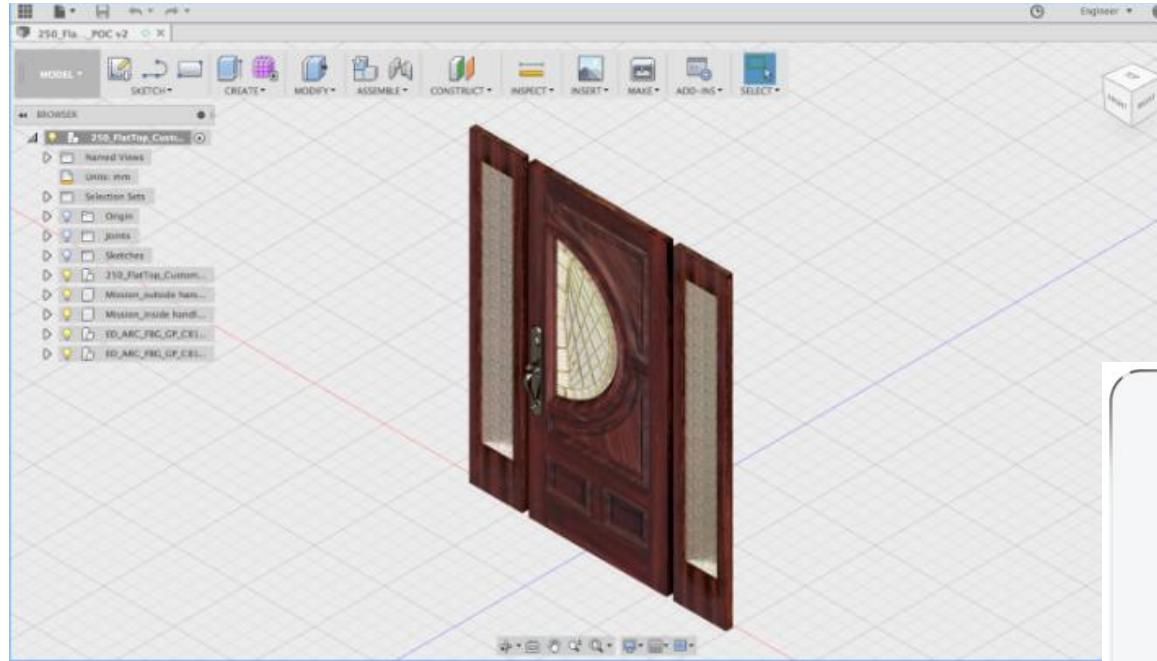


TUBE CHASSIS

R1's tube chassis is very light and firm. In addition, the 3D chassis offsets external shocks effectively.



Beispiel Jeldwen Konfigurieren Von Türen und Fenstern im Browser



The image displays a multi-device digital sales ecosystem for Jeld-Wen doors and windows:

- Top Right (Desktop):** A screenshot of the Autodesk Forge IDX application interface. It shows a navigation bar with "FORGE IDX", "Data Management", "Services Store", "Get Started", "Recent" (which is underlined in red), and "Published". Below the navigation is a grid of product cards. One card for "C-Glass Panel Doors" is highlighted with a blue box and a blue arrow pointing to it from the bottom right.
- Middle Left (Tablet):** A screenshot of a tablet displaying the Jeld-Wen website. The page title is "CUSTOM GLASS PANEL DOORS". It features a large image of a double door, filter buttons for "Model" (A250) and "Decorative" (C Glass), and a "FIND A STORE" button at the bottom.
- Bottom Right (Smartphone):** A screenshot of a smartphone displaying a smaller version of the same product page, showing the double door model.

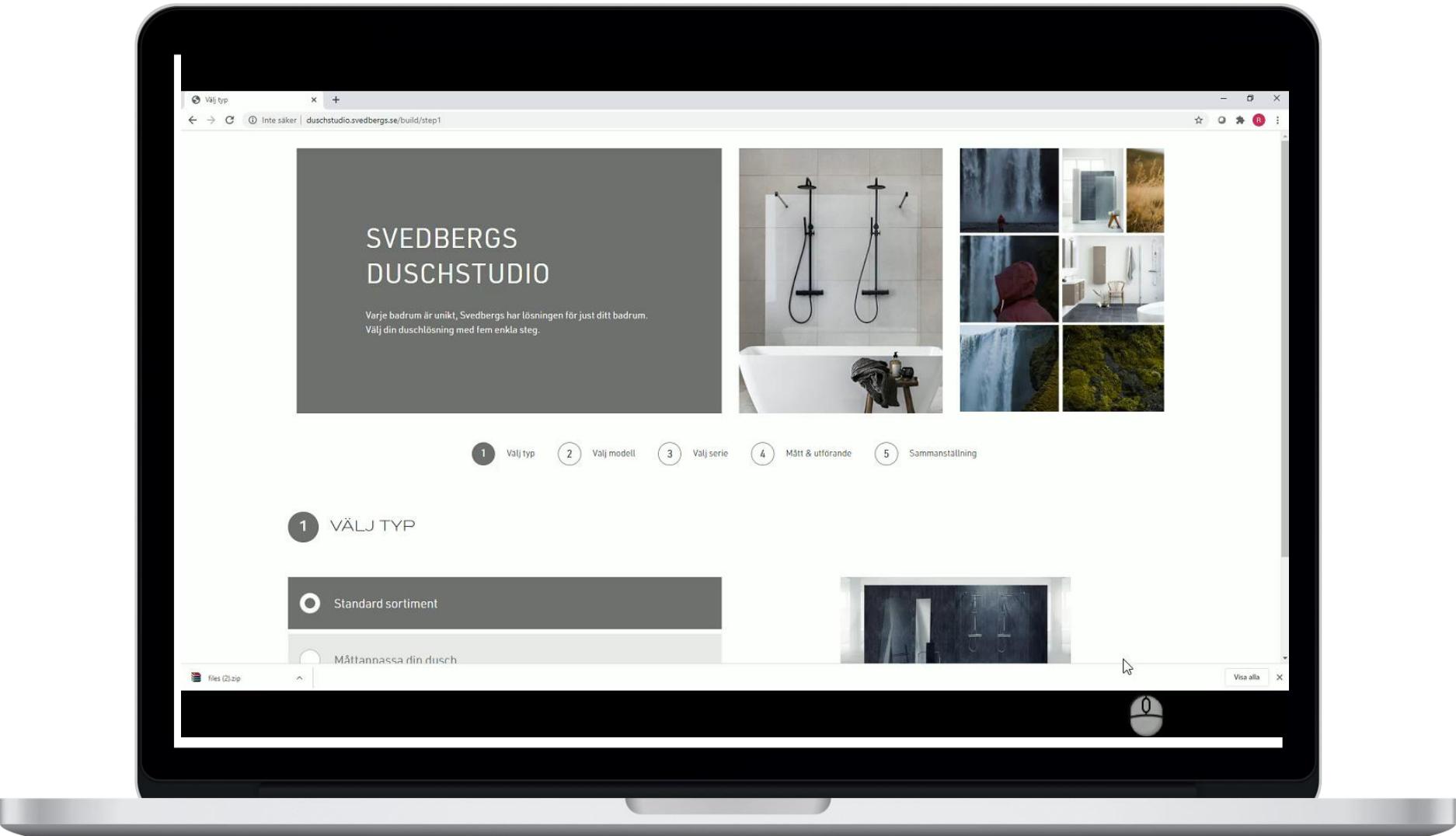
The image shows two side-by-side screenshots illustrating the integration of product information and 3D design.

Left Side (Product Landing Page):

- Header:** United States, Find A Store, Like 0, Post, Share.
- Section:** PRODUCTS, PLANNING & PROJECTS, PROFESSIONAL, PRODUCT SUPPORT, INVESTOR RELATIONS.
- Product Preview:** A large image of a blue-framed window with a grid pattern.
- Options:**
 - Model: Exterior (checkboxes for single and double panes).
 - No Grill (checkboxes for different grid patterns).
 - Brass (checkboxes for different colors).
 - Dimensions: Width, Height, Center Bar Width (sliders).
- Ways to Buy:** REGISTER A CONSULTATION, FIND A STORE.

Right Side (3D Modeling Interface):

- Header:** Window v13 - good.f3d v1*, File, MODEL, SKETCH, CREATE, MODIFY, CONSTRUCT, SELECT.
- Browser:** _Window v13 - good.efc7acb5-1533-480a-a00f-0, Distance: Millimeter, Angle: Degree, Origin, Window1.1, Window2.1.
- View:** A 3D perspective view of a window frame with a 4x3 grid pattern. The frame is dark grey/black, and the glass panes are light grey. The 3D interface includes a coordinate system, a grid, and various toolbars at the bottom.



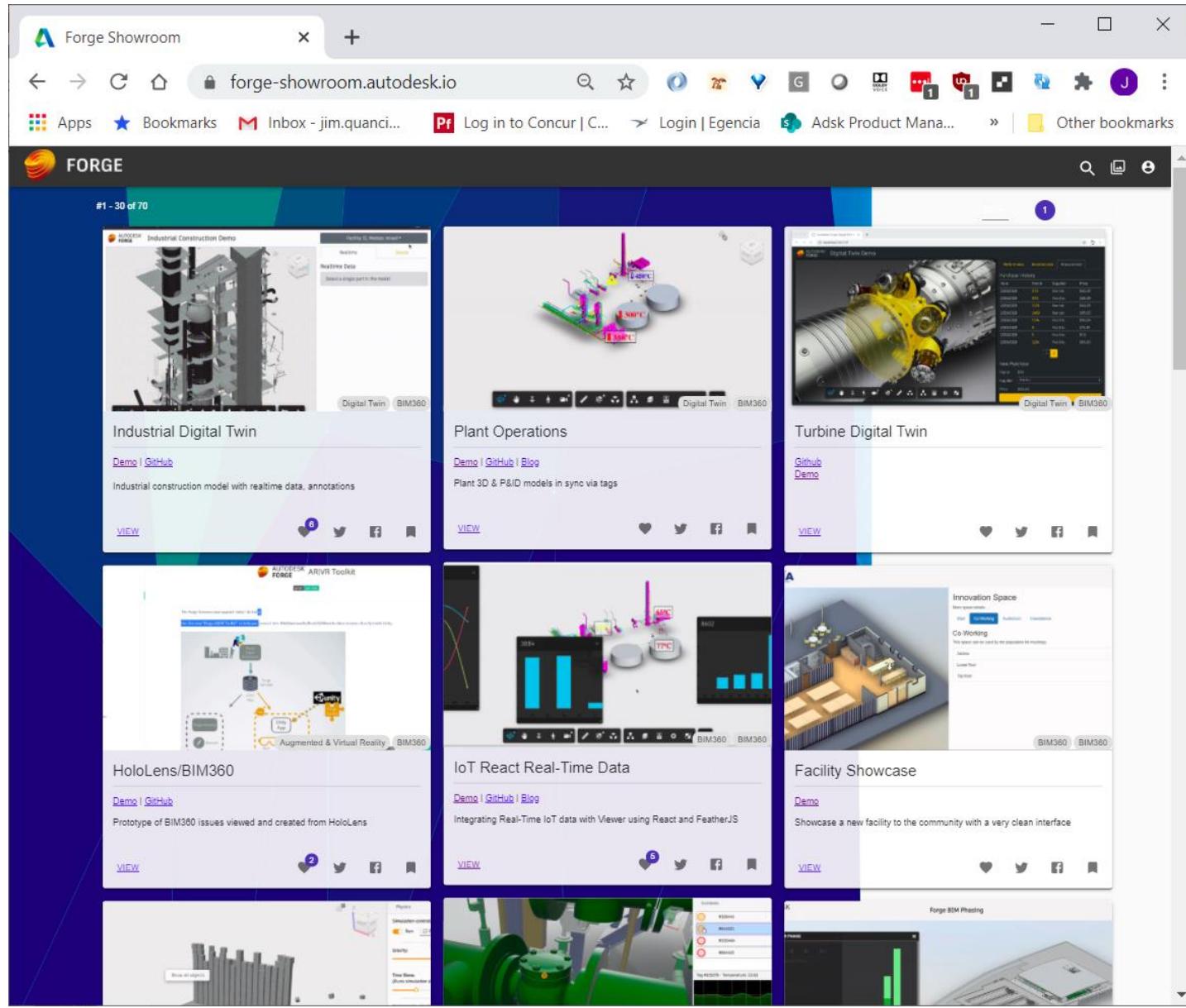
Design
Automation
(Inventor)

More examples – forge.autodesk.com

The screenshot shows the 'FORGE Success Stories' page. At the top, there's a banner with two success stories: 'NORCONSULT INFORMASJONSSYSTEMER AS' and 'MG AEC TECHNOLOGY PARTNERS'. Below the banner, there's a section titled 'Discover Community Success Stories' with filters for 'APIs and Services', 'Industries', 'Autodesk Products', and 'Sort by'. There are three main cards displayed:

- BIM6D**: Software Development. Description: 'BIM6D uses Forge to create data integrations and related reports that help AEC professionals manage data throughout the entire project lifecycle.' [Read story](#)
- SWAPP**: Software Development. Description: 'SWAPP uses the Forge platform to provide customers with 2D/3D visualizations of highly optimized, AI-based, automated building plans.' [Read story](#)
- Cadcraft**: Manufacturing, Software Development. Description: 'Cadcraft turned to Forge APIs to streamline and speed a customer's order and manufacturing process, reducing errors and cost and boosting customer satisfaction.' [Read story](#)

More examples – forge-showroom.autodesk.io



More examples – Forge Partner Talks

<https://forge.autodesk.com/partnertalks>

The screenshot shows a web browser window displaying the Autodesk Forge Partner Talks website. The page features a grid of four recent talk cards, each with a thumbnail image, date, title, author, and a 'READ MORE' link.

- Forge Partner Talks: Configurators - Q&A and recording** (MAY 29, 2020)
SANJANA CHAND
Thank you for joining us for Forge Partner Talks: Configurators. We are always excited to showcase new and exciting solutions built by our partners and customers, and hope seeing what the... [READ MORE](#)
TAGS [Forge Partner Talks](#), [Events](#)
- Forge Partner Talks Summer Lineup** (MAY 26, 2020)
SANJANA CHAND
The Forge Partner Talks webinar series will continue through June and July with four brand new panel discussions on another set of industry topics and trends! This is your opportunity to ... [READ MORE](#)
TAGS [Forge Partner Talks](#), [Events](#)
- Forge Partner Talks: AR/VR - Q&A and recording** (MAY 20, 2020)
SANJANA CHAND
Thank you for joining us at Forge Partner Talks: AR/VR. We enjoy showcasing new and exciting solutions built by our partners, and hope seeing theirs has inspired you to build your own or ... [READ MORE](#)
TAGS [AR/VR Toolkit](#), [Forge Partner Talks](#), [Events](#)
- Forge Partner Talks: Digital Twins Q&A and recording** (MAY 18, 2020)
SANJANA CHAND
Thank you for joining us at the very first Forge Partner Talks on Digital Twins. Hopefully you learned a lot from seeing the solutions our partners created, and are now inspired to build ... [READ MORE](#)
TAGS [Software Development](#), [Forge Partner Talks](#), [Webinar](#), [Events](#)



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