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Operation go-live!
Mastering the people side
of operational readiness ▶

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Up to 30% of the value of a capital programme can be destroyed due to operational readiness failures.[1] In the complex interplay between technology, infrastructure and process, it is often the 'people' side of delivering the operation that presents the greatest challenge.

Reflecting on recent success stories, such as the London 2012 Olympic & Paralympic Games, how can early and iterative readiness planning, testing and exercising help to deliver a seamless operation from day one?

1 Deloitte (2012) "Effective Operational Readiness of Large Mining Capital Projects – Avoiding value leakage in the transition from project execution into operations".

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Introduction

Good practice dictates that programmes and projects should be justified by a solid business case. This underpins sponsorship, investment and, ultimately, stakeholder expectations. Yet many large-scale capital projects fail to deliver on these expectations, with ineffective operational readiness a significant contributory factor. Recent case studies in the mining industry have demonstrated that as much as 30% of the potential value of a major programme can be destroyed as a result of operational readiness failures.[2] For many programme directors therefore, a comprehensive approach that builds and evidences their organisations' readiness offers real value as they prepare for day one.

It is increasingly recognised that a focus on operational readiness is a key differentiator in a programme's ability to deliver against the commitments made in its business case.

Programmes that embed operational readiness from the outset typically identify risks earlier, mitigate design issues when they are less costly to resolve and build highly capable teams who deliver the operation to their end users with greater efficiency and confidence. Conversely, programmes that fail to do this often expose the operation to increased initial spend, on-going operational cost, unnecessary burdens on their people and damaged stakeholder confidence.

However, while a number of industries do focus on operational readiness, few can claim to have mastered managing the human factor, with people by far the most challenging and least predictable component in delivering a complex operation.

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2 Deloitte (2012) "Effective Operational Readiness of Large Mining Capital Projects – Avoiding value leakage in the transition from project execution into operations".

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Operational readiness – journey or destination?

Many programme managers ask whether "operational readiness" is the destination or the journey. In reality, it is both.

Readiness programmes should have a clear end goal – an agreed and sponsored articulation of what readiness means for each function and partner. Over the course of the programme, these readiness objectives should be actively tested; and progress towards them tracked, monitored and reported. Ultimately, demonstrable achievement of these objectives gives confidence and evidence to stakeholders to declare that "we are ready".

But operational readiness also describes the evolving capability of an organisation to deliver the operation at 'go-live'. It is the glue that binds together the functional silos and integrates the external partners, moving people away from blinkered one-dimensional planning and challenging them to think, collectively, "How will this work on day one and beyond?" A readiness programme, through exercising and testing, also validates the integration points between people, process, infrastructure and technology, identifying risks and gaps to be addressed long before operational launch.

Increasing confidence and capability through progressive testing and learning
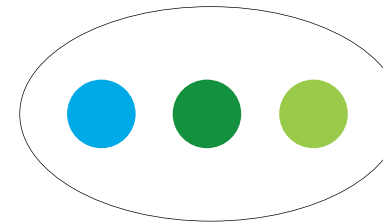
• **Start simple**
• Define core risks and priorities
• Identify readiness roles and responsibilities
• Test individual functions and processes
• Incorporate lessons learned into functional plans
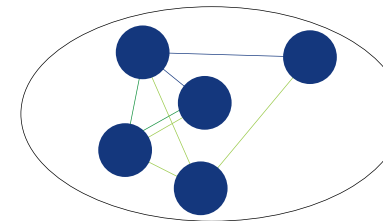
• **Validate integration points** between functions and partners
• Progressively test end-to-end processes
• Build a common understanding of the integrated operation
• Use testing outputs to refine the integrated operational plan
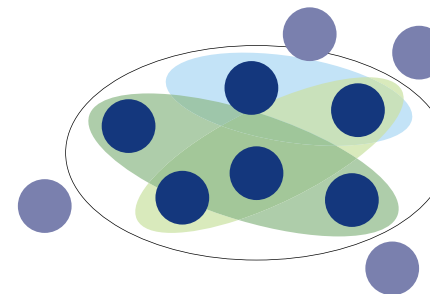
• **Bring all partners together** to stress the entire model in response to simulated complex internal and external factors
• Focus all levels of the organisation on the realities of day one operations.

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It's never too early to start

A common pitfall is to interpret operational readiness as "the things that need to be ticked off in the ramp-up to go-live". Whilst effective transition planning, training, communications and reviews of risk/issue close-out are important in achieving readiness, they do not go far enough in addressing the human factor so critical to success. Furthermore, by only considering operational readiness at later stages, programmes may have already exposed themselves to significant value destruction

Take a typical programme scenario, for example. A design team is tasked with developing a future operating model, and briefed to design infrastructure, select systems and equipment, and develop operational processes. However, the team that will ultimately deliver the operation is not involved in developing and validating this future model. A separate team will be responsible for training end users. By the time the operations team begins to ramp-up, buildings have been built, equipment has been procured and processes embedded into systems. Emotional connections have been established and loyalties formed according to organisational boundaries. The operations team quickly identifies risks to delivery, inefficiencies and inadequacies, and are left feeling exposed with their commitment to the new ways of working diminished. But to change things now would be too costly, time consuming, and jeopardise the 'go-live' date. And so, from the outset, not only is the operation compromised in its ability to function effectively, but the morale and commitment of the team is also undermined, due to features that could have been designed out with an earlier focus on operational readiness.

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Reaching the parts that traditional approaches don't

Used effectively, experiential learning and exercises can transform a programme's management of the 'people' side of achieving operational readiness.

Traditional operational planning and design methodologies invariably incorporate review stage gates. Technology projects may even incorporate an element of conference room piloting or model office in the final stages of testing. But linear planning and end-stage reviews can be limited in the dimensions that are addressed and the viewpoints heard. A standard review process is unlikely to validate the complex integration points, roles, responsibilities, systems, locations, communication channels and individual responses that go to make up an end-to-end operation.

What is experiential learning?
Experiential or immersive learning and exercising techniques provide a way to bring functions and partners together to challenge and validate plans, and build collective capability.

Based on the premise that skills are best acquired through experience, the main goal of exercising is to accelerate the development of capability by presenting people with real life challenges. It provides a safe environment in which to test end-to-end processes, validate assumptions, identify gaps and build a team's confidence

and capability in delivery, as well as their commitment to adopting the new ways of working, before designs are locked down and delivery resources committed.

As a result, exercising also helps to demonstrate and accelerate some intangible, yet essential, operational readiness elements, including:

- Strengthening internal and external relationships, particularly across multiple sites, regions, partners and other organisations

- Improving collaboration, fostering common work practices and protocol

- Increasing awareness of others' practices, needs and expectations

- Highlighting individual human behaviours in situations that replicate real life

- Developing knowledge, skills, attitudes and confidence.

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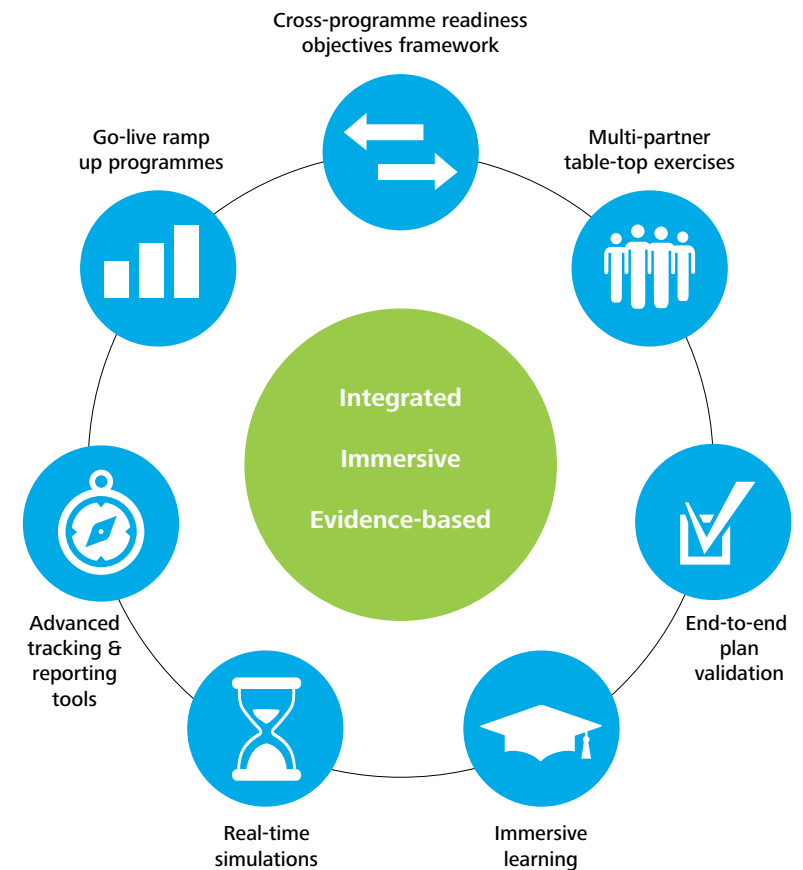Mastering the people side
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How can it be applied in a capital programme?

Across the lifecycle of a major programme, exercising can be used to progressively build capability and engagement. Such an approach was used to good effect to build the capability of the delivery teams at London 2012 (see page 10).

Exercises can be targeted at particular topics pertinent to the current project phase and progressively develop in scope and sophistication as the emerging operation evolves. During the early phases of design, exercises will focus on clarifying scope boundaries, roles and responsibilities between partner organisations. With this foundation in place, these early phase exercises should focus on developing and validating 'Plan A', 'business as usual' operations. As the design matures, exercises develop in complexity to look at less common situations, including contingency and crisis scenarios.

As the scope and complexity of exercises increases, so does the level of realism. By moving end-users from the office to a more realistic environment, such as a simulated operations centre or model facility, it is possible to get a more realistic view of their response under pressure. As 'go-live' approaches, exercises focus on building the capability of the organisation at all levels, from the Executive team through to the frontline operational teams and fully integrating this across the partner network.

Innovative tools to build capability

Cross-programme readiness objectives framework

Multi-partner table-top exercises

Go-live ramp up programmes

**Integrated
Immersive
Evidence-based**

End-to-end plan validation

Advanced tracking & reporting tools

Real-time simulations

Immersive learning

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Learning from some of the best

Andy Cox, former Captain in the British Army and now a Senior Manager in Deloitte's Simulations and Wargaming practice, considers how the corporate world can learn from military exercising techniques.

The British Army has developed an approach to operational readiness that blends traditional capability development with a focus on rehearsing integrated operations, using two distinct concepts. Many corporate programme managers will recognise the concept of **'force preparation'**, which focuses on developing appropriate staffing levels, procuring and delivering essential equipment and training individual roles and functions. But once these foundations are established, the military transitions to focus on **'force generation'**, which helps map out how to develop the integrated capability of the end-to-end operation and the frontline delivery team.

This approach has three distinct phases:[3]

1. Foundation training – allowing all individuals to achieve flexible core competence in their functionally specific roles.

2. Mission-specific training – addresses the need to adapt to meet the specific, intended operational context, focusing on the competencies needed to deliver the mission in its entirety, and integrating all of the delivery functions, partners, equipment and systems to develop a collective competence.

3. Mission rehearsal training – preparing units to deliver operational responses in real time with realistic pressures and challenges with the aim to practice and test skills learnt through the entire force generation process. Rehearsals require individuals, functions and wider units to collectively respond using the command, control and communications architecture they will have during the live mission.[4]

3, 4 Ministry of Defence, "Army Doctrine Publication (ADP) Operations",
https://www.gov.uk/government/publications/army-doctrine-publication-operations

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Lessons identified vs. lessons learned

All too often, organisations go through a valuable exercising period without really taking on board the lessons identified. The military approach is based on both lessons identified (from which a remedial action has been developed), and lessons learned (the results from the implementation of a remedial action that delivers improved performance or increased capability). The process demands that lessons identified become institutionally learned and recommendations are exploited to maximise and enhance operational capability. What sets the military approach apart is an understanding that learning lessons is an individual as well as a collective activity. A lesson might be clear institutionally, but until it is absorbed individually, the risks of repeating mistakes or missing opportunities will remain high.

The military have a very obvious reason for focusing on operational readiness. Whilst the corporate world will infrequently face such stark realities, adopting some of the techniques and robustness of the military approach can have a hugely positive impact in managing the 'people' side of achieving operational readiness.

What sets the military approach apart is an understanding that learning lessons is an individual as well as a collective activity.

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London 2012 – the ultimate immovable deadline

"As an athlete, you never want to perform something in the final that you haven't spent thousands of hours preparing for..."

Lord Coe, Chair, LOCOG

In the summer of 2012, the eyes of the world were on London. The overall success of the Games would be determined largely by the readiness of the UK-wide operation on day one. The challenge was unparalleled in its complexity, seeking to integrate over 50 nationwide domain owners and 40 internal organising committee functions delivering to 200+ locations across a complex multi-stakeholder landscape. Over a period of 20 months, Deloitte worked alongside a number of the key London 2012 delivery partners, including the Organising Committee (LOCOG), the Greater London Authority, Transport for London, Network Rail, the Cabinet Office, the Emergency and Security Services, and the British Olympic Association, to deliver a comprehensive and sophisticated readiness programme.

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Working alongside LOCOG, we defined over 4,500 readiness objectives that spanned the breadth of their operation. The premise of the programme was to "make people feel like they had done it many times before". **But how can you achieve this when the venues have yet to be built, the athletes have yet to arrive and the equipment has yet to be procured?**

An 'experiential learning' approach was used to focus participants on what it would actually be like to operate their function at Games time, balancing 'Plan A' scenarios with crisis management and everything in between. From late 2010 onwards, a dedicated readiness team delivered over 300 exercises, ranging from scenario-based table-top activities to live 'day in the life' venue simulations and multi-day, multi-partner test events with over 3,000 participants. Readiness exercises challenged participants to pool their functional resources, apply their collective plans and build strong working relationships to resolve real life challenges that, at Games time, would require a seamless integrated response. Whether simply talking through how to support a wheelchair user to get from the Jubilee Line to the Velodrome, or collaborating with multiple partners and locations to respond to a potentially Games-ending toxic smoke plume, the exercises all focused on building capability, confidence and a collective response instinct in the people who would need to step up and take charge.

Importantly, this readiness programme started earlier than in many other projects, giving London 2012 the chance to test incrementally as plans and capability developed. The robust performance analysis and reporting process identified and fed back actions throughout, escalating issues and risks, and tracking overall readiness status. And as the Games approached, lessons from testing were continuously revisited and embedded to support the transition to, and delivery of operations.

"Whilst the London 2012 readiness programme was essential in helping people understand their own roles, it was equally instrumental in helping them understand how their role integrated with, and was impacted by, everyone else's. An early focus on operational readiness helped integrate roles, functions and partners to ensure that, on day one, they operated as a single, seamless and accountable team rather than 200+ individuals."

Matthew Wilson, Operational Readiness Manager – Competition & Non-Competition Venues, LOCOG – Deloitte secondee

More lessons from London 2012 ▶

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Is the investment worth it?

Investing in operational readiness at the earliest stages of a new programme's lifecycle will add costs to the capital expenditure – typically between 1-4% of total cost. However, this investment drives benefits that far exceed the cost – both immediately upon operational launch and on a recurring basis through enhanced efficiency, increased quality, better customer service, improved compliance and greater productivity.

In the run-up to 'go-live', a comprehensive readiness programme will build valuable confidence in operational performance amongst all stakeholders, from the frontline operator to programme director and external regulator.

A leading oil and gas company has observed that the costs of achieving effective operational readiness are typically quickly recouped through increased asset reliability, improved safety, lower modification costs and reduced operating and capital expenditure associated with downtime and turnarounds. Their evidence suggests that, in addition to the severe detrimental impact on capex and initial operational capacity, ongoing operations and maintenance costs over an asset's lifecycle are typically 1 – 2% higher, year-on-year and for the entire life of the asset, where operational readiness was not sufficiently achieved at the outset.[5]

So the question is less "can we afford to do it?" but rather "can we not?"

Evidence suggests that, in addition to the severe detrimental impact on capex and initial operational capacity, ongoing operations and maintenance costs over an asset's lifecycle are typically 1 – 2% higher, year-on-year and for the entire life of the asset, where operational readiness was not sufficiently achieved at the outset.

5 Bob DiStefano, "Operational Readiness: Bridging the Gap Between Construction and Operations for New Capital Assets" –
    http://reliabilityweb.com/index.php/articles/bridging_the_gap_between_construction_and_operations/

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Key success factors of embedding operational readiness preparation into a major capital programme

- **Start early:** By embedding a focus on the reality of the end operation, and bringing accountable operational leaders into the programme early, every decision will be made with consideration of the operational impact. This culture will then permeate the organisation as it grows in the run-up to operational launch.

- **Ensure senior sponsorship:** Operational readiness is as much a mind-set as it is an approach or methodology. Only with the right direction from senior leadership will programmes be able to bridge the gap between those who design and build, and those who will eventually operate. For a capital project, operational readiness should be the focus of a named director.

- **Define what readiness means:** Readiness can be a nebulous concept. It is important that time is spent defining what "ready" looks like. This is critical in translating a vision into something which can be implemented. Each function and delivery partner should have an opportunity to input into and agree the programme's operational vision, underpinned by readiness objectives.

- **Develop an overarching readiness strategy:** As early as possible, define who from across the internal and external stakeholder landscape will be responsible for driving and delivering each readiness objective. Different teams or organisations may be better placed to lead on different objectives. This not only spreads the overhead, but embeds the culture across the programme.

- **Integration with the programme plan:** Once this framework is established, seek to integrate the readiness plan into the programme plan, so that readiness activities complement the evolving programme outputs.

- **Establish clear roles, responsibilities and governance:** Operational readiness activities are worthless unless the actions, issues and risks they identify are actively managed and openly shared. Strong governance that involves external partners as well as internal functions will help share these lessons and incorporate the learnings.

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• **Engaging teams in experiential learning throughout the operational readiness journey** creates a sense of teamwork, participation and commitment to new ways of working that is sustained across the wider team beyond day one.

• **Measure and communicate progress towards readiness:** Readiness objectives should be evidenced through exercises and other activities, such as traditional training and reviews, as the programme progresses. Readiness objectives can provide a quantitative and qualitative framework to track progress, evidence capability, highlight areas of risk and communicate with stakeholders.

• **Focusing on what could go wrong can distract you from focusing on what needs to go right:** Many operational readiness approaches simply focus on high risk, contingency scenarios. Whilst it is essential that capability is built to respond to contingency and crisis scenarios, this should not divert attention away from building capability to deliver the core 'Plan A' operation. Indeed, by focusing on building capability to deliver the 'Plan A' operation, it is possible to actually mitigate the risk of some contingency and crisis situations occurring in the first place.

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What could this mean for your programme?

Deloitte's specialists have extensive
experience of supporting clients in achieving
operational readiness. From design and
delivery of a readiness programme through
to support at 'go-live' and beyond, we
offer a comprehensive range of services
throughout the lifecycle of a capital project,
as well as a readiness health check to assess
existing plans.

**We would be delighted to discuss
the operational readiness plans for
your programme.** Please contact us
through your Deloitte contact or at
infrastructure@deloitte.com

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Deloitte to create a portfolio of skills that gives
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