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Digital Capital Projects

Transforming Capital Programmes in a Digital and AI Future

Capital Project Insights

Contents

Capital Project Insights is a series of papers bringing together the latest thinking from members of our team on optimising performance and value across the lifecycle of capital projects.

Executive Summary

Digital transformation provides an opportunity to gain safety, efficiency, and significant financial benefits. However, the digital transformation pathway for capital project organisations is complex, with numerous barriers to overcome.
Digital Capital Projects: Realising value through digital maturity | Deloitte

Six Success Factors for accelerating digital

Digital transformation progress can be slow. Organisations are discovering that even after investing in digital initiatives for several years, they are not realising the expected benefits. The solution lies in finding a more efficient and effective approach to navigating and sustaining continuous evolution. Based on the Operating Model layers mentioned below, the following summarises the success factors across this path:

- Leadership is crucial for driving digital adoption and establishing a clear vision
- A unified data strategy can unlock efficiencies and drive innovation
- Addressing resistance to change is vital for fostering a culture of digital adoption
- Strategic selection of digital tools aligned with business objectives is necessary
- Continuous upskilling and talent retention are essential to meet evolving digital demands
- Agility in adapting to technological changes is critical for success

Importance of an 'orchestrator'

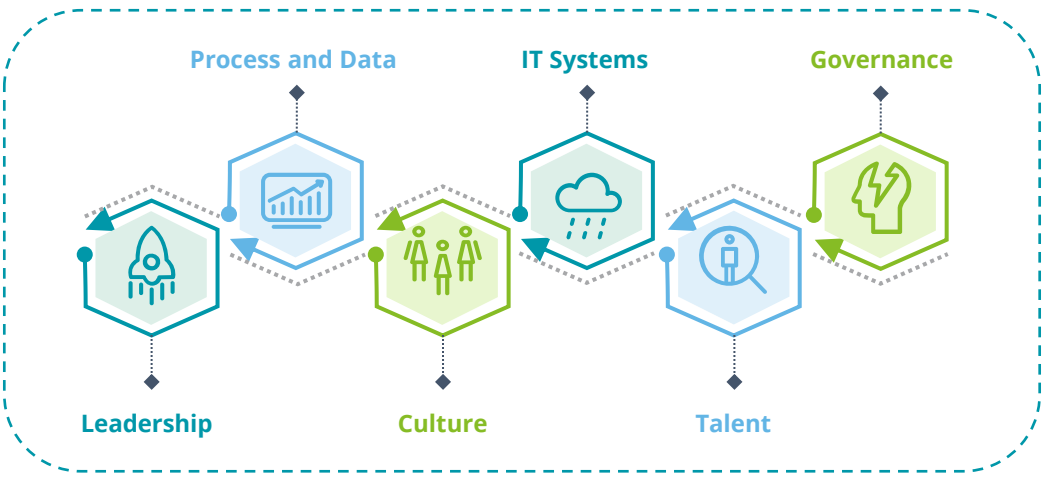
The demand for a fundamental shift in mindset, the need to overcome internal and external barriers, and the growing complexity of capital programmes, is creating the need for dedicated roles to "orchestrate" this transformation and unify initiatives across the organisation.

These roles are essential for successfully changing ways of working and thriving in this new competitive climate. Individuals and teams who can inspire change, challenge norms, and connect with industry trends play a key role in aligning technology capabilities with business value.

Leveraging AI into capital programmes

AI brings new opportunities and challenges – it's clear that the revolutionary upside outweighs the potential for distraction. The newest release of agentic, sovereign, and physical AI will make access to information easier, faster, and most importantly, safer, helping drive towards genuine 'data-driven' decision-making across both, business and programme delivery.

Successfully transforming capital programmes across all its Operating Model layers:



by Deloitte

Transforming capital programmes: A focus on 'How'

Racing to win

Many capital project organisations are well underway with digital transformation programmes, a significant shift for a sector that had seen minimal technological advancement over the past decade. Organisations initially focused on understanding the benefits of transforming their operations, followed by defining the scope of necessary changes. However, moving beyond 'proof of concepts' to genuine scaling and transforming practices remains a challenge.

The rapid evolution of technology and generative AI presents a potential distraction for capital project organisations, who are already on the path of digital transformation. New solutions emerge frequently, often quicker than the industry's ability to adapt and integrate them effectively.

This disparity between technological advancement and industry adoption is creating a widening gap, making it increasingly challenging for organisations to maintain their future readiness. Scaling adoption and changes to ways of working have been ineffective.

> "Although the industry has largely recognised the benefits and components of digital transformation, many organisations are yet to see full-scale transformation. Accelerating these journeys requires a fundamental shift in mindset to cultivate a truly digital-first culture."

Guri Neote, UK Digital Capital Projects Leader Major Programmes, Deloitte

With 'what to transform' and 'why to transform' well established, understanding how to drive and sustain the transformation has become the new challenge

WHY: Most capital project organisations understand the importance of transforming their operations

62% of organisations agree/strongly agree that processes and practices driven by **digitalisation** help or are likely to **help the respondent's organisation improve** different functions[1]

WHAT: Most capital project organisations have developed a scope on what they need to do to transform their operations

Over 60% of organisations currently have a priority **Digital Transformation Programme** in place and over 50% of organisations have a **Digital Strategy** in place[2]

HOW: On the other hand, most approaches being used to drive widespread adoption of digital initiatives and wholesale change appear to be ineffective.

Progress in the consistent use of processes and practices driven by digitalisation is **slow** with only around a **1% change in adoption over a year** [3]

Six success factors for digital enablement

A balanced and focused investment on people and technology

Based on continued analysis of the evolving market, these six success factors could equip organisations to unlock sustainable value. They address not only the technological advancements crucial for progress, but also the organisational and cultural changes required to drive genuine change.

Leadership sponsorship and commitment in actively driving digital adoption

Effective leadership is crucial for successfully encouraging digital into the organisation. Leaders must establish a clear vision and strategy to demonstrate the value of digital adoption while sustaining momentum through cultural change and continuous improvement..

Focus on data first

Capital project organisations often face challenges posed by fragmented data residing in silos, which hinders insights and value creation. A unified data strategy, underpinned by robust governance and advanced analytics, can unlock efficiencies and drive innovation throughout the entire project lifecycle.

Plan for organisational resistance

Resistance to new technologies and ways of working poses a significant challenge, particularly in the construction industry where traditional mindsets prevail. A holistic approach is needed to foster a culture of digital adoption through shared accountability, hybrid expertise and early demonstrable wins.

Navigate the evolving digital deluge while demonstrating value

A strategic approach to digital tool selection is essential, aligning technology choices with business objectives to avoid a fragmented digital pathways. Prioritising high-impact solutions; aligning with the wider organisational vision; fostering innovation and; collaborating with external partners are all crucial.

Recruit, retain and grow technology skills in capital programmes

Organisations face a growing skills gap with the increased use of digital tools, requiring highly varied upskilling across all levels. Equipping employees for the future of work requires a tailored, hybrid approach to training, partnerships, talent acquisition and retention.

Stay agile in a dynamic environment

Capital project organisations need to embrace agility and a 'fail fast, learn faster' mentality to thrive amid rapid technological change. Continuously adapting to key industry challenges in a dynamic landscape is key to sustain a successful evolution in the long run.

Leadership

Success factor #01: Leadership sponsorship and commitment in actively driving digital adoption

Leading through the confusion and uncertainty

The sheer volume of information and advice surrounding digital transformation can often leave leaders feeling overwhelmed, making it challenging for them to identify a set of both pragmatic and systematic steps to implement.

Leaders, particularly at the C-suite level, wield significant influence over an organisation's trajectory. Their vision, decisions, and actions shape the culture, strategy, and ultimately, the success of any transformation, including the digitalisation of capital programmes.

The key question: how can capital programmes leaders identify tangible actions that will empower their organisations to navigate this transformation successfully?

> “Strong commitment to health & safety culture within many asset intensive industries provides an example of how leaders must also champion, drive and demand digital behaviours.”

Ed Lambourn, Associate Director, Major Programmes, Deloitte

Time to bring theory to the reality

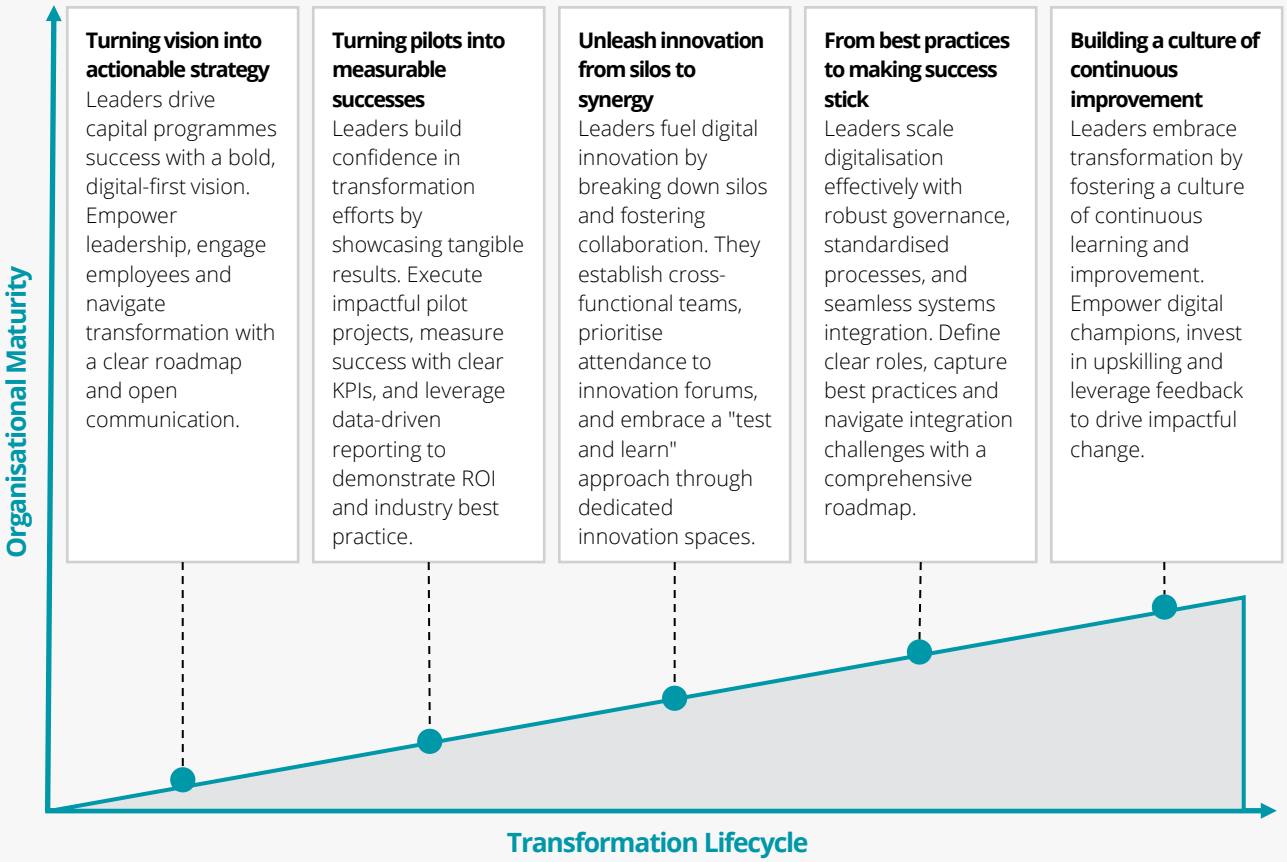
The opportunity lies in bridging the gap between theoretical understanding and impactful action. To thrive in the digital age, capital project businesses need leadership to champion an organisational change – moving beyond simply acknowledging the importance of digitalisation, to actively driving and embedding a transformation that delivers measurable results, from the top down.

79% of UK energy organisations

said that a strong, clearly articulated vision from leadership is essential for fostering a culture of innovation. [4]

Senior leadership team roles in driving organisation wide adoption

Our experience working across the sector reveals a clear path to successful transformation within capital project organisations, here are five examples:



Turning vision into actionable strategy
Leaders drive capital programmes success with a bold, digital-first vision. Empower leadership, engage employees and navigate transformation with a clear roadmap and open communication.

Turning pilots into measurable successes
Leaders build confidence in transformation efforts by showcasing tangible results. Execute impactful pilot projects, measure success with clear KPIs, and leverage data-driven reporting to demonstrate ROI and industry best practice.

Unleash innovation from silos to synergy
Leaders fuel digital innovation by breaking down silos and fostering collaboration. They establish cross-functional teams, prioritise attendance to innovation forums, and embrace a "test and learn" approach through dedicated innovation spaces.

From best practices to making success stick
Leaders scale digitalisation effectively with robust governance, standardised processes, and seamless systems integration. Define clear roles, capture best practices and navigate integration challenges with a comprehensive roadmap.

Building a culture of continuous improvement
Leaders embrace transformation by fostering a culture of continuous learning and improvement. Empower digital champions, invest in upskilling and leverage feedback to drive impactful change.

Introducing Agentic, Sovereign & Physical AI

Agentic AI:	Autonomous agents for smarter enterprise operations
Sovereign AI:	Governments or organization's control over AI technologies and associated data (e.g. AI Factory as a Service).
Physical AI:	Dynamic, responsive robotic ecosystem that adapts to evolving client needs and the world around it

Success factor #02: Focus on data first

The data paradigm

For organisations operating within the capital programmes landscape, data is both a cornerstone and a challenge. While essential for decision-making and operational efficiency, data often resides in fragmented silos, trapped within legacy systems or bound by pre-existing agreements with suppliers and contractors. This lack of a unified data structure hinders an organisation's ability to extract meaningful insights, leading to inefficiencies, missed opportunities, and ultimately, lost value.

This fragmented ecosystem complicates data governance, making it difficult to ensure accuracy, consistency, and compliance across the entire project lifecycle. However, organisations that are able to structure, analyse and gain insight from such a complicated network of data can unlock new revenue streams and opportunities.

88% of surveyed businesses

fall into the beginner or emerging categories of data capability, pointing to a need for strengthened data integration in everyday operations.[5]

The future of capital programmes depends on data

Delivery Organisations and Projects should strive for a future where data flows seamlessly between them and its suppliers, fostering real-time collaboration and informed decision-making. This transparency and interoperability will pave the way for the integration of advanced technologies, such as AI-driven analytics and predictive modelling.

By unifying their approach to data through clear, standardised structures and robust governance, capital project organisations can transform complex data networks into streamlined ecosystems. This unlocks efficiencies, mitigates risks and drives innovation across the value chain.

A robust data structure can even enable new commercial models and revenue streams – organisations which work across the supply chain with multiple vendors and project owners have unparalleled access to valuable new insights.

Critical considerations to define a robust data management strategy

A comprehensive data strategy that lays the foundation for efficient and secure data management can empowers capital project organisations to move beyond inefficient silos and unlock significant operational efficiencies.

As shown in the Table below, this goes beyond simply collecting data; but harnessing its power for better decision-making and value creation.

Critical considerations	Description
Insight generation & sharing	Harness the power of data visualisation tools to turn raw data into actionable insights, optimising project schedules, predicting and mitigating risks, and ultimately delivering exceptional projects.
Identification and acquisition of data	Pinpoint and capture only essential data from key sources like building information management software, sensors, and enterprise resource planning systems, eliminating data overload and maximising relevance.
Data ingestion & management	Streamline data management by implementing robust processes for secure import, cleansing, organisation, and storage. Consider a scalable, centralised solution like a cloud-based data lake.
Security & privacy	Prioritise data security with ironclad protocols: encryption, access controls, regular audits and full GDPR compliance.
Data governance	Ensure data integrity through clear ownership, standardised dictionaries, and rigorous quality controls, guaranteeing consistency, reliability and trustworthiness.
Data operating model	Build a sustainable data management engine with defined roles, responsibilities, and processes to ensure smooth adoption and user buy-in.

Leveraging Agentic, Sovereign & Physical AI

Sovereign AI can be used to connect, harmonise and synthesise data from disparate sources, such as BIM software, ERP systems, and sensor data. Algorithms can then identify and resolve data inconsistencies, map different data formats to a common data environment (CDE) and create a unified view of project data.

Culture

Success factor #03: Plan for organisational resistance

Far more than just process changes

Resistance to change, particularly towards new technologies, presents a significant obstacle for organisations undergoing a digital transformation.

This resistance manifests as a reluctance among individuals, departments, and even entire project teams to embrace new ways of working. However, it's crucial to recognise that this hesitancy isn't solely due to individual mindsets. Often, legacy structures and outdated processes, deeply ingrained within the organisational DNA, actively hinder the adoption of agile methodologies and innovative technologies. A lack of understanding of the target users and how they work can also be a significant contributor.

'Research finds from 50%–75%

of change efforts fail. And for those that do succeed, many don't achieve the goals of the original vision'. [6]

Capital programme organisations often approach change management through a process-driven lens, which may not be suitable for the broad and multifaceted nature of digital transformation.

A more holistic approach is needed to unlock the full benefits. A project or team may need to work through challenges of being the first adopter and develop best practice, but this allows other teams and projects to implement a digital capability quicker and see value from day 1.

It takes leadership guidance and visibility of the broader vision to bring people on the path and be open to acting as the first adopter, despite the added burden.

A new generation for the capital project industry

Individuals, engineering and project professionals are seeing their industry becoming more technology enabled and are increasingly interfacing with new solutions.

Their organisations need to support curiosity and openness and avoid individuals becoming set in their ways and viewing change as an unnecessary distraction to 'getting the job done'. Nurturing a culture that embraces new digital practices, shares goals, emphasises individual contributions, and demonstrates the tangible benefits of technology are just some examples.

Additionally, the recent advancements of Industry 4.0 technologies offer more adoptable user-friendly solutions to help break down barriers and make adoption stick through continuous training (to overcome workforce churn) and incentivise and gamify compliance with new ways of working.

Breaking down barriers to drive change and transformation

To foster a culture of digital adoption, capital project organisations need to learn how to overcome resistance to change across all departments and all grades. To succeed against organisational or process-driven barriers, the team driving the change may need to start slow and spend time unblocking this resistance, to ensure longer term momentum and success.

Best practices for overcoming organisational resistance

Approach	Description	Do's	Don'ts
Listening leadership	Listening and understanding your user groups and population segmentation, and then engaging with them continuously.	Create channels that will enable leaders to keep their finger on the pulse (e.g. speak up lines, anonymous surveys, etc) and proactively react to the reports	General approaches to comms channels, forgetting about different local regulations, roles, cultural sensitivities; impact of automation.
Shared accountability	As with safety, leaders must encourage everyone to take responsibility and understand what technology and innovation means.	Define clear roles and responsibilities making sure of spreading the accountability among everyone with clear collective and personal goals.	The transformation isn't the CIO/CTO or IT department's responsibility alone. Don't put the responsibility for this change on a small group.
Hybrid expertise	Cross-functional teams, encourage collaboration and efficiency.	Bring together a team of players from all fronts. Blend technical capability, specific role expertise and change agency together.	Fostering silos by giving isolated tasks without working within a collaborative and transparent environment.
Early momentum	Ensure early and ongoing confidence in digital transformations and its wider adoption. Business should prioritise small, visible successes.	Pilot technology initiatives and user-friendly digital tools. Select an area of high relevance and impact for users. Nurture "transformation champions" to empower advocacy for change	Designing large-scale transformation plans, which often results in significant expenditure without immediate results and loss of trust.
Grassroots innovation	To promote digital adoption and nurture innovation, business should empower their employees with access to training resources so they can explore and advocate new technologies.	Humanise the transformation process by allowing users to share their experiences, success stories, and tech applications through formal and informal channels.	An unstructured approach to innovation can lead to accountability and transparency issues, as well as difficulties in scaling impactful initiatives.

Leveraging Agentic, Sovereign & Physical AI

Agentic AI can create tailored communication materials for different employee segments, addressing specific concerns and highlighting the benefits of digital tools in their respective roles. This personalisation will increase engagement and reduce resistance by making change relevant and relatable.

IT Systems

Success factor #04: Navigate the evolving digital deluge while demonstrating value

The consequence of the deluge

For capital project organisations, selecting digital tools can feel like navigating a turbulent sea of overwhelming choices. The digital ecosystem presents a vast and complex landscape of established technology providers, each offering a myriad of solutions and vying for attention. This can lead to a sense of paralysis, leaving organisations unsure of where to begin or how to effectively evaluate the options.

Leaders are susceptible to external pressures from competing vendors and internal stakeholders demanding rapid results. As a result, capital project organisations often fall into the trap of frequently shifting priorities and investment areas. This reactive approach results in a fragmented, piecemeal digital transformation that lacks a cohesive vision and fails to deliver meaningful, lasting value.

Although the range of available digital solutions may appear to present a significant obstacle, this abundance also signifies an increased probability of finding the best fit.

With a surge in data volume,

organisations struggle with complexity, which includes variations in data quality and types.[7]

Turning a threat into thousands of opportunities

By approaching technology adoption with clearly defined objectives and a well-articulated strategy, organisations can effectively filter out the peripheral and concentrate on solutions that directly address their specific requirements and contribute to the achievement of long-term goals.

To achieve this, capital project organisations should adopt a strategic selection and testing process. This involves establishing clear criteria for evaluating solutions, prioritising those that address specific business needs and demonstrate tangible value.

By implementing a structured process for piloting and scaling promising technologies, organisations can mitigate risks and ensure that investments deliver optimal return, transforming the digital deluge from a potential threat into a source of strategic advantage. This lean and agile approach to technology adoption encourages capital project organisations to prioritise and select number of high-impact solutions with near-term benefits.

Responding to evolving business needs

This strategy mitigates the risk of unnecessary expenditure. By focusing on continuous delivery of value-added solutions, organisations retain the flexibility to adapt and pivot their technology roadmap in response to evolving business needs. Key elements of this approach include:

Vision alignment

- Align the transformation vision and objectives with the business' values and priorities.
- Establish clusters of transformation around key objectives and set clear criteria for analysing new ideas.

Innovation as a practice

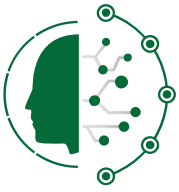
- Using a forum of both leaders and users allows activities remain relevant to the business.
- This process encourages experimentation and 'fail-fast' approaches.
- Allows for horizon scanning and enables reprioritising of investments as solution landscape changes.

Prioritise sustainable value

- Establish a consistent method for assessing tech transformation value.
- Include criteria recognising technology maturity, industry prevalence, and competitive impact.
- This will promote investment in solutions that initiative and perpetuate the transformation while creating sustainable value.

A network of collaborators

- Forge and cultivate relationships with external experts.
- Developing 'in house' expertise is time-consuming, costly and risky as sometimes could lead to obsolesce.
- Collaboration within a network is key to making informed decisions and inspire innovation and creativity through tech and data insights.



Leveraging Agentic, Sovereign & Physical AI

Agentic AI can assess the potential value of different technologies based on factors such as cost, ROI, implementation complexity, and alignment with business objectives. This helps organisations prioritise investments and select solutions that deliver the greatest impact..

Talent

Success factor #05: Recruit, retain and grow technology skills in capital programmes

A growing capability challenge

The rapid evolution of technology requires continuous upskilling across all organisational levels, from executives to on-site practitioners. The reality is that many of them feel ill-equipped to meet the demands of current and future digital skills requirements.

This skills gap extends beyond technical proficiency to encompass a broader understanding of digital and data strategy, risk management in digital contexts, evolving industry trends, and the ability to navigate cultural shifts driven by technology.

Building a future-ready workforce

This pressing challenge presents a significant opportunity for organisations to reimagine their approach to capability development. By designing and implementing varied training programmes that cater to the diverse needs of their workforce, organisations can empower their employees to thrive in a rapidly changing digital landscape.

The average half-life of skills is now less than five years,

and in some tech fields it's as low as two and a half years.[8]

> "Capabilities need to be protected, matured, evolved and adapted during and beyond the delivery lifecycle to realise the long-term legacy."

Marc O'Connor, Global Capital Projects Leader
Deloitte

A granular and forward-looking approach for capability building and talent retention

To effectively address the digital upskilling imperative, we propose a four-part approach:

1. **Persona-based learning paths:** Transitioning from one-size-fits-all training to personalised learning paths tailored to specific roles and responsibilities is important. This targeted approach ensures relevance to the specific role needs and accelerates the acquisition of job-specific competencies.

2. **A hybrid approach to capability building:** Adopting a strategic blend of building internal capabilities through training, borrowing expertise through outsourcing specific tasks, and buying talent by strategically hiring individuals with in-demand digital skills. This multifaceted approach allows for flexibility and responsiveness to the evolving digital landscape and changing business needs.

3. **Cultivating a culture of digital retention:** Fostering an environment that attracts and retains digital talent by providing the necessary support systems, resources, and a culture that values innovation and continuous learning. In-house digital teams play a crucial role in creating this supportive ecosystem.

4. **Enhancing hiring practices**:
Proactively adapting hiring strategies to prioritise candidates who possess a blend of technical skills and soft skills essential for success in a digital environment. This includes seeking individuals with strong analytical abilities, adaptability, problem-solving skills, and a demonstrated capacity for continuous learning.

This diagram illustrates how persona-based learning paths can be modified for different users:

Persona-based learning, delivered through themed and modular online courses, offers a more efficient and effective alternative to traditional department-wide training. This approach provides role specific content and flexible delivery, reducing the burden on the workforce while ensuring employees gain relevant skills.

Required Skills & Knowledge

	Requests for information (RFIs)	Finance & budget tooling	Project estimation tooling	Material requisition form submission	Resource management
 **Shilpa** Project Manager	Will view but only used on a case-by-case basis.	Must be able to model and edit information.	Used for variation estimation and review.	Views cost data but does not submit or review requests.	Used for productivity estimates and project budgeting.
	Not Required	Required	Required	Not Required	Required
 **Kieran** Site Engineer	Issues RFIs quite frequently.	Can view for information.	Is not used at all.	Requisitions used frequently to order site materials.	Needed for worker efficiency and task management.
	Required	Not Required	Not Required	Required	Required

Leveraging Agentic, Sovereign & Physical AI

Physical AI can provide field training through a robotic ecosystem that reacts to real-life scenarios, offering personalized learning to employees without putting them in harm's way. This can unlock new ways of training on the site.

Governance

Success factor #06: Stay agile in a dynamic environment

A rapidly evolving and increasingly complex landscape

Rapid technological change is accelerating, with profound impacts on business and society.

This rapidly evolving and increasingly complex landscape makes it challenging to define and implement an end-to-end strategy without encountering issues such as:

- Regrettable spending on technology that becomes outdated before delivering a return on investment (ROI)
- Technology debt, which arises from the need to maintain and update multiple, duplicated, or overlapping solutions
- A loss of digital 'credibility', as users become disillusioned with the technology available to them a disconnect from the supply chain, which can lead to excluding higher-value providers or falling behind more digitally enabled competitors

Organisations

that successfully create business value from digital transformation do so by being agile.[9]

The opportunity to use an agile approach to sustain an evolving vision

Organisations still need to define a 'high value outcome', a vision of where they wish the organisation to go focussing on outcomes and impacts with little or no mention of specific technologies but considering the evolving complexities that they will bring to their contexts. The current landscape provides a genuine new opportunity to navigate these challenges, enabling capital project organisations to demonstrate agility.

With the advent of cloud services, SaaS, APIs, common data environments, and open-source coding, organisations no longer need to invest in a single, all-encompassing vendor solution. These traditional solutions often require lengthy transitions and rollouts, in addition to adding to IT burdens. Instead, there is the opportunity to develop an ecosystem of connected solutions driven by data flows to deliver insights, allowing organisations to focus on improving processes and encouraging new behaviours, ultimately promoting enhanced productivity and communication.

This alternative approach aims to provide a more flexible and responsive strategy to sustain an evolving vision, having innovation and data as key components contributing to improve the quality of the strategy and enabling successful sequential waves of progress. In action, committing to only a few near-term horizon solutions for highest priority problems to then, recalibrate incorporating insights from the generated data to pivot towards opportunities presented by the latest technology trends and maturing of the industry.

Key principles to set up this agile approach for a continuous strategy

There are three principles that need to be upheld to set up and operate an agile and continuous strategy:

- Be 'problem focused' – ensure all strategic activities are addressing high priority business issues and adding measurable value.
- Use short duration planning horizons – set a strategy to cover a period of 6-9 months (or one project phase).
- Focus on a few initiatives only - especially in early horizons, and ensure the organisation is able to support and deliver.

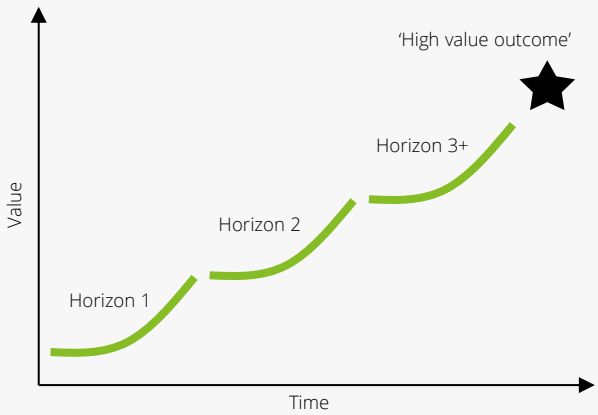
These principles, when combined, allow the strategy to adapt and respond, pivoting to support new emerging issues but also allowing maturing, emerging and disruptive technologies to be considered in the next stage.

Key benefits of this approach

- ✓ Getting the most relevant and scalable cost-efficient solution
- ✓ Enhanced understanding of the costs, time, and challenges involved in executing digital and data transformations
- ✓ Capability to influence and modify transformation strategies, minimising regrettable expenditures and technical debt
- ✓ Increased credibility of the organisations approach to digital transformation due to the higher success rate in delivery
- ✓ Greater visibility and adoption of cutting-edge technologies, leading to improved market share and competitiveness

Example of a high-level approach to design an agile and continuous strategy:

A continuous strategy involves 'fractioning' the evolution of change into short 'horizons' that usually last between 6-9 months (or in line with its project phases). Example:



Considerations for each of these 'Horizons':

- **Horizon 1:** Defined with detailed plan of delivery solving 'current' highest priority business issue. Consider splitting into smaller horizons if any ambiguity exists.
- **Horizon 2:** Defined only to available options and to be adapted based on learnings from previous strategic horizon, changing business needs and technology trends.
- **Horizon 3+:** Only defined with indicative approaches to support business planning and illustrate a path to deliver a high value outcome (applicable to all following horizons).

Leveraging Agentic, Sovereign & Physical AI

Agentic AI can analyse industry trends, emerging technologies, and competitor activities to identify potential opportunities and threats. This helps organisations anticipate future needs and adapt their technology strategies accordingly.

The importance of an 'Orchestrator'

Enabling transformation

For major transformations in capital programmes, 'what to transform' and 'why to transform' is well established. In addition, the six success factors listed contribute the 'how to transform', but there is another important consideration: "who" is required to successfully transform?

Digital transformation for capital programmes is no longer a part time activity. When combining complex project scope with intricate stakeholder interfaces and a fast-paced technology landscape, defining and delivering value with digital capabilities requires capacity and capabilities that traditional capital programmes roles do not usually have. Instead, a dedicated role(s) is required to 'orchestrate' the transformation, enabling and delivering the change required.

The Orchestrator

An orchestrator develops transformation strategy development, aligns approaches, breaks down silos and unifies initiatives based on real business value. Collaborating across all levels, orchestrators constructively challenge norms and culture to influence positive change.

The orchestrator is also connected to the wider capital project industry and the world of technology, bringing connections, insights and, experiences to their role aiding the decision making-process. An orchestrator can help organisations to reflect on their positions in the wider market supported by industry best practices and future trends.

Principles of the role

An individual or team, who is characterised as being able to accelerate the transformation, deliver long-term value, and advising on required technology capabilities, while building a sustainable change for the organisation. They operate with the principles:

People theme

Inspiring and influential
Capable of addressing all parts on an organisation and able to challenge ways of thinking, bring about new ideas and create excitement for change.

Diverse and versatile
Has an array of capabilities and experiences bringing new perspectives and the ability to rapidly respond to new needs, providing services and skills with limited delay.

Process & governance theme

Advocacy and adjudication
Ability to translate ideas into business cases, enabling consistent and objective decision-making and supporting efficient and effectively planning across portfolios.

Independent and pragmatic
Operates without bias or preference nor influenced by any one part/, focussing on outcomes and holding true to strategic aims.

Technology theme

Knowledgeable and agnostic
Competent in a wide range of technology solutions, aware of latest trends and advances and operates without preference to any single solution/approach

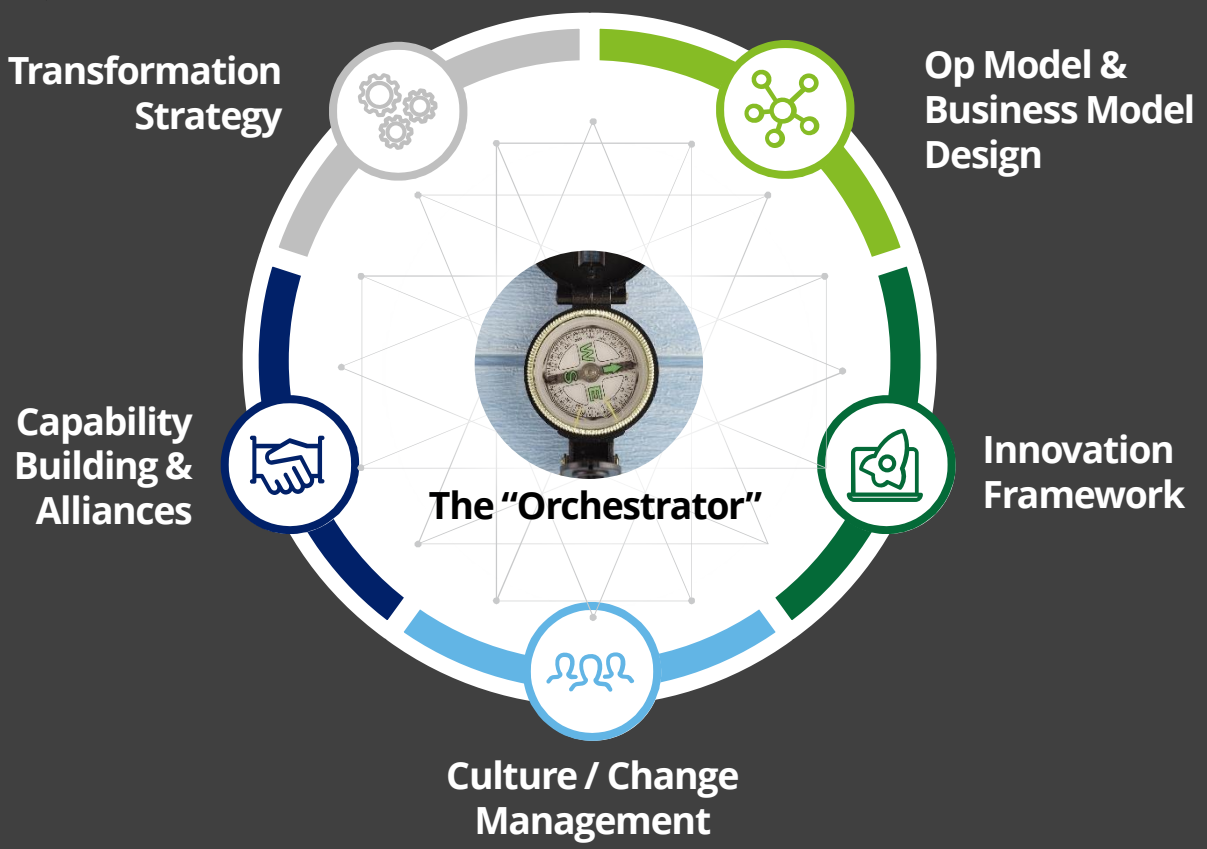
Collaborative and connected
Active in the capital programme and technology industries, contributing to advancing the industry and continuously growing a network of connections.

Strengths and weaknesses across different players applying the orchestrator role

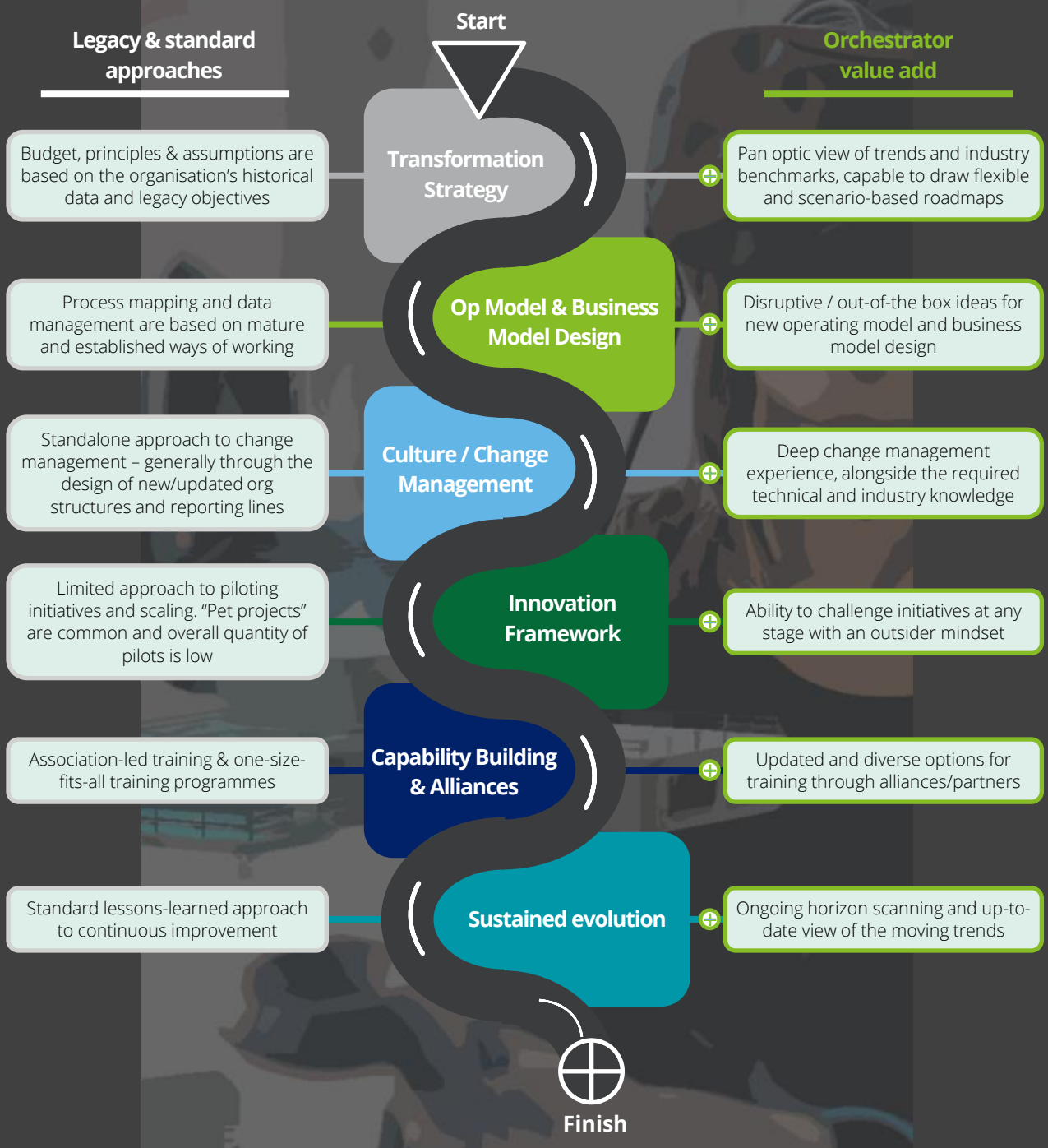
'Orchestrator' services can be provided by different organisations, each with strengths and weaknesses to be considered.

Organisation-led	Professional Services	Vendors	EPCs
Ensures deep understanding of purpose and benefits of a transformation. Strong influence through the organisation. May lack independence, ability to think beyond the established norms and have limited connections into the wider industry.	Experience across a range of industries and technologies, are able to bring new ideas and champion innovation. Able to act independently, leverage a broad bank of capability and vast networks of connections. May require support to grow influence within an organisation.	Will bring a deep technical capability and strong links into industry networks. Valuable insights into technology implementation and value cases. Will have preference for own solutions and may not offer a broad range of options.	Wide range of capabilities, experiences and connections covering multiple industries. Will provide a broad perspective. May show preference to own or existing solutions that favour programme delivery than the owner-organisation's strategic aims.

The "Orchestrator" as the compass and neurological dot for a sustained evolution



Heading towards a sustained evolution



End-to-end accelerated success across the transformation

In the capital projects industry, continuous value delivery is crucial for successful transformation. The proposed success factors are designed to assist all types of organisations by creating alignment, defining resilient models and frameworks, and building momentum for growth and continuous evolution.

Get in touch

We have supported digital transformation for some of the world's largest capital project organisations

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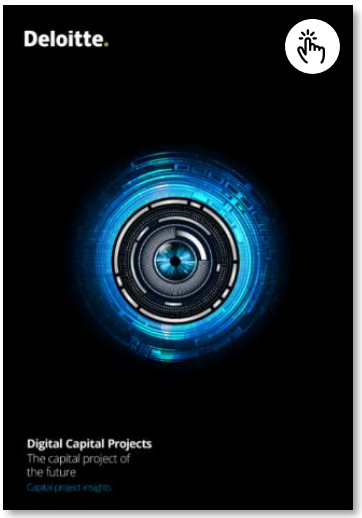
Key contributions from:
John Saba, **Mayukh Dutt** & **Nuwani Ratnayaka**

Thought Leadership

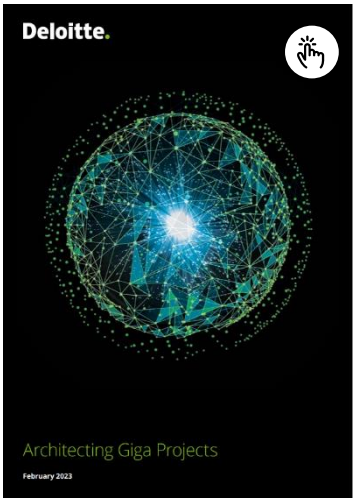


Digital Capital Projects

The Capital Project of the Future

Digital Capital Projects

Realising value through digital maturity



Architecting Giga Projects

Delivering the future

UK Oil and Gas Digital Maturity Report 2023

Produced in partnership with Oil & Gas UK

End Notes

[1, 3] Digitalisation in Construction Report 2023, Royal Institution of Chartered Surveyors (RICS)

[2] Offshore Energy Data & Digital Maturity Survey Report 2023, Offshore Energies UK

[4] Offshore Energy Data & Digital Maturity Survey Report 2023, Offshore Energies UK

[5] Navigating the Future of Construction: Leveraging Data for Strategic Advantage, May 2024, Autodesk

[6] Blount, S. and Carroll, S. (2017) 'Overcome Resistance to Change with Two Conversations', Harvard Business Review, 16 May

[7] Shukla, S. et al. (2023) 'Navigating the data deluge: Challenges and opportunities', Data-Intensive Research.

[8] Tamayo, Jorge., Duomi, Leila,. Goel, Sagar,. Sadun, Raffaella,. & Kovacs-Ondrejkovic,.(2023) 'Reskilling in the Age of AI;, Harvard Business Review

[9] Unleashing Value from Digital Transformation: Paths & Pitfalls, Deloitte Insights, 2023

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