

Improving Digital Leadership Skills

SDF workshop / National Highways

David Emery - Supply Chain Sustainability School

4th October 2023

Understand how to use the School's resources and to take a Training Needs Assessment

Understand some of the skills and characteristics required of the digital leader

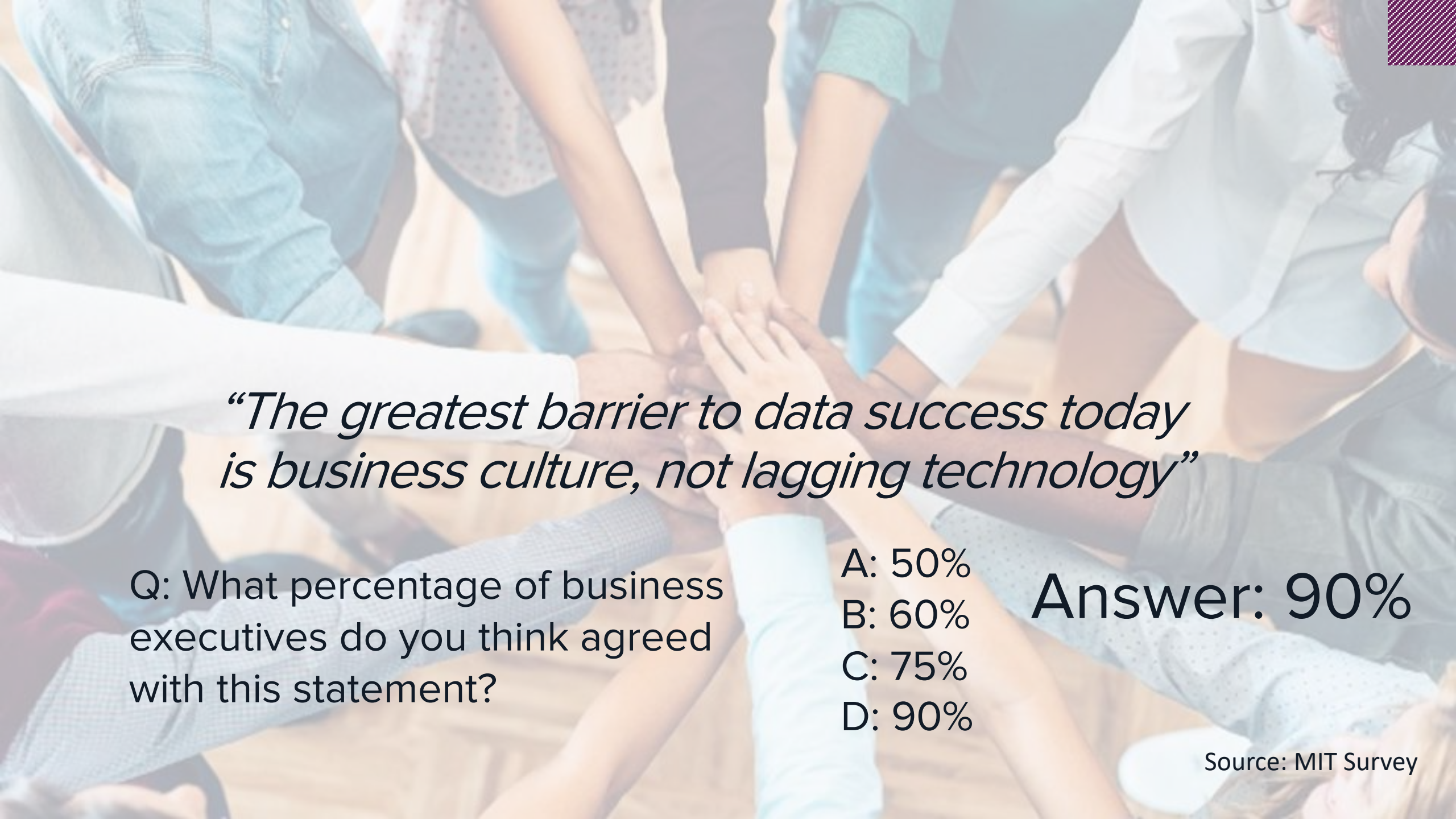
Understand some of the benefits – and pitfalls – of digital innovation

Understand the essentials of creating a digital strategy

Understand the ways of using data to drive better outcomes

Understand the further learning and support available.





“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

SUPPLY CHAIN SUSTAINABILITY
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SECTION ONE



Welcome and introductions

SUPPLY CHAIN SUSTAINABILITY
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SECTION TWO

About the School

SUPPLY CHAIN SUSTAINABILITY
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SECTION THREE



About the 'Downloading a Digital Mindset' project

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SECTION FOUR

Demonstrating the Resources and the Assessment Tools



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SECTION FIVE

Characteristics of a Digital Leader



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SECTION SIX



Benefits and Risks

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SECTION SEVEN

Digital Strategy



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The value of data
SECTION EIGHT

Using data to drive better business outcomes



Feedback please



Welcome and Introductions

David Emery



Digital



Offsite



Join at [menti.com](https://www.menti.com) use code 3684 9658

Mentimeter

Instructions

Go to

www.menti.com

Enter the code

3684 9658



Or use QR code

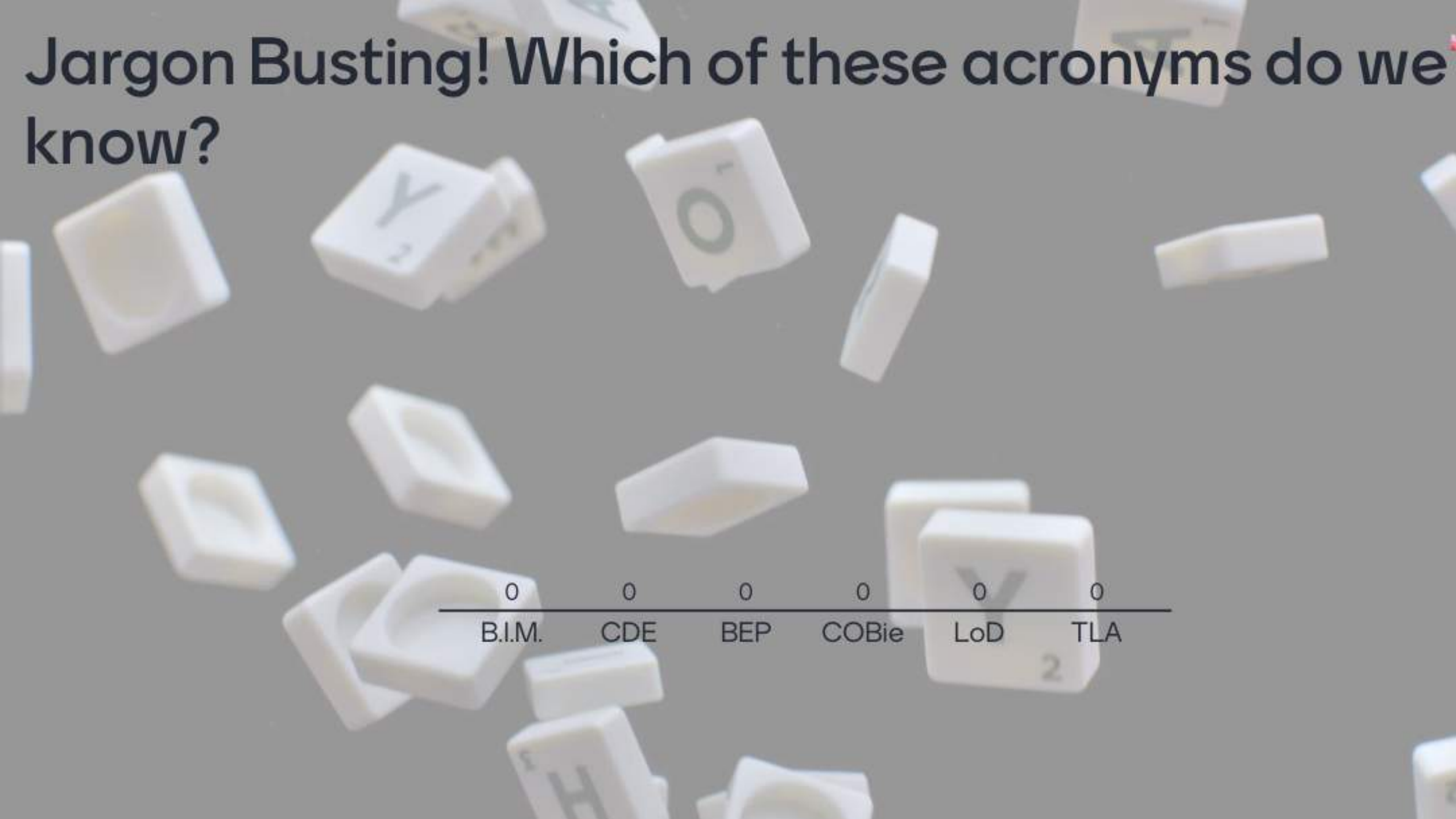
**Please introduce yourself - name,
company, location, job**



What was your most disappointing digital purchase?



Jargon Busting! Which of these acronyms do we know?



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B.I.M. CDE BEP COBie LoD TLA

SUPPLY CHAIN SUSTAINABILITY



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

200+ Partners leading our work





200+ Partners leading our work



200+ Partners leading our work



200+ Partners leading our work



200+ Partners leading our work





Our digital mission

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

Free

Confidential

CPD Accredited

Key topic areas



Sustainability



Management



Offsite



FIR



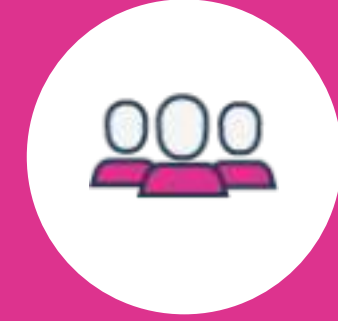
Lean Construction



Digital



Procurement



People

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



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SECTION THREE

About the 'Downloading a Digital Mindset' project



GRANDS PROJETS



SUPPLY CHAIN SUSTAINABILITY



‘Downloading a Digital Mindset’

Outputs from the project



Online Resource
Library

Training Needs
Assessment



Digital Maturity
Assessment

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‘Downloading a Digital Mindset’

Outputs from the project (cont'd)



5 New eLearning
Modules

10 Digital Bite
Videos



Digital Leadership
Course

SUPPLY CHAIN SUSTAINABILITY



‘Downloading a Digital Mindset’



SKANSKA

**MORGAN
SINDALL
GROUP**



**AGGREGATE
INDUSTRIES**



Leadership
Group

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Leadership
Group

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

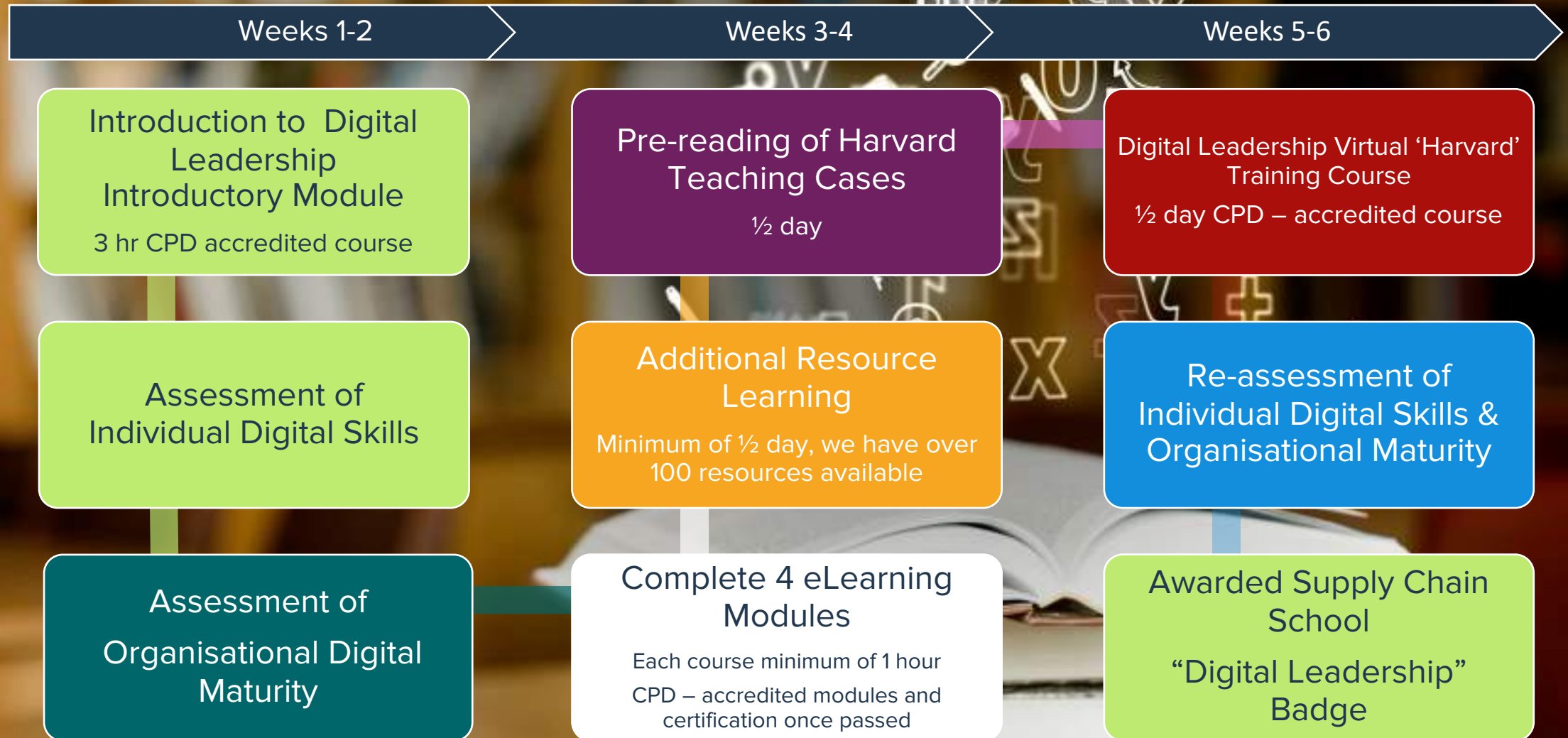
Digital technology will be a cornerstone of the construction sector's reform to productivity, efficiency, and quality of delivery.

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



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

THE DIGITAL LEADERSHIP STUDENT'S JOURNEY



THE DIGITAL LEADERSHIP STUDENT'S JOURNEY

Coming Soon!

Digital Leadership course 2
Addressing Business Culture and
Behaviours

SUPPLY CHAIN SUSTAINABILITY



SECTION FOUR

Demonstrating the Resources and the Assessment Tools



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SEARCH EVENTS Welcome, David
DASHBOARD LOGOUT

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.

Part funded by **citb**

Search our catalogue of **free** learning resources

ASSESS NOW >

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



SECTION FIVE

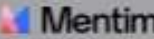
Characteristics of a Digital Leader

Percentage of respondents who agree or strongly agree



- 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.

Go to www.menti.com and use the code 8794 5215



Rate your own digital maturity (e.g. Early, Developing, Mature etc.)



Rank the characteristics of a Digital Leader



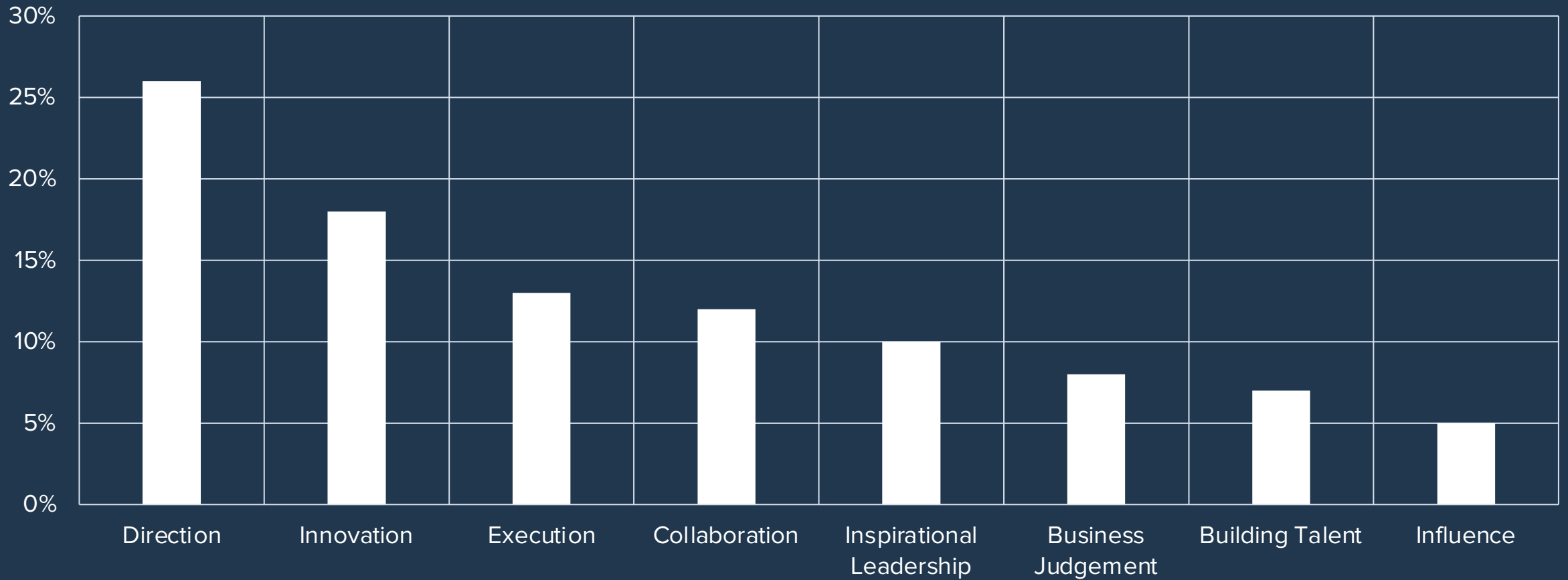
Go to www.menti.com and use the code 8794 5215

Rank your own characteristics and skills





%



SUPPLY CHAIN SUSTAINABILITY



Technological Skills of the Digital Leader



Critical thinking

A series of colorful speech bubbles hanging from a string, representing different aspects of critical thinking. The bubbles are in various colors: purple, orange, blue, green, red, and teal. The largest bubble is orange and is in the foreground, while the others are smaller and in the background.

Analysing Data

Evaluating Sources

Problem-Solving

Ethical
Considerations

Innovating

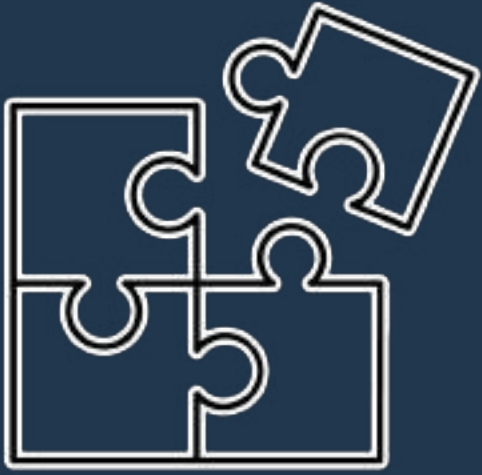


Direction

[Listen to Jeremy Galpin of Tideway](#)

Digital leadership skills





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 	<p>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</p>	<p>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))</p>	<p>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.</p>
Augmented Reality	<p>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</p>		<p>Visualization as training before entering complex, confined areas, increasing the safety and decreasing the risk of accidents</p>
Drone surveys	<p>A drone to survey the interior (dimensions, geolocation, state) of sewers (third party assets)</p>	Demonstration	<p>1. Increase in safety, reduction in time and cost as opposed to traditional surveys</p>
Google street view	<p>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.</p>	<p>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</p>	<p>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)</p>
Laser scanning & TrueView	<p>Initiative to identify discrepancies supplied by third-party as their assets</p>		<p>ing discrepancies - A discrepancy of 120mm the 3D model supplied by third party and reality - if picked up, the design would have been wrong (thus avoided the cost of re-work)</p>
Photogrammetry		<p>An immediate photo survey of an area which facilitates the input into a 4D model</p>	
FlowForma	<p>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</p>	<p>Create and fill forms without needed programming experience</p>	<p>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).</p>
TOTEM	<p>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</p>	<p>Furthering 4D BIM benefits to the site. Involves the production-side in understanding the sequence and upsills in new ways of works. Empowers the generation and use of more visual, digital RAMS, SoSs and reports.</p>	<p>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)</p>

Create a Matrix of Tools

Go to www.menti.com and use the code 8794 5215



Mentimeter

What digital tools do you currently use (or are considering) and what advantages do they bring?



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]"

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SECTION SIX



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

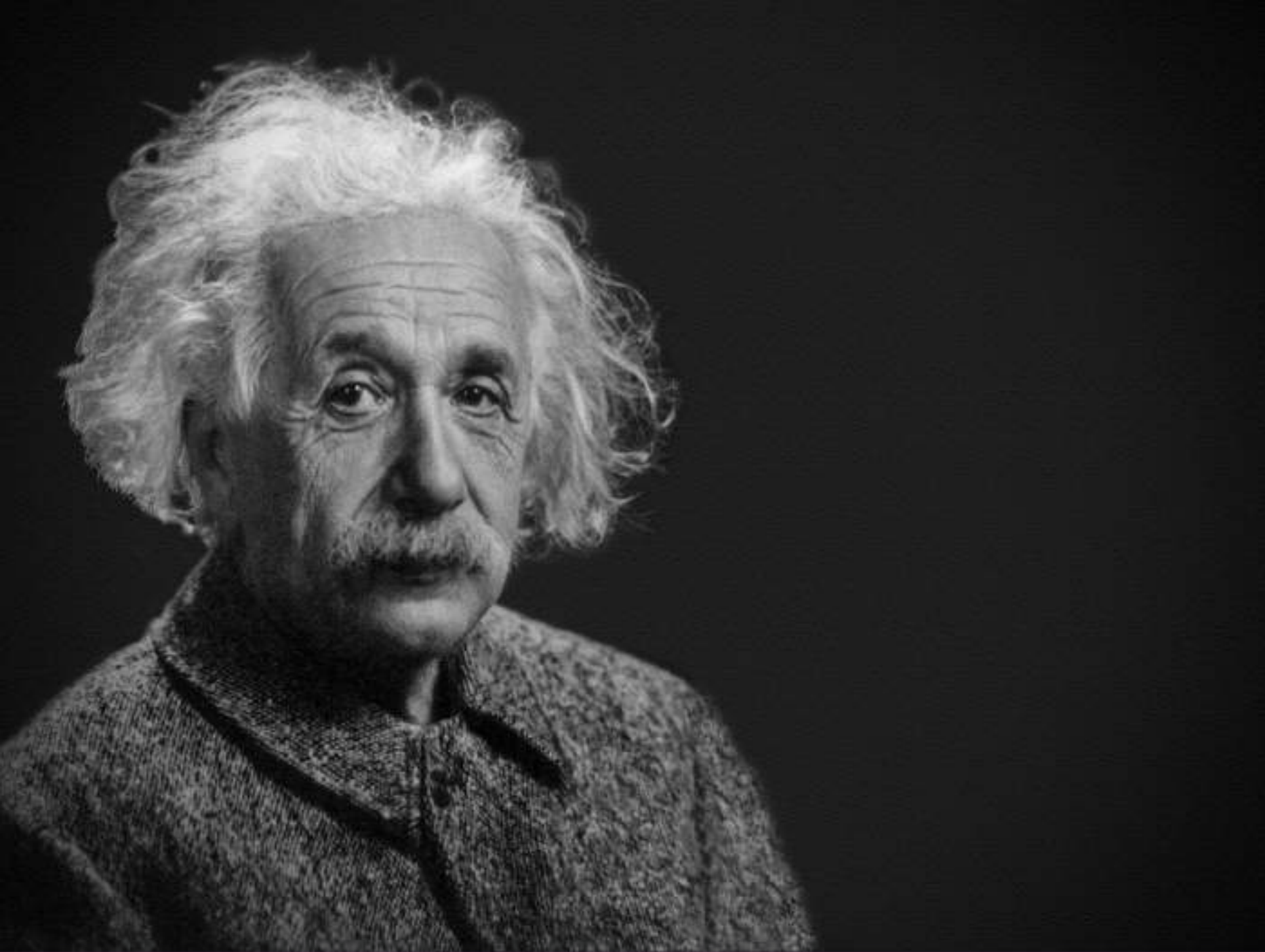
Cloud computing

Internet of Things

Proximity sensors

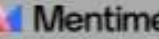
Robotics & Drones

“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”*

Go to www.menti.com and use the code 8794 5215



**Name some RISKS of Digital in
your job**





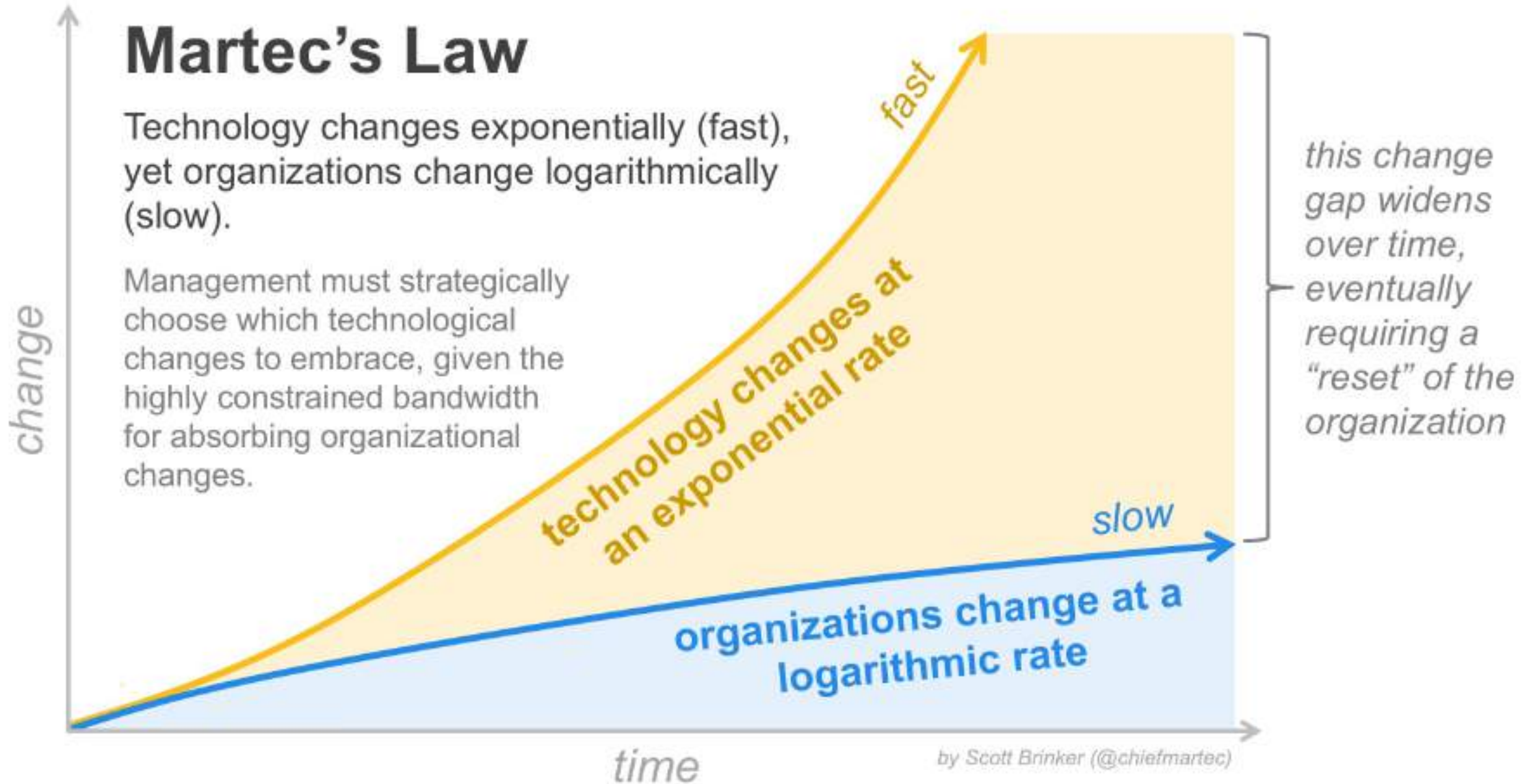
Underestimating the challenge

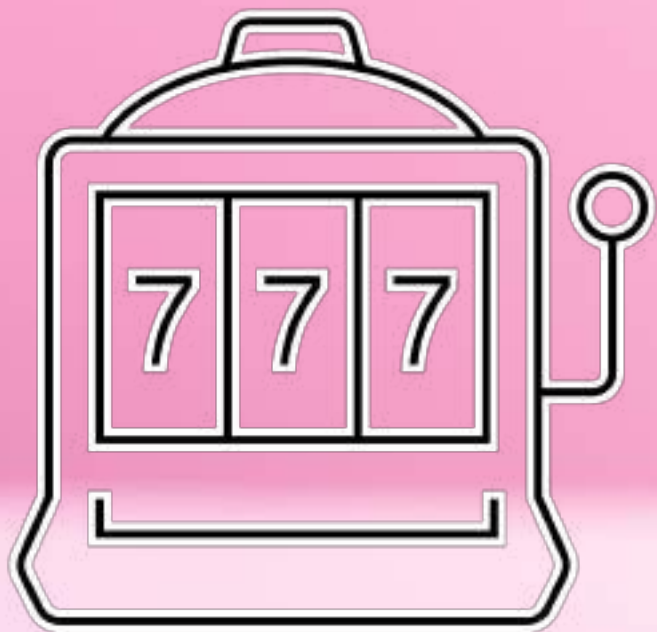
Listen to John Batterbee, Solutions Director, Costain plc

Martec's Law

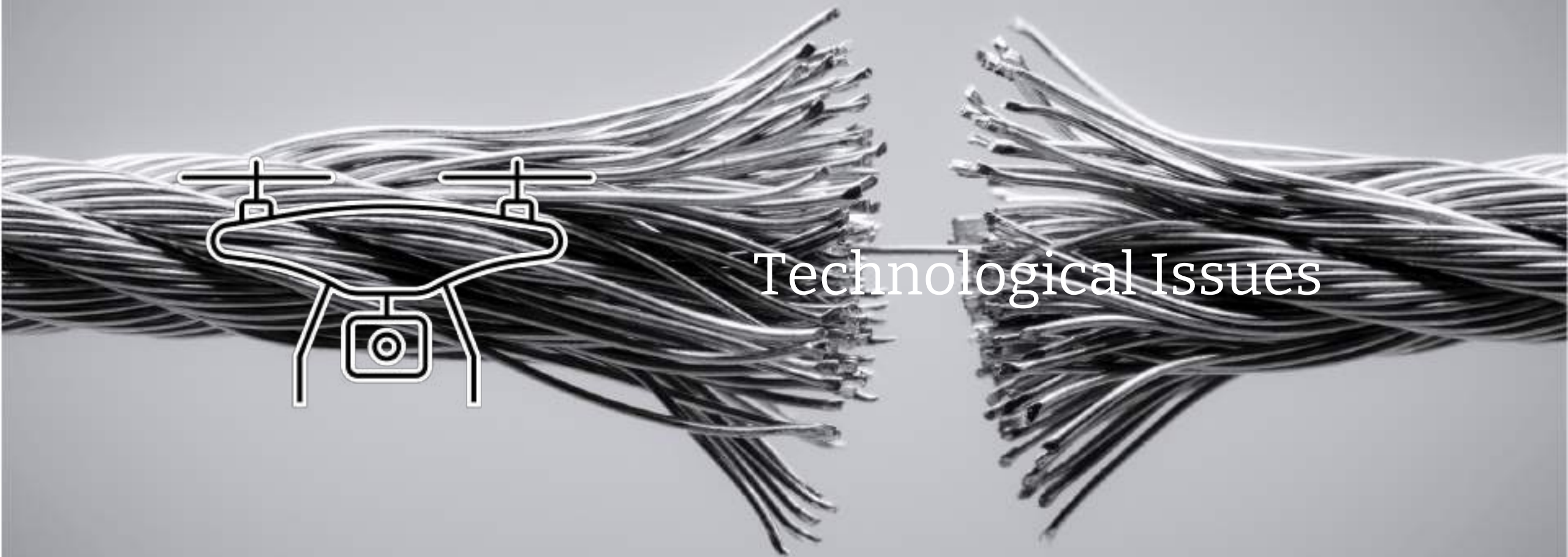
Technology changes exponentially (fast), yet organizations change logarithmically (slow).

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



Tideway



THE TUNNEL

LOCATIONS

BENEFITS

CAREERS

NEWS

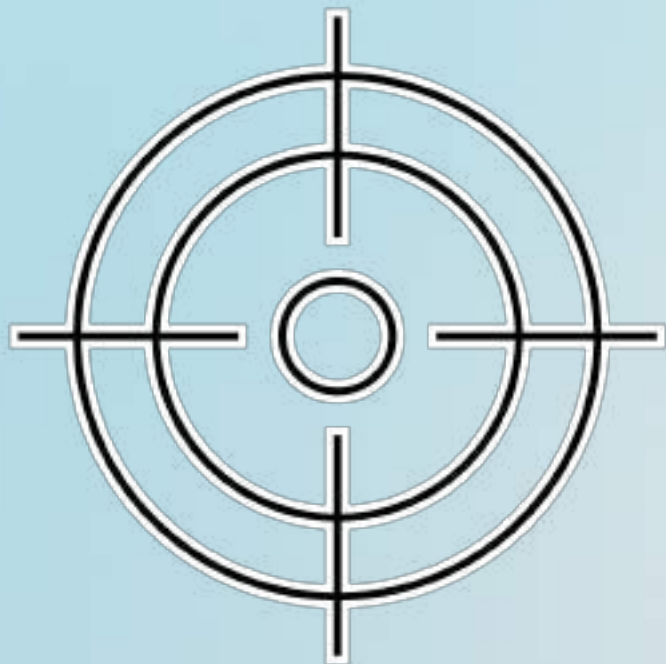
CONTACT US

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



Risks



Cyber risks





Michael Born
VP, Cyber & Technology
Lockton Companies



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SECTION SEVEN

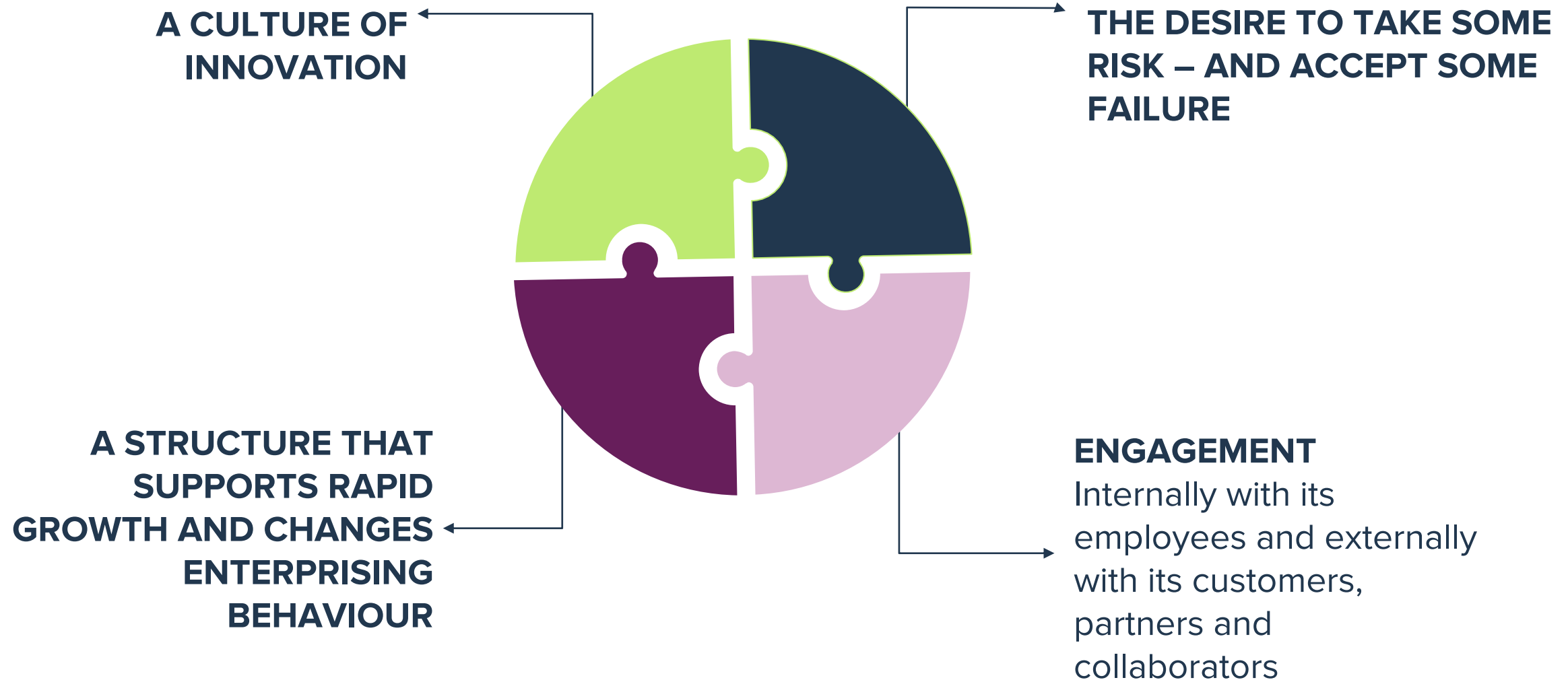
Digital Strategy



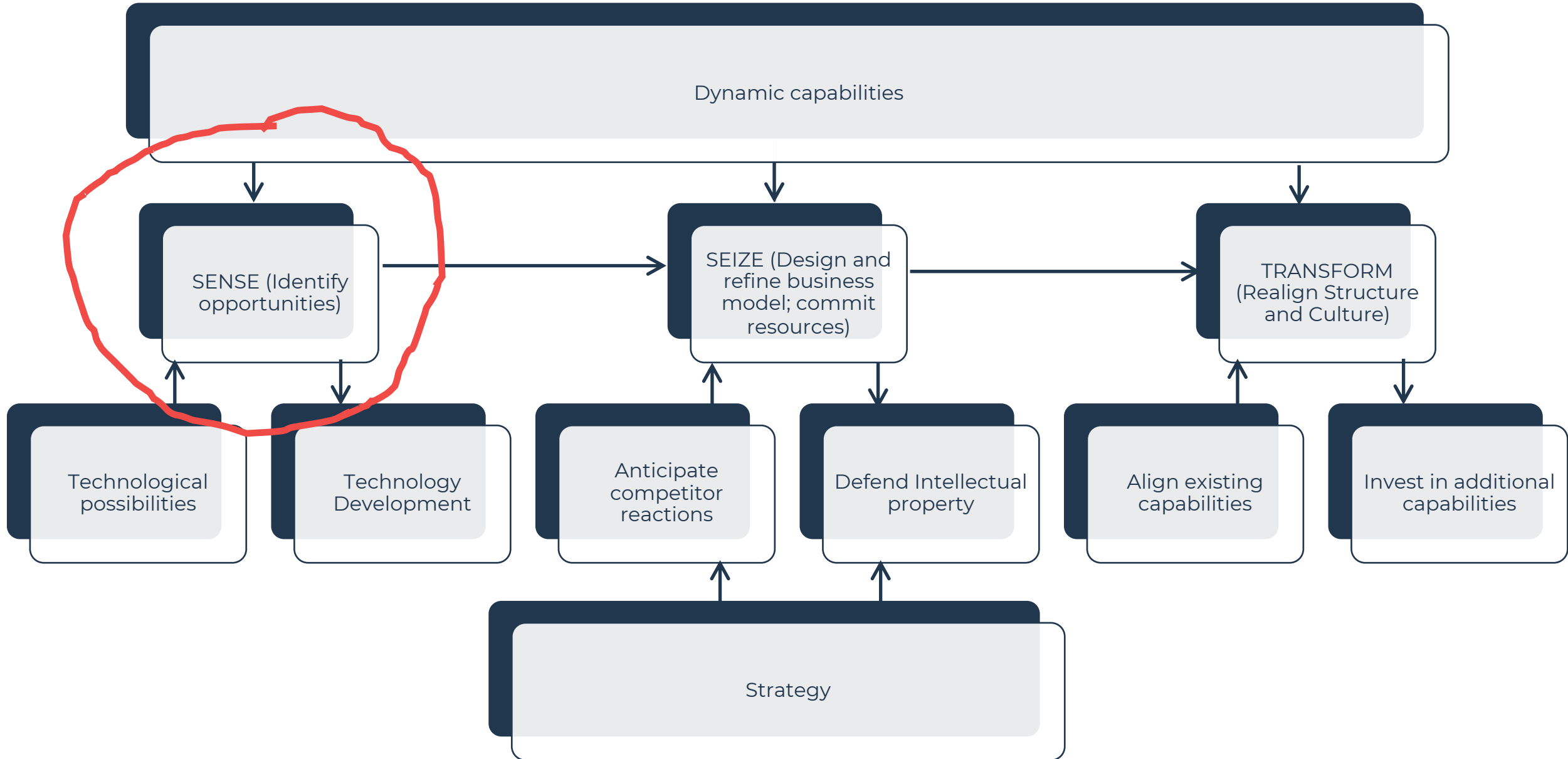


Digital Strategy: *“A plan formulated to achieve specific goals through a digital medium”*

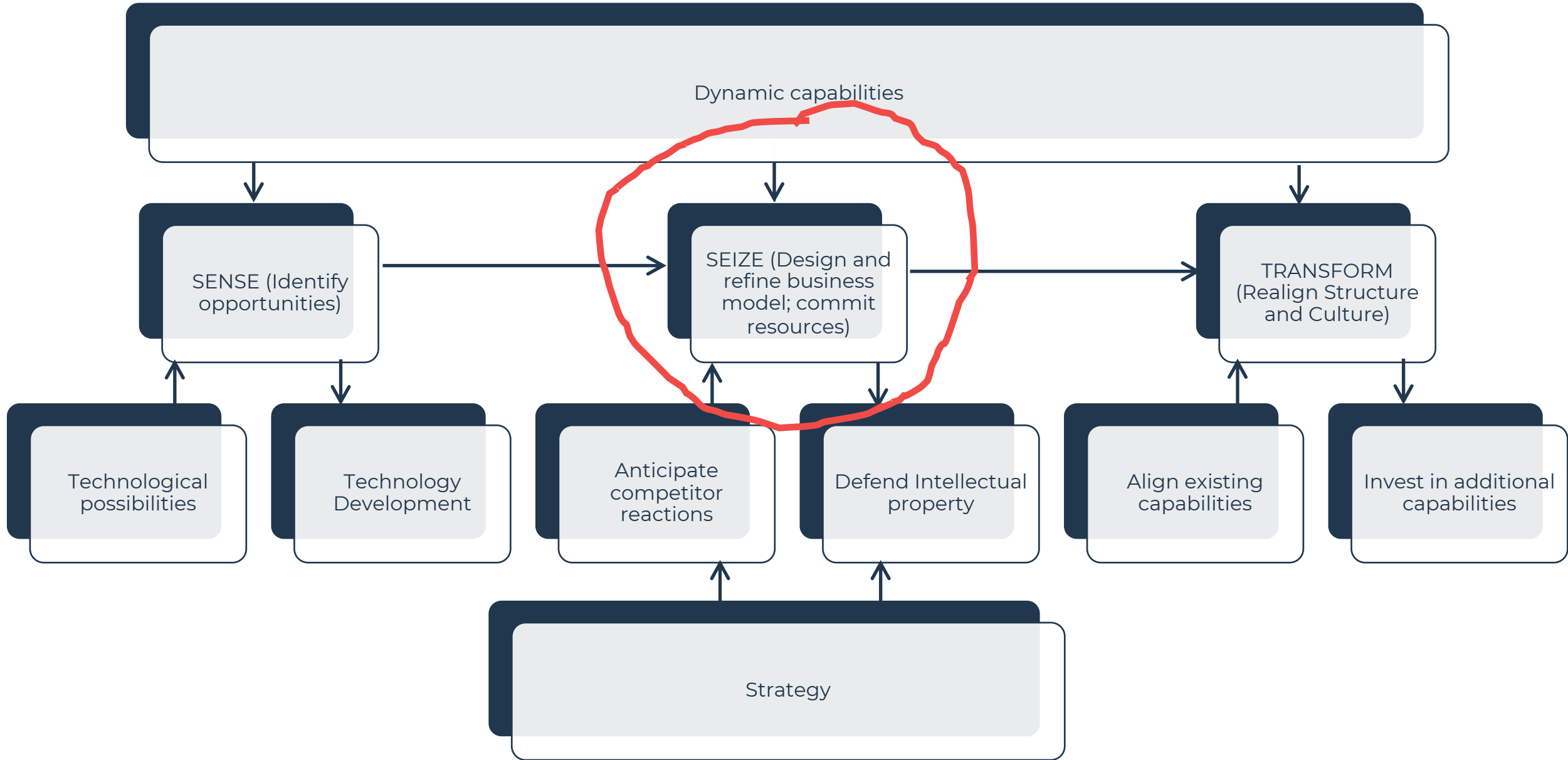
THE STRATEGY SHOULD HELP CREATE AN ORGANISATION THAT CAN DEMONSTRATE



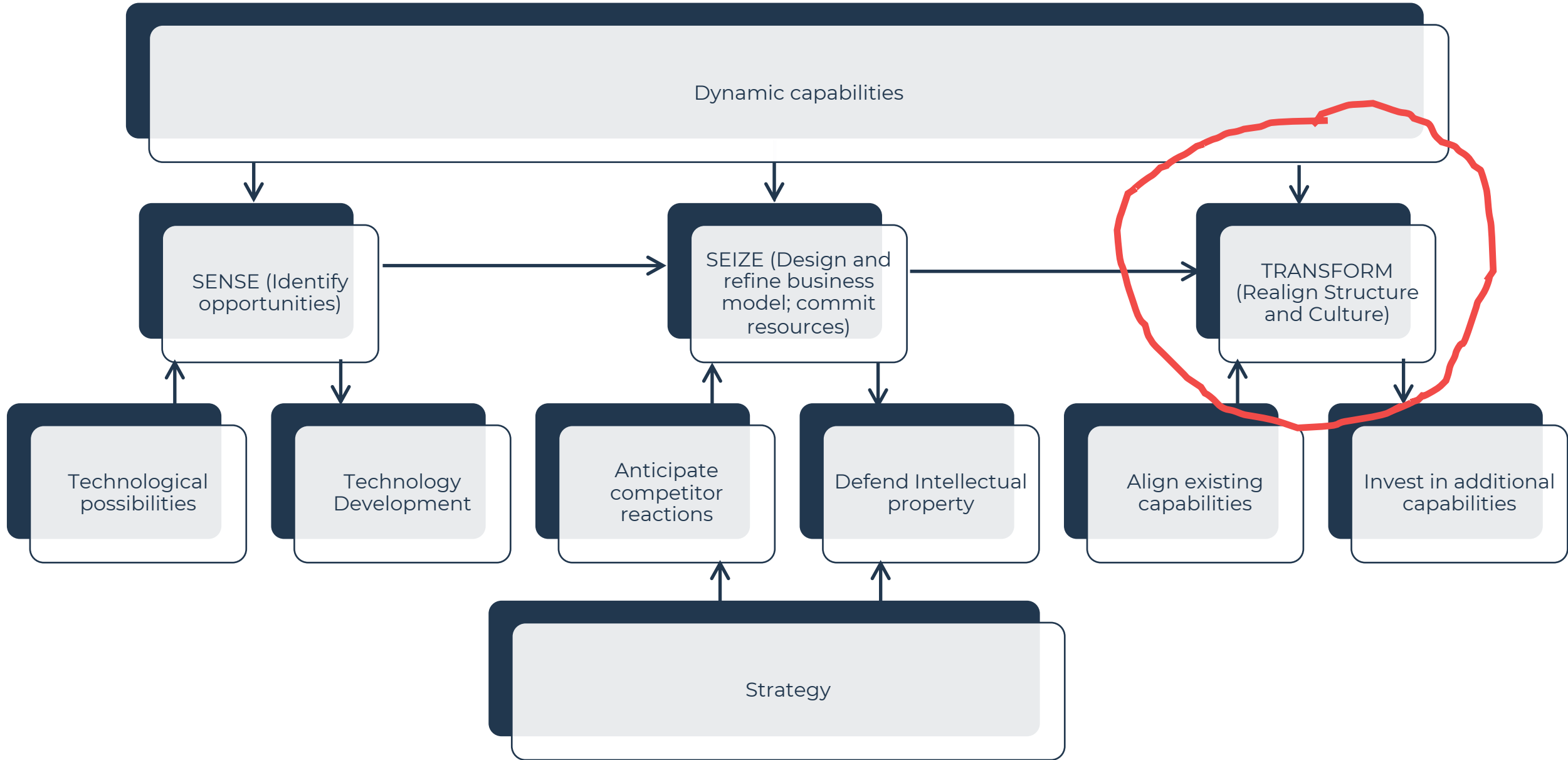
Dynamic Capabilities



Dynamic Capabilities



Dynamic Capabilities



SUPPLY CHAIN SUSTAINABILITY

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The value of data

SECTION EIGHT

Using data to drive
better business
outcomes



But first...
Feedback please

Capture



Transfer



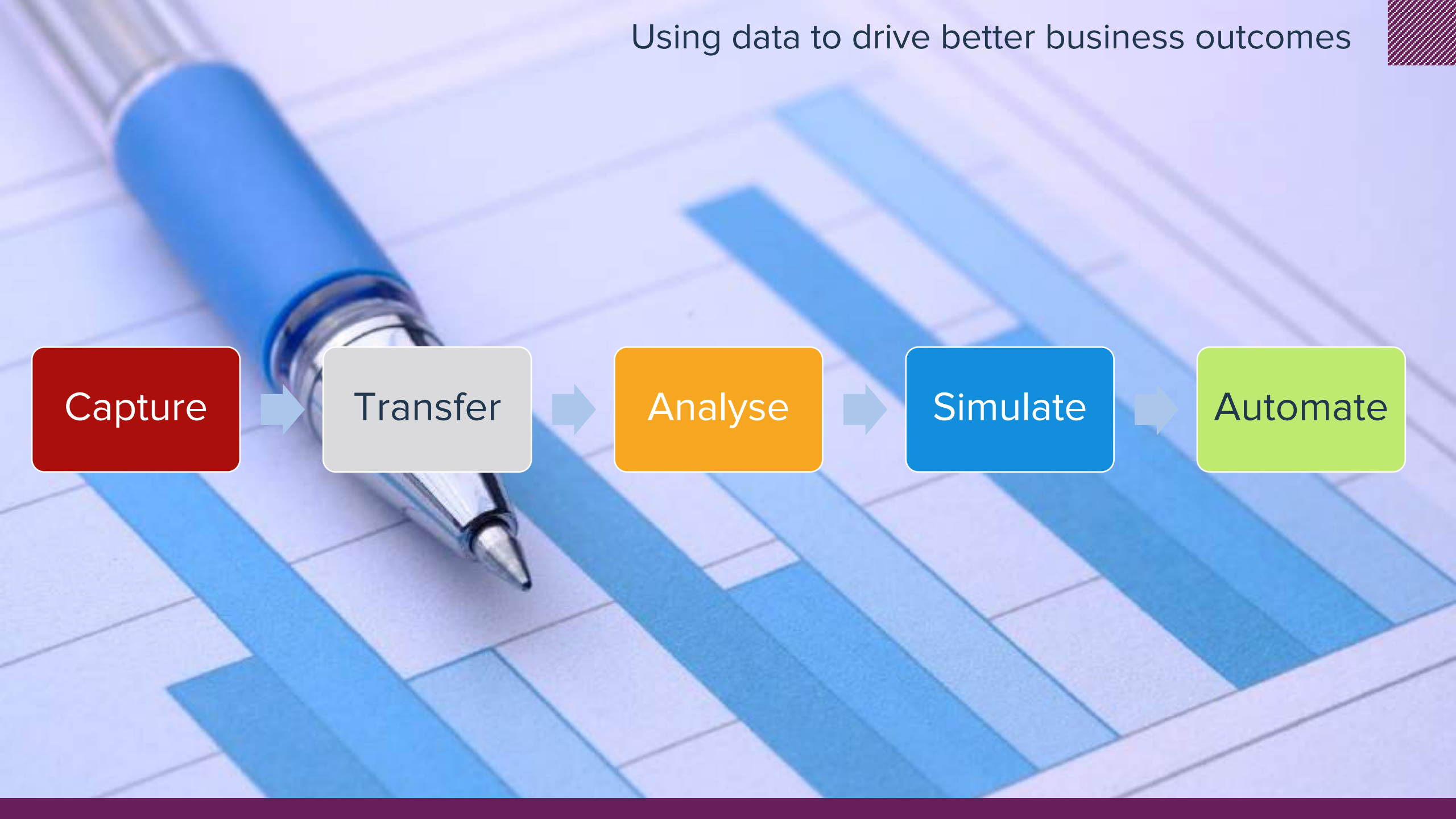
Analyse



Simulate



Automate





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?



Feedback please