



The Global CEO Advisory Firm

Engineering and Construction: Positioning for Success with Digital

“Waking up to the digital era presents a potentially greater impact than the industrial revolution.”

Association for Consultancy and Engineering

July 2020



The digital transformation opportunity

The E&C sector has reached a 'tipping point', with the need to digitally transform accelerated by COVID-19

“Infusing digital tech and construction is expected to create a 14-15% improvement in industry productivity.”

World Economic Forum

“The construction industry is ripe for digital disruption.”

CEO, Katterra [Silicon Valley-founded start-up, raised over \$1.1bn since inception in 2015]

A 'tipping point' for E&C?

The E&C sector has been slow to embrace 'digital', however it is quickly rising up the board agenda. The industry is now at a tipping point, with digital transformation providing a huge opportunity for successful adopters, and a significant threat for those left behind. COVID-19 has served as a stark warning as to why digital is crucial for companies.

Benefits of new digital operating models vs. the traditional model

- 1. Boost productivity and reduce uncertainty in delivery** (AI-informed design and delivery; real-time supply chain visibility; enhanced workforce engagement).
- 2. Improved client experience**, enhanced trust levels and better end-to-end outcomes for the ecosystem.
- 3. Support a more sustainable, innovative and high-skill industry.**

The E&C value chain presents multiple digital value creation opportunities



Sources: IBEC, Crunchbase, MIT, Wharton, Construction Week, PandaDoc, Schneider, Ramboll, Teneo research & analysis

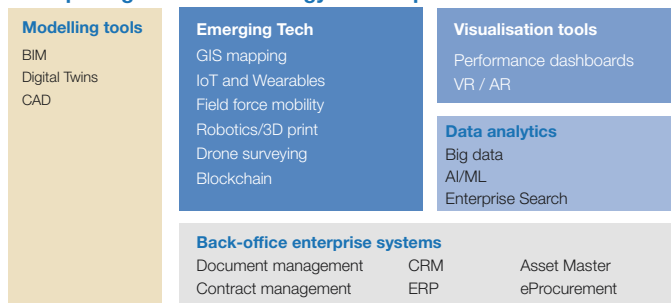
Challenges to transformation

But digital transformation in E&C is complex, and there are a number of operational and financial challenges

1 Navigating the vast digital and technology landscape within E&C

- How to identify the use cases that will deliver the most value? (and ignore those that won't!).

Example digital and technology landscape



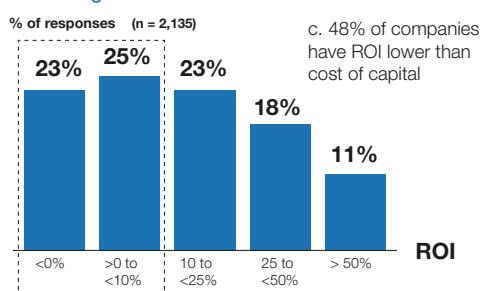
“Digital innovation is a complex undertaking that requires a fundamental understanding of the technology landscape.”

Sloan review

2 Driving investment in a low-margin and project-orientated industry

- Variable returns, low margins and cost-plus contracts makes building business cases for digital investments challenging.
- An emphasis on project-level profitability presents barriers to investments that have longer-term and/or corporate-level pay-offs.

ROI on digital investments



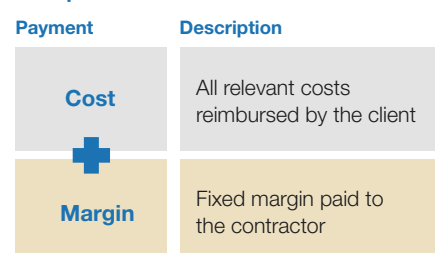
“Really innovative technology is limited as investment is considered too risky.”

Construction Industry Training Board

3 Limited customer expectation & prohibitive contracting structures

- Unlike other industries, there is less pressure to invest in digital from clients.
- Prevalence of cost-plus or input based contracts offer reduced incentive for E&C companies to invest in digital to cut costs, improve efficiency, and drive innovation.

Cost-plus contract



Any savings made on digital investment may need to be passed to the customer

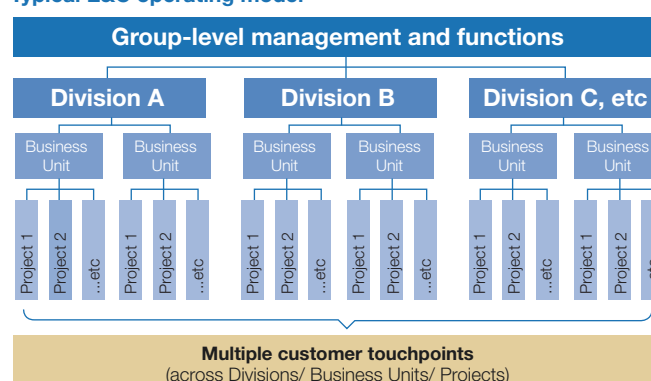
“Cost plus contracts offer contractors no incentive to cut costs.”

Association of Construction & Development

4 Establishing change in transient and project-based operating models

- Driving change in an operating model that needs to balance corporate vs project priorities is challenging.
- Compounded by a high level of transient workforce.

Typical E&C operating model



“Transience makes it difficult for new ways of working to carry over from one project to the next.”

Institute of Civil Engineers

Digital transformation ‘working for all’







To overcome these challenges, digital transformation needs to provide visible early results to establish and maintain momentum and should touch most of the ‘key users’ in the organisation

Digital transformation programs should prioritise initiatives in the early part of the roadmap that:

- a. Make a tangible difference to the day-to-day working of the ‘key users’ (across corporate and projects, and across project office and field work)
- b. Have a relatively short lead time (‘quick wins’)

This will considerably reduce the ROI risk in the transformation

Example early win use cases

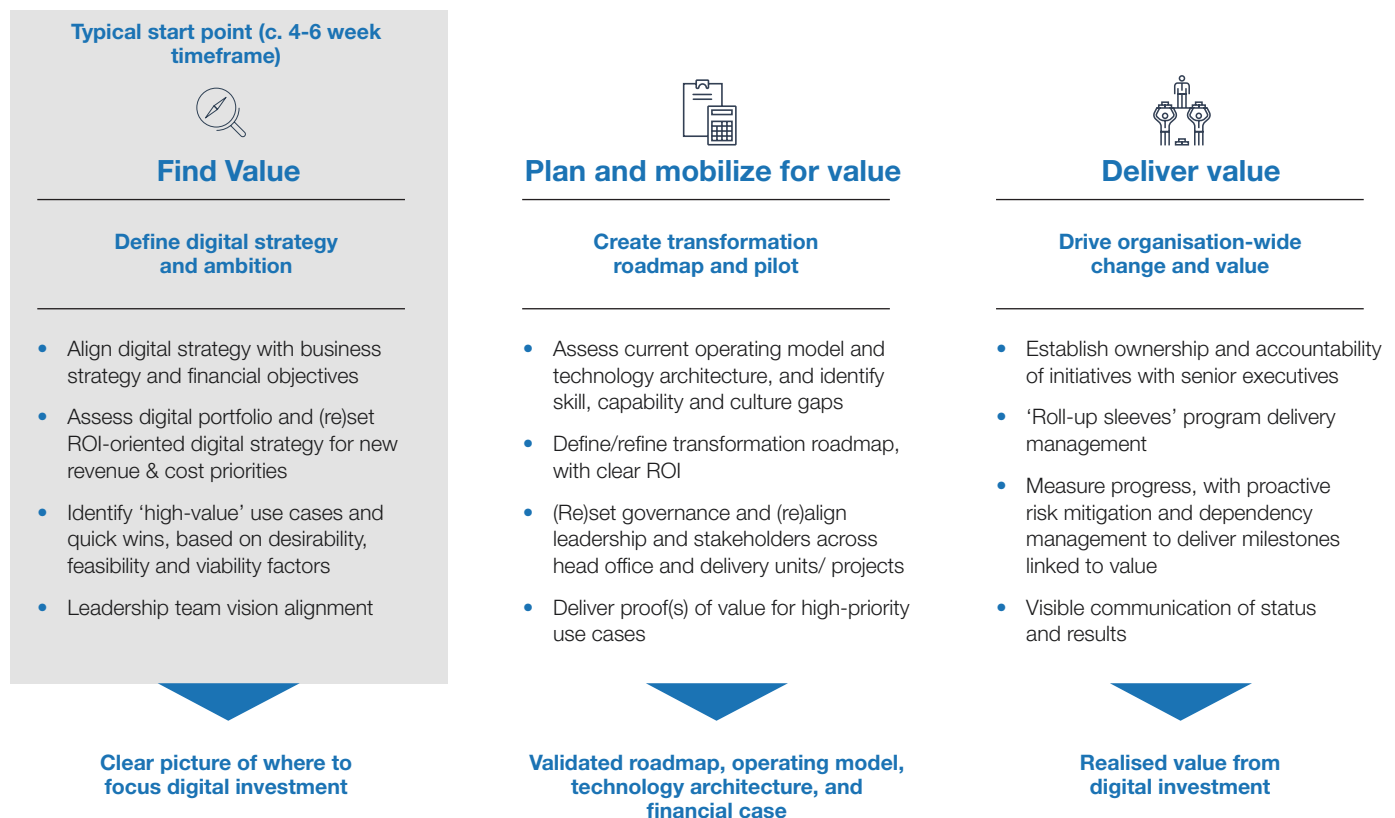
	Design engineer		Field worker		Site manager
<ul style="list-style-type: none">• Digital collaboration platforms driving integrated working• Use of predictive modelling (through BIM, data analytics and algorithms) to optimise asset design/ build schedule		<ul style="list-style-type: none">• Digital interaction and communication of real-time information (work plans; change requests; process docs) improving delivery• Roll-out of proven new ‘delivery’ technologies• Handhelds and apps for inspection/handover activities		<ul style="list-style-type: none">• Real-time site information enabling continued efficient labour, plant and materials planning• Reports/ notifications/ alerts to enable approval on-site decisions• Automated periodic reporting of site performance	
	Project & cost control		Support functions		Business managers/ Executives
<ul style="list-style-type: none">• Real-time visibility of project performance• Real-time KPI tracking (e.g. material consumption) and cost control		<ul style="list-style-type: none">• Seamless digital interface with business for employee (e.g. HR self-service, travel requisition, expense approval)• Procurement analytics and optimisation• Improved back-office process efficiency e.g. Finance, HR		<ul style="list-style-type: none">• Automated, real-time reporting and management dashboards• Digital value performance monitoring, and ‘narrative’ for employees, customers and the investor community	

Successful digital transformation

‘Where do I start?’

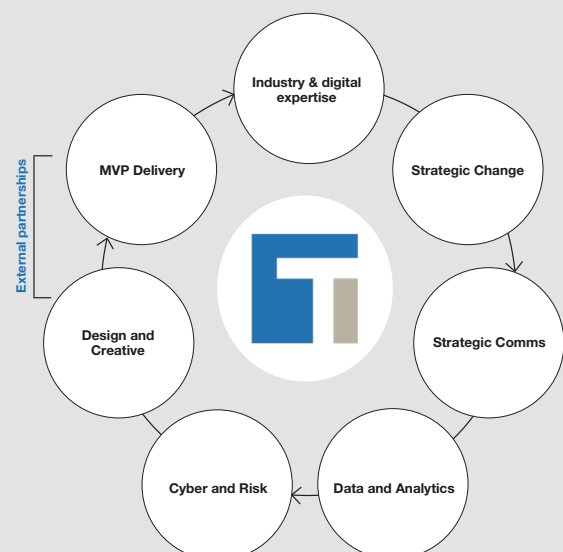
Teneo's approach to successful digital transformation

- The most common question we encounter is ‘Where do I start?’; Whilst Teneo provides an end-to-end transformation framework, we typically start with helping clients to define their digital strategic goals, and then identify implementable ‘use cases’ that will have a real impact/ ROI.
- We also pride ourselves on being flexible and pragmatic in our approach and bring strong strategic change and communications capability (the ‘soft’ touch) to ‘win the hearts and minds’ of the people.



We help our clients with:

- Industry and digital functional expertise, helping clients identify use cases and digital solutions tailored to the unique challenges of the industry
- Strategic communications, to ensure internal organization and external market alignment to the digital strategy
- Change management, for buy-in from the organization, and for embedding culture and process changes
- Analytics, for extracting value from your data, driving real value from proactive insights and visualisation
- Cyber and risk, helping to anticipate and mitigate potential cyber security risks and improving digital security posture across information technology and operational technology
- Partnerships, for creative design and for delivery of ‘proof(s) of value’



An Introduction to Teneo

Teneo is the global CEO advisory firm. Working exclusively with the senior executives of the world's leading companies, Teneo provides strategic counsel across their full range of key objectives and issues. Integrating the disciplines of management consulting, physical & cyber risk advisory, financial advisory, corporate governance advisory, political risk advisory, strategic communications, investor relations, digital advisory, diversity & inclusion, and talent advisory, Teneo solves for the most complex business challenges and opportunities. Our team is comprised of over 800 members, working in 20 office locations around the world. We are headquartered in New York, with our second largest office based in London.

Teneo has deep expertise and experience within the engineering and construction sector. Our work covers organisational transformation, operational improvement, market and competitor analysis and strategy development.

Our Global Offer

Integrating the disciplines of management consulting, financial advisory, strategic communications, investor relations, digital advisory, diversity & inclusion, physical & cyber risk advisory, corporate governance advisory, political risk advisory, and talent advisory, Teneo solves for the most complex business challenges and opportunities.

Management Consulting

Advisory focused on strategic decision-making and business plan implementation, to help companies fully realise their business goals

Management Consulting

Strategy & Communications Advisory

Strategy & Communications Advisory

Advisory focused on managing reputation and protecting and enhancing shareholder value

Risk Advisory

Advisory focused on helping corporations anticipate and mitigate risks associated with geopolitics, physical security and cybersecurity

Risk Advisory

Capital Advisory

Capital Advisory

Leading independent global investment bank providing innovative, unconflicted strategic advice

Teneo's four key business areas, focusing on the CEO's most pressing issues

Contact Us

For more information on Teneo's Digital Transformation and E&C offer, please contact:



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