FIVE MORE THINGS
I'VE LEARNED
FROM GETTING
SMART WRONG
Dr Matthew Marson

DISCLAIMER

THE CLIENTS, SITUATIONS, TECHNOLOGIES AND EVENTS PRESENTED HAVE BEEN ANONYMISED.

Mr. Zuckerberg

LESS STUFF
BLEW UP

LESS STUFF
BLEW UP

THE
INDUSTRY
GREW UP

LESS STUFF
BLEW UP

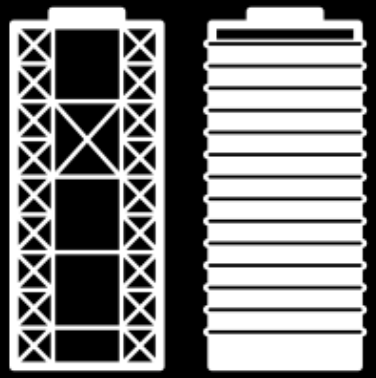
THE
INDUSTRY
GREW UP

APPLICATION
TO
CORPORATE
CONTEXTS

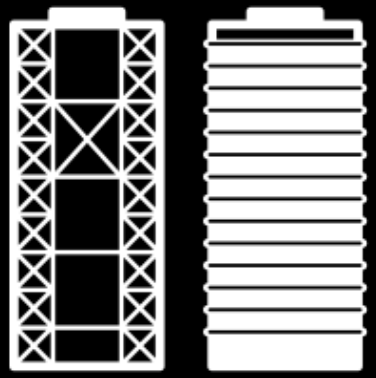
DALLE’s impression of this story

001 //

THAT’S NOT HOW I’VE EVER DONE IT

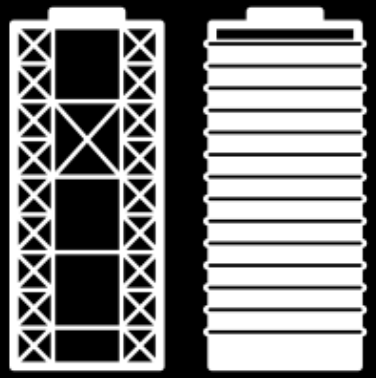


budget defines outcome



budget defines outcome

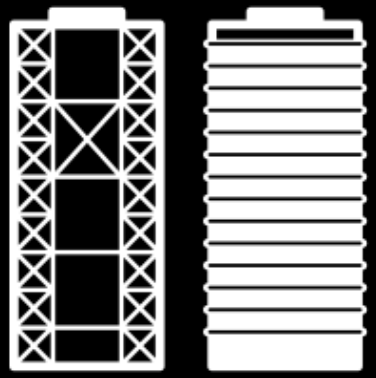
value engineering



budget defines outcome

value engineering

intended outcomes to define budget



budget defines outcome — value engineering

intended outcomes to define budget — business case

CONSTRUCTION

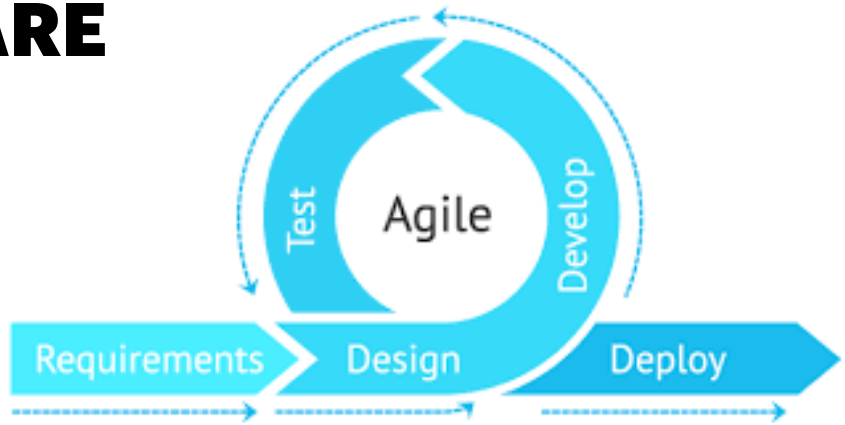
RIBA Plan of Work 2013 compared with RIBA Outline Plan of Work 2007

0	1	2	3	4		5	6	7
Strategic Definition	Preparation and Brief	Concept Design	Developed Design	Technical Design		Construction	Handover and Close Out	In Use

RIBA Outline Plan of Work 2007

A	B	C	D	E	F	G	H	J	K	L
Appraisal	Design Brief	Concept	Design Development	Technical Design	Production Information	Tender: Document-ation	Tender: Action	Mobilisation	Construction to Practical Completion	Post Practical Completion
Preparation	Design				Preconstruction			Construction		Use

SOFTWARE



CONSTRUCTION

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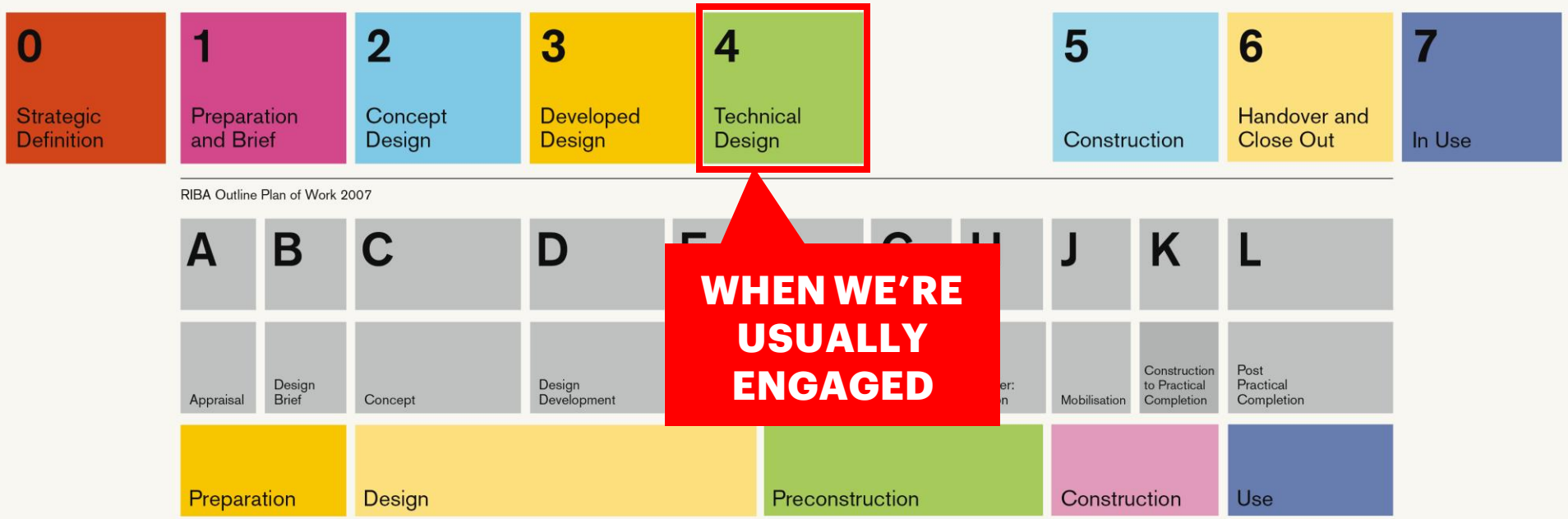
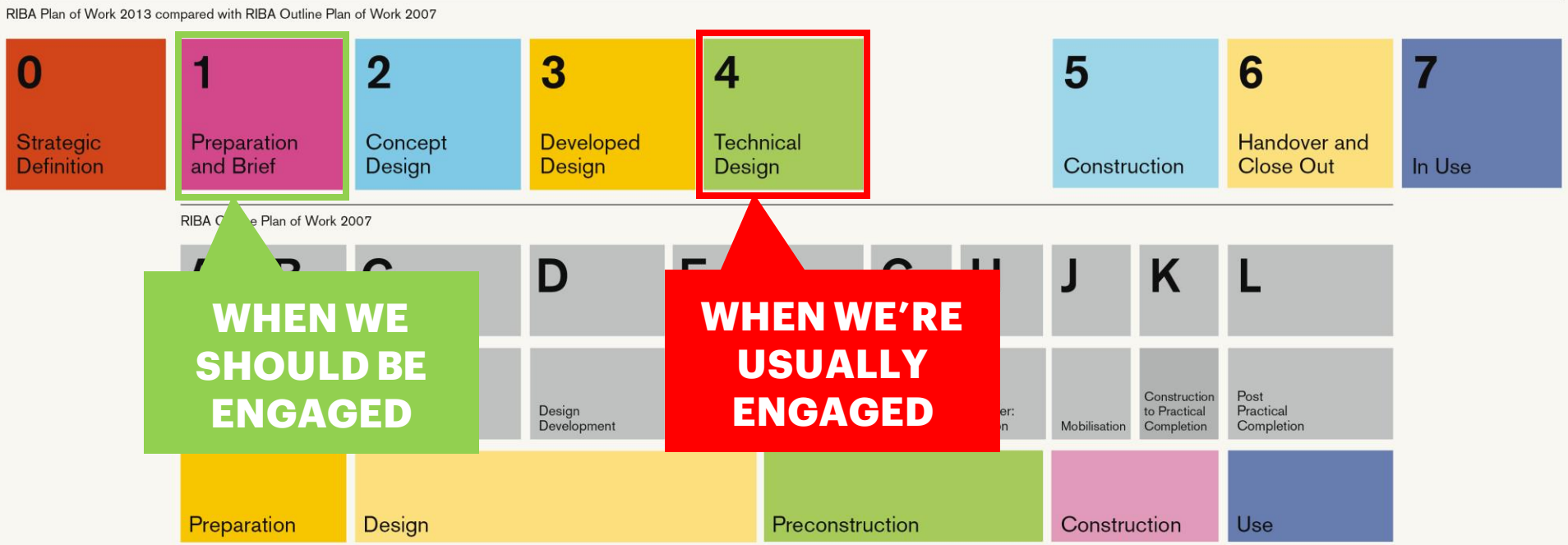
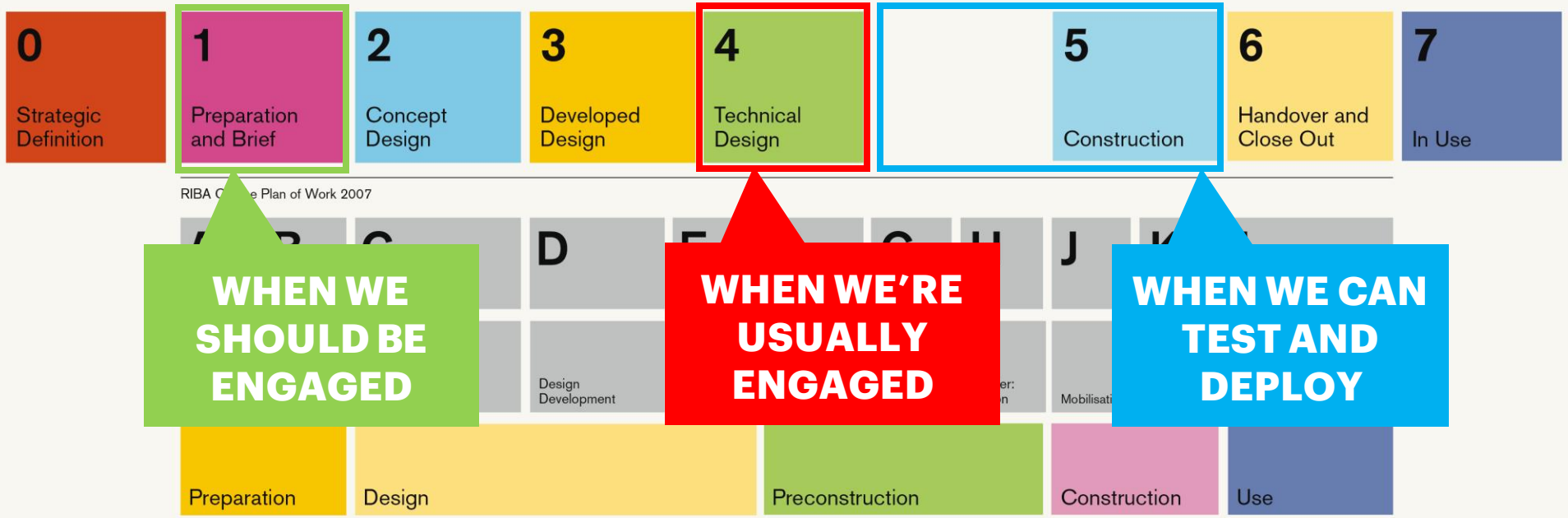


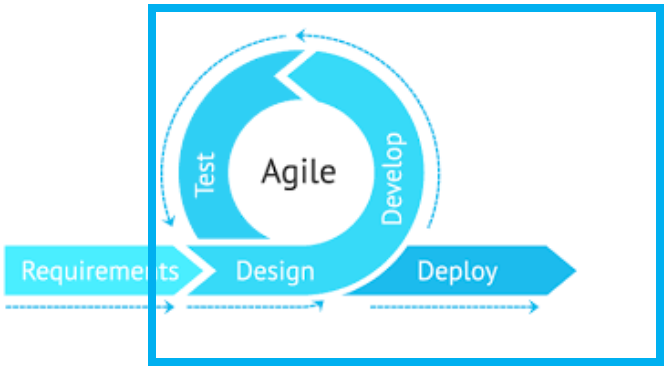
CONSTRUCTION



CONSTRUCTION

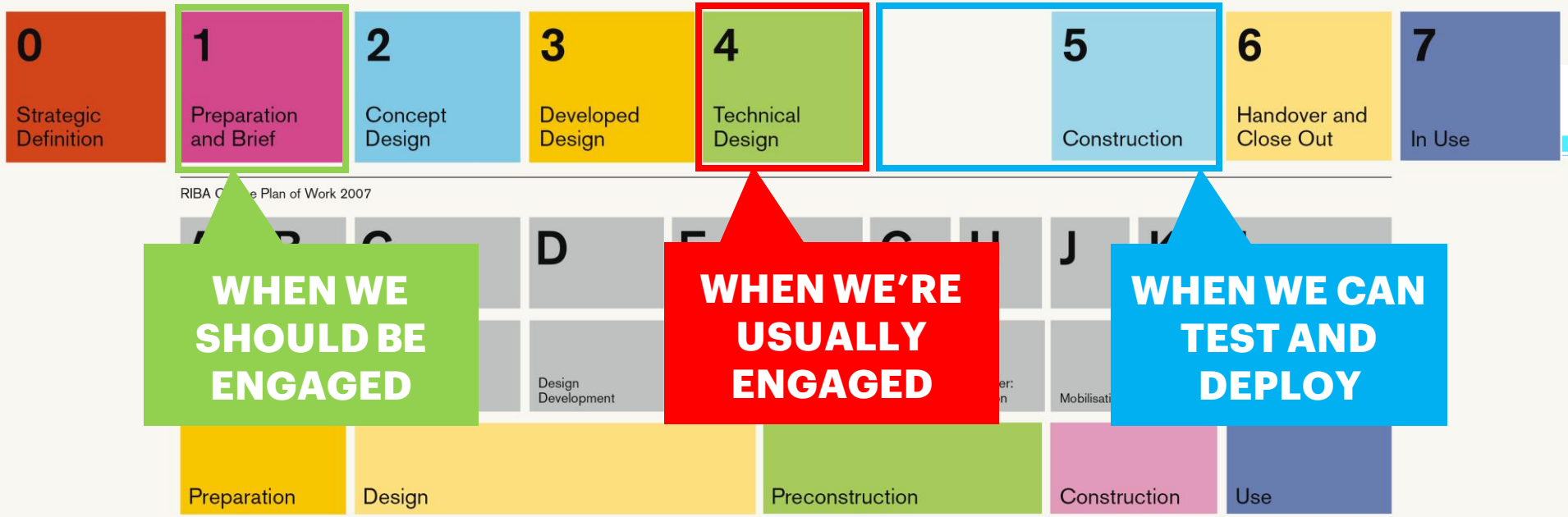
RIBA Plan of Work 2013 compared with RIBA Outline Plan of Work 2007





CONSTRUCTION

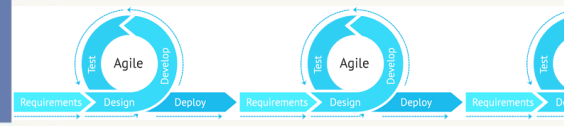
RIBA Plan of Work 2013 compared with RIBA Outline Plan of Work 2007



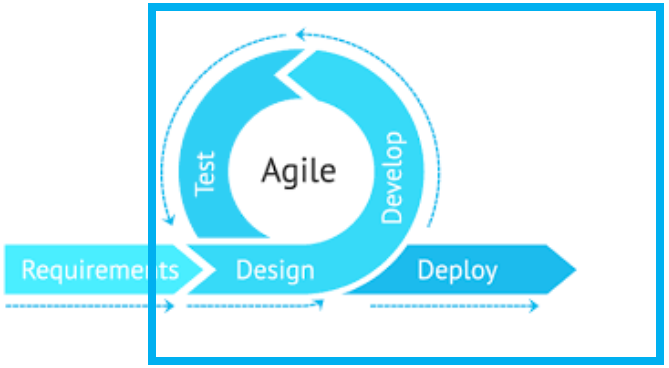
WHEN WE SHOULD BE ENGAGED

WHEN WE'RE USUALLY ENGAGED

WHEN WE CAN TEST AND DEPLOY



WHEN WE CAN KEEP IMPROVING



lighting

mechanical

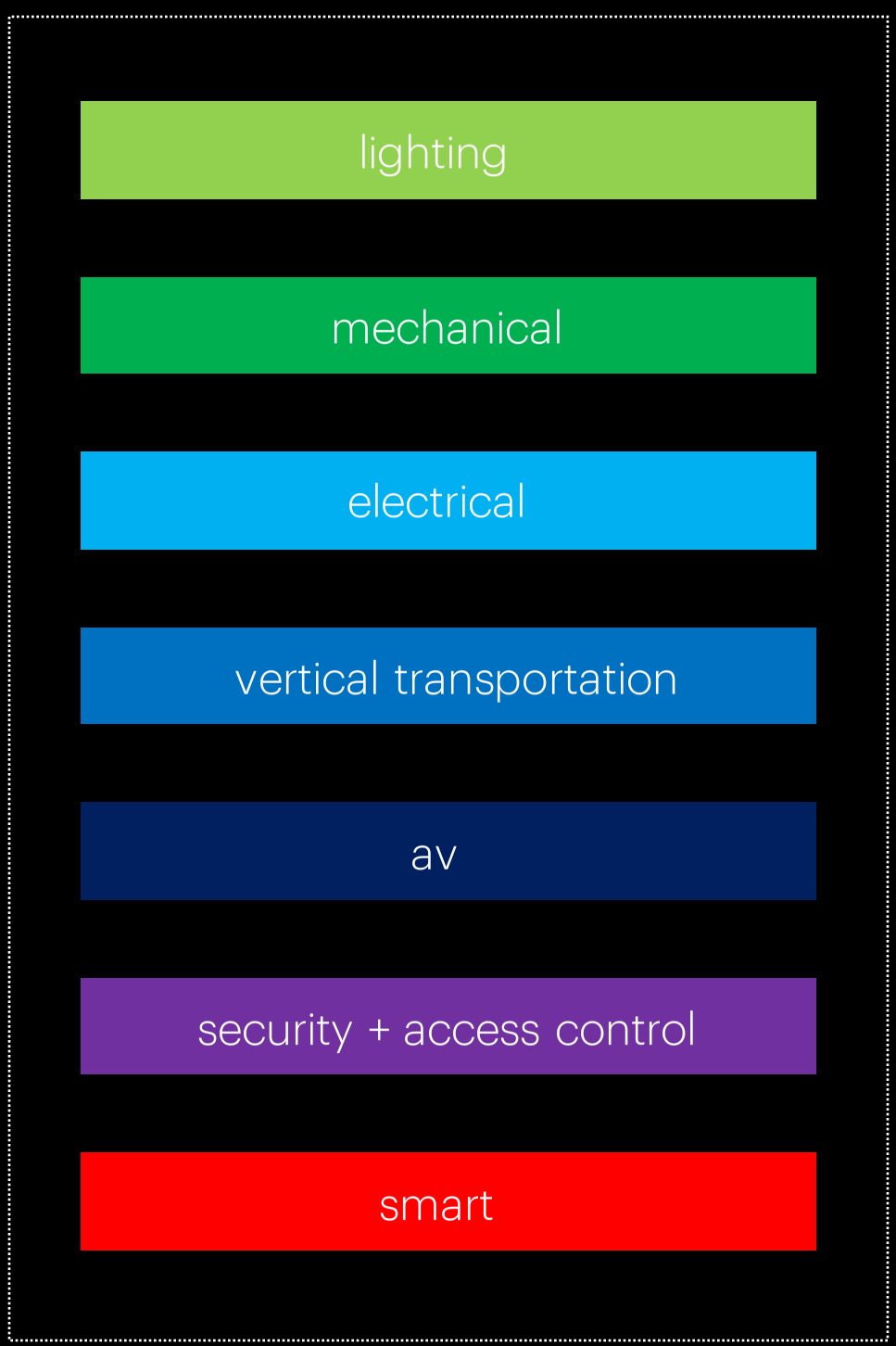
electrical

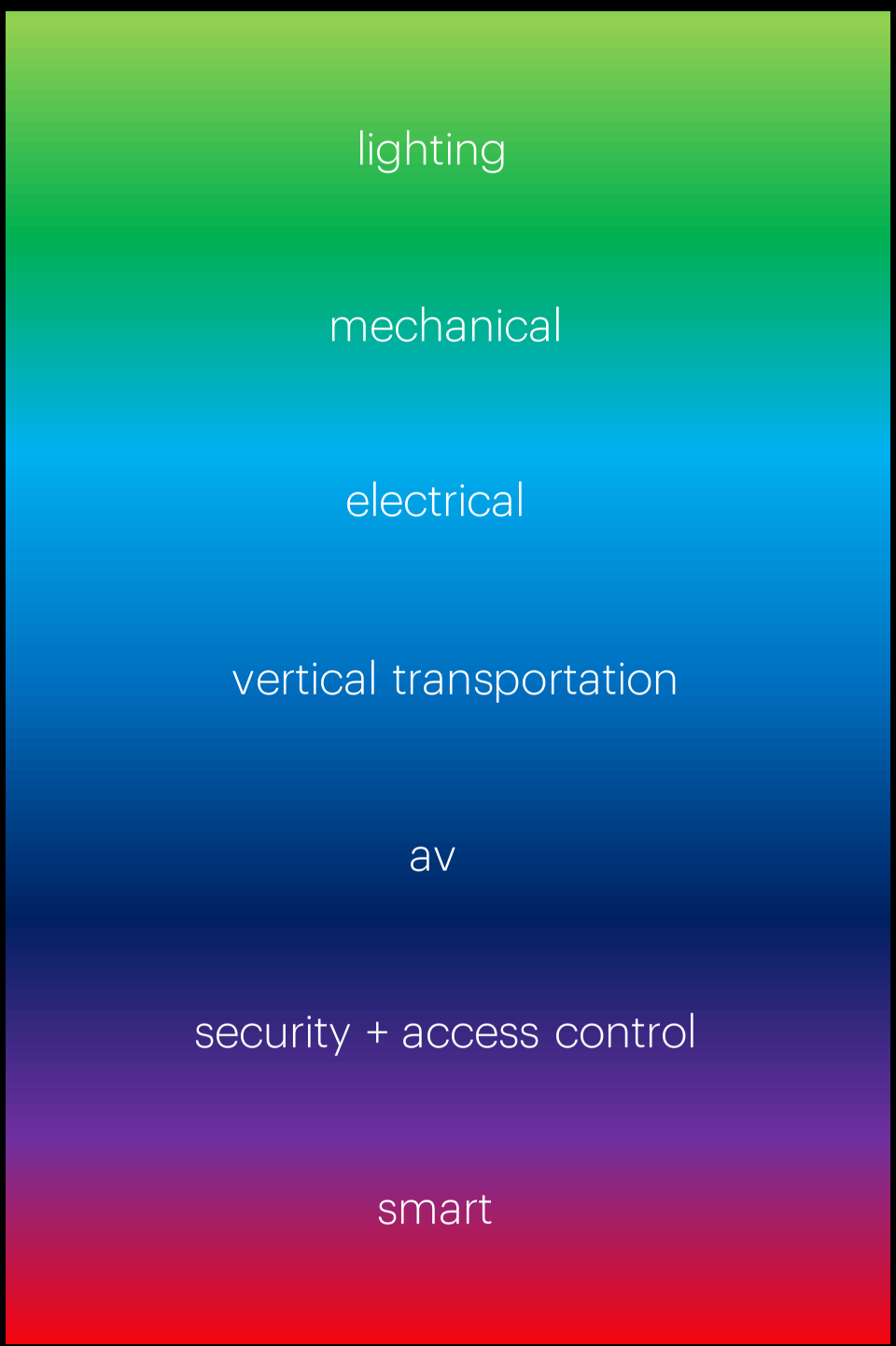
vertical transportation

av

security + access control

smart


lighting
mechanical
electrical
vertical transportation
av
security + access control
smart
nsi


lighting
mechanical
electrical
vertical transportation
av
security + access control
smart
multi-disciplinary connected team

001 //

start with a strong brief

go above + beyond to teach

know when to call it quits

DALLE's impression of this story

002 //

RETROFITTING A BUILDING THAT HASN'T FINISHED CONSTRUCTION

construction

technology

construction **slow**

technology

construction **slow**

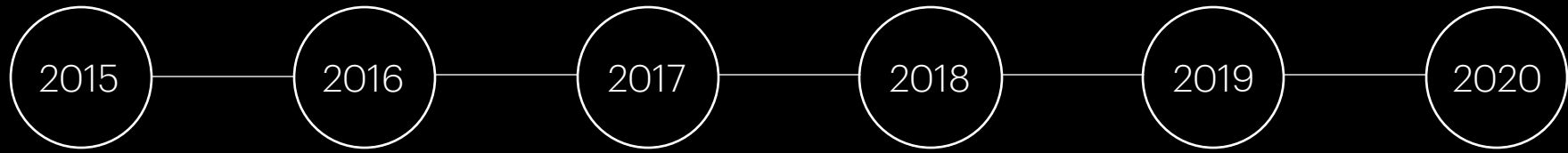
technology **fast**

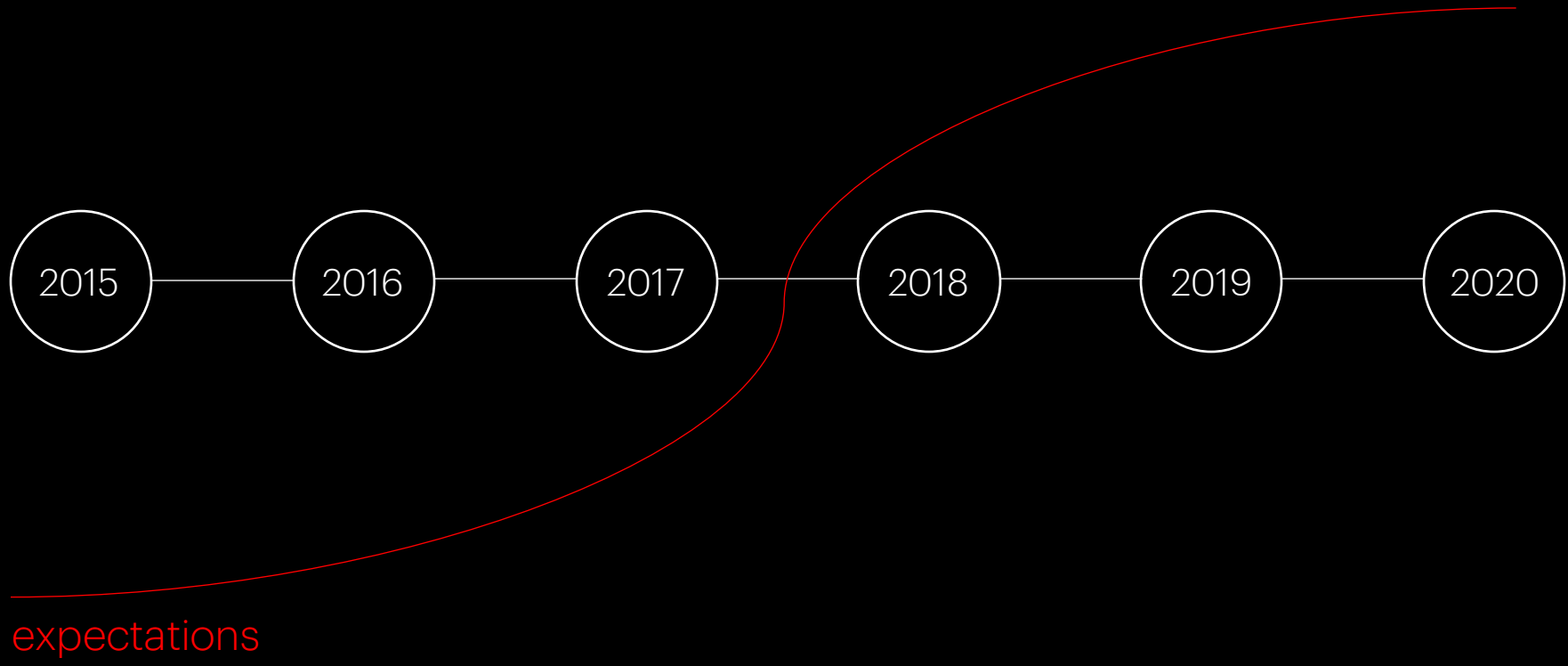
construction **slow**

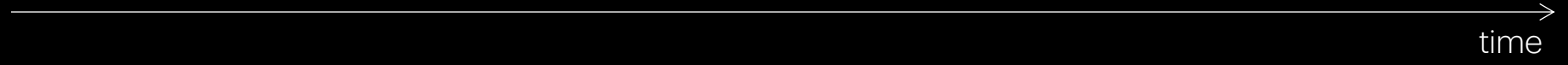
market

technology **fast**

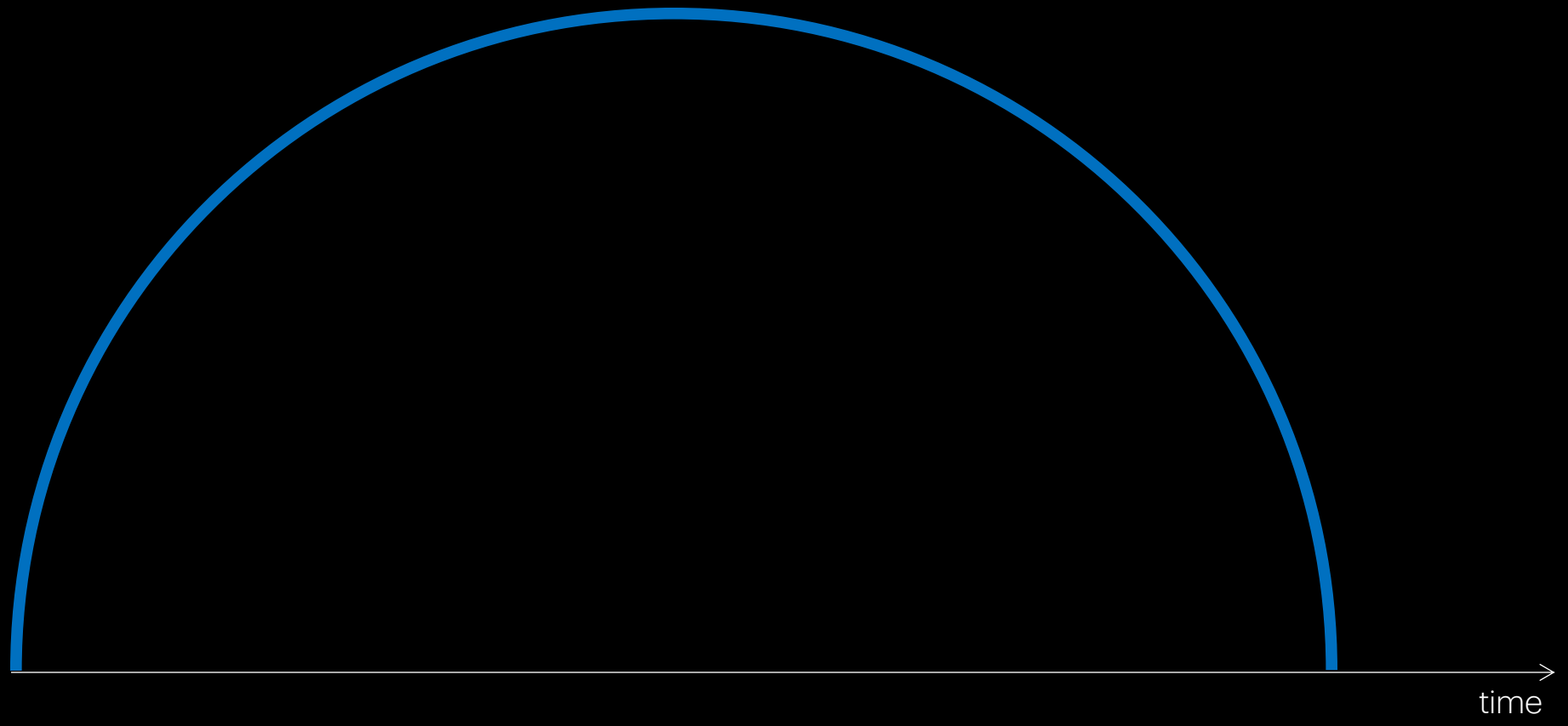
construction	**slow**
market	**medium**
technology	**fast**


2015
2016
2017
2018
2019
2020


2015
2016
2017
2018
2019
2020
expectations

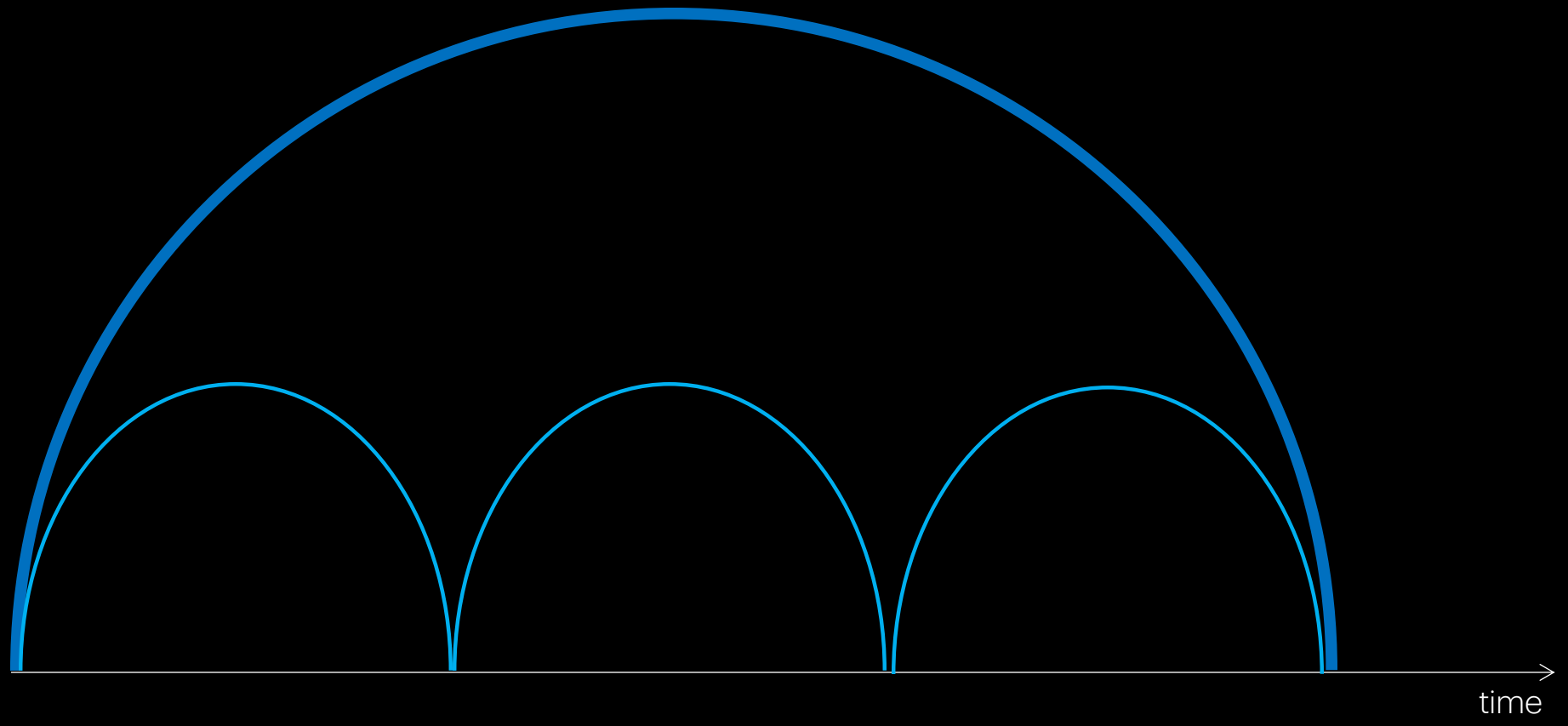

time

structure – 100+ years



structure – 100+ years

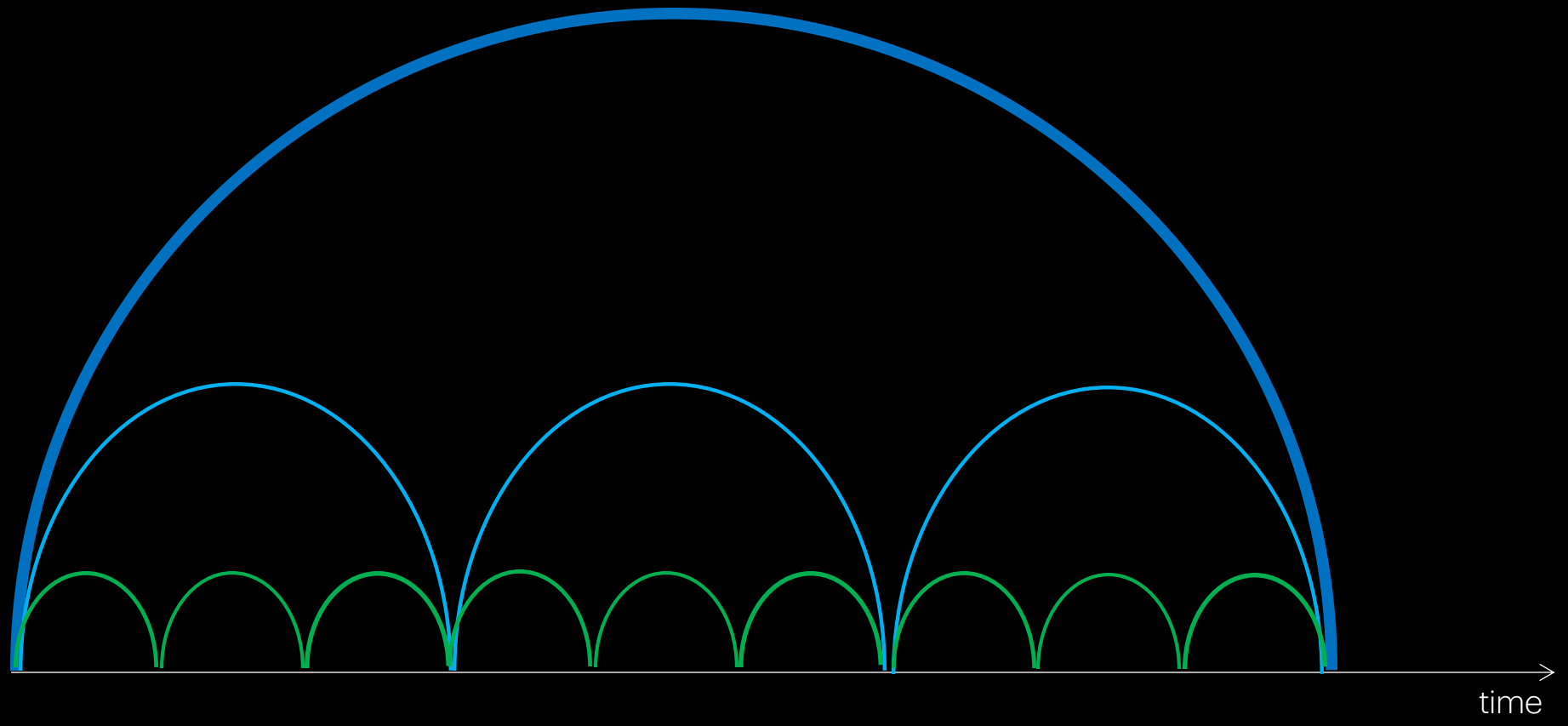
plant – 30 years



structure – 100+ years

plant – 30 years

fit out – 10 years

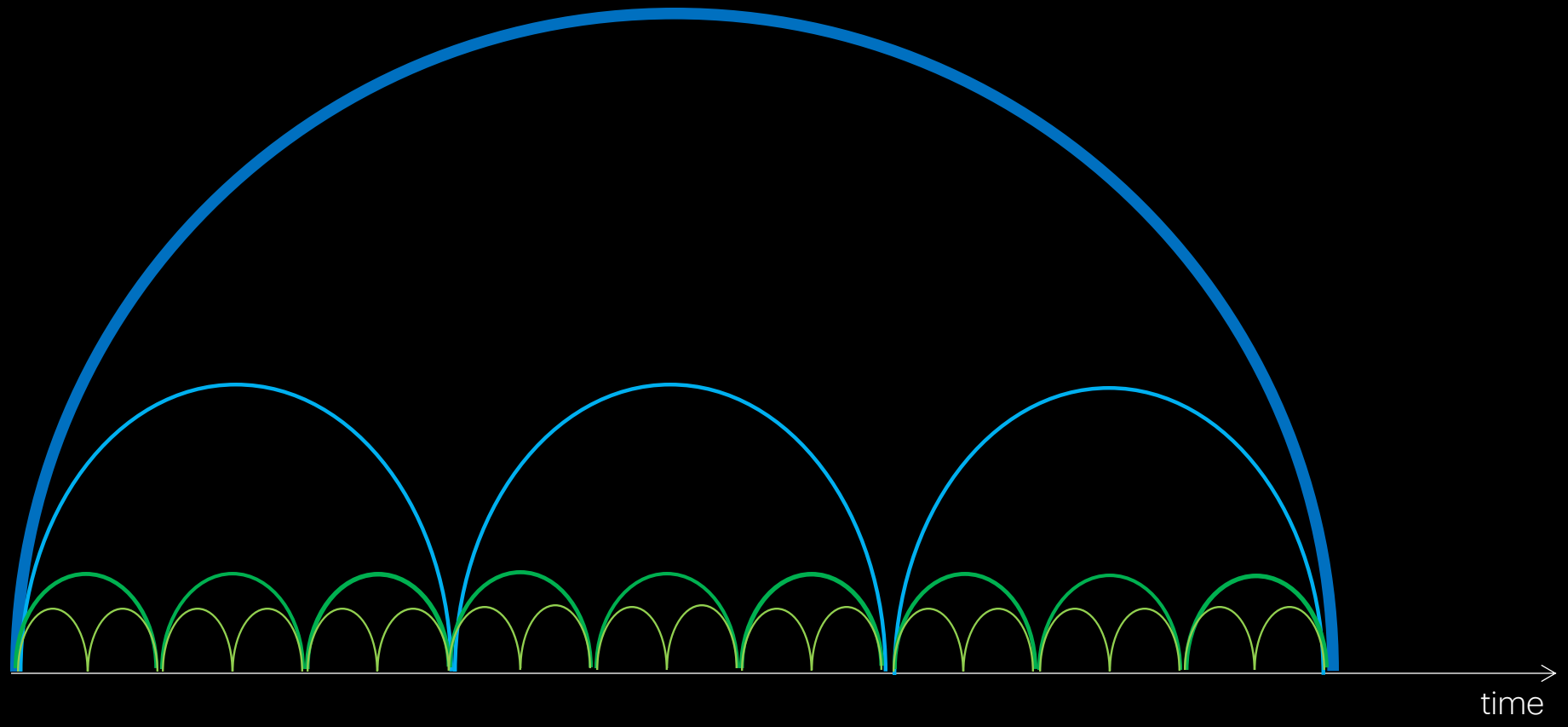


structure – 100+ years

plant – 30 years

fit out – 10 years

tech refresh – 5 years



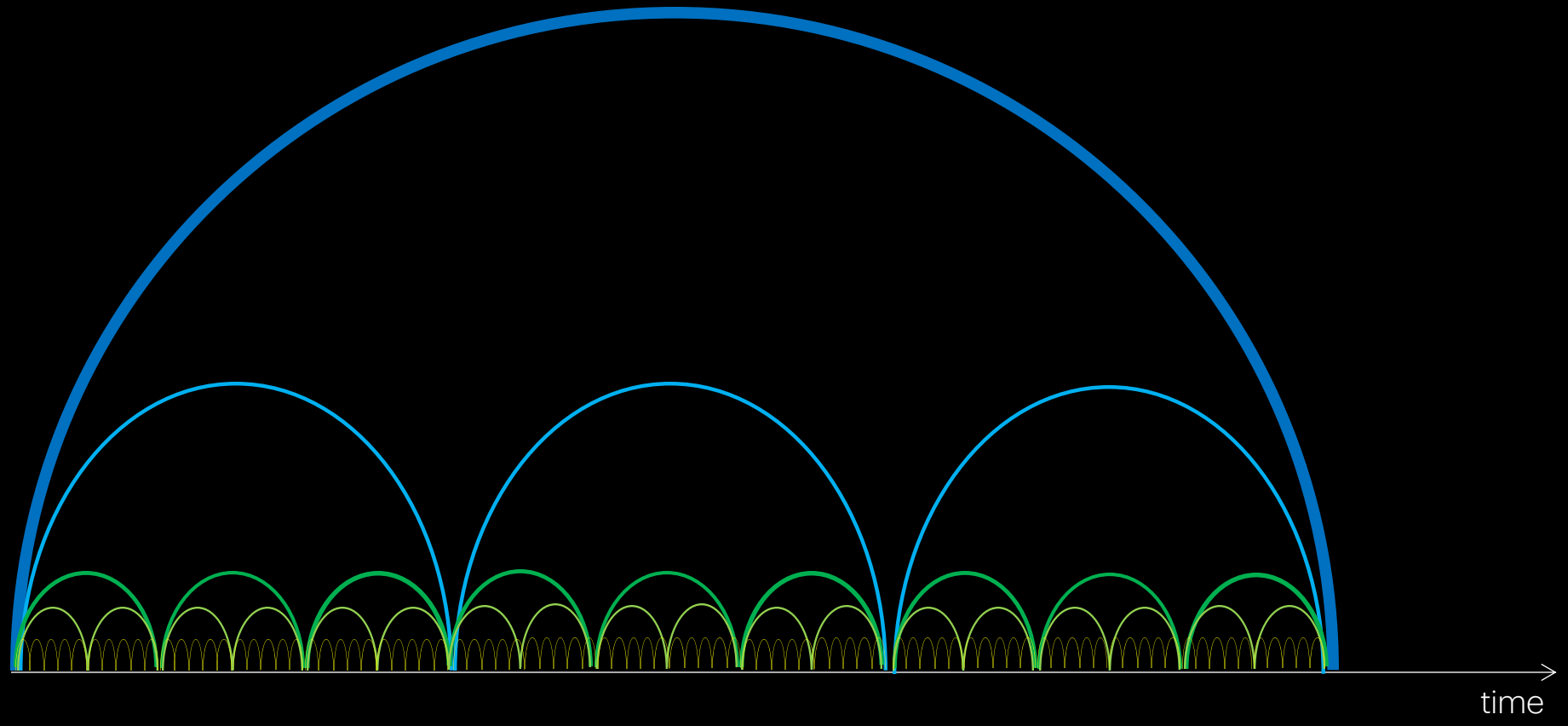
structure – 100+ years

plant – 30 years

fit out – 10 years

tech refresh – 5 years

software – 1 year



002 //

identify design obsolescence

don’t rush into decisions

be clear on outcomes; not technologies

DALLE's impression of this story

003 //

SMART SCHOOL GRADUATES

IoT
Big Data
AI
Algorithms
Vertical/Horizontal Approach
Cloud
Connectivity
OpEx
CapEx
Gen Z
Efficiency
Platform
Predict/Predictive
Operational
Machine Learning
Value
5G
Layers
BIM

BIM
Cyber
ROI
Widgets
Digital twin
Lift and shift
Industry 4.0
Data democratisation
Journey
Single Pane of Glass
M&V
Maintenance
ESG
Net Zero
Smart Cities
MSI
Cognitive
Intelligent
Smart

CONTEXT

To situate the new systems and changes to existing systems in a business and operational context.

DIGITAL

To provide technical understanding to assembly and operation of core system components.

PHYSICAL

To explore how base building systems differ and contribute to a wider system and experience

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1. The Market and Business Opportunity
2. Fundamentals of Intelligent Building Technologies
3. Facilities Management for Intelligent Buildings
4. Technology Consumer Trends
5. Crafting a Business Case

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1. Internet of Things
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3. Platforms
4. WebTech
5. Mobile Apps

PHYSICAL

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DIGITAL

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4. WebTech
5. Mobile Apps

PHYSICAL

To explore how base building systems differ and contribute to a wider system and experience

1. Energy Analytics
2. Intelligent Lighting
3. Intelligent Access Control
4. Location Services
5. Occupier Wellness

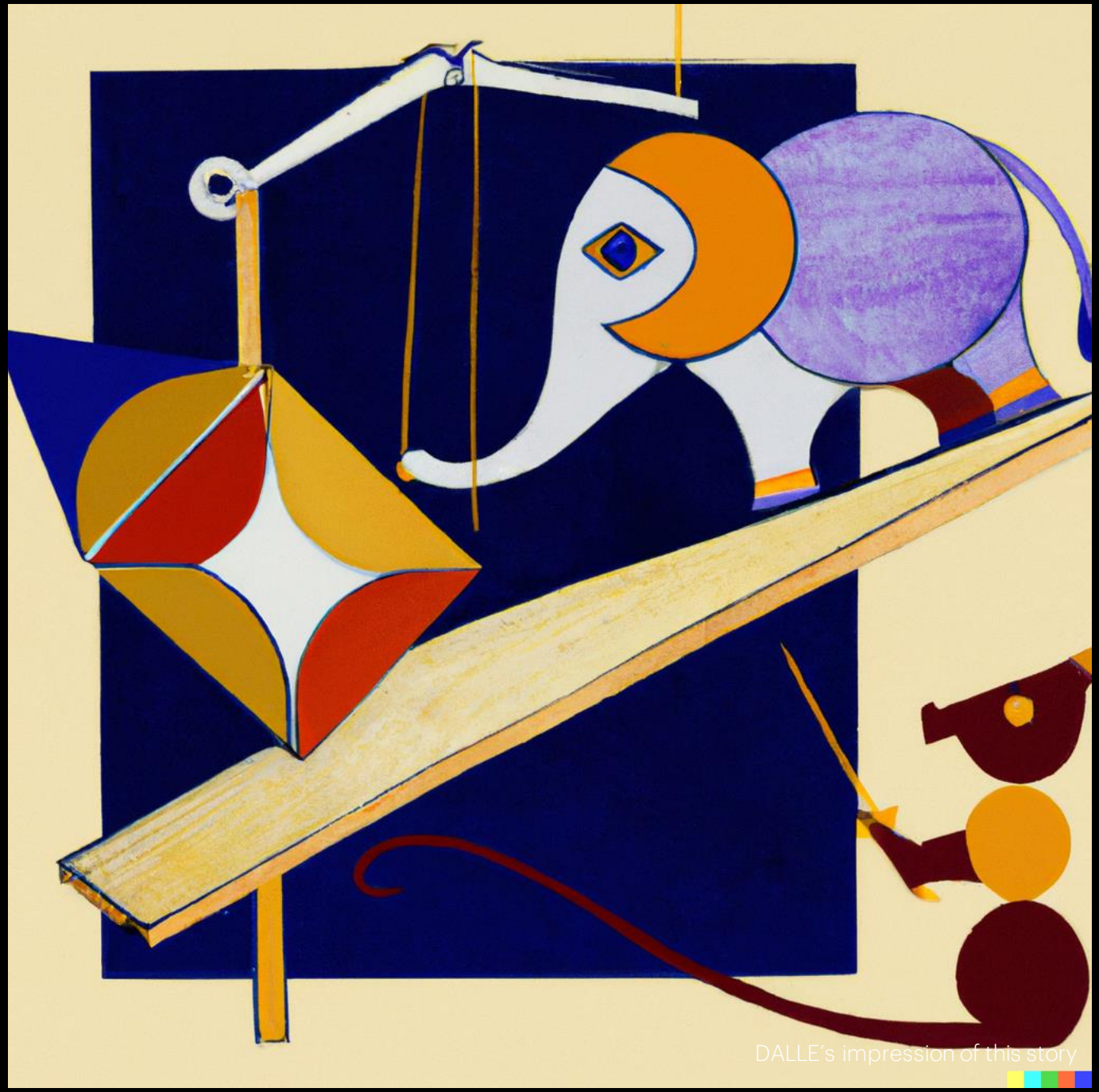
003 //

built environment education no longer cuts the mustard

how can you meet a ‘standard’ if you don’t understand the topic?

there’s always something to learn

read, speak, ask

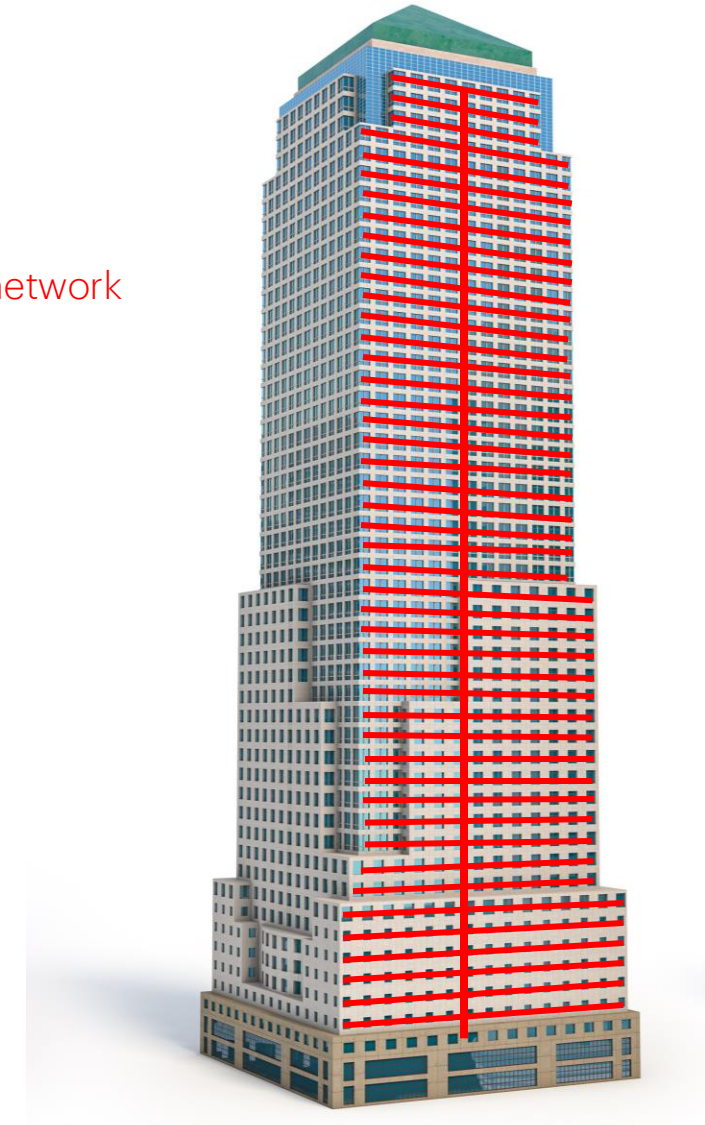


DALLE's impression of this story

004 //

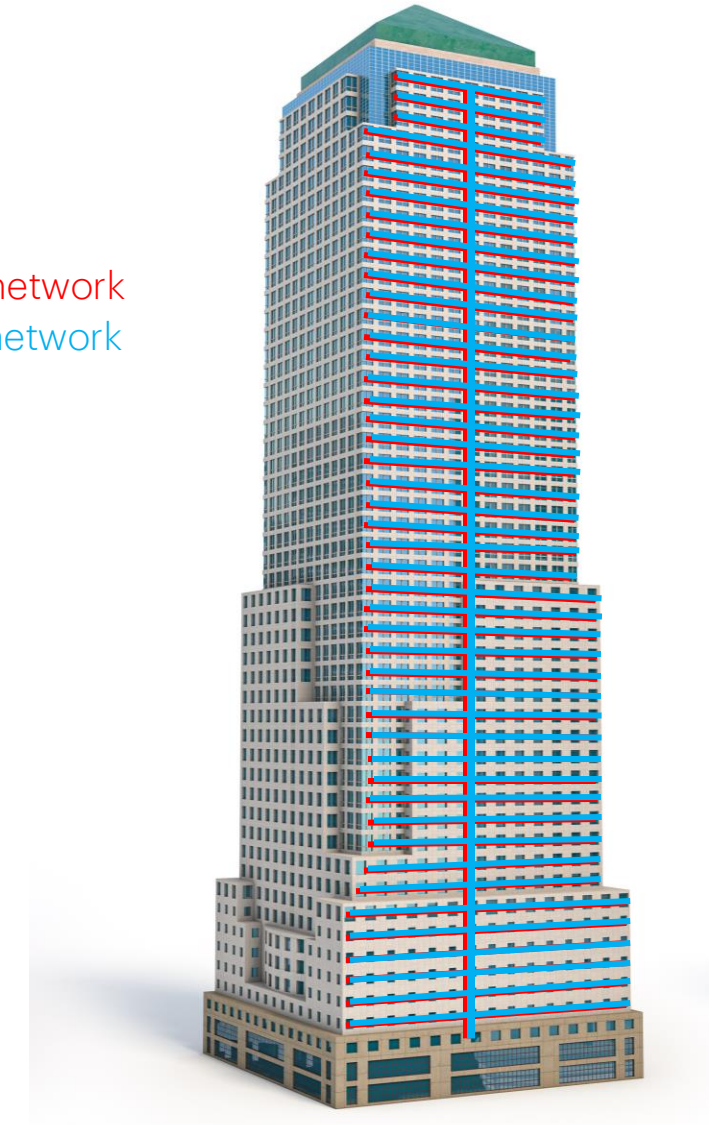
GETTING HALF FOR DOUBLE

IT network



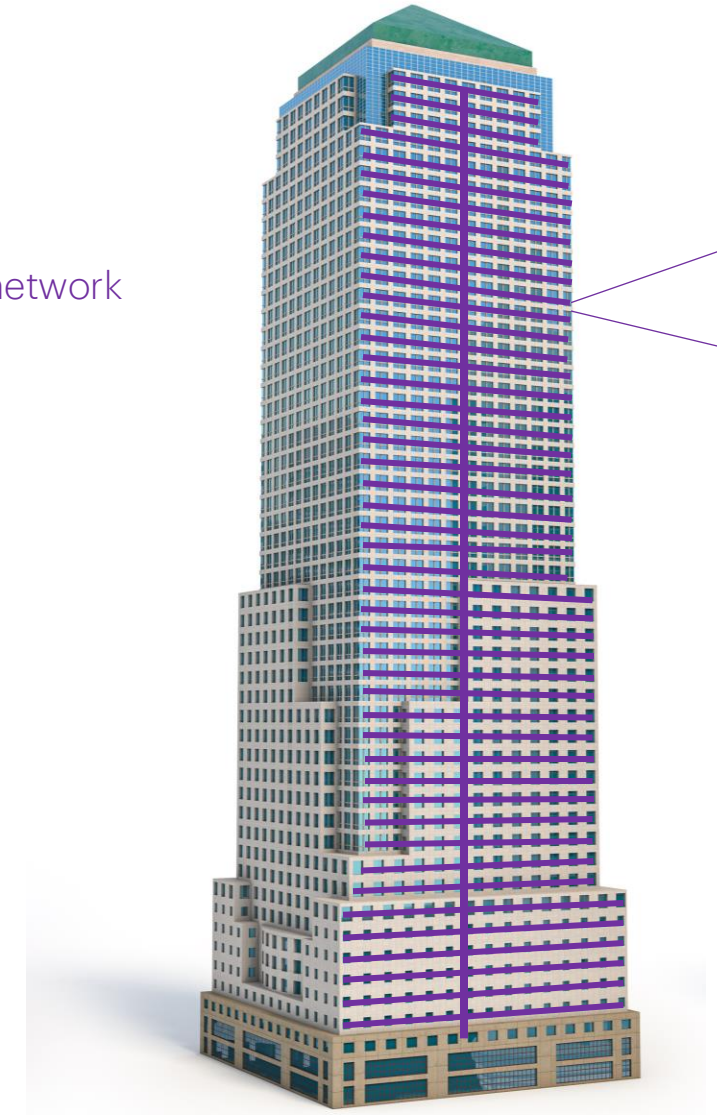
IT network

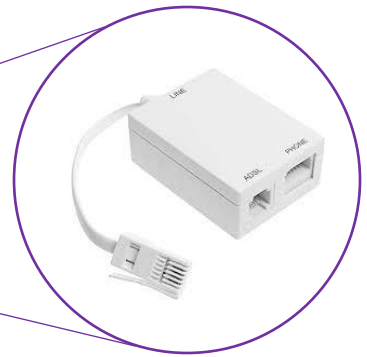
OT network



converged network

converged network





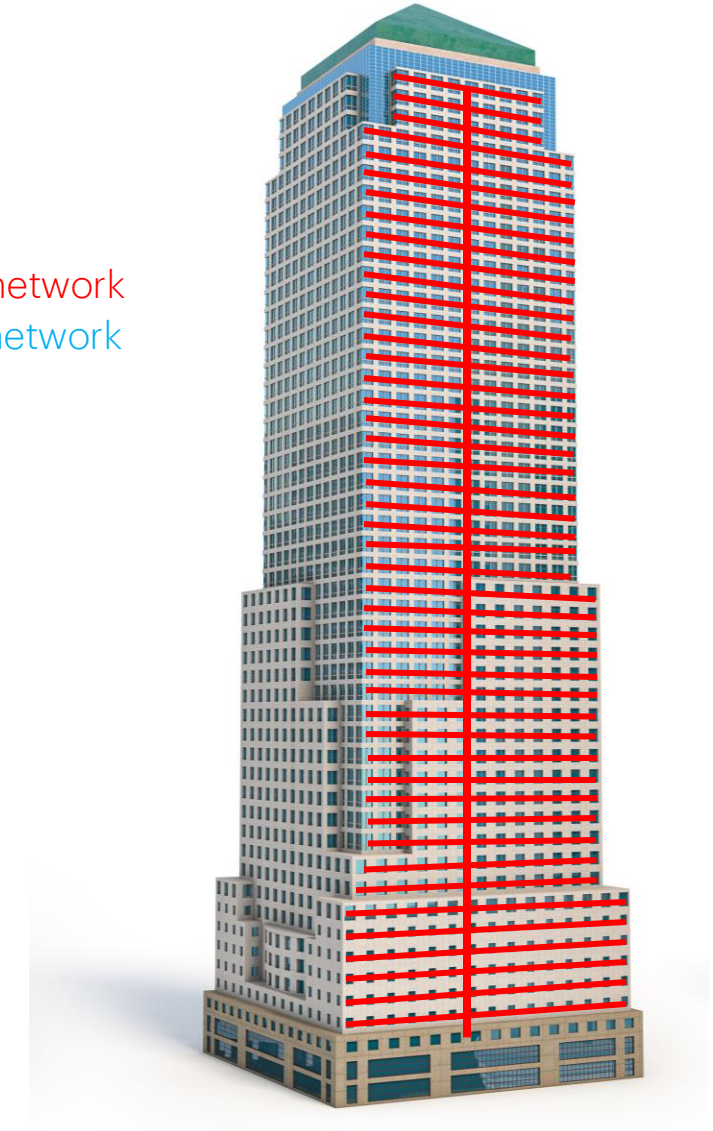
which machine can communicate to where?

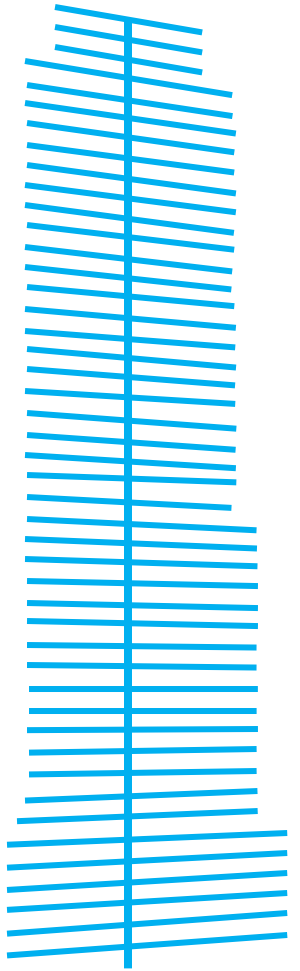
onboarding profiles with predefined allowances by machine types

MUD files

IT network

OT network





004 //

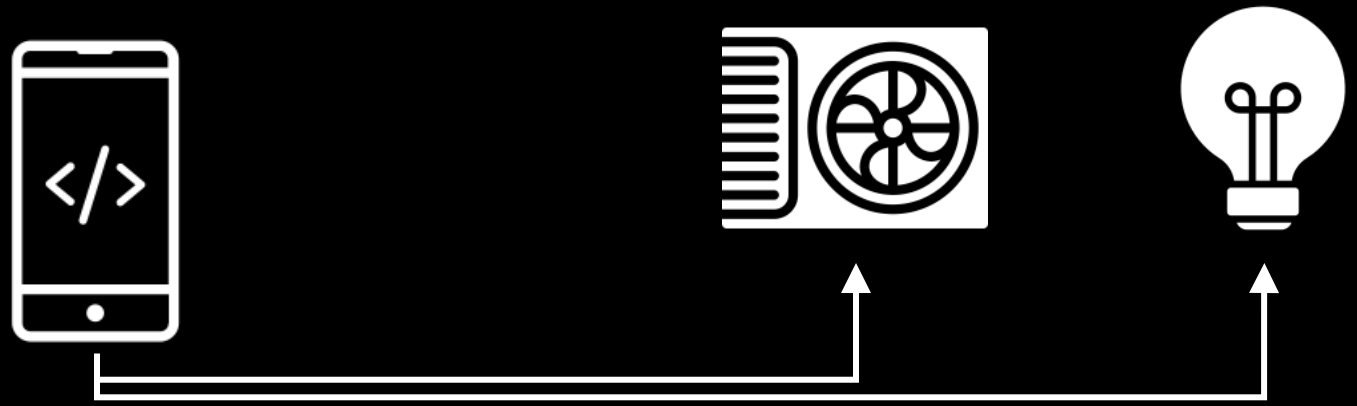
some don’t believe a business case

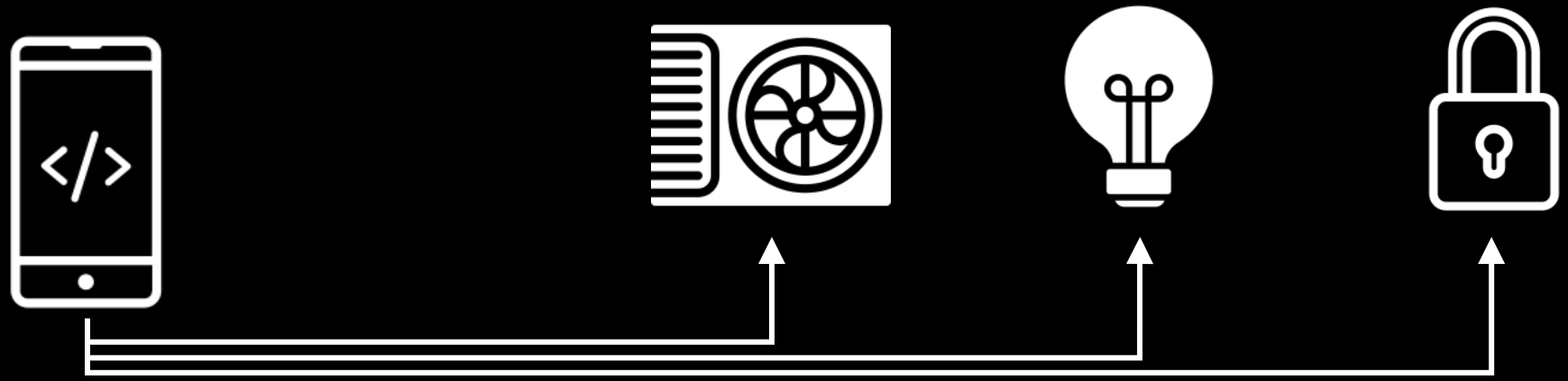
explain and explain again

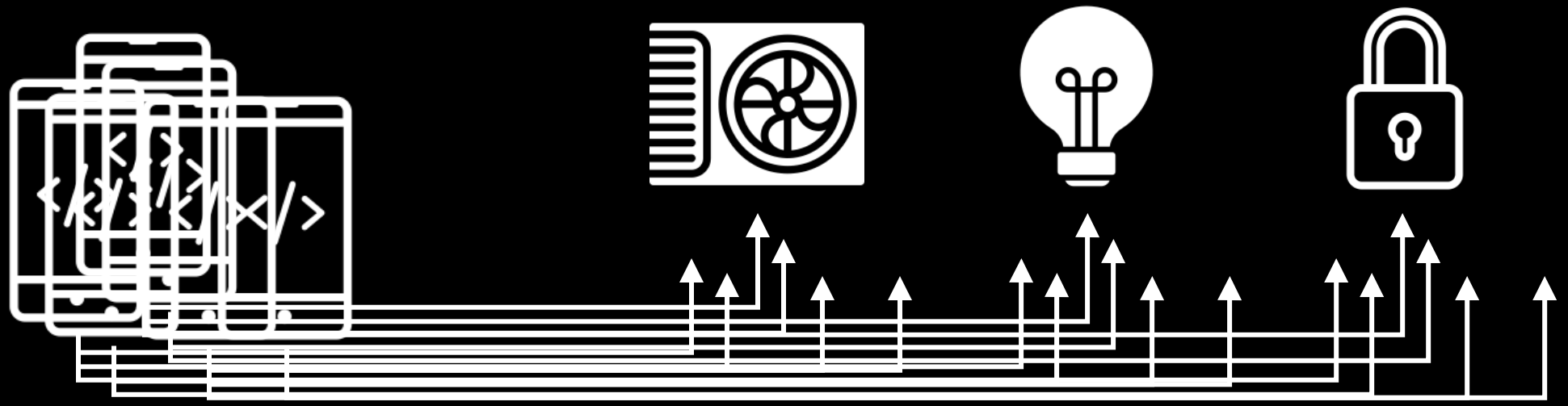
security is used as means to end a conversation

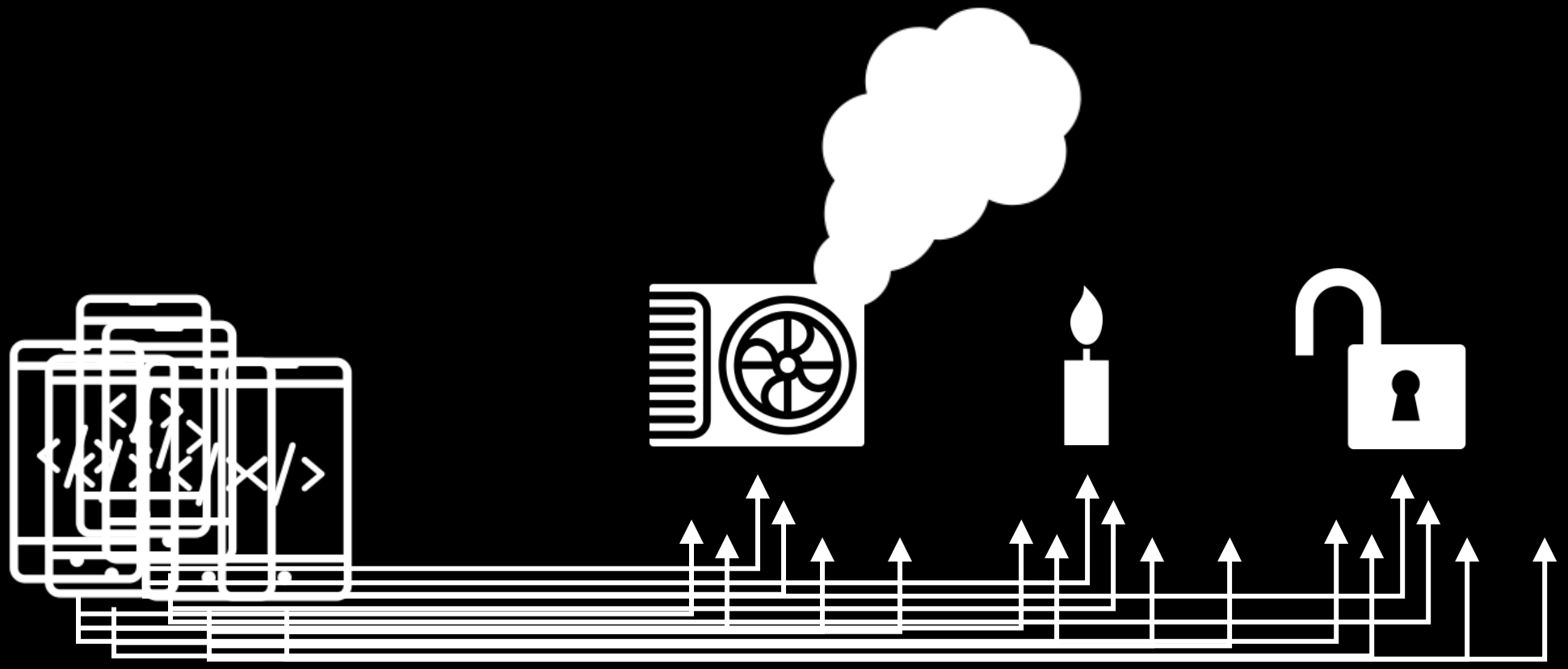
005 //

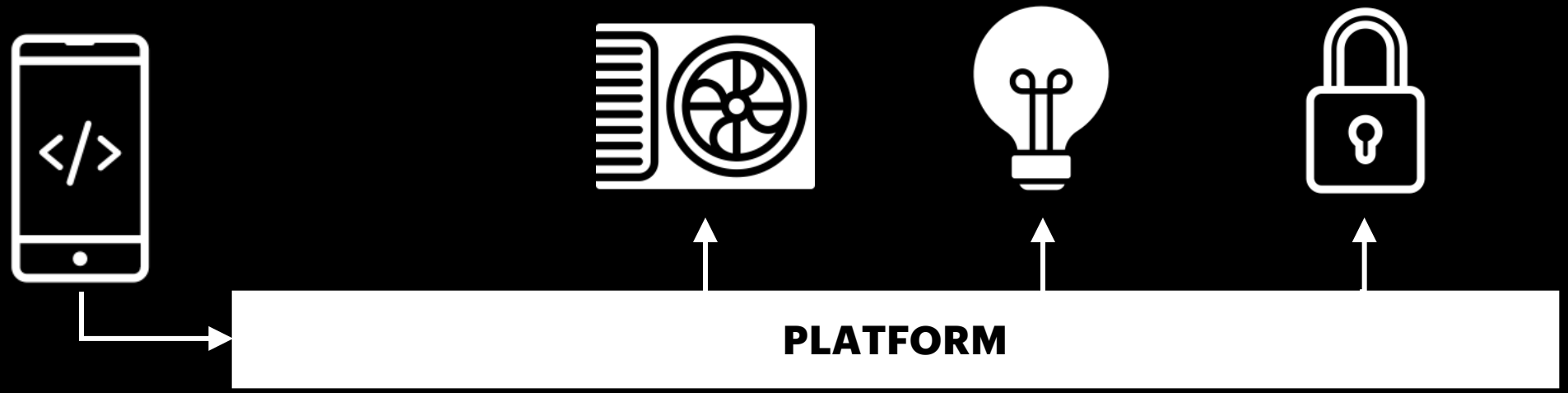
A MOBILE APP THAT'S A BIT TOO OPEN SOURCE










PLATFORM

005 //

secure design is a business imperative

take vendor claims with a pinch of salt

you get what you pay for

MY FIVE LESSONS

FADS ARE JUST THAT

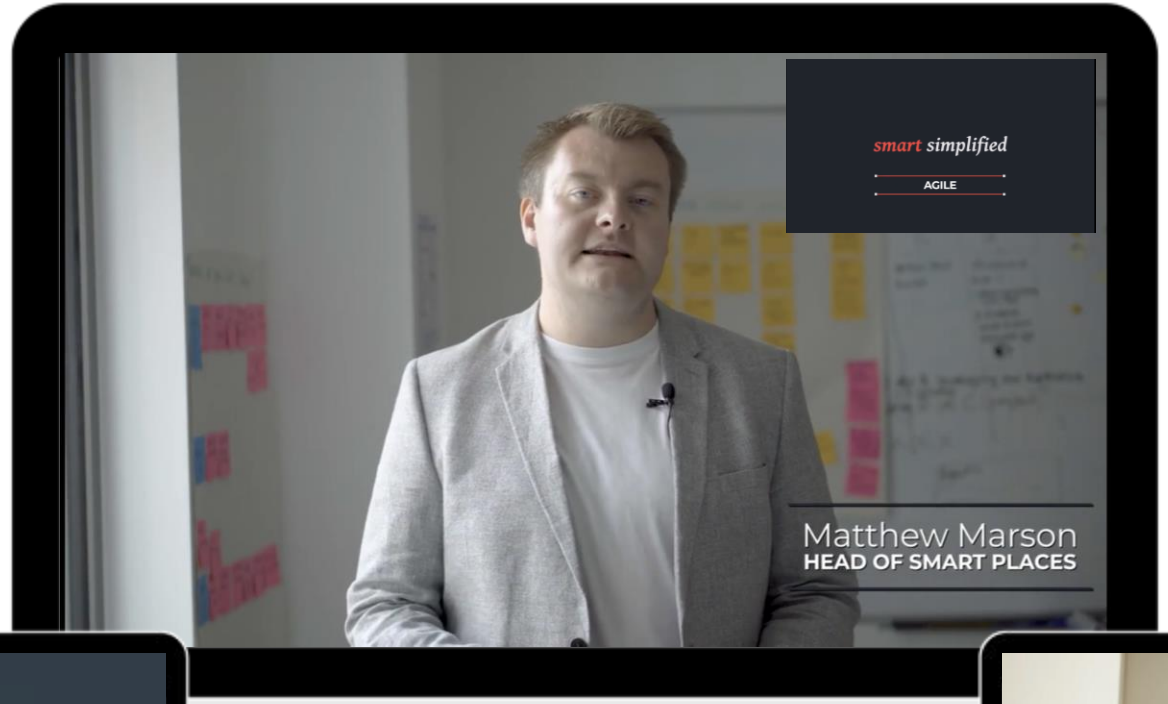
DESIGN FOR THE LONG-TERM

BE
KIND

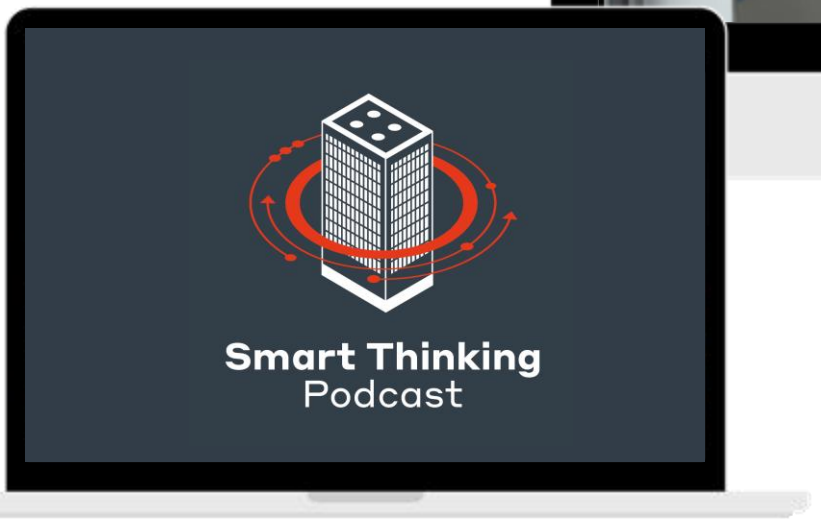
HONESTY
AND
AUTHENTICITY
REPRESENT
VALUE

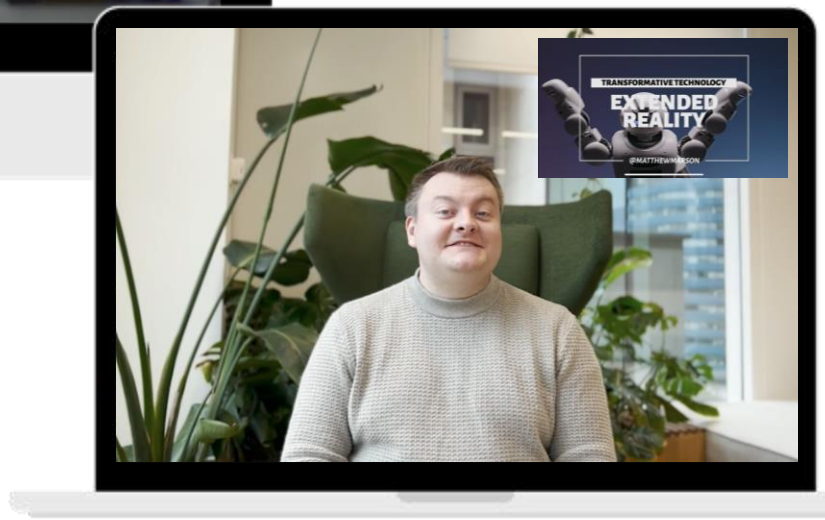
KEEP LEARNING

Smart Thinking Podcast
Brief and punchy Intro's to all aspects of smart buildings



Transformative Tech
Quick-fire on the technologies that are shaping the future





Smart Simplified
How-to guides for delivering your smart building

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linkedin.com/in/**matthewmarson**