'Digitally Transforming Environmental Assessment'

Leveraging Digital Information to Streamline Environmental Assessment

Chris Gentle, December 9th 2020







Background >> WABSI Pathways Documentation (2012 – 2014)

- 1. 'A great deal of information on the State's biodiversity has been collected and interpreted by research agencies and industry. However, the existing knowledge base is fragmented and difficult to access. All stakeholders agree that an enhanced information base, which can be readily accessed and easily interpreted by decision-makers, will improve decision-making'
- 2. 'The issues associated with biodiversity information management will not be resolved quickly or easily. A concerted and disciplined approach over several years is required across government, industry and research agencies to ensure that **information is made accessible** by establishing clear policy frameworks and **investing in the supporting infrastructure and information technology** that is required'





Vision >> Digitally Transforming Environmental Assessment

- 1. Our focus since 2017 has been to progress our **"Understanding of the cumulative impacts, of an action, on a region over time"** while "streamlining environmental assessment and approvals" or by 2025 how can we halve the time it takes to undertake an assessment?
- 2. This requires high volumes of quality data that can be shared, a place to put it, work-flow tools to enable process efficiencies and analytic tools for decision support
- 3. That can be leveraged by State and Commonwealth regulators, proponents and the community, which will:
- 4. Improve the efficiency for environmental assessments from project inception to final decision, for both the proponent and regulator
- 5. Improve the confidence of the regulator that they have made the correct decision at both the project level and at a landscape cumulative impact scale
- 6. Improve public trust in EIA decisions through transparency and visibility of data and methods underpinning decisions
- Provide assurance that commitments to Ministerial conditions are proceeding as planned through continuous monitoring and assessment





Vision >> Digitally Transforming Environmental Assessment

- 1. Current process
- 2. Three disruptions Data, Digital and Decision Support
- 3. Three objectives Robust, Repeatable and Sustainable





What has been achieved >> Digitally Transforming Environmental Assessment

- 1. Index of Biodiversity Surveys for Assessments (implemented 2018, 500 surveys ~ AU\$40m annually)
- 2. Digitally Transforming Environmental Assessment Case (completed 2019, ~\$150m NPV benefit annually)
- 3. Index of Marine Surveys for Assessments (implemented 2020, 50 surveys ~ AU\$50m annually)
- 4. Biodiversity Information Office (under way 2020 23, ~ AU\$10m)
- 5. Environment Online / Digital Environmental Assessment Program (under way 2020 -2022, ~ AU\$50m)
- 6. >> Shared Analytic Framework for the Environment (concept development SAFE)





How? Culture Challenge >> GBIO - Framework

- The framework described here is organized into four focus areas, each of which is broken down into several core components. All four interconnect and strengthen each other; all four are needed if biodiversity informatics is to achieve its full potential. Each focus area – and the individual components within them – can be progressed independently but as they develop they should start to feed into and reinforce each other, making them together far greater than the sum of their parts.
- At the root lies the **culture** focus area which puts in place the necessary elements to turn biodiversity information into a common and connected resource stable and persistent storage, pooled expertise, the culture and policies to support sharing, and common data standards.
- Building on those foundations, the data focus area aims to accelerate the mobilization of data from all sources, unlocking the knowledge held in our collections and literature, improving data quality and filling in gaps, and bringing observations and data from all sources from satellites to genomes online.
- The evidence focus area deals with refining, structuring and evaluating the data, to improve quality and place it within a taxonomic framework that organizes all known information about any species.
- Finally, the **understanding** focus area enables a broader synthesis, providing the modelling tools to enable us to look at whole ecosystems, make better policy decisions and react to any changes'





Western Australian Environmental Protection Authority 2019 – 2022 Strategic Plan

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Improving the assessment and management of cumulative impacts

We will accomplish this by:

- X Identifying best practice approaches to the assessment and management of cumulative impacts with a focus on:
 - landscape scale and regional assessments
 - mechanisms for flexibility and conditioning.
- X Taking a strategic approach targeted to areas identified as having existing or future high cumulative impacts.
 For example:
 - Burrup airquality
 - Cockburn Sound
 - Pilbara coast
 - South West nativeforests.
- x Developing and publishing process methodology for cumulative impact assessment and management.
- X Advancing the proposition for best practice cumulative impact assessment and managementunder the Environmental Protection Act 1986.

Being innovative in environmental information and digital EIA

We will accomplish this by:

- Showing continuing leadership with government in digital innovation, including:
 - supporting digital environmental information innovation
 - sharing advances in information systems and analytics with other jurisdictions.
- X Championing the capture, curation, and public availability of environmental data, including:
 - broadening the scope of data capture beyond terrestrial biodiversity survey data
 - widely and effectively communicating benefits of this data to stakeholders.
- Collaborating with research organisations to develop new analytics to inform Cumulative impact assessment.
- X Promoting regular reporting on the condition of the state's environment.

Actively advising on the development of effective state environmental policies and plans

We will accomplish this by:

- X Prioritising engagement with environmental policies and plans including
 - climate change
 - mining rehabilitation
 - native vegetation management
 - biodiversity offsets
 - waste minimisation
 - water resource management
 - land use planning.
- Articulating strong and effective environmental protection needs and opportunities.
- x Responding to strategic environmental implications of changing external policies through the prompt review of EPA guidelines and procedures to recognise the changing external policy environment.
- X Showing public leadership in policy matters of significance to environmental protection.

Improving the soundness, robustness and transparency of advice through our assessments

We will accomplish this by:

- X Being a leader in EIA innovation through
 - keeping up to date with advances in impact assessment frameworks and techniques
 - actively collaborating with other jurisdictions in Australia and internationally
 - trialling of new processes.
- × Informing and promoting EIA innovation through the State's streamlining initiative.
- X Collaborating with industry, consultants, non-government organisations and the broader community through:
 - identifying where the EIA process can be improved
 - reviewing the trial of new approaches to EIA
 - investigating the potential and mechanisms for EIA accreditation
 - continuing to review and develop environmental guidance.
- X Bringing to the public's attention significant findings and primary science on the environment.

Digitally Transforming Environmental Assessment – MEM – 8th November 2019

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November 8th COAG Meeting of the Environment Ministers (MEM) was held. At the meeting WA and the Commonwealth requested that COAG MEM:

1.Note the work in Western Australia and the Commonwealth on digital reform of environmental assessments and approvals, including Western Australia's *Digitally Transforming Environment Assessments* report and the *Environment online* paper;

2.Recommend to Ministers they encourage participation in detailed scoping work that Western Australia and the Commonwealth will progress to pursue the aims of better regulation and digital transformation with specific reference to:

- a. Exploring joint ways to capture, curate, store and share biodiversity and other environmental data relevant to assessments approvals; and
- b. Better aligning and streamlining environmental assessment and approval systems throughout the full assessment life cycle.

The formal MEM Statement is here: <u>https://www.environment.gov.au/system/files/pages/4f59b654-53aa-43df-b9d1-b21f9caa500c/files/mem-9-agreed-statement.pdf</u>

"Digital Transformation of Environmental Assessments

Ministers agreed to work together to digitally transform environmental assessment systems, *providing greater access to shared environmental data, less duplication and greater transparency*. Delays within the current system are a costly frustration to both proponents and environmental groups and have already been identified as a key area to address within the review of the Environment Protection and Biodiversity Conservation Act under Professor Graeme Samuel."



Prime Minister Morrison, Business Council of Australia, November 21st 2019

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- 1. Now the third area of our regulatory congestion busting agenda is getting major projects off the ground sooner.
- 2. Again, we have taken on board what businesses have been telling us.
- 3. Environmental approval processes for major projects are overly complex, duplicative and they take too long.
- 4. As in other areas, digital technology gives us the opportunity to make these processes faster and simpler.
- 5. Our Government is taking the first step towards a nationally consistent digital environmental assessment and approvals regime.
- 6. We will partner with the Western Australian Government to develop a system that will reduce approvals times, allow project proponents to submit a single application via a single online portal, track its progress and access a database of biodiversity studies relevant to their project.
- 7. I want to recognise the role companies such as BHP, Rio Tinto and Fortescue have played in the development of the biodiversity database.
- 8. It takes approximately three and a half years for a complex major project to navigate the State and Commonwealth environmental assessment process. It's estimated that this timeframe could be reduced by between 6 and 18 months through the better use of technology.

9. So that's what we're going to do. https://www.pm.gov.au/media/speech-business-council-australia-annual-dinner



Shifting from local to regional thinking (Pilbara ~= Land Area as Spain)

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Commercial in Confidence

2015 Pilbara operations



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Slide 11

Planned development in the Pilbara





In 2018 this is specialist task. What if in 2023 it wasn't? >> SAFE

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"The spatial bias resulted in high confidence in model outputs surrounding BHPBIO's mining tenements, but less confidence in predictions in distinct environments with limited survey coverage."

