

AECOM Digital Journey

Amr Saad Chartered RICS BIM Manager, Autodesk Expert Elite, BRE

Projects BIM Manager





About the speaker

Amr Saad

Amr Saad is Digital Engineering, Construction expert, who enabled digital transformation, delivery in multiple firms on mega projects. By Harnessing the BIM process, Big Data analytics and Artificial intelligence AI, He delivered better facilities through optimised processes starting from the strategic planning till the facility handover resulting in less waste and sustainable facilities. Amr provide insights to decision makers in the early stages to ensure that delivery aligned with the organisational requirements within time and budget constraints and serves the end users. Amr has a record of accomplishment in transforming international firms from the traditional approaches to BIM -Data driven process, enhancing the awareness about digital transformation through conducting workshops, presentations, and training programs to a wide spectrum of audiences.



Agenda

1. Who We Are

2. Digital Transformation Global Mandates.

3. Digital Transformation First Principles.

4. Digital Transformation & BIM.

5. Digital Transformation Implementation

6. BIM 360 in AECOM

7. AECOM Analytics



WHO WE ARE

The world's premier infrastructure firm

McLoughlin Point Waste Water Treatment Plant
Victoria, British Columbia, Canada



We envision a world
where infrastructure
creates opportunity
for everyone.

One World Trade Center
New York, New York, U.S.

Our businesses

DCS
Design and Consulting Services

Connecting disciplines and resources to deliver innovative solutions

Planning, architectural and engineering design, and consulting services

CS
Construction Services

Building the most iconic, complex structures ever conceived

A full suite of construction services to build, modernize and expand projects anywhere in the world

MS
Management Services

Delivering mission success for a safer, better world

Program and facilities management, training, logistics, systems engineering and critical infrastructure protection for national governments and non-governmental organizations

AECOM Capital

Discovering new opportunities together

Invests in real estate, infrastructure and public-private projects and participates as a partner to advance projects with clients

Our connectivity enables us to mobilize our people and partners across the globe to be there for our clients — when, where and how they need us — ensuring they're always a step ahead.

Halley VI Research Station
British Antarctic Survey, Antarctica

AECOM by the numbers

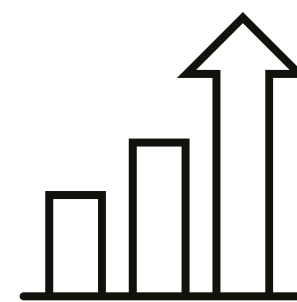
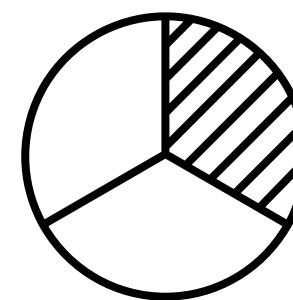
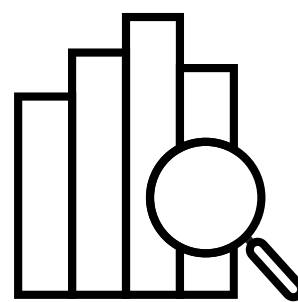
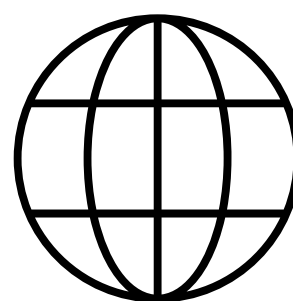
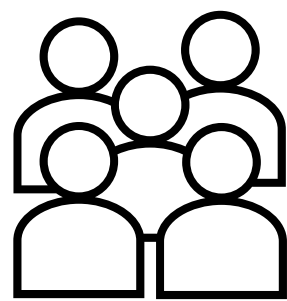
87k
People

7
Continents

US\$20.2B
FY 2018 revenue

US\$6B
Market cap*

#157
Fortune 500



Featured on
**Fortune's "World's
Most Admired
Companies"**
five years in a row

Ranked #1 in
Transportation and
General Building in
**Engineering-News
Record's** 2018 "Top 500
Design Firms"

Recognized by
VIQTORY as a 2019
**Military Friendly®
Gold Employer**

Received a perfect score
on the **Human Rights
Campaign Foundation's**
Corporate Equality Index

*As of October 2019

AECOM Around The Globe



Digital Transformation First Principles



Digital Transformation First Principles

Digitisation

Conversion Of Analog Or Physical Information
To A Digital Format.

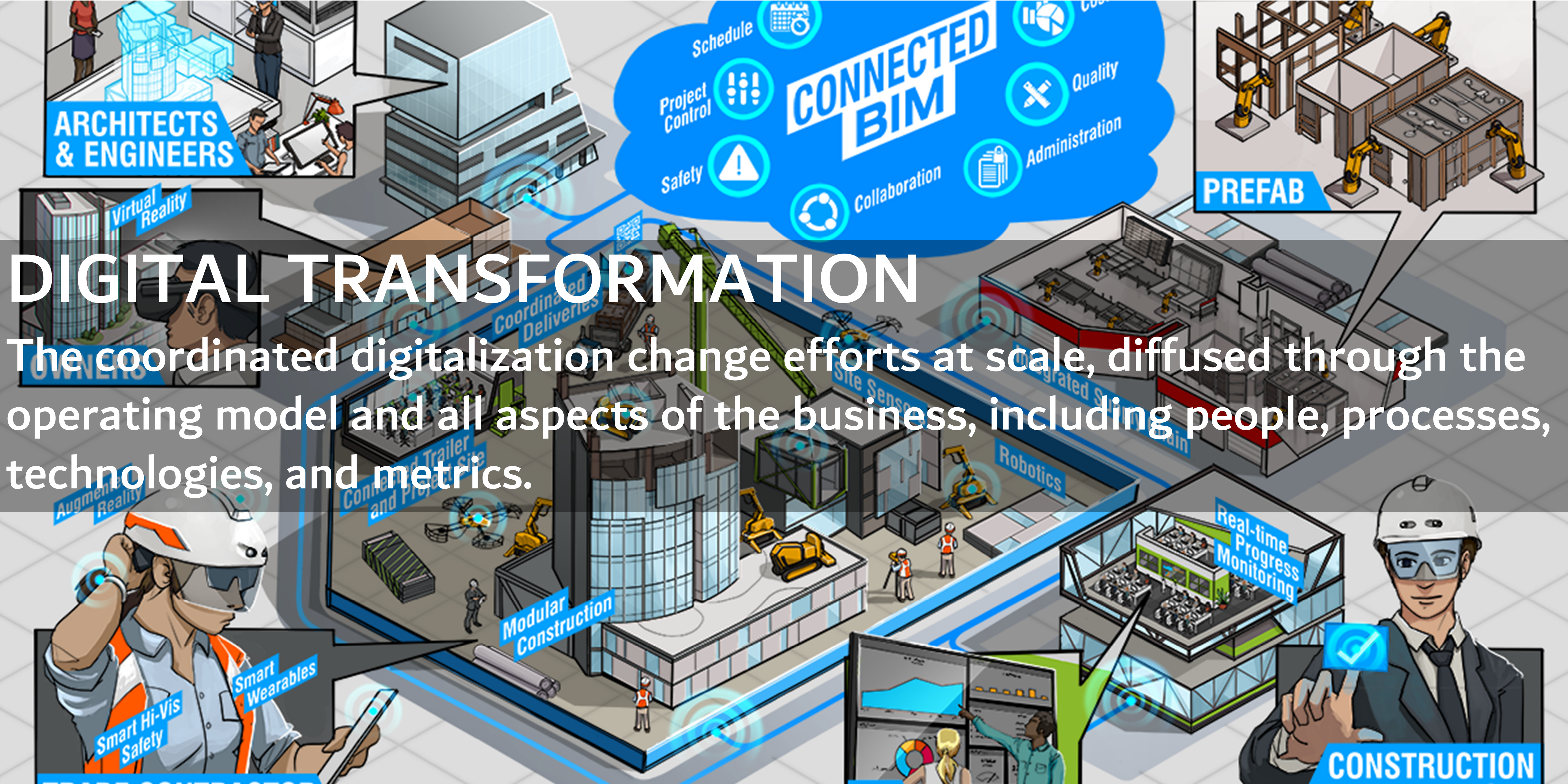


Digital Transformation First Principles

Digitalisation: is the use of digital technologies and digitally-enabled approaches to enable or improve business models and processes.

DIGITAL TRANSFORMATION

The coordinated digitalization change efforts at scale, diffused through the operating model and all aspects of the business, including people, processes, technologies, and metrics.





What is Information Modeling ?

An **information model** is a representation of concepts and the relationships, constraints, rules, and operations to specify data semantics for a chosen domain of discourse.

What is Information Modeling ?

An **information model** is a representation of **concepts** and the **relationships**, **constraints**, **rules**, and **operations** to specify data semantics for a chosen domain of discourse.

Digital Transformation & BIM

Structured Data



What you find in a DB
(typically)

Unstructured Data



What you find in the 'wild'
(text, images, audio, video)

80%
Unstructured

Vs

20%
Structured



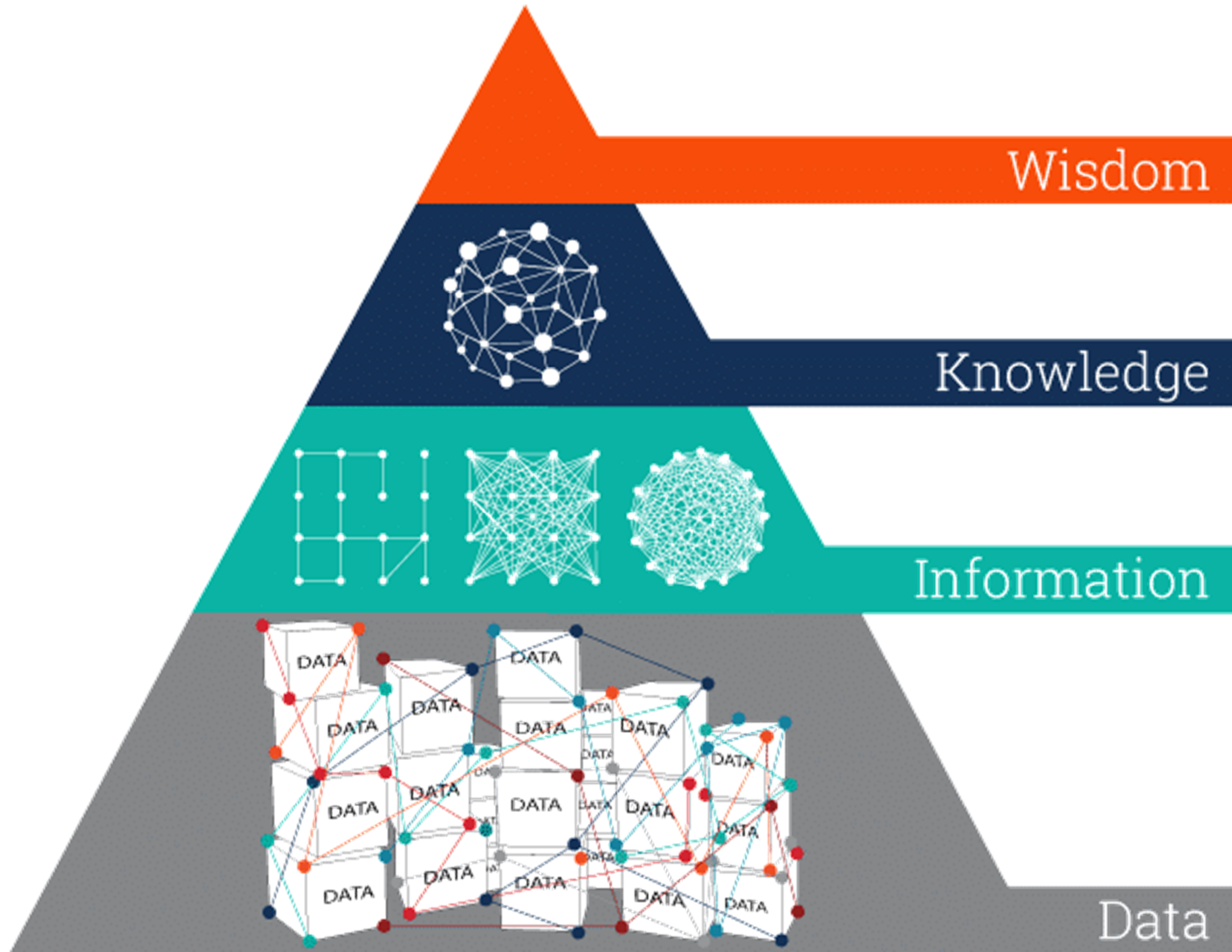
Database



Tables



Digital Transformation & BIM Intelligence

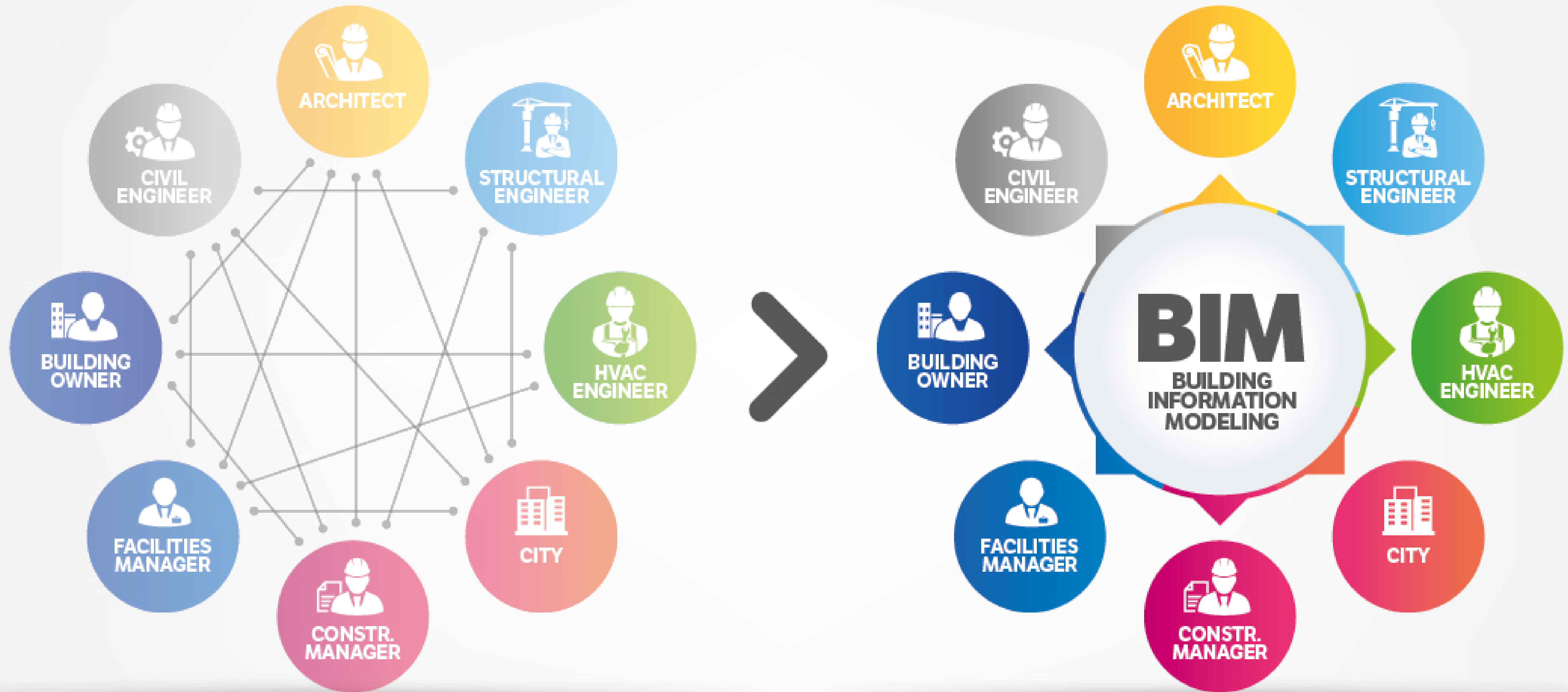


Each step up
the pyramid
answers
questions
about and
adds value
to the initial data.

Digital Transformation & BIM



Digital Transformation & BIM



SUCCESSFUL ORGANIZATIONAL TRANSFORMATION



People



Process

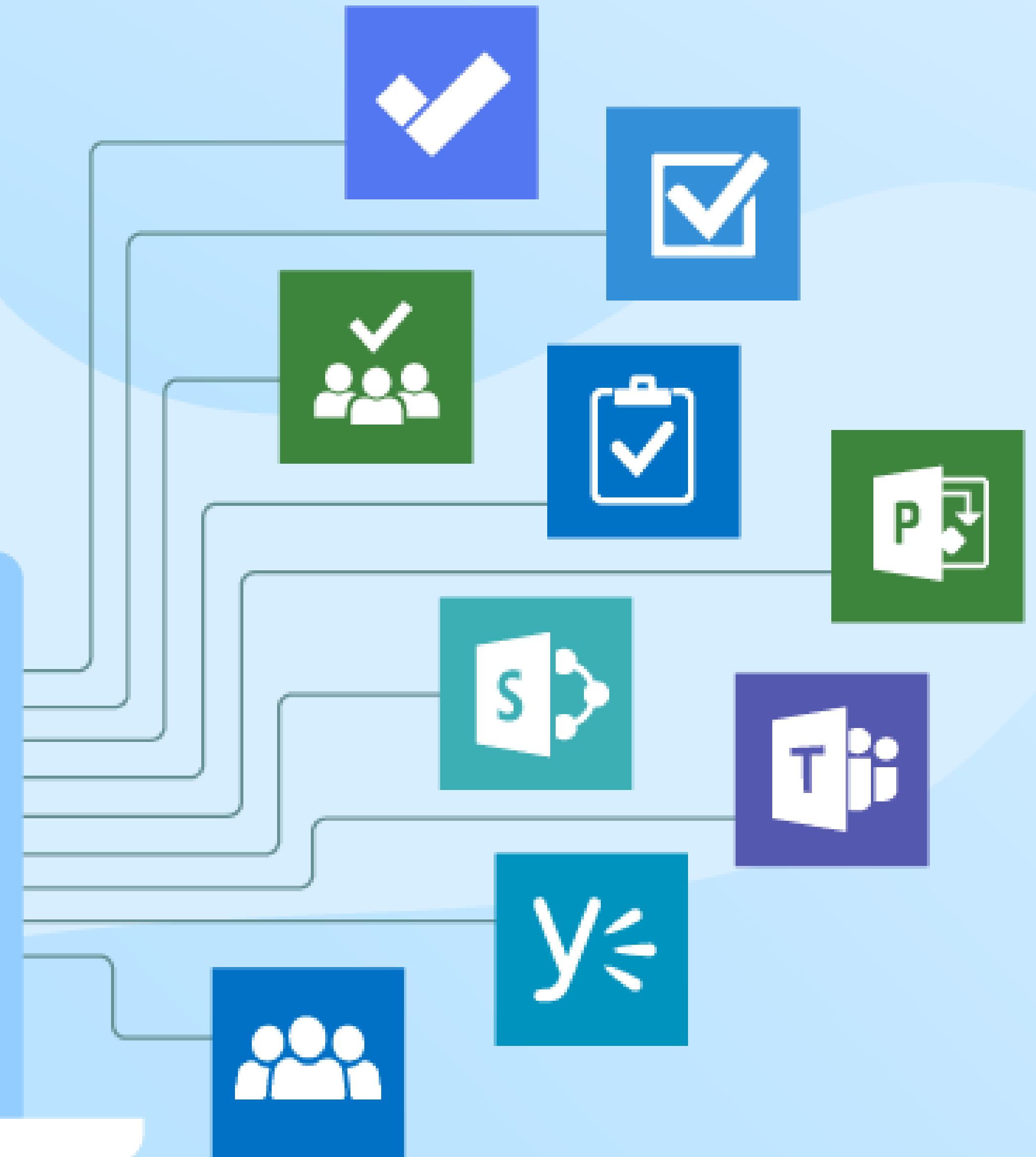
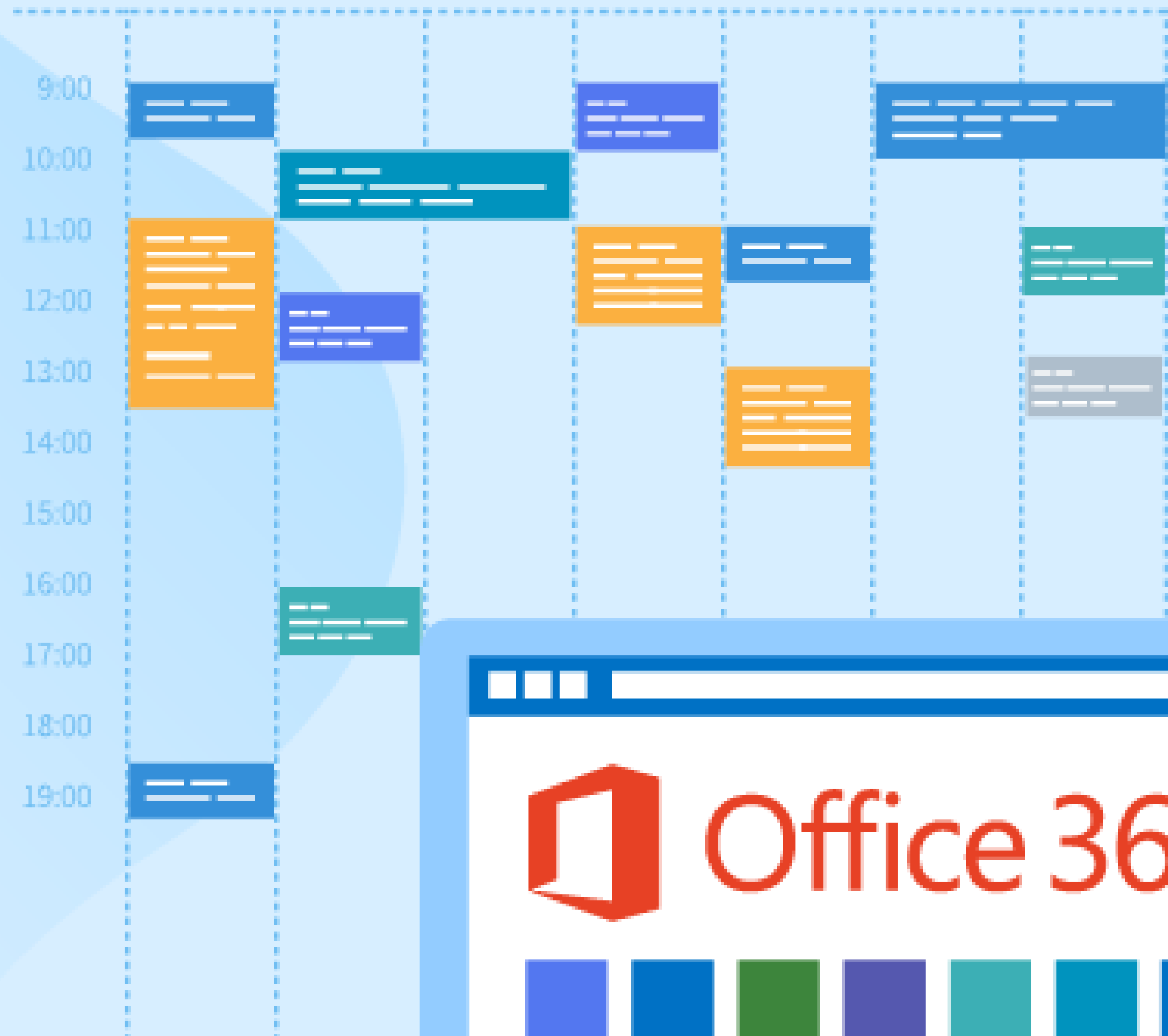


Technology

People

Using Technology To Remove Barriers

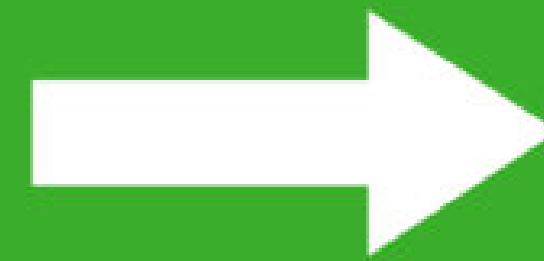




Policy

Go Green GO Paperless.

PAST



NOW



Policy

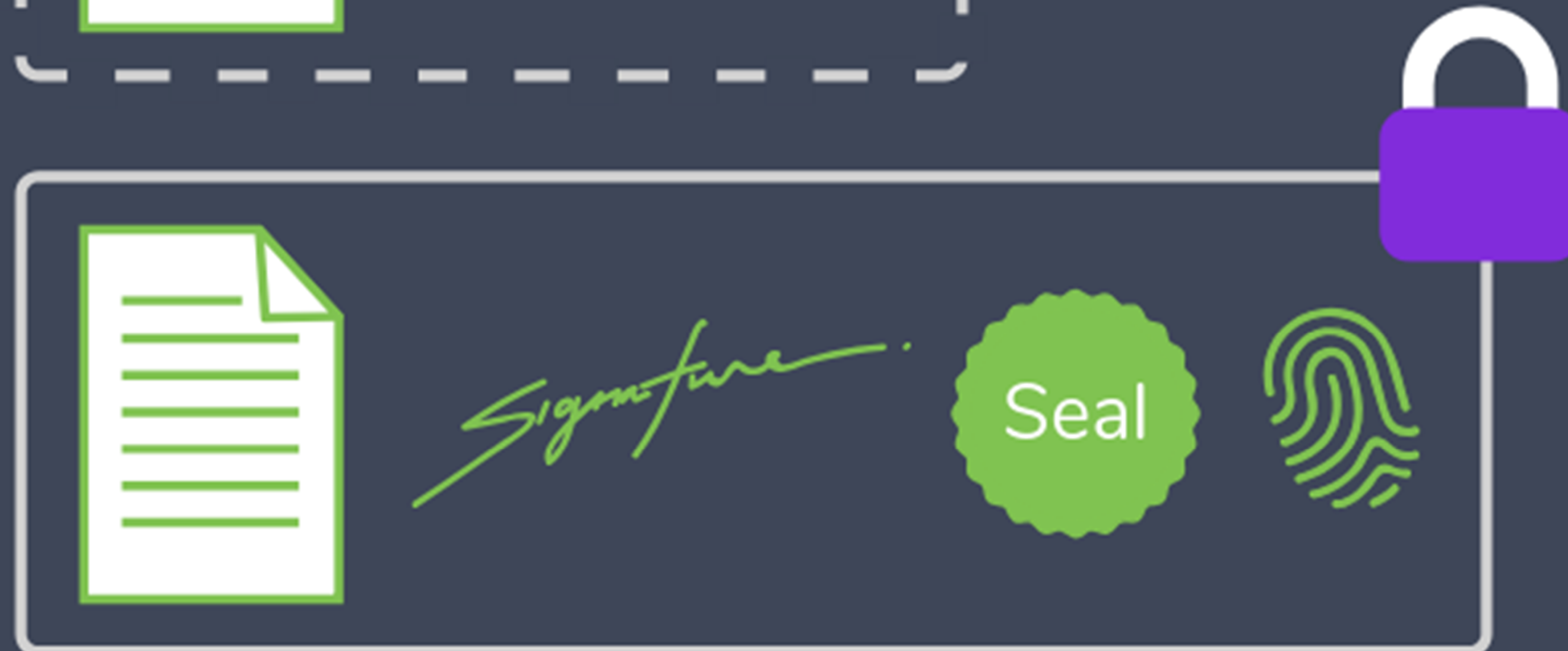


Policy

Electronic
signature



Digital
signature

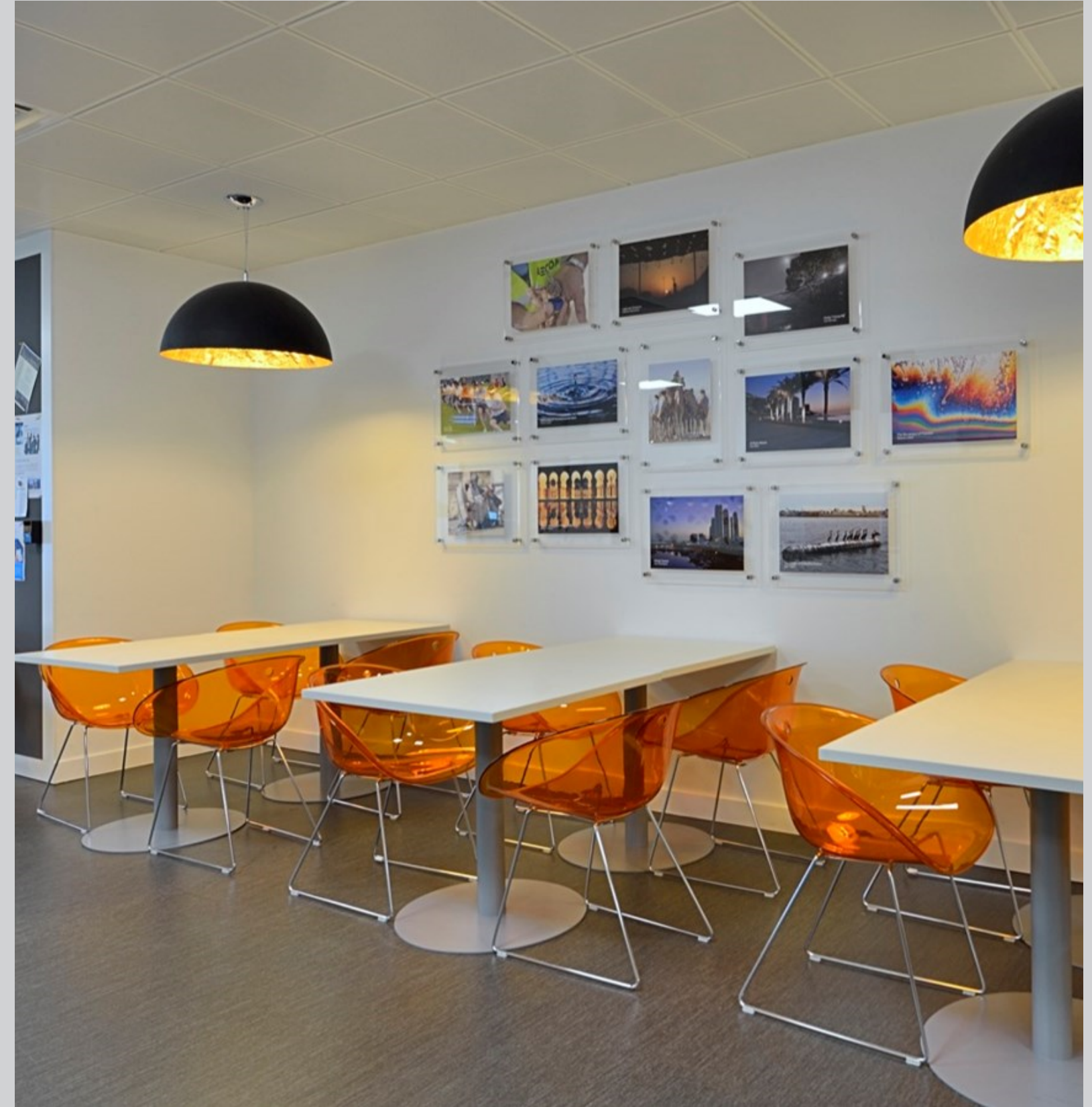


Process



Agile Frameworks

Agile Workplace




Digital Review

Markups

Filter


Sort



PRIVATE

Michael Burton
11:19 am · V5 (current)


Add attachments



PUBLISHED

Michael Burton
11:18 am · V5 (current)


Add attachments



PUBLISHED

Michael Burton
11:18 am · V5 (current)

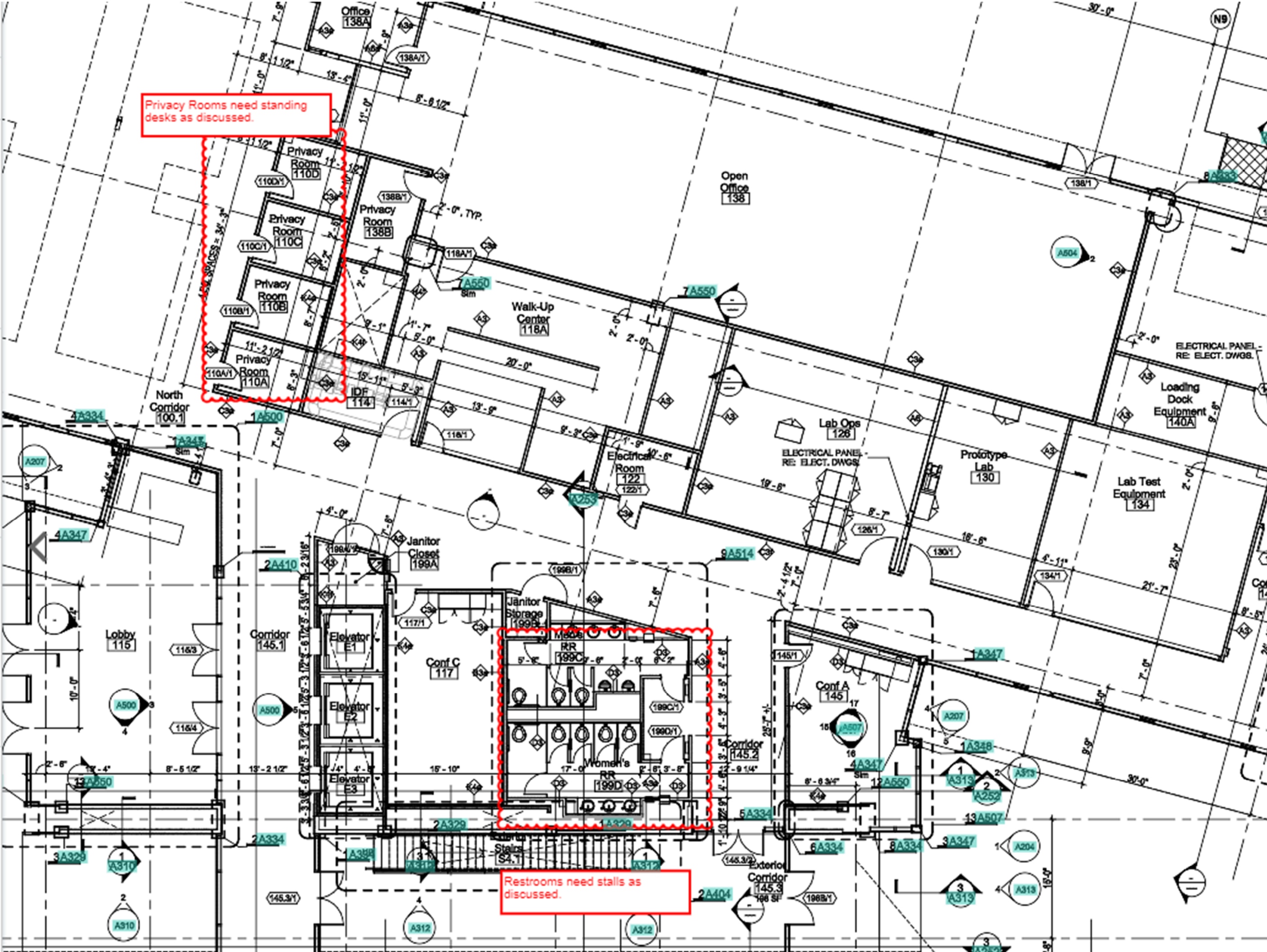
Add attachments



PUBLISHED

Michael Burton
11:18 am · V5 (current)

Add attachments



AECOM

BIM 360 in AECOM



BIM 360 Design
Our Concurrent Engineering
beating heart



**BIM 360 Document
Management**
AECOM's Single source of
Truth



BIM 360 Coordinate
Dynamic Coordination

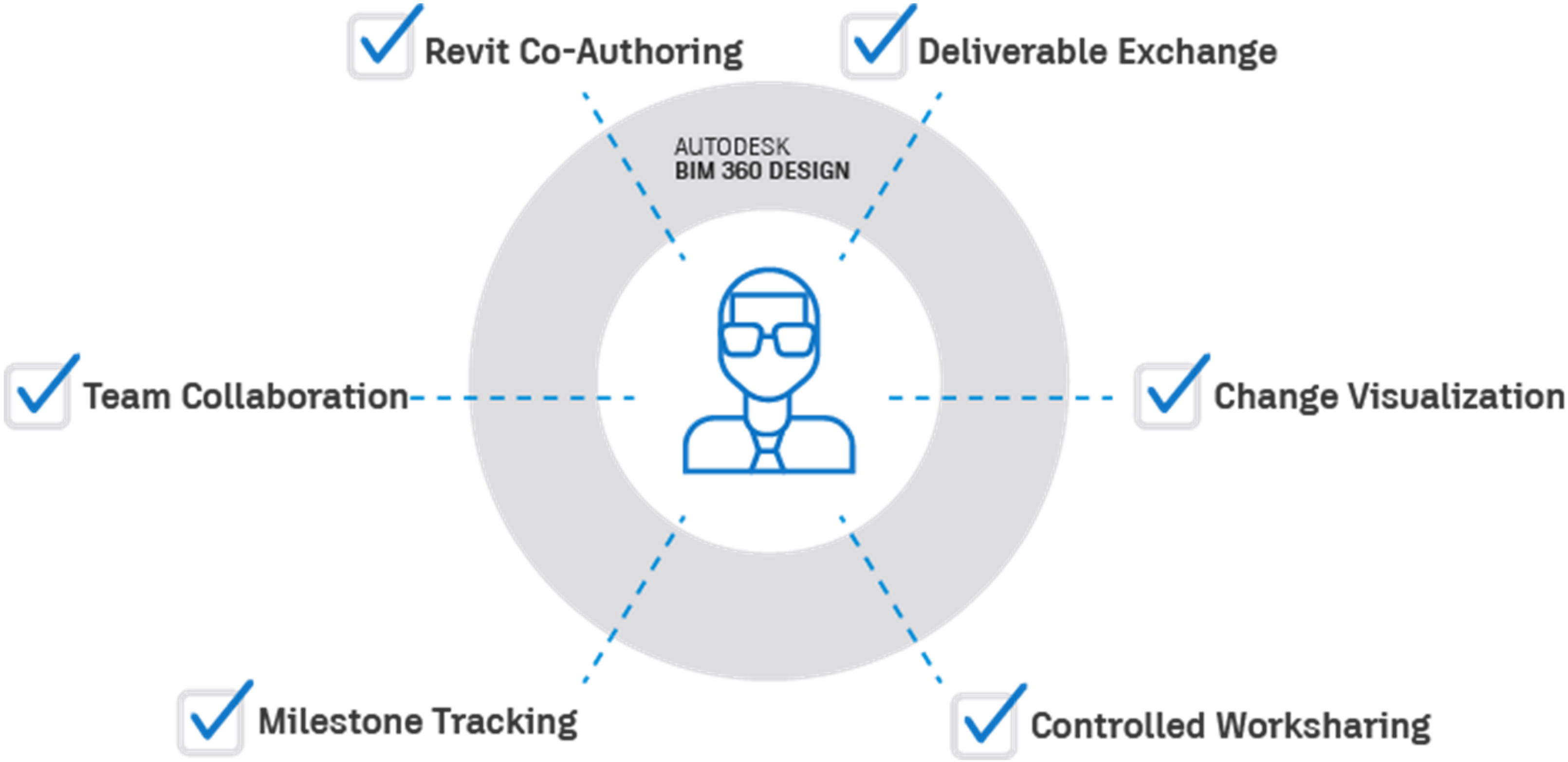


BIM 360 Build
Paperless Construction
supervision services

BIM 360 in AECOM



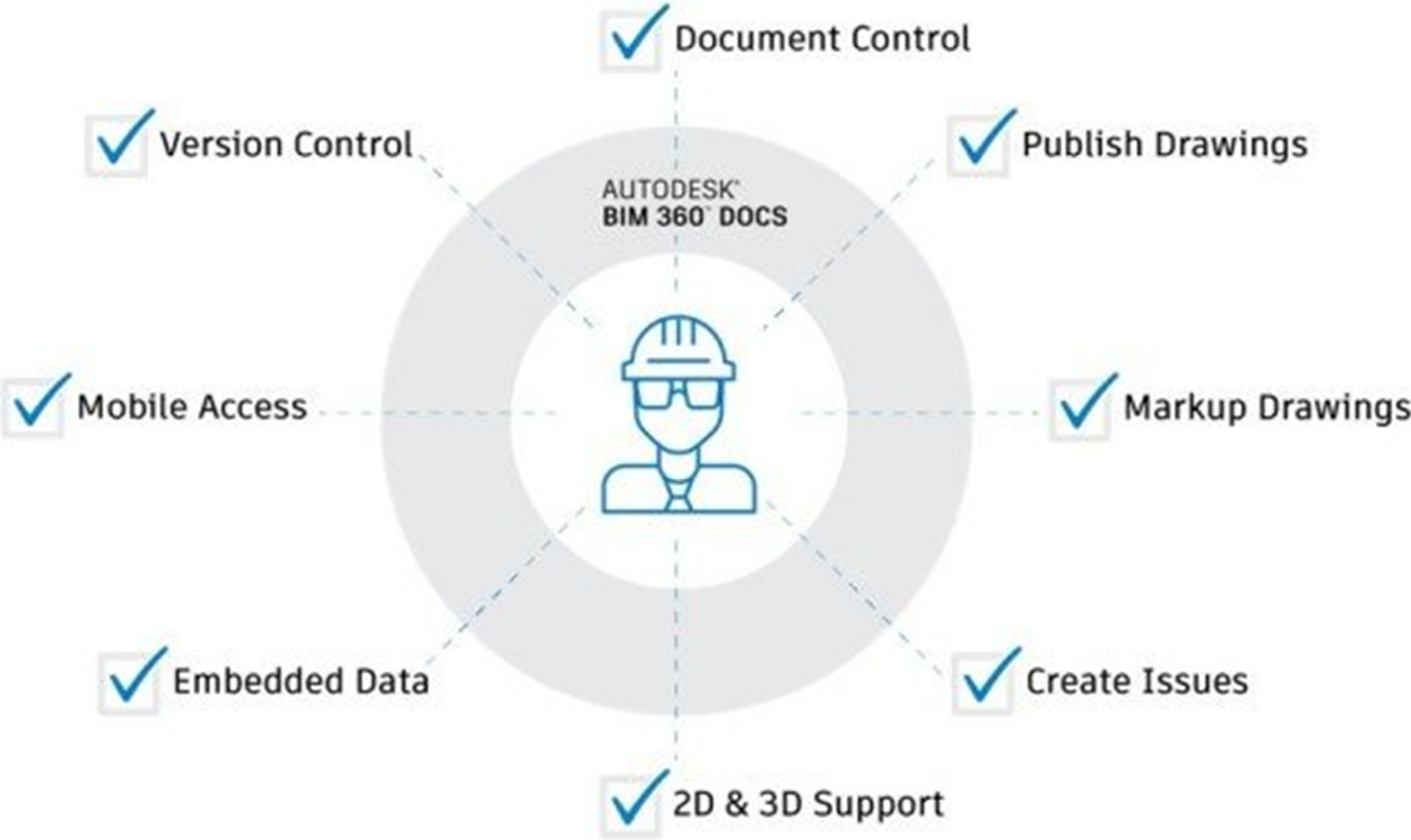
BIM 360 Design
Our Concurrent Engineering
beating heart



BIM 360 in AECOM



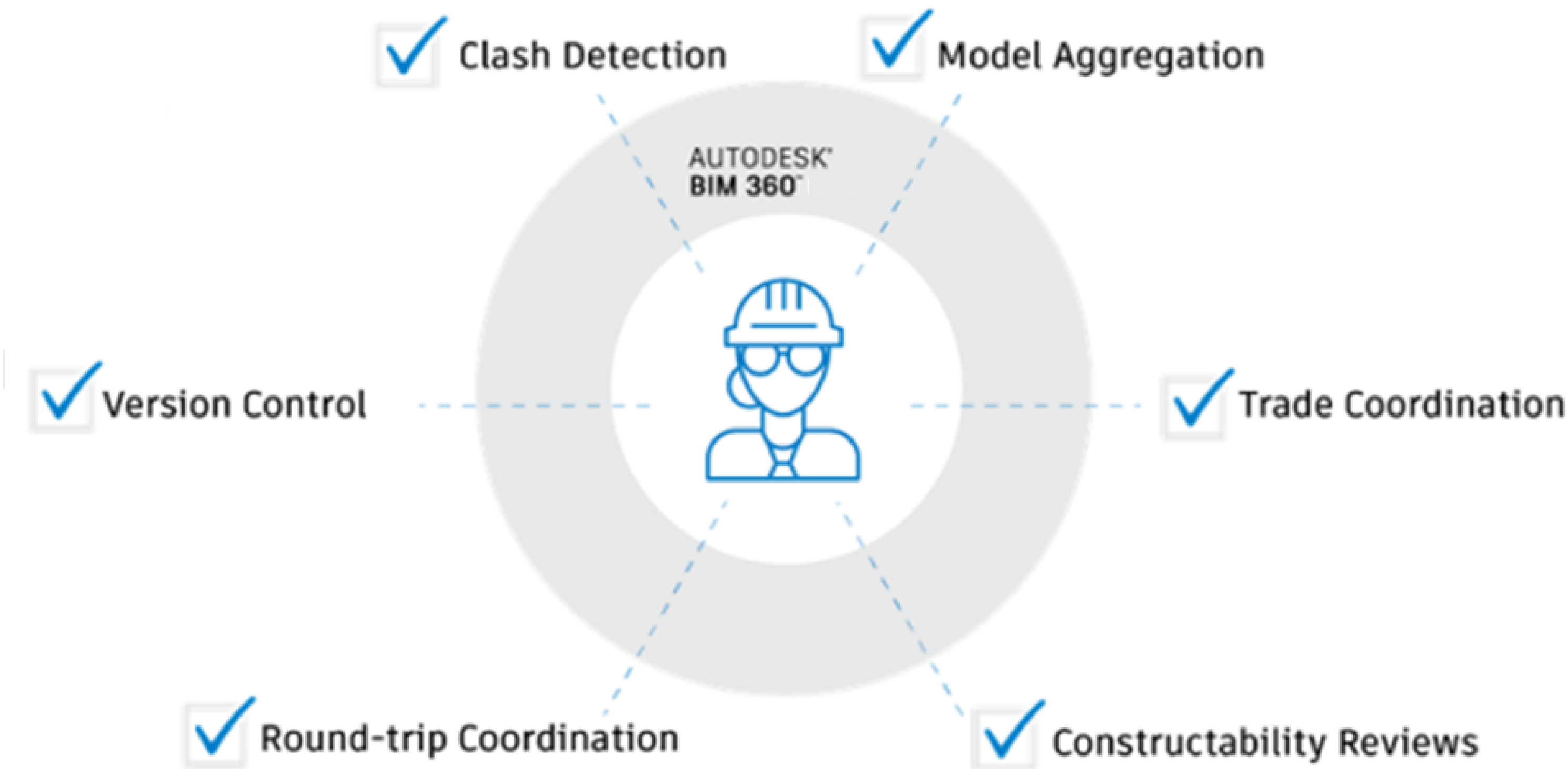
BIM 360 Document Management
AECOM's Single source of Truth



BIM 360 in AECOM

B AUTODESK®
BIM 360® COORDINATE

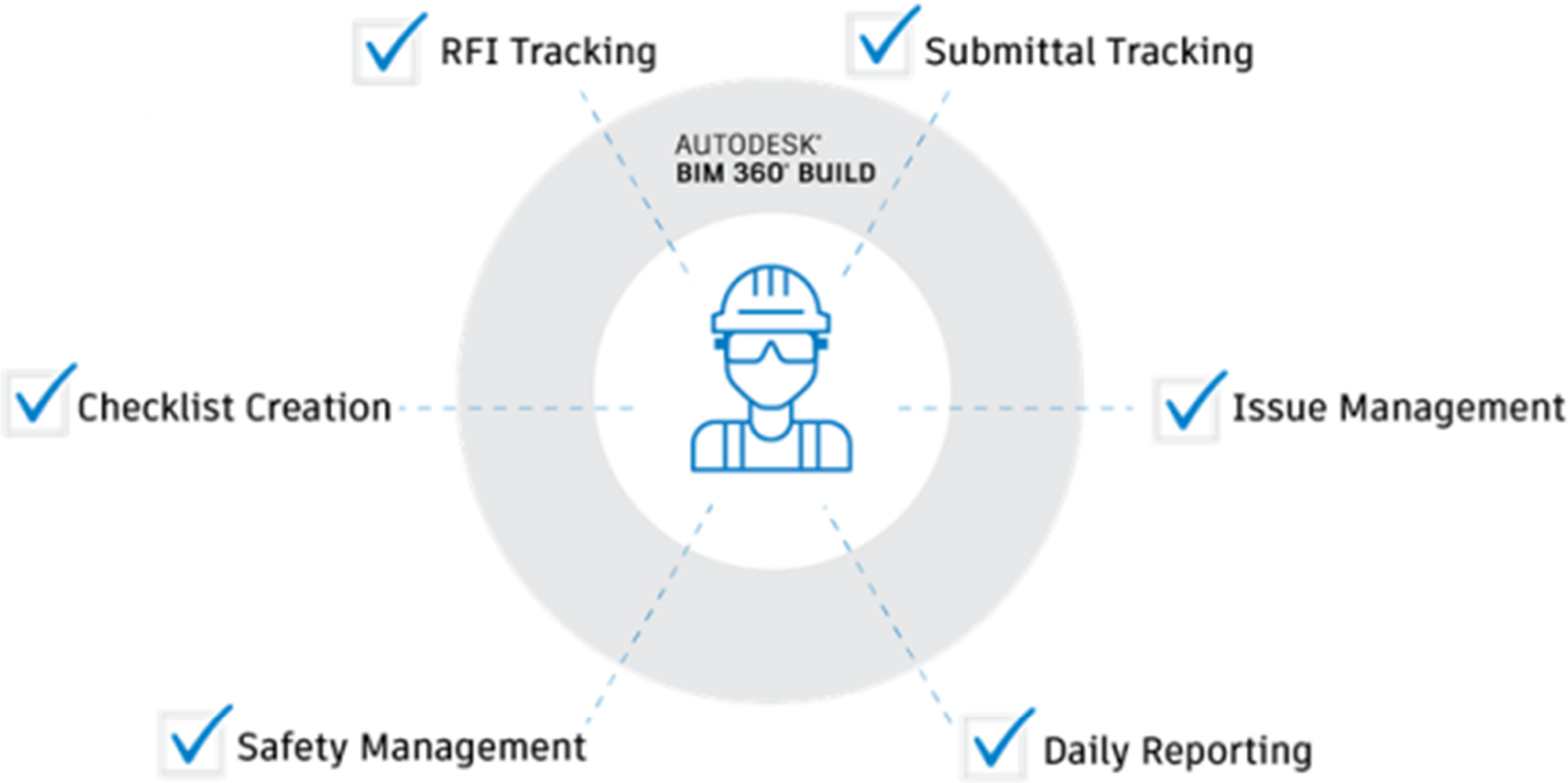
BIM 360 Coordinate
Dynamic Coordination



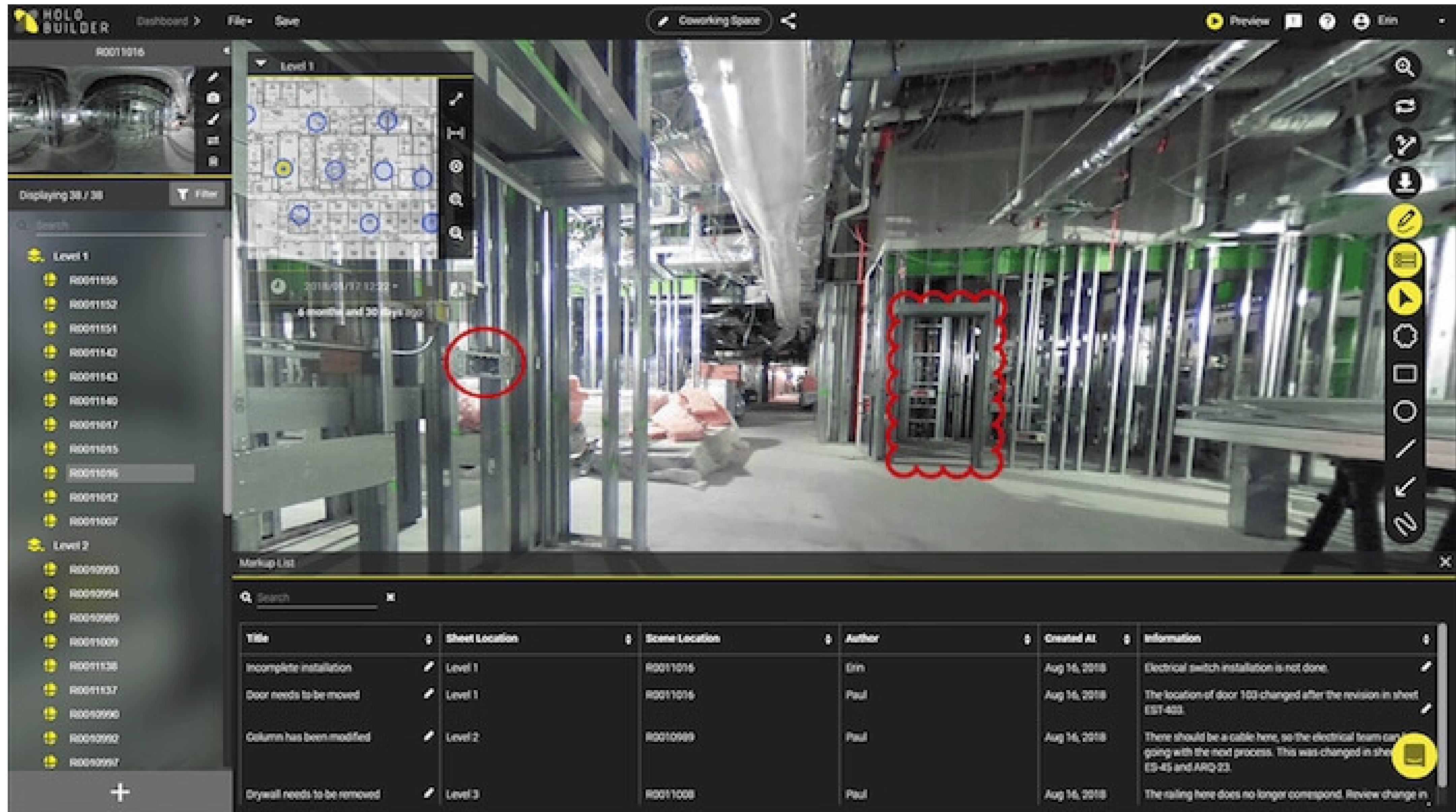
BIM 360 in AECOM

B AUTODESK®
BIM 360® BUILD

BIM 360 Build
Paperless Construction
supervision services

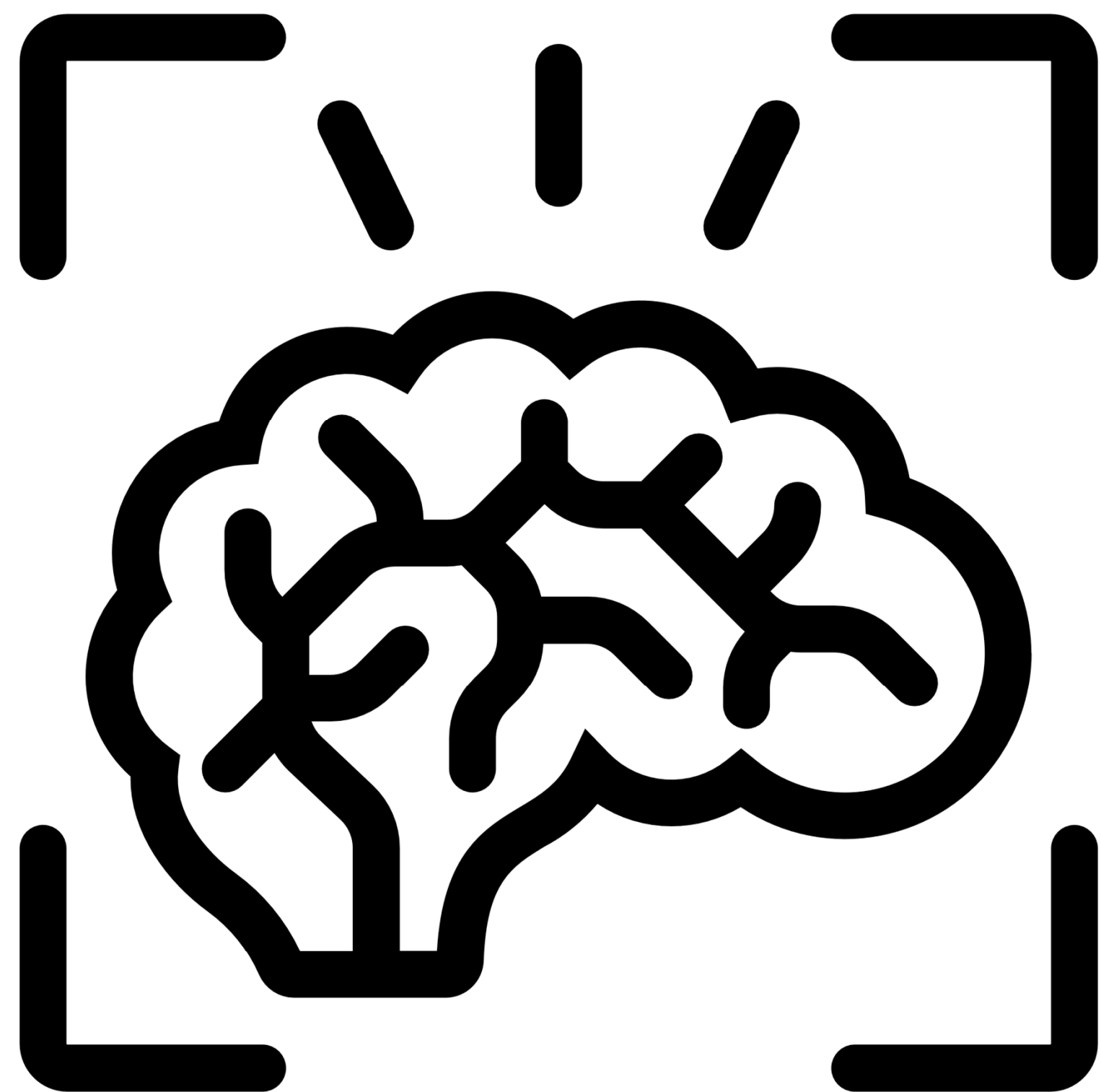


BIM 360 in AECOM



AECOM Successful projects





Design Analytics Digital Engineering Computational Design BIG DATA

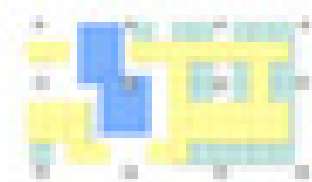


استراتيجية الإمارات للذكاء الاصطناعي

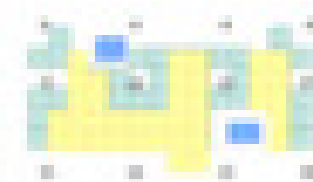
UAE ARTIFICIAL INTELLIGENCE STRATEGY



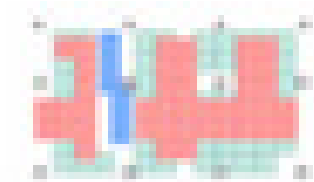
DESIGN OPTION 3_39



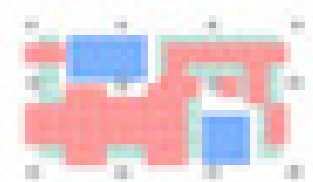
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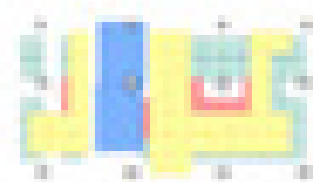
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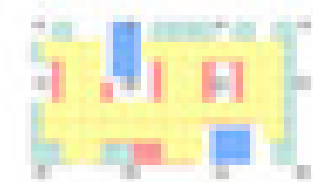
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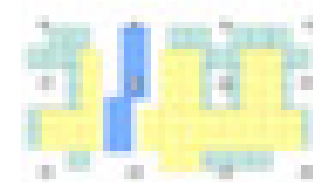
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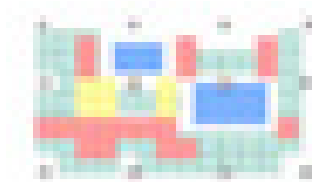
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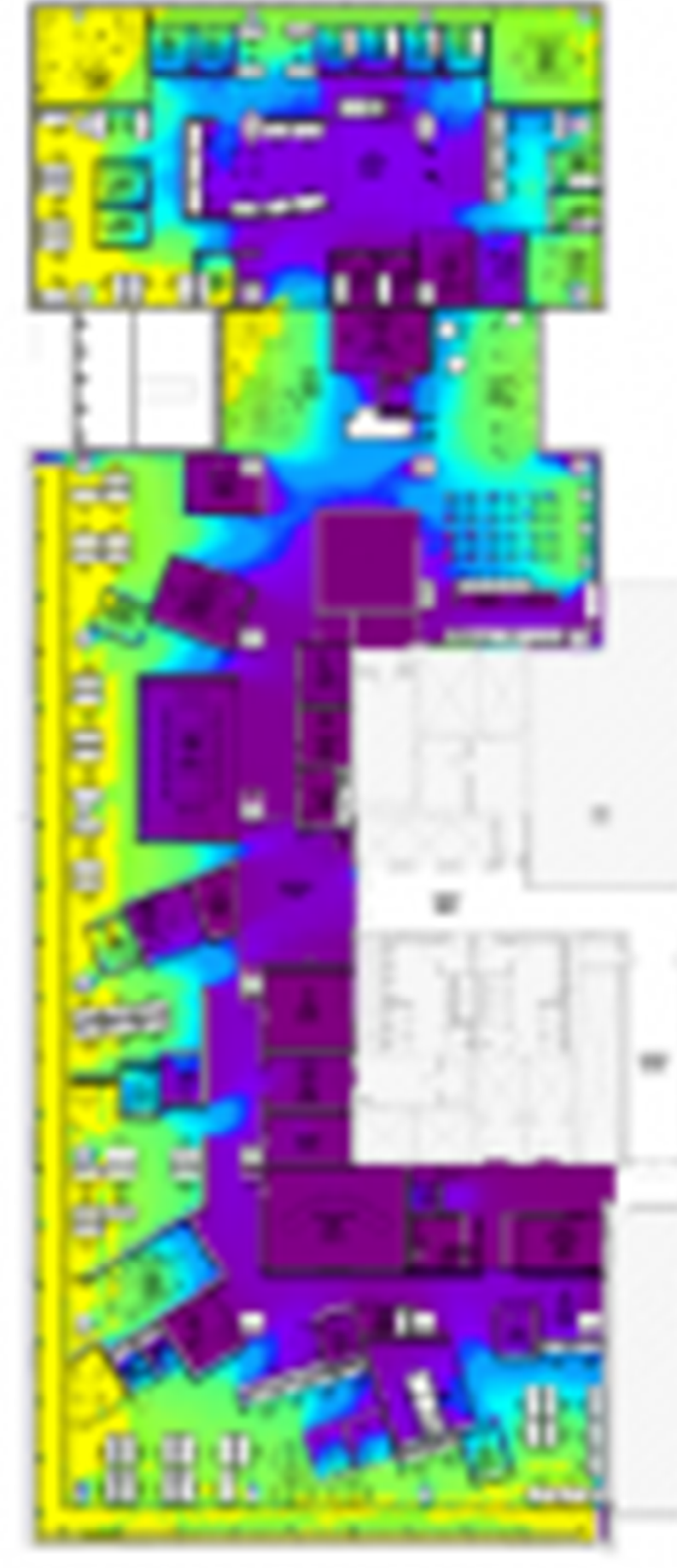
design-0047.png



design-0048.png



design-0049.png



A word cloud featuring the phrase "thank you" in numerous languages. The words are arranged in a circular pattern, with "thank you" being the largest and most central. Other prominent words include "gracias", "mercies", "danke", "terima kasih", "arigato", "mochchakkeram", "sukriya", "dziękuje", "obrigado", "bedankt", "nimmu", "mauriuru", "hvala", "gracie", "nandri", "nanni", "enkos", "sagolun", "sukriya", "kop khun krap", "taiku", "go raibh maith agat", "arigato", "takk", "dakujem", "trugarez", "merci", "shukriya", "merce", "merci", "diolch", "dhanyavadagalu", "tanemirt", "rahmet", "xiexie", "감사합니다", "তোমাকে ধন্যবাদ", "kam sah hamnida", "najis tuke", "didi madloba", "mes", "sobodi", "dekuji", "sagolun", "chnorakaloutioun", "gratias ago", "gracies", "sulpay", "mochchakkeram", "mamnun", "chokrane", "murakoze", "tenki", "asante", "manana", "xhala", "tapadh leat", "mahalo", "paldies", "grazzi", "matondo", "misaotra", "dank je", "welalin", "tack", "barka", "kia ora", "mersi", "blagodaram", "vinaka", "спасиби", "Баярлалаа", "спасибо", "раxмат", "ngiyabonga", "tesekkür ederim", "danke", "謝謝", "спасибо", "nimmu", "mauriuru", "hvala", "gracie", "nandri", "nanni", "enkos", "sagolun", "sukriya", "kop khun krap", "taiku", "go raibh maith agat", "arigato", "takk", "dakujem", "trugarez", "merci", "shukriya", "merce", "merci", "diolch", "dhanyavadagalu", "tanemirt", "rahmet", "xiexie", "감사합니다", "তোমাকে ধন্যবাদ", "kam sah hamnida", "najis tuke", "didi madloba", "mes", "sobodi", "dekuji", "sagolun", "chnorakaloutioun", "gratias ago", "gracies", "sulpay", "mochchakkeram", "mamnun", "chokrane", "murakoze", "tenki", "asante", "manana", "xhala", "tapadh leat", "mahalo", "paldies", "grazzi", "matondo", "misaotra", "dank je", "welalin", "tack", "barka", "kia ora", "mersi", "blagodaram", "vinaka", "спасиби", "Баярлалаа", "спасибо", "раxмат", "ngiyabonga", "tesekkür ederim", "danke", "謝謝", "спасибо".

Q&A

You have

Questions

We have

Answers

