SUPPLY CHAIN SUSTAINABILITY SCHOOL

Becoming a Digital Leader

national highways

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SUPPLY CHAIN SUSTAINABILITY SCHOOL

SECTION ONE

Welcome and Introductions

Adrian Sillitoe MCIPS

Head of Digital Services & Technology - Programmes, Asset Management & SCADA

David Emery

Consultant

Supply Chain sustainability School

Welcome and Introductions

Introduce yourself!

- Name
- Company
- Job title
- What do you hope to learn?.

Mentimeter

Real-time polls and audience Q&A

1. Go to www.menti.com in a new browser or tab on your phone or computer.
2. Enter the menti code: **** **** when you see it on the slide or hear the trainer read it out.
3. Don’t disconnect from the webinar, you will still need to hear the trainer

Go to **www.menti.com** and use the code **9755 2391**

What was your worst digital purchase?

Menti question - code: 8942 8700

What was the one digital purchase you made that you most regret or which most disappointed you?

SUPPLY CHAIN SUSTAINABILITY SCHOOL

Section Two

About the School

Our mission

“To be the world class collaboration to enable a more sustainable built environment”

The School is a common approach to...

1. Assessing supply chain sustainability competence
2. Developing suppliers' sustainability knowledge

17,000+ companies

60,000+ individual learners

140+

Partners leading our work

140+ Partners leading our work

140+ Partners leading our work

140+ Partners leading our work

140+ Partners leading our work

140+

Partners leading our work

Our digital mission

“To accelerate the adoption of digital technologies in the construction supply chain”

Free

Confidential

CPD Accredited

Seven key topic areas

Sustainability

Management

Offsite

FIR

Lean Construction

Digital

Procurement

Variety of learning resources

Video based toolbox talks, 300 selected videos, 90+ e-learning modules

CPD Events & Workshops

Fairness, inclusion & Respect

E-Learning

Web Pages

Toolkits

Video Sustainability Shorts

Go to **www.menti.com** and use the code **6064 5981**

Mentimeter

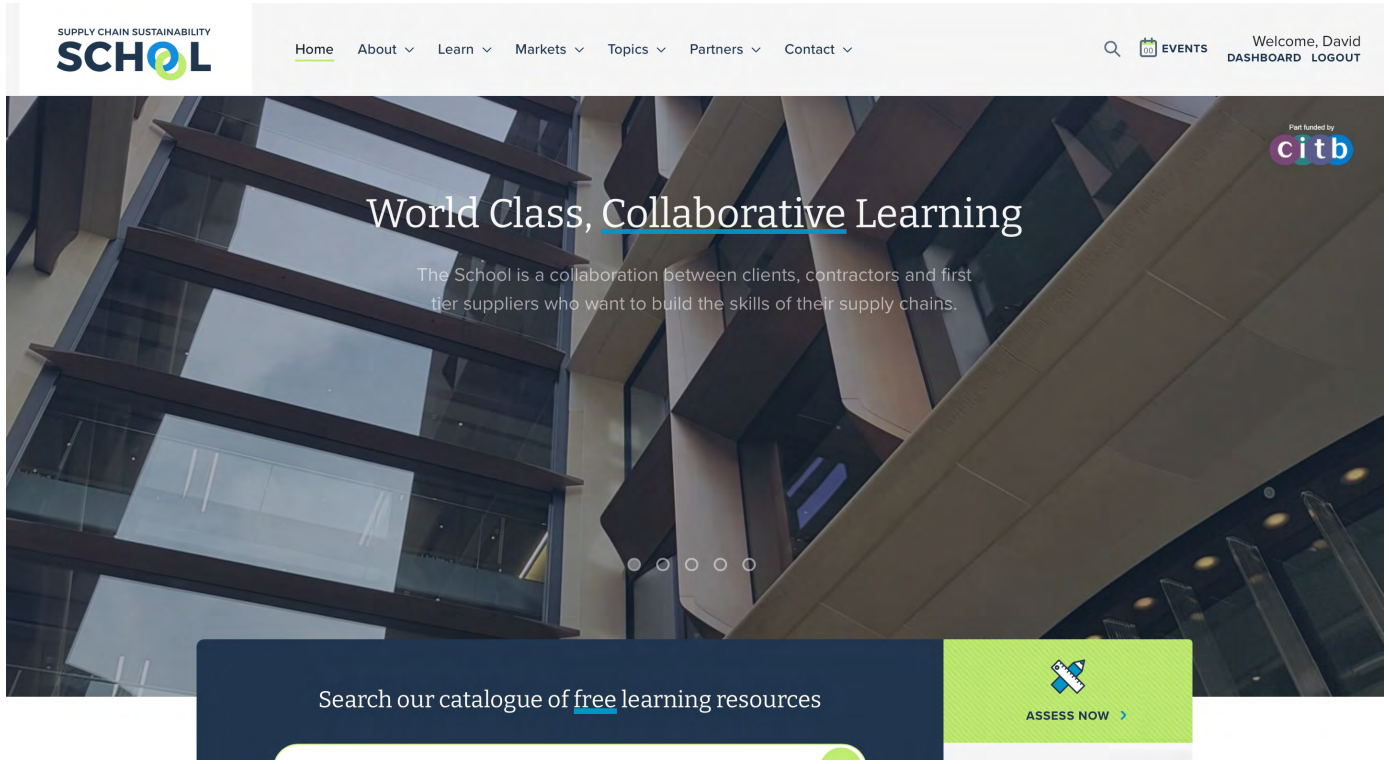
Menti question - code: 8942 8700

How often do you make use of the resources available on the school's platform?

SUPPLY CHAIN SUSTAINABILITY SCHOOL

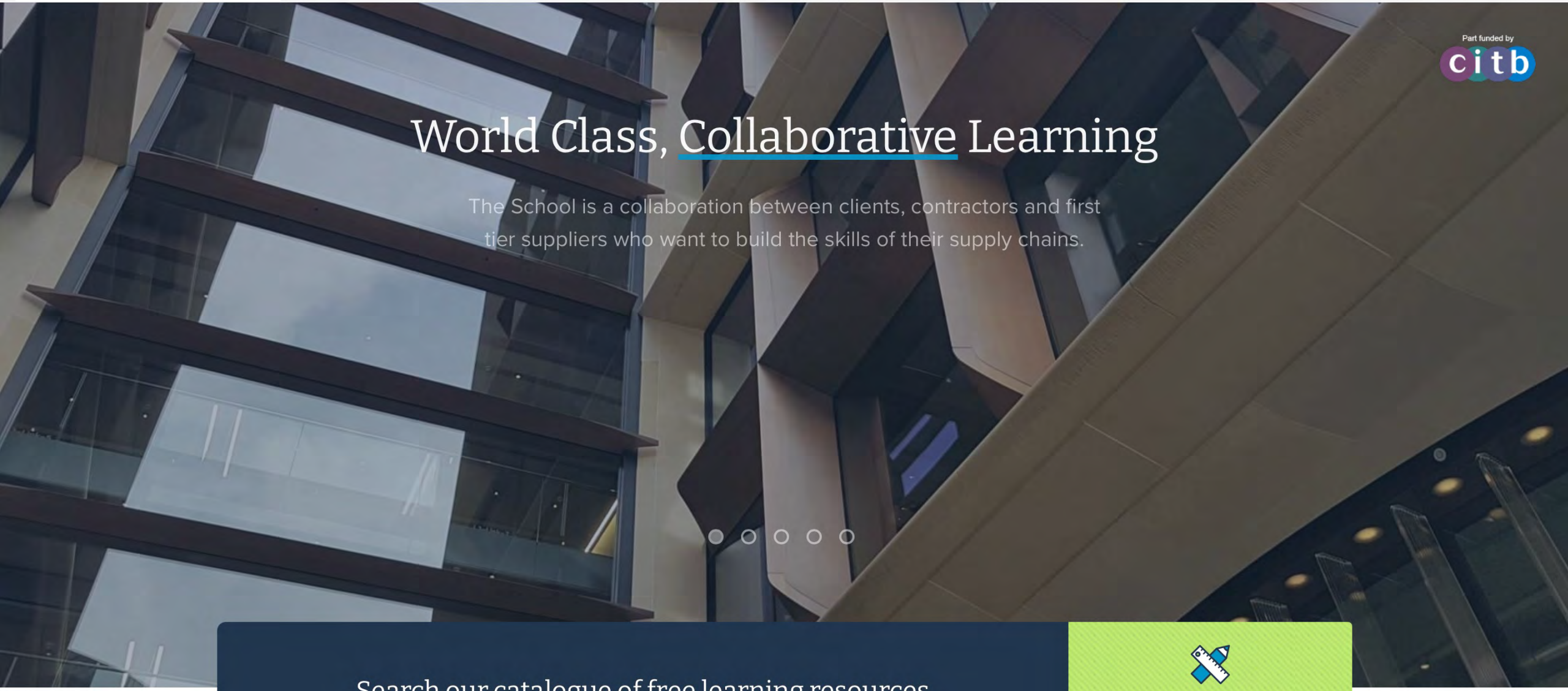
Section Three

Demonstrating the Resources and the Assessment Tools



Demonstrating the Tools:

1. Training Needs Analysis
2. Digital Maturity Assessment



World Class, Collaborative Learning

The School is a collaboration between clients, contractors and first tier suppliers who want to build the skills of their supply chains.

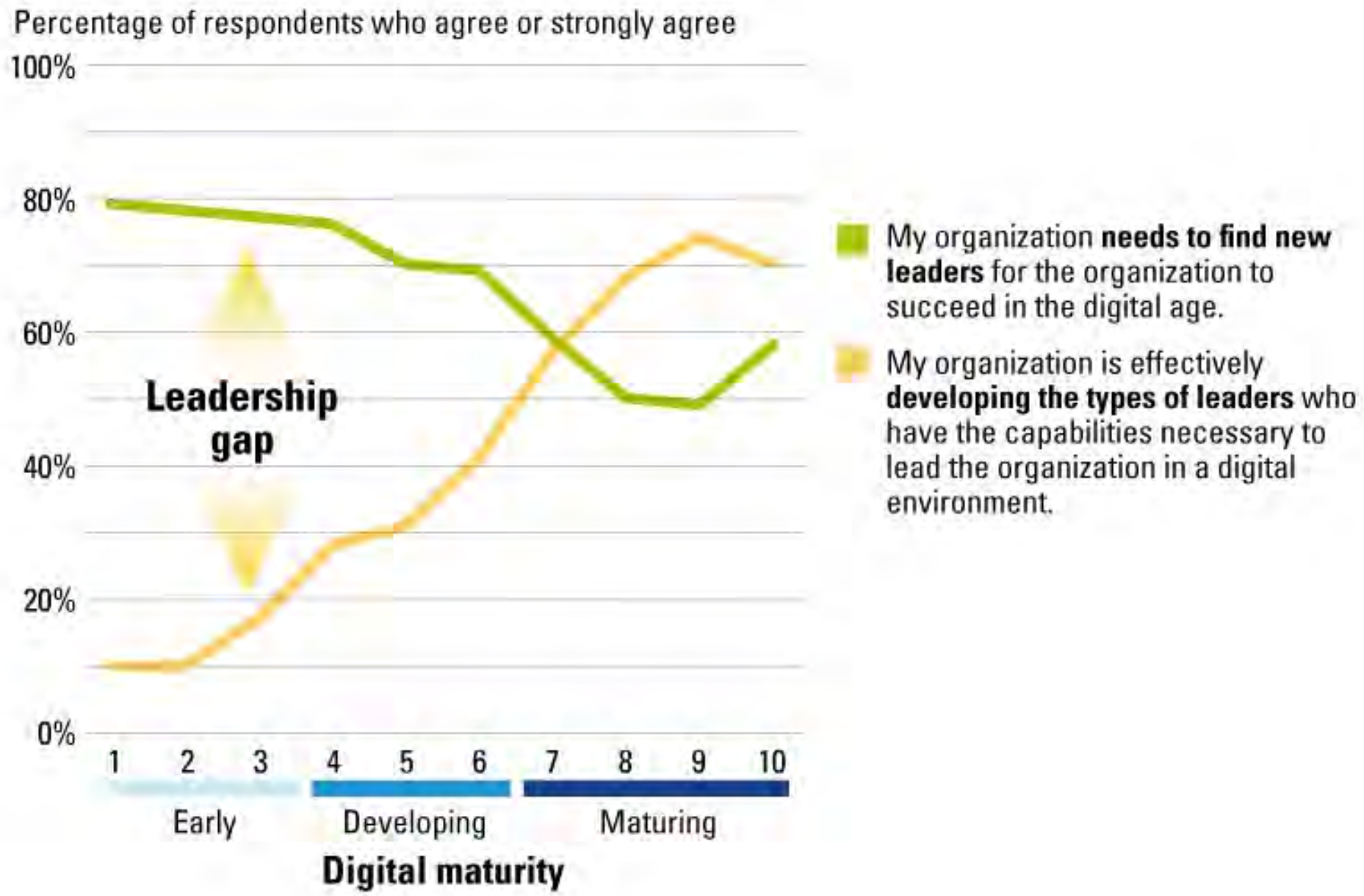
Search our catalogue of free learning resources

ASSESS NOW

SUPPLY CHAIN SUSTAINABILITY SCHOOL

Section Four

Characteristics of a Digital Leader


Percentage of respondents who agree or strongly agree
100%
80%
60%
40%
20%
0%
Leadership gap
1 2 3 4 5 6 7 8 9 10
Early
Developing
Maturing
Digital maturity
My organization needs to find new leaders for the organization to succeed in the digital age.
My organization is effectively developing the types of leaders who have the capabilities necessary to lead the organization in a digital environment.

Menti question - code: 8942 8700

Go to **www.menti.com** and use the code **6064 5981**

Rate your own digital maturity

Mentimeter

1st	1 Early
2nd	2 Developing
3rd	3 Mature

Rate your own digital maturity on Menti

Menti question - code: 8942 8700

Go to **www.menti.com** and use the code **6064 5981**

Rank the characteristics of a Digital Leader

Mentimeter

- Direction
- Innovation
- Execution
- Collaboration
- Inspirational leadership
- Business Judgement
- Building Talent
- Influence

What do you think are the most important characteristics of a digital leader?

Rank them in order of importance.

Menti question - code: 8942 8700

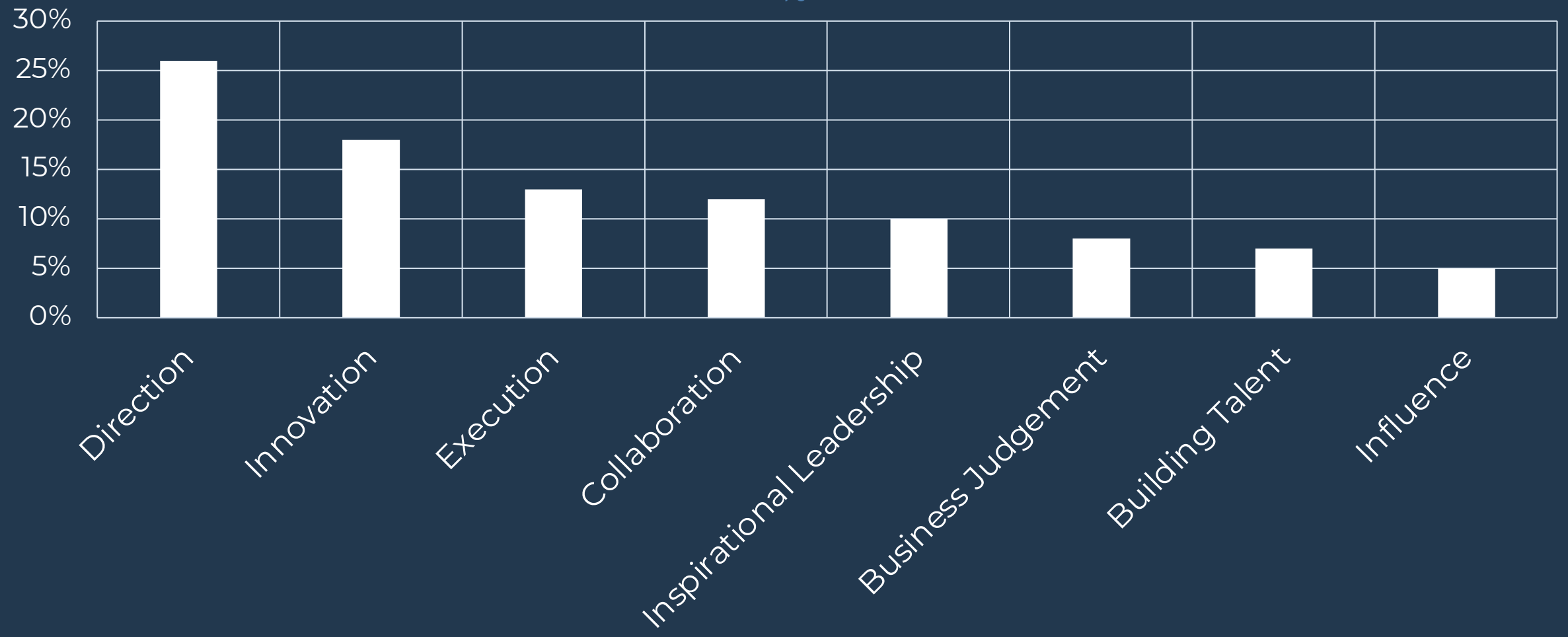
Go to **www.menti.com** and use the code **6064 5981**

Rate your own digital leadership characteristics

Mentimeter

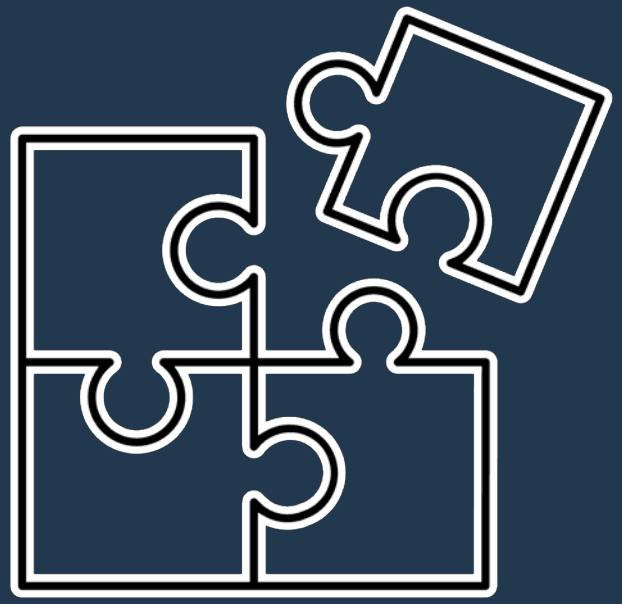
1st	Give Direction
2nd	Innovate
3rd	Empower people
4th	Collaborate
5th	Inspire
6th	Business Judgement
7th	Build talent
8th	Influence

Which of the characteristics of a digital leader do you think you already possess?


%
30%
25%
20%
15%
10%
5%
0%
Direction
Innovation
Execution
Collaboration
Inspirational Leadership
Business Judgement
Building Talent
Influence

Direction

Listen to Jeremy Galpin of Tideway



Innovation

Listen again to Jeremy Galpin of Tideway

Execution

- Empower people
- Create champions
- Support with expertise
- Provide resources

Collaboration

- With your team
- With stakeholders in your business
- Those outside your organisation.

Inspirational Leadership

Name an inspirational digital leader

Business judgement

TOOL	Background	Application	Benefits
APHEX	APHEX Planner is a short-term, detailed web-based planning tool. The parent start-up has been created by ex-Tideway ex-Costain engineers and QSs and the proximity to site teams have been continuous. APHEX took on board most suggestions from Tideway sites to incorporate into the product. It has mostly replaced Microsoft Project (but MS Project still used for simulation by some) and some functions are shared with 4D BIM modelling although they are recognized to have different purposes	Clash detection and smart suggestions for an alternative sequence (between activities on the main Gantt chart but equally on a 2D site plan is the activities have been coded to their respective areas). Optimization of schedule (supports the identification of critical path, re-alignment of activities to save time). APHEX Planner operates in a live environment (no offline versions so always one schedule). Delay analytics (the user is prompted to input the reason for every delay (when an activity is pushed back & APHEX aggregates delay reason statistics for insights))	1. Space-proofing contributes to preventing clashes (and thus delays and materials waste) during delivery. 2. When APHEX is used in weekly lookaheads, it can (with a proper set- up) engage equally the engineers, the foremen and the subcontractors to reveal their tacit knowledge and input their previously separately held schedules. 3. Confidence of looking at the most up to date version because of the live (no offline versions) environment.
Augmented Reality	Initiated by the BIM team for training before going into complex areas, but it is associated with high costs of design and has therefore a fairly limited application scope		Visualization as training before entering complex, confined areas, increasing the safety and decreasing the risk of accidents
Drone surveys	A drone to survey the interior (dimensions, geolocation, state) of sewers (third party assets)	Demonstration	1. Increase in safety, reduction in time and cost as opposed to traditional surveys
Google street view	A bottom-up initiative. Composed of a 360 degrees camera (c. £150 fixed cost) and cloud storage (c. £10 per month). The camera is at present manually operated to take daily snapshot at different site locations.	Progress tracking, safety monitoring, site security, and as-built documentation. Digital images provide an unprecedented opportunity to visually capture actual status of construction sites (at a fraction of cost compared to other alternatives such as laser scanning). Demonstration (for internal learning, external relations, and auditability by the	1.Reduced number of site visits from people non-essential for delivery (saved cost & time of engineers doing the site tour, including the H&S briefing, the Start of Shift), Support for learning (leaves trace when a mistake was made), 2.Support for auditability and as-built documents (reduced risk of missing evidence, reduced time for the red-lining process and cumentation)
Laser scanning & TrueView	Initiative to identify discre supplied by third-party as their assets		ng discrepancies - A discrepancy of 120mm e 3D model supplied by third party and reality - if ked up, the design would have been wrong (thus avoided the cost of re-work)
Photogrammetry		An immediate photo survey of an area which facilitates the input into a 4D model	
FlowForms	Allows to create digital processes (workflows and forms) without the need for programming. Reduced paper usage, no lost forms, better structured data for analytics, awareness of process holdups	Create and fill forms without needed programming experience	1. Reduced time to process because smaller loss of forms. 2.Augments the benefits of Finance robotics (weakest there was absence or illegibility of delivery notes). 3.Benefits multiplied the more repetitive a process (e.g. daily checklists for tunnelling).
TOTEM	A large screen within a metal enclosure placed in safe zones outside on site, the large touch screen connected to Wi-Fi allows the access core systems (Microsoft Teams, APHEX Planner or a 4D BIM model) without leaving the site. iPads aren't allowed on site (to read 4D models) because of health & safety (could get distracted and not notice a danger ahead or above) + signal problems to receive data and use the most up to date drawing (if the worker needs to walk 10-15 minutes each way to get signal, it goes against many benefits of time saving, and most likely will cause the worker not to	Furthering 4D BIM benefits to the site. Involves the production-side in understanding the sequence and upskills in new ways of works. Empowers the generation and use of more visual, digital RAMS, SoSs and reports.	1. Increases access to 4D BIM 2. Saves engineer's time (and loss of focus) lost walking between the site and the office 3. Increases demonstration capability for delivery, de-risks constructability (start of shifts increasingly delivered by the TOTEM)

Create a Matrix of Tools

Breakout Session

1 What digital tools do you currently use and what advantages do they bring?

2 What digital tools are you considering and why?

Building talent

"*Young people nowadays have digital capabilities way beyond my knowledge. I have to accept and use that expertise.*"

Create:

- meaningful work and growth opportunities for staff
- a high-performance workplace and
- a climate of continuous learning and increased productivity.

Influencing

What percentage of change initiatives fail?

A: 70%

Influencing

- Difficult to quantify RoI
- May need to persuade others of the benefits of digital transformation
- Address mindsets/behaviours
- Address shortfalls in existing infrastructure.

Influencing

"[a stakeholder] didn’t approve of our works because they said they didn’t quite understand what needed to be done.... We created a 4D model to show them … and … having seen this they were very happy and [withdrew their objection]".

SUPPLY CHAIN SUSTAINABILITY SCHOOL

Section Five

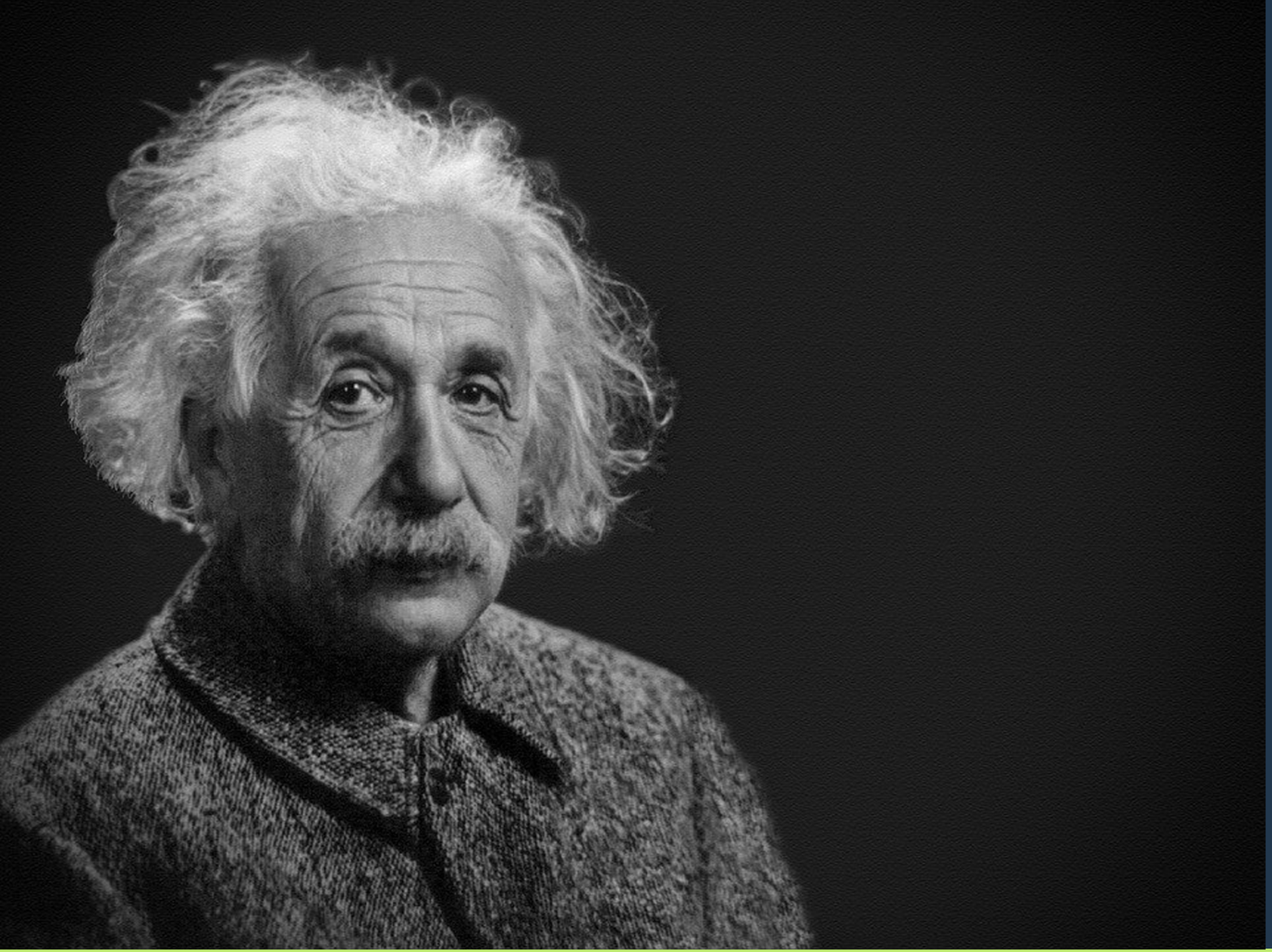
Benefits and Risks

What might be some of the benefits of digitalisation in your business?

- 3D printing
- 5G
- Artificial intelligence & Machine learning
- Big Data
- Blockchain
- BIM
- Cloud computing
- Internet of Things
- Proximity sensors
- Robotics & Drones

'Construction 2025 - Industrial Strategy: government and industry in partnership'

“A UK industry that leads the world in research and innovation, transformed by digital design, advanced materials and new technologies, fully embracing the transition to a digital economy and the rise of smart construction”.



“The world cannot be changed without changing our thinking”

“The greatest barrier to data success today is business culture, not lagging technology”

Q: What percentage of business executives do you think agreed with this statement?

A: 50%
B: 60%
C: 75%
D: 90%

Answer: 90%

Source: MIT Survey

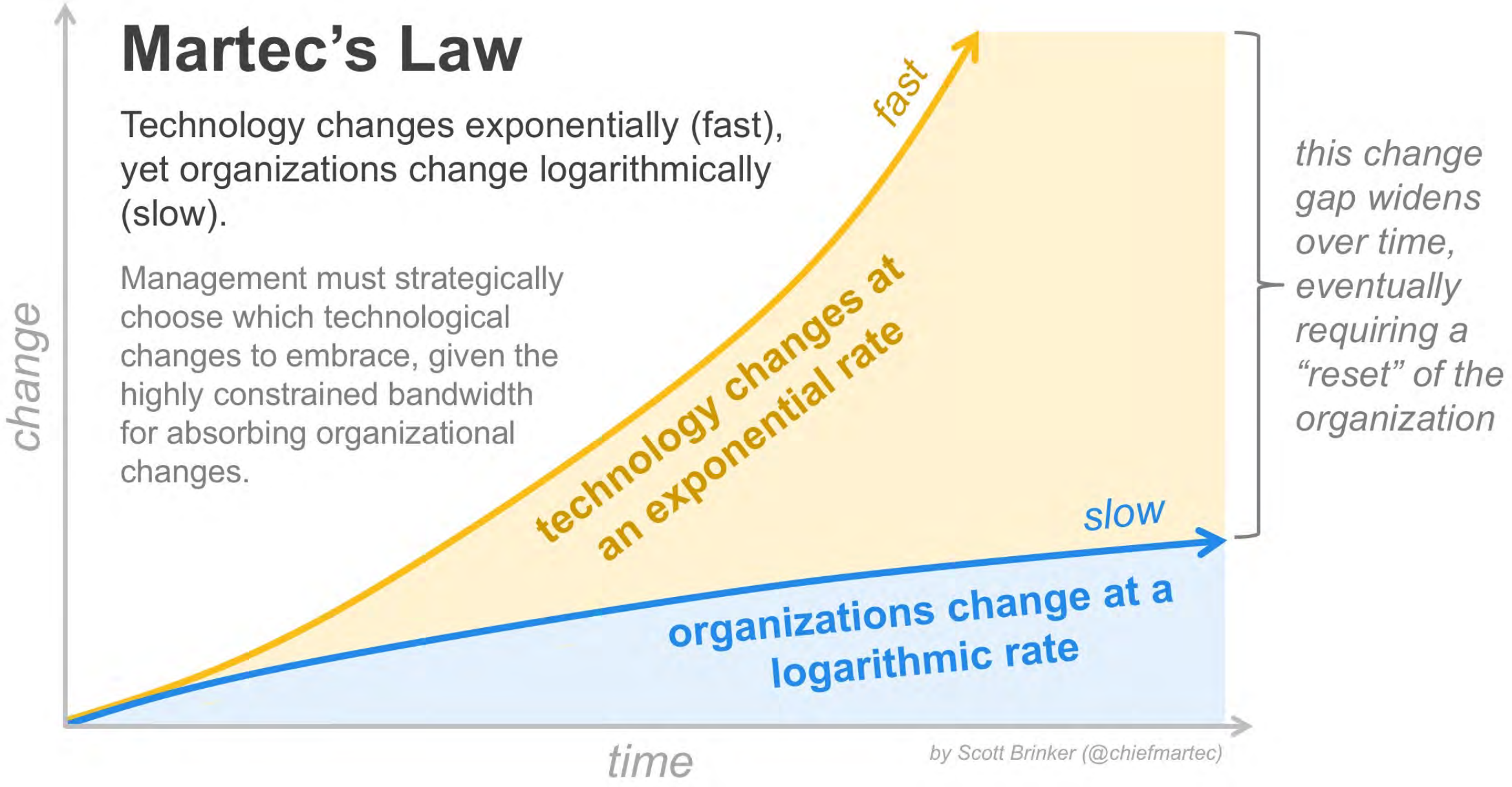
Underestimating the challenge

Listen to John Batterbee, Solutions Director, Costain plc

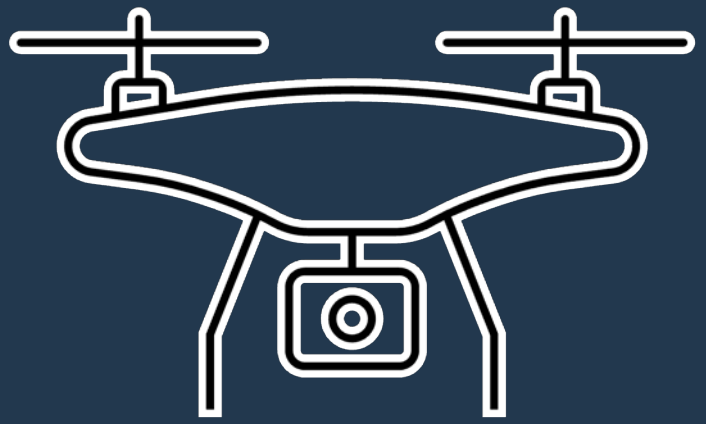
Martec's Law

Technology changes exponentially (fast), yet organizations change logarithmically (slow).

Management must strategically choose which technological changes to embrace, given the highly constrained bandwidth for absorbing organizational changes.



Failing to grasp the opportunity



Technological Issues

BLUES BROTHERS
JURASSIC PARK
THE LOST WORLD
JURASSIC PARK
ALIENS
IBM
Guide to Operations
Personal Computer XT
WordPerfect
WordPerfect
123
LOTUS
IBM
IBM

LONDON'S SUPER SEWER
PLAY FULL VIDEO

Late delivery

Missing the target

Listen again to John Batterbee, Solutions Director, Costain plc

Case Study
GAP Group

Cyber risks

Michael Born
VP, Cyber & Technology
Lockton Companies

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Section Six

Digital Strategy

Digital Strategy: “A plan formulated to achieve specific goals through a digital medium”

The strategy should help create an organisation that can demonstrate

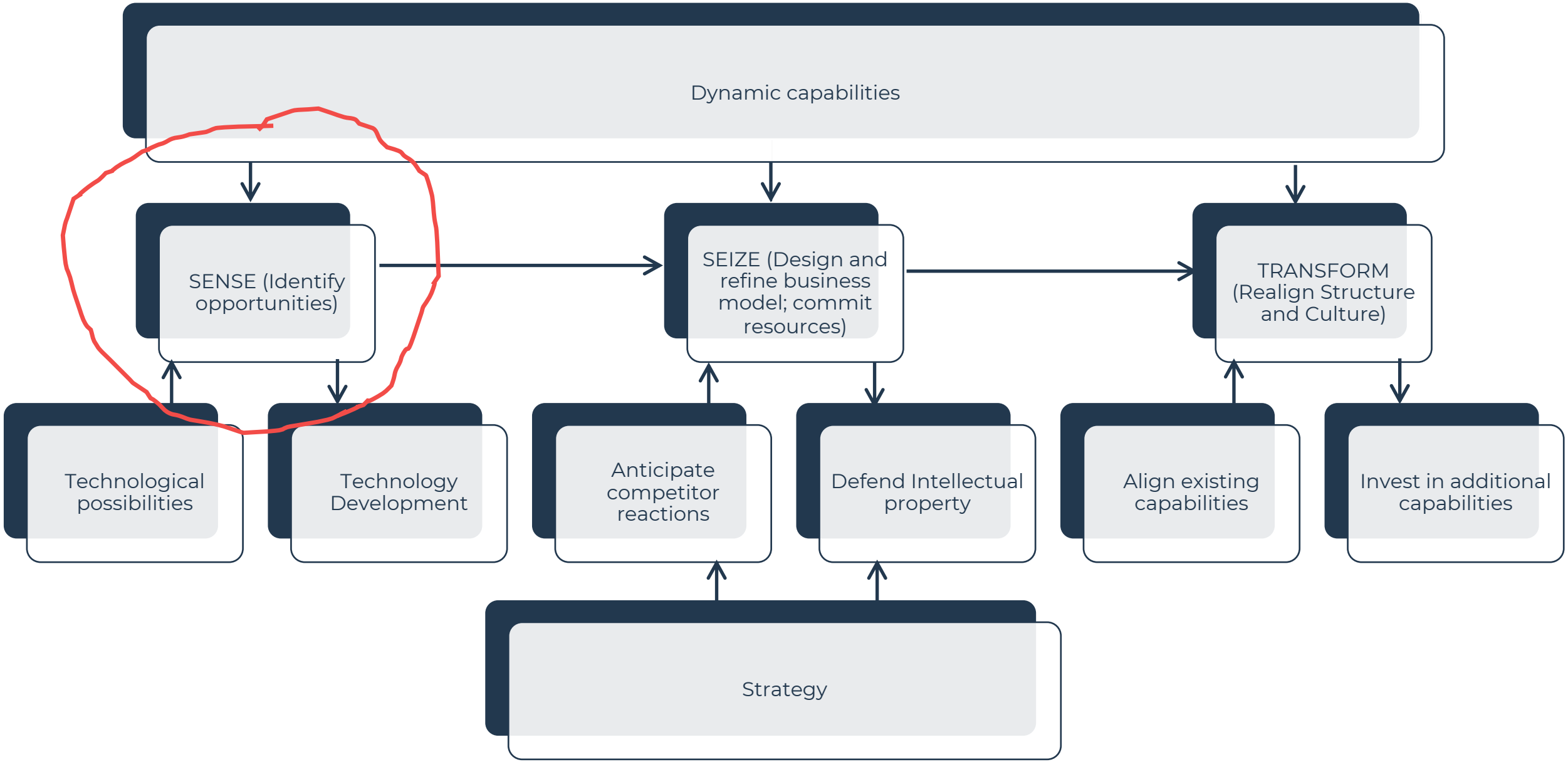
A CULTURE OF INNOVATION

THE DESIRE TO TAKE SOME RISK – AND ACCEPT SOME FAILURE

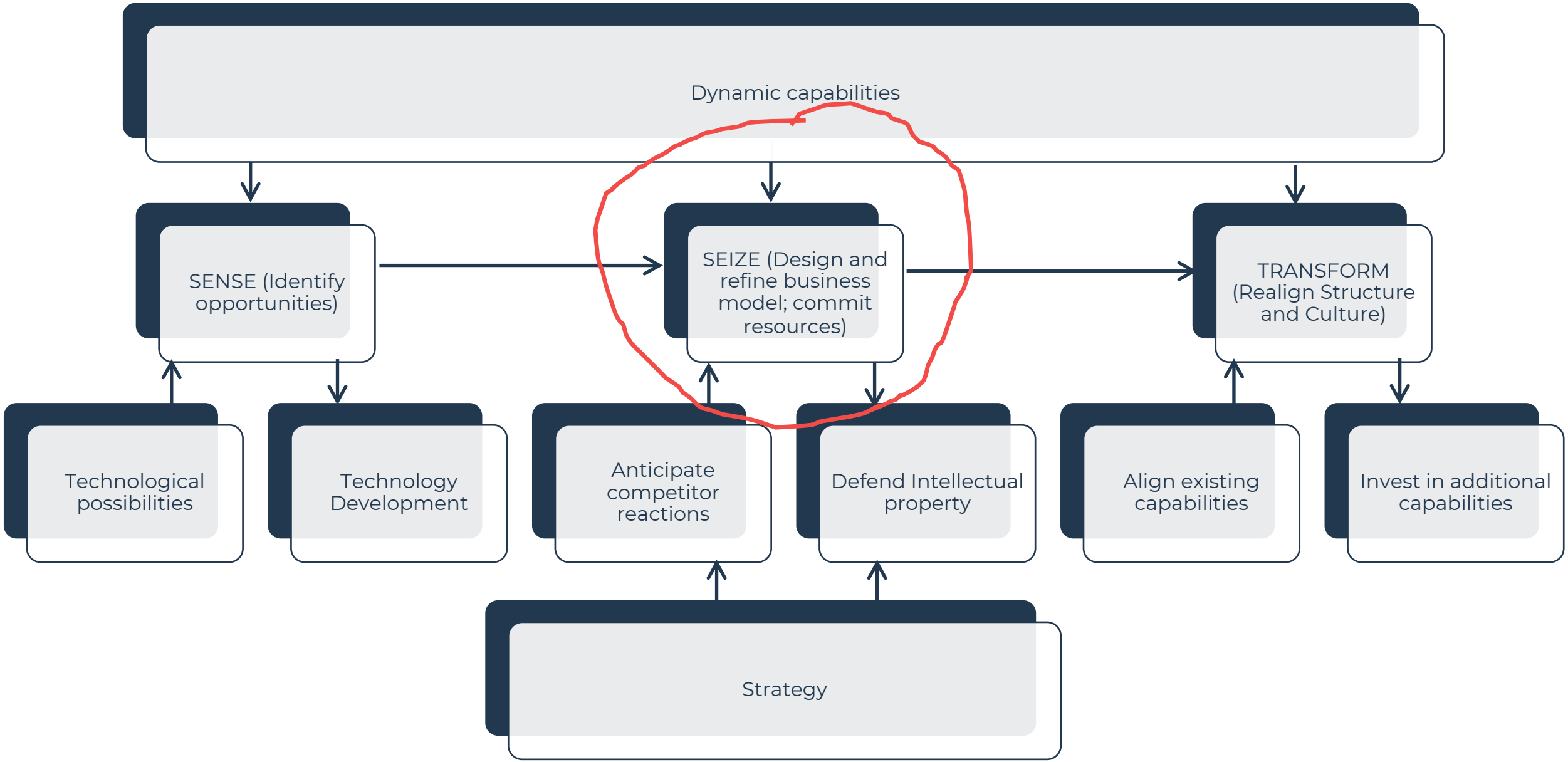
A STRUCTURE THAT SUPPORTS RAPID GROWTH AND CHANGES ENTERPRISING BEHAVIOUR

ENGAGEMENT
Internally with its employees and externally with its customers, partners and collaborators

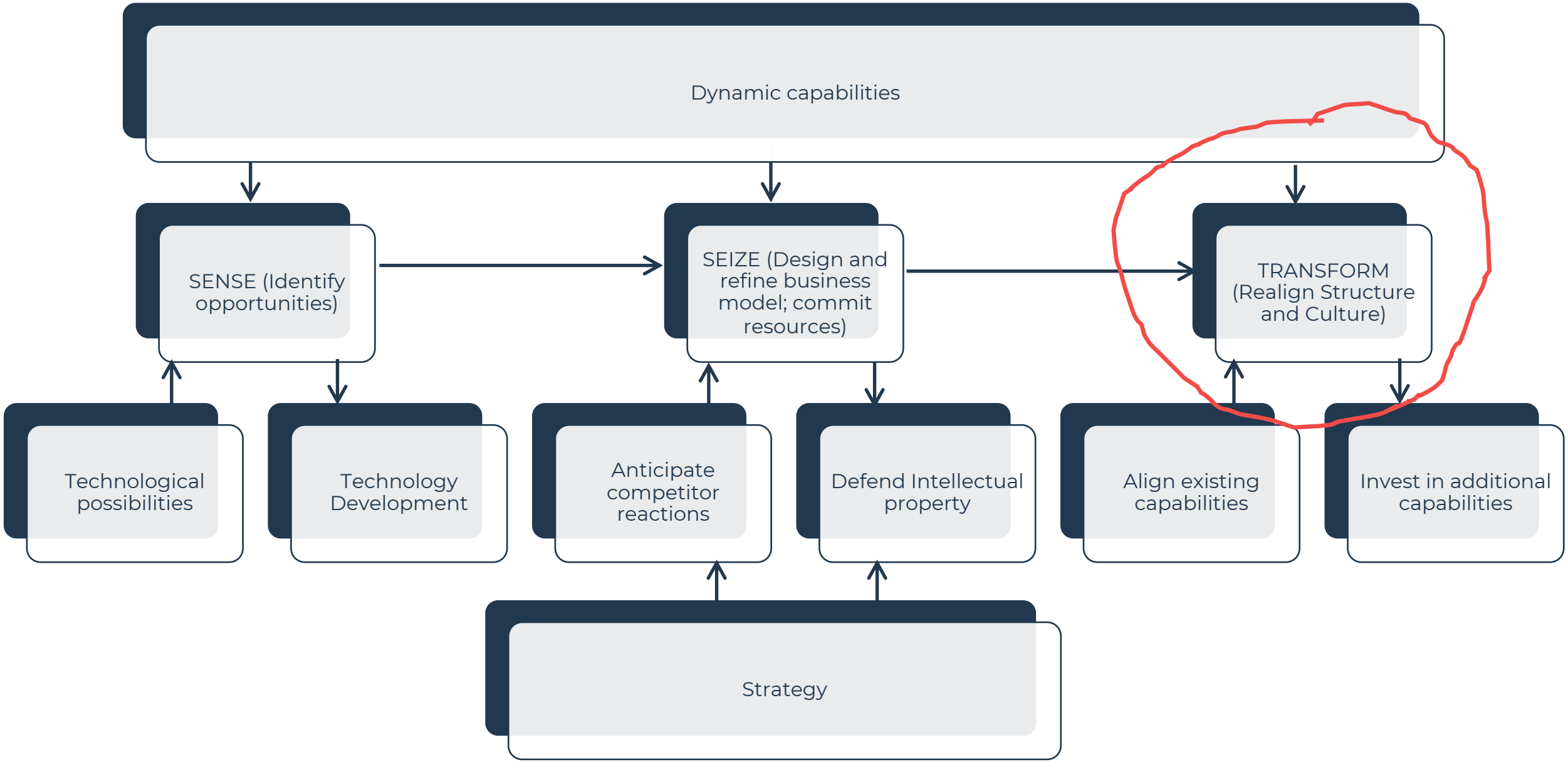
• Dynamic Capabilities



• Dynamic Capabilities



• Dynamic Capabilities



SUPPLY CHAIN SUSTAINABILITY SCHOOL

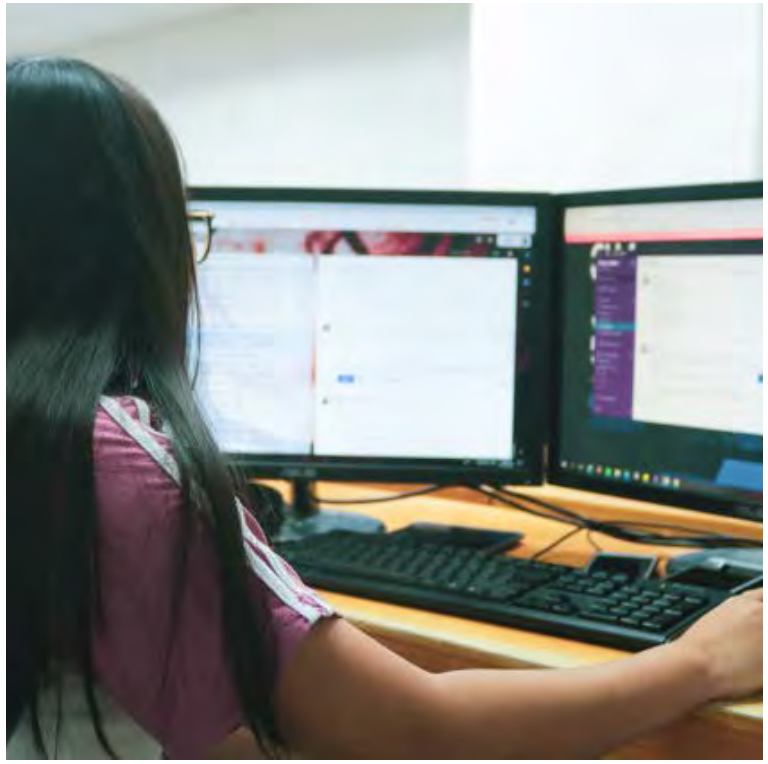
Section Seven

Using data to drive better business outcomes

Using data to drive better business outcomes

For the project team

What digital innovations can you think of?



For admin staff

What digital innovations can you think of?

For the site

What digital innovations can you think of?

For the customer

Before we discuss innovations....

A Capgemini study found that 75% of organisations believed themselves to be customer-centric.

What percentage of customers do you think agreed?

A: 30%!

For the customer

What digital innovations can you think of?

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Section Eight

Feedback

Feedback please

<insert link>

SUPPLY CHAIN SUSTAINABILITY SCHOOL

Section Nine

About the Digital Leadership Course

1
Online resource library

1
Online TNA

5
e-learning modules

1
Online Digital Maturity Assessment

10
Digital bytes videos

Tideway

SKANSKA

8
Digital Days

24
Training courses

1
Online resource library

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Online TNA

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e-learning modules

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Online Digital Maturity Assessment

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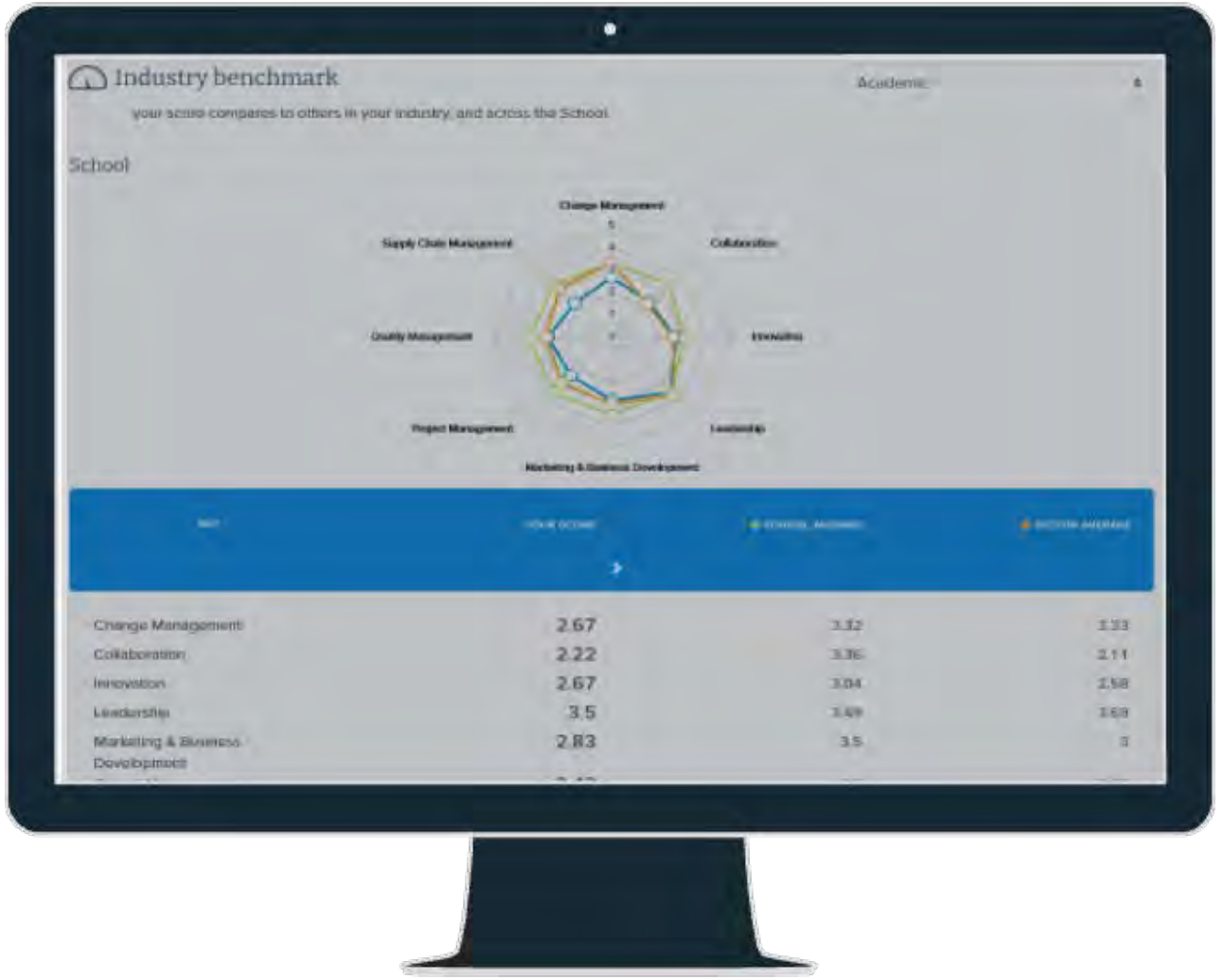
Digital bytes videos



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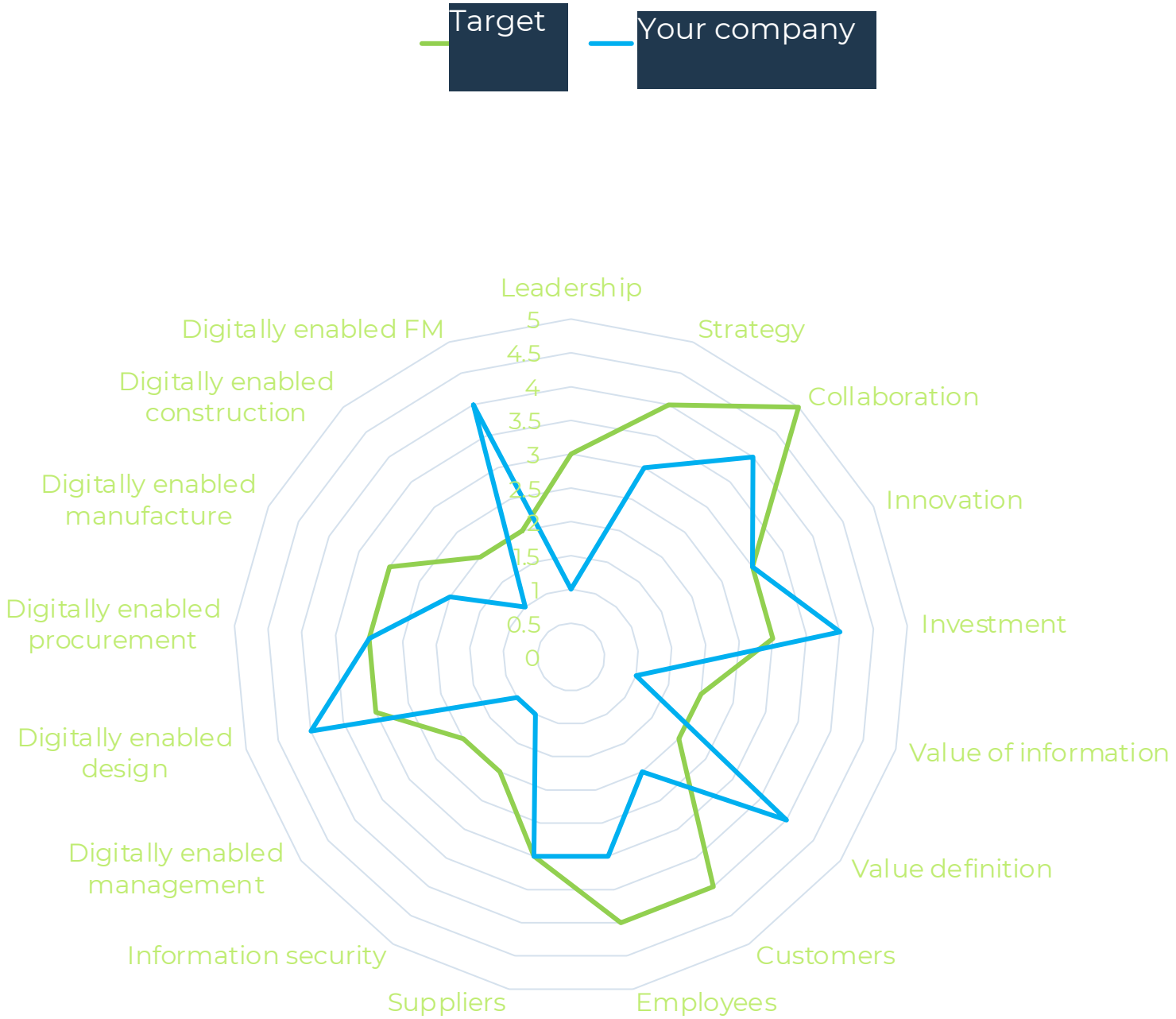

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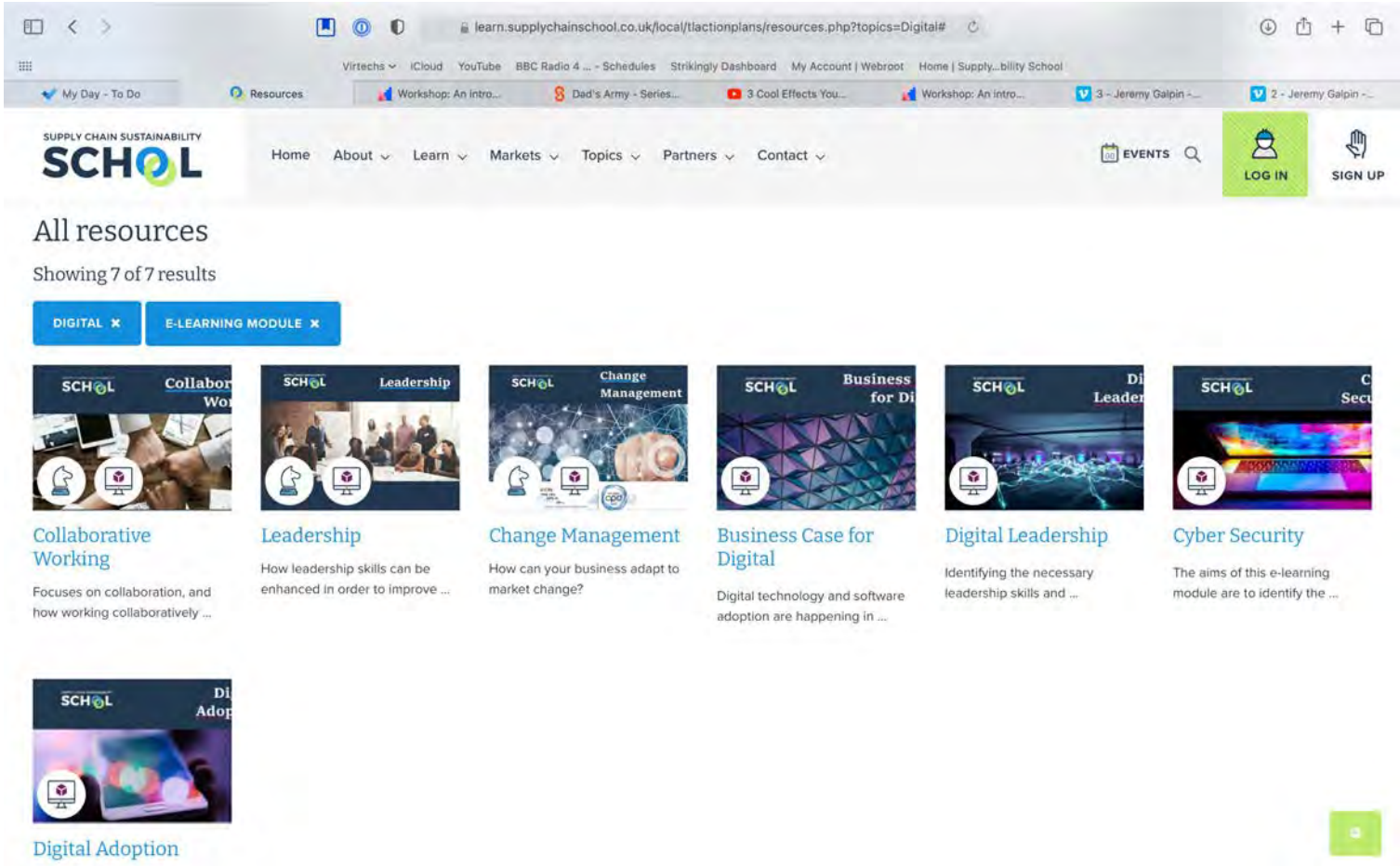

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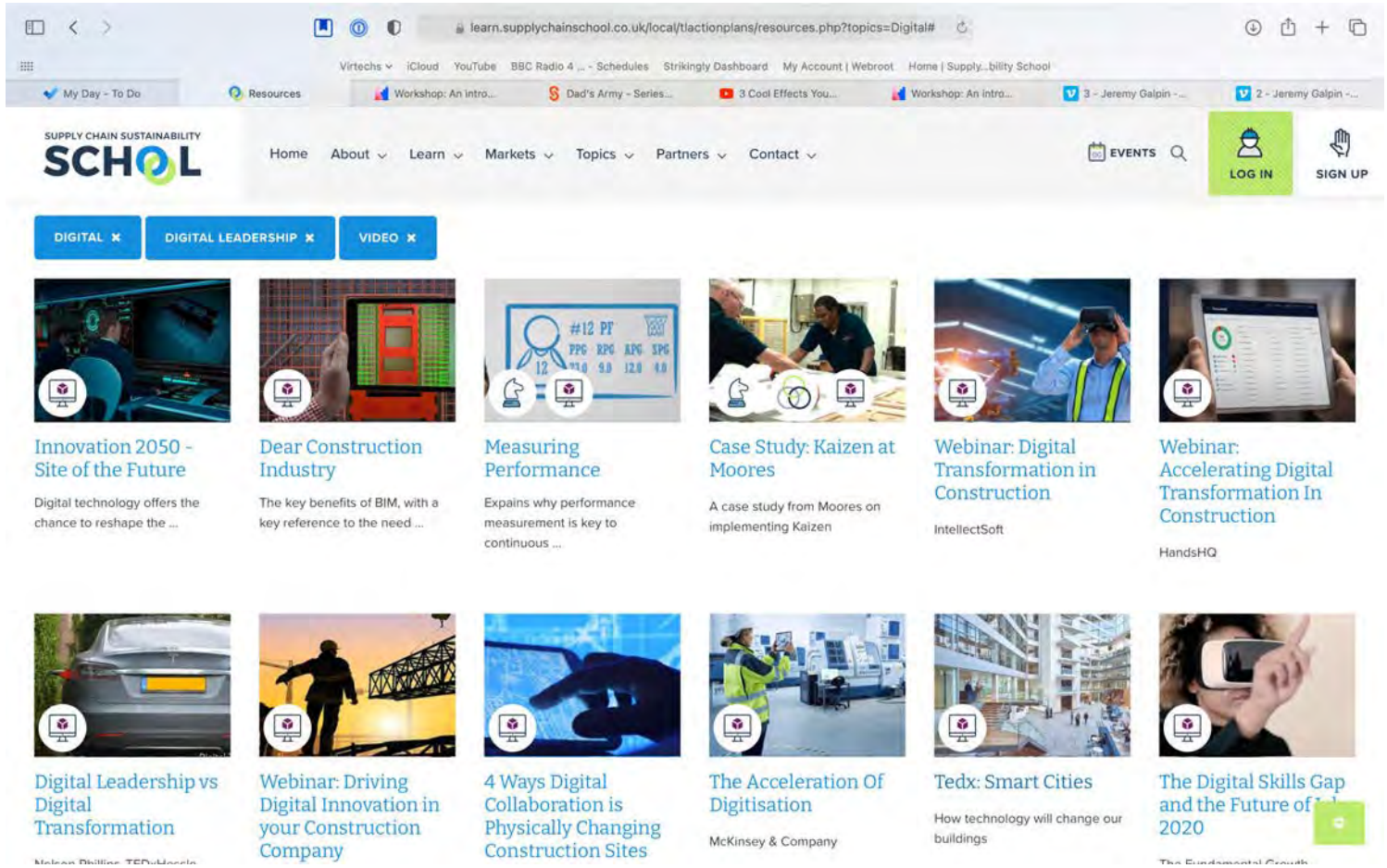


CITB believes that

. . ."Digital technology and the wider understanding of its benefits are the vital next steps for modernisation.

Digital technology will be a cornerstone of the construction sector's reform to productivity, efficiency, and quality of delivery.

[It] can also support the attraction, retention and inspiration of new generations of talent for our sector".

This is the Introductory Module

A 3-hour CPD accredited course

Weeks 1-2 → Weeks 3-4 → Weeks 5-6

Introduction to Digital Leadership Introductory Module
3 hr CPD accredited course

Assessment of Individual Digital Skills

Assessment of Organisational Digital Maturity

Pre-reading of Harvard Teaching Cases
½ day

Additional Resource Learning
Minimum of ½ day, we have over 100 resources available

Complete 4 eLearning Modules
Each course minimum of 1 hour
CPD – accredited modules and certification once passed

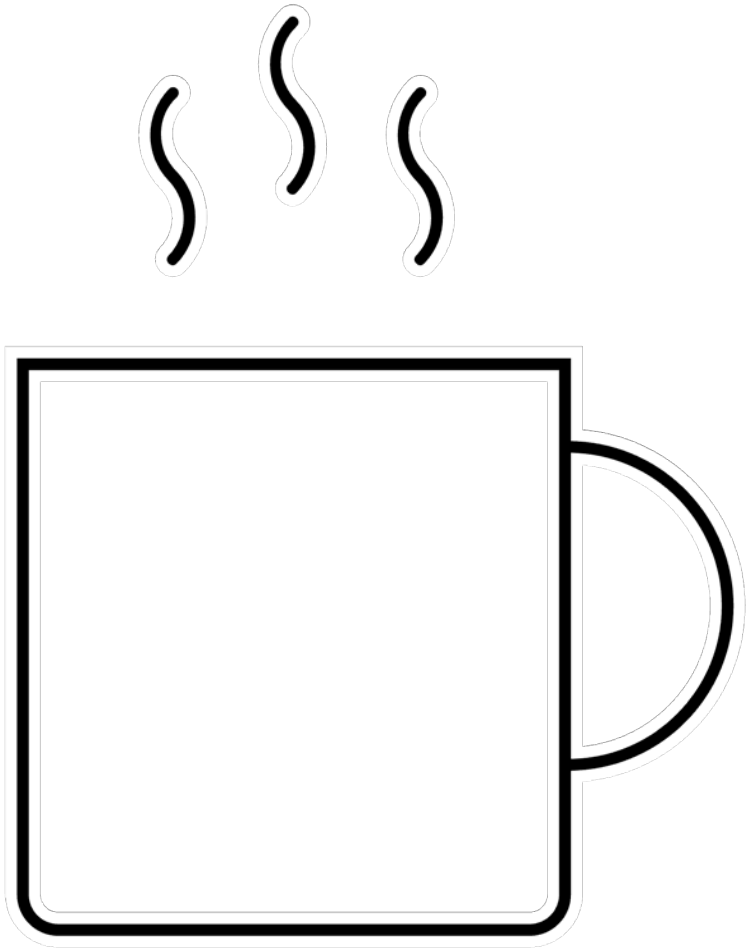
Digital Leadership Virtual 'Harvard' Training Course
½ day CPD – accredited course

Re-assessment of Individual Digital Skills & Organisational Maturity

Awarded Supply Chain School "Digital Leadership" Badge

For leaders to become digital leaders, they will need to develop new skill sets.

SUPPLY CHAIN SUSTAINABILITY SCHOOL

This is what you will learn

- How to use the School's resources
- How to take a Training Needs Assessment
- What are the characteristics of a Digital Leader?
- The Benefits and Risks of Digital Transformation
- Developing a Digital Strategy
- The value of data.