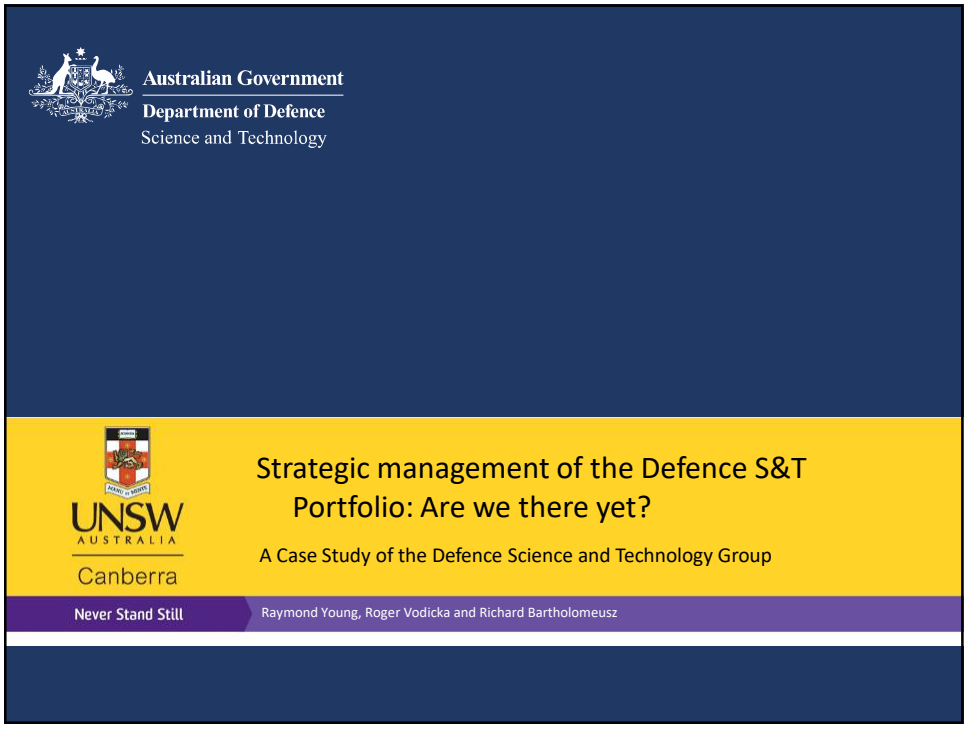

1

Introduction – persistent problem of project failure

- Research studying organisational performance over long periods has found little evidence that strategy is being implemented and goals realised (Kiechell, 2010).
  - disappointing results in all types of large projects: manufacturing, marketing and mergers and acquisitions *(Lovallo and Kahneman, 2003; PMI, 2016)*
- Research in the public sector has found that projects contribute little to strategy (Young *et al.*, 2012; Young and Grant, 2015).

10-year strategic goals (VIC/NSW)

- ↑ economy, ↑ jobs (↑quality)
- ↓ crime 5% & 'feel safer'
- ↑ health
  - ↓ waiting times (emergency, elective, …)
- ↑ education
  - ↑ literacy/numeracy
  - >90% yr 12
  - ↑ VET participation
- ↑ transport
  - ↓ commuting times
- ↑ environment
  - ↓ water usage 15%

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2

Large organisations – Defence

- Defence historically was organised around traditional Army, Navy and Air Force structures with independent chains of command.
  - In 1976, the government made a strategic change and established the ADF to place the services under a single headquarters.
  - In 2016, a review of Defence from first principles took this one step further and concluded "that a holistic, fully integrated One Defence system is essential if Defence is to deliver on its mission in the most effective and efficient way" (FPR, 2016, p. 7).
  - This First Principles Review has been quite influential with a recommendation that "implementation of the changes required to deliver One Defence is in place in two years [2018]" (FPR, 2016, p. 7).
- *Size of the Defence Portfolio*
  - A$34.7 billion in the 2017–18 financial year.
  - 1.9% of GDP and 7.28% of total Australian Government expenditure.
  - 60,000 staff in the ADF permanent force and 18,000 civilian staff in the Department of Defence.

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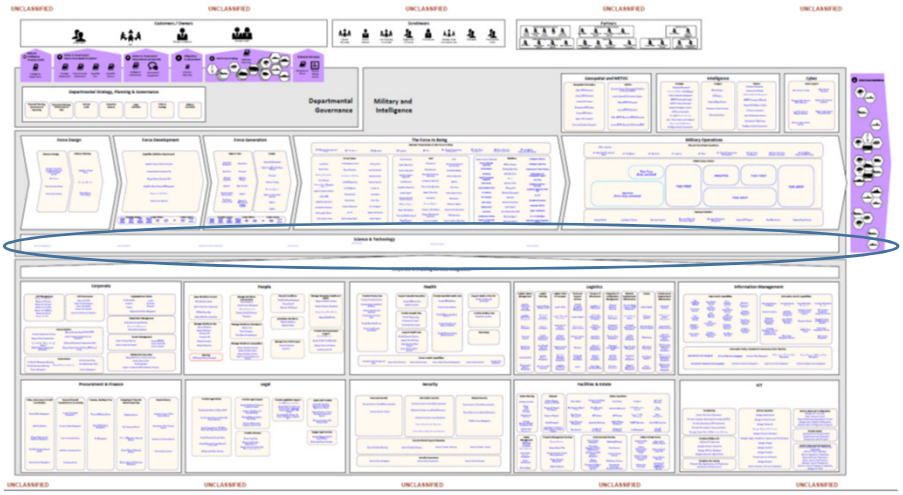
3

Defence Business Model



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4

Case Study: Defence Science & Technology Group

- DST Group provides scientific advice and innovative technologies to meet Australia's Defence and National Security challenges.
  - DST is part of the Department of Defence and DST is Australia's second largest publicly funded research organisation with approximately 2,100 scientists, engineers, IT specialists and technicians.
  - DST Group is organised into 37 Major Science and Technology Capability (MSTC) areas that have been developed to deliver outcomes against Defence and National Security strategies.

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Case Study: the case for change

- DST provides value through its capacity to reduce and mitigate strategic and operational risks and to create and maintain a capability edge.
  - DST had an audit report that concluded: "**it is difficult for the Group to demonstrate quantitatively the extent to which its portfolio of work aligns with Defence's strategic priorities**."(ANAO, 2015, p. 10).
  - In addition, the 2016 Defence First Principles review identified a recommendation that DST "be **required to clearly articulate its value proposition**".
  - DST formally satisfied this recommendation by **developing and implementing innovative processes to engage with the rest of Defence and allocate resources strategically** and is starting to be recognised for this within Defence.
    - The lessons learned may apply to any large organisation trying to improve its effectiveness in implementing strategy.

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Research Methodology

- An action research methodology was adopted because DST has a practical problem that needs a solution which may be better delivered by trialling or testing the viability of the approach rather than by theoretically based academic research *(Brydon-Miller et al., 2003).*
- Research was conducted over 3 cycles:
  - AR1: 2015 – 2016
  - AR2: 2016 – 2017
  - AR3: 2017 – 2018

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Action Research Cycle 1: 2015 – 2016

- DST identified areas of work in consultation with clients using primarily a bottom-up process consisting of gathering detailed client requirements (over 1,200 in total from the other Defence Groups and Services).
  - The large number of client requirements and the bottom up process of resource allocation made it difficult to agree the overall priorities across multiple Defence stakeholders.
- A new investment process was initiated to try to raise the level of abstraction for decision making from 1,200 client requirements to 37 Major Science and Technology Capabilities (MSTCs).
  - The 37 MSTCs were allowed to make up to five bids for funding to either develop and sustain the capability or deliver to the client domains.
  - Decision-makers initially considered and ranked around 170 proposals aiming to address the 1,200 client requirements.
  - **However**, when the bids were consolidated at the MSTC level it became difficult to easily resolve the investment needed to develop S&T capability from that needed for delivery to the client. In addition, the bids considered only funding and did not attempt to prioritise staff effort.

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Action Research Cycle 2: 2016 – 2017, P3M

- A Portfolio, Program and Project (P3M) approach was introduced as the means to provide a hierarchical structure for investment decision-making.
  - Priorities were first decided at the Portfolio and Program level before undertaking individual project prioritisation within a Program.
  - Portfolio was divided into five streams that separated investment into the MSTC capability, direct delivery to Defence domains, long-range strategic research as well as enabling functions
  - decision-makers prioritised internal funding to maintain S&T capabilities (MSTCs) separately from client requirements.
  - a smaller number of project-level business case proposals were considered in separate steps and a more strategic overview was provided for senior decision makers.
    - Each project-level business case aggregated a number of related client requirements and was presented using an Investment Logic Map (ILM)
    - In the first iteration only three of the five streams were considered:

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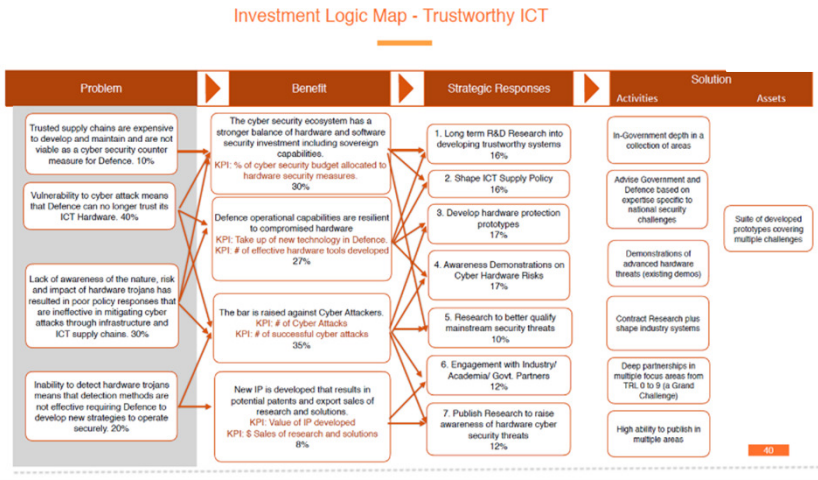
Investment Logic Maps



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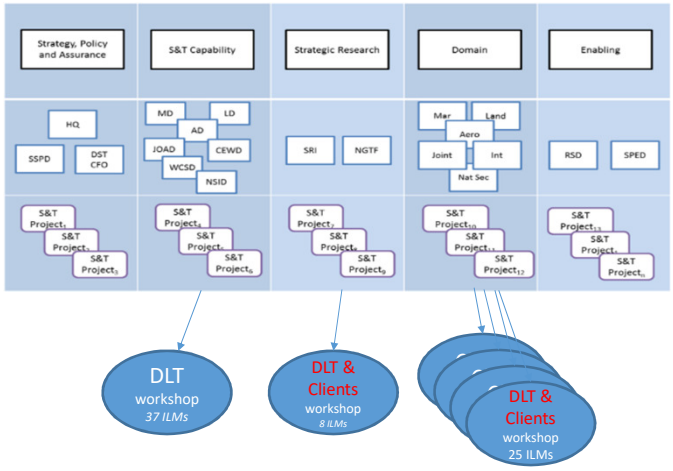
Project, Program and Portfolio Management (P3M)



11

AR2: Results

- Moved away from 1000 client requests to approx. 15 'strategic' programs
- Use of voting criteria allowed a judgement to be made on the overall 'value' of a given ILM or proposal
  - Scoring criteria
  - Aggregation based on 'crowdsource'
  - Voting outcome was universally agreed
  - Rich set of comments from the evaluation panel was fed back to the presenters
- Clients were able to see the 'strategic picture' when between 10-15 projects were presented for each program rather than hundreds of individual requirements
- A sense of 'shared benefit' meant we were able to identify better ways of marshalling resources from both the client side and from DST
  - Shared asset ('ship available for use')
  - Need to move staff with similar skills to area of greater need
  - More collegiate approach to sharing resources across boundaries where greater benefit was identified
- Mix of 'quality' – some presenters and ILMs were able to articulate benefit and value better than others – more training is planned to improve this 'skill'

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AR2: However …

- A maximum change of 5% funding for each project was considered
  - staff were still transitioning from planning by client requirements to stating project-based business cases using ILMs.
- BUT: the P3M process was not fully aligned with the budgeting process.
- Not all of the projects that required funding were captured in the first iteration
  - it was later identified that additional funding was required to fund projects that were agreed outside of the investment process.
- Total commitment now exceeded the available budget and every business unit had to accept a cut in their budget even when the P3M process had identified projects where the budget should be increased.

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Action Research Cycle 3: 2017 – 2018, ZBB

- Enlarge scope
  - P3M process now accepted across the entire organisation.
  - Investment process across all of the five streams within the Portfolio.
  - DST senior management and finance managers made a commitment to ensure that all investment decision-making would be captured using the investment process to ensure that the process could prioritise the entire Portfolio budget.
- To respond to this need a modified zero-based budgeting (ZBB)
  - To more strongly instil a culture of prioritisation and re-allocate funding more strategically
  - 15% of the funding was removed from every program.
    - These funds were then reallocated to the highest priority projects and programs across the entire Portfolio,
    - Program managers were given the authority to reallocate the remaining funds within their program to the projects with the highest strategic priority.
    - Program managers now had to make difficult strategic investment decisions that they had to negotiate with their stakeholders.
  - One-star and two-star Defence stakeholders saw the strategic nature of the decision-making and commented that the DST process provided a structured and efficient approach to the reallocation of resources across the streams within the P3M framework.

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AR3: However …

- A weakness of this process was that it was not able to easily reallocate staff resources to the area of highest strategic need in the same way as funds.
  - The re-allocation of staff is inherently more difficult as the skillsets of available staff may not be readily applied to priority delivery areas without an additional investment in recruitment or re-skilling (to develop new or increase capacity in S&T capabilities).
  - Defence outcomes in these priority areas may therefore not be realised in the short term, despite additional funding available to them.
  - Consideration of staff reallocation will be undertaken in the next iteration of the investment process along with a stronger link between workforce planning and investment decision outcomes.
- Planning is now starting to focus on institutionalising the P3M processes
  - upgrading project management software and management information systems.
  - DST will need additional skills to be developed through tailored training in program and project management.

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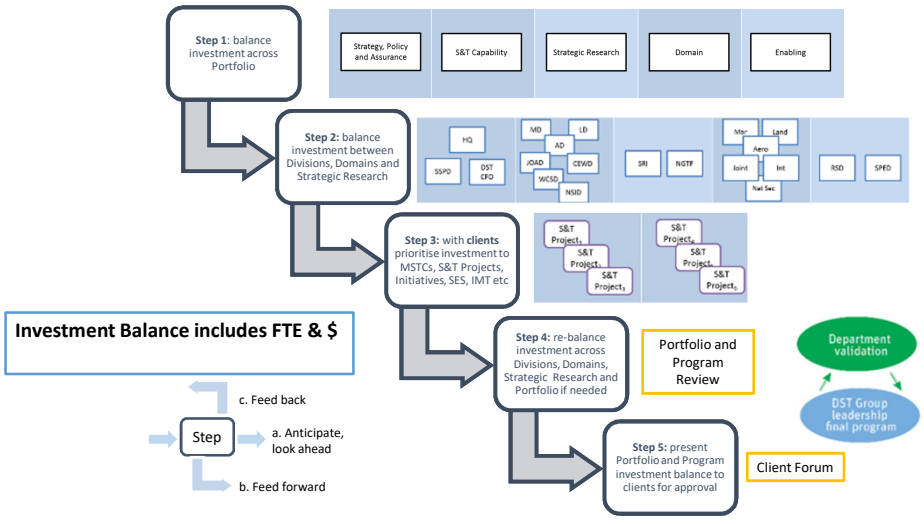
Final 5-Step Investment Process



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Reflection (1)

- Context not too dissimilar to the Manhattan Project
  - How much of the project management body of knowledge that has developed over the past eighty years should have been taught at Los Alamos.
  - Lenfle & Loch (2010) suggest the answer is very little because project management has come to emphasize control over the flexibility and novelty needed for the Manhattan Project.
  - In DST's case, the need is not so much control but alignment of effort with Defence's strategy.
- Top Management Support
  - Initiative quite successful to date but this result is much more than a case of introducing a P3M framework and standard business case formats through investment logic maps.
  - The recommendations from a recent audit (ANAO, 2015) and the change in strategic direction within Defence (FPR, 2016) provided the catalyst for action
  - Success of the initiative was due in large part to the strong support of top management.
    - Top management realised that if the situation was untreated there was an unacceptable risk that DST could lose support from its Defence stakeholders and fail to deliver its full potential in meeting the strategic goals of Defence.
    - Extensive consultation is necessary and staff at all levels within the organisation have to be supported as they make fundamental changes to their existing business practices.

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Reflection (2)

- Funding needs to be allocated at the level where the strategic decisions need to be made.
  - Initially decisions were made to prioritise 1,200 client requirements.
  - Then decisions were made to prioritise projects and finally decisions were made to prioritise at the portfolio and program level.
  - DST took a relatively cautious approach by lifting the level of decision making to a more strategic level as they gained experience.
  - In addition, the amount of funding that was re-allocated was also increased from 5% to the modified zero-based budgeting approach which removed 15% of the budget from each program.
  - The impact of this cut at the program level and the empowerment of the program managers to reallocate project funding within their programs had the greatest impact in aligning the Portfolio towards the highest value areas for Defence.

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Conclusion

- There is little evidence that organisational strategies are implemented effectively (Kiechell, 2010) and the public sector has been found to be particularly ineffective (Young and Grant, 2015).
- Through three action research cycles, the study has found that it is possible to go from an organisation where it was considered difficult to demonstrate the extent to which its work contributes to strategic priorities to an organisation that manages its portfolio strategically.
  - The lessons for other organisations is to manage improvements in the investment allocation process not so much through the introduction of new tools, but as a change management project driven through top management support.
  - A technical lesson is that decision-making about budget allocation needs to be at the level at which strategy is implemented, that is at a program rather than at a project level.
- Further research is recommended within Defence and other organisations to evaluate whether strategic benefits can be realised more effectively if resources are allocated strategically.

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Questions & Discussion

Future Direction

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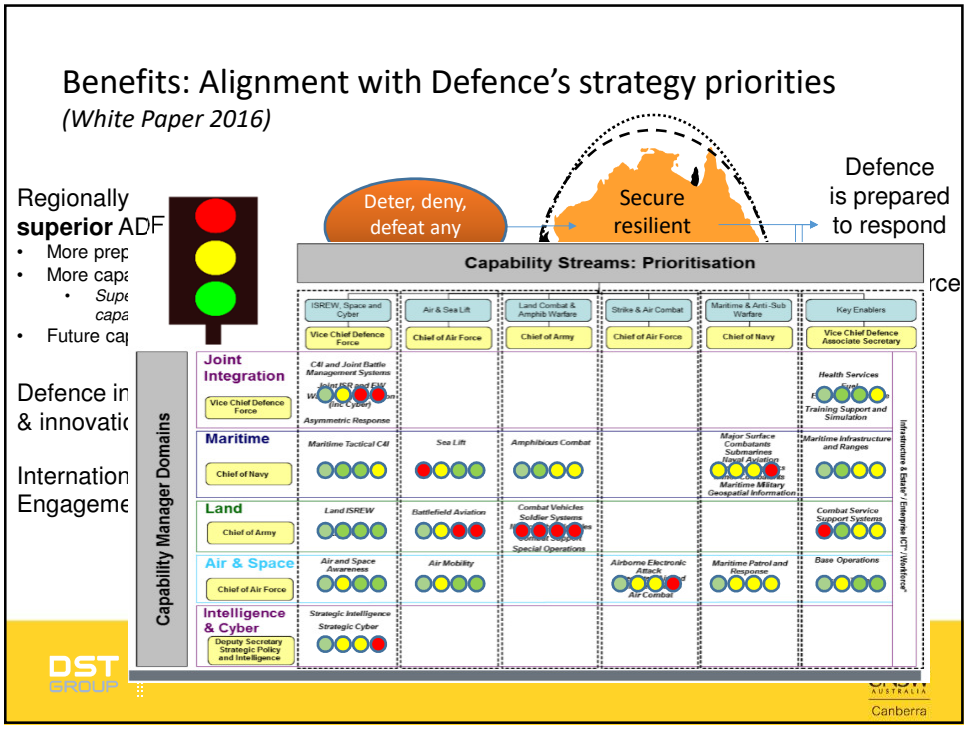
Benefits: Alignment with Defence's strategy priorities
(White Paper 2016)
Regionally
superior ADF
More prep
More capa
Supe
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Future cap
Defence in
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Internation
Engageme
Deter, deny, defeat any
Secure resilient
Defence is prepared to respond
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Capability Streams: Prioritisation
Capability Manager Domains
Joint Integration
Vice Chief Defence Force
Maritime
Chief of Navy
Land
Chief of Army
Air & Space
Chief of Air Force
Intelligence & Cyber
Deputy Secretary Strategic Policy and Intelligence
ISREW, Space and Cyber
Vice Chief Defence Force
Air & Sea Lift
Chief of Air Force
Land Combat & Amphib Warfare
Chief of Army
Strike & Air Combat
Chief of Air Force
Maritime & Anti-Sub Warfare
Chief of Navy
Key Enablers
Vice Chief Defence Associate Secretary
C4I and Joint Battle Management Systems
Asymmetric Response
Health Services
Training Support and Simulation
Maritime Tactical C4I
Sea Lift
Amphibious Combat
Major Surface Combatants
Maritime Military Geospatial Information
Maritime Infrastructure and Ranges
Land ISREW
Battlefield Aviation
Combat Vehicles
Special Operations
Combat Service Support Systems
Air and Space Awareness
Air Mobility
Airborne Electronic Attack
Air Combat
Maritime Patrol and Response
Base Operations
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