



Impact in a Mission-Directed Research Organisation: Past, Present and Future

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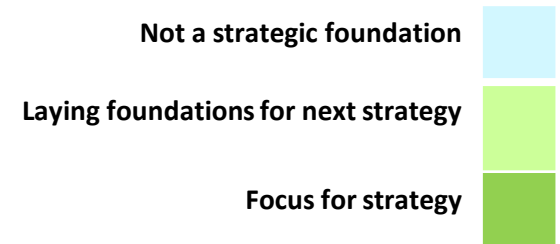
4 November 2011



Our Strategic Journey

Role	2003-2007	2007-2011	2011-2015
Access to global Knowledge			
National R&D Connector			Deep Collaboration and Connection
Trusted Advisor			Trusted Advisor
Science Excellence and Preparedness		Science Focus (Discovery)	World Class Capability and Precincts
Mission Directed	Flagships, 20-35% Science Investment	Flagships, 20-35% Science Investment, SAP	Flagships 65%
Multi-Disciplinary	Research Support	Matrix, Research Support	People, Governance and values
Large Scale	Flagships, One-CSIRO	Flagships, One-CSIRO	Profound Impact, Flagships, One-CSIRO

Delivering on our strategy 



Flagship goals

Climate Adaptation

To equip Australia with practical and effective adaptation options to climate change and variability and in doing so create \$3 billion per annum in net benefits by 2030.

Future Manufacturing

To create \$2 billion of additional annual value for Australia's manufacturing industry by 2025 through the development and application of resource efficient, clean and disruptive technologies.

Sustainable Agriculture

To secure Australian agricultural and forest industries by increasing productivity by 50 per cent and reducing net carbon emissions intensity by at least 50 per cent by 2030.

Biosecurity

- Integrated approach to bio-security
- detection, diagnostics and risk assessment

Energy Transformed

To develop, demonstrate and ensure deployment by 2020 of integrated low carbon pathways for Australia and alternative stationary and transport energy solutions that realise a reduction of Australia's CO2e emissions greater than 20 million tonnes per annum by 2030 and greater than 50 million tonnes per annum by 2050.

Minerals Down Under

To assist the Australian minerals industry exploit new resources with an in-situ value of \$1 trillion by the year 2030 and to more than double the size of the associated services and technology sector to \$10 billion a year by 2015.

Water for a Healthy Country

To provide Australia with solutions for water resource management, creating economic gains of \$3 billion per annum by 2030, while protecting or restoring our major water ecosystems.

Food Futures

To transform the international competitiveness of the Australian Agrifood sector, adding \$3 billion in annual value, by applying frontier technologies to high potential industries.

Preventative Health

To improve the health and wellbeing of Australians and save \$2 billion in annual direct health costs by 2020 through the prevention and early detection of chronic diseases.

Wealth from Oceans

To provide Australia with the knowledge and tools to protect coastal and ocean environments, increase their value to society and create a net economic benefit of \$3 billion per annum by 2020.

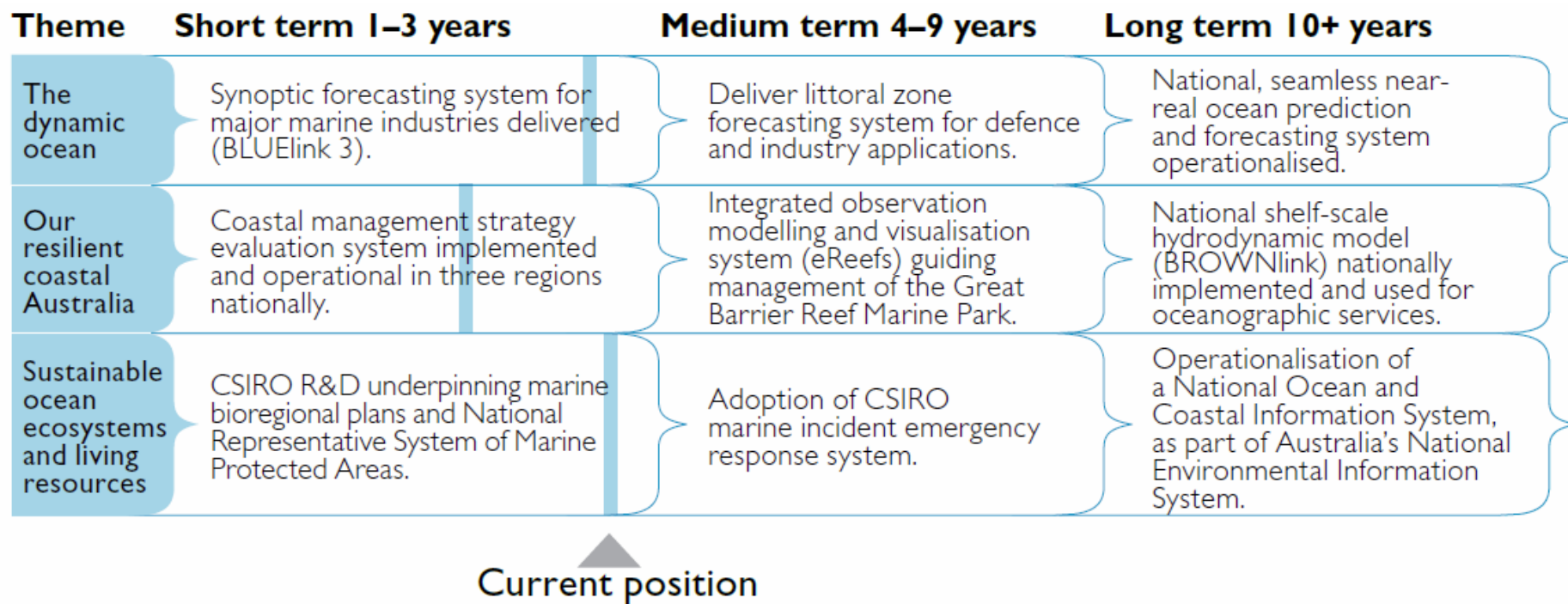
Digital Productivity

- Investing in Services & Digital Productivity
- Utilising the capacity of the NBN
- Support eGovernment initiatives

Potential Flagships in development

Sample Flagship Roadmap

Wealth from Oceans



CSIRO also commissions external quantitative measurement of impact delivered from Flagship research.

Observations

- The importance of a goal to help define the ‘mission’ in mission-directed research
- Impact and Research Quality are the two dimensions of the axis in measuring innovation
- Understanding the path to impact before you start the research is critical to successful delivery
- Difficulties in valuation and aggregation of impact – the case study approach will only take you so far
- Milestones and APGs are valuable but not sufficient

Strategy overview

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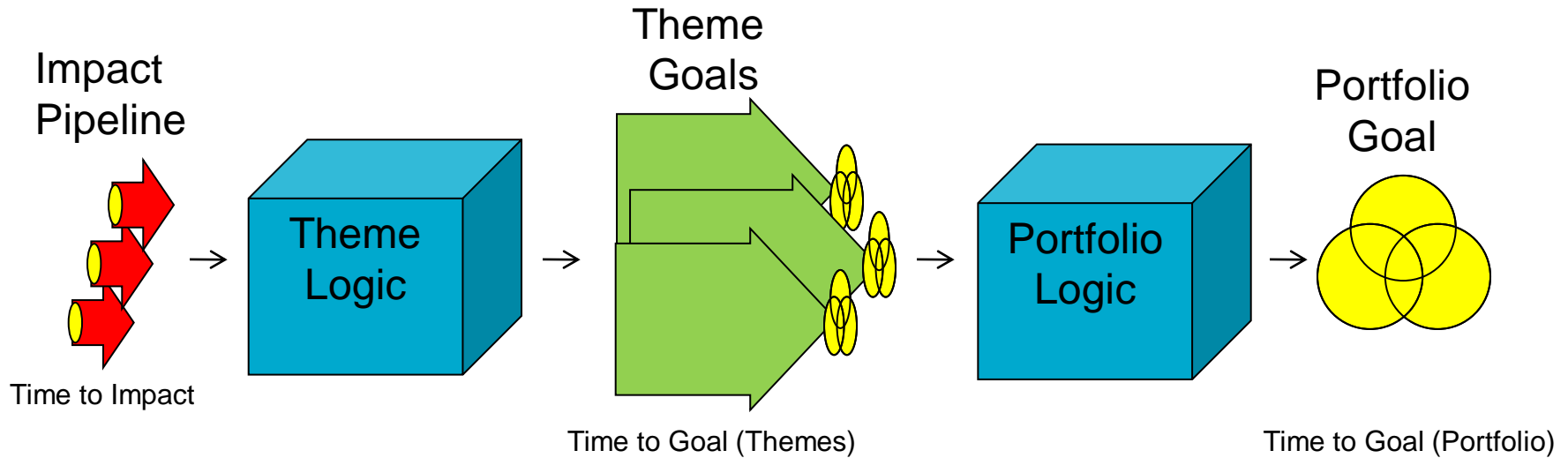


Success Pillars	National Flagships	Science Excellence and Preparedness	Deep Collaboration and Connection	Innovation Organisation	Trusted Advisor
Strategic Objectives	Focus and increase the Organisation's resources invested in delivering profound impact in response to national challenges and opportunities through the National research Flagships program	Invest in people and infrastructure to maintain and develop national scientific breadth and depth in support of delivering profound impact and scientific preparedness.	Build deep connections with and among the best partners in Australia and the world to complement our science capability and accelerate impact delivery.	Boost our capacity to operate as one organisation to respond to the changing nature of science, deliver profound impact and build capability for the future.	Play a leading role in the trusted delivery of scientific evidence, advice and interpretation to the Australian government, public and industry.

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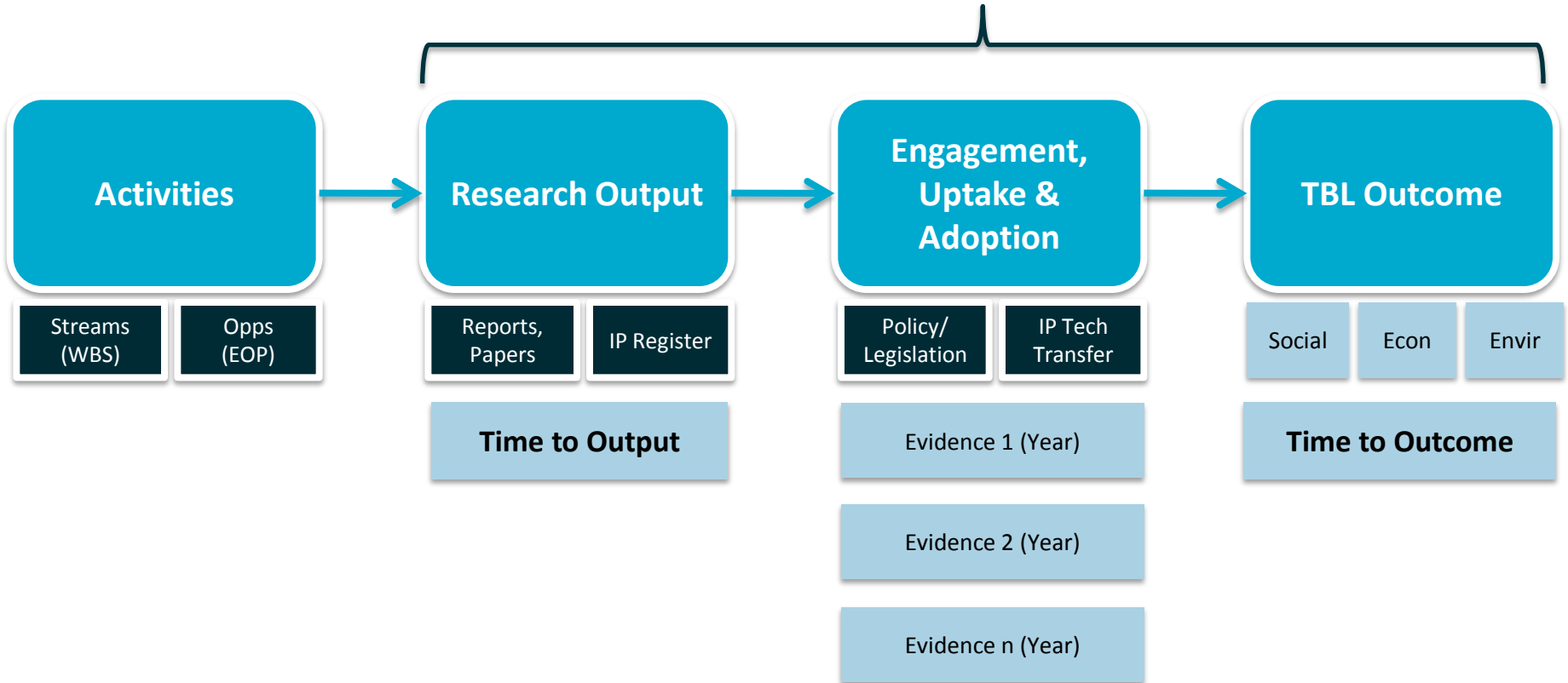
Develop and implement a robust impact measurement framework (delivered and projected) and track performance against it.

Impact 2020 - Approach



Impact Delivery Model

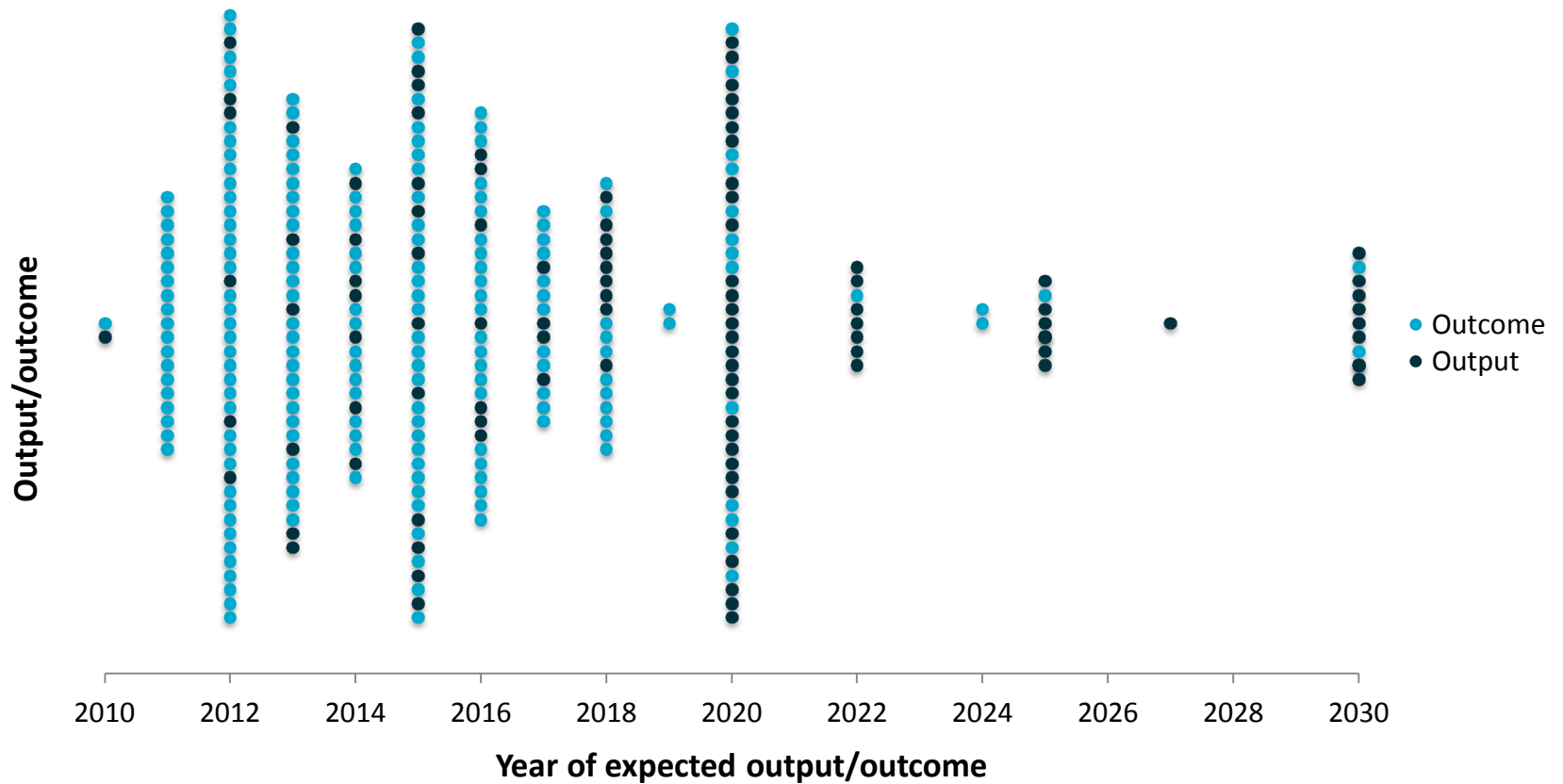
Impact Pipeline Statement



“Climate adaptation options and sustainability assessment tools for materials and construction processes and built asset management that reduce resource use per person and are incorporated into best practice.”

Impact Pipelines

2011/12 - Timing of outputs and outcomes



Impact 2020 – Time to Goal

Portfolio X: Difference-Making for a Happier World

	Time to Goal (TtG)						
	2009	2010	2011	2012	2013	2014	Goal
Portfolio	12	11	10.5*	9	8	6.5	\$3bn in Value added happiness
Theme 1	8	7.5*	7	6.5	6.5	6	XXX
Theme 2	6	4	3	2	2	0	XXX
Theme 3	10	8.5*	7*	4	3	2	XXX
Theme 4	10	9	8*	6	5	4	XXX
Theme 5	6	7	6	4.5	6*	3	XXX
Theme 6	9	8.5	8	6	6	5	XXX

Acceleration towards goal
Delays in achieving goal

* = goal description changed this year

Key Questions

- Is this about Excellence in “Innovation” in general (which implies both research and delivery), or should the focus be on Excellence in Impact?
- How do we best to characterise Impact (given difficulties in valuation and aggregation)?
- Who should do measurement, validation and assurance?