The Power of Forge

Ron Locklin

Director, Autodesk Cloud Platform (Forge)

AUTODESK.
UNIVERSITY

About the speaker

Ron Locklin | Director
Forge Strategy & Marketing

Ron Locklin is responsible for the global business management for the Autodesk Cloud Platform (Forge), including strategy, pricing, packaging, partner strategy, sales enablement, and marketing.

The Power of Forge

What is Forge?

How does Forge fit within the “Future of Making” vision?

How can customers Benefit from Forge?

What are examples of Forge’s Power?

What should I do next?

Forge: The platform powering the Future of Making

A set **of web service APIs*** and components that power the future of making.

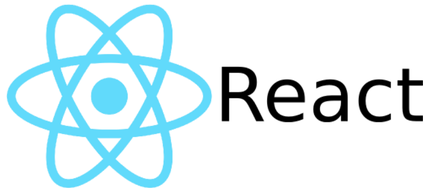
FORGE IS:

The **common SaaS technology stack** Autodesk uses to build its own web applications.

APIs* you can use to **extend and integrate Autodesk web applications** into your workflows.

Components from our technology stack that you can use in **your own web applications.**

Forge is based on Web Standard Technologies



What is Forge?

SAAS DEV	API'S	DATA	DEVELOPERS
Internal baseline for all SaaS development AND external SaaS platform	Leverage powerful API's to access data	Centered on Forge Data	Target audience

Who uses Forge?

INTERNAL AUTODESK DEVELOPERS	ENTERPRISE ACCOUNTS	ISV'S	SYSTEMS INTEGRATORS
Identity	JE DUNN CONSTRUCTION	CADshare	Capgemini
Forge data	NBS	Xinaps	MICRODESK
Security	Norconsult Informasjonssystemer		N+P INFORMATIONSSYSTEME
	SKANSKA		

Who interacts with Forge?

“ECONOMIC BUYER”	DEVELOPER OF A FORGE APP	USER OF THE FORGE APP
VP of IT, CIO, CEO of a small ISV	Web apps developers	e.g. Marketing team using dashboard app

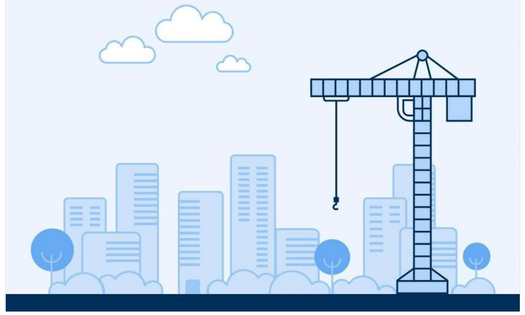
The Economist

The world's most valuable resource is no longer oil, but data

smartsheet

A Digital Transformation Report:

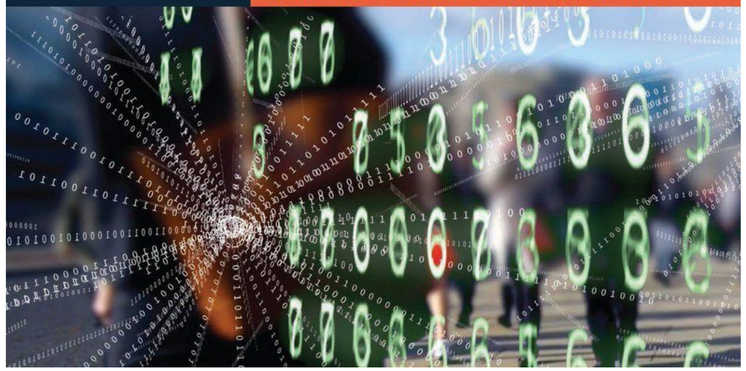
5 Emerging Trends in the Construction Industry



Forbes INSIGHTS

DIGITAL TRANSFORMATION

USING DATA-DRIVEN INSIGHTS FOR EXCEPTIONAL CUSTOMER ENGAGEMENT



Gartner

Every Organization Needs a Digital Platform Strategy

Forbes INSIGHTS

WORLD ECONOMIC FORUM

Platforms and Ecosystems: Enabling the Digital Economy

“Digital Transformation”

HBR

Digital transformation is about **reconstruction the firm** around digital operating principle, integrating traditional assets to address new challenges and pursue new opportunities.

MIT SLOAN

The use of technology to **radically improve performance** or reach of enterprises

Forge enables the Digital Transformation for your Design & Make

Your Digital Transformation

OFFICE

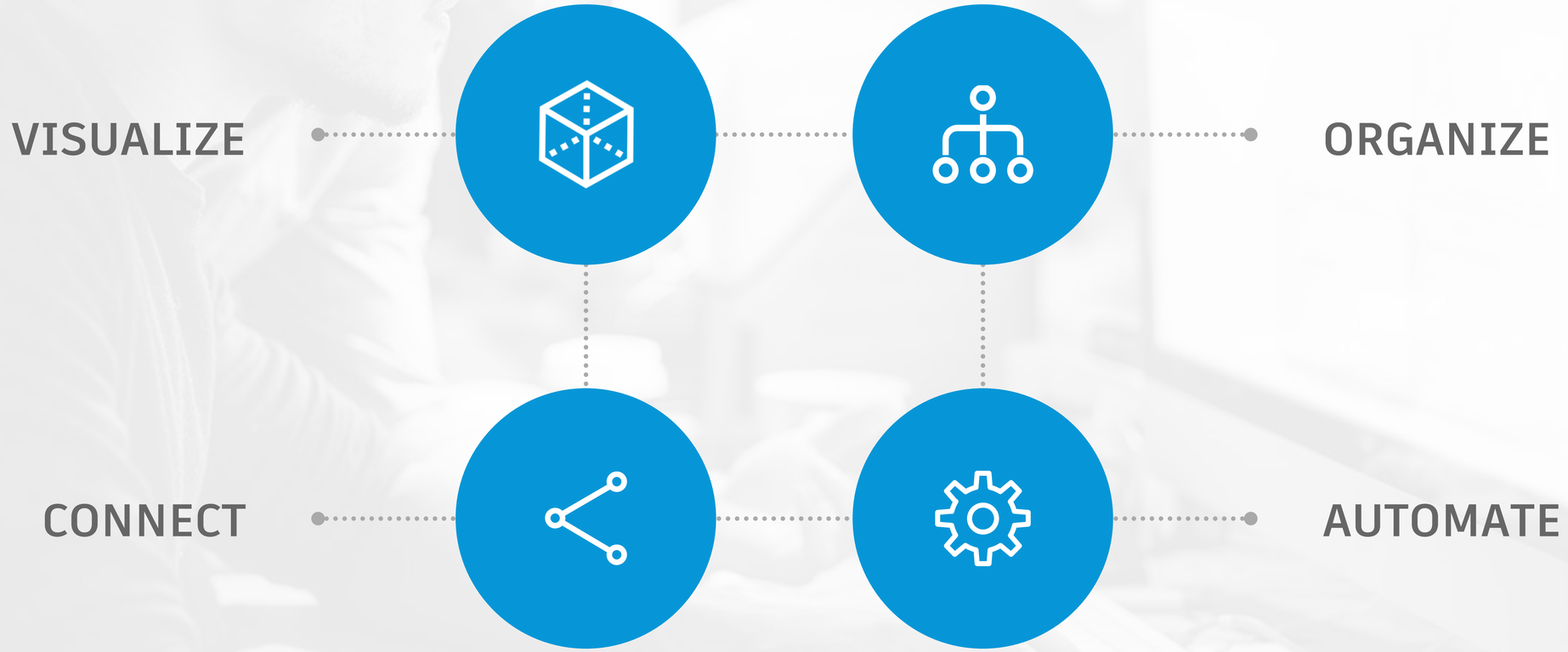
ERP

COLLABORATION

CRM

DESIGN
AND MAKE

How can Forge enable your Digital Transformation?



Better

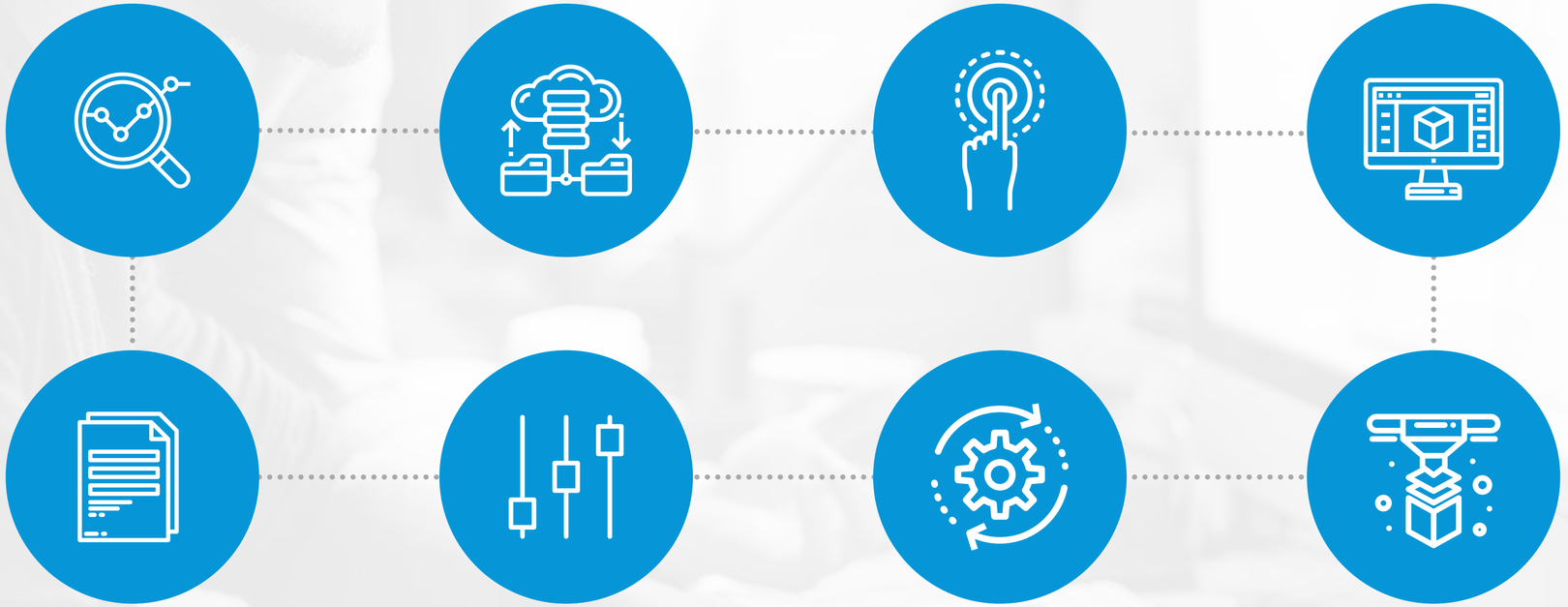
What customers and partners build with Forge

DATA VISUALIZATION & ANALYSIS

DIGITAL TWIN

AUGMENTED & VIRTUAL REALITY

SaaS INTEGRATION



CATALOGS

CONFIGURATORS

DESIGN AUTOMATION

PHOTO TO 3D

Norconsult

Enhanced Viewer and Analytics

AF

Recording Limit 5 min. Get more recording time
Model Browser

NBS

Visualization and Collaboration

NBS

CONNECTED CONSTRUCTION INFORMATION

NBS is an Integrated global platform for everyone involved in the design, supply and construction of the built environment

OFFICIAL

UK CONSTRUCTION WEEK | 2019

BEER FESTIVAL SPONSOR

NBS BIM Toolkit

SEARCH DEFINITIONS...

PROJECTS CONTENT SUPPORT SIGN OUT

Back to Project

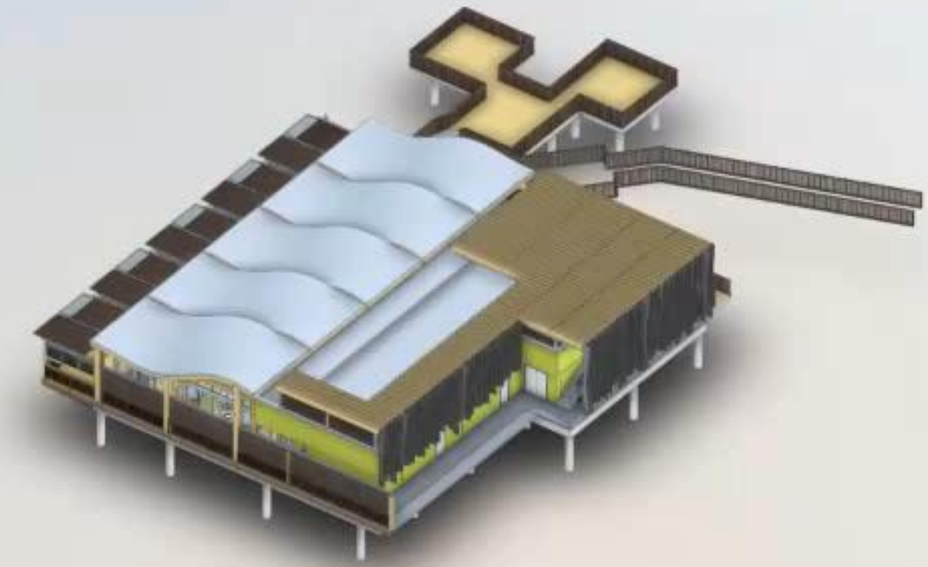
NBS Viewer

Files Participants

Contents

Search clauses...

Title	Suffix	NBS Code	Uniclass 2015
Driven precast or prestressed concr...		15-05-65/155	Ss_20_05_65_24
In situ reinforced concrete framing s...		15-65-75/140	Ss_20_10_75_70
Timber framing system		15-65-75/185	Ss_20_10_75_85
Composite concrete deck system		20-05-80/110	Ss_30_12_85_15
Board suspended ceiling system		20-10-10/110	Ss_30_25_10_10
Unit (modular) suspended ceiling sy...	type A	20-10-20/190	Ss_30_25_22_90
Unit (modular) suspended ceiling sy...	type B	20-10-20/190	Ss_30_25_22_90
Unit (modular) suspended ceiling sy...	type C	20-10-20/190	Ss_30_25_22_90
Deck system	type A	20-15-25/125	Ss_30_20_30_25
Deck system	type B	20-15-25/125	Ss_30_20_30_25
Permeable small unit paving system		20-15-90/170	Ss_30_14_90_62
Single layer warm roof covering syst...		20-50-30/170	Ss_30_40_30_80
Stainless steel sheet roof covering s...		20-50-90/145	Ss_30_40_50_80
Bonded or partially bonded cementi...		20-55-15/110	Ss_30_42_15_10
Internal floor tiling system		20-55-35/140	Ss_30_42_32_40
Resilient sheet flooring system		20-55-75/165	Ss_30_42_72_72
Resin flooring system		20-55-77/170	Ss_30_42_54_75
Wood block flooring system		20-55-90/195	Ss_30_20_90_95
Panel cubicle system		25-05-60/160	Ss_25_12_60_60
Masonry internal leaf system		25-10-55/160	Ss_25_13_50_51
Metal post and rail fencing system		25-20-30/105	Ss_25_14_63_51
General pattern wire mesh fencing s...		25-20-30/139	Ss_25_14_67_34
Balustrade and guarding system		25-25-10/110	Ss_25_15_60_05
Handrail system		25-25-10/135	Ss_25_15_60_35
Doorset system	type A	25-50-20/120	Ss_25_30_20_25
Doorset system	type B	25-50-20/120	Ss_25_30_20_25
Doorset system	type C	25-50-20/120	Ss_25_30_20_25
Doorset system	type D	25-50-20/120	Ss_25_30_20_25
Doorset system	type E	25-50-30/120	Ss_25_30_30_25
Louvre screen system		25-55-45/150	Ss_25_50_45_45
Panelled louvre screen system		25-55-45/170	Ss_25_50_45_60
Stick curtain walling system		25-60-15/175	Ss_25_10_20_85



Specification

No specification

Select a clause from the Contents panel or select an object in the model to view its specification

Object

The NBS Viewer is currently in BETA. VIEW BETA UPDATES

Tell us what you think

JE DUNN®
CONSTRUCTION

Visualization and Collaboration

Benefits

FORGE HELPED JE DUNN BREAK THROUGH ITS DATA SILOS, INTEGRATING BIM WITH THEIR INTERNAL ESTIMATING TOOLS AND RUNNING IT ALL THROUGH A SINGLE ERP.

SCALABLE, TRANSPARENT SOLUTION

- Solution enables greater transparency with external users, and enhances design coordination between architects and owners

STREAMLINED WORKFLOWS

- Streamlines the design iteration process between the architects and the engineers that are making the changes

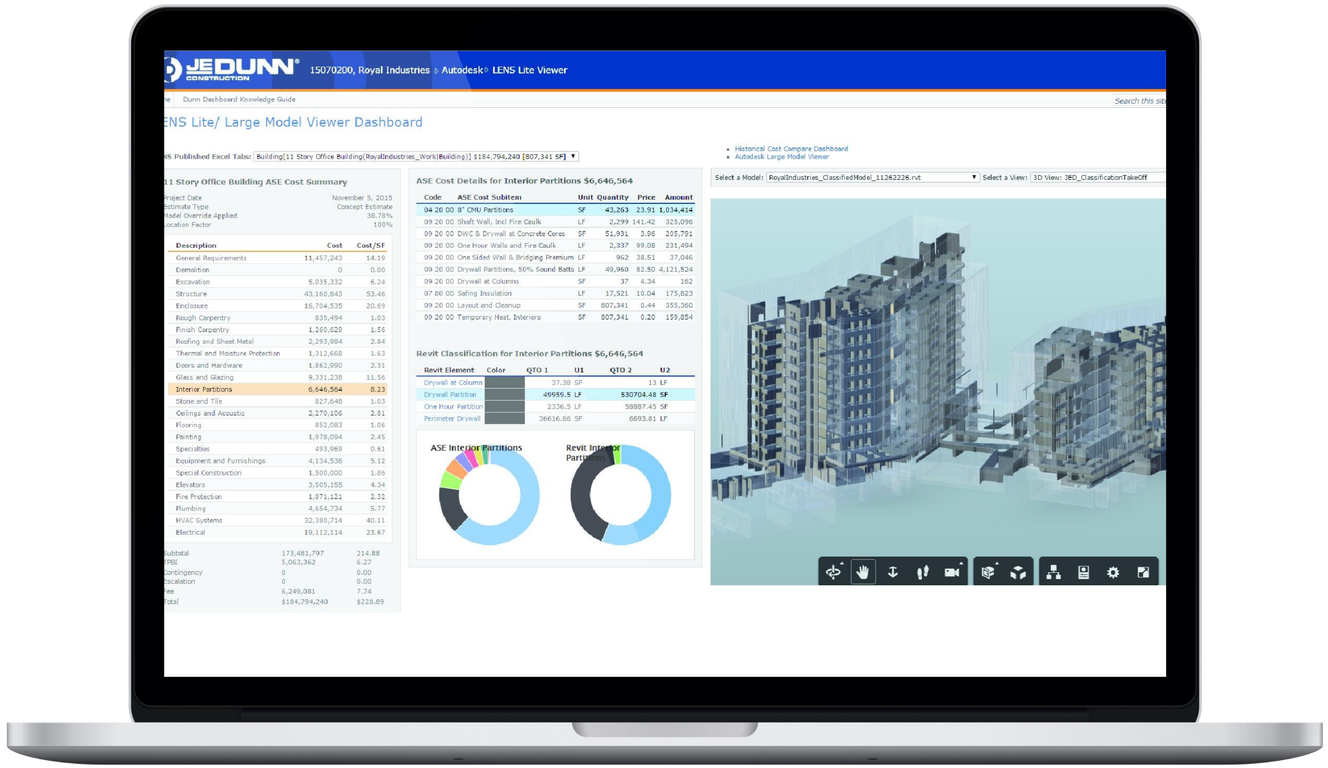
SHARE DATA ACROSS TEAMS

- Integrates virtual models and cost-related history into a seamless application, accessible across teams

VIEWER

MODEL DERIVATIVE API

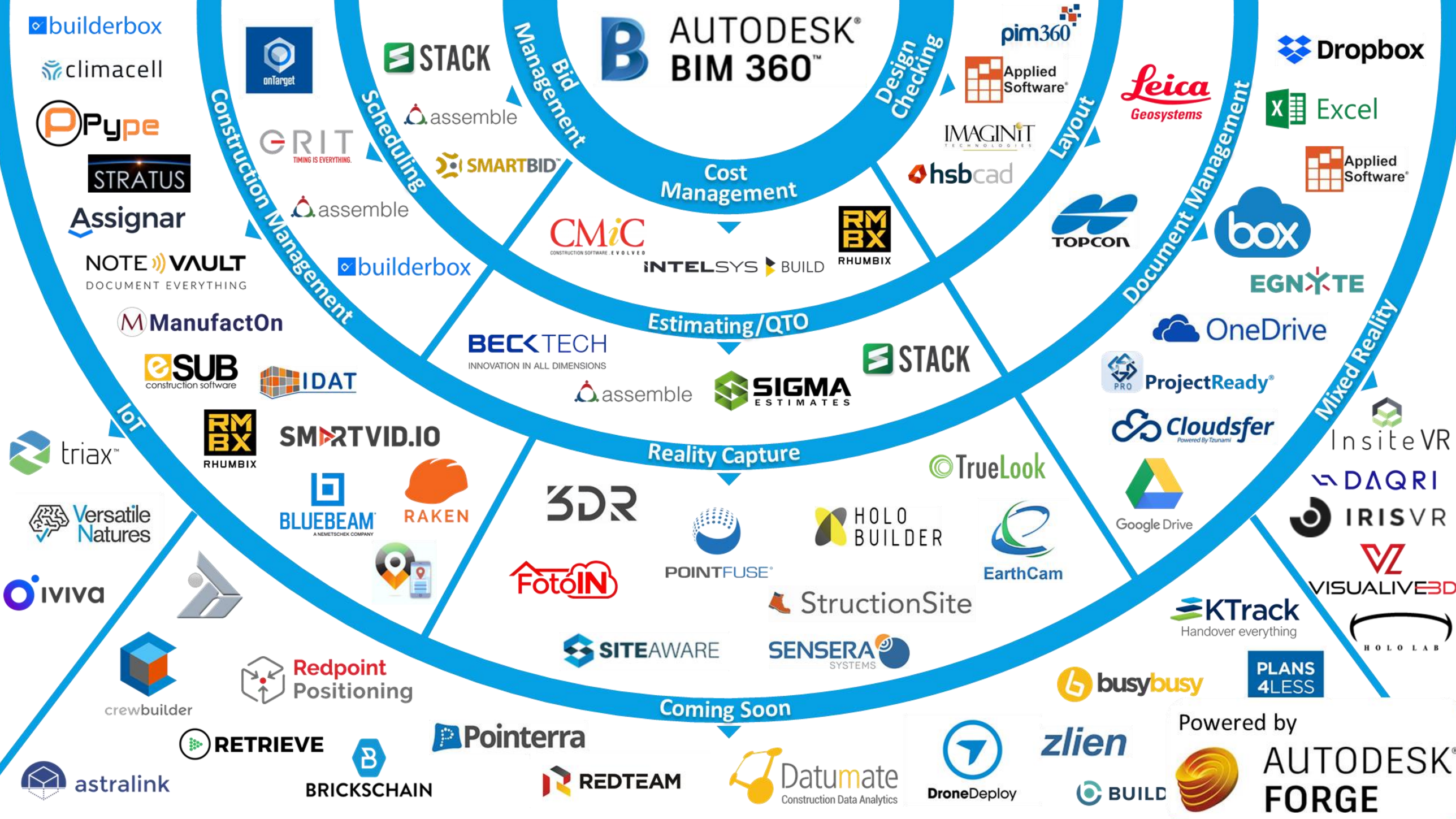
DATA MANAGEMENT API



Forge certified systems integrators

WE CERTIFY SYSTEMS INTEGRATORS SO CUSTOMERS HAVE ACCESS TO TRUSTED SUPPORT RESOURCES THAT CAN HELP THEM BUILD SOLUTIONS WITH FORGE.

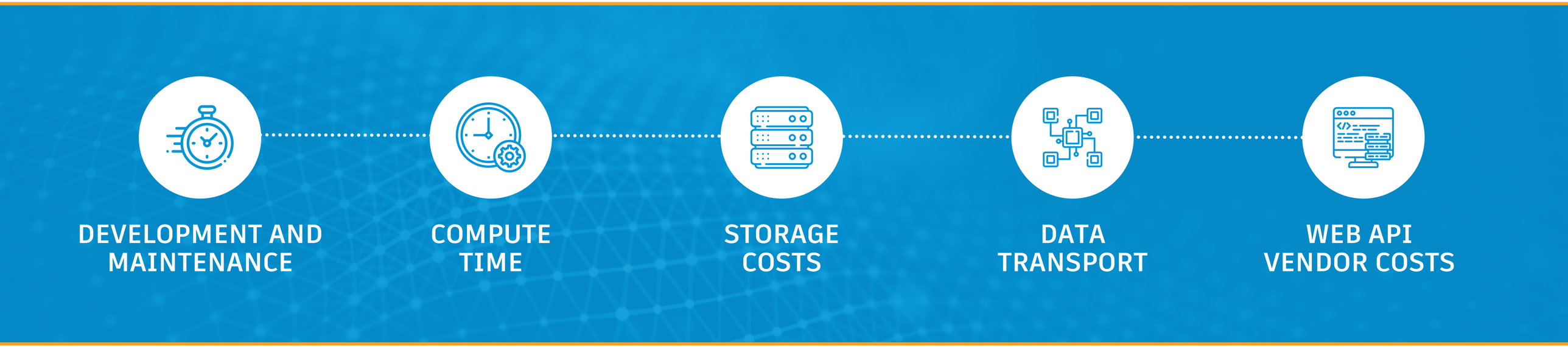
AUTODESK. PRO BONO CONSULTING
Capgemini
ProtoTech Solutions
Xinaps
MONARCH INNOVATION PVT. LTD.
_ioLabs
Chetu World-Class Software Solutions
MICRODESK
NP INFORMATIONSSYSTEME
Applied Software® We Build Solutions.
CCTech®
Cadac Group
ARKANCE SYSTEMS
BAD MONKEYS
APPLIED TECHNOLOGY CO.,LTD. 応用技術株式会社
IMAGINiT TECHNOLOGIES
SOFTWARE DESIGN SOLUTIONS
leb
AMCBRIDGE
AMCAD Software and Consulting
matterlab
CAD & COMPANY
D3 TECHNOLOGIES
INTELSYS BUILD
nti
SPINALCOM
CIDEON
BIMLAUNCHER
ofcdesk
SystemMetrix
db-lab


AUTODESK BIM 360
Bid Management
Design Checking
Scheduling
Layout
Construction Management
Document Management
Cost Management
Estimating/QTO
IoT
Mixed Reality
Reality Capture
Coming Soon
builderbox
climacell
PPype
STRATUS
Assignar
NOTE VAULT
DOCUMENT EVERYTHING
ManufactOn
eSUB construction software
IDAT
RHUMBIX
SMARTVID.IO
triax
Versatile Natures
IVIVA
BLUEBEAM
A NEMETSCHEK COMPANY
RAKEN
crewbuilder
Redpoint Positioning
RETRIEVE
astralink
BRICKSCHAIN
Pointerra
REDTEAM
Datumate
Construction Data Analytics
DroneDeploy
zlien
BUILD
onTarget
STACK
assemble
GRIT
TIMING IS EVERYTHING.
SMARTBID
assemble
builderbox
CMiC
CONSTRUCTION SOFTWARE . EVOLVED
INTELSYS BUILD
RHUMBIX
BECKTECH
INNOVATION IN ALL DIMENSIONS
assemble
SIGMA ESTIMATES
STACK
3DR
FotoIN
POINTFUSE
HOLO BUILDER
EarthCam
StructionSite
SITEAWARE
SENSERA SYSTEMS
pim360
Applied Software
IMAGINiT TECHNOLOGIES
hsbcad
TOPCON
TrueLook
Leica Geosystems
Dropbox
Excel
Applied Software
box
EGNYTE
OneDrive
PRO
ProjectReady
Cloudsfer
Powered By Tzunami
Google Drive
InsiteVR
DAQRI
IRISVR
VISUALIVE3D
KTrack
Handover everything
HOLO LAB
busybusy
PLANS 4LESS
Powered by
AUTODESK FORGE

The Forge Business Model Explained

AUTODESK. UNIVERSITY

Web applications cost money to run



FORGE

Microsoft Azure

aws

HEROKU

ORACLE

twilio

PingIdentity

PubNub

How to access Forge?

EBA CUSTOMERS	OTHER CUSTOMERS	BIM 360DOCS/FUSION 360/ FUSION TEAM CUSTOMERS
Ask your CSM to add a Forge entitlement to your EBA contract Consumption is in Tokens (1 Token = 1 Cloud Credit)	Buy a Forge subscription via forge.autodesk.com/pricing 100 USD per year – Includes 100 Cloud Credits Buy additional Cloud Credits as needed	A subset of Forge APIs is available for free Enable access on forge.autodesk.com/pricing

Forge pricing is based on consumption

Buy Credits in Advance

Some API calls consume Credits

Buy more Credits when you need them

PROS

Customer pays for exactly what they use – and no more.

CONS

It takes time for a customer to be able to predict costs.

OTHER CONSUMPTION MODELS

MOST WEB APIS

amazon web services

Microsoft Azure

twilio

AUTODESK PRODUCTS

- GENERATIVE DESIGN
- RENDERING
- RECAP PRO

What consumes cloud credits?

TRANSLATING A MODEL

Model Derivative API*

- 1.5 CCs for Revit and Navisworks
- 0.2 CCs for everything else
- (Not required to view models uploaded to BIM 360 Docs)

BATCH EDITING A DESIGN

Design Automation API

- 4 CCs per hour of processing time for AutoCAD
- 6 CCs per hour of processing time for everything else
- (Example – Typical time to create 2D drawings from an Inventor model is 1-2 minutes= 0.1-0.2 CCs)

CONVERTING PHOTOS INTO A 3D MESH

Reality Capture API

- 3.5 CCs per gigapixel processed

*Translation cost is 'per model', not 'per file'.

Find out more…

WEBSITE/DEVELOPER PORTAL
forge.autodesk.com

CUSTOMER SUCCESS STORIES
forge.autodesk.com/customers

SALES MATERIAL
forge.autodesk.com/ots

SYSTEMS INTEGRATORS
forge.autodesk.com/systemsintegrators

ACCELERATORS
forge.autodesk.com/accelerator

FORGE DEVCON
forge.autodesk.com/devcon-2019

SALES QUESTIONS
forge.sales@autodesk.com

TECHNICAL QUESTIONS
forge.help@autodesk.com

SYSTEMS INTEGRATORS PROGRAM QUESTIONS
forge.si.program@autodesk.com

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