



Major capital projects
Making them work

Major capital projects in Australia

In recent years, Australia has seen unprecedented capital investment in some of the world's largest projects including the National Broadband Network, a number of private mining, and the rise of liquefied natural gas (LNG) projects, and new power and water assets.

While a global downturn in commodity prices has seen the mining sector rethink some of its investments, expenditure on capital projects continues to rise, others begin to enter their operations phase, and the need for commercially astute project advice remains as critical as ever.

The development of increasingly large and complex major capital projects in the energy and resources sector span years and involves complex technologies, global supply chains and varying local environments. They also face strategic, financial, and regulatory checks that may challenge traditional models of project management.

Deloitte offers specialist capabilities covering every aspect of major capital project development. Clients tell us that our depth of experience and collaborative working style sets us apart from our competitors. We work with our clients to co-design solutions, tapping into their detailed business knowledge, and challenging and evolving this knowledge by bringing innovative perspectives that shape solutions and drive success.



Challenges and questions



► What should our delivery strategy/business plan be?



► What is the most suitable delivery/operating model?



► How can we control cost and improve value for money?



► How can we drive consistency and efficiency in planning and execution?



► How do we ensure a seamless transition from construction to operation?



► The centre and the site. How should we be organised?



► How do we use data and technology to drive better outcomes?



► What capabilities do we need, when and where?

Our capabilities

Making the right case for investment:

Robust and realistic business case development

In the current environment, it's even more important to produce robust, coherent and intelligent business cases to inform and ensure project success. We work with clients to develop realistic business cases that drive the delivery of strategic goals and benefits through operational implementation.

Setting up to succeed: Establishing the right governance structures and delivery models

There's a close link between appropriate governance of a program and the delivery model of the program and operations. We focus on three aspects of effective governance:

- Having the right people involved in decision making
- Giving them timely, accurate information upon which to base decisions
- Most importantly, ensuring effective leadership from senior executives and the board.

Creating and maintaining oversight and foresight:

Information management

Investment in information management is critical to establishing and maintaining the oversight and foresight that's required on a capital program. Our focus ensures that clients don't over invest, while demonstrating and achieving program control to provide delivery confidence to decision makers and stakeholders.

Delivering an operation, not just an asset:

Operational transition

Delivering an asset that's fully operational, effective and efficient from day one is critical. A capital program must be planned, designed and delivered for operational readiness from the outset, and underpinned by a common vision and a clear line of sight.

Using capital effectively and efficiently:

Optimisation of the capital investment portfolio

It's essential to develop a transparent, objective mechanism for prioritising projects based on evaluating desirability (what creates shareholder value) and viability (implementation risk). Once the capital project is committed to, independent assurance and oversight ensures confidence of delivery against stated objectives, time, cost, quality and benefits.

Deloitte and WorleyParsons – a compelling alliance

Our clients know they can come to us to obtain leading advisory services across a range of specialist areas, from tax and accounting to consulting. However if they need more in-depth engineering capabilities, we are able to offer the solution of our WorleyParsons alliance to bring a whole new breadth and depth of capability.

Combining world-class engineering services with advisory, consulting and systems integration expertise, Deloitte and WorleyParsons have created a unique partnership that delivers insightful, end-to-end solutions for capital intensive industries.

Leveraging each other's capabilities, our alliance combines seamless strategic advisory with deep engineering expertise to provide broad and deep project and operational client solutions across areas that include project finance, project execution, systems and technology, change management and asset maintenance/capital management capability.

The alliance has helped clients around the world to deliver more than 30 major projects, offering a large capital project portfolio of over 70 individual solutions/ methodologies and the entire capital program capability within the 45,000 strong WorleyParsons workforce and the 200,000 people who comprise the Deloitte global network.

WorleyParsons

WorleyParsons is an Australian-based, global provider of professional engineering services to the infrastructure and resources industries. They deliver projects, provide expertise in engineering, procurement and construction and offer a wide range of consulting and advisory services, creating a skill set complimentary to Deloitte's leading strategy, operations and technology advisory services.

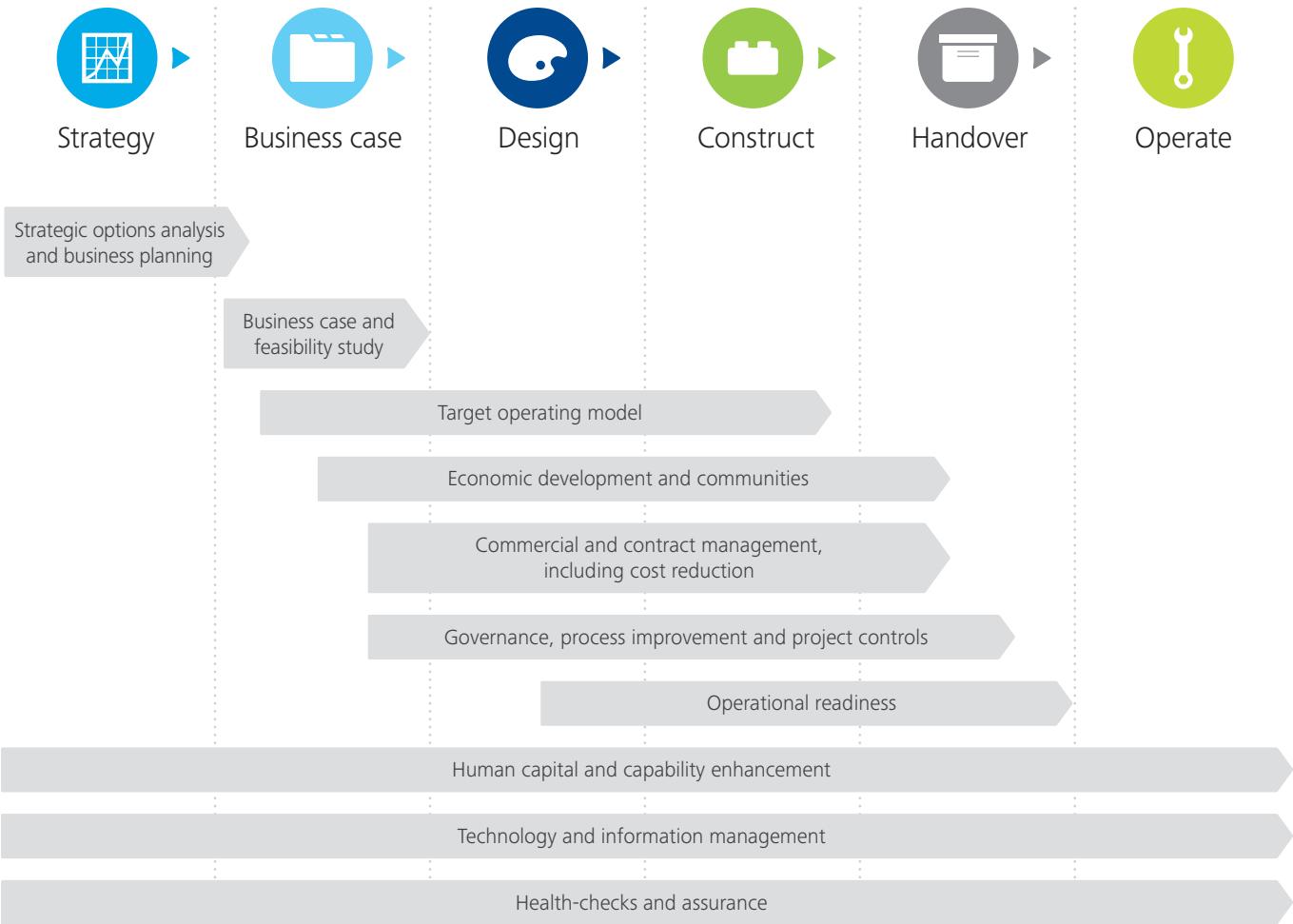
With major operations in the Americas, Asia, Europe and Australasia, WorleyParsons provides services across the major capital project lifecycle, specialising in three core sectors: hydrocarbons (upstream and downstream); minerals, metals and chemicals; and power, infrastructure and environment.

Deloitte

Deloitte has substantial expertise across oil and gas, mining, power, water and shipping and ports, working with clients to help them maximise their return on financing, procurement, delivery, operations and transactions associated with large capital projects. Our diverse expertise – and access to a global network of professionals – spans advice and assurance across every stage of the capital project lifecycle.



Major capital projects lifecycle



How we can help

Exceptional industry knowledge and a collaborative approach to client solutions are delivered across ten key major capital project service offerings.



Options analysis and business planning

A core Deloitte specialty lies in coordinating, developing and refining business plans and testing key assumptions and alternative strategies on complex capital projects. This includes market analysis and trending to provide insight and foresight to get one step ahead of change, as well as strategy translation and outcome management to understand the line of sight of the path to value.



Business case and feasibility study

Our ability to translate corporate strategy to program options sets the foundation for successful complex and large scale capital projects. This includes defining boundaries and prioritising investments aligned to strategy, while having a clear appreciation of the feasibility of options from risk and value perspectives and the organisational design required to successfully deliver outcomes.



Case study:

Background: We delivered an accommodation execution strategy for a global diversified mining company operating in Australia.

The challenge: The client's accommodation and towns management division must deliver maximum benefit to the business at the most effective cost. However, the division didn't have a strategy in place to articulate its vision and end benefits to the business to engage key stakeholders to support their proposals.

How we helped: We developed an execution strategy outlining the proposed long-term accommodation delivery strategy for the whole of the organisation that included trusted builders and developers to meet demand for accommodation in the project site over the next five years. This was supported by a net present cost model outlining the real cost of various replacement options over specific periods of time to support the securing of government funding. The end result was improved transparency and confidence around the planning, expenditure and benefits associated with accommodation management.



Case study

Background: A global mining client wanted to expand an existing open gold mining operation in the US to increase the expected life of mine.

The challenge: In addition to expanding the operation, the client needed to understand potential value optimisation opportunities that would further improve the business case. They also needed comfort that the production profile was achievable.

How we helped: Our specialist team confirmed the investment case for the project, undertook sensitivity analysis and identification of primary risks to support the analysis, and explored potential value optimisation opportunities. They delivered significant value, improved the original investment case which was incorrectly calculated and confirmed that the production profile was achievable.

How we can help



Target operating model

Advising on what world-class capital project delivery looks like, and helping clients to develop or transform their own team organisation to get there, is a particular strength. This involves following a hierarchy – from vision and values through to functional implementation – enabling the design of a consistent approach, including people, processes and systems, to managing contracts and projects.



Economic development and communities

A strong focus on the community and economic impacts of major capital projects is critical, and we are experienced in factoring these priorities into the overall sustainability and governance of the project to achieve success. We advise on the commissioning and delivery of large scale capital projects to enable clients to accelerate impacts and benefits to project stakeholders.



Case study

Background: A UK infrastructure provider responsible for delivering a £4 billion water infrastructure project sought our help to design the target operating model for the complex project. Support was also required for planning, subsequent implementation and organisational transition to the new major water supply entity company that was being created.

The challenge: It was essential for the new entity to not only have the capabilities to deliver the capital program, but to also meet the needs of multiple external stakeholders, make the new entity attractive to potential investors, and preserve the client's existing operations.

How we helped: We defined the target state operating model for the organisation at the time of construction and commissioning, encompassing organisation, process, information, technology and governance. This included development of roles and responsibilities for delivery of the capital project to create a sustainable organisation and governance arrangement, both pre and post transition. Our collaborative approach to design resulted in positive engagement of senior stakeholders, resulting in a sense of ownership and strong understanding of the operating model.



Case study

Background: We were appointed as a key advisor and partner by a global mining company to assist with one of its largest ever community initiatives for a large scale project in Africa.

The challenge: The project was part of a business critical investment in the client's product group and one of the biggest integrated infrastructure projects ever developed in Africa. Construction of a new railway and port were required to enable first commercial production within a relatively short timeframe. Long-term success was dependent on delivering socio-economic outcomes and benefits to local communities.

How we helped: We were instrumental in developing a communities and social performance delivery strategy for land acquisition, resettlement and compensation, community development and community relations, as well as helping with a regional development framework, and creating a previously unknown benchmark for sustainable economic development for capital intensive projects in Africa. We worked closely with the client to engage with local communities across the relevant country ahead of major construction works on the mine, railway and port, and supported the client with targeted regional and local community projects by working with the International Finance Corporation, government, local authorities and non-government organisations.



Commercial and contract management

We have a proven track record in analysing contract management on some of the largest capital projects globally, and across a range of industries. This experience includes developing a detailed understanding of expenditure and capability 'current state', and defining fit-for-purpose frameworks and capabilities to move the maturity of an organisation to contain and optimise contract expenditure.



Governance, process improvement and project controls

We specialise in defining and executing robust governance, processes and controls, and creating appropriate delivery models to enable the successful navigation of delivery of capital projects on time and to budget. This involves consideration of the client's organisational structure and operating model to ensure that appropriate governance and processes are in place to optimise control and decision making.



Case study

Background: We were sought out by the regional capital projects group for a mining operator to analyse factors that influenced recent contractor cost escalations, and to develop recommended improvements. Our brief included insight into the existing strategy, the market context for contractor supply and demand, and the client's contractor management and negotiation processes.

The challenge: Twelve to eighteen months prior to our engagement, we worked with the client to develop a contractor management strategy that relies on long-term framework agreements with key contractors in the four key disciplines that most affect operations. Post-implementation there was a lack of coordinated oversight of contractor management processes, and the client required insight into what might have gone wrong, and what steps could be taken to improve outcomes.

How we helped: We produced a report and dynamic model including the client's labour and commodity needs, the insights of which were applied in strategic planning sessions to formulate a course of action that maximises benefits and minimises risks to the client's key capital projects in the future.



Case study

Background: As part of a capital infrastructure project management refresh, our client's parent invested in an integrated project controls management system to capture project cost and schedule performance information in a single database.

The challenge: While the system 'as built' provided physical control over project expenditure and a linkage between cost and schedule, there was limited capability to view and analyse captured data.

How we helped: We defined a program to improve decision making by project management, and provide timely access to consistent, reliable and auditable data in reporting and dashboards and standard cost reporting. The pilot phase of implementation of the program of work was considered a success by key project stakeholders as it provided improved insights and accuracy of data, and enabled the decision to proceed with the full roll out.

How we can help



Operational readiness

From design and delivery of a readiness program, through to support at 'go live' and beyond, we have a comprehensive range of services that also includes a readiness health check to assess existing plans. This involves empowering project teams and operation owners to proactively identify and integrate critical operational readiness tasks into the overall capital planning and execution process, delivering much improved outcomes as a result.



Case study

Background: A metals mining company had limited guidance around operational readiness.

The challenge: There were no clear definitions and minimal dedicated planning and resources, with different stakeholders across the organisation taking different approaches.

How we helped: We helped the client's project hub to review current practices and develop a suitable operational readiness framework aligned to the major capital project lifecycle to ensure projects meet 'ramp-up' requirements, business case objectives are met, and value is not eroded. The outcome of this work was improved controls and management of operational readiness activities, providing comfort to senior leadership that the risks on future major projects would be identified and mitigated in a structured manner to set the operation up for success.



Human capital and capability enhancement

We support clients across the human capital landscape, enabling effective organisation design, workforce capability and, ultimately, the quality delivery of complex programs. This involves designing project organisation and capabilities to meet the needs of the program across all phases of the project lifecycle.



Case study

Background: One of the world's largest diversified mining organisations appointed us as advisors for the development of a new iron ore mine in West Africa.

The challenge: The project's timelines, production 'ramp-up' profile and workforce supply conditions make human resources one of the largest risks to the successful delivery and operation of the future mine.

How we helped: We worked with the client to develop a detailed organisation design for a new mine 'future state' operation, including a comprehensive view of organisational requirements, unique operational requirements, and business processes across a range of mine areas. Value delivered centred around three key areas: increased clarity of future human resource requirements, enabling commencement of recruitment and training activities; business processes to form the foundation for detailed process design and development of operating procedures and training; and rigorous assumptions and inputs for cost/benefit analysis for the project as it progresses towards construction.



Technology and information management

Delivering large scale, complex technology implementations and information management systems across capital projects is fundamental to successful program delivery. This involves working with key stakeholders to develop a strategic roadmap that ensures the technology and information management is designed and implemented to effectively support successful capital project delivery. We bring core capabilities across enterprise architecture, system selection, system specification, analytics and implementation to achieve desired outcomes. The success of our projects in this space is underpinned by our collaborative approach to working with clients, vendors and additional third parties.



Health checks and assurance

Independently checking project health throughout the project lifecycle, and highlighting key issues and developing practical actions to remediate these, is critical, and we also design assurance frameworks for major capital programs using a unique risk-based tool. This provides certainty to program leadership and those within the program that risks are being identified and assessed appropriately.



Case study

Background: This global oil and gas client was using an ineffective manual authorisation for expenditure process across its operations and was seeking advice on leading practice to improve this process and overall efficiency.

The challenge: The client's existing system was not able to adequately locate and track items and report on status and was an inefficient, administratively heavy process that lacked a single source of truth due to the need for individuals to source data from a number of spreadsheets to create a single view.

How we helped: We established functional requirements defining the authorisation for expenditure workflow and necessary approvals, standardised and automated the process globally and deployed the solution in each operating region. As a result, the client is able to automate the initiation, tracking and management of the authorisation for expenditure process, produce real-time reporting, track and report globally on capital expenditure and improve productivity, delivering a tangible impact on the organisation's bottom line.



Case study

Background: We were engaged by a gold mining client to assess and provide comfort as to the execution readiness of the newly approved brownfield expansion of an existing mining operation.

The challenge: Existing systems and reporting didn't provide the board with the visibility and comfort it needed that the expansion project was being managed and implemented to support a successful increased operation.

How we helped: We conducted a gap analysis on implementation execution readiness that involved the development of a central project management office to coordinate and track activities, integration and the conclusion of service level agreements, contractor execution readiness support, project KPI and report streamlining, change management program scoping and schedule review and risk analysis. We then supported the client further, ensuring readiness gaps were closed prior to initiating the project, providing assurance and comfort to the board and leadership that the project was set up for success.

Contacts

National Lead



Michael Rouse
Partner
Tel: +61 3 9671 7755
Mob: +61 409 805 677
mrouse@deloitte.com.au

Victoria



Heidi Isreb
Director
Tel: +61 3 9671 6696
Mob: +61 421 373 293
hisreb@deloitte.com.au

Western Australia



James Kornweibel
Director
Tel: +61 8 9365 7190
Mob: +61 410 406 252
jkornweibel@deloitte.com.au

Victoria



Michael Rath
Partner
Tel: +61 3 9671 6465
Mob: +61 413 758 057
mrath@deloitte.com.au

New South Wales



Diana Tandora
Partner
Tel: +61 2 9322 5633
Mob: +61 403 156 690
dtandora@deloitte.com.au

Queensland



Chris Noble
Partner
Tel: +61 7 3308 7065
Mob: +61 418 465 209
cnoble@deloitte.com.au

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