Downloading a Digital Mindset

31st July 2023

Contract start date: 1st December 2019
Contract end date: 31st March 2023
Contract Value: £309,860

Contents

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SUPPLY CHAIN SUSTAINABILITY
SCHOOL

DOWNLOADING A DIGITAL MINDSET

Foreword

Ian Heptonstall,
Director of Supply Chain
Sustainability School

Net Zero carbon, improved profitability, workforce attraction and improved safety and quality are just some of the big challenges our industry faces.

We can continue as we are, or we can embrace new ways of working and the digital technologies that can help us to address these challenges. Our new training materials allow managers and leaders to understand the emerging digital technologies and the skills they will need to be an effective champion of digital in their organisation.

Drawing upon one of the UK's leading digital infrastructure projects, Tideway, and using best practice from Costain, Skanska and other main infrastructure contractors, the project team created a series of free-to-access learning materials and then piloted these with 100's of managers and leaders who were seeking to embed digital technology in their businesses and construction projects.

Feedback has been great and thanks to funding from CITB that has been matched by the School and our Partners these are all now available on the School's website.

Project Summary

The purpose of the three-year **'Downloading a Digital Mindset'** project was to equip managers and leaders with the skills and knowledge of technology that would enable them to embed a digital approach into their business strategies.

The project drew on the learning and best practice that were developed on Tideway East, one of the U.K.'s leading digitalised construction projects. The main infrastructure contractors, which were Costain, in joint venture with VINCI Construction Grands Projets and Bachy Soletanche, together with Skanska, provided insights and experiences which enabled the Supply Chain Sustainability School to create a blend of online digital leadership training modules.

The project resulted in:

- **3,561 individuals engaged in the project** consisting of free expert-led webinars, workshops, and conferences.
- More in-depth learning for **130 digital leaders who participated in the Digital Leadership Course using the Harvard Business School's teaching case methodology**
- **2,193 individuals conducted a self-assessment**
- **961 SME companies have been supported** through the project
- **6,177 learning resources have been accessed.**

As a result of the project the participants have acquired measurable steps towards digitalisation. All content on the *Supply Chain Sustainability School* ("the School") Platform is made freely available to industry.

Project Introduction

The project was designed to **build digital leadership** capability and **accelerate digital transformation** in this industry.
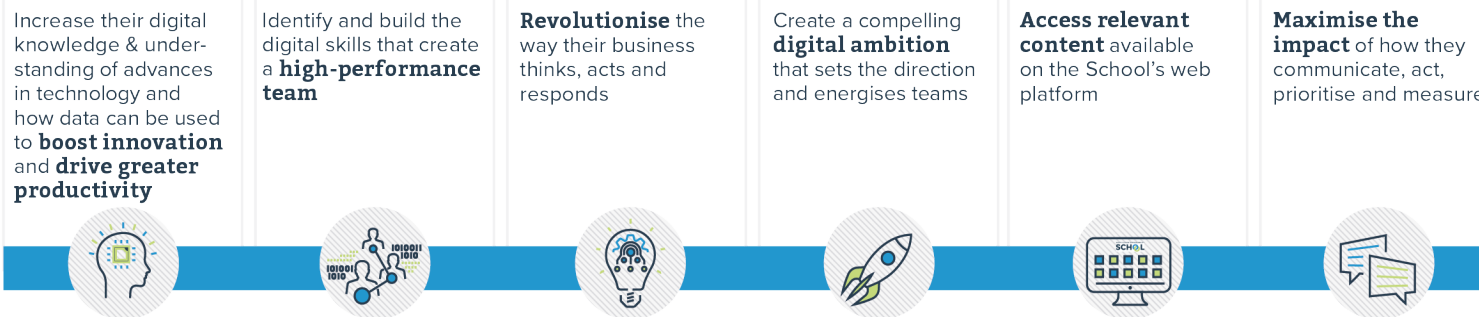
The construction sector has barely increased its productivity over the last forty years and, therefore, managers within the construction industry often lack the skillsets to lead the adoption of new digital technology. Without widespread digital adoption, the construction industry risks being marginalised and may lose a generation of new talent to other sectors.

Downloading a Digital Mindset aimed to support business leaders by equipping them with the right skills, knowledge, and tools for the successful implementation of new digital technology solutions within their organisations.

To achieve this the project DESIGNED and FOCUSED on:

A supply chain **Performance Dashboard** - to track performance improvements	A **Digital Skills Diagnostic Tool** - to assess the training needs of participants	A **CPD Accredited Digital Leadership Course** using the Harvard Business School's teaching case methodology	**4 e-Learning Modules** and an **Online Resource Library** of learning videos, materials, and tools	**10 Information Byte Size Videos**	Delivery of **Training Sessions**	A process to **Monitor** the impact of training interventions

The BENEFITS enabled senior leaders to:

Increase their digital knowledge & understanding of advances in technology and how data can be used to **boost innovation** and **drive greater productivity**	Identify and build the digital skills that create a **high-performance team**	**Revolutionise** the way their business thinks, acts and responds	Create a compelling **digital ambition** that sets the direction and energises teams	**Access relevant content** available on the School's web platform	**Maximise the impact** of how they communicate, act, prioritise and measure

Project Overview

» **CITB Downloading a Digital Mindset** ended its 3-year contract on 31st March 2023.
» The School's team worked with Tideway and Skanska who were consulted in the design and delivery of the training project and resources available.
» All the **deliverables** for training **reached their target or were exceeded.**
» **3,561 individuals on training project.**
» **2,193 digital individual assessments** have been taken to date.
» **6,177 resources accessed** from the School's online learning library.
» **961 SME companies have been supported** through the project.
» **Two 5,000-word Harvard Business School digital teaching cases** written by Digital Outlook drawing on primary research consisting of 24 interviews have been incorporated into the Downloading a Digital Mindset project. Both *Tideway* and *Skanska* **teaching cases** have been **published** in an open repository of cases available at The Case Centre for educational use.
» **10 Byte Size Information videos created.**
» **130 digital leaders participated** in theDdigital Leadership Course using the Harvard Business School's teaching case methodology.
» Downloading a Digital Mindset won the **Skills and Workforce Initiative of the Year** category at the Water Industry Awards 2022
» The Digital Leadership Governance Group within the School to continue past contract end.
» **Digital** will stay as a topic within the School even though the CITB Downloading a Digital Mindset project has ended.

Aims and objectives of the project

Project Delivery

The **Downloading a Digital Mindset** project provided a series of free-to-access learning materials to assist a wide range of people in the construction industry to develop a digital mindset that moves beyond BIM and IT. **That mindset shift is critical to transform productivity, quality, and safety.**

Piloted during the early stages of the COVID-19 pandemic, it was a three-year project, running until March 2023. The project trained 3,561 individuals from 1,491 organisations of which 961 organisations were SMEs through virtual instructor-led training and 'on-demand' e-learning. A digital library provided the tools for 2,193 individuals to take a digital training needs assessment. Also, 152 organisational maturity assessments were completed. Four e-learning modules, 10 byte size videos and two case studies made available.

The school's training programme of 26 webinars, 26 workshops, and 4 conferences were delivered, and 6,177 learners downloaded materials from the online resource library available on the School's web platform.

The project supported business leaders across the construction supply chain and it helped equip them with the right skills, knowledge and tools required to lead the successful implementation of new digital technology solutions within their organisations using an innovative Harvard business case model of hybrid training.

The work of the Digital Leadership Group and access to the school's wider network enabled us to encourage industry-wide collaboration in the development of the tools.

"

Jeremy Galpin, Costain's lead for digital social value consultancy commented:

"We are thrilled that this project won the Skills and Workforce Initiative of the Year category at the Water Industry Awards 2022. This is testament to everyone involved.

Having sufficient digital leadership skills in every organisation is essential to delivering on the industry's ambitions to increase productivity and reduce carbon as well as delivering increasing social value. Our award winning Downloading a Digital Mindset project is designed to enable that upskilling. "

YOUR ORGANISATION'S MATURITY AGAINST TARGET

TARGET   YOUR COMPANY

An example of a Digital Maturity Assessment to benchmark your organisation's digital skills against others in your sector

Digital Leadership Course

The Digital Leadership Course approach was to demonstrate case studies of technology adoption from leading projects and contractors from the construction sector and mix them with the academic knowledge of **Dr Beth Morgan** and **Dr Eleni Papadonikolaki** of Digital Outlook and to deliver this through a virtual classroom with over 20 hours of digital learning.
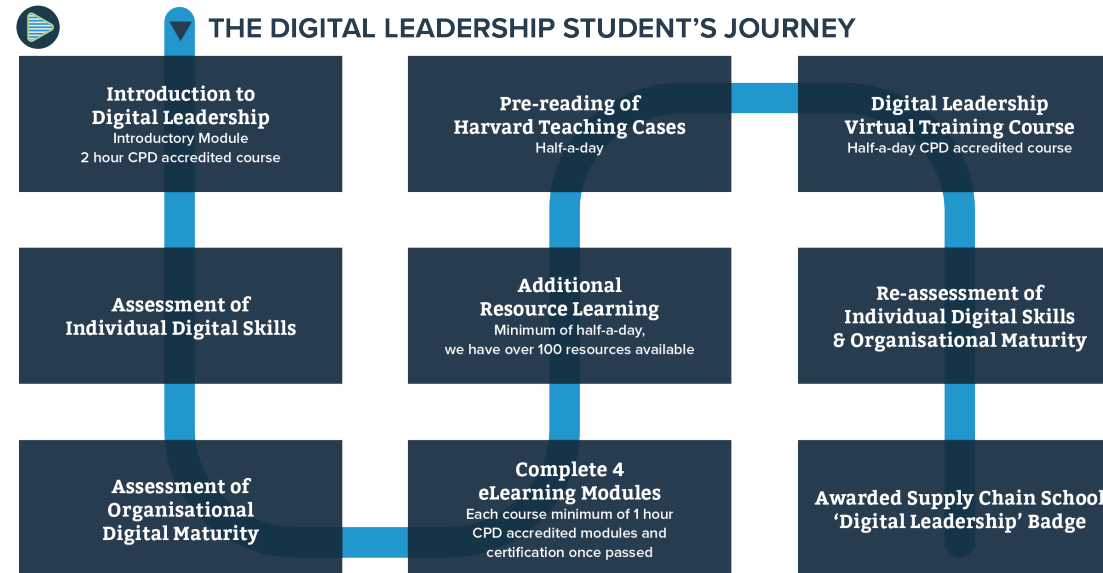
> **David Emery, Consultant at the Supply Chain Sustainability School said**
>
> *"Digital technologies are now underpinning much of the construction industry's work, and it is essential that its leaders understand the opportunities that digital innovations can deliver. However, digital leaders need to acquire the skills to exploit digital technologies whilst at the same time minimising risk and managing change. We are delighted that the Supply Chain Sustainability School has helped so many people begin their journey towards developing those skills."*

130 digital leaders participated in the digital leadership course to help them embed a digital approach into their business and help them understand how to:

- **Evaluate the benefits and value** of digitalisation, including process improvement and technical interventions.
- **Deliver the cultural change** needed to achieve digital transformation.
- **Evaluate** their digital corporate readiness.
- **Understand** the link between data, digital technologies, productivity, value and innovation.
- **Deliver digital transformation** in a project environment.
- **Embed digital requirements** into the supply chain procurement process.

The construction industry is rapidly embracing new technologies. From apps that can be used on site to robots and drones, new technology is everywhere. What has been recognised – and what is especially important - is that the culture of a business should encourage innovation and that people have the appropriate training and - more importantly - mindsets to implement change. We are continuing to work with **Dr. Reyhaneh Sojaei from Cambridge University** who researches cultural barriers to adopting digital technologies. Reyhaneh has collaborated with the School to design a workshop to take a deeper dive into this understanding as well as provide some key factors that can help a business transform project delivery by utilising digital technologies. This workshop has now been added to the Digital Leadership Course.

THE DIGITAL LEADERSHIP STUDENT'S JOURNEY

Introduction to Digital Leadership
Introductory Module
2 hour CPD accredited course

Pre-reading of Harvard Teaching Cases
Half-a-day

Digital Leadership Virtual Training Course
Half-a-day CPD accredited course

Assessment of Individual Digital Skills

Additional Resource Learning
Minimum of half-a-day, we have over 100 resources available

Re-assessment of Individual Digital Skills & Organisational Maturity

Assessment of Organisational Digital Maturity

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

Awarded Supply Chain School 'Digital Leadership' Badge

Feedback from Digital Leadership Course participants:

> *The Introduction to Digital Leadership Course altered my mindset by giving me an appreciation of what is possible, and a deeper recognition that I can and will influence outcomes across our Business, customers, and supply chain. As a direct result of attending this training, the personal impact on myself has been phenomenal."*
>
> **John Lennie**
> **Group Executive Director at HE Simm Group**

> *We saw the Digital Leadership Course as a great resource to help us drive awareness further around digital for both senior leaders and heads of function in Sir Robert McAlpine in support of our business digital agenda".*
>
> **Nick Leach**
> **Head of Digital Construction at Sir Robert McAlpine**

> *It is vital for the improved effectiveness of infrastructure delivery that we maximise the benefits of digital delivery. The Digital Leadership Course helps to bring those of us who aren't expert digital practitioners more up to speed so that we can better understand this area and can more fully contribute to its future development."*
>
> **Roger Bailey**
> **Chief Technical Officer at Tideway**

Impact

There is a significant digital skills gap across the construction industry.

Modern technologies can **raise productivity, increase efficiency, improve quality and safety**, reduce our sustainability impacts, and help attract people to the sector.

The Digital topic featured in the School's annual Impact Survey to all members (2021 & 2022). The results were broadly similar in both years, however an interesting statistic showed there was a **19% increase in respondents stating that their organisation had benefited from investment in digital technologies since joining the School.**

The School Impact survey also asked members to explain the key benefits their company received because of using the School's Digital content, their responses are shown to the right.

Those who participated in training and gave feedback showed results of **95% of learners rating the quality of training as "good" or "excellent"** and **84% of those learners are likely to implement the training given.**

> *A better knowledge of the theory.*

> *A good level of base knowledge now of what the subject of digital encompasses.*

> *Access to information easily in one place.*

> *Broader understanding of sector and peer progress leading to collaboration and innovation in digital.*

> *Gave us the impetus and insight into how we to develop our digital offering.*

> *Highlighting the importance of BIM and need for investment in this area.*

> *It has given us more expansive language to engage a wider audience and help them understand what digitisation and digitalisation mean for them.*

> *It has helped us to increase our knowledge about the digital technologies that are available in the marketplace.*

> *Operational efficiency and productivity improved. Issues are identified earlier because they are more transparent.*

> *The understanding of the terminology and the application of the digital structures that help the company meet client requirements.*

Lessons Learned

- Longer contract delivery time to evaluate real impact.
- Buy in from Senior Management is needed for the business to embrace a digital journey.
- The recognition of how much the culture of a business and the behaviours of its teams could affect the successful implementation of digital innovations.

We Share
We share knowledge and resources and our direction is led by our Partners and members

We Inspire
We inspire our members and Partners to drive positive change

We Exemplify
We exemplify respect for the planet, our colleagues and wider society

Individual Learning
Our learning is tailored to individual companies to ensure best practice in all fields

We Deliver
We deliver measurable impact through dynamic leadership

Free Workshops
We offer free learning opportunities to build skills to deliver a sustainable built environment
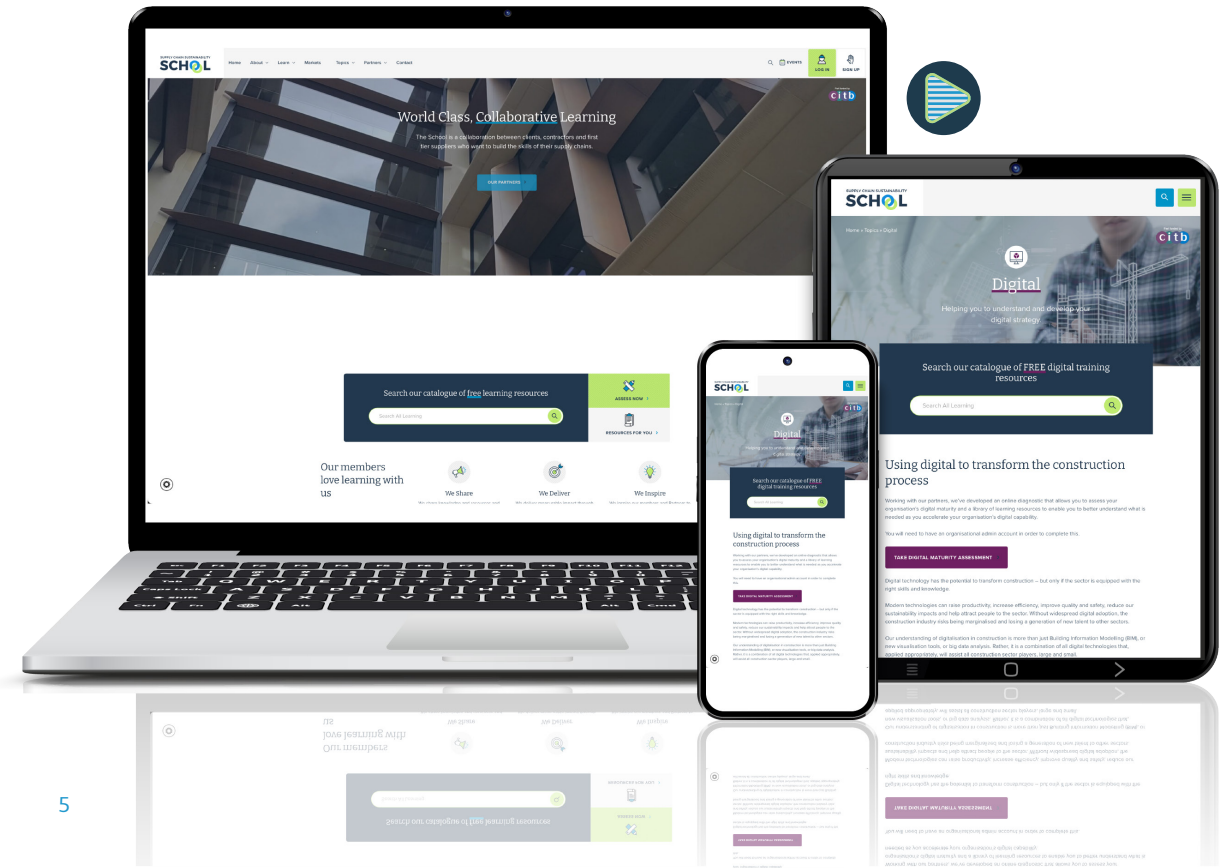
Products

An opportunity for an innovative research and delivery partnership with Academia **Dr Beth Morgan and Dr Eleni Papadonikolaki of Digital Outlook** were commissioned to undertake primary research at the Tideway East joint venture, and with the Skanska supply chain.

The research consisted of 24 interviews which were written up into **two 5,000-word case studies.** These case studies have been incorporated into the Digital Leadership Course and made **available at The Case Centre for educational use**.

⬡ Tideway   ⬡ Skanska

Complementing the case studies were the development of an **Organisational Maturity Tool** and a **Training Needs Analysis Tool**. These tools had been developed through extensive research across multiple sectors to collate and process the different digital metrics.

10 Byte Size Videos interviewing a range of experts on how new innovations are transforming the industry.

Working with subject matter experts and the School's employer partners, a range of **CPD accredited training courses** was developed, as well as four supporting web-based **e-learning** modules and a **resource library** that are all hosted on www.supplychainschool.co.uk.

eLearning Modules

DIGITAL LEADERSHIP

- Understand how to recognise the characteristics of a digital leader
- Understand the Digital Competencies required of a digital leader
- Understand how to develop a digital strategy
- Understand the risks and benefits of digital adoption

BUSINESS CASE FOR DIGITAL

- Understand how to create a framework to assess the risks of digital investment
- Understand how to create a framework to assess the value - including non-financial - of digital investment
- Understand how to simulate and automate decision making and drive better business outcomes
- Understanding whole-life costs and benefits

DIGITAL ADOPTION

- Understand data journey - capture, transfer and analyse, simulate, automate.
- Understand how digital can solve problems and drive improvements though the project lifecycle
- Understand key underpinning technologies such as AI, IoT, Block Chain and 5G

CYBER SECURITY

- Understand how to implement a cyber security strategy that covers people, processes and physical assets
- Understand how to manage known and emerging IT security threats

Legacy & Recommendations

Now that the CITB **Downloading a Digital Mindset** project has ended, **Digital** will stay as a topic within the School.

The Digital Leadership Group which has supported this project will be re-prioritising the Group's objectives. This Group will also ensure the resource library is kept up to date, and that access to the e-learning modules and assessments is freely available. They will continue to work together to determine how best to educate the construction sector and address industry issues and topics. The training courses created will continue to be promoted and delivered by the School.

The School's board have established a budget line, interest from the School's industry partners and have the content to continue for the next two years. This is a significant investment of around £150k per annum into Digital Leadership training by the School and its Partners.

Recommendations

- Recognition of the need to keep up with new technologies.
- CITB to recognise **Digital is an enabler** and to ensure that digital delivery and the use of new digital tools to improve key focus areas such as **productivity**, **carbon** and **diversity**, are embedded in funds and grants such as the **Impact Fund**.
- Increase the grant reclaimable per short duration course to £70 from £35. This will stimulate levy payers to roll out across key managers and leaders.

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Acknowledgements

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SKANSKA

Tideway