

Agenda – Capital Markets Day, Tuesday 13 November, 2018

1

09.30–10.00 **Welcome Address – Business & Strategy Update**
Patrik Heider, Spokesman and CFOO of Nemetschek SE

2

10.00–12.45 **Segments: Potential, Positioning & Strategy**

10.00–11.00 **Design: Architecture**
Viktor Várkonyi, Member of the Executive Board of Nemetschek SE; CEO of Graphisoft

Design: Structural Engineering
Sean Flaherty, CSO of Nemetschek SE

11.00–11.15 **Break**

11.15–11.45 **Build**
Jon Elliott, CEO of Bluebeam

11.45–12.15 **Manage**
Koen Matthijs, CEO of MCS Solutions

12.15–12.45 **Media & Entertainment**
Dave McGavran, CEO of Maxon

3

12.45 **Wrap-Up and Q&A**

4

13.15 **Lunch and Get Together**

Safe Harbor Statement

Each of the presentations today will contain forward-looking statements about our strategies, products, future results, performance or achievements, financial, operational and otherwise, including statements about our strategic priorities, guidance and our mid-term goal, our M&A strategy, and our capital allocation initiatives. These statements reflect management's current expectations, estimates and assumptions based on the information currently available to us. These forward-looking statements are not guarantees of future performance and involve significant risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from results, performance or achievements expressed or implied by the forward-looking statements contained in these presentations.

Nemetschek undertakes no obligation to publicly update or revise any forward looking statements. All forward looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward looking statements, which speak only as of their dates.

Capital Markets Day 2018

Business & Strategy Update

November 13th 2018 | Patrik Heider, Spokesman & CFOO of Nemetschek SE



AGENDA

01 | Our Achievements / Our DNA

02 | AEC Market Opportunities

03 | BIM Market Potential

04 | Way Ahead / Outlook



01

Our Achievements /
Our DNA

Key Business Highlights

Strong Performance



Strong growth:
5 yrs¹ revenue CAGR of
~20%



>500%
growth in market
capitalization (5 yrs)



High cash generation:
>80%



Global footprint: US 5 yrs¹
revenue CAGR of
>45%



~50%
Recurring revenues



High profitability: Sustainable **25 – 27%**
EBITDA margin while investing in growth

Customer Focus



4.0m
Users around the world



>95%
Customer retention

Huge Market Potential



€ 8bn
AEC Market opportunity²



€ 20bn
Building management
market opportunity³



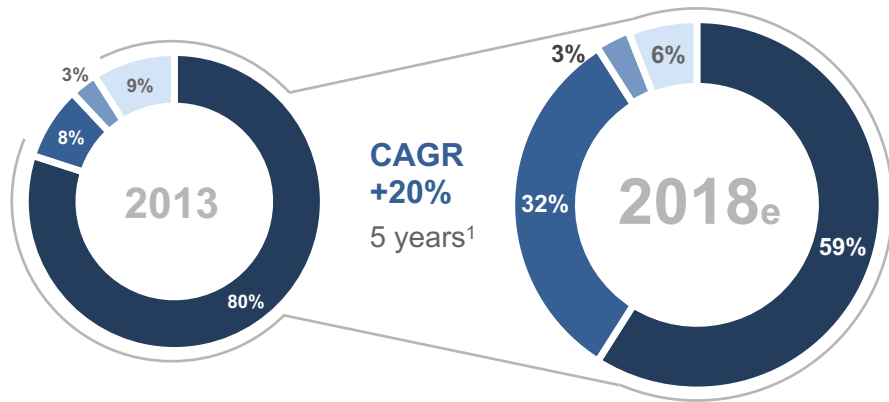
€ 5bn
Media market opportunity⁴

¹ 2013 – 2018(e)

Source: ²Cambashi BIM Design Observatory for 2021, ³Research and Markets Global Forecast 2023 (2018) | ² Source: Gartner Market Guide for IWMS (2018), ⁴ Data collected by Jon Peddie Research

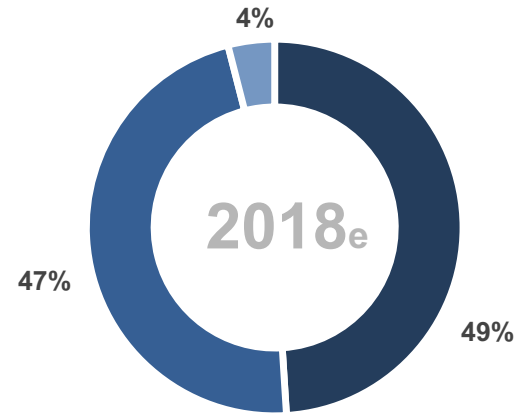
Diversified Portfolio is Positioned to Provide Strong Growth

AEC business mix



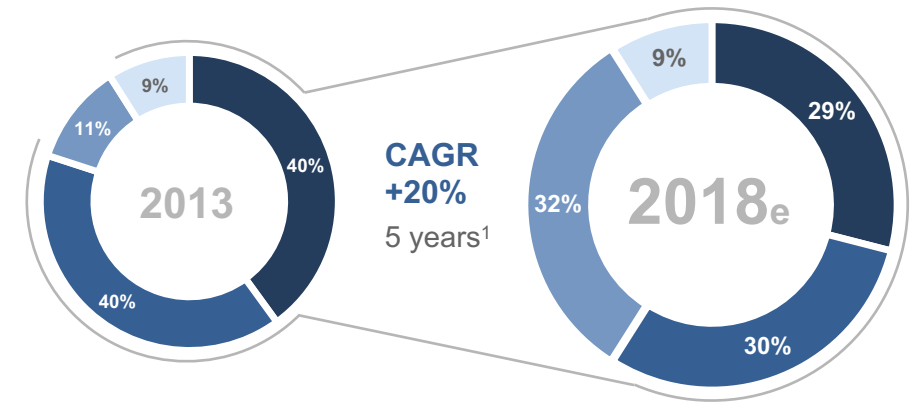
- Design
- Build
- Manage
- Media & Entertainment

Revenue mix



- Recurring revenues Build
Maintenance and rental models such as subscription, SaaS
- Software licenses
- Consulting & Hardware

Regional mix



- Germany
- Europe (w/o Germany)
- Americas
- Asia/Pacific

¹ 2013 – 2018(expected)

Why We are Successful – A Unique Approach Similar to German Mittelstand



NEMETSCHKEK
GROUP

Highly specialized small or mid-sized companies

Go to market with
16 strong, entrepreneurial brands (5– € 100m)

Long-term focus

Every brand is a world leader in its discipline

Holding 5× as many patents per
employee as large enterprises

Our brands are pioneers
in Building Information Modeling

37% of all employees have regular customer
contact (only 7% in large enterprises)

All brands are developing their solutions
in close cooperation with customers

Almost 50% of all small world
market leaders are German

No 1 AEC software provider in Europe,
one of the largest worldwide



Innovative



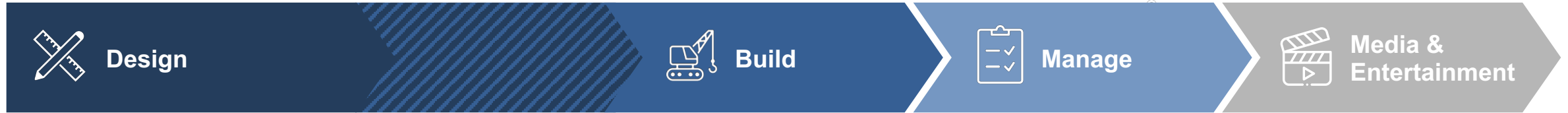
Customer
focused



Internationally
successful

NEMETSCHEK Covers the Complete AEC Value Chain

Architecture | Engineering | Construction



GRAPHISOFT.

PRECAST SOFTWARE
engineering

NEVARIS

CREM SOLUTIONS

MAXON

dRofus

DATA DESIGN SYSTEM

BLUEBEAM

MCS
SOLUTIONS

ALLPLAN

SCIA

SOLIBRI

VECTORWORKS

IRISA

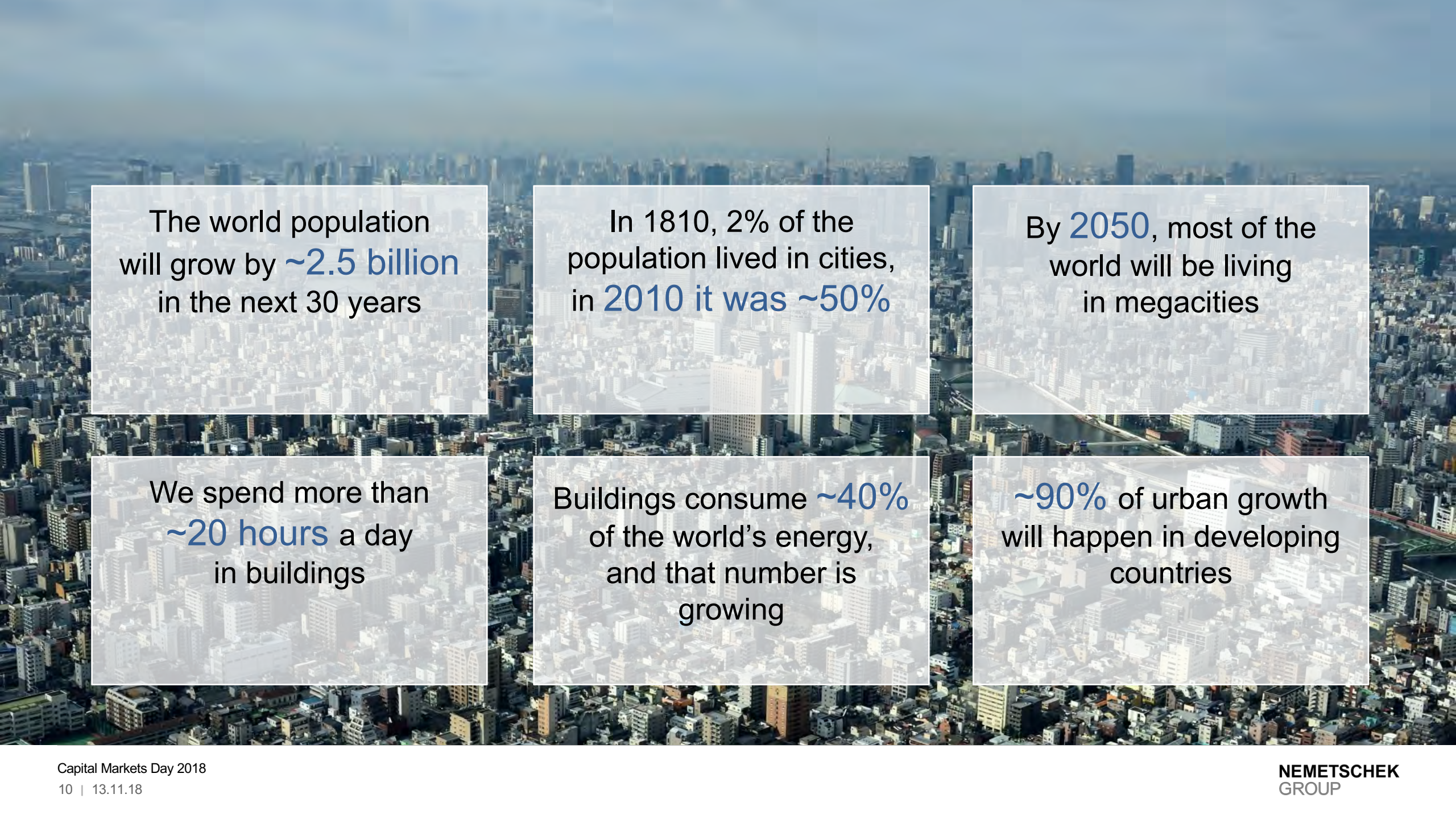
SDS/2

FRILO
Software



02

AEC Market Opportunities



The world population will grow by **~2.5 billion** in the next 30 years

In 1810, 2% of the population lived in cities, in **2010 it was ~50%**

By **2050**, most of the world will be living in megacities

We spend more than **~20 hours** a day in buildings

Buildings consume **~40%** of the world's energy, and that number is growing

~90% of urban growth will happen in developing countries

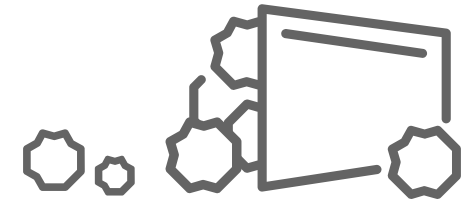
Challenges in Construction Industry

The worldwide construction market is estimated at

~\$3.5 trillion

(exc. residential)

However at least **20%** is waste



~10%

materials are wasted



~30%

of construction is rework



~40%

of projects are over budget



~90%

of projects are late



~40%

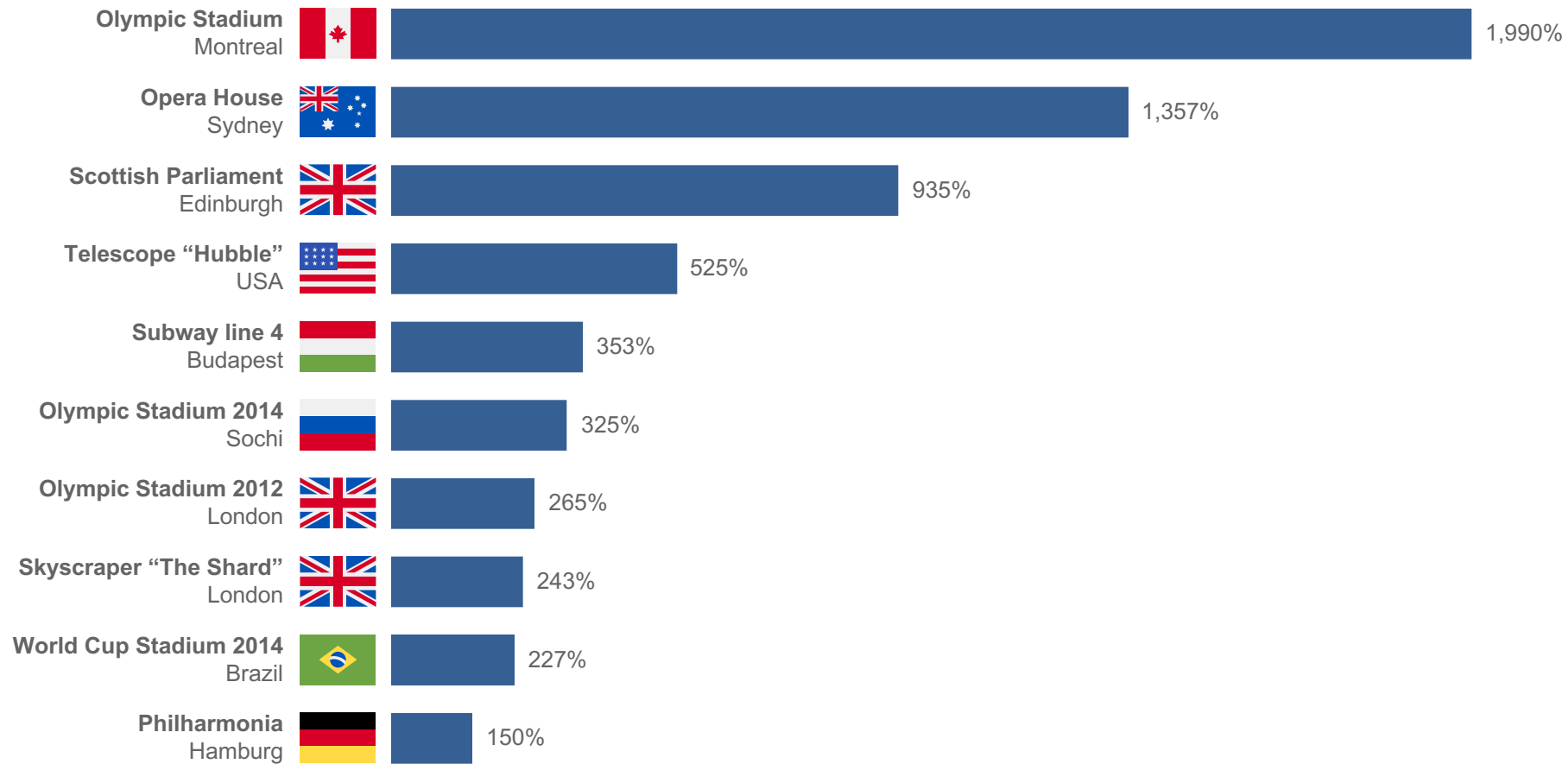
of jobsite work is unproductive

▶ Mostly due to **Ineffective Communication, Planning and Collaboration**

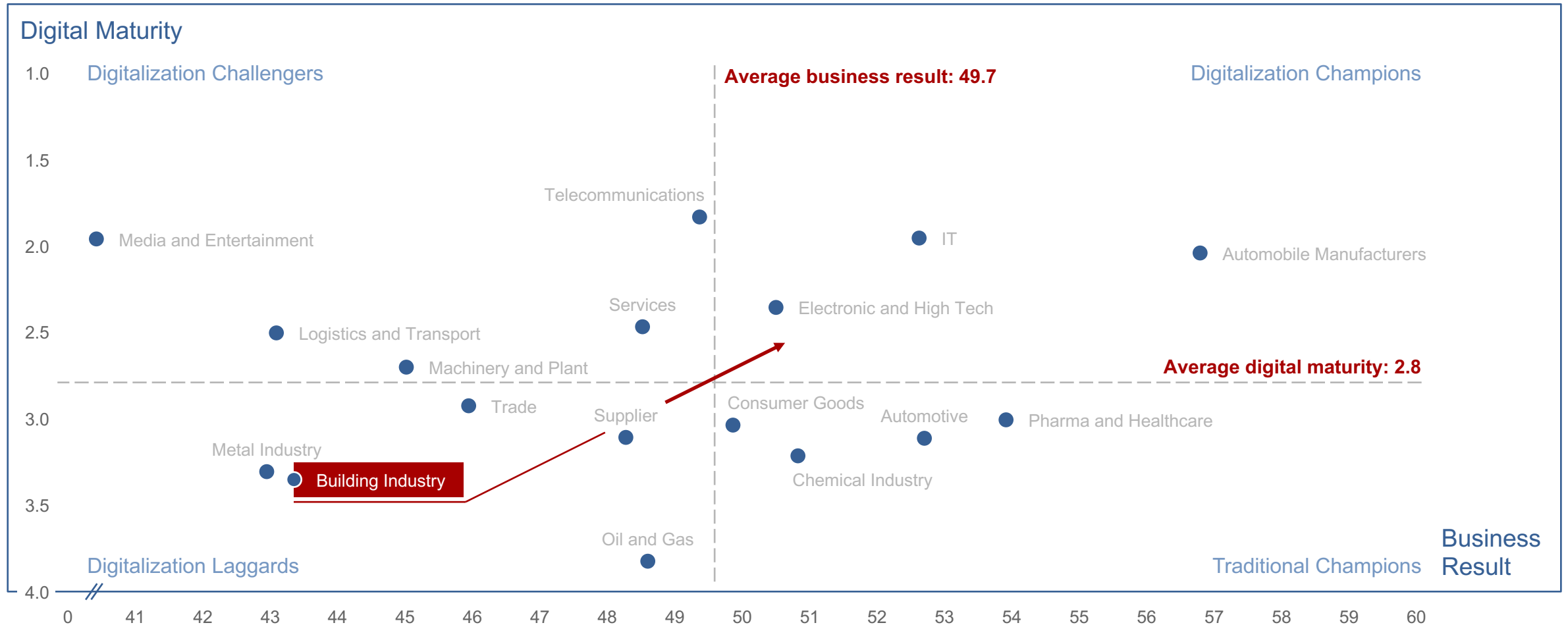
Source: Engineering-News Record 2017

High Inefficiency in Construction Projects

Cost overruns in % (of original budget)



Huge Digitalization Potential for AEC



Source: Top500 study 2017, Accenture analysis



03

BIM Market Potential

What is BIM? There Are Different BIM Levels

Level 0:

CAD is used as a drawing board, no collaboration

Level 1:

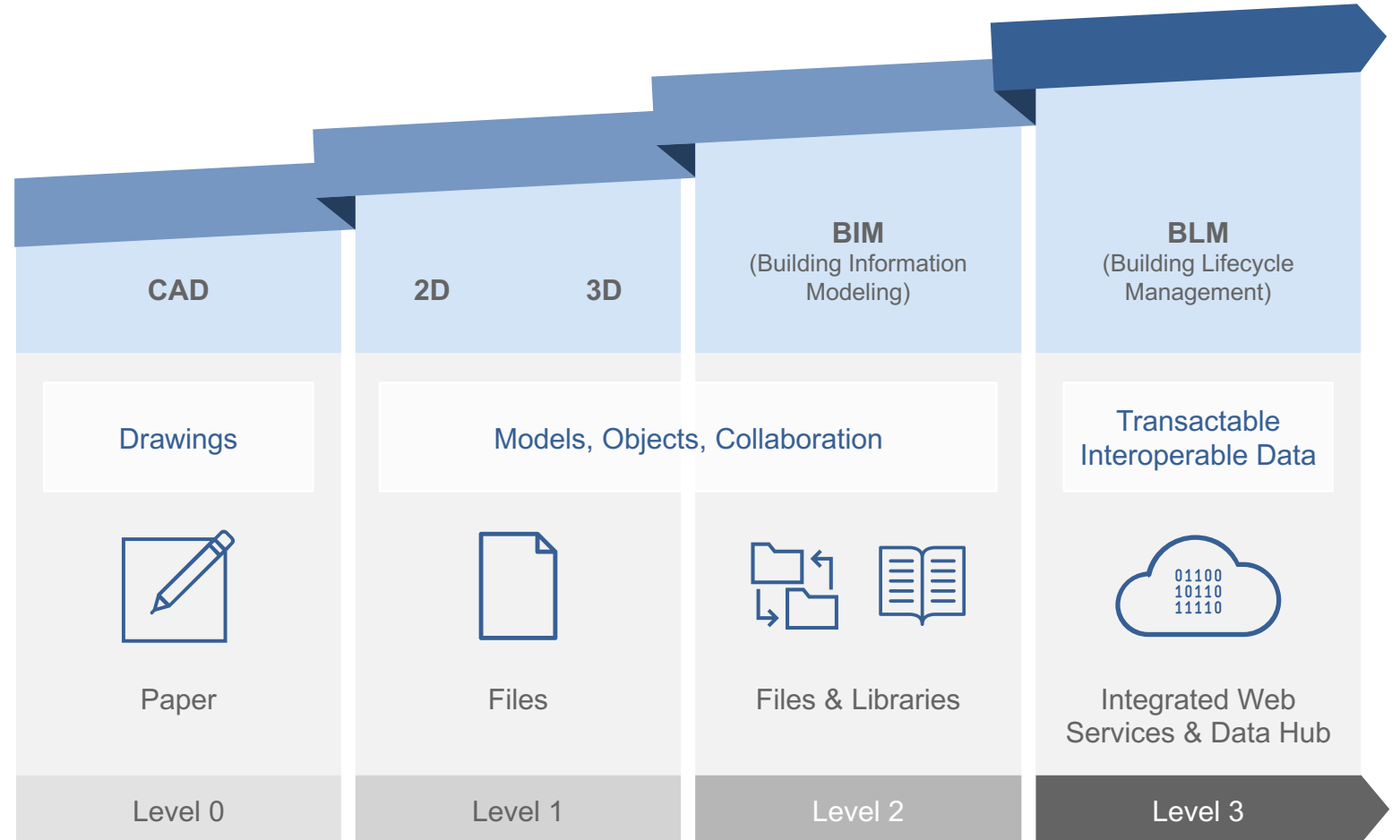
Mix of 2D and 3D work principles, no exchange of models

Level 2:

All planning partners work in 3D, but do not work on a shared model

Level 3:

Full collaboration between all disciplines using a shared model



Source: Based on "The BIM Maturity Model by Mark Bew and Mervyn Richards adapted to reflect BLM's relationship to Level 3"

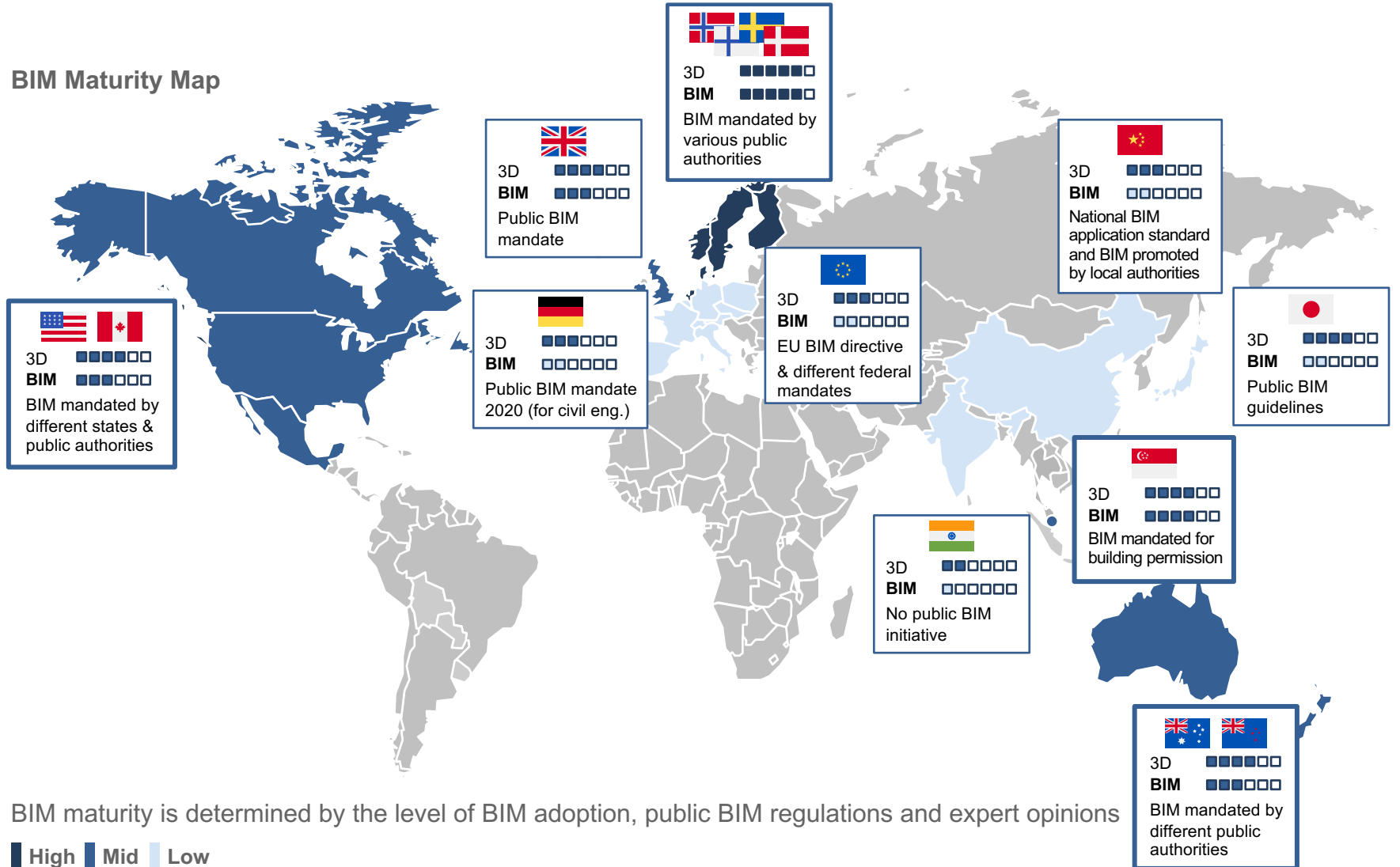
Countries With Biggest BIM Influence

BIM – Countries with biggest BIM influence

Top 5

- Nordics
- Singapore
- USA/Canada
- UK/Ireland
- Australia/New Zealand

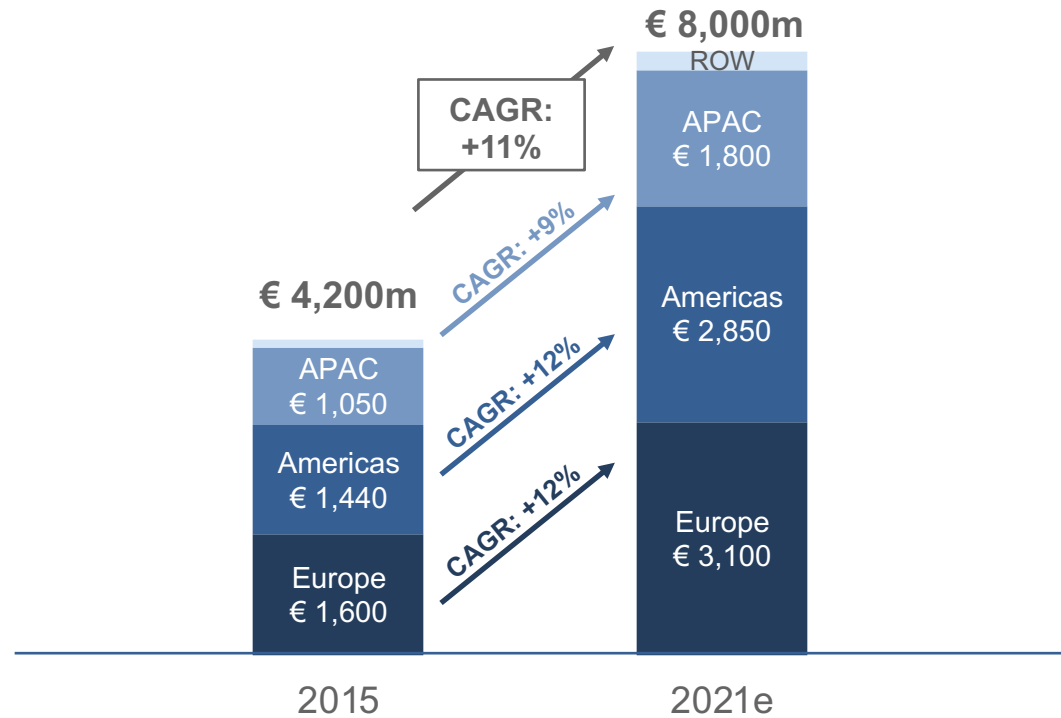
BIM Maturity Map



BIM maturity is determined by the level of BIM adoption, public BIM regulations and expert opinions

High Mid Low

Huge Market Potential: The AEC BIM Software Market Will Grow to € 8bn in 2021



Top 3 Countries per Region



APAC EUE (2017)	Japan € 528m	China € 257m	Australia € 83m
Americas EUE (2017)	US € 1,354m	Canada € 136m	Brazil € 61m
EMEA EUE (2017)	DACH € 767m	UK/I € 282m	France € 209m

Source: Cambashi BIM Design Observatory and internal research

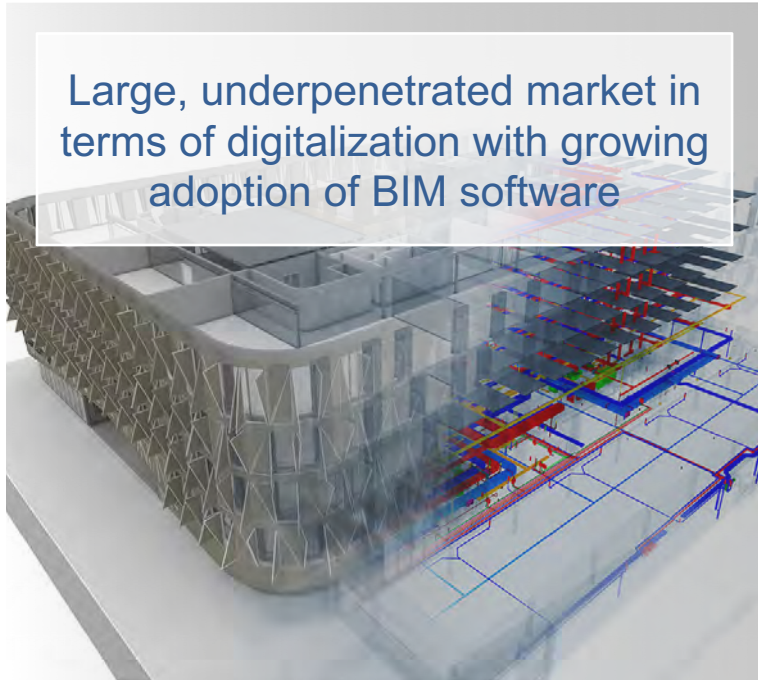
04

Way Ahead / Outlook

Our Strategy to Exploit Market Potential: Organic Growth and Acquisitions



Large, underpenetrated market in terms of digitalization with growing adoption of BIM software



Organic growth initiatives



M&A to fill gaps and add competence



Clear Organic Strategy: Three Pillars to Sustain Double-Digit Organic Growth



Key drivers & fields of investments

1

Internationalization

2

Next-generation products & solutions

3

Operational excellence



Taking advantage of market leaderships

- | Strong US brands support US market entry for European brands and vice versa

Focus on markets with biggest potential

- | USA followed by Europe and Asia



Architecture & structural engineering

- | Targeting large customers by merging superior discipline-specific products into total BIM-workflow solutions

Collaboration

- | Development of a groupwide Common Data Environment (CDE)
- | Huge market potential: Collaboration market size of >€1 bn with a mid-teens growth rate



Increase efficiency

- | Implementation of a groupwide harmonized core application infrastructure to leverage process efficiency

Inorganic Growth Strategy: M&A Complements our Organic Portfolio



€250m
Firepower

- | Drive M&A search based on our strategic project needs
- | Concentrate on larger targets and market leaders
- | M&A remains crucial to our geographic expansion
- | But: We have the choice for make or buy

Nemetschek Group Acquisition Focus Areas



Strategic
Projects



Building
Management

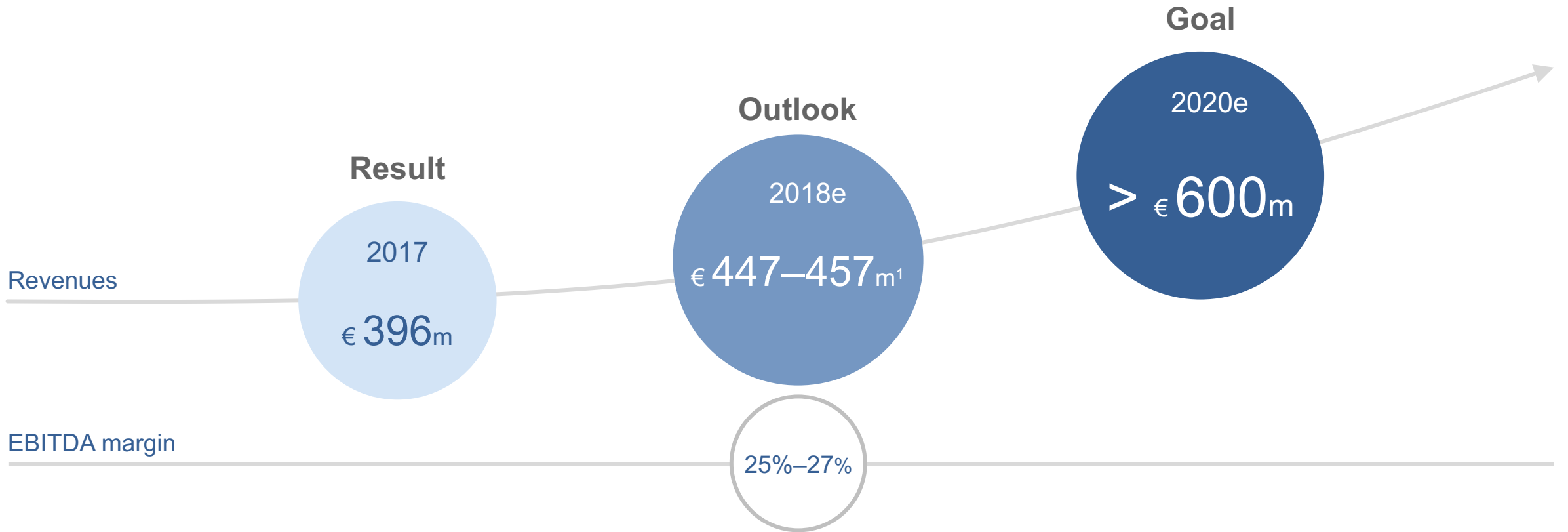


Collaboration
Technology



Brand
Level

Mid-term goal 2020: Secure future double-digit growth while maintaining a high EBITDA margin

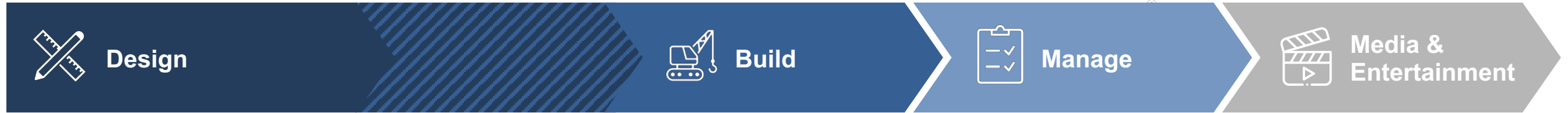


- | Revenues: double-digit growth rate
- | EBITDA margin: on sustainable level of 25%–27%
- | Investments 2018: additional 10 m euro to leverage future growth

¹ The revenue outlook is based on planned exchange rate of 1.18 EUR/USD

NEMETSCHEK Covers the Complete AEC Value Chain

Architecture | Engineering | Construction



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engineering

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IRISA

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Software

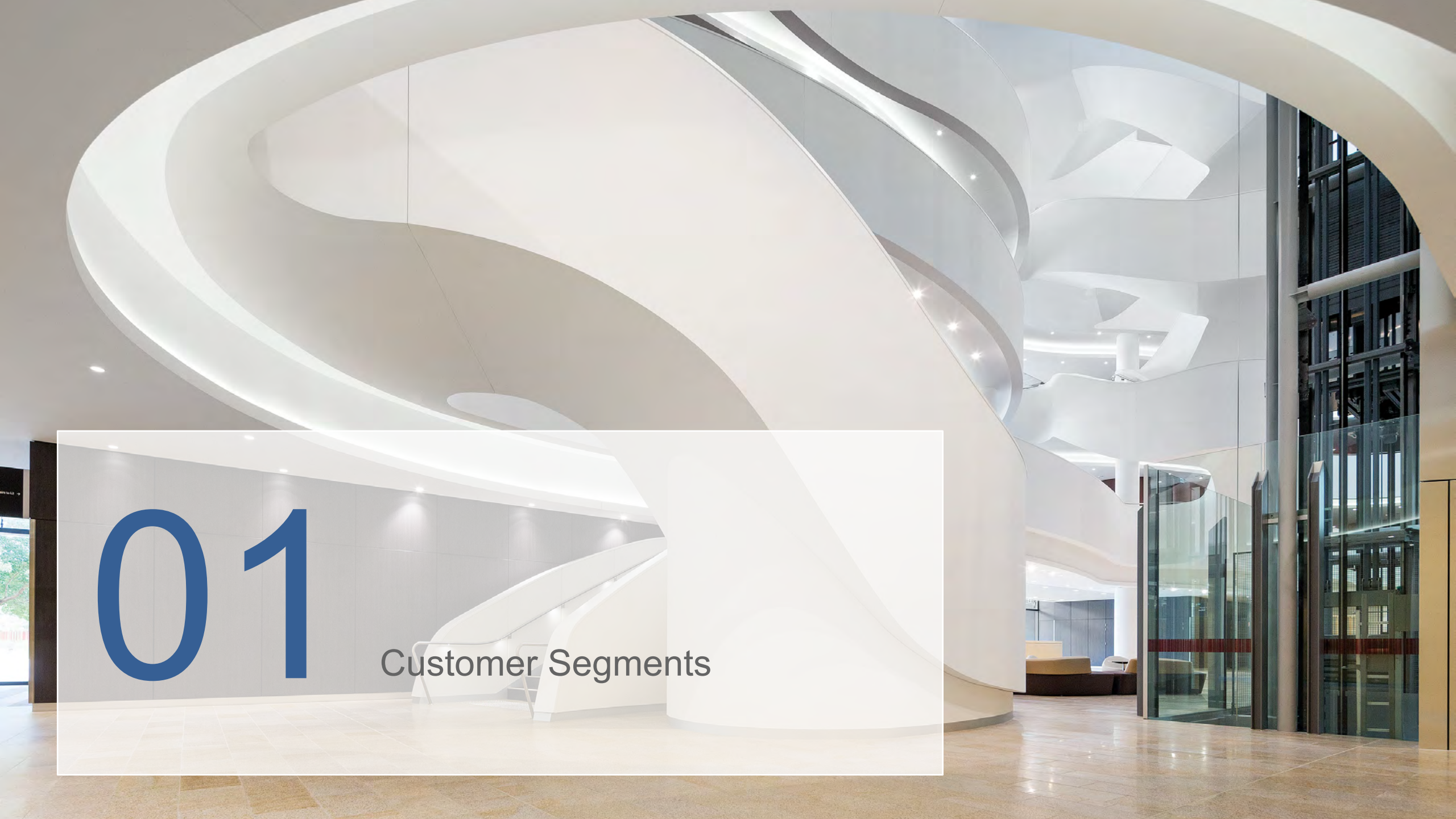
Capital Markets Day 2018

**Design Segment:
Potential, Positioning & Strategy in Architecture**

November 13th 2018 | Viktor Vårkonyi,
Member of the Executive Board of Nemetschek SE, CEO of Graphisoft

AGENDA

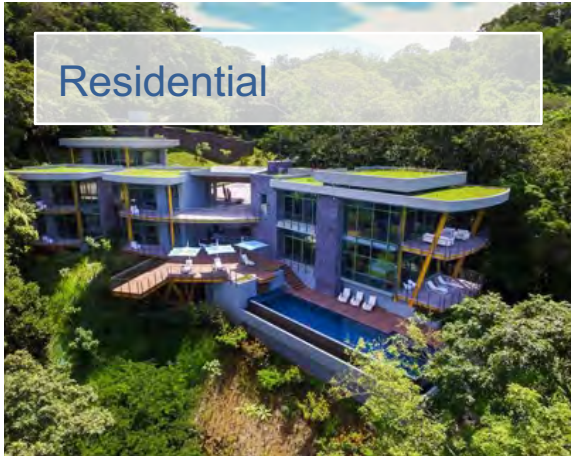
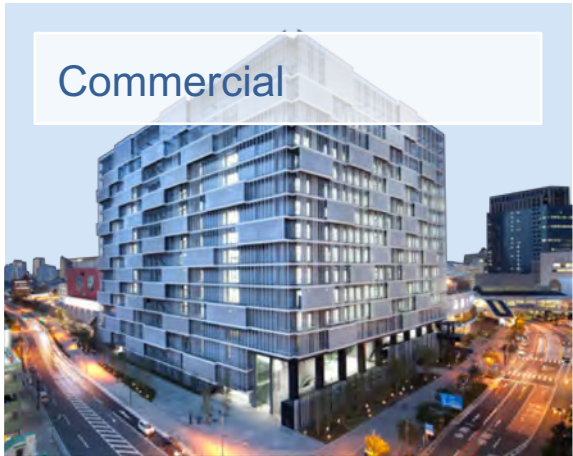
- 01 | Customer Segments
- 02 | Challenges and Opportunities
- 03 | Core Competency & Positioning
- 04 | Strategic Focus
- 05 | Key Highlights



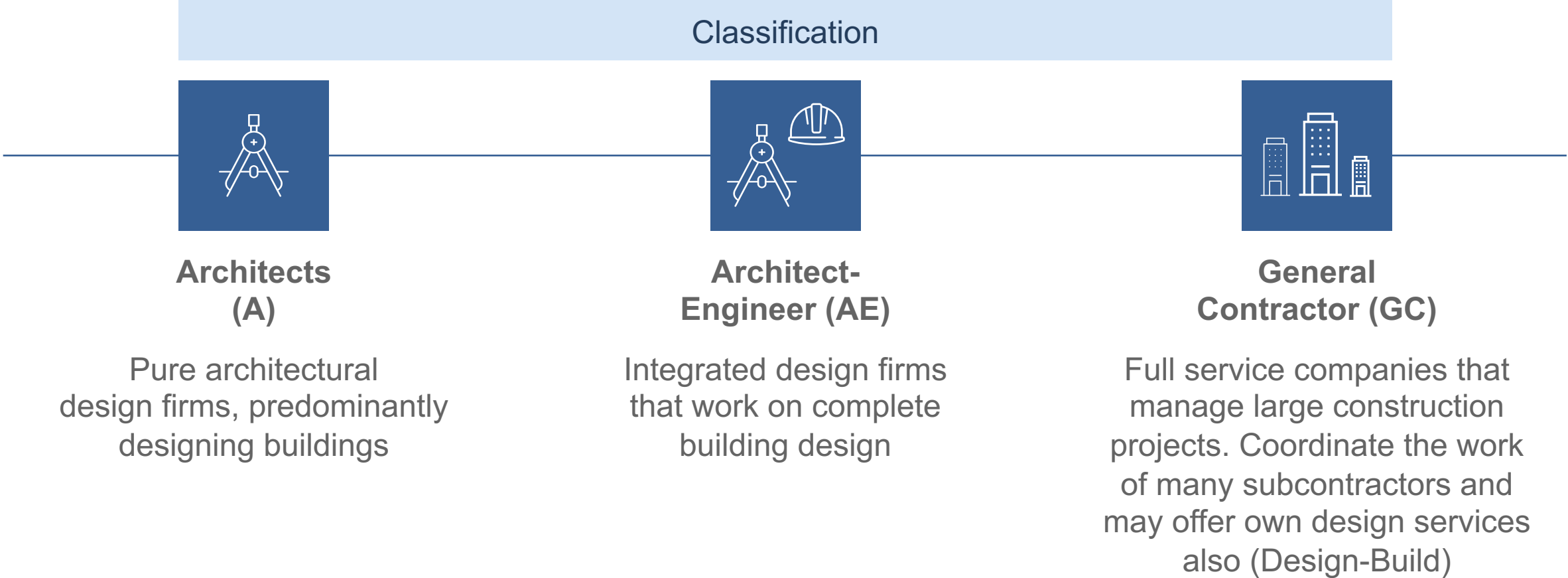
01

Customer Segments

Architectural Market Breakdown by Project Type

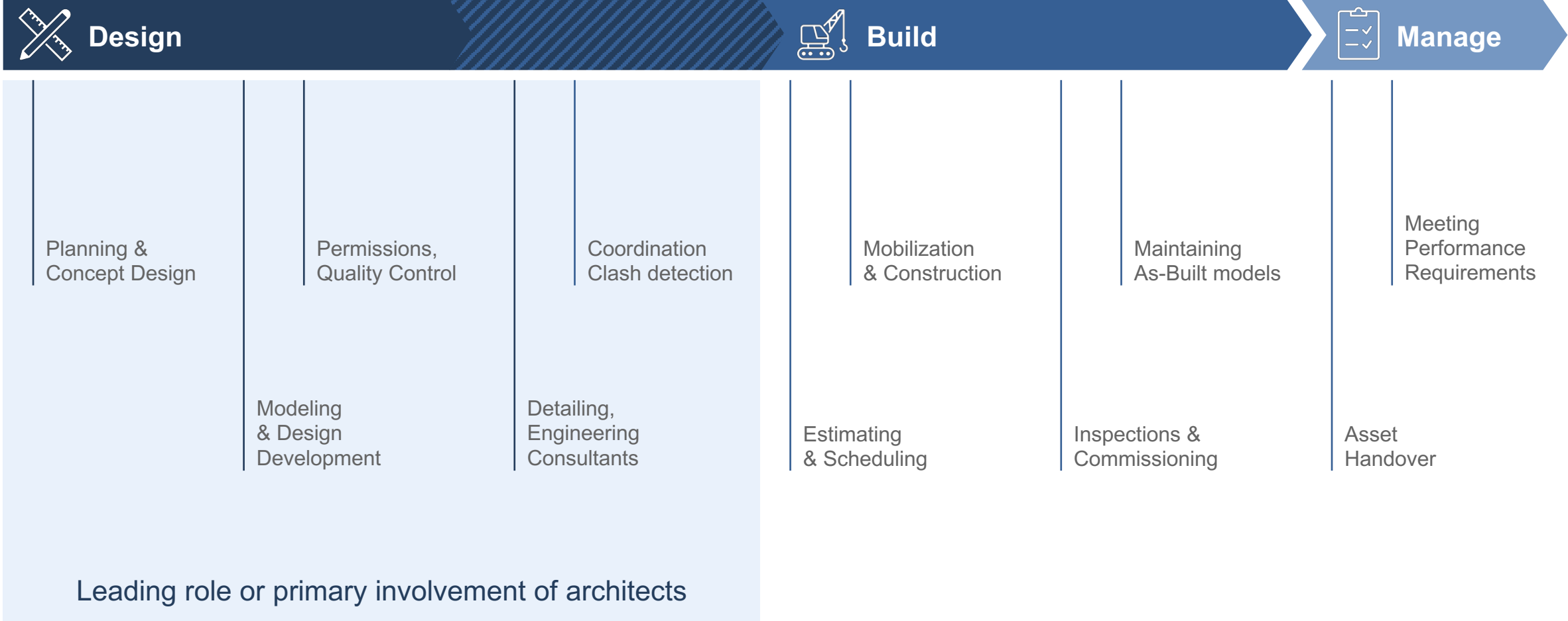


Architectural Market Breakdown by Firm Type



Construction of Buildings – from an Architects’ Point of View

Architecture | Engineering | Construction





02

Challenges and Opportunities

Changing Industry: Construction 2025 – Industrial Strategy Policy (UK)

Lower costs



33%

Reduction in the initial cost of construction and the whole life cost of build assets

Faster delivery



50%

Reduction in the overall time, from inception to completion, for newbuild and refurbished assets

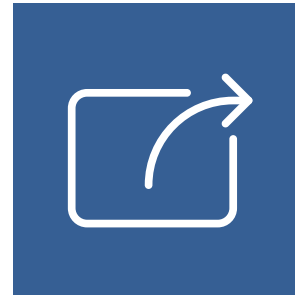
Lower emissions



50%

Reduction in greenhouse gas emissions in the built environment

Improvement in exports



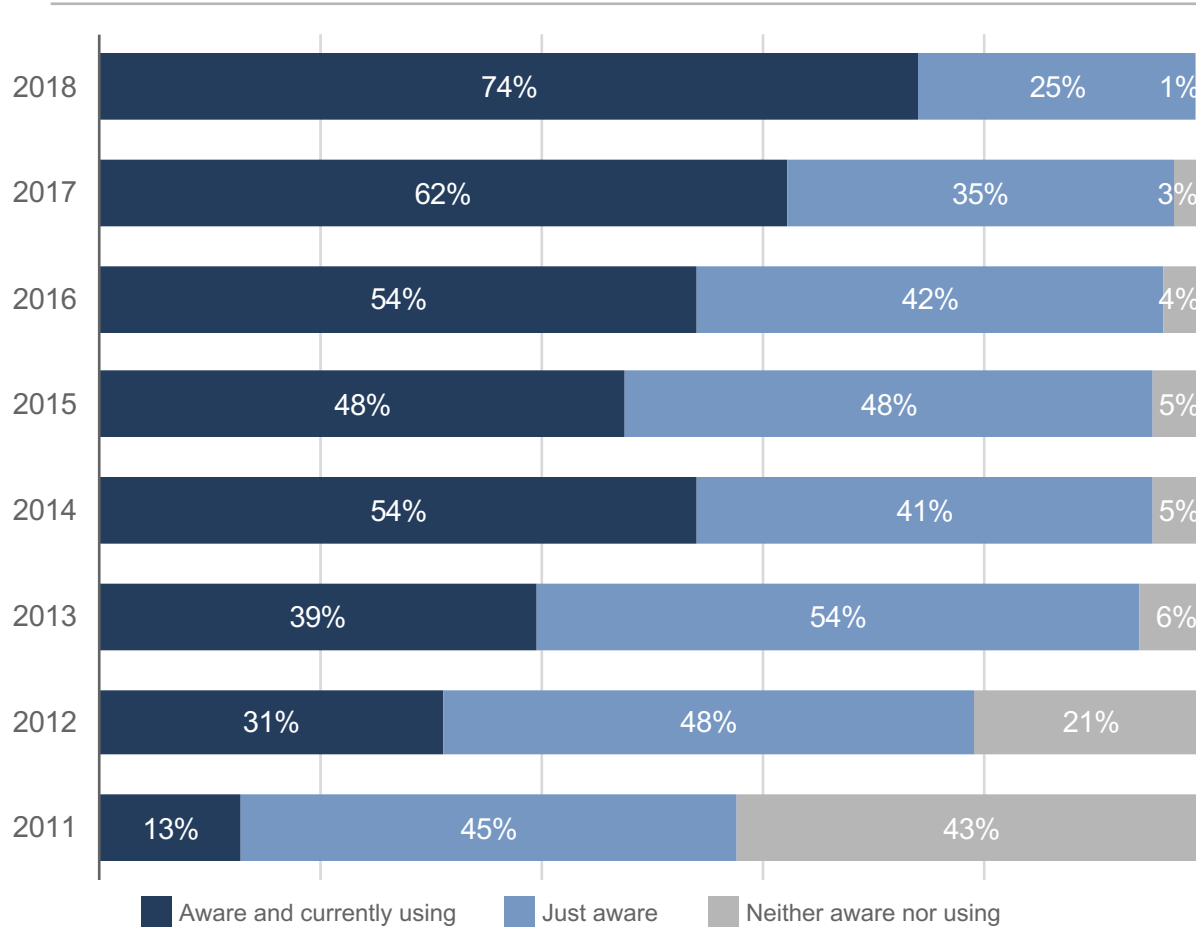
50%

Reduction in the trade gap between total exports and total imports for construction products and materials

Source: www.official-documents.gov.uk | Industrial Strategy: Government and industry in partnership

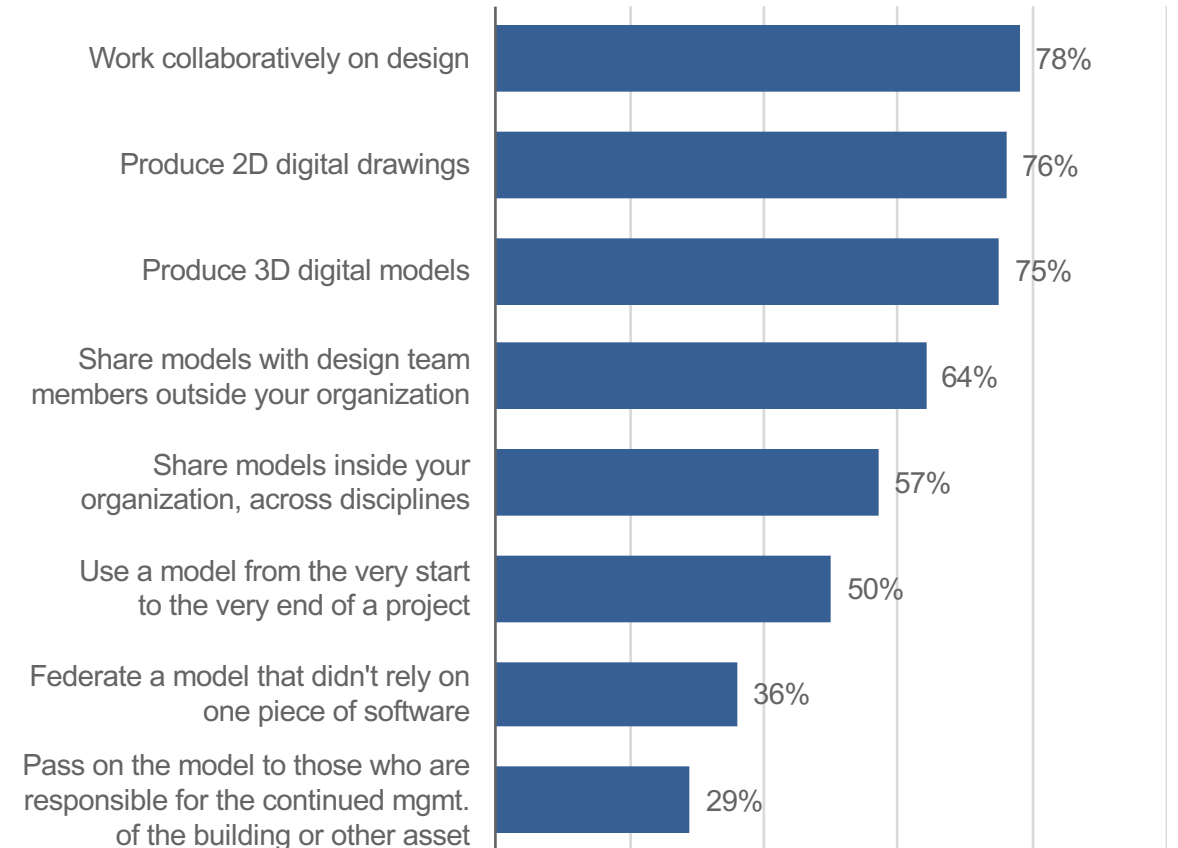
Huge Potential in BIM Deployment – Still Being an Under-Utilized Technology ...

BIM adoption over time



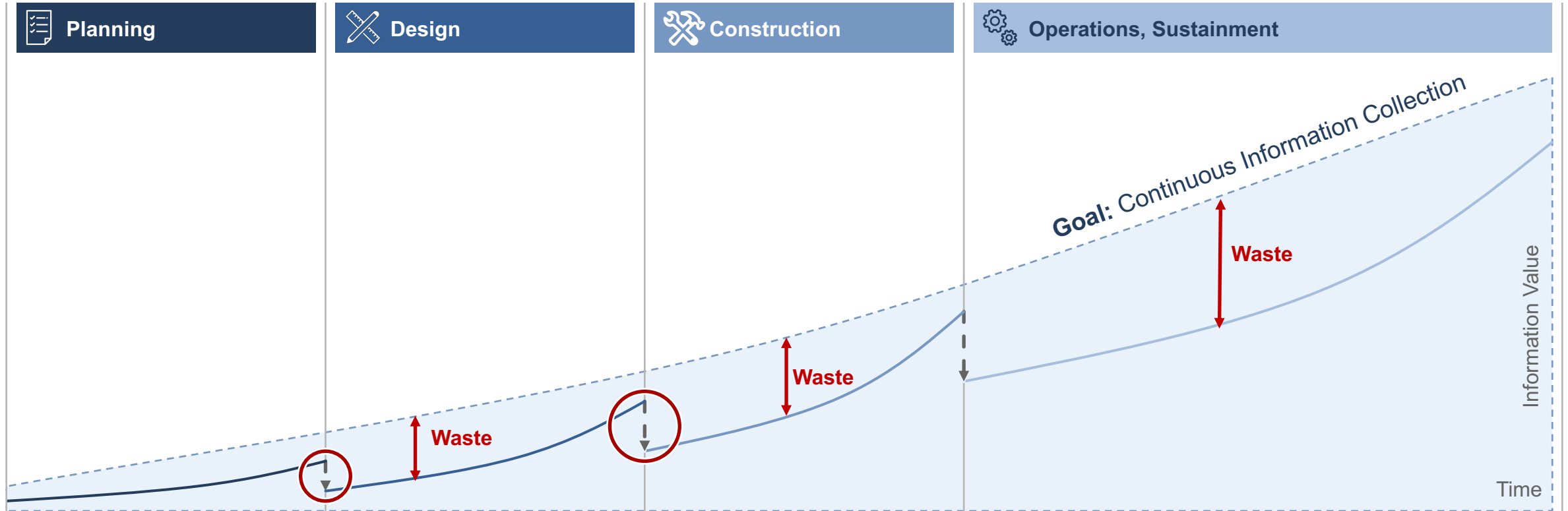
Source: NBS Report 2018, UK

Thinking about the projects you were involved in over the last 12 months, did you ever



Numerous Stakeholders: Huge Information Loss at the Hand-Over Points

Full Cycle BIM



Information is collected during each phase of the building life-cycle.
At the handoff points significant information is lost, which is huge loss of efficiency and additional cost.



03

Core Competency & Positioning

NEMETSCHEK Provides all Expertise

Architectural Workflow



Design



Build

Planning & Concept Design



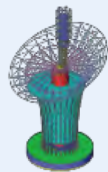
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Modeling & Design Development

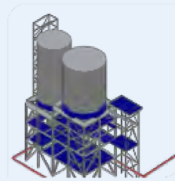


GRAPHISOFT

VECTORWORKS



SCiA



IRISA



FRILO
Software

Detailing, Engineering Consultants



ALLPLAN

SDS/2



DATA DESIGN SYSTEM

Quality Control, Coordination, Clash Detection



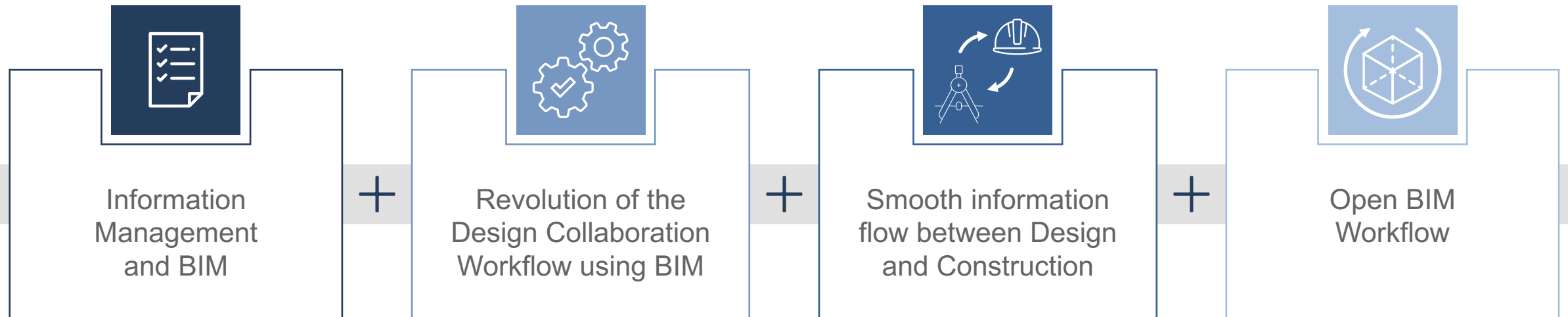
SOLIBRI



04

Strategic Focus

We Are Focusing on Innovation to Increase the Architectural Workflow

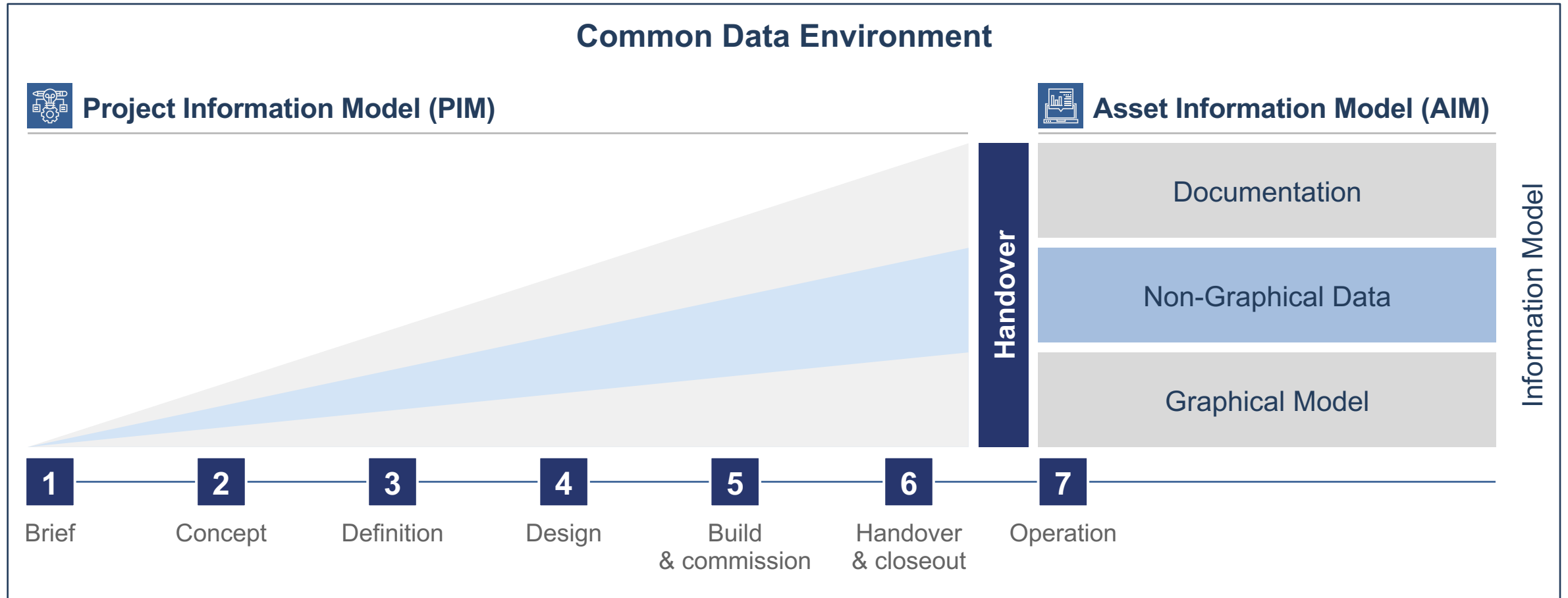


Source: <https://www.thenbs.com/knowledge/what-is-the-project-information-model-pim>

1. Leadership in Innovation – Information Management and BIM



Common Data Environment



Source: <https://www.thenbs.com/knowledge/what-is-the-project-information-model-pim>

1. Leadership in Innovation – Information Management and BIM

Extension of the Oslo Airport



Planning

- | Building program
- | Project requirements
- | Room data sheets

Design

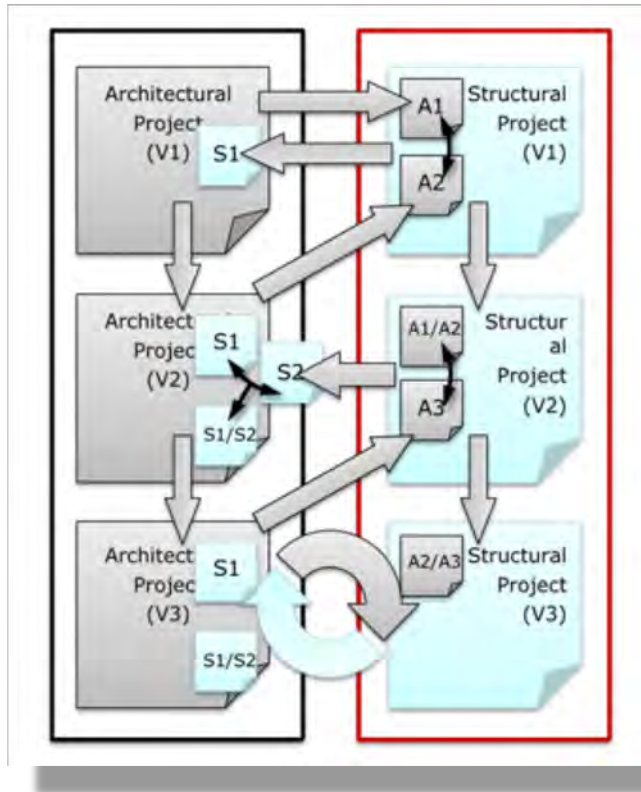
- | Up-to-date, continuous gap analysis on the fulfillment of requirements (29 BIM files)

Build

- | Information database on the built-in assets

Technology will be deployed on all airports in Norway.

2. Leadership in Innovation – Revolution of the Design Collaboration Workflow using BIM



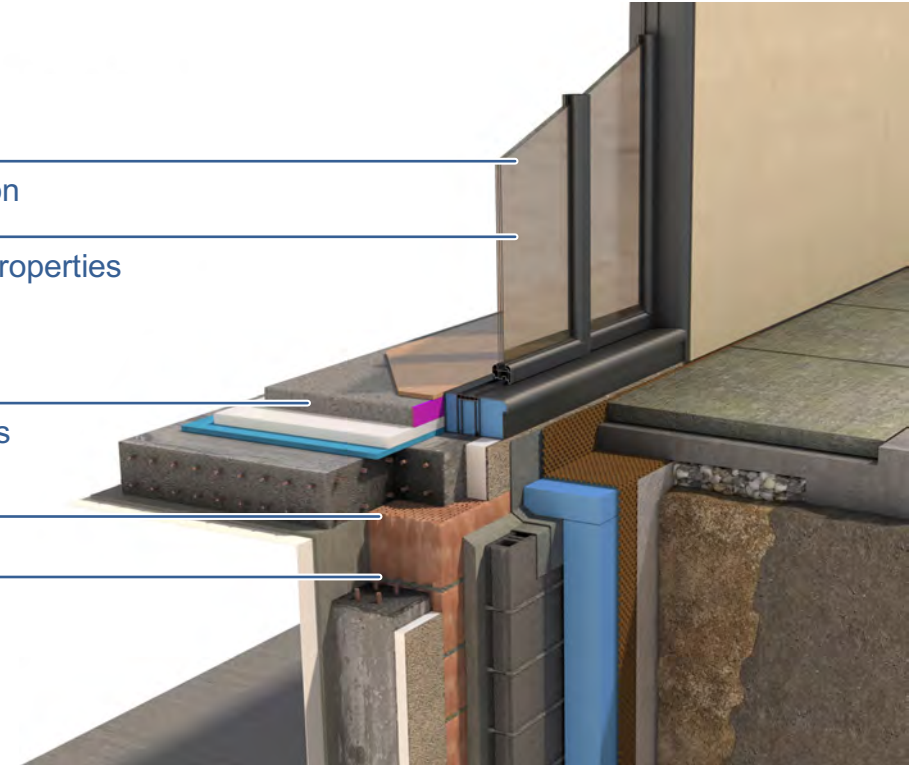
Architect: Design, Function

Energy expert: Thermal properties

Architect: Insulation layers

Engineer: Size, Material

Architect: Position



- | Professions working in silos, on duplicated data
- | Huge cost & risk on data synchronization
- | Slow decisions



- | Shared design model, BIM Level 3 readiness
- | Ownership on the element parameters, instead of elements
- | Real-time teamwork among professions

2. Leadership in Innovation – Revolution of the Design Collaboration workflow using BIM

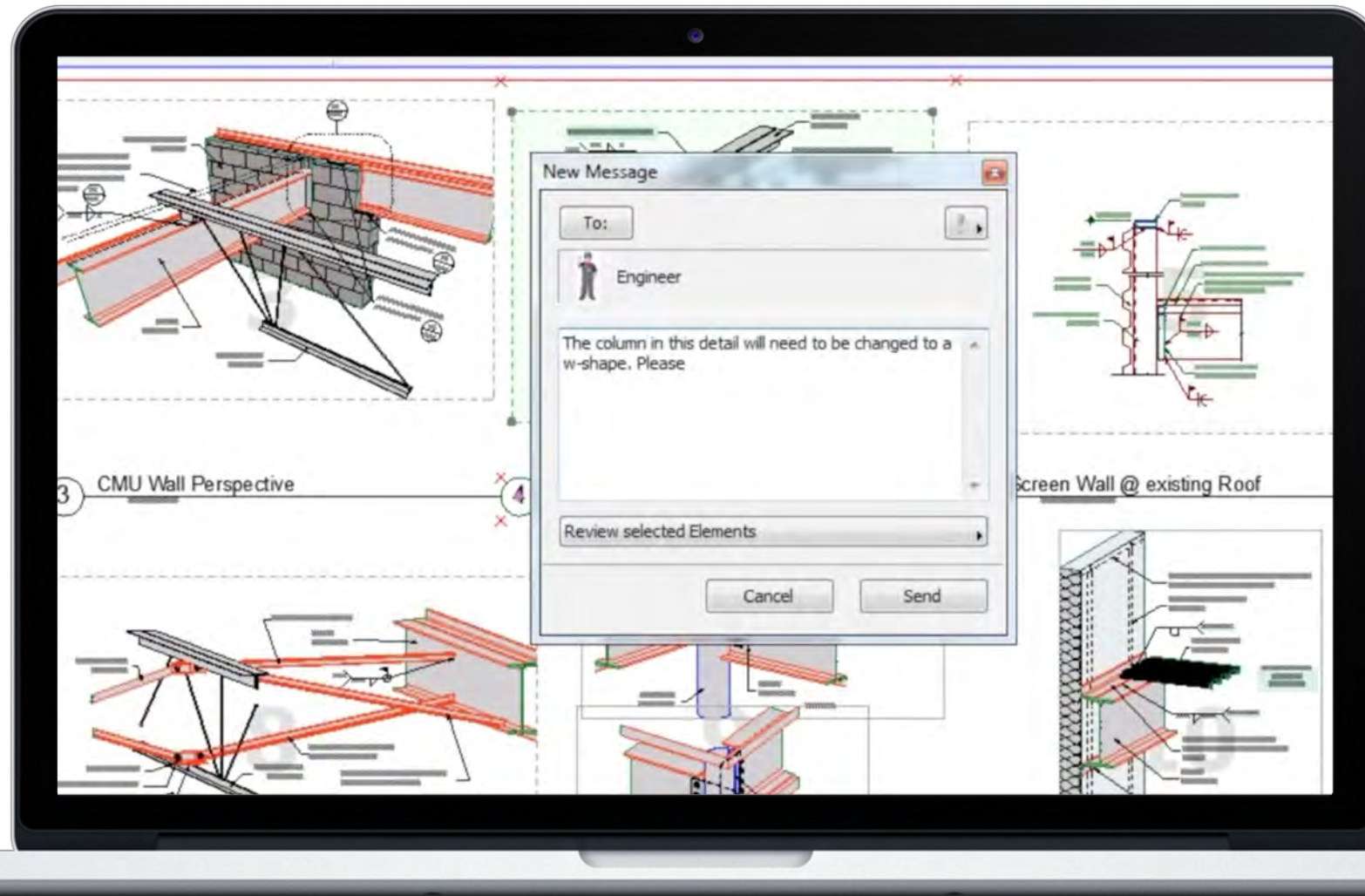


 **Structural Engineering Firm**

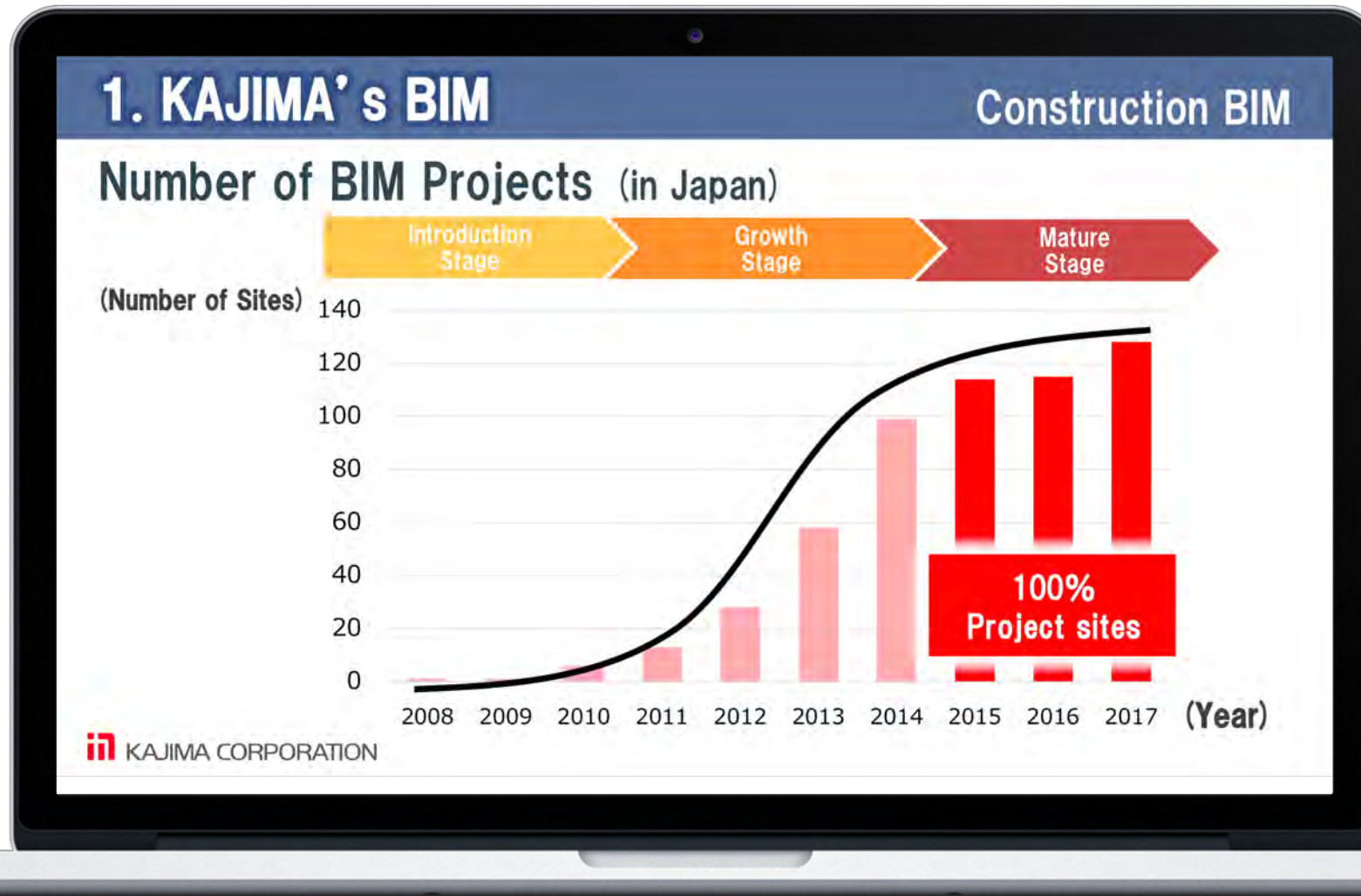
 **Pioneering technologies to share the design model with the project architect**

 **Result's of real-time teamwork**

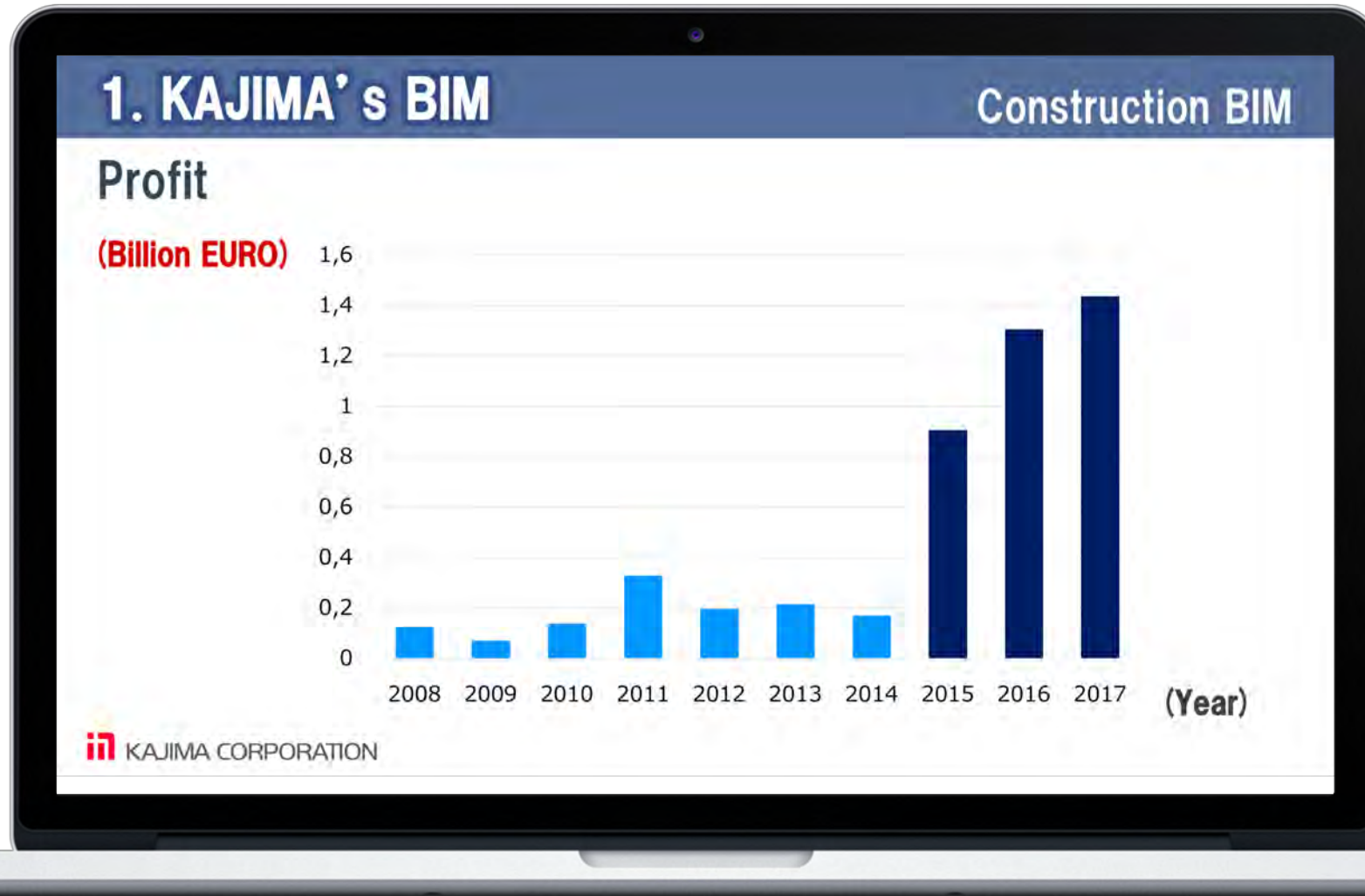
- | Optimized design solutions
- | Reducing cost
- | Faster delivery



3. Leadership in Innovation – Pay-off of smooth information flow between Design and Construction





3. Leadership in Innovation – Pay-off of smooth information flow between Design and Construction




3. Leadership in Innovation – Pay-off of smooth information flow between Design and Construction

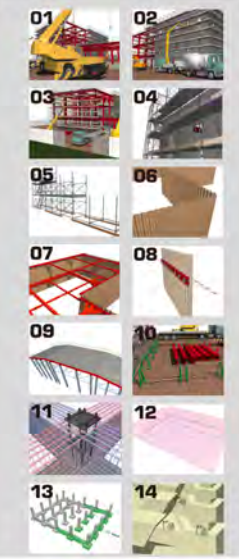
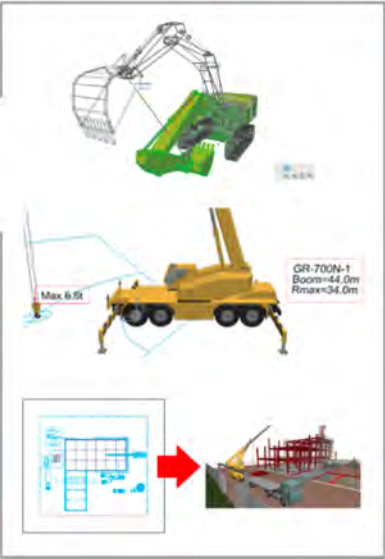

1. KAJIMA's BIM


smartCON Planner (SCP)

Developed by  KAJIMA CORPORATION Based on GDL Technology
Distributed by  Global BIM. GRAPHISOFT. A NEMETSCHek COMPANY



smartCON Planner
施工計画を視覚化する
マウスによる直感操作で素早くモデリング。
性能検討もワンクリック!








 KAJIMA CORPORATION



4. Design Case Study – OPEN BIM Workflow in Practice



	Project	New national stadium in Budapest
	Architect	György SKARDELLI
	Starting of the design	2013
	Inauguration	2019
	Category	Premium EURO 2020

GRAPHISOFT.
ARCHICAD

ALLPLAN
ENGINEERING

SOLIBRI

OPEN BIM™

05

Key Highlights

Investments and Innovation to Increase Market Share

OPEN BIM stays fundamental in our strategy

| Our strong brands are well set to compete in their respective market verticals



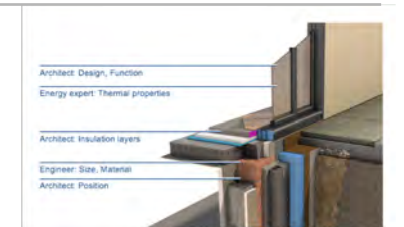
Recent acquisitions have fundamentally strengthened our competitiveness

| Strategic fit to our existing business in Building Design solutions
| All bring dominant market share and unique offering



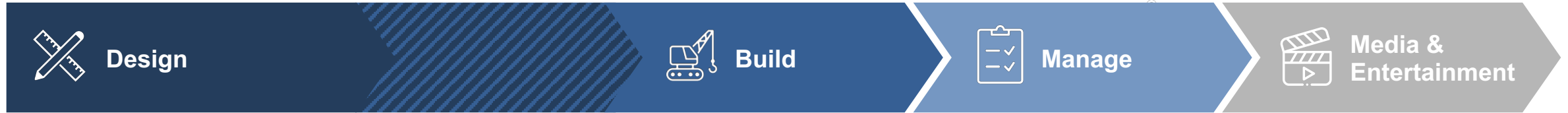
Exciting investments to link our solutions into a comprehensive customer offering

| Focus on specific market verticals (A, AE, GC) and customer needs
| Vision to “create a new market” that the Nemetschek Group will own



NEMETSCHEK Covers the Complete AEC Value Chain

Architecture | Engineering | Construction



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engineering

NEVARIS

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IRISA

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FRILO
Software

Capital Markets Day 2018

**Design Segment:
Potential, Positioning & Strategy
in Structural Engineering**

November 13th 2018 | Sean Flaherty, CSO of Nemetschek SE

AGENDA

01 | The Structural Engineering Workflow

02 | Customers, Verticals & Market Size

03 | Challenges & Opportunities

04 | Core Competency & Positioning

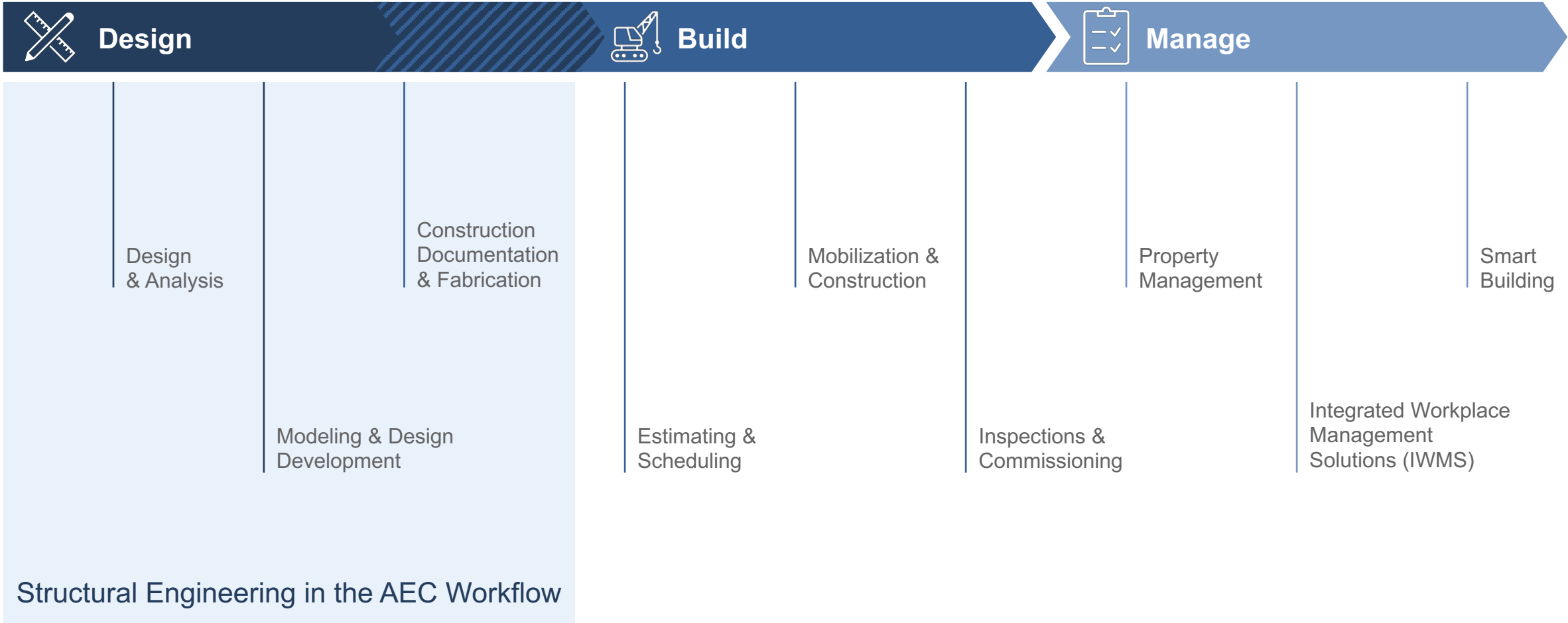
05 | Key Highlights

01

The Structural Engineering Workflow

The Structural Engineering Workflow in the AEC Life Cycle

Architecture | Engineering | Construction



Nemetschek Provides the Right Tools Connected in the Right Way: Structural Engineering Process

Structural Engineering



Design



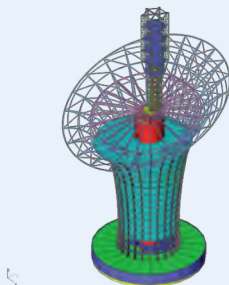
Build

Design & Analysis

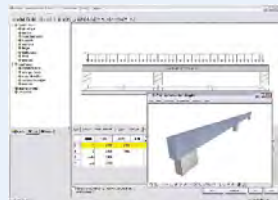


IRISA

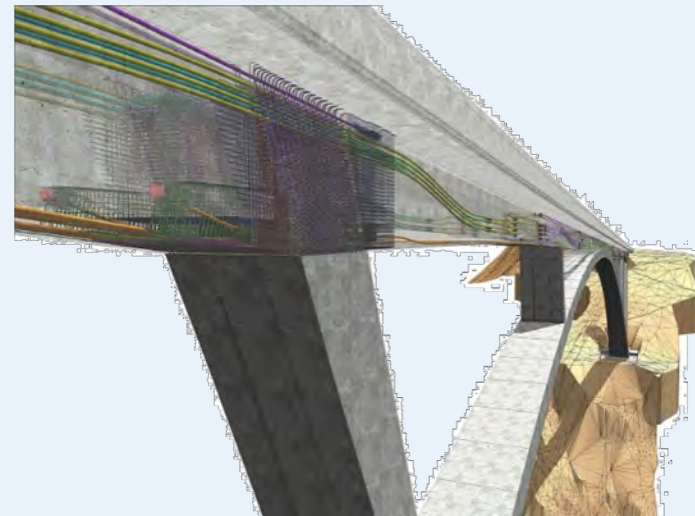
FRILO
Software



SCIA

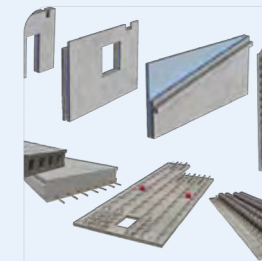


Modeling & Design Development

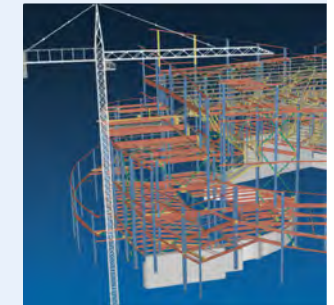
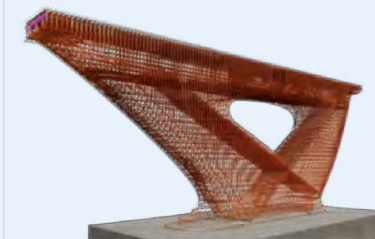


ALLPLAN

Construction Documentation & Fabrication



PRECAST | SOFTWARE
engineering



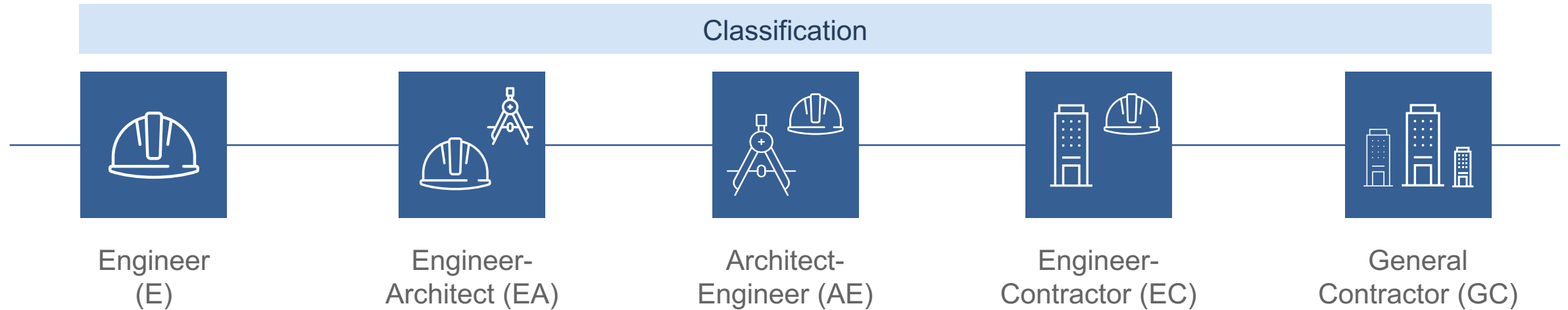
SDS/2

ALLPLAN

02

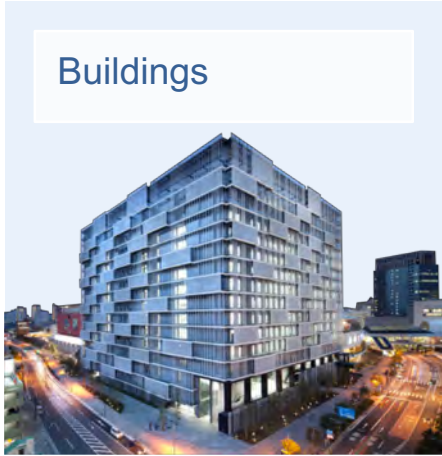
Customers, Verticals & Market Size

Structural Engineering Market Breakdown by Customer Type



Structural Engineering Market Breakdown by Project Type

Buildings



Transportation



Industrial



Heavy Civil

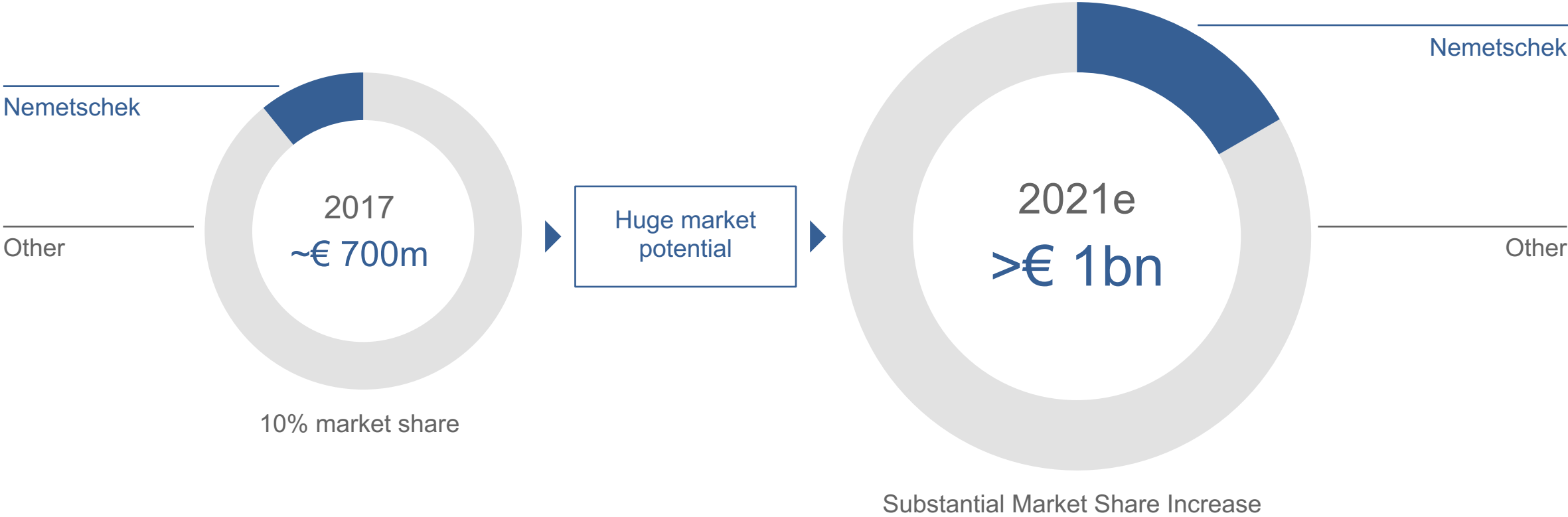


Superscrapers



Structural AEC Software – Nemetschek’s Addressable Market

Dedicated Structural CAD/CAE Software in AEC
End User Expenditures



Source: Cambashi and internal research



03

Challenges & Opportunities

Engineering Projects: Running out of Time and Cost

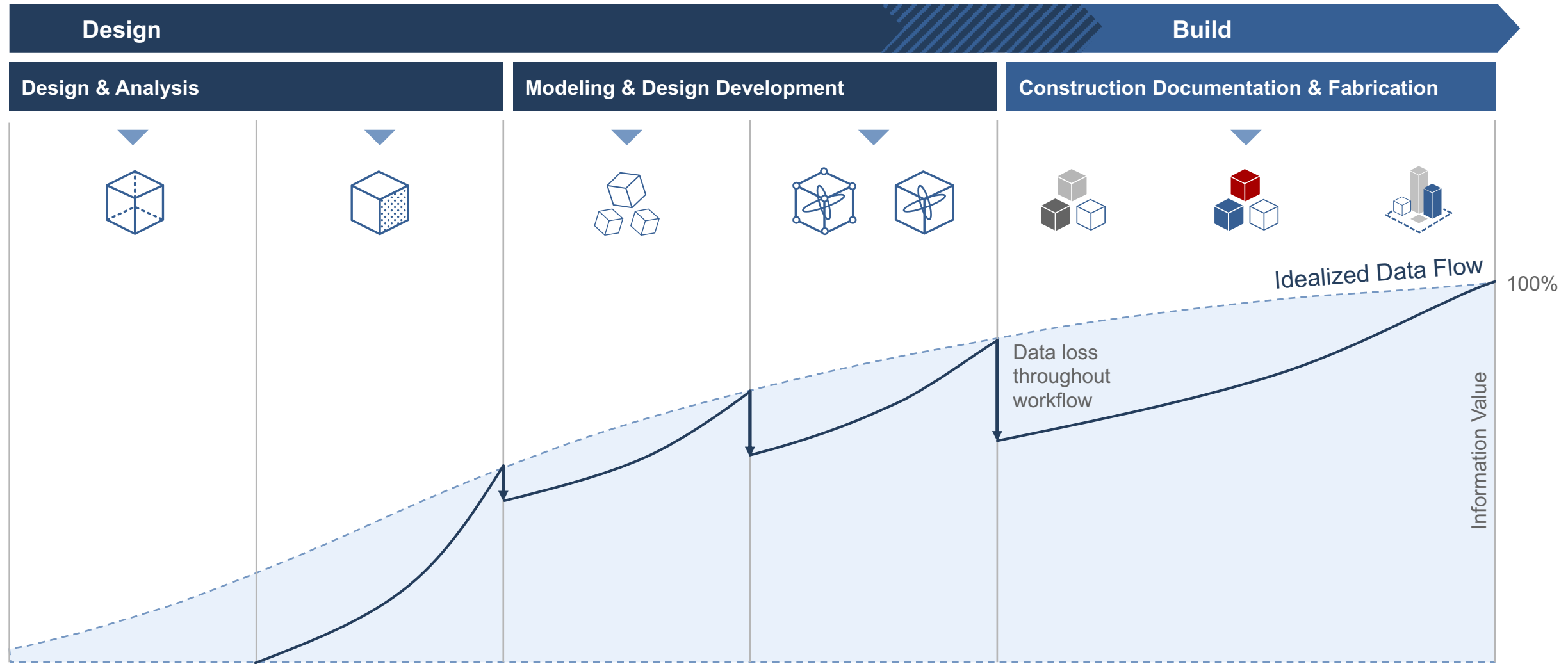


Type of Project	Average Cost Overrun ¹
Bridges	11%
Roads	27%
Railways	30%
Buildings	39%
Airports	56%
Waterways	68%
Tunnels	149%

Cost and time overruns occur in ~90% of the projects

¹ Source: Herite School of governance (2015), 170 infrastructure projects analyzed | ² Flyvbjerg et al. (2013): Underestimating Costs in Public Works Projects: Error or Lie?

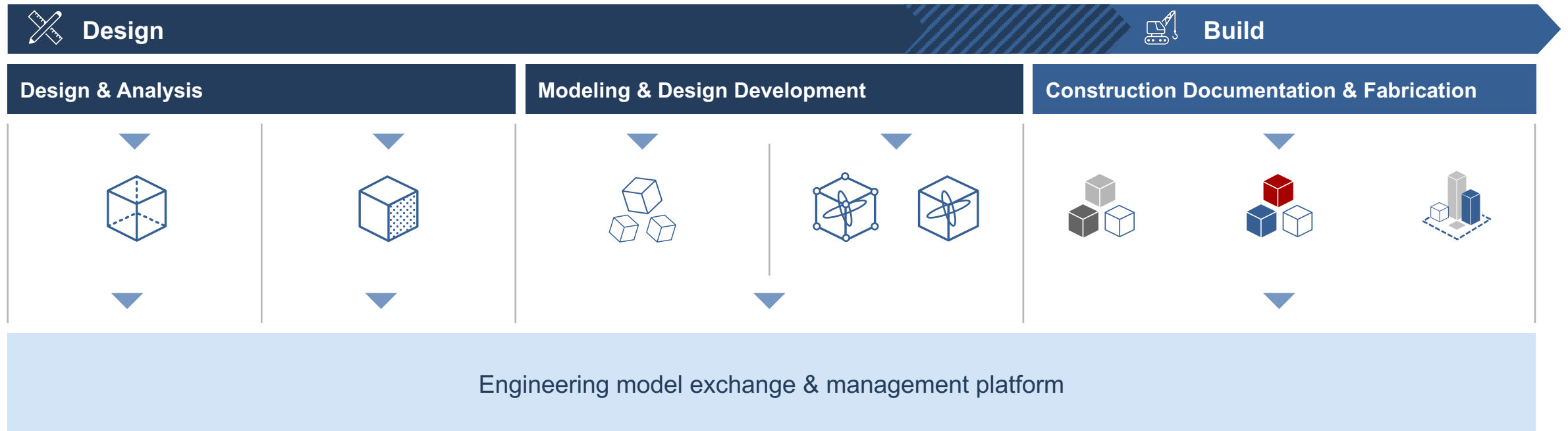
Structural Engineering Workflow: Data Losses throughout the Process



04

Core Competency & Positioning

Structural Engineering Workflow: Nemetschek Competency to Increase Efficiency



FRILO
Software

ALLPLAN

 **SDS/2**

PRECAST | SOFTWARE
engineering

 **SCIA**

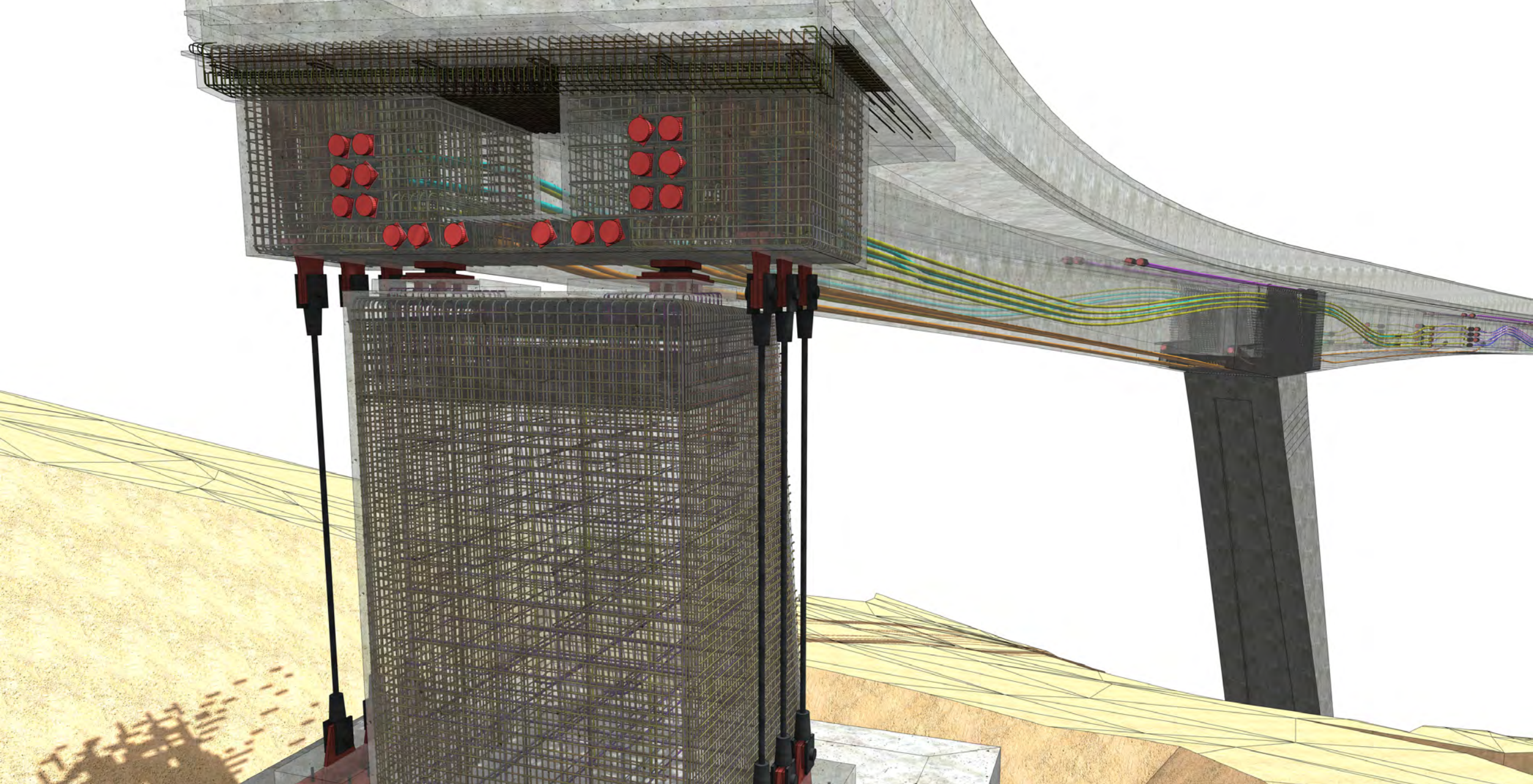
 **IRISA**

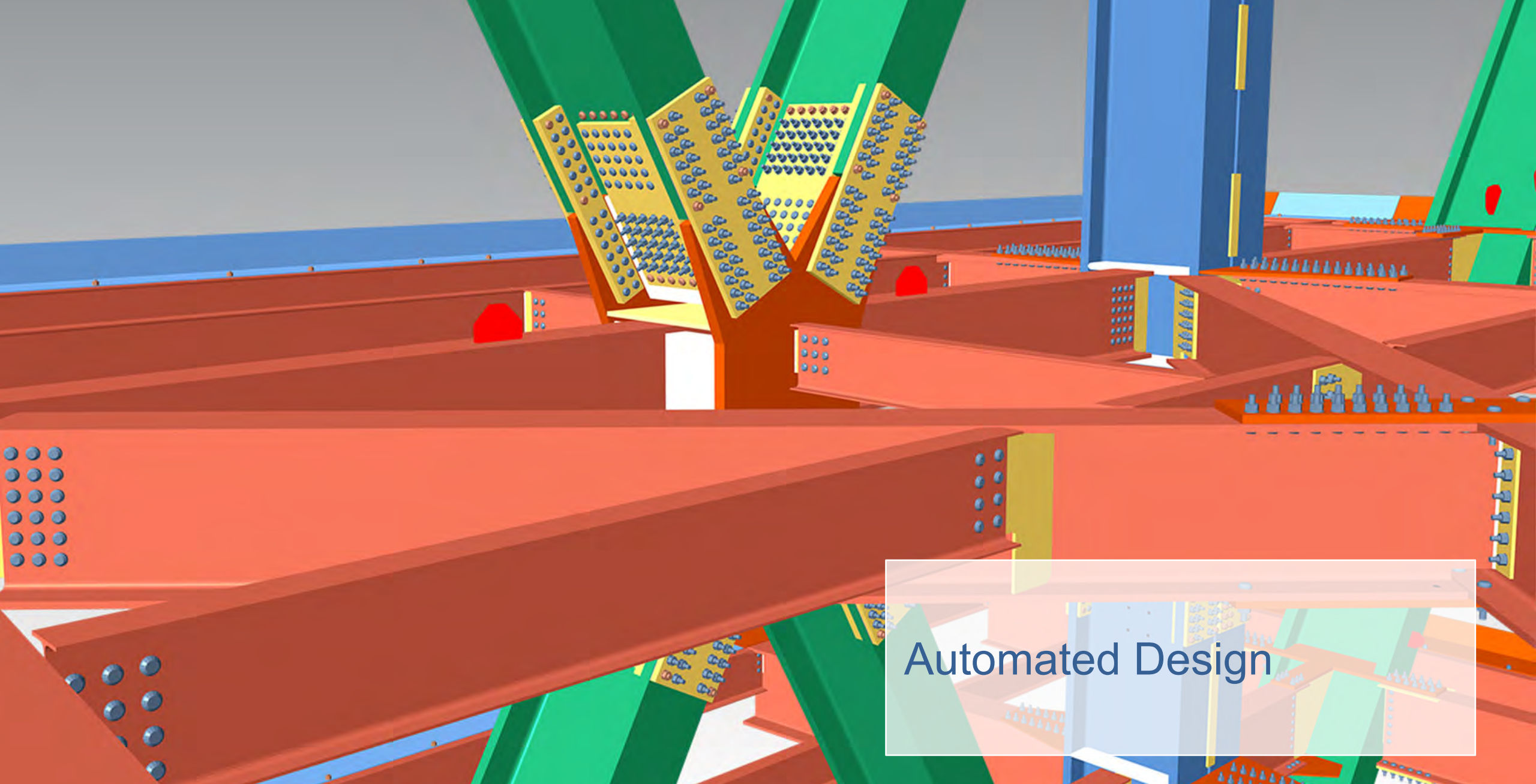


Antwerp Port House
Zaha Hadid Architects with
Bouwtechniek and Origin
Structural Engineering by Mouton



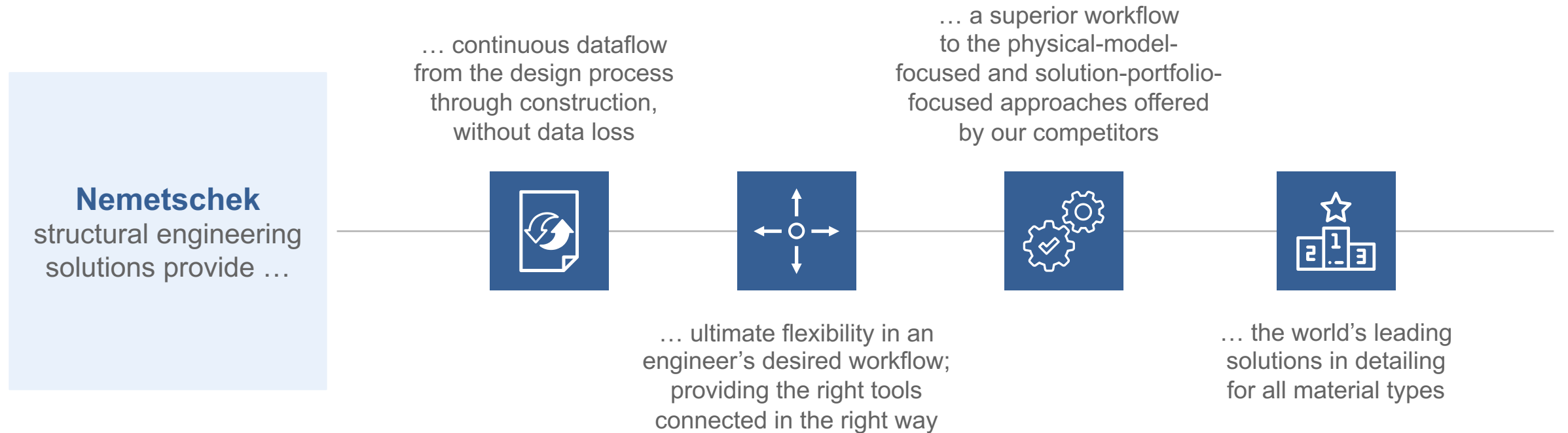
Tamina Bridge
Leonhardt, Andrä und Partner



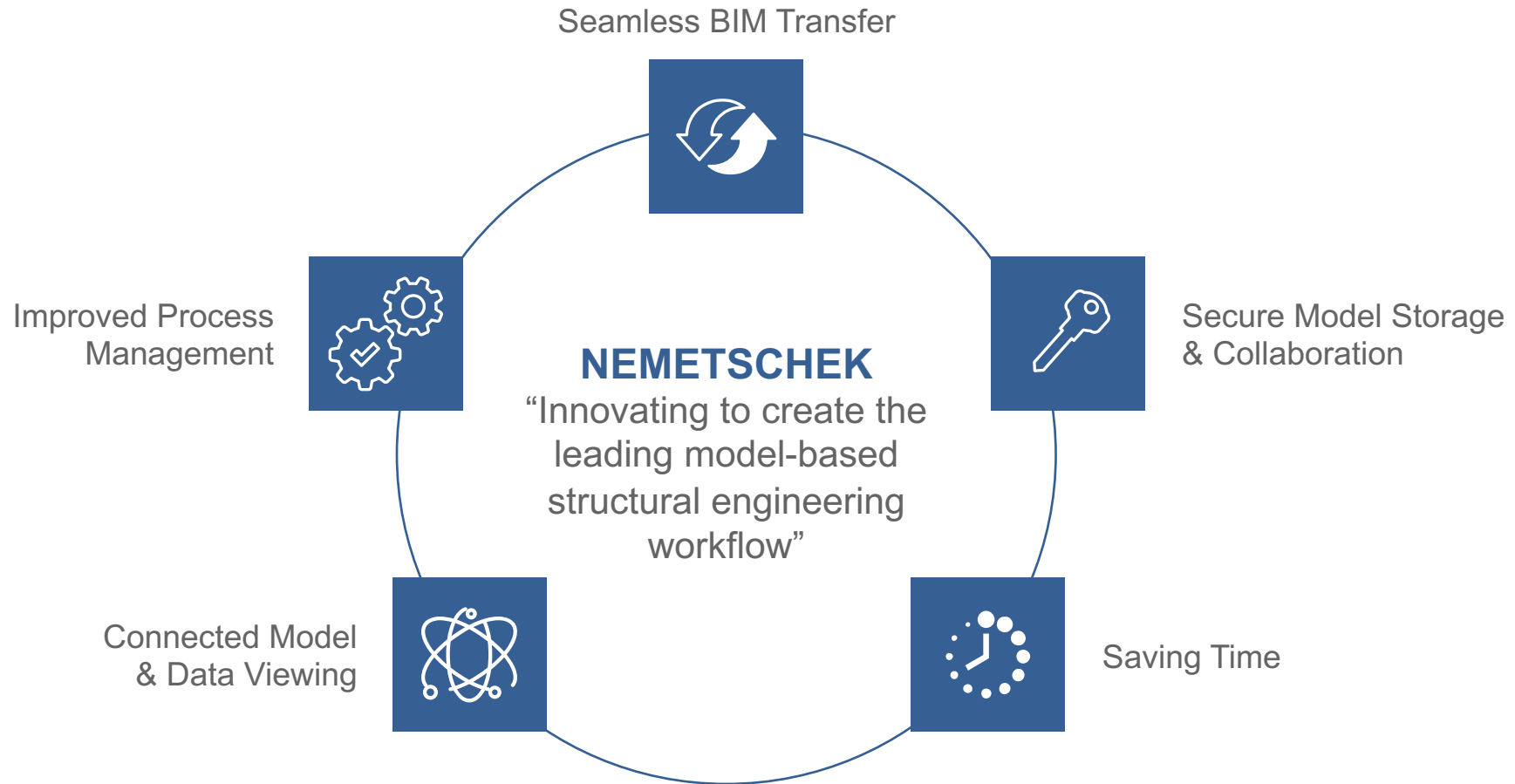


Automated Design

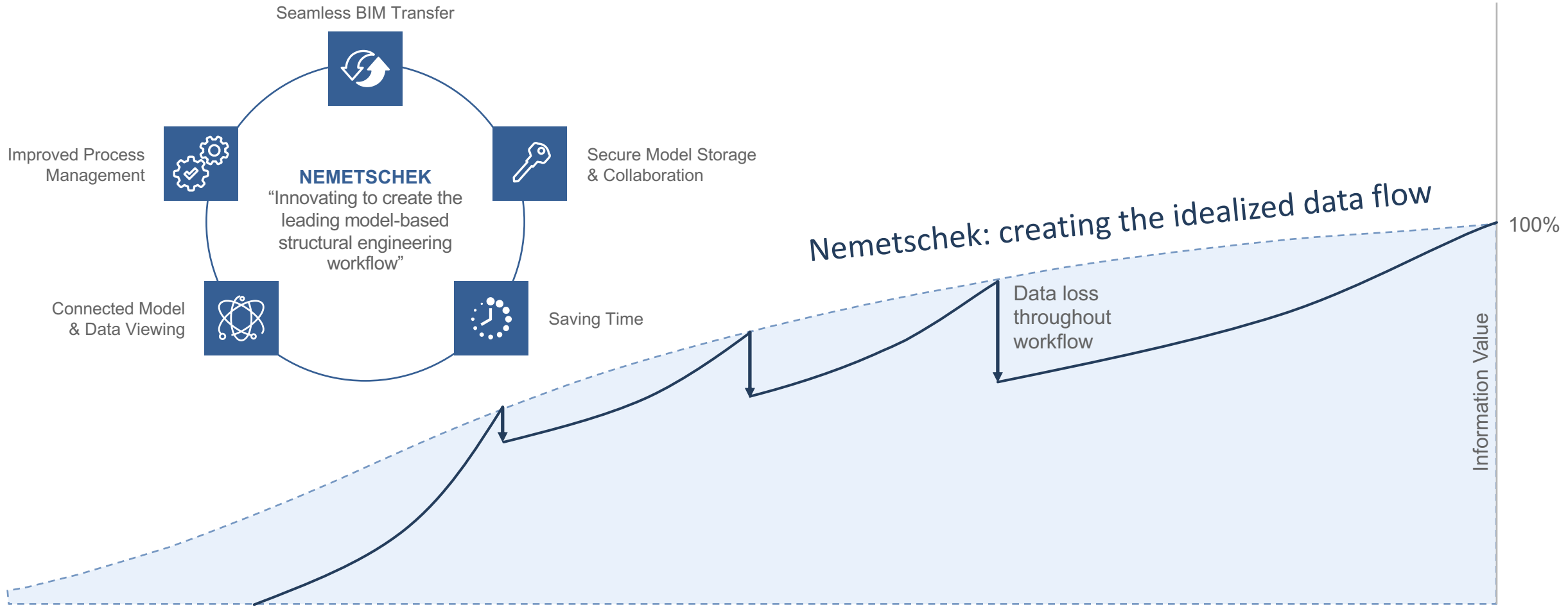
Our USPs Lead to Strong Market Position



Structural Engineering Workflow: How It Works in Detail ...



... And Thus Stops Data Loss



Performance Highlight: Bridge Project

ALLPLAN
A NEMETSCHKE COMPANY



Prestressing
made simple



Save time with
parametric object
placement



Planning stressing
sequences in
Allplan Bridge



Model creation
without compromise



Changes made
in realtime



Smooth data
exchange



Convenient
operation



Intelligent
Database



From model
to time planning

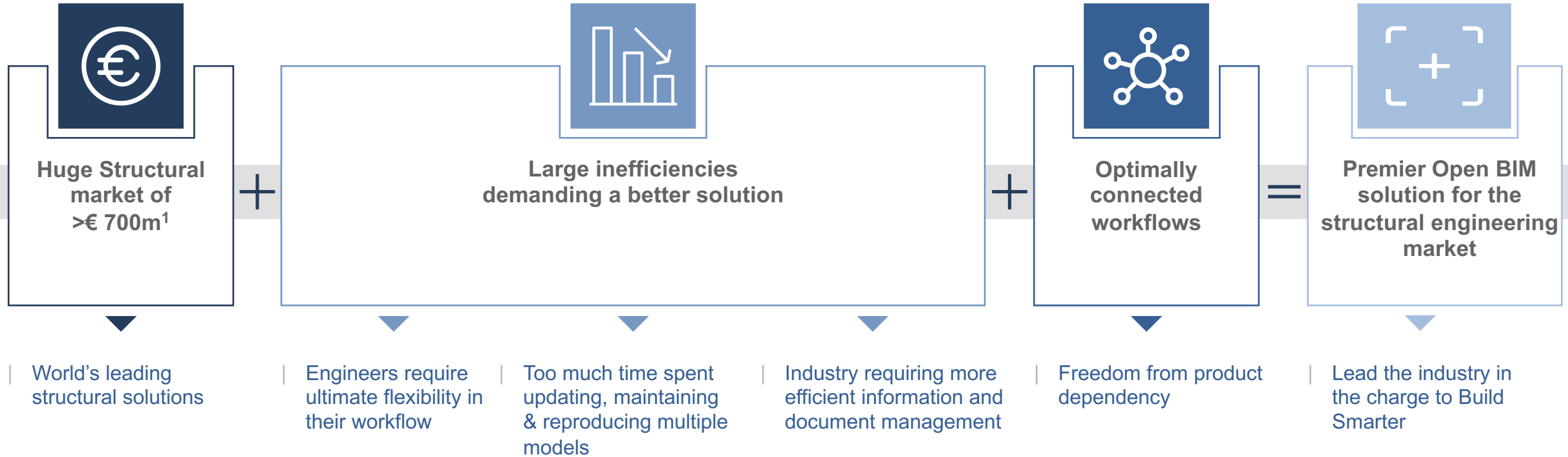


Technical support
from bridge experts

05

Key Highlights

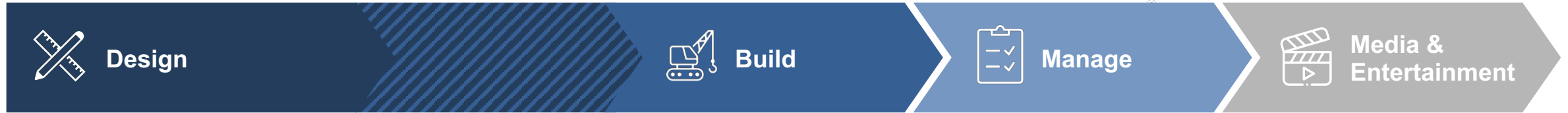
Improvement of Solutions and Workflows to Increase Market Share



¹ Source: Cambashi

NEMETSCHEK Covers the Complete AEC Value Chain

Architecture | Engineering | Construction



GRAPHISOFT.

PRECAST SOFTWARE
engineering

NEVARIS

CREM SOLUTIONS

MAXON

dRofus

DATA DESIGN SYSTEM

BLUEBEAM

MCS
SOLUTIONS

ALLPLAN

SCIA

SOLIBRI

VECTORWORKS

IRISA

SDS/2

FRILO
Software

Capital Markets Day 2018

**Build Segment:
Potential, Positioning & Strategy**

November 13th 2018 | Jon Elliott, CEO of Bluebeam





AGENDA

- 01 | Introduction
- 02 | Our Customers, Our Industry
- 03 | Current State,
Growth Opportunities



01

Introduction

Four strong brands

SOLIBRI
A NEMETSCHEK COMPANY

 **SDS/2**
A NEMETSCHEK COMPANY

 **BLUEBEAM**
A NEMETSCHEK COMPANY

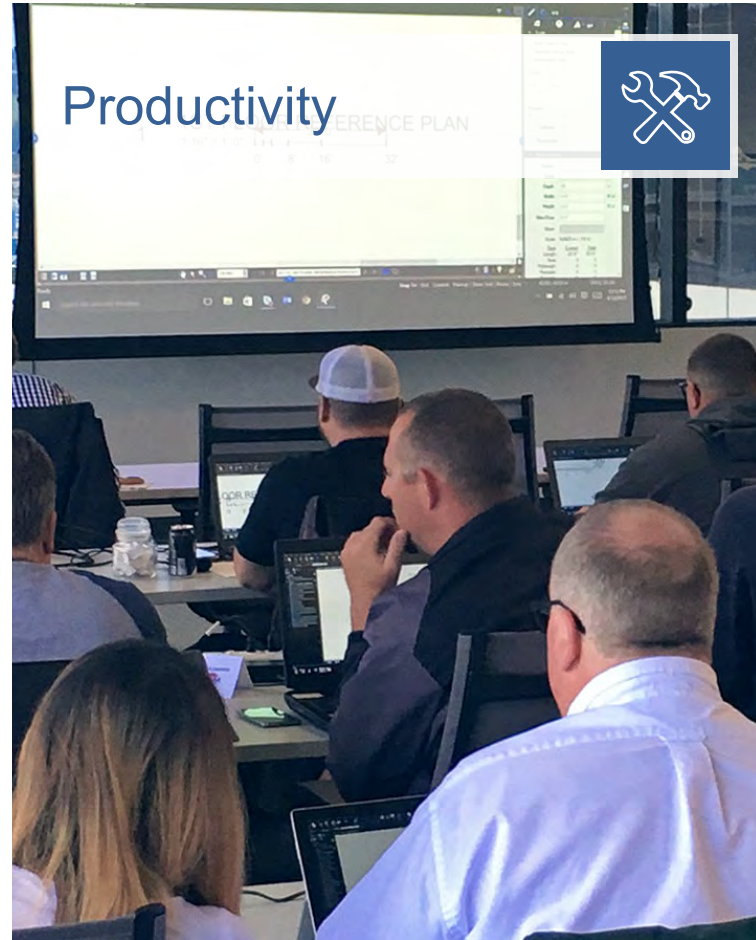
NEVARIS
A NEMETSCHEK COMPANY

A construction site featuring a large building under construction with a concrete frame. In the foreground, two construction workers wearing hard hats and safety vests stand on a dirt ground. The worker on the left is wearing an orange safety vest and a white hard hat, while the worker on the right is wearing a yellow safety vest and a white hard hat. They are looking towards the building. The background shows a parking lot with several cars and a clear blue sky. The overall scene is bright and sunny.

Bluebeam's Purpose

**We empower people to advance
the way our world is built.**

Our Vision



Facts on Bluebeam



2002

Bluebeam was founded

1.4m

Users around the globe

130

Countries using Bluebeam

24

Bluebeam user Groups

94%

of top U.S. contractors

4bn

Collaborative Transactions

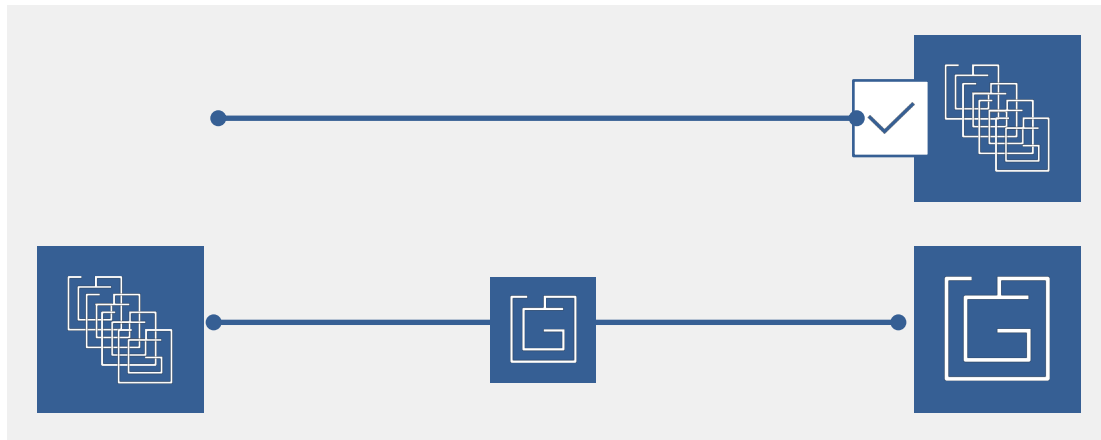
The Results



Business Impacts

12 hour document markup
process reduced to

25 min.



Wohlsen Construction

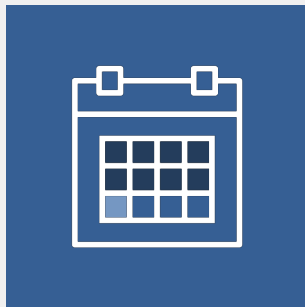
Enterprise wide efficiency

Revu was adopted as an Enterprise wide solution to streamline document management with automated processes. Improved user experience & reduced document set up time.

Business Impacts

20%

Reduction in project timeline
and repeat business with owner



Barton Malow

Daytona International Speedway

Despite a compressed timeline, delivered project on-time and on budget by standardizing on Revu across contractor, designer, owner and trades for real-time reviews and universal document access and management.

Business Impacts

Increased productivity by

60%



Hilson Moran

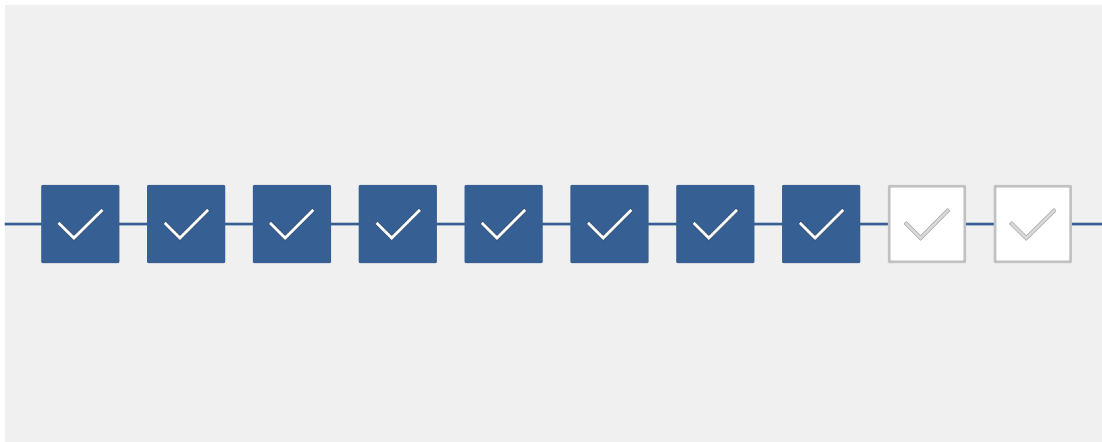
Enterprise wide efficiency

Leveraged Studio Prime to conduct real-time digital design review sessions across the UK and the Middle East.

Business Impacts

80%

Completed approvals
process faster



Cannon Design + NEUF



Centre Hospitalier de Montreal

Created a repeatable process for managing 5,900+ pages using Revu's customizable tools and Studio for multiple consultants to collaborate concurrently.



02

Our Customers, Our Industry



Our Core Customers



Architects/Engineers/Contractors

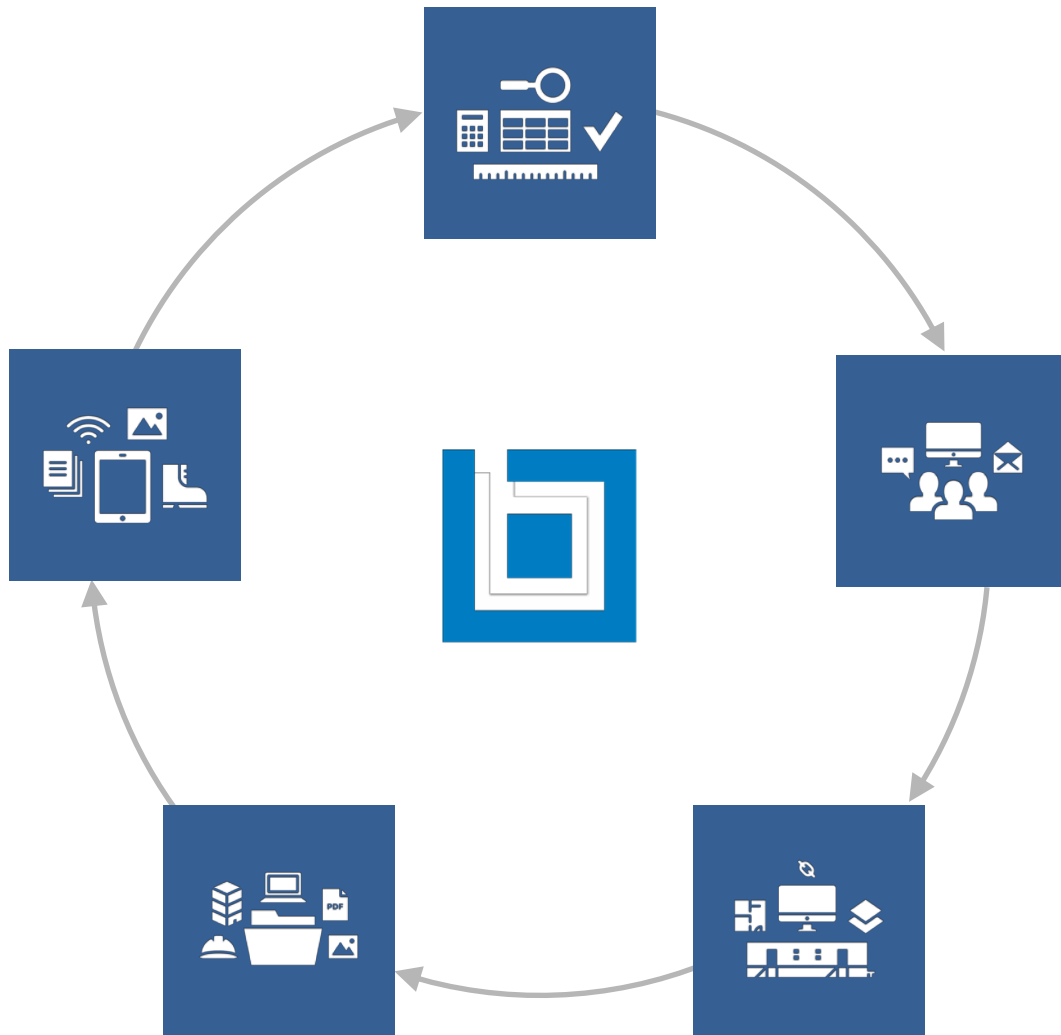
Small Business to Enterprise

Specialty Trade Contractors

Private and Public Sectors

~7% of global working population

>10M in US, >18M outside of US



How Construction Works

“On time and on budget”

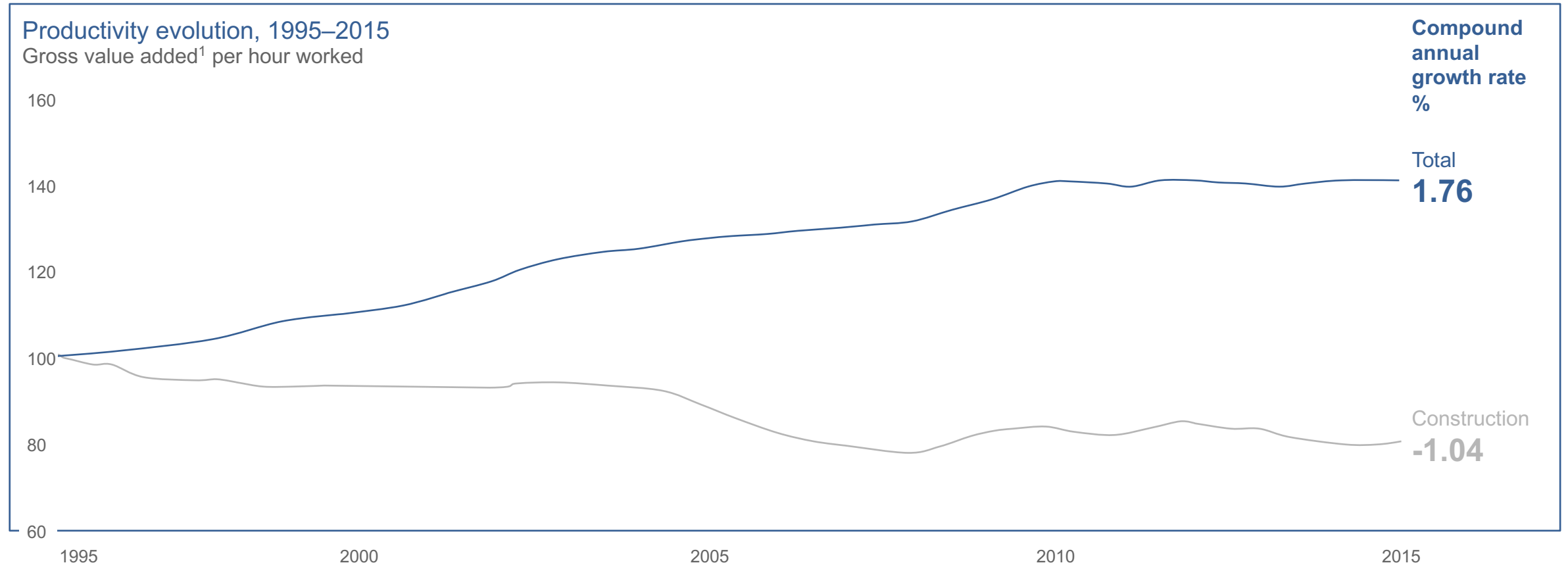
Multiple project partners
 Legal risks and responsibilities
 Collaboration is critical

Common results:

80% higher costs
20% longer schedules
 Low, single-digit profit margins

Productivity Challenges

Significant opportunity to find better ways to build



Index: 100 = 1995

Global Population Growth



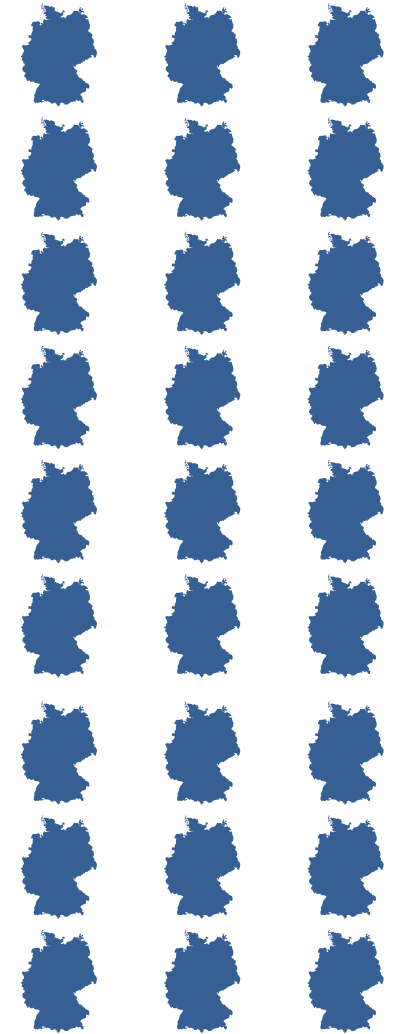
7.6 bn

Now



9.8 bn

2050



Construction Industry in Digital Transformation



Spark

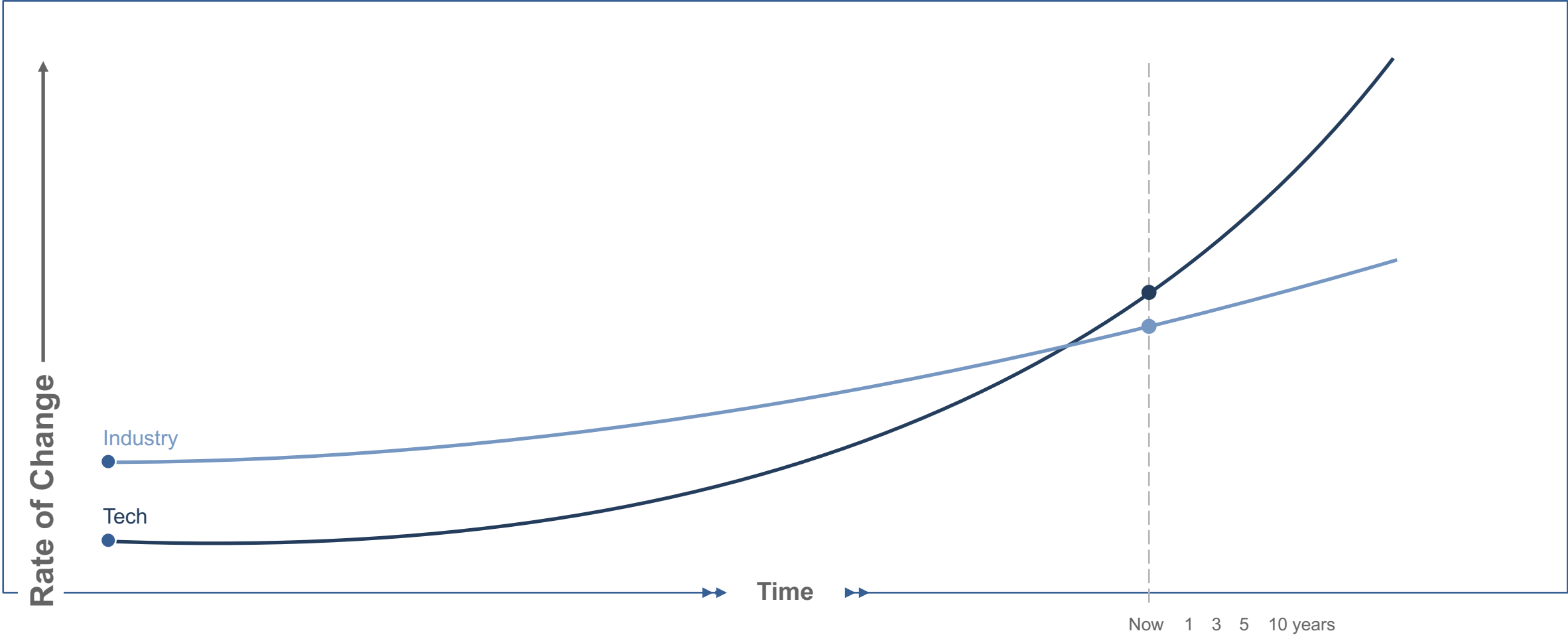


Experimentation

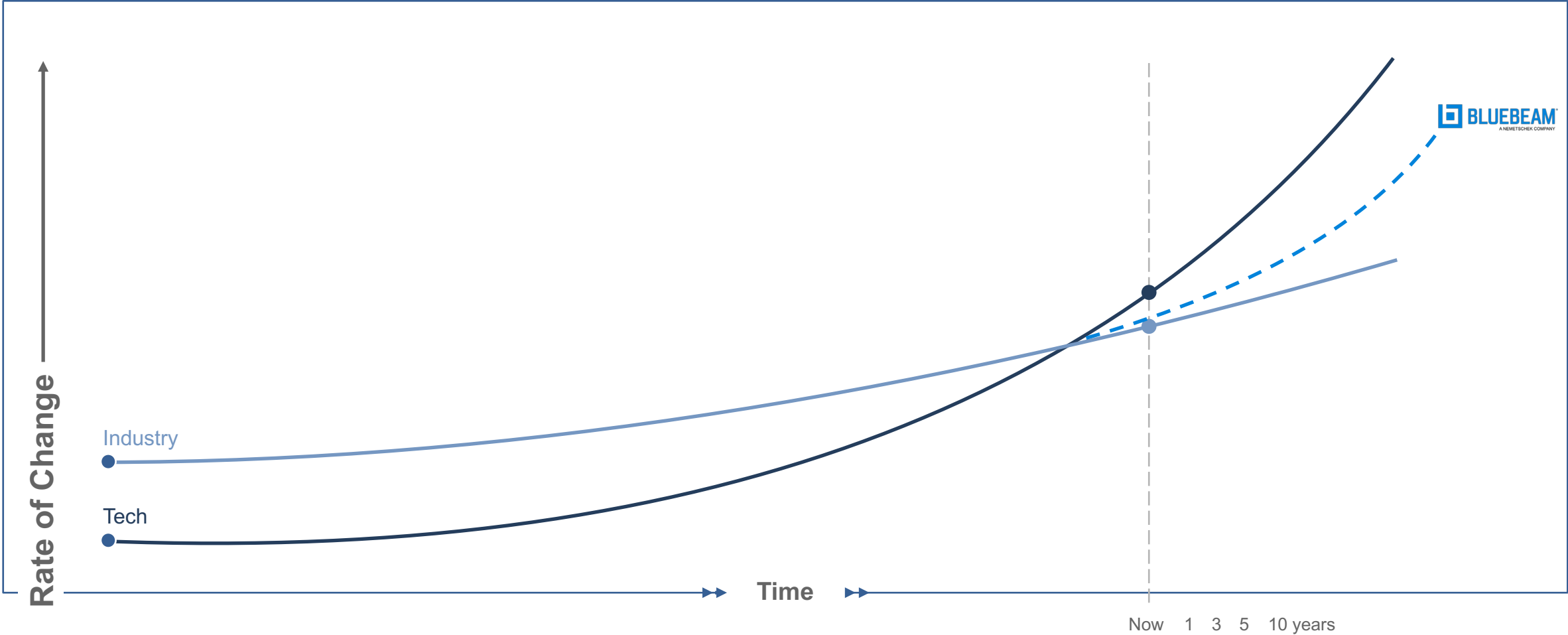


Convergence

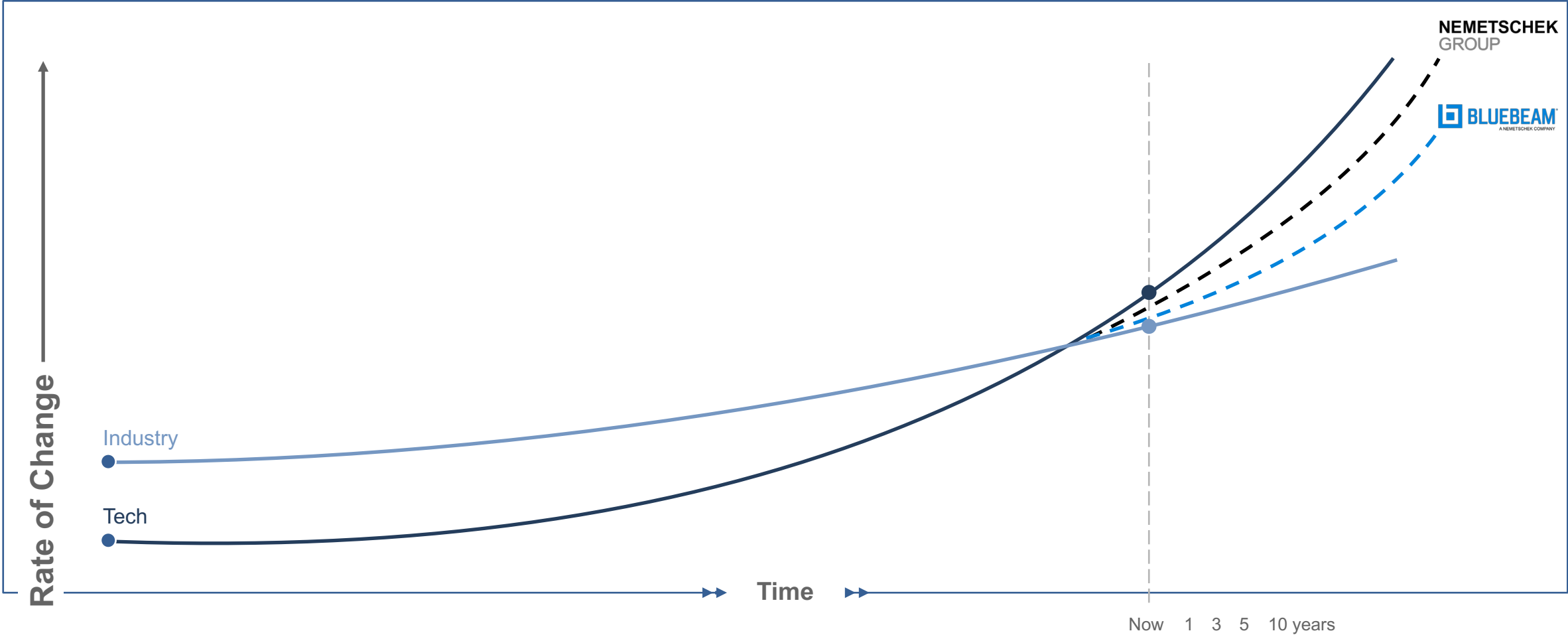
Advancing the Industry



Advancing the Industry



Advancing the Industry

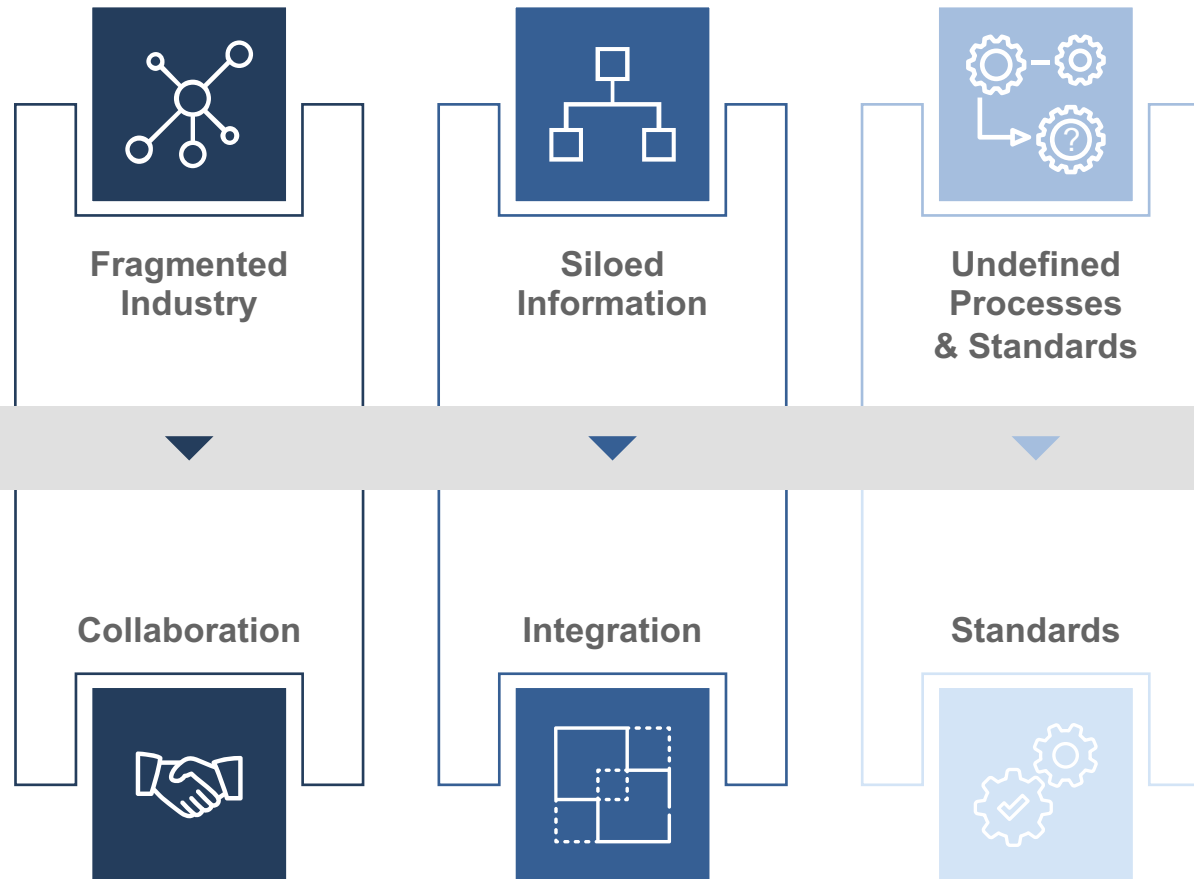




03

Current State,
Growth Opportunities

Current Industry Challenges



Bluebeam Revu

Project efficiency and collaboration solution built for the AEC



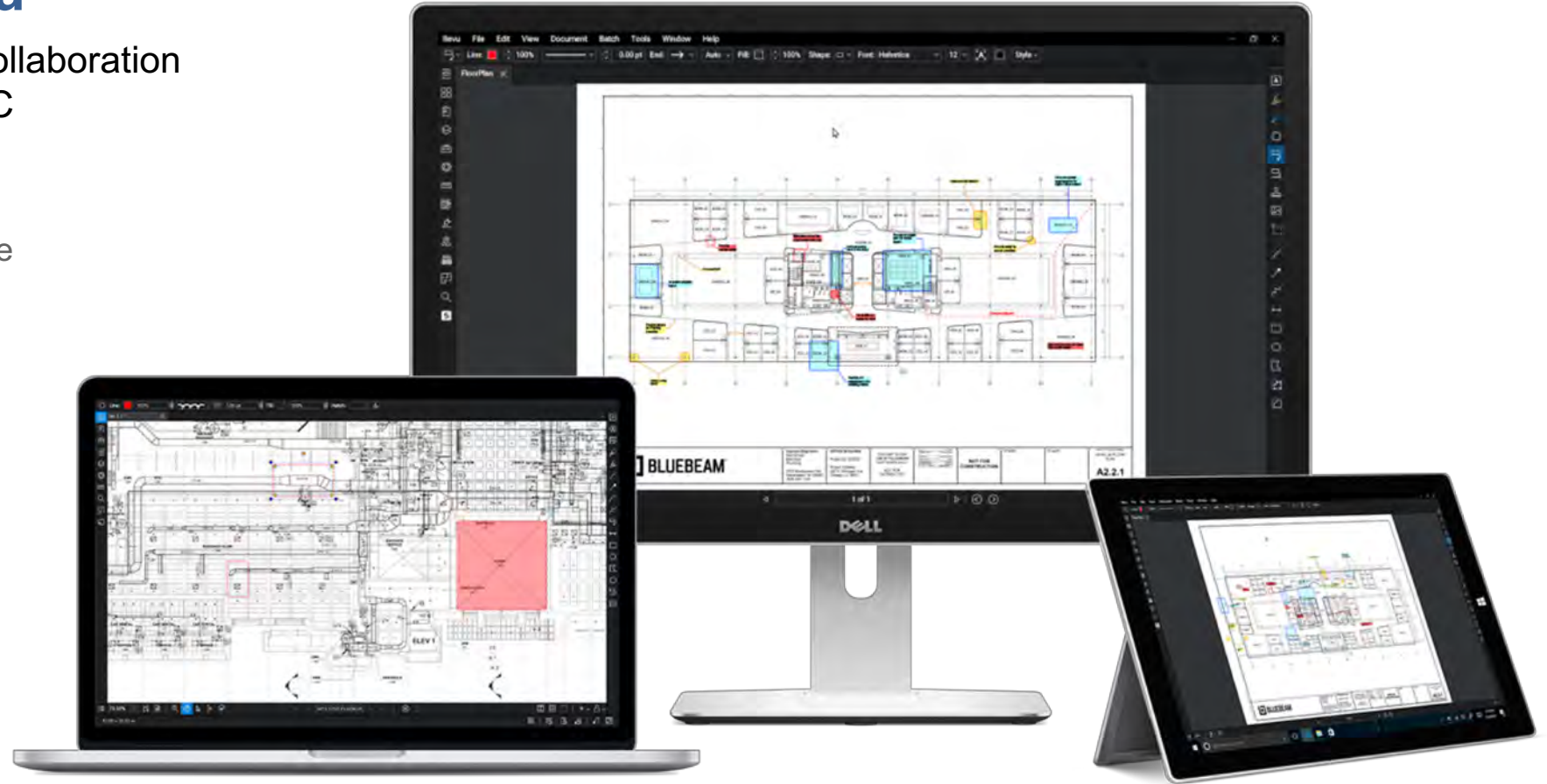
Increased Revenue



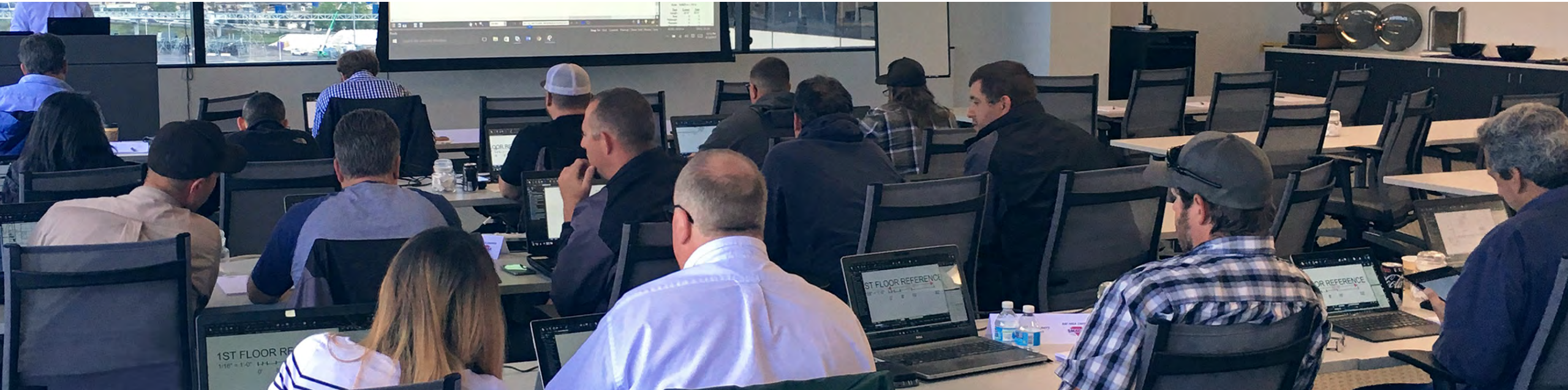
Reduced Costs



Minimized Risks



Competitive Landscape



Collaborative Design
Review, Technical
Document Review



Field & Document
Management



Project & Document
Management

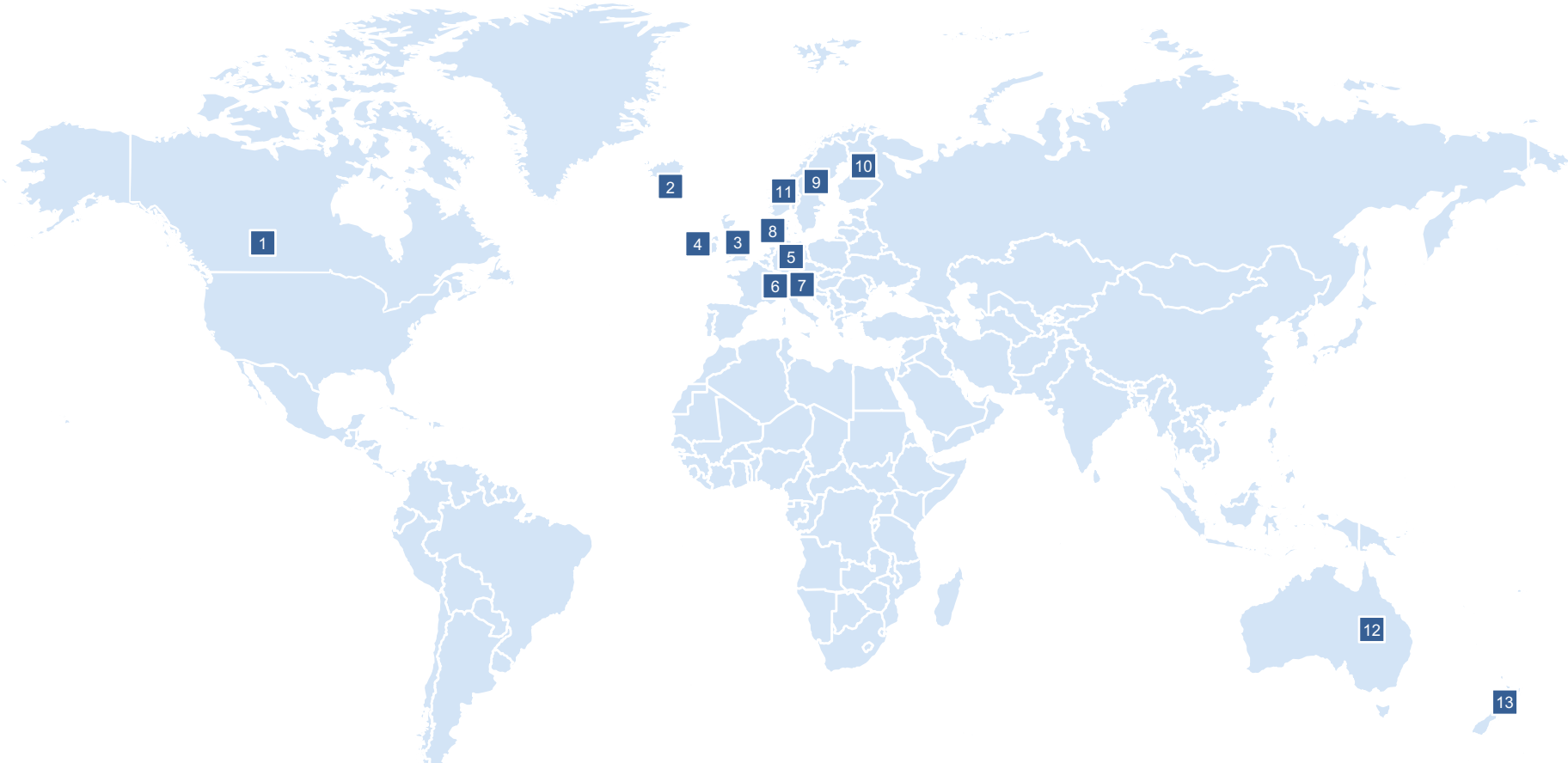


Paper



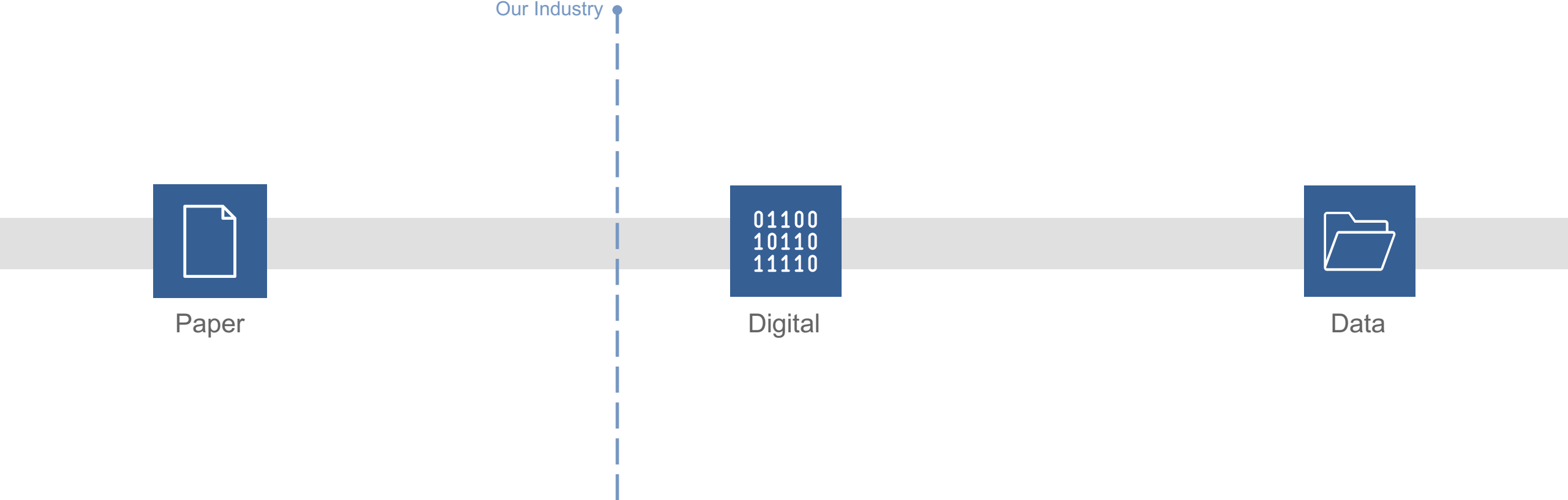
PlanGrid
Field & Mobile
Workflows

Future Growth Opportunities



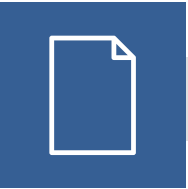
Future Growth Opportunities

Next Generation Innovations



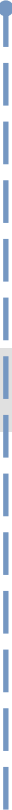
Future Growth Opportunities

Next Generation Innovations



Paper

Our Industry



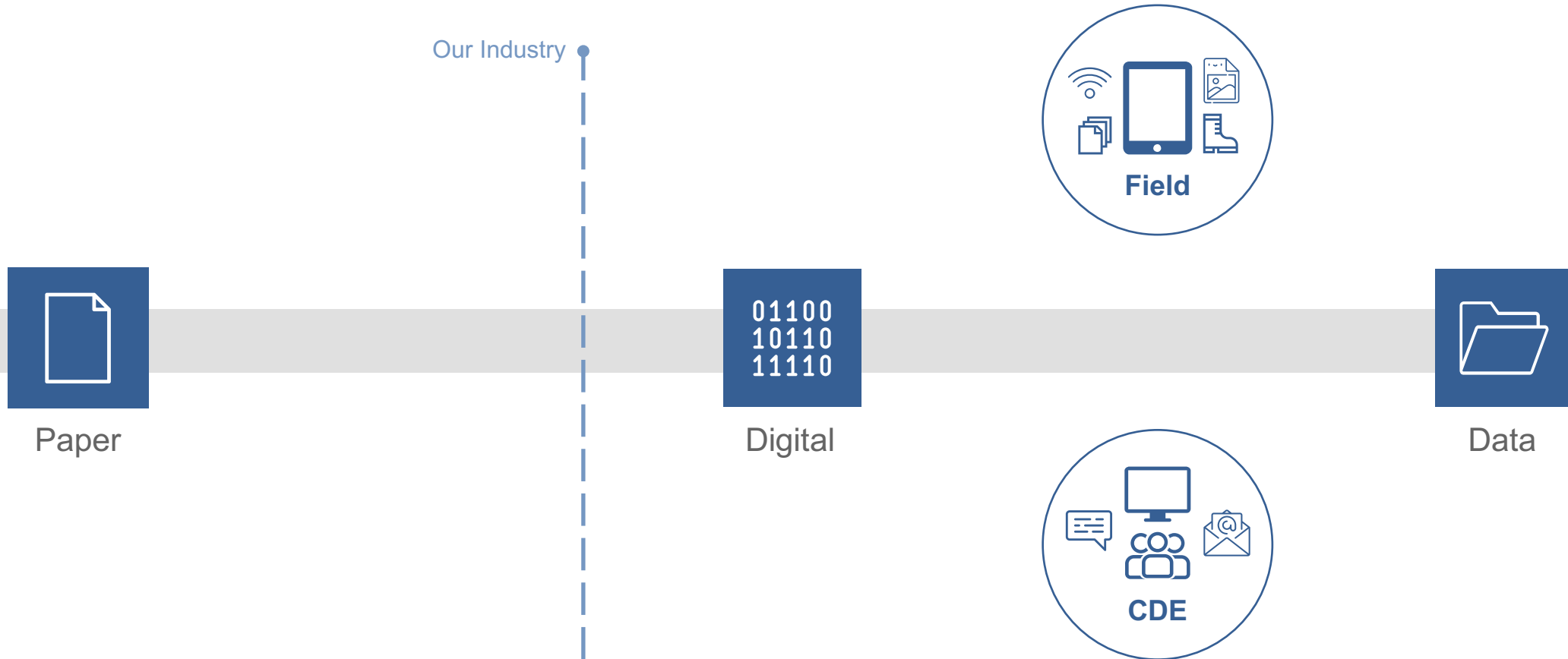
Digital



Data

Future Growth Opportunities

Next Generation Innovations



Thank you

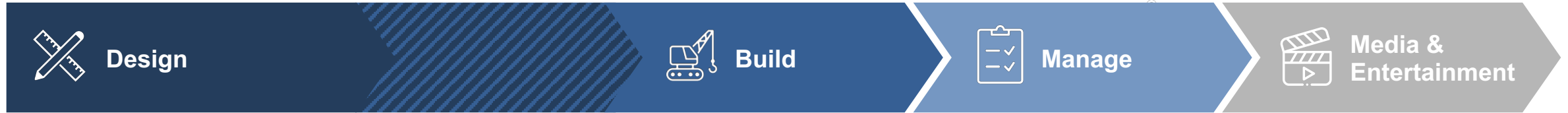
Building the future, together.



NEMETSCHKE
GROUP

NEMETSCHEK Covers the Complete AEC Value Chain

Architecture | Engineering | Construction



GRAPHISOFT.

PRECAST SOFTWARE
engineering

NEVARIS

CREM SOLUTIONS

MAXON

dRofus

DATA DESIGN SYSTEM

BLUEBEAM

MCS
SOLUTIONS

ALLPLAN

SCIA

SOLIBRI

VECTORWORKS

IRISA

SDS/2

FRILO
Software

Capital Markets Day 2018

**Manage Segment:
Potential, Positioning & Strategy**

November 13th 2018 | Koen Matthijs, CEO of MCS Solutions



AGENDA

- 01 | The Manage & Operations Market
- 02 | Market Size, Industry Trends & Growth Drivers
- 03 | Core Competency & Positioning
- 04 | Key Highlights

01

The Manage & Operations Market

Verticals in the Manage & Operations Market: Addressing Future Growth Markets



Asset Management

- | Increase the real estate returns
- | Dealing with financial models



Property Management

- | PM is the **administration** of real estate
- | PM is the partner of the owner of the real estate

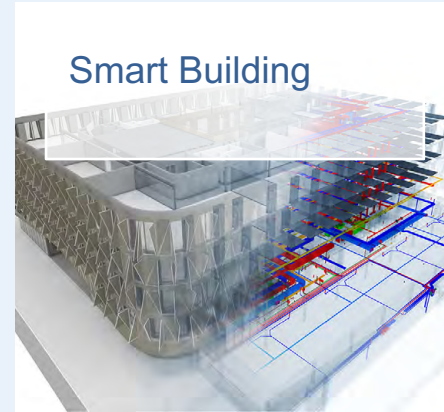
MCS + CREM



IWMS
(Integrated Workplace Management System)

INTEGRATED software in which multiple facility **services are automated**

- | Property management
- | Sustainability/energy
- | Reactive & preventive cleaning/maintenance
- | Equipment & space, move management
- | Hospitality (reception & meeting management)



Smart Building

INTEGRATED measuring & response to continuously updated sensor data (IoT) to **improve performance of**

- | Services (FM)
- | Building (CFO)
- | People (CEO)



BAS/BMS (Building Automation System / Building Management System)

| Control technology of properties/buildings using built in controls integrated and linked with each other.



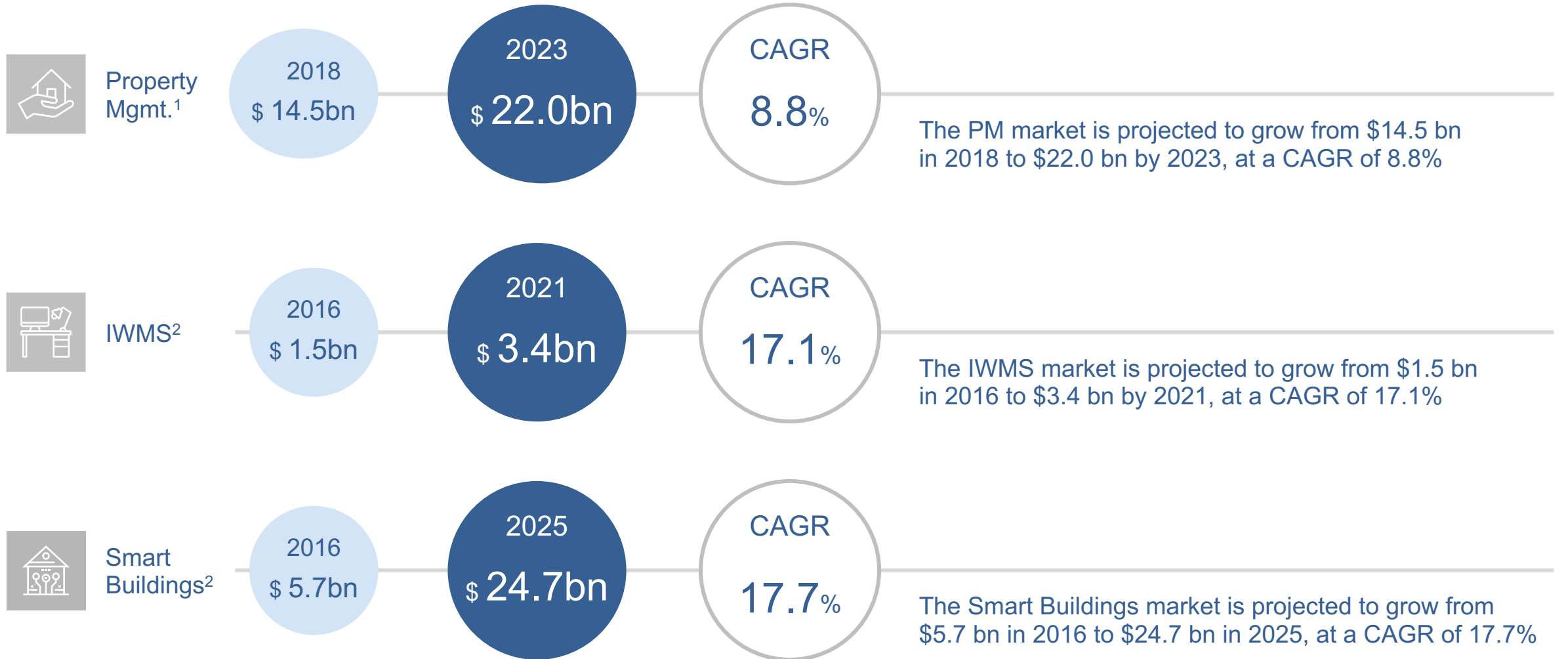
02

Market Size, Industry Trends & Growth Drivers

Trippla Quarter, Helsinki, Finland
Contractor: YIT Construction | Realized with SOLIBRI

Central Park Tower area, detailed plan, view from South West

Huge and Dynamically Growing Manage & Operations Markets



¹ Source: Research and Markets Global Forecast 2023 (2018) | ² Source: Gartner Market Guide for IWMS (2018)

Key Disruptive Drivers Enabling Unprecedented Growth Opportunities

Technology drivers



IoT



BIM / 3D



Big Data, AI



Cloud

Market drivers (revenue increase & cost reduction)



Regulatory compliance



New workplace concepts



Mobile workforce



War for talent



Operational costs
25% of building lifecycle cost are incurred in Design/Construction, 75% in Manage



Volatile real estate needs



Personal butler

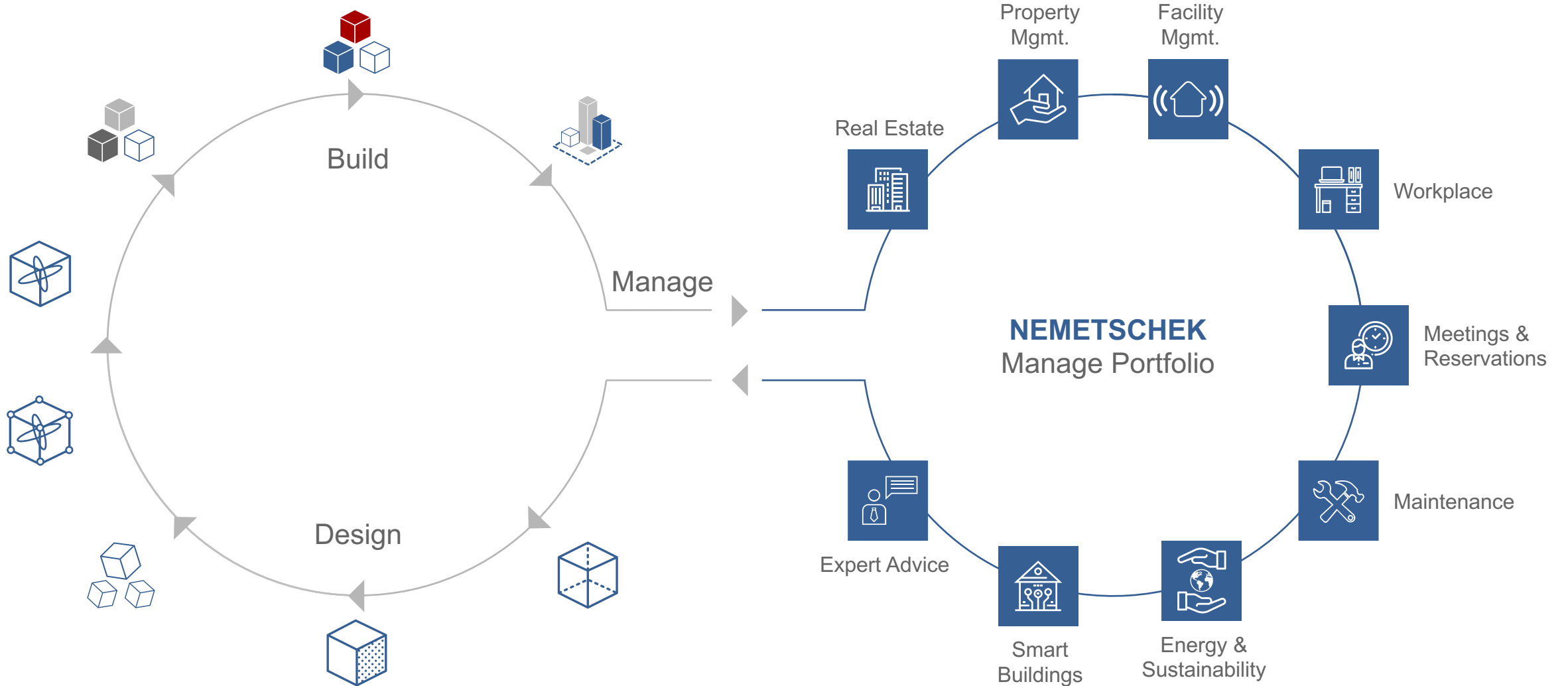


Employee productivity

03





Core Competence & Positioning

Outstanding Positioning, Competence & Offering in the Manage Market



Facts & Figures of MCS Solutions – Who We Are

Key Facts

	Founded in 1989		44% recurring revenue
	HQ Antwerp, Belgium		200+ people (50% offshored)
	7 offices globally		Productized to scale & globalised
	Offshore development in India		

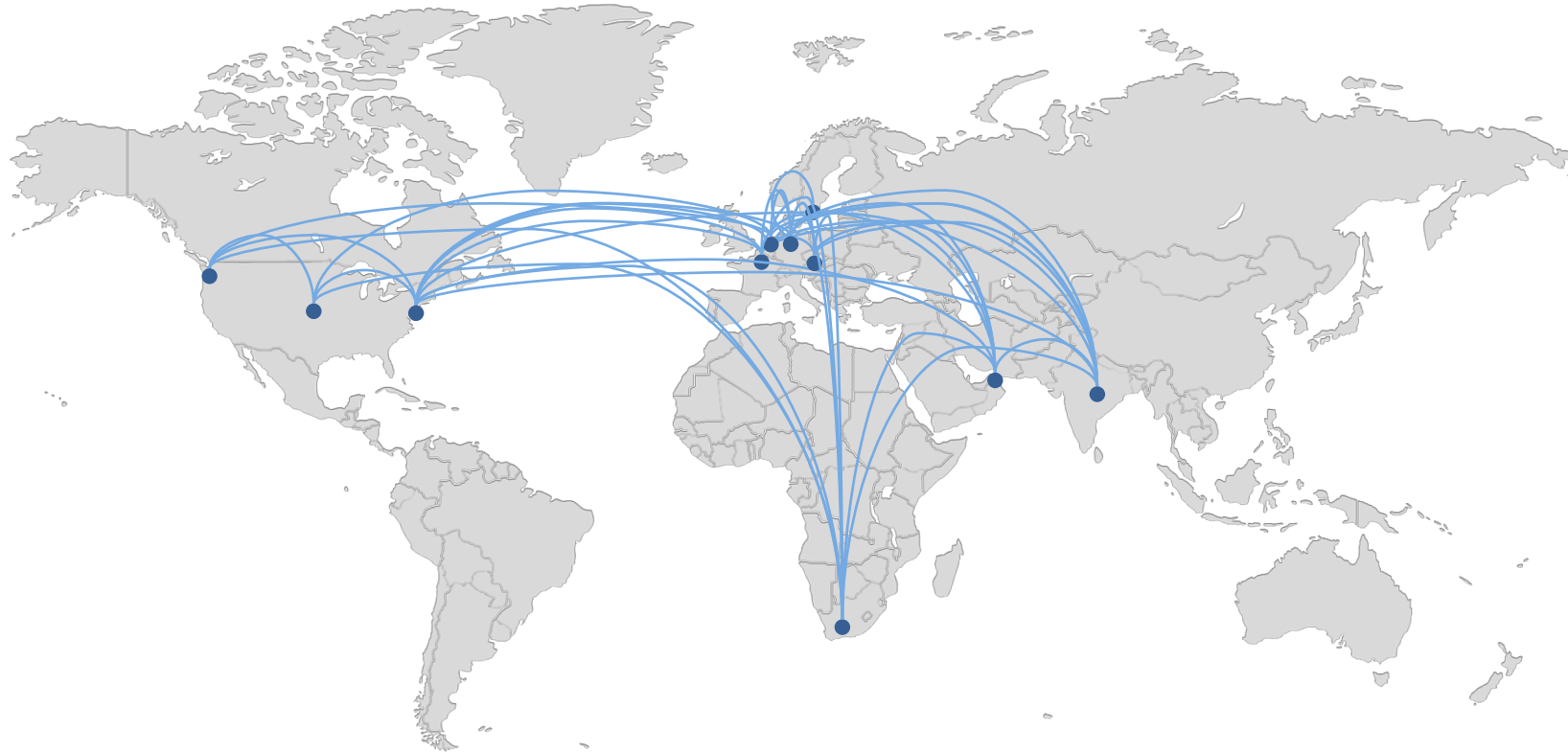
Customers / Key Clients



Market information

	Nr.2 in IWMS in Europe		New technologies (IoT, Big Data, VR, AI)
	GEFMA certified		Cloud
	Recognised as leader by Gartner & Verdantix		

Worldwide Approach: Global Network of Partners



Partners:



MCS Solutions Offering: Three Strong Business Units



PROCESS OPTIMIZATION



DATA SCIENCE



DOMAIN EXPERTISE

MCS software

One integrated software solution for managing facilities, real estate and workplace



Real Estate



Facility Mgmt.



Workplace



Energy



Maintenance



Meetings & Reservations



COBUNDU platform

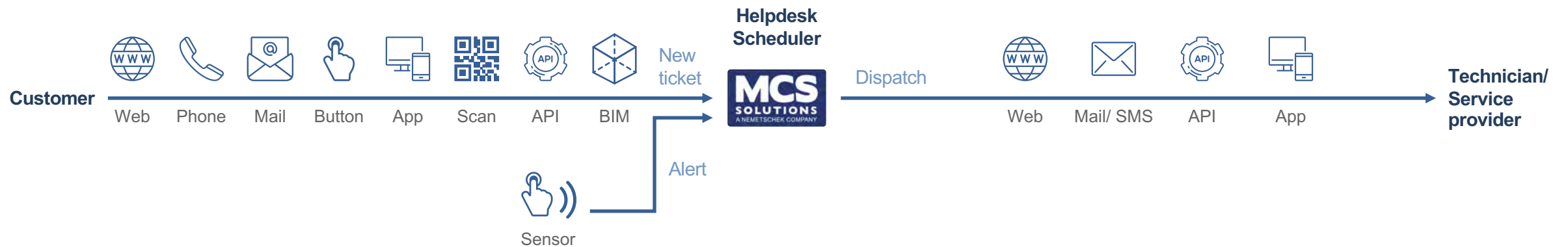
Collect building related data & act on it to make it a smart connected building

Advisory services

Domain experts & data scientists advising on tactical & strategic level

MCS Software: Example Facility Management

(()) Facility management



MCS Software: Example Meetings & Reservations



Meetings & reservations



Advisory Services: Broad Range of Real Estate, Workplace & Facility Management Domains

Our domain experts in facility management, workplace & real estate



Smart Workplace

- | Activity measurement
- | Workplace concept



Facility Management

- | Quick scan
- | Audit



Maintenance

- | Maintenance strategy
- | Tendering



Cleaning

- | Cleaning program & model
- | Quality control



Catering

- | Catering strategy
- | Restaurant/kitchen design

COBUNDU Platform: Combining IoT, Sensors and Big Data to Support Smart Buildings








FOCUS ON BOTH THE OCCUPANT USING THE BUILDING
AND THE OPERATIONAL EFFICIENCY OF THE BUILDING






COBUNDU Platform: What Is a Connected Building?

Sensor Network

Occupancy

-  Movement
-  Contact
-  Traffic
-  Door opening
-  Parking

Well-being

-  Temperature
-  Noise
-  Humidity
-  Air quality
-  CO₂

Metering

-  Water
-  Electricity
-  Gas
-  Waste

Positioning






-  Positioning

Feedback

-  Feedback









Big data platform

Other inputs

-  CAFM/IWMS
-  Performance benchmarks
-  3rd party data
-  BMS
-  CAD/BIM

Touchpoints

User outputs

-  Advanced analytics
-  Improvement initiatives
-  Web portal
-  Work calendar
-  Mobile app
-  Virtual assistant
-  Meeting room display
-  Kiosk

COBUNDU Platform: Your Workplace Gets Smart

Monitor



Space



Comfort



Feedback

Assist



Rooms



Workplaces



Parking

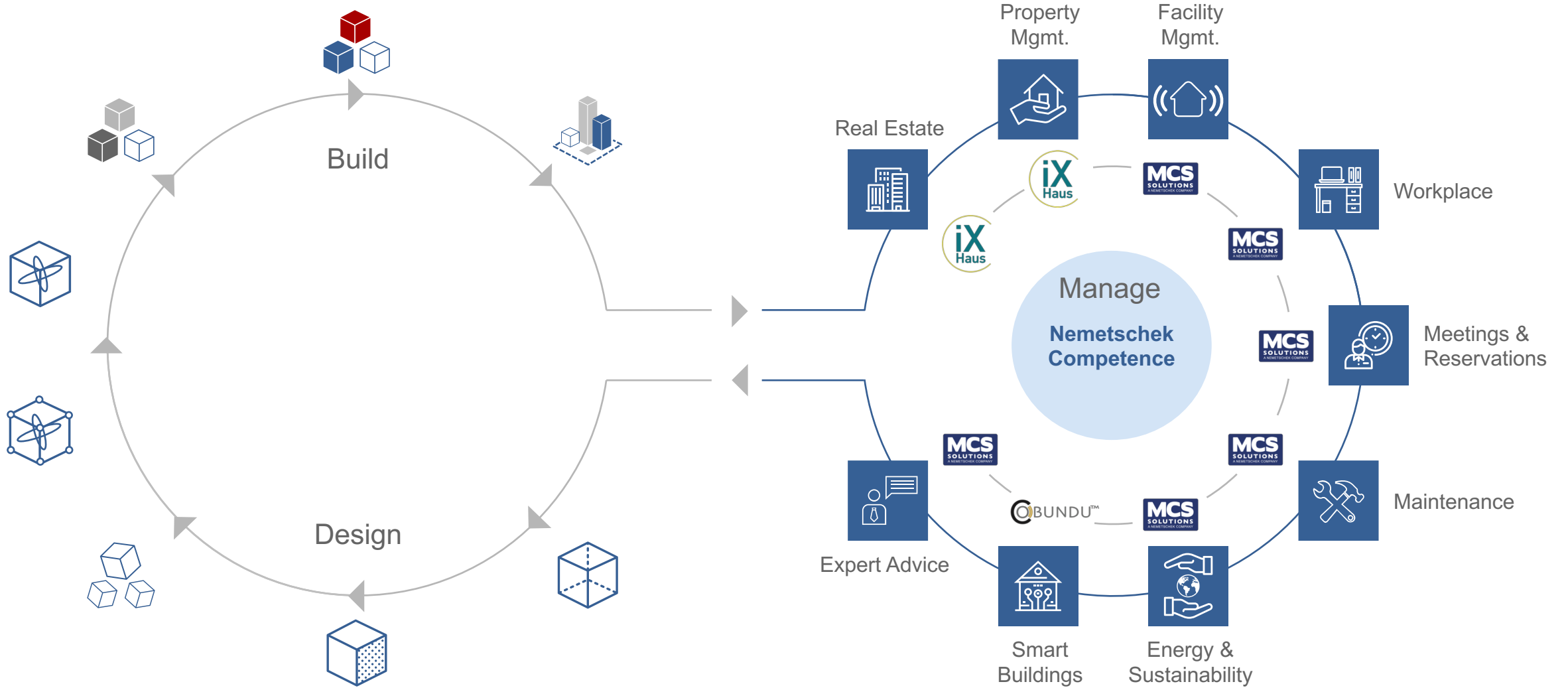
Transform



Cleaning



Complete Offering: Across all Manage/Operations Verticals



Key Differentiators: Make Buildings Work for People

Overall differentiators



SPEED

Short time to value



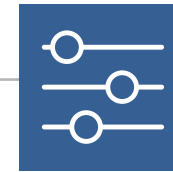
One stop shop

All-in-one integrated solution



We know your world

Domain expertise



Do it yourself

Be in control, it's that easy

COBUNDU Smart Building specific



Hardware Vendor independent

Any sensors.
Any type of networks.



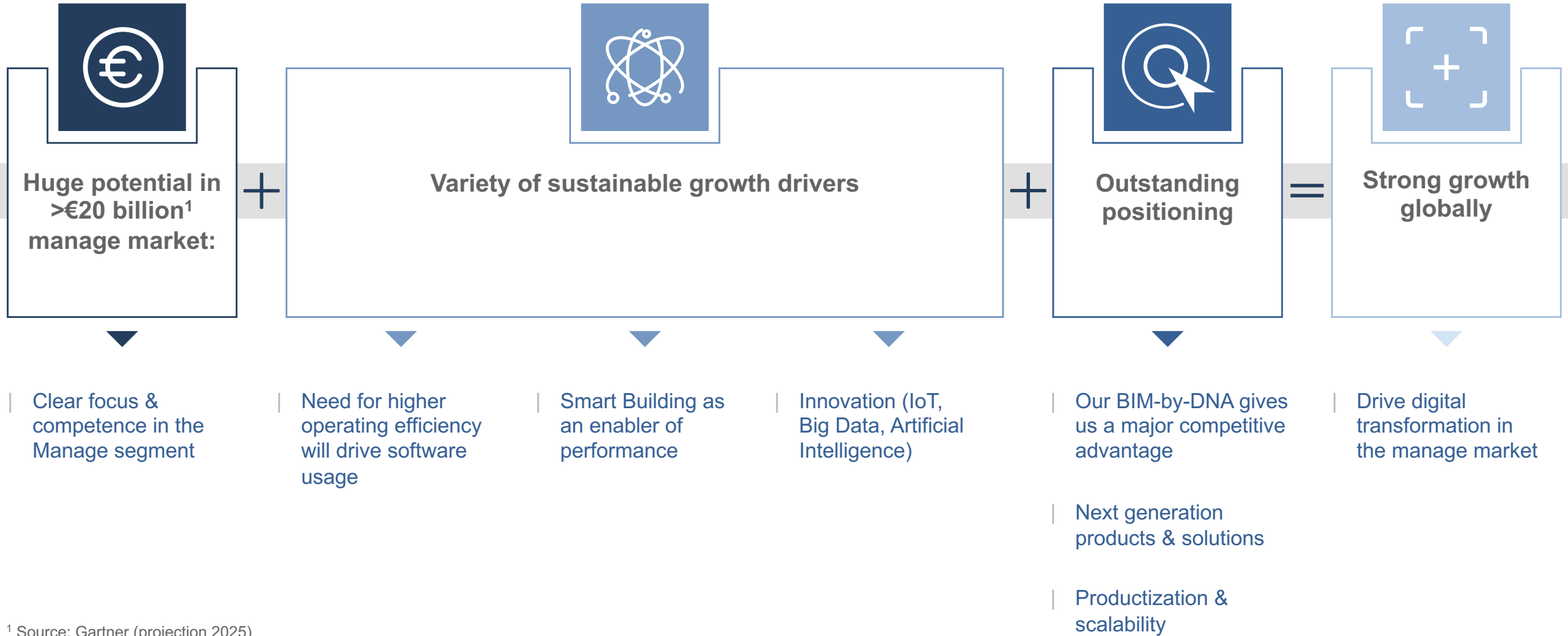
Actionable

Comes with an operational BRAIN

04

Key Highlights

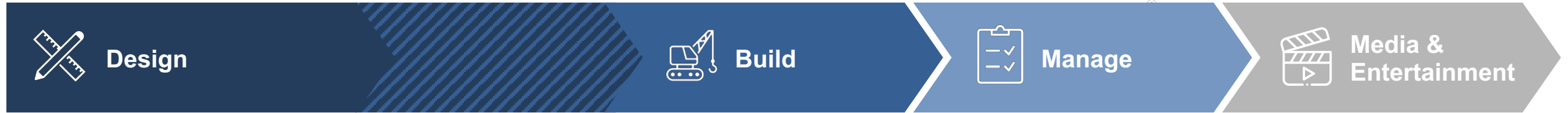
Excellent Positioning in Dynamically Growing Manage Market



¹ Source: Gartner (projection 2025)

NEMETSCHEK Covers the Complete AEC Value Chain

Architecture | Engineering | Construction



GRAPHISOFT.

PRECAST SOFTWARE
engineering

NEVARIS

CREM SOLUTIONS

MAXON

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SCIA

SOLIBRI

VECTORWORKS

IRISA

SDS/2

FRILO
Software

Capital Markets Day 2018

**Media & Entertainment Segment:
Potential, Positioning & Strategy**

November 13th 2018 | David McGavran, CEO of Maxon



AGENDA

- 01 | Cinema 4D: Best Practices
- 02 | Core Competency & Positioning
- 03 | Market Size, Trends & Drivers
- 04 | What Comes Next?
- 05 | Big Market Prepared for Future Growth



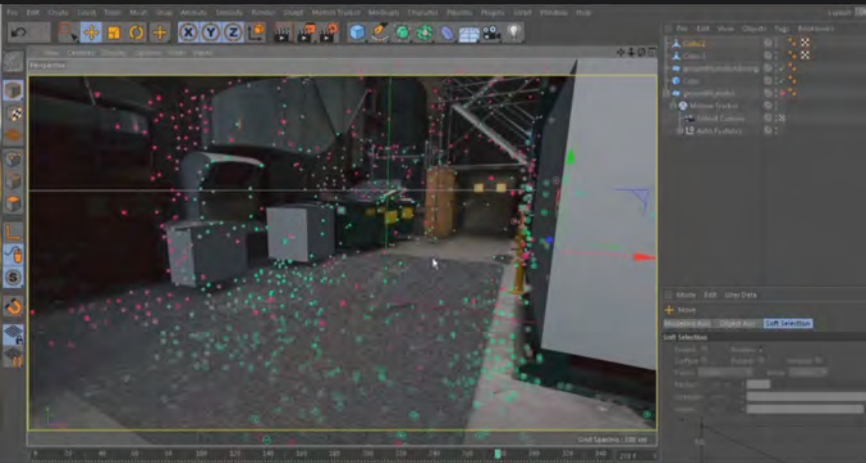
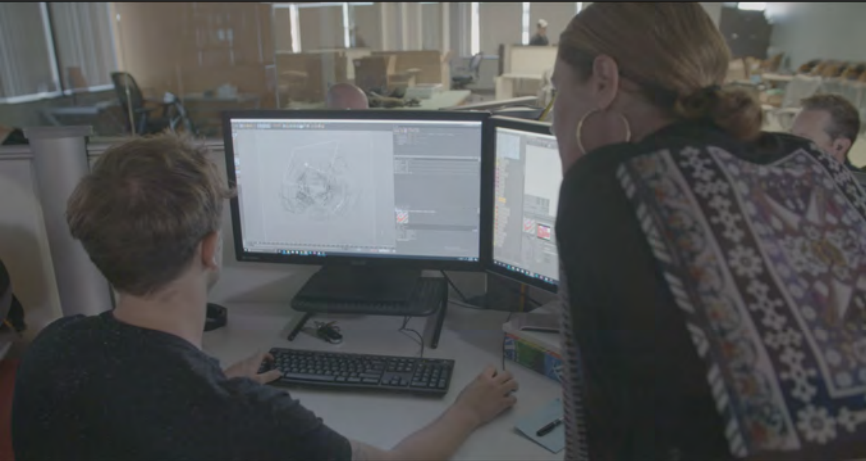
01

Cinema 4D: Best Practices

MAXON
A NEMETSCHKE COMPANY

3D FOR THE REAL WORLD

Best-In-Class: CINEMA 4D Release 20



CINEMA 4D Release 20



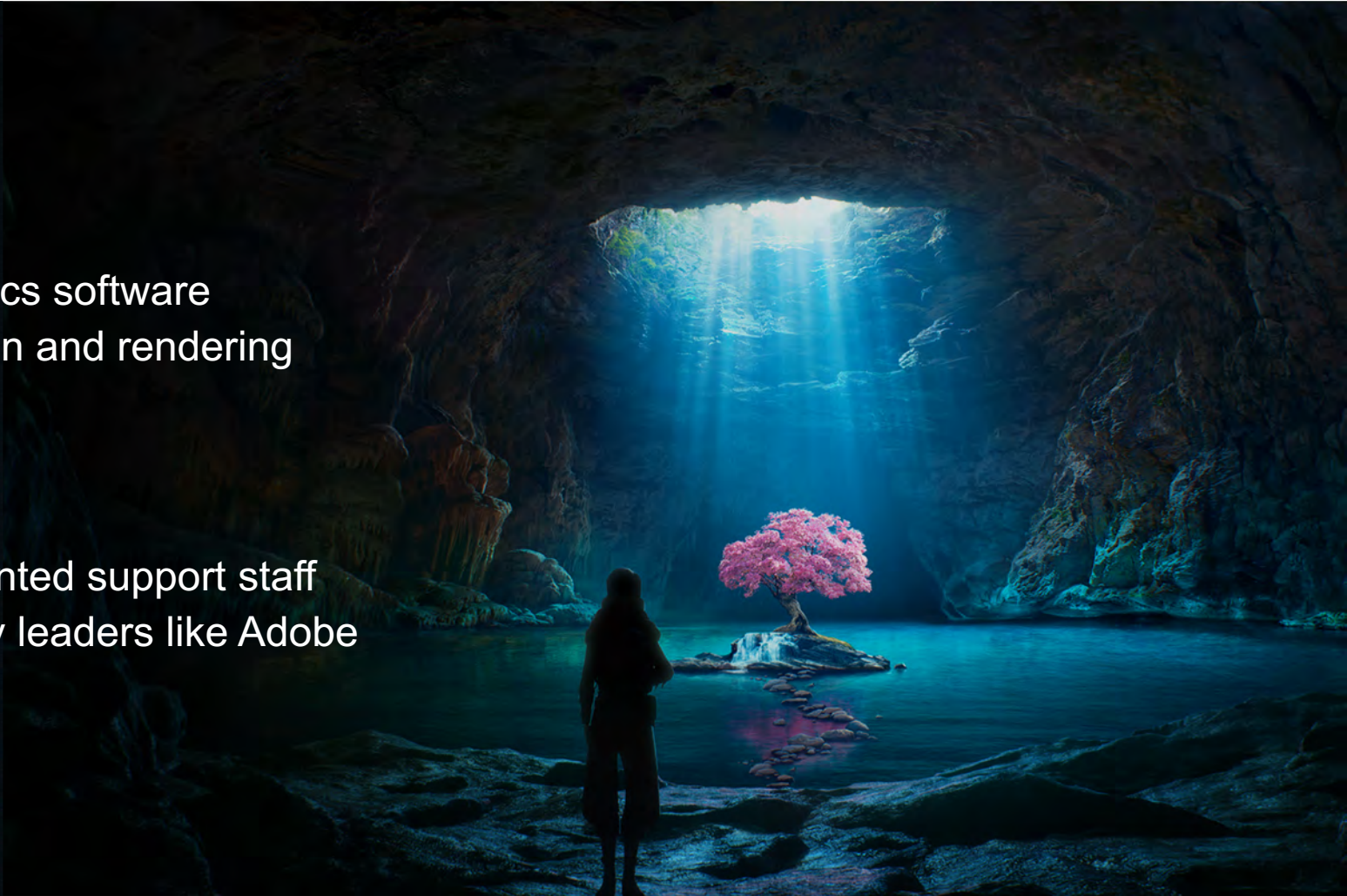
A modern interior space with large, curved glass windows overlooking a misty forest. The room features a wooden floor, a black fireplace with a fire, and a dining table with chairs. In the foreground, there is a small table with a cup and saucer, and a patterned blanket.

02

Core Competency & Positioning

Who We Are

- | Industry's leading professional 3D graphics software
- | 3D modeling, texturing, lighting, animation and rendering
- | Best-in-class, scalable technology
- | Diverse and global customer base
- | Present in over 85 countries
- | Seasoned management team with a talented support staff
- | Bundles/partnerships with global industry leaders like Adobe





The Swiss Army Knife for Creatives

- | Ease-of-use
- | Quality and Stability
- | Integration Sustainability
- | Forward-looking Vision
- | Extensible Architecture

Design



Use Cases

- | Product Design
- | Product Packaging
- | Technical Design
- | 3D Design Elements
- | 3D Typography

Advertising



Use Cases

- | Product Visualization
- | Compositing Elements
- | Ad Collateral
- | Dynamic 3D Content
- | TV Commercials

Design



USPs

- | Ease of Use
- | 2D/3D Creative Bridge
- | Strong Font Tools
- | Color Management
- | Interactive Workflows

Advertising

USPs

- | Enhanced Procedural Asset Building
- | CAD Format Support
- | Support of Scanned Materials

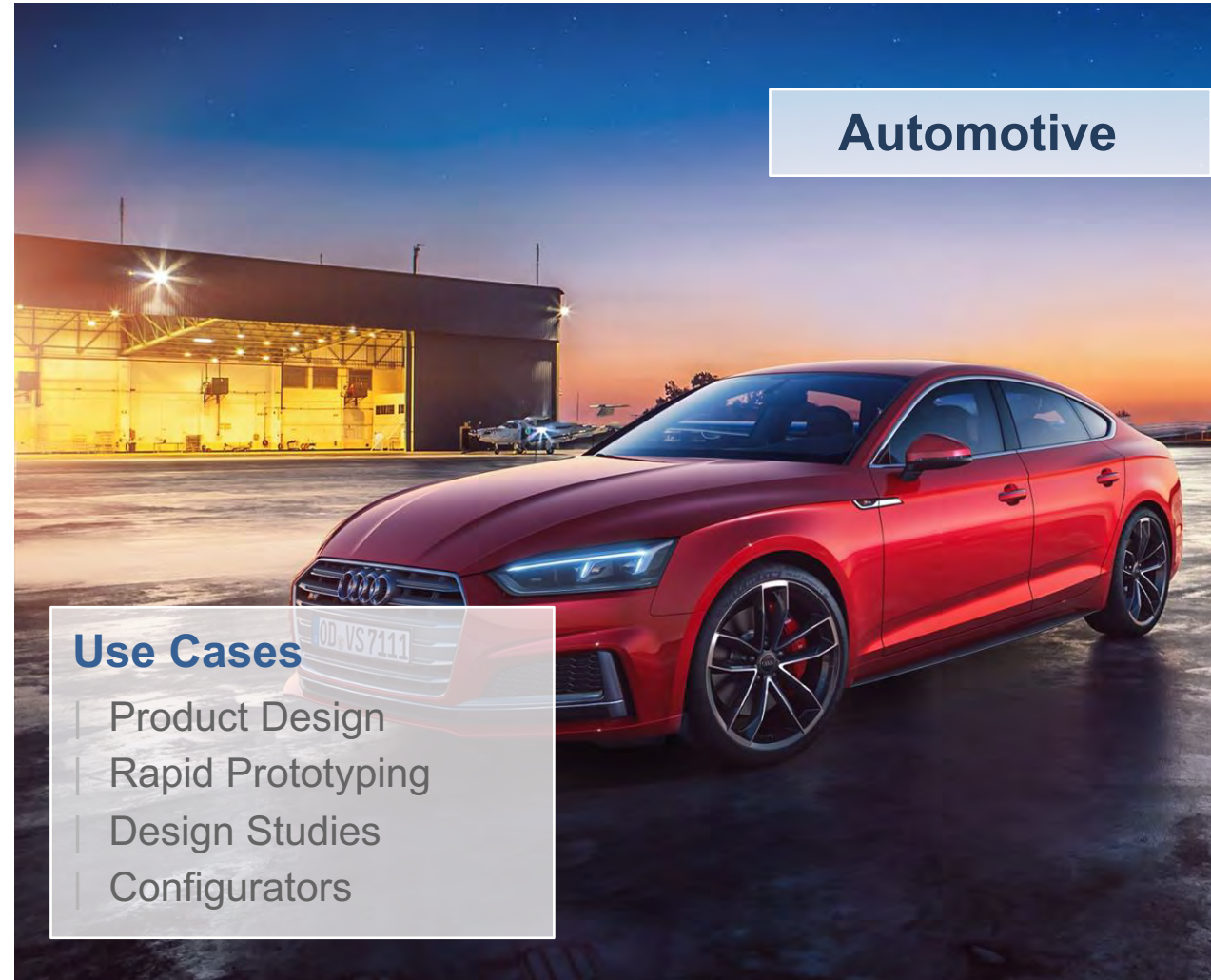
Engineering



Use Cases

- | Product Design
- | Rapid Prototyping
- | Design Studies
- | Configurators

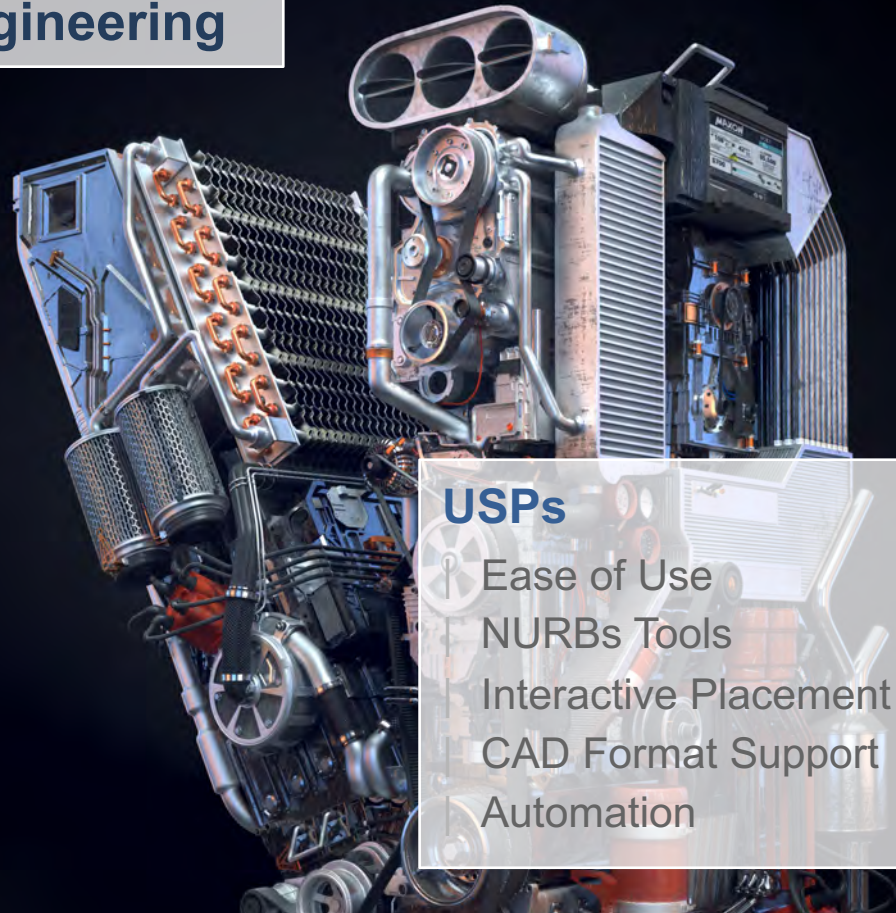
Automotive



Use Cases

- | Product Design
- | Rapid Prototyping
- | Design Studies
- | Configurators

Engineering



USPs

- | Ease of Use
- | NURBs Tools
- | Interactive Placement Tools
- | CAD Format Support
- | Automation

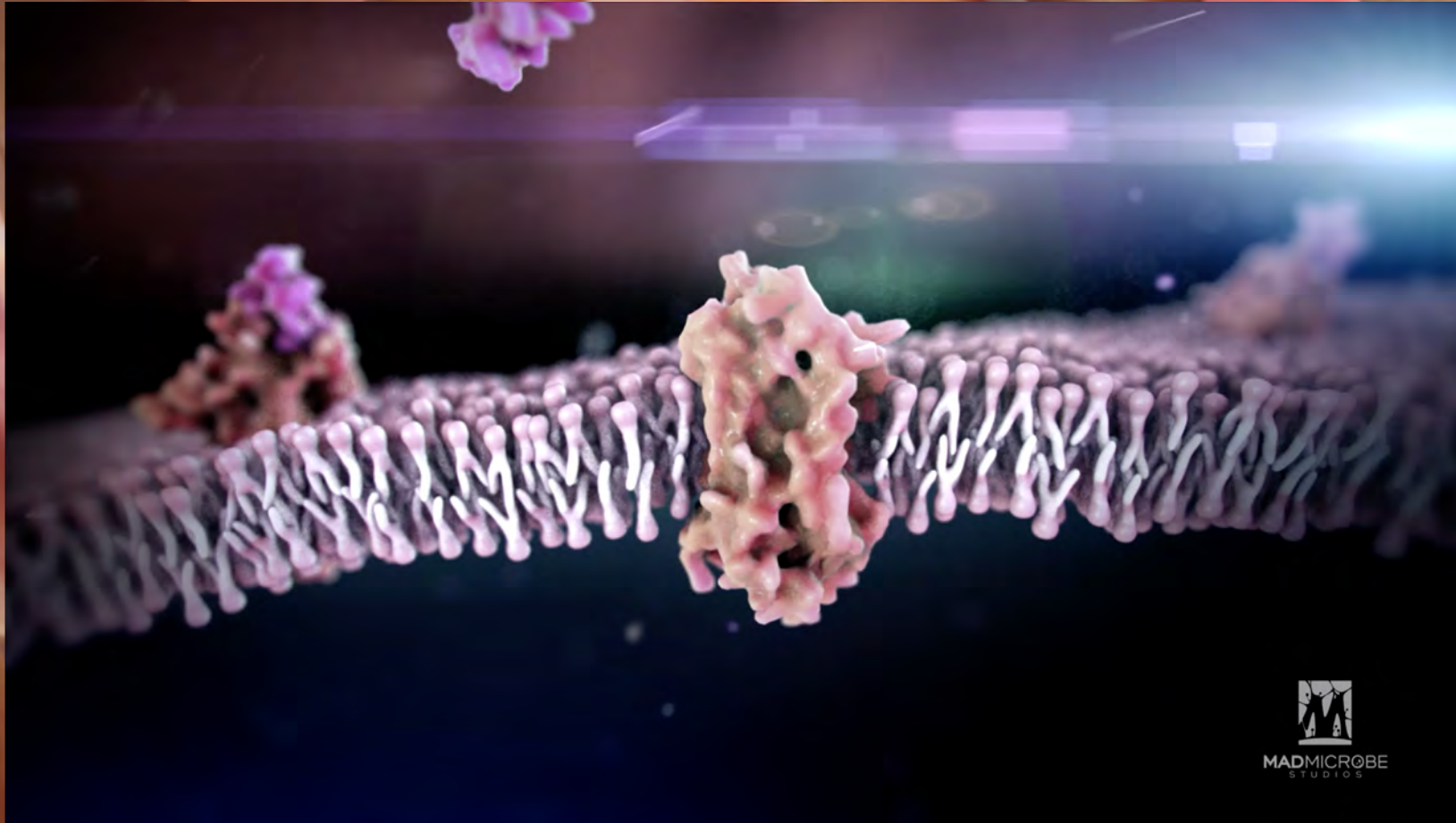
Automotive



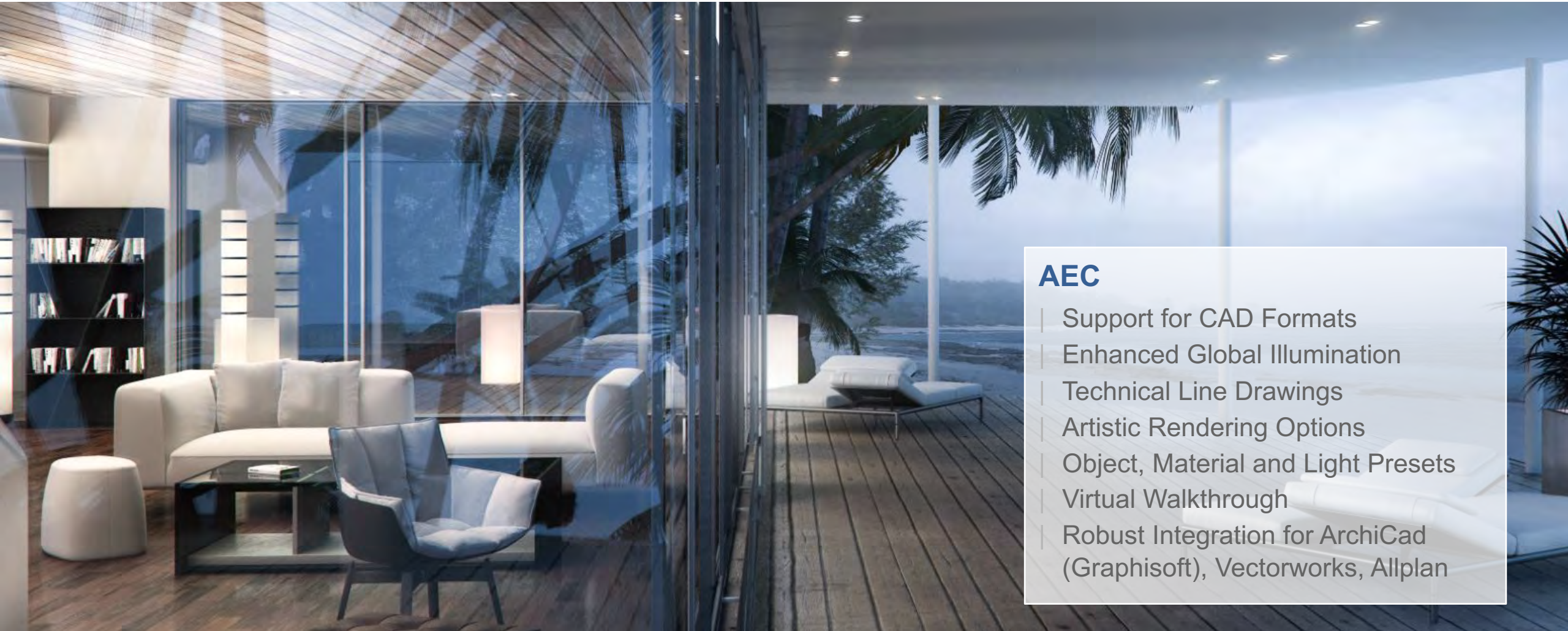
USPs

- | Physical Correctness
- | Real World Scale
- | Workflows
- | Large Data Sets
- | Advanced Material System

Scientific and Medical Animation



- | Complex, Organic Animations in Seconds
- | Beautiful and Versatile Procedural Shaders
- | Physics Simulation and Particle Systems
- | Import Protein Data Bank via ePMV



AEC

- | Support for CAD Formats
- | Enhanced Global Illumination
- | Technical Line Drawings
- | Artistic Rendering Options
- | Object, Material and Light Presets
- | Virtual Walkthrough
- | Robust Integration for ArchiCad (Graphisoft), Vectorworks, Allplan

Rendering Integration in Graphisoft, Vectorworks and Allplan



| Faster, High Quality,
GPU-Assisted Rendering for
Customers using CineWare

Why Cinema 4D?



Why Cinema 4D?



A photograph of a modern, glass-walled building with a dark metal frame, situated in a lush forest. The building is partially obscured by trees and foliage in the foreground. The scene is brightly lit, suggesting a sunny day. The building has large windows and a flat roof, and it appears to be a multi-story structure. The surrounding forest is dense with green trees and undergrowth.

03

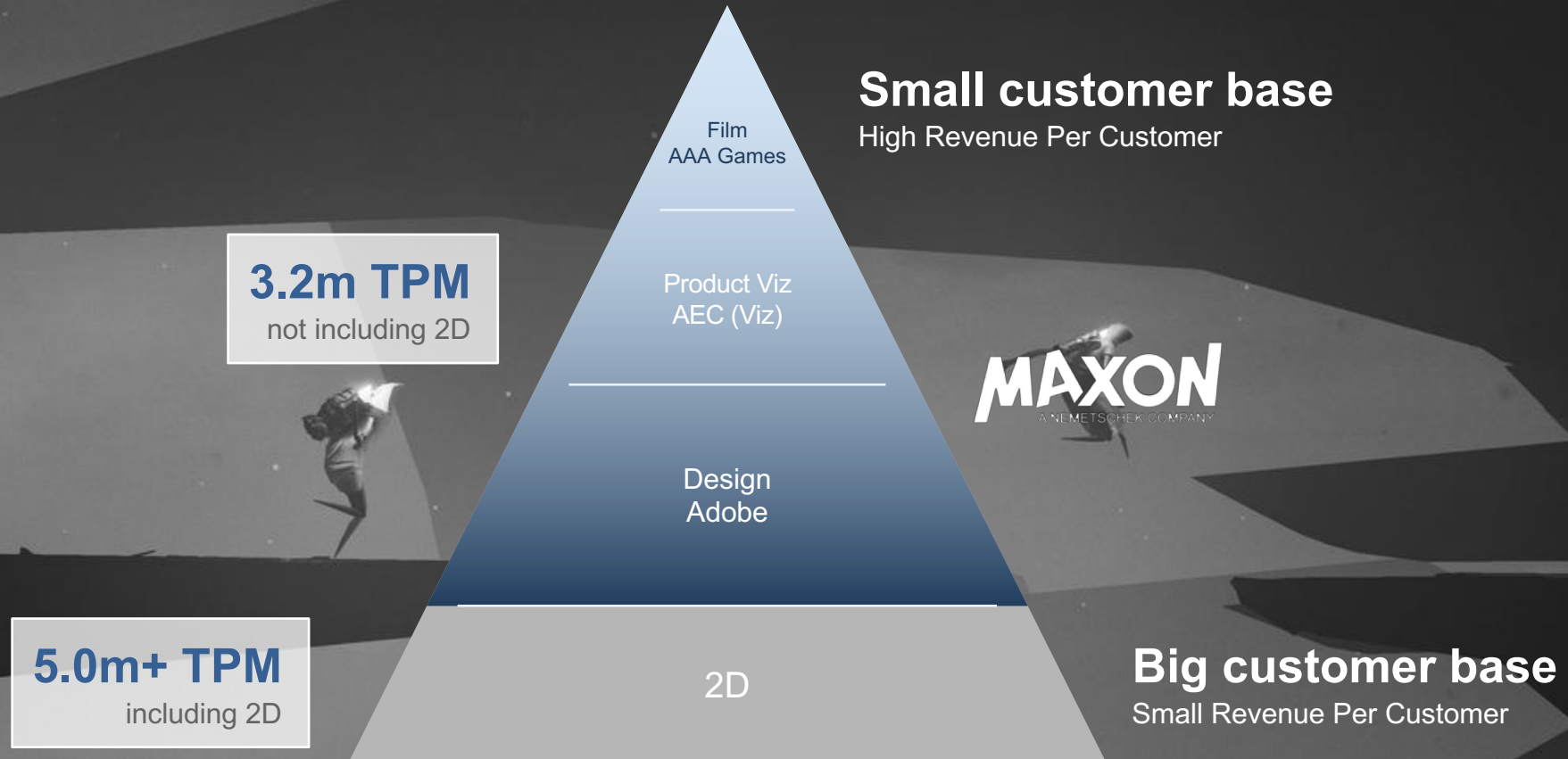
Market Size, Trends & Drivers

Huge Addressable Media & Entertainment Market



Source: Data collected by Jon Peddie Research

Market Potential



What Will Drive the Growth?

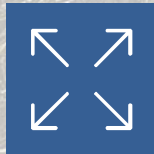
Growth Drivers

Step 1



Solidify our Position
in our Key Markets

Step 2



Expand Efforts
in Existing Verticals

Step 3



Position Ourselves to Lead
the Way in Emerging Markets

Step 4



Stay Ahead of the
Technological Curve

© Emanuel Ammann

Our AEC Market Opportunities



600,000 Architects using Visualization Products to Make High Quality Renderings¹

¹ Data collected by Jon Peddie Research



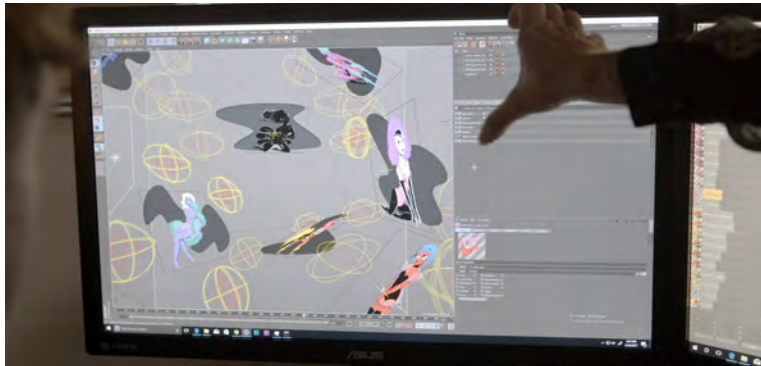
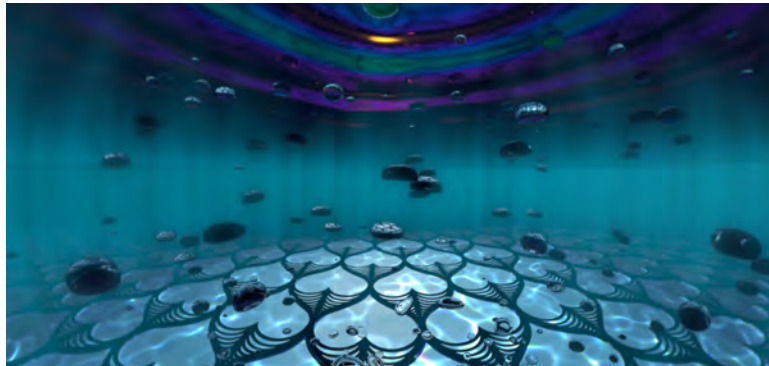
04

What Comes Next?

Where to Next?



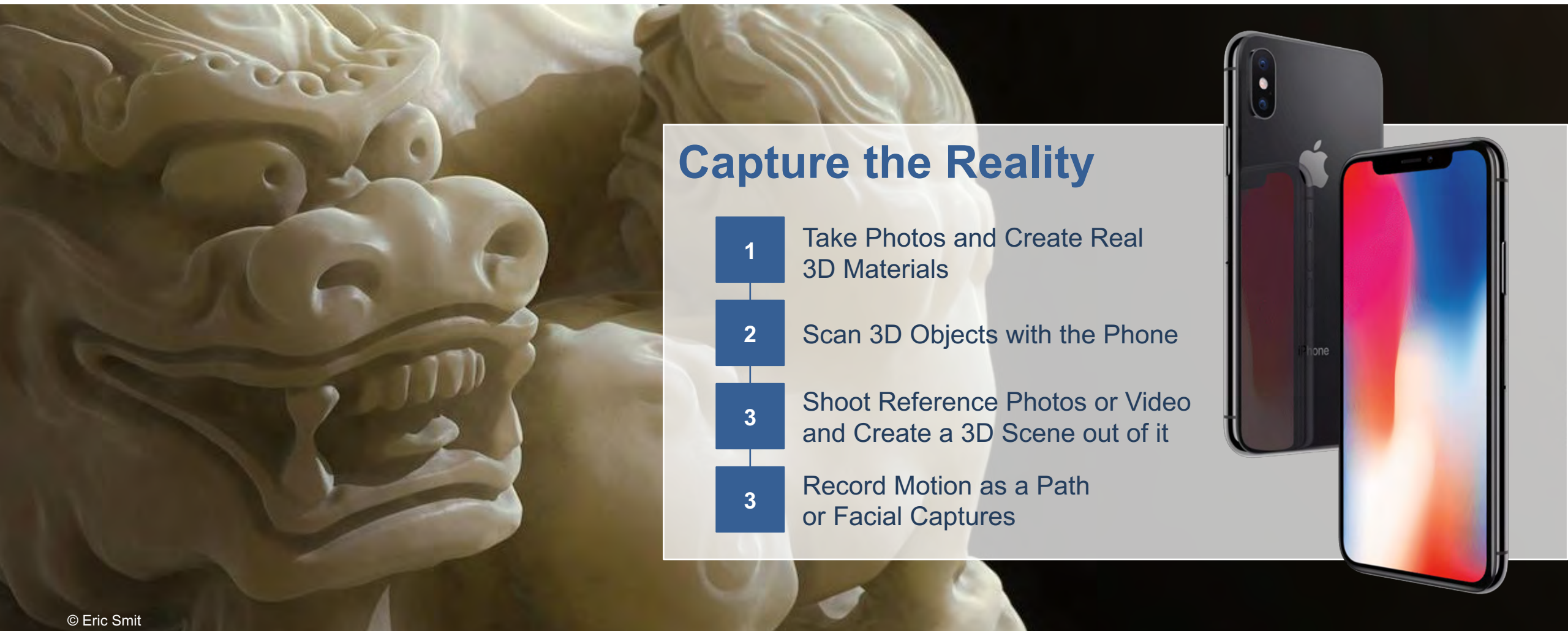
Augmented and Virtual Reality will Drive the Need for More High Quality 3D Content



Augmented and Virtual Reality



| Devices with Depth Capture will be a Game Changer



Capture the Reality

- 1 Take Photos and Create Real 3D Materials
- 2 Scan 3D Objects with the Phone
- 3 Shoot Reference Photos or Video and Create a 3D Scene out of it
- 3 Record Motion as a Path or Facial Captures



Mass Market Adoption of gLTF

- | Seeing quick adoption from major industry drivers
- | Seeing big adoption by leading content providers (Sketchfab, Turbosquid,...)
- | Main driver for AR/VR



Goals

- | Utilize mass market adoption to position C4D as main content creation tool
- | Integration with leading partners
- | Drive content strategy around gLTF



05

Big Market Prepared for Future
Growth

All Roads Lead to Success



Unlimited Potential

Agenda – Capital Markets Day 2018

1

09.30–10.00 **Welcome address – Business & Strategy Update**
Represented by Patrik Heider, Spokesman and CFOO of Nemetschek SE

2

10.00–12.45 **Segments: Potential, Positioning & Strategy**

10.00–11.00 **Design: Architecture**
Represented by Viktor Várkonyi, Member of the Executive Board of Nemetschek SE; CEO of Graphisoft

Design: Structural Engineering
Represented by Sean Flaherty, CSO of Nemetschek SE

11.00–11.15 **Break**

11.15–11.45 **Build**
Represented by Jon Elliott, CEO of Bluebeam

11.45–12.15 **Manage**
Represented by Koen Matthijs, CEO of MCS Solutions

12.15–12.45 **Media & Entertainment**
Represented by Dave McGavran, CEO of Maxon

3

12.45 **Wrap-Up and Q&A**

4

13.15 **Lunch and get together**

NEMETSCHEK Covers the Complete AEC Value Chain

Architecture | Engineering | Construction



GRAPHISOFT.

PRECAST SOFTWARE engineering

NEVARIS

CREM SOLUTIONS

MAXON

dRofus

DATA DESIGN SYSTEM

BLUEBEAM

MCS SOLUTIONS

ALLPLAN

SCIA

SOLIBRI

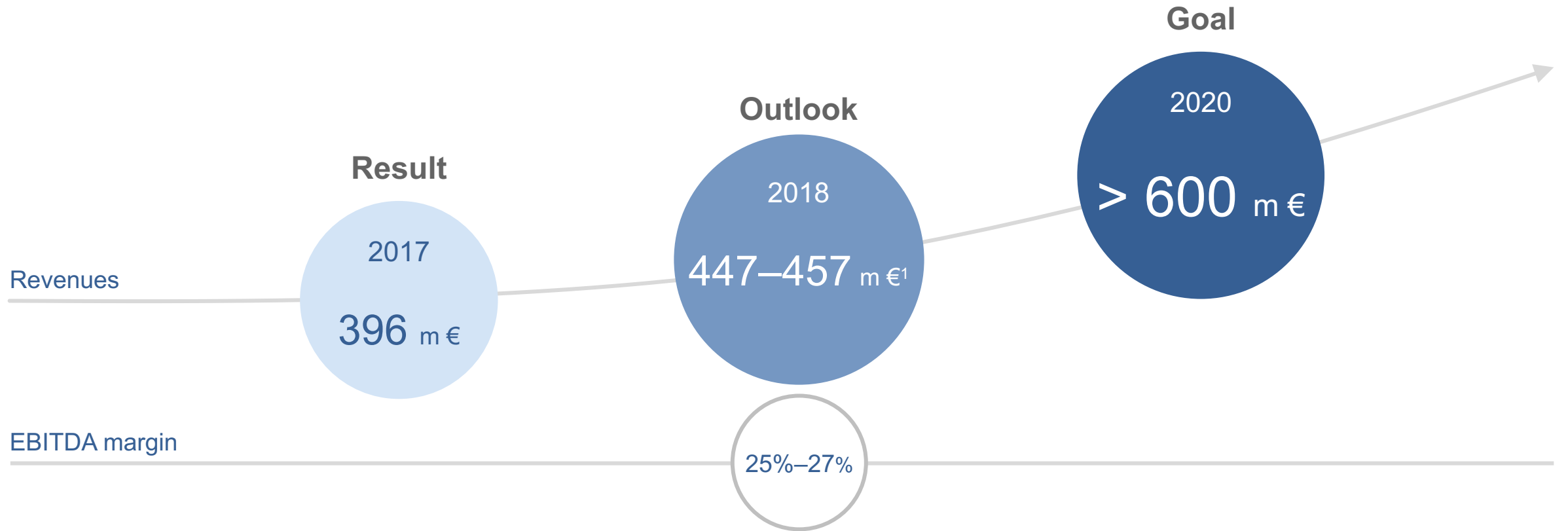
VECTORWORKS

IRISA

SDS/2

FRILO Software

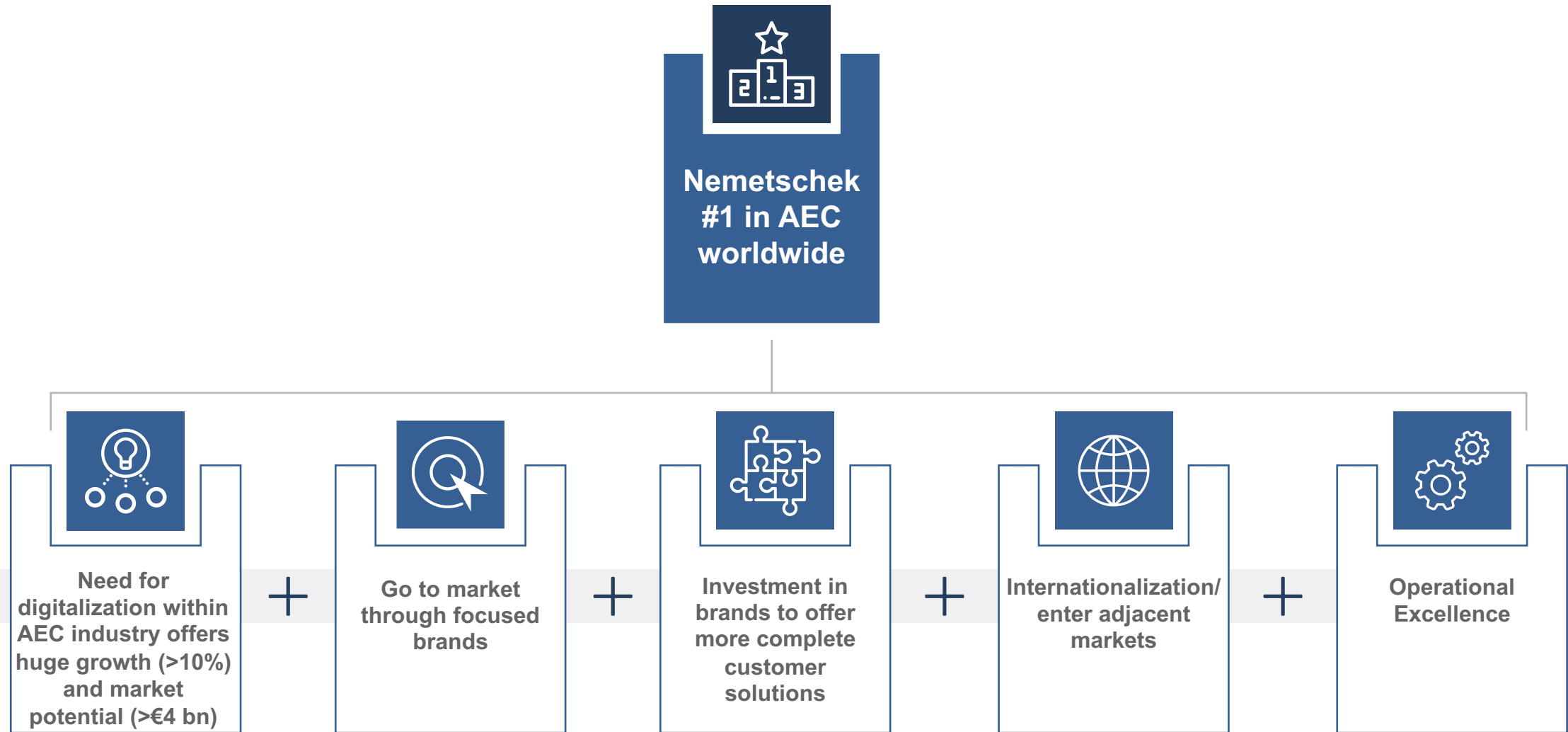
Mid-term goal 2020: Secure future double-digit growth while maintaining a high EBITDA margin



- | Revenues: double-digit growth rate
- | EBITDA margin: on sustainable level of 25%–27%
- | Investments 2018: additional 10 m euro to leverage future growth

¹ The revenue outlook is based on planned exchange rate of 1.18 EUR/USD

Our Winning Strategy





Now it's your turn.
Q&A