NATIONAL ARCHIVES OF AUSTRALIA

Chief Information Governance Officer Forum

Tuesday 1 October 2019 | 9:30am-12pm

Agenda

- Introduction by Director-General (NAA)

Speaker presentations

- Tony Krizan (NHMRC)
- Brendan Dalton (CSIRO)

Morning tea

- Kylie Highley & Maureen Hickson (APSC)
- Ryan McConville (Australian Human Rights Commission)
- Sonya Sherman & Jon Palin (Objective)

NATIONAL ARCHIVES OF AUSTRALIA

David Fricker

Director-General

National Archives of Australia

NATIONAL ARCHIVES OF AUSTRALIA

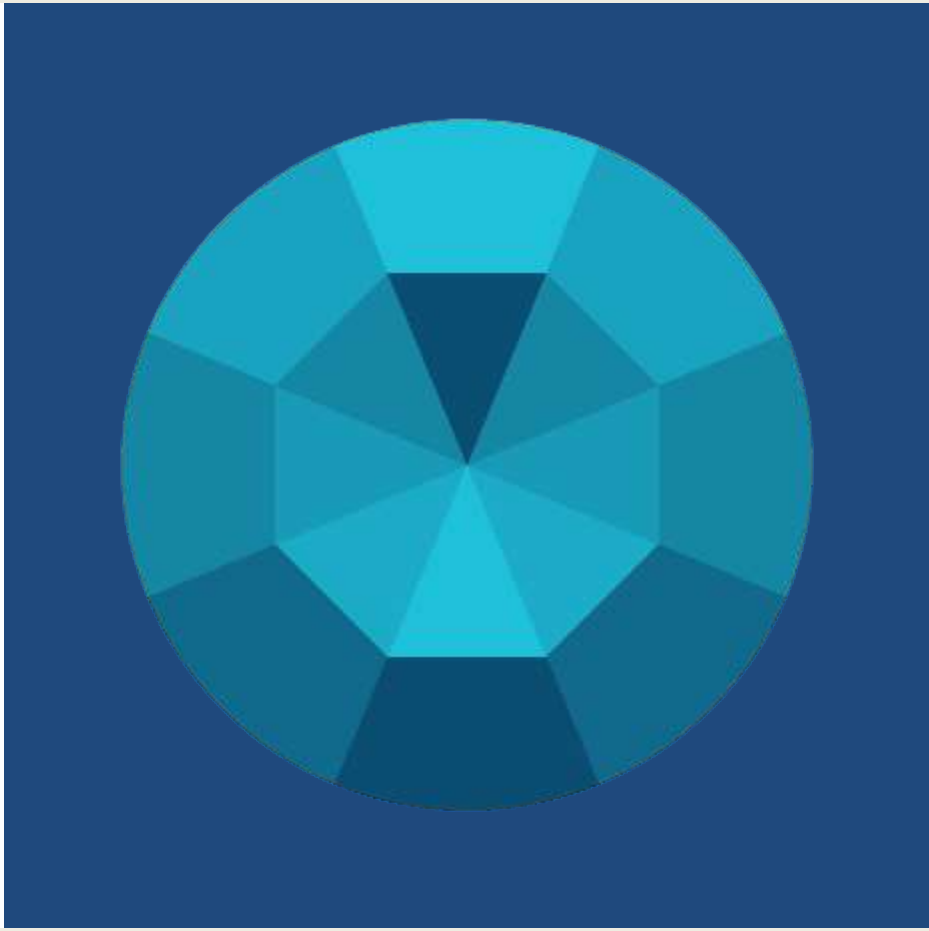
Tony Krizan

National Health & Medical Research Council (NHMRC)

- National Archives of Australia
- 1 October 2019

CIGO Forum

NHMRC's new grants management solution, including development of machine learning



NHMRC overview

- Health portfolio agency with national responsibilities
  - Health advice; ethical research frameworks; boosting dementia research; fostering translation; regulation of human embryo research; various smaller activities
- $900m annual HMR investment / $1.8b ongoing grants
- Grants hub support for Health's MRFF & others
- Leverage support of HMR sector
  - Council & committees (100s)
  - Expert peer review (1,000s)
  - Research activity (10,000s)
- $40m p.a. / staff @ 2006 level
  - Doubled functional responsibilities; >50% more app's
  - RGMS - externally facing, end to end electronic workflow (grant administration) for ~10 years

Change drivers

External:

- Government policy & legislation for leveraging data
  - Citizen expectations for amenity, data safety, privacy
  - Government expectations for RoI
  - Data sharing and release legislation
- HMR sector expectations
  - Reduced application & assessment burden
  - Tell it once (eg single source of publications truth)
  - Simple & intuitive IT systems
  - International trend toward open data

Internal:

- Better demonstrate our ongoing value proposition
- Increase operational efficiency & effectiveness

Developing Sapphire capabilities

Externally facing:

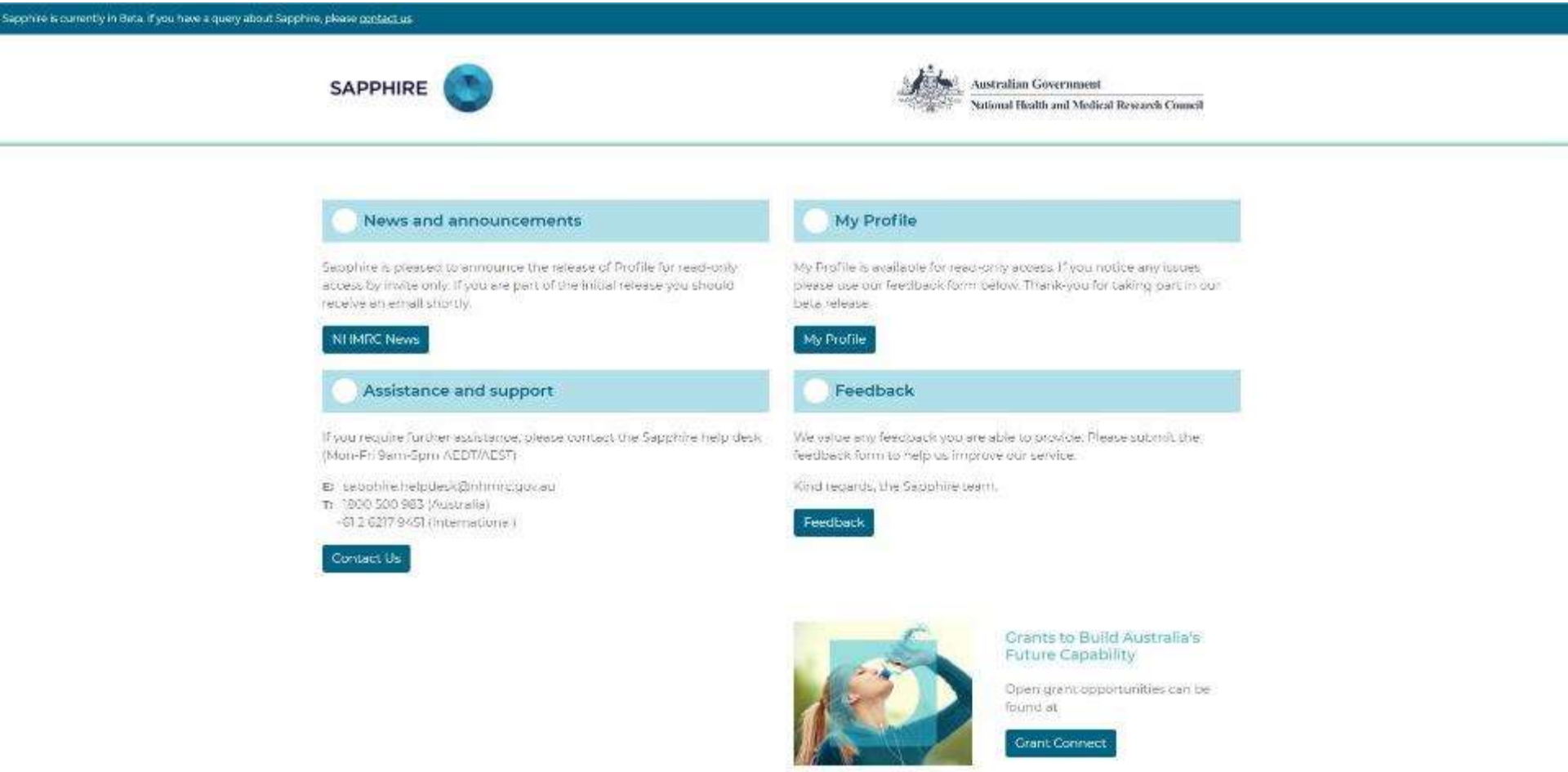
- Grant opportunity publication (GrantConnect)
- On-line application & assessment management
  - Integrated machine learning to accelerate processes
- Virtualising meetings through flexible/secure VC
- On-line approval & administration
- On-line outcome & impact reporting
  - Integrated machine learning to accelerate admin
- Grants Hub

Internally facing:

- Deployment of NLP text analytics for RPA & BI
- Predictive analytics for decision support

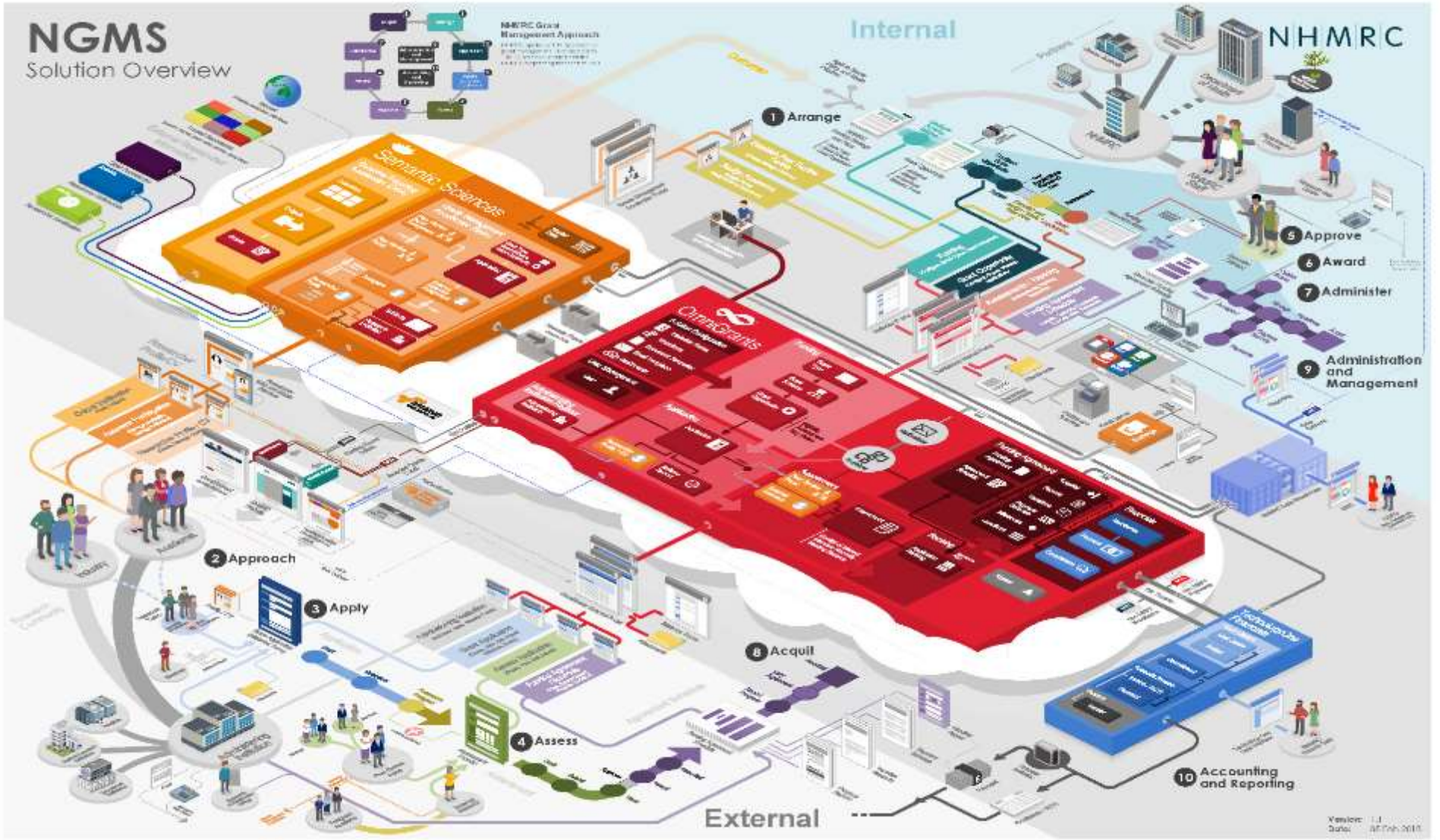
Modular, concurrent development/deployment is complex

Landing page look & feel

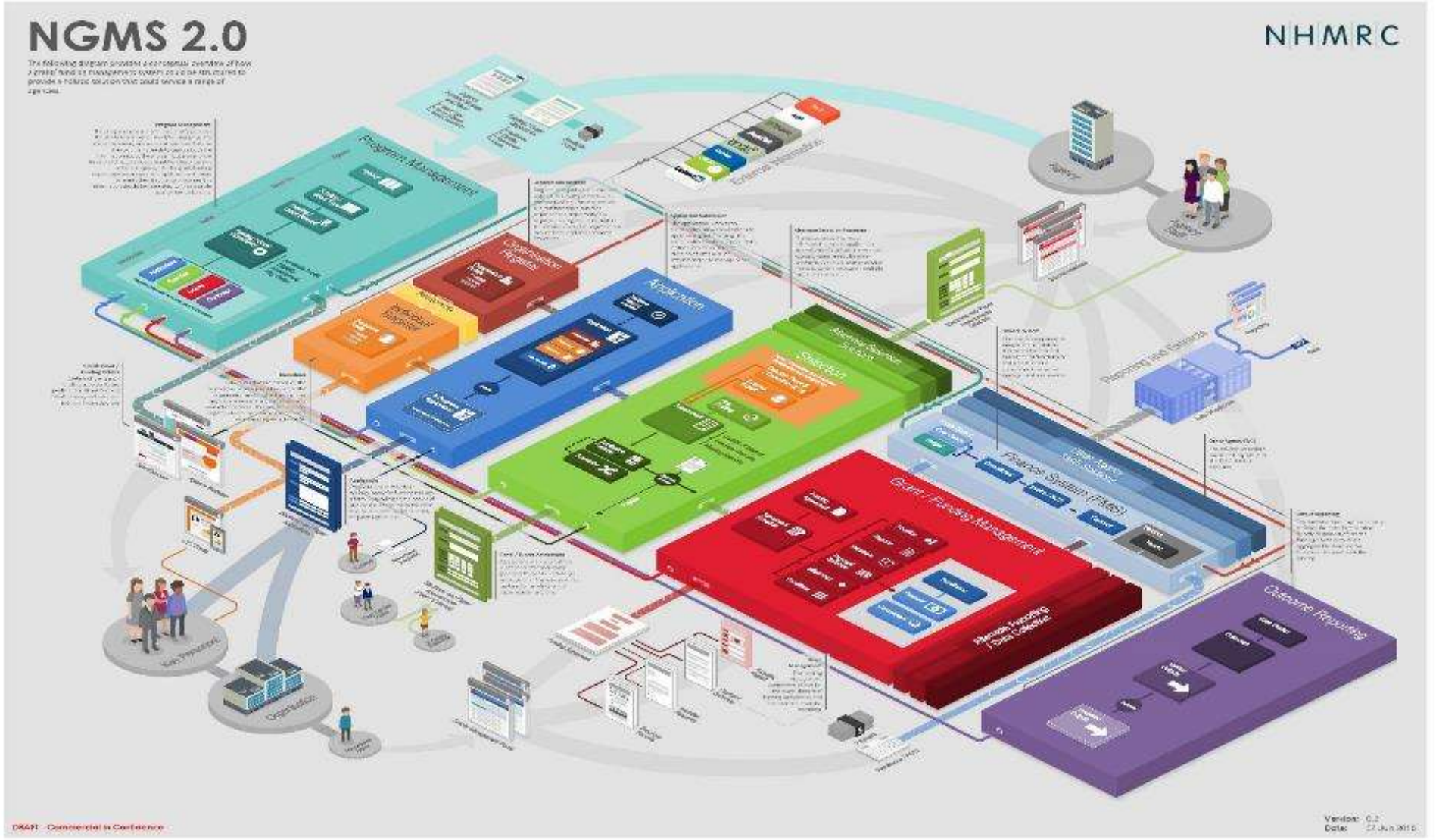


Research grant applicant view

Evolving enterprise architecture (1)



Evolving enterprise architecture (2)



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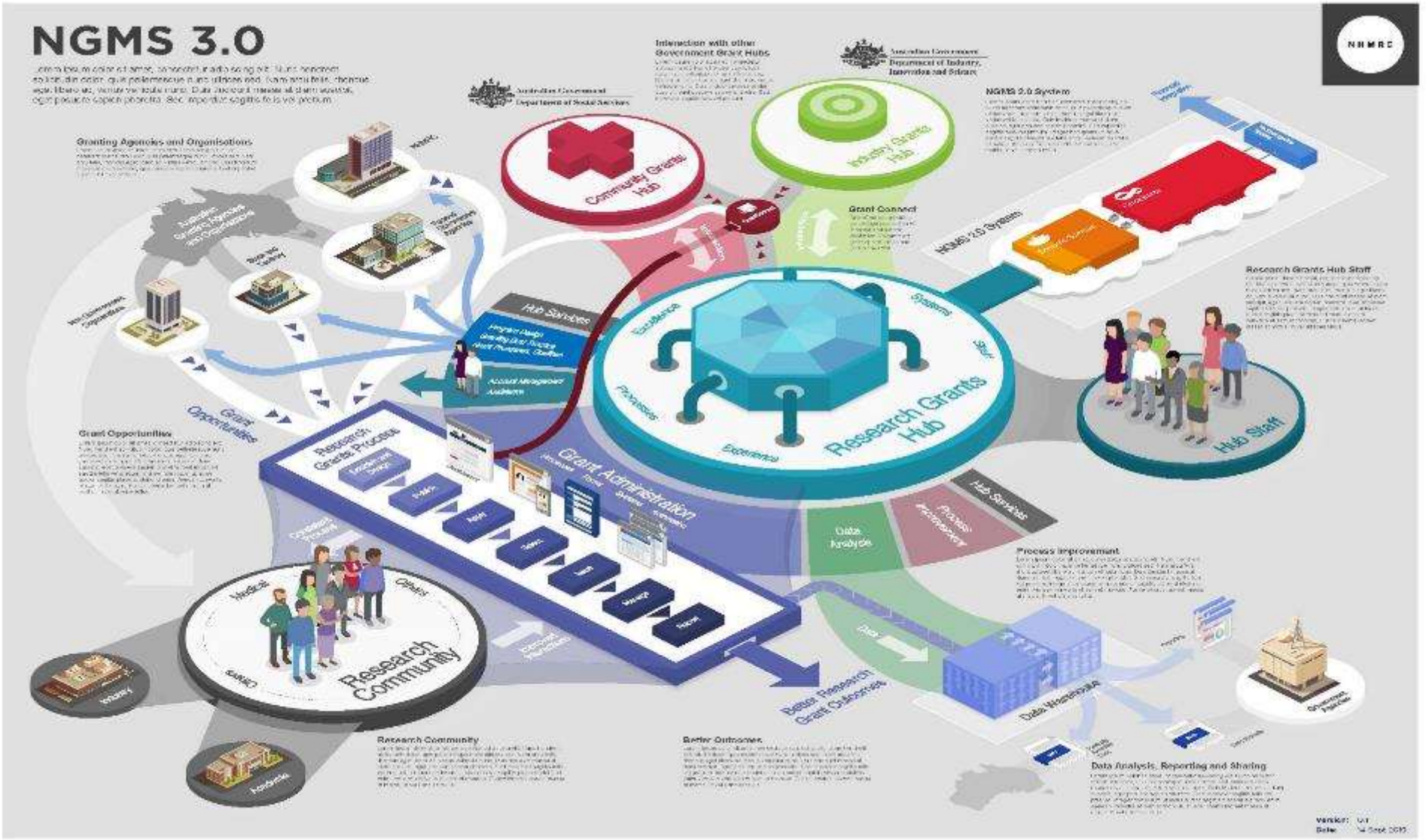
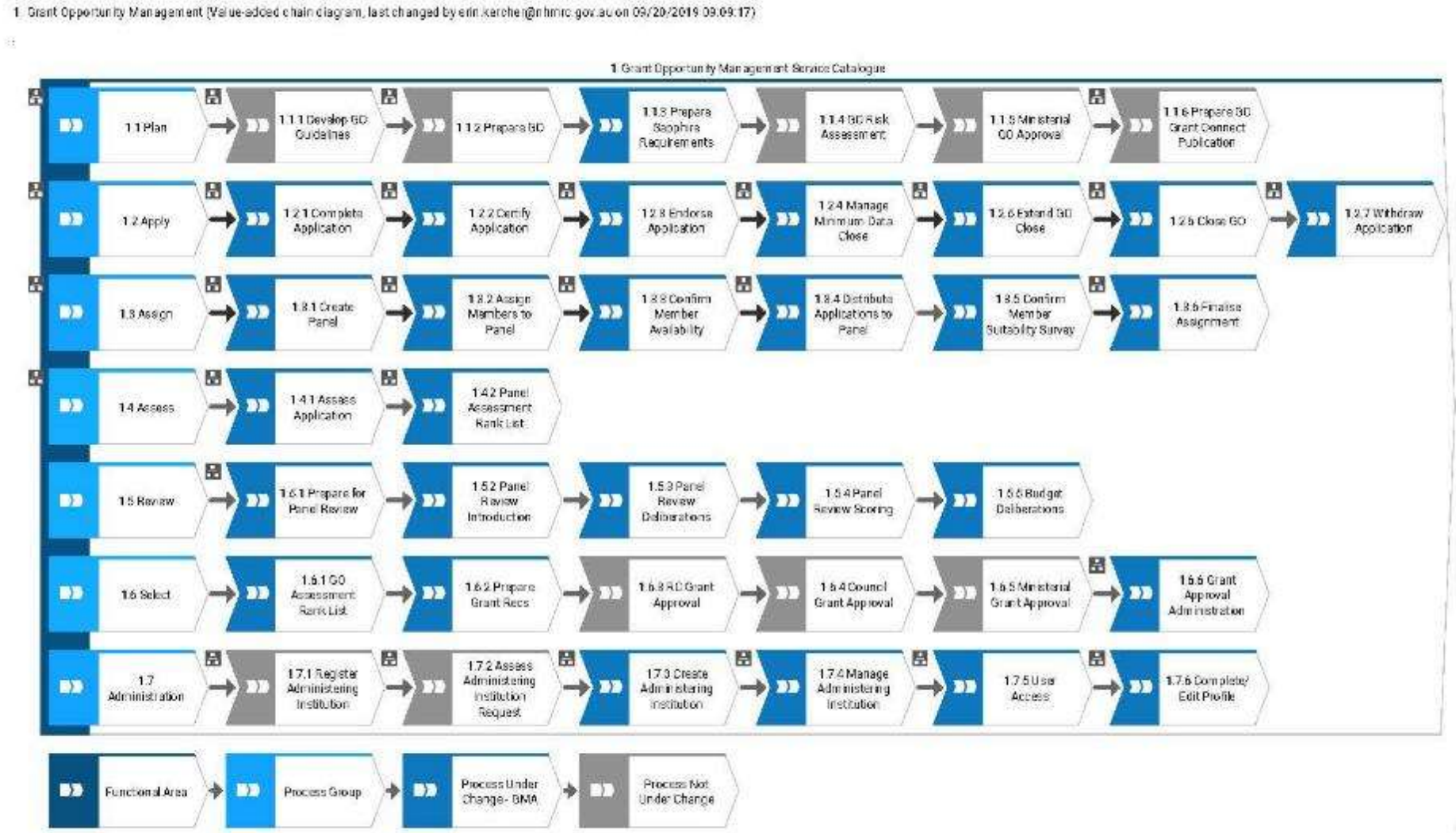
Evolving enterprise architecture (3)



HMR research grants hub

- NHMRC has provided specialist grants hub services to government and NGO's for decades
- As an 'Interim Grants Hub' NHMRC is providing services to the Health's MRFF through RGMS
  - MRFF doubling managed annual application rounds
- Sapphire's modular design will support integration with Health's systems (eg ERP/CRM) to offer more flexibility
- NHMRC's service offering will include SaaS for other organisations

Service catalogue – Internal/External



Grants management accelerator (GMA)

RGMS:

- $7 billion / 9 years; >50,000 applications; >180,000 grant application assessments
- Complex application assessment
  - 1,000s of applications & many more assessors; many panels; several spokespersons & external assessors per application, up to 150,000 CoI assessments for one scheme
- GMA's low level Machine Learning (ML) to be used for application assignment and assessment
  - Semantic analytics sort showed assignment can be completed in seconds, with 25% greater accuracy
    - 1 person recreated work of 20 staff (6 v. 500 hours)
      - Requires expertise to control payoff matrix settings
  - Currently working to refine & deploy systematically

Organisation & individual profiles

- Recognise linkages between individuals & organisations through trustworthy & reliable data
  - Scientific journals, ORCID, Trove, [AusPat, ARDC]
- Advanced text (ie semantic) analytics enables a better understanding of relationships
  - Individuals to individuals [& organisations]
  - Individuals [& organisations] to artefacts (eg research publications and patents)
- Accelerates identifying suitable experts to conduct assessments, while also managing CoI & other criteria
- Future implementations could enhance profiles through news articles, LinkedIn, social media, etc

Outcome reporting accelerator (ORA)

Funded research supports advancements in science, improvements in clinical practice, clinical trials and commercialised medical and pharmaceutical products

- Research outcomes take 20 years, on average
  - Bench to bedside to commercialisation can cost billions, funded from many sources (no/little visibility)
- ORA PoC scanned 10.5 million patents world-wide
  - Searched (un)structured data for links to NHMRC grants
  - 1,105 new patents; market capitalisation of 10 = $860m+
- Delayed but MVP to be completed this year
  - Structured data linkages to ORCID & TROVE [AusPAT & ARDC planned] to provide mutual data enrichment
  - Deep dive case studies discover missing data, enable algorithmic refinement & accelerate & expand reporting
    - https://www.nhmrc.gov.au/about-us/resources/impact-case-studies

Pharmaxis Ltd: Case study

Pharmaxis Ltd is an Australian pharmaceutical research company established in 1998. It listed on the Australian Securities Exchange (ASX) in 2003. The business focuses on new therapies to treat inflammation and fibrosis with a portfolio of products at various stages of development and approval. With origins in clinical research, this Australian-owned start up successfully competes in an international market.

Origin

The Pharmaxis story began in the 1990s when Drs Brett Charlton and William Cowden met at the John Curtin School of Medical Research (JCSMR) at the Australian National University (ANU). They co-founded Pharmaxis (originally named Praxis Inc.) in 1998 to commercialise a group of compounds (patented by ANU) with the potential to treat inflammatory and other immune-mediated diseases.

This initial intellectual property (IP) licence attracted venture capital funding and enabled Pharmaxis to license further patents from ANU and CSIRO. These early licences did not progress to commercial development. However, they created a momentum of activity and interest which, in 2001, allowed Pharmaxis to license IP from the (then) Central Sydney Area Health Service (CSAHS) on the potential of the dry sugar mannitol to diagnose asthma and reduce the symptoms of cystic fibrosis (CF). This patent was developed into Pharmaxis' first products, Aridol® and Bronchitol®, in collaboration with Dr Sandra Anderson AM (University of Sydney) and her colleagues. [*See separate NHMRC case study.*]

Dry mannitol powder has a number of uses. In Aridol® it is used in aerosol form as a test to identify asthma and assess its severity. In Bronchitol® it assists people with cystic fibrosis to clear their airways of mucus.

Grants and Investment

NHMRC

NHMRC supported Drs Charlton and Cowden early in their careers. Pharmaxis also received Development Grants in association with other institutions.

Brett Charlton:

- Postgraduate Scholarship 1983-84
- Postdoctoral Fellowship, Walter and Eliza Hall Institute (WEHI), 1987-88
- International Collaborations for Diabetes Research Grant, 1998.

William Cowden:

- Targeted Calls for Research Grant, 1991
- Project Grant, 1994.

Pharmaxis, with Professors:

- Hak-Kim Chan, University of Sydney, bronchoprovocation testing in children, 2005
- Fiona Woods, University of Western Australia, treatment of scars resulting from burns, 2016
- Paul Young, Woolcock Institute, testing inhaled antibiotics with the Orbital inhaler, 2017.

Other grants and investment

- Rothschild Bioscience (now GBS Ventures), 1999 and 2001
- AusIndustry START grants, 2000 and 2003
- AusIndustry Biotechnology Innovation Fund grant, 2001
- ASX Initial public offering (IPO), 2003. Approx. $300 million in capital has been raised from the public markets since the IPO
- Australian Research Council (ARC) Linkage Projects grants: University of Sydney, 2007; Kolling Institute, 2013; and Woolcock Institute, 2013.

Commercialisation Journey

The road to developing a fully viable company took many twists and turns. There were few venture capitalists (VCs) when Charlton and Cowden first established Pharmaxis. Their early suite of patent licences led them to Melbourne-based VC fund GBS Ventures in 1999. GBS commissioned Dr Alan Robertson, then a consultant, to report to them on the company. Based on his report, they committed the first seed funding. Charlton and Cowden hired Robertson as CEO to provide the company with much-needed business experience, and he helped kick-start the company's rapid progression. Clinical trials progressed within 10 years, requiring several rounds of successful capital fund raising. Pharmaxis established its manufacturing facility in Sydney during this period.

Since bringing Aridol® and Bronchitol® to market, the company strengthened its drug discovery capability by hiring experienced international pharmaceutical executives. The company now focuses on developing drugs to Phase I or Phase II clinical trials, and then licensing these drugs to larger pharmaceutical companies. For example, in 2015, Pharmaxis licensed a drug to German-based Boehringer Ingelheim (BI), which BI is now trialling. Pharmaxis receives staged payments based on the success of the trials; to data, these have totalled $83 million.

Research and Trials

Early research leads were not successful for Pharmaxis but the subsequent licensing of the mannitol patent from CSAHS ultimately led to the clinical trialing and commercial development of Aridol® and Bronchitol®.

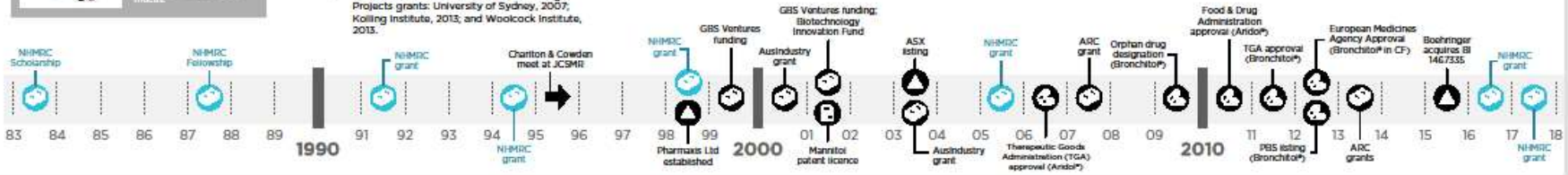
Following the recruitment of Ian McDonald in 2005, Pharmaxis built a drug discovery program based on amine oxidase chemistry and now focuses on discovering drugs to treat inflammatory and fibrotic diseases such as the liver disease Non-Alcoholic Steatohepatitis (NASH), pulmonary fibrosis, kidney and liver fibrosis and cancer.

- In 2015, BI acquired the investigational drug BI 1467335 to treat both NASH and Diabetic Retinopathy (DR), a leading cause of blindness. A Phase II clinical trial for NASH commenced in August 2017. A Phase IIa trial for DR commenced in January 2018.
- In 2016, Pharmaxis announced a research collaboration with the Woolcock Institute to develop a therapy for the treatment of CF using the Pharmaxis developed Orbital inhaler technology. Planning for Phase II trials is underway.
- In November 2018, Pharmaxis completed Phase I trials on a molecule that targets the LOXL2 enzyme, which is present in several fibrotic diseases such as NASH. This is the second program from its amine oxidase platform to reach clinical trials.

Outcomes and Impact

Since its foundation in 1998, Pharmaxis has achieved significant milestones for an Australian-owned company. It has:

- developed and manufactured two successful pharmaceutical products (Aridol® and Bronchitol®) to a world-wide market
- developed and maintained ownership of IP in Australia
- developed an internationally-recognised medical research program bringing new drugs to Phase I, II and III trial stages
- established partnerships with other significant research bodies and pharmaceutical companies
- fostered a new generation of medical researchers. Pharmaxis has employed over 100 postgraduate researchers in the fields of drug discovery and development, clinical trial design and management, pharmaceutical manufacturing, business development and capital markets.



Dr Brett Charlton

Dr Charlton is co-founder and Medical Director of Pharmaxis Ltd. He helped to attract funding from a range of public and private investors to develop Aridol® and Bronchitol®. Dr Charlton has been an NHMRC Postdoctoral Fellow at the WEHI and visiting clinician at Royal Melbourne Hospital working on diabetes and autoimmunity. He was a Founding Medical Director of the National Health Sciences Centre in Canberra. In 1995 he was awarded the Aza/Lilly Fellowship from Diabetes Australia.

Dr William Cowden

Dr Cowden is co-founder, and was Chief Scientific Officer (until 2008), of Pharmaxis Ltd. He has spent over 20 years developing new therapeutic compounds for the treatments of cancer, infectious disease, and inflammatory diseases. Dr Cowden has held senior research positions at the JCSMR, Peptide Technology Ltd (Peptech), and consulting scientist to Anutech. He received a PhD in Medical Chemistry from the University of Queensland in 1979. He is the co-inventor on 12 patents and author of over 130 scientific papers.

Dr Alan Robertson

Dr Robertson served as CEO of Pharmaxis Ltd from 1999 - 2011. Prior to this, he held senior product development roles at Wellcome PLC, Faulding Group and Amrad Pty Ltd. Dr Robertson has assisted in the establishment of two start-up companies, Promics Pty Ltd and Pharmaxis Ltd. He is the co-inventor of 18 patents and author of more than 35 scientific papers. He is also the inventor of the migraine therapeutic Zomig. Dr Robertson holds a BSc and a PhD in Synthetic Organic Chemistry from the University of Glasgow.

Gary Phillips

Mr Phillips joined Pharmaxis Ltd in 2003, and was appointed CEO and a director in 2013. He previously held the positions of Commercial Director and Chief Operating Officer. Mr Phillips has more than 30 years of management experience in the pharmaceutical and healthcare industry in Europe, Asia and Australia, including at Ciba Geigy (Hungary), and Novartis Australia. He holds a BPharm from Nottingham University, UK, and an MBA from Henley Management College. Mr Phillips is a Graduate Member of the Australian Institute of Company Directors.

Dr Ian McDonald

Dr McDonald was the Chief Technical Officer at Pharmaxis Ltd from 2005 - 2012. He has over 25 years of international experience in managing drug discovery and design teams in Europe and USA, including at Structural GenomiX, Structural Bioinformatics, SIBIA Neurosciences and Merrell Dow. Under his leadership at Pharmaxis Ltd, six compounds have been developed and evaluated in clinical trials. Dr McDonald was awarded his PhD in Organic Chemistry from the University of WA and has co-authored over 75 peer-reviewed manuscripts and book chapters, and is an inventor on 39 issued US patents.

Dr Wolfgang Jarolimek

Dr Jarolimek joined Pharmaxis Ltd in 2010 as Manager, In Vitro Pharmacology, and was appointed Head of Drug Discovery in 2012. He has more than 20 years' experience in pharmaceutical drug discovery and has published more than 20 peer-reviewed articles. Prior to joining Pharmaxis Ltd, Dr Jarolimek worked at GlaxoSmithKline, Italy, and Merck, Sharp and Dohme, England. He holds a PhD in Pharmacy from the University of Saarbrücken, Germany. In 1997, he became Assistant Professor in Physiology at the University of Heidelberg, Germany.

[March 21st, 2019 – Photos supplied by Pharmaxis]

[This case study is not intended as financial advice]

Virtualising meetings through VC

Expert committees are central to grant selection & make up ~8% of operating costs (was ~10%)

- Established low cost, secure, technology agnostic (ie anywhere, anytime on any device) - Zoom/AARnet
- Virtualising committee meetings over time
  - Better enables carers (particularly women) to join & participate in committees
  - Researcher time used in the lab, clinic or health service rather than unproductive travel time
  - More flexible & efficient engagement with the health & medical researchers nationally & globally
- Complements acceleration of assignment & selection using advanced technologies

Data proliferation

Complex enterprise/data architecture ecosystem

- Complex multi-vendor environment: infrastructure, platform, software interacting with human systems
- Digital records, including digitised Council records from 1937 & available paper grant records (10,000s)
- Increasing external data (GMA/ORA)
- Staff laptops always on VPN, rapidly increasing data
- Need enhanced visibility & mgmt (data wheat v. chaff)
  - Necessary information is created and described
  - Value & lifespan are known
  - Systematically governed
  - Suitably stored & preserved to manage & sentence
  - Available for use & reuse

Managing data proliferation

Search for cost-effective solution(s)

- EDRMS is costly and problematic
- PoC demonstrated powerful, relatively low cost technology can provide effective visibility & control
  - Scoping a procurement to leverage the PoC
- Using COTS product, open source software & code libraries to perform text extraction & topic analysis
  - PoC classified 7 cancer types @ 92%-95% accuracy
  - Currently scaled to 700/1,000+ research topics
    - Analyse and report on funding round app's quickly
- NHMRC/HMR issues constitute a substantial daily reporting workload (1,000s extractions pa)
  - NLP PoC classifies entity types & relationships from press clips with a view to automate data extraction

Entity & relationship classification

An innovative eHealth program launched today DATE at UNSW ORG aims to target the six CARDINAL main lifestyle risk factors among teenagers including binge drinking and unhealthy eating to help prevent chronic disease later in life.

Professor Maree Teesson PERSON at the launch of Health4Life. Photo: Jacquie Manning PERSON A world first ORDINAL eHealth ORG program being launched today DATE at UNSW Sydney , and led by Professor Maree Teesson PERSON , AC ORG , aims to help thousands CARDINAL of young Australian high school children reduce their chance of developing chronic diseases, including heart disease and mental health disorders, by preventing and modifying lifestyle risk behaviours that commonly emerge in adolescence.

The program aims to improve young peoples unhealthy lifestyle behaviours, which a recently published study shows are well established by the late teens, co-occur in clusters and are associated with mental health symptoms.

The study published this month DATE in Frontiers in Public Health ORG found that more than three quarters DATE of a sample of 853 CARDINAL 18-year-olds DATE had insufficient intake of vegetables (80% PERCENT) and more than half CARDINAL reported binge drinking at least monthly DATE (52% PERCENT). More than 40% PERCENT showed inadequate consumption of fruit (42% PERCENT), approximately one-third CARDINAL reported sitting for longer than recommended periods (33% PERCENT), and approximately one quarter DATE reported smoking (29% PERCENT) or failing to meet physical activity guidelines (23% PERCENT).

The online Health4Life Initiative ORG is a collaborative effort, in partnership with the Paul Ramsay Foundation ORG . It will be led by researchers from the NHMRC Centre of Research Excellence ORG in Mental Health ORG and Substance ORG Use (CREMS), based at the National Drug and Alcohol Research Centre ORG at UNSW Sydney , in collaboration with Northwestern University USA ORG , the University of Newcastle ORG , Curtin University ORG and the University of Queensland ORG .

Dr Katrina Champion, Research Fellow at UNSW ORG , investigator on the Health4Life Initiative ORG and lead author of the study, said that the high prevalence of risk behaviours among the 18-year CARDINAL olds surveyed shows that such behaviours are well established by emerging adulthood.

Leveraging data for decision support

Enhanced Reporting System (ERS) provides rich/seamless reporting & analytics on >40 years of research funding

- Enables highly complex demographic & other modelling (peer review, research, researchers)
- Infer likely & possible outcomes from new decisions
  - Piloted advanced predictive analytics in 2017/18
    - Actual 2019 data proved modelling highly reliable
- Provides an evidence base for decision making
  - Significant decisions based on predictive modelling
    - Caution: Historical data may not be a good predictor of the future because of behavioural economics, programmer bias & interpretability issues

Lessons

- Imperative for change is real & immediate as NHMRC continues to demonstrate its ongoing value proposition
- Data to create knowledge is a given
  - Challenge is to apply data routinely in operations & as intelligence through advanced analytics, RPA & ML
- Our experience was low & required substantial effort & time for environment & market scanning
  - Discovering who can actually deliver on promises is trial & error
  - RFQs/RFTs may not be good discovery mechanisms & small PoCs can help avoid getting trapped
- Defining high value use case(s) is harder than thought
  - Capturing hearts & minds is hard & transitioning new ways of working in SoPs is hard because of BaU

There is no magic

- Advanced analytics needs well thought out reasoning
  - Algorithms are only another tool-set
  - Unlike expert (ie knowledge) systems, RPA, NLP & ML have bias and interpretability limitations
  - Integrating text analytics involves fundamentally rethinking your data environment
- Understanding the data is critical to success
  - Data must be fit for purpose
    - Algorithms will not magically fix data problems
  - Pre-processing has many steps & is never perfect
- Bringing data scientists in-house to work with our data experts & partnering with outside specialists is working

Privacy, Human Rights and Ethics

- Current laws & regulations do not fully safeguard confidential health information
  - European General Data Protection Regulation has set a global benchmark, but is subject to contestability
  - Australian Government is considering benefit/risks closely
- Re-identification of individuals is increasingly likely by bringing together disparate data
  - Combining health & other personal data through the power of big data & ML creates new knowledge that has privacy, ethics & human rights implications
    - Dr Alan Finkel AO (Chief Scientist): https://www.chiefscientist.gov.au/wp-content/uploads/Human-Rights-&-Technology.pdf

Other ML demons

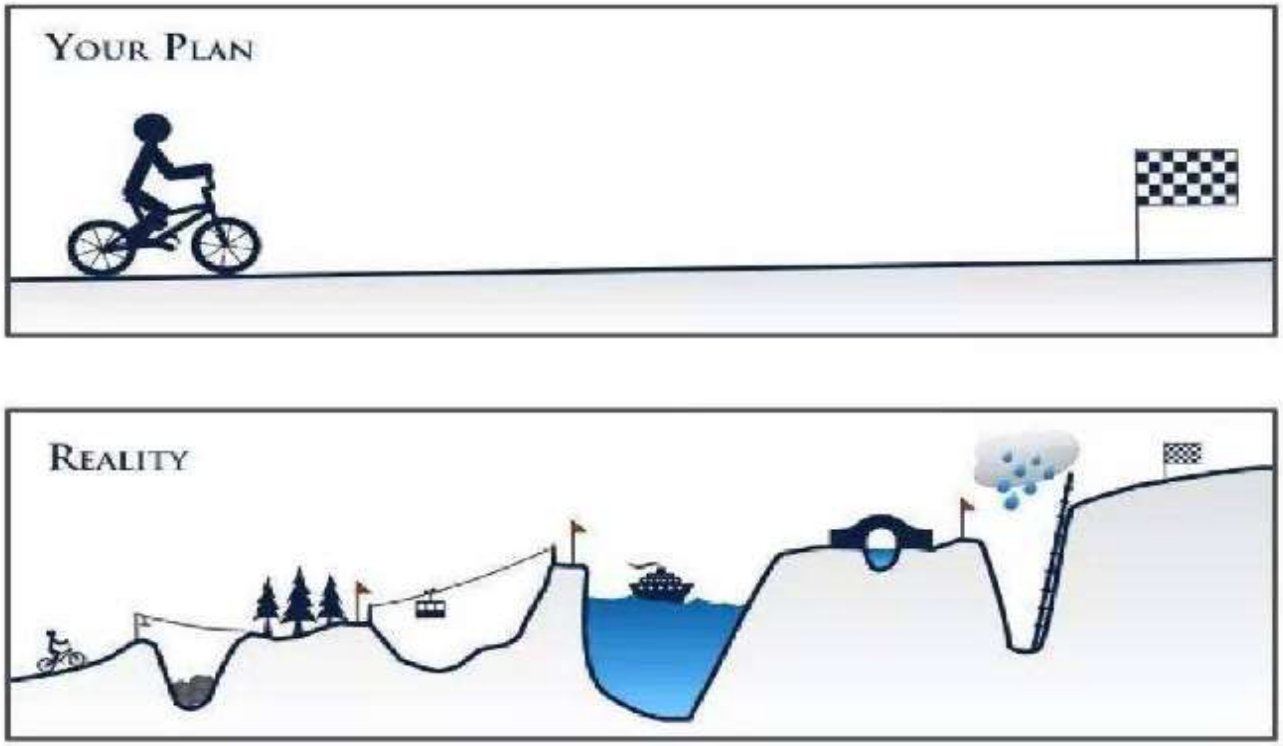
- ML verifiability
  - Unlike knowledge systems, ML data synthesis is not necessarily transparent and needs supervision/review
    - Research has proven AI can cheat by hiding data once it recognised what was wanted
      - https://techcrunch.com/2018/12/31/this-clever-ai-hid-data-from-its-creators-to-cheat-at-its-appointed-task/
- ML algorithm bias
  - It's not the mathematics but humans programmers and legacy systems that load subjective bias into ML
- Renewing public trust
  - Social complacency
  - US NSA, Cambrige Analytica, Facebook, Google, …
  - Robo-debt, Census-fail

Conclusion

- Leveraging data more effectively through advanced analytics technologies for operations and decision support is the new normal
- Organisations must recreate themselves to unlock potential benefits that otherwise will not be realised
- It is incumbent upon us, as leaders, to create the opportunities to identify & realise those benefits, or face the inevitability of being left behind
- We need to better share our experience and knowledge to shorten the learning and implementation journey

Expectations and reality

Big #DataScience: Expectation vs. Reality



Thank you

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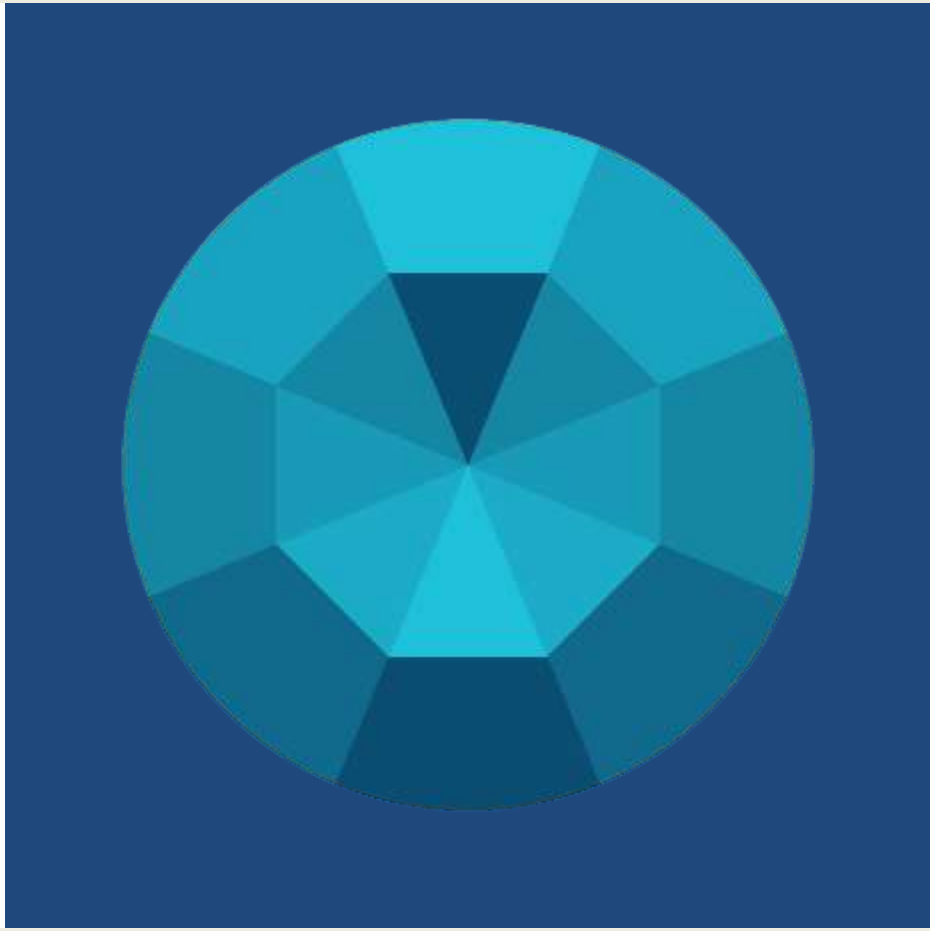
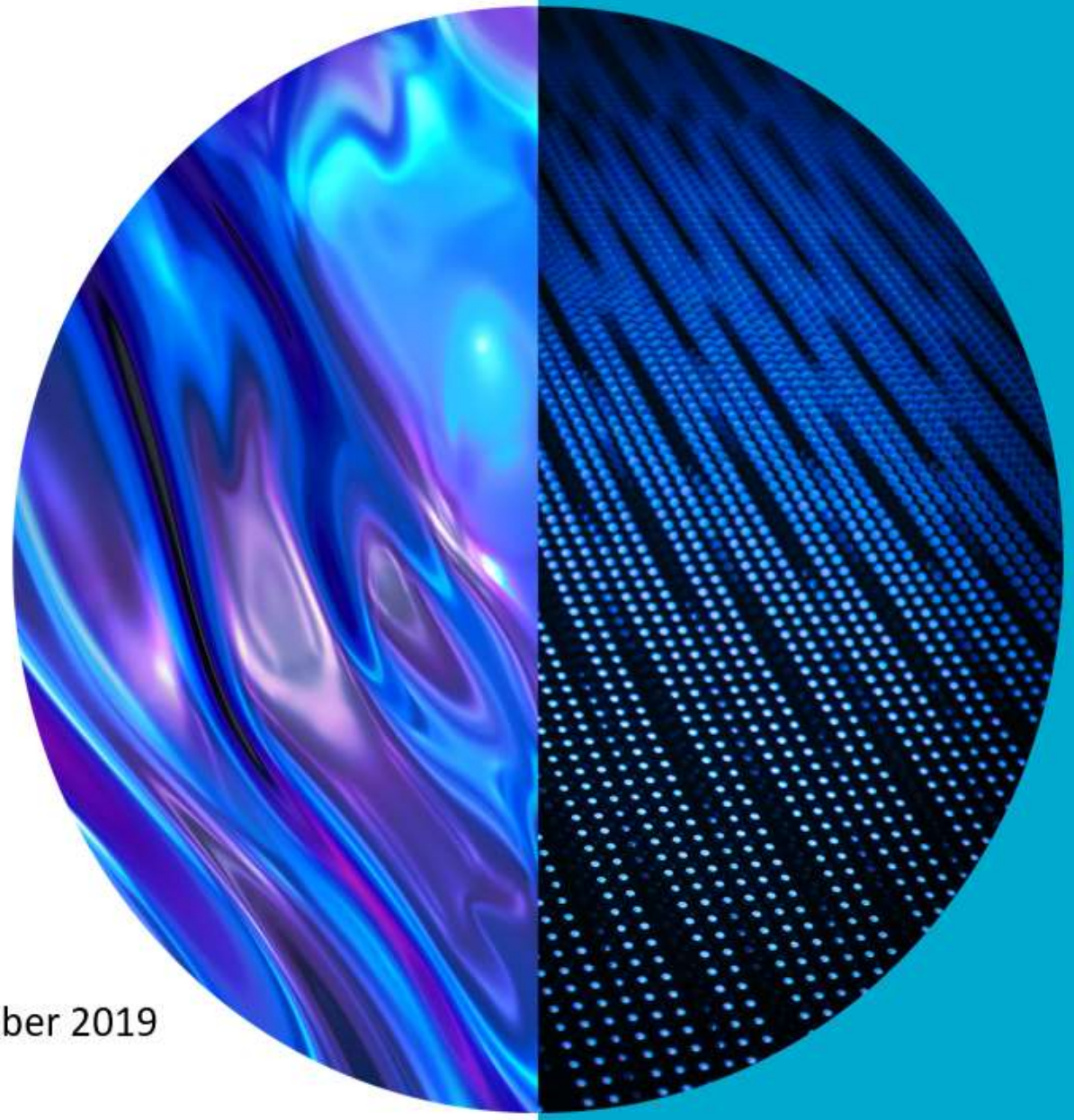


NATIONAL ARCHIVES OF AUSTRALIA

Brendan Dalton
CSIRO



Information Governance in CSIRO

Brendan Dalton, CIO| 1 October 2019

Your national science agency

State-of-the-art national research infrastructure

5,500 dedicated people

Across the world including Australia, Singapore, Vietnam, US and Chile

$4.5B+ a year

Value delivered to the Australian economy through our science and technology

57 sites

One of the world's largest multidisciplinary science and technology organisations

Our research and development

We are one of the largest and most diverse scientific research organisations in the world.
Our research focuses on providing solutions in nine core areas.

Key areas of research

Animals and plants
Astronomy and space
Climate
Environment
Farming and food production
Health
Information technology
Mining and manufacturing
Renewables and energy

Change in CSIRO's information environment

- Digital transformation
  - Cloud
  - AI/ML
  - Social media
  - Smart devices
- Increased cyber threat

- Increase in the 'v's:
  - Volume
  - Velocity
  - Variety
  - Veracity… and
  - Value

Drivers

- **CSIRO Challenges and Digital Transformation Program for Science**
  - Fewer bigger things eg removing plastic from the oceans
  - Brining digital to domain science at scale
  - Managing Data Risk
  - CSIRO strategic projects:
    - Managed Data Ecosystem
    - Digital Academy
    - Decadal Science Plan
    - Missions
  - Digital Continuity 2020
  - IMT goal: Maximising the value of our information assets

Current state

- Lack of understanding of the value of information and data
- Largely disparate and unconnected science systems
- Need for standards, policies or procedures
- Need to meet CSIROs compliance obligations

- Risk of deletion, loss or unauthorised access.
- Management of information and data is uncoordinated.
- Risks to integrity and reputation through unknown information and data

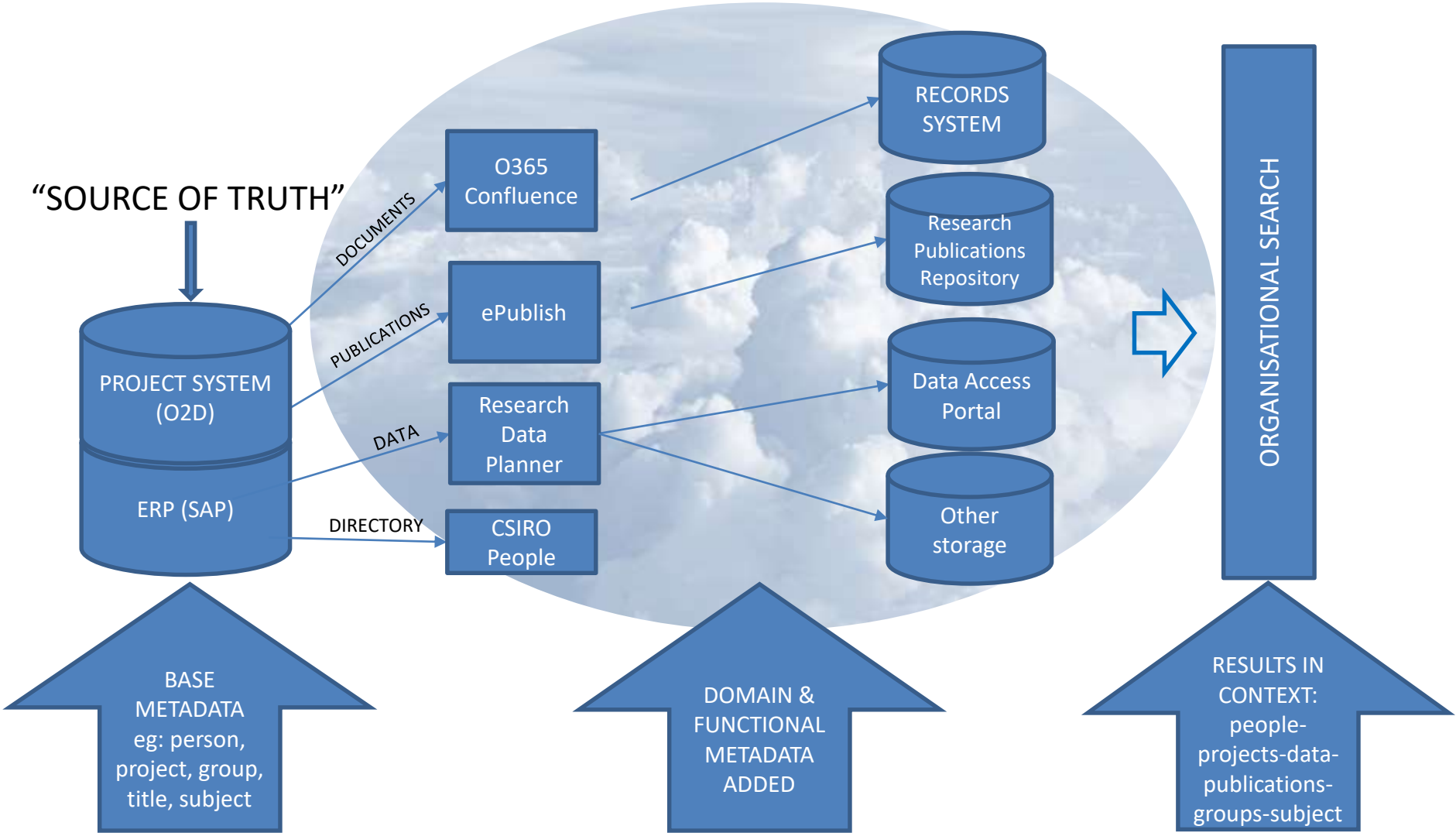
Benefits to CSIRO of good Information Governance

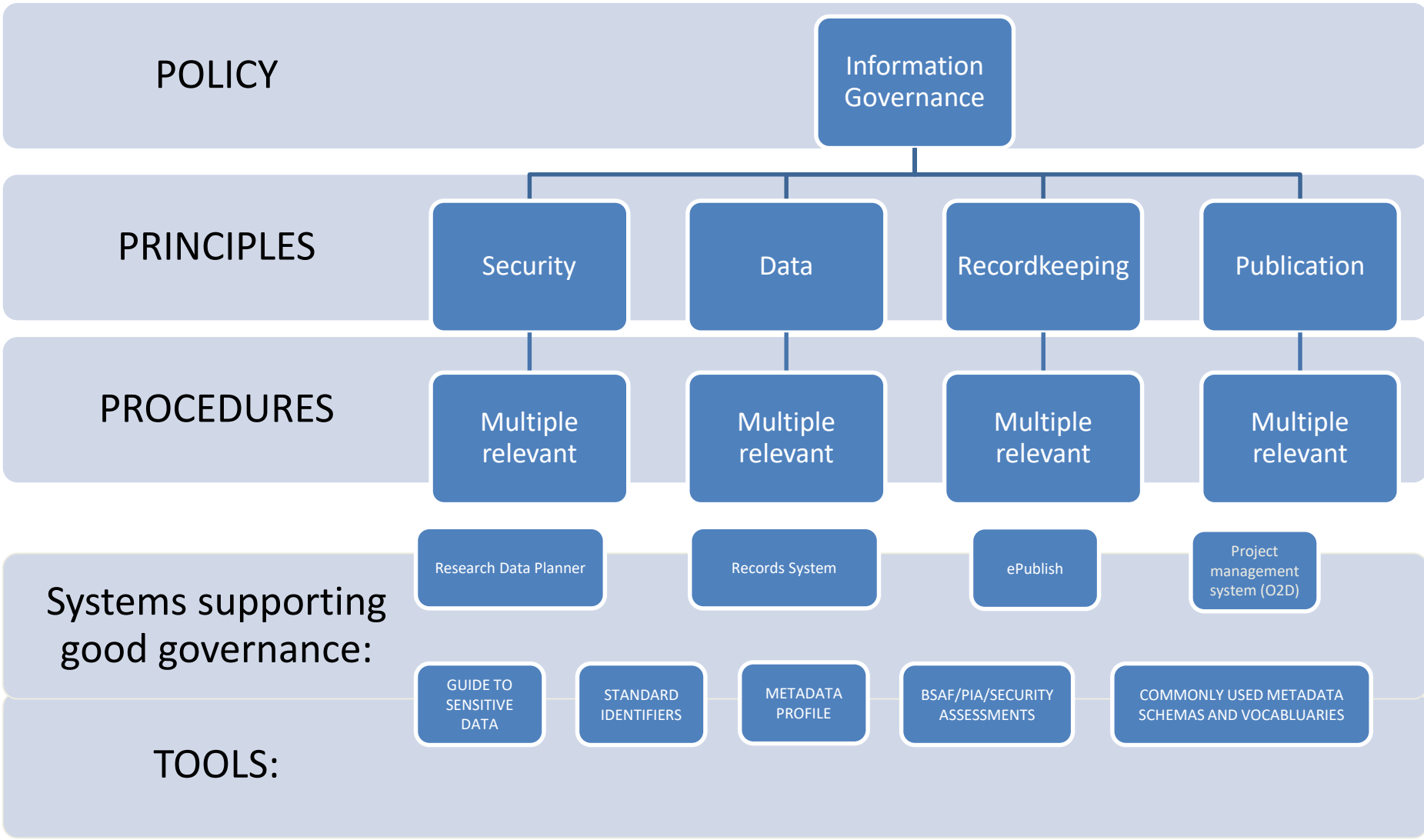
- Research integrity and reproducibility
- Protects our IP
- Knowledge sharing
- Interoperability
- Realise the full value of our data and information
- Reduce costs
- Reduce risks:
  - Security
  - Non-compliance
  - Missed opportunities through not knowing what we already know.
- You cant do good digital science without it!

Approach

- External engagement
  - Represent research in data sharing
  - Align with national and international goals and strategies
- Identify key information assets
- Establish a new operating model for data management as a core enterprise activity – MDE
- Information Governance Framework
  - Policy, principles, procedures
  - Supporting tools and systems
  - Governance steering committee

IM descriptive framework for retrieval




POLICY
Information Governance
PRINCIPLES
Security
Data
Recordkeeping
Publication
PROCEDURES
Multiple relevant
Multiple relevant
Multiple relevant
Multiple relevant
Systems supporting good governance:
Research Data Planner
Records System
ePublish
Project management system (O2D)
TOOLS:
GUIDE TO SENSITIVE DATA
STANDARD IDENTIFIERS
METADATA PROFILE
BSAF/PIA/SECURITY ASSESSMENTS
COMMONLY USED METADATA SCHEMAS AND VOCABLUARIES

Metadata Profile

- Descriptive
- Re-use & access
- Storage
- Retention & Disposal

Supports identification and discovery.
Author, title, description, subject etc

Supports data sharing. Licencing, permissions, formats
Links to supporting objects etc

Supports efficient & effective management of data.
Size, format, frequency of access etc

Supports curation.
Retention period, classification

Supporting a Managed Data Ecosystem

- Research data is now a first class output of research.
- It supports innovation, research integrity and reproducibility

A Managed Data Ecosystem (MDE):

- Effective interoperability between enterprise systems and processes and those specific to research areas.
- 4 aspects:
  - Governance & Strategy
  - People
  - Architecture & Standards
  - Technology Platforms

The MDE brings a number of benefits

VALUE	Optimised value for re-use & impact
ACCESS	Clear data sharing standards enabling assured access
TRUST	Complete data provenance
STORAGE	Fit-for-purpose & interconnected solutions
UNDERSTANDING	Comprehensive understanding of data assets
COMPLIANCE	Systematic, fully assured governance
ANALYSIS	Curated, best-of-breed tool kits

Deliverables:

1. Ongoing development and review of enterprise systems and processes with a connected ‘ecosystem’ mindset
2. Conducting pilots with specific research identified ‘use cases’
    - Sensitive data
    - Domain data hubs
    - Workflows and tools
3. Development of an ongoing operating model

Information and data are key assets for CSIRO. They are our intellectual capital.

Thank you

Information Management & Technology, Office of the CIO
Brendan Dalton
Chief Information Officer
+61 2 62142934
Brendan.Dalton@csiro.au

NATIONAL ARCHIVES OF AUSTRALIA

Morning tea break

NATIONAL ARCHIVES OF AUSTRALIA

Kylie Highley & Maureen Hickson

Australian Public Service Commission (APSC)

Australian Government
Australian Public Service Commission

Migration of IT Network to a PROTECTED Network

1 October 2019

Our Transition

- Decision made to uplift the security environment of the Commission
- Formerly working within an unclassified network, with segmented PROTECTED instance

Working it through – new ways of working

- Preparing staff with what to expect:
  - Change to the system – SharePoint platform
  - Working in the PROTECTED environment
  - Highlighting the differences in document collaboration
  - Not over classifying their information
- Difference between EDRMS and Shared Drives

Lessons Learnt

- Preparing staff early is key to a smooth transition
- Training sessions are imperative – supporting staff to understand the system and their responsibilities
- Sometimes people need to change to meet the system, rather than changing the system to meet the business needs

NATIONAL ARCHIVES OF AUSTRALIA

Ryan McConville

Australian Human Rights Commission (AHRC)

RADICAL

Record And Document Innovation & Capture – Artificial Learning

Ryan McConville
AHRC Information Manager

RADICAL

is

Records365

SharePoint Online

Exchange/Outlook

Microsoft Flow

Power BI

Records365

Machine learning + rules

No mandatory metadata

No third-party add-ins

Tailored information architecture

Powerful search

Simple navigation

Real-time corporate reporting

Email capture simplified

External collaboration

Available on any device

Anywhere

Any time

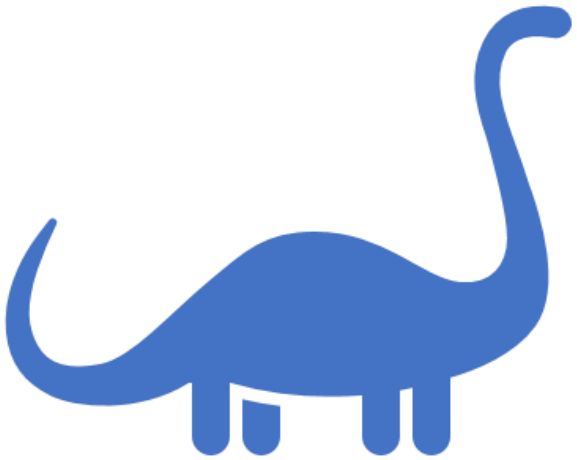
AHRC

Australia's national human rights institution

An independent statutory organisation

Our role is to promote and protect human rights

Approximately 140 staff



Life B.R.

(before RADICAL)

No EDRMS

Paper files registered in CARMS

Manual file creation and classification

Confusing nested folders in fileshares

Life B.R.

Duplicate files everywhere

Drafts published on website

Manual document versioning

ICT Policy FINAL v2 (old don’t use).docx

Life B.R.

Compatibility issues with MacOS

Ex-staff inboxes left unmanaged

Files shared as email attachments

Corporate reporting tracked in Word docs

Life B.R.

"Completing the National Archives annual Check-Up survey feels like ritual humiliation."

- Ron McLay, AHRC CIO

… and 2020 was fast approaching.

A RADICAL Change

Inspired by Department of Finance

Secured an executive sponsor

Formed a steering committee (of the willing)

Looked for opportunities in the marketplace

Guiding principles

Ease of use

Avoid past mistakes

Transparent records management

Value change management

Getting Radical

Three main components:

- Records365
- SharePoint Online
- Exchange Online

Classification Intelligence

Uses a statistical model to classify records based on their content

Differs from rules-based classification, which relies on metadata

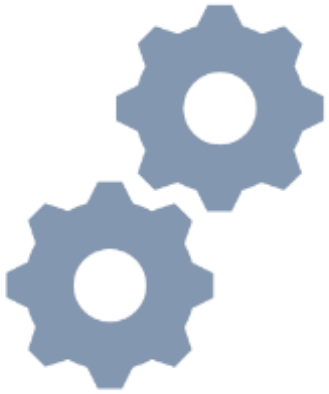
RADICAL uses both rules and ML to classify

Creating a model

1000 records for each AFDA Ex class

Natural Language Processing techniques turn documents into binary signals

Binary used to build a statistical model used for classifying records

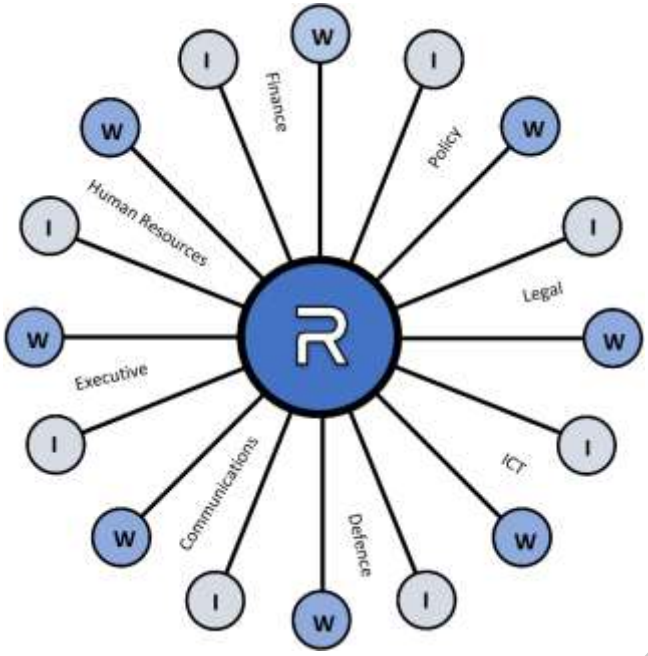


Training the model

80% of training data used to build

Remaining 20% used to test

Initial tests showed 80% confidence rate in suggesting records class



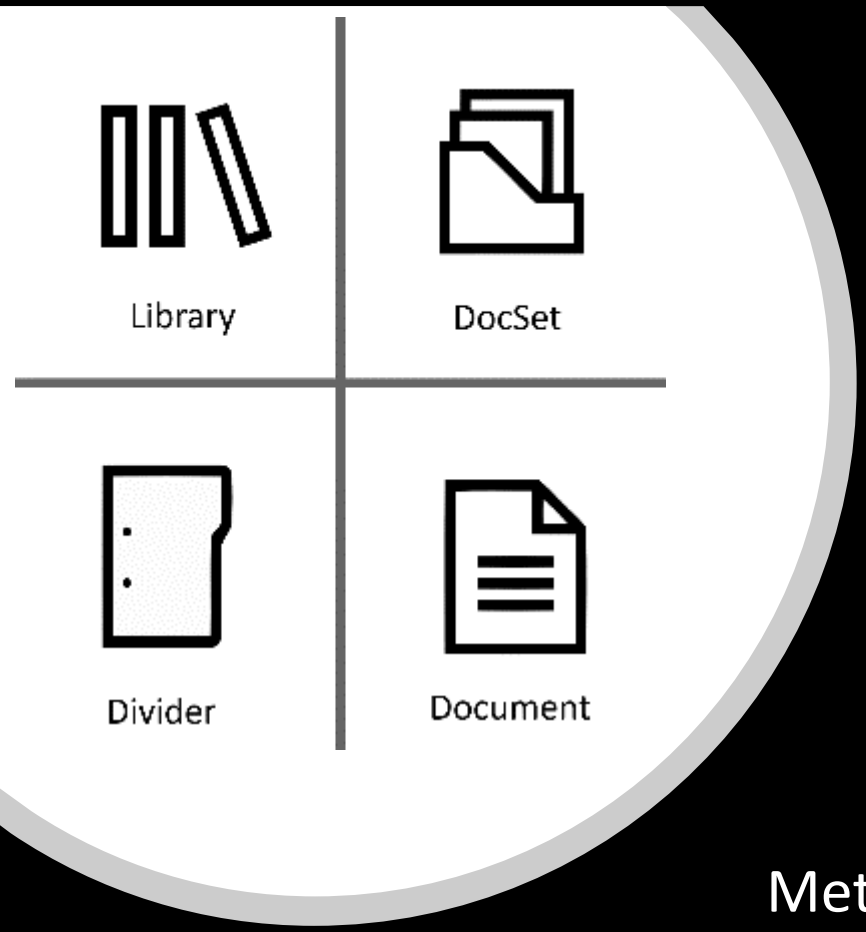
SharePoint Online

Based on organisation structure

Hub site joins department sites

Information Page and Workspace

Centralised search and navigation



Information Architecture

No folders

Utilise person and location fields

Managed metadata and dropdowns

Metadata fields based on reporting and navigation needs

Record And Document Innovation & Capture - Artificial Learning

RADICAL Information Page

Commission News

News

ICT

Legal

Finance

Commission Events

Create an event

Title of event

Title of event

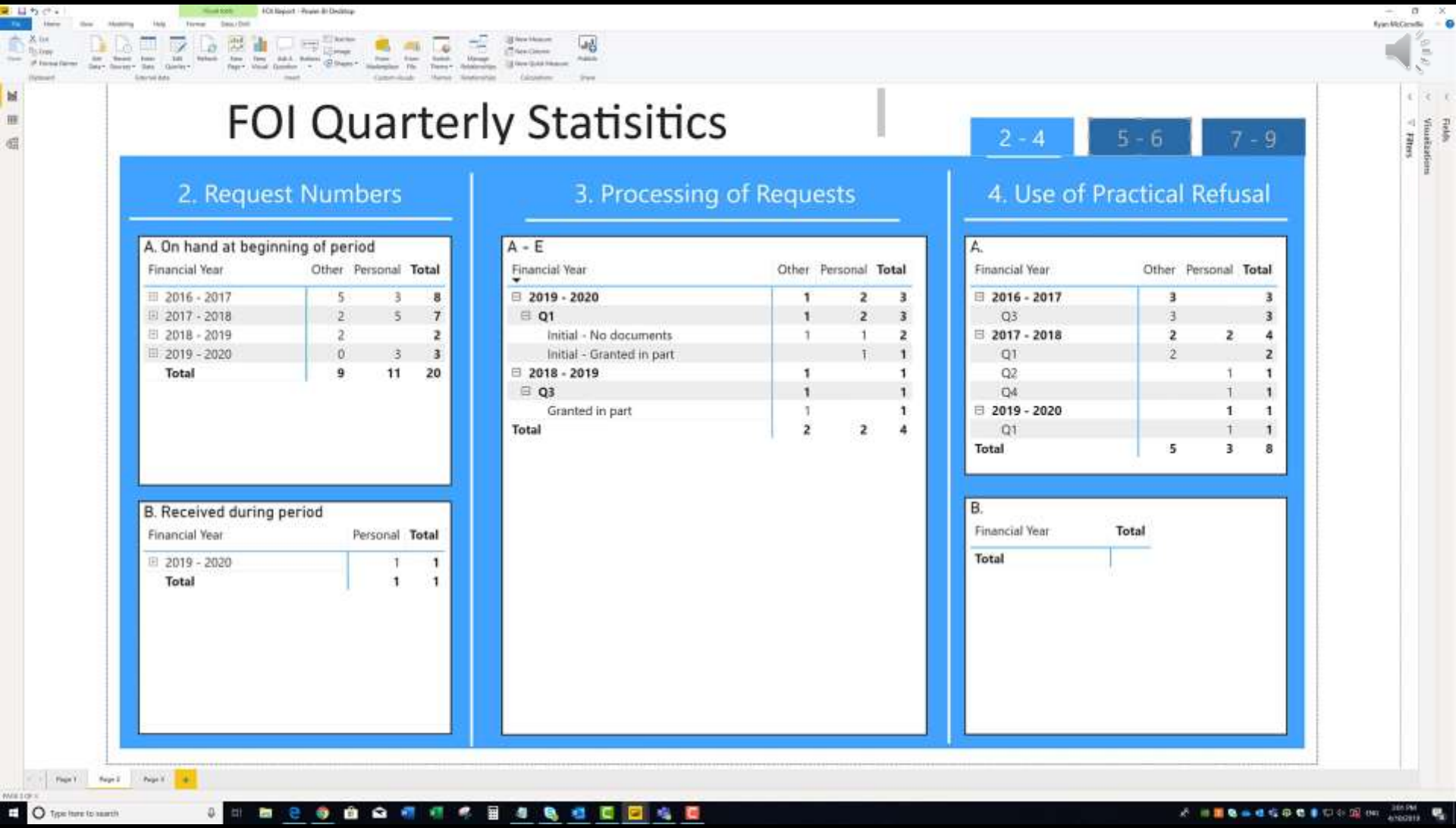
Title of event

Corporate Reporting

Power BI reports connected to DocSet metadata

Auto-refresh up to 8 times a day

Schedule reports to auto-send via email


FOI Quarterly Statisitics
2 - 4
5 - 6
7 - 9
2. Request Numbers
A. On hand at beginning of period
Financial Year | Other | Personal | Total
2016 - 2017 | 5 | 3 | 8
2017 - 2018 | 2 | 5 | 7
2018 - 2019 | 2 | | 2
2019 - 2020 | 0 | 3 | 3
Total | 9 | 11 | 20
B. Received during period
Financial Year | Personal | Total
2019 - 2020 | 1 | 1
Total | 1 | 1
3. Processing of Requests
A - E
Financial Year | Other | Personal | Total
2019 - 2020 | 1 | 2 | 3
Q1 | 1 | 2 | 3
Initial - No documents | 1 | 1 | 2
Initial - Granted in part | | 1 | 1
2018 - 2019 | 1 | | 1
Q3 | 1 | | 1
Granted in part | 1 | | 1
Total | 2 | 2 | 4
4. Use of Practical Refusal
A.
Financial Year | Other | Personal | Total
2016 - 2017 | 3 | | 3
Q3 | 3 | | 3
2017 - 2018 | 2 | 2 | 4
Q1 | 2 | | 2
Q2 | | 1 | 1
Q4 | | 1 | 1
2019 - 2020 | | 1 | 1
Q1 | | 1 | 1
Total | 5 | 3 | 8
B.
Financial Year | Total
Total

Email

Poor integration between SharePoint Online and Outlook

Use Add-ins?

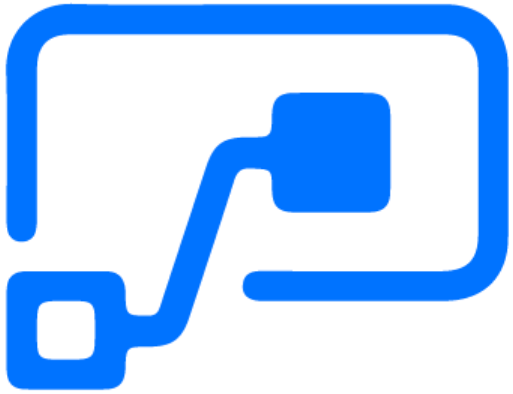
‘In place’ management – excellent, but …

Records365™

Microsoft Flow

+

Exchange Online Connector



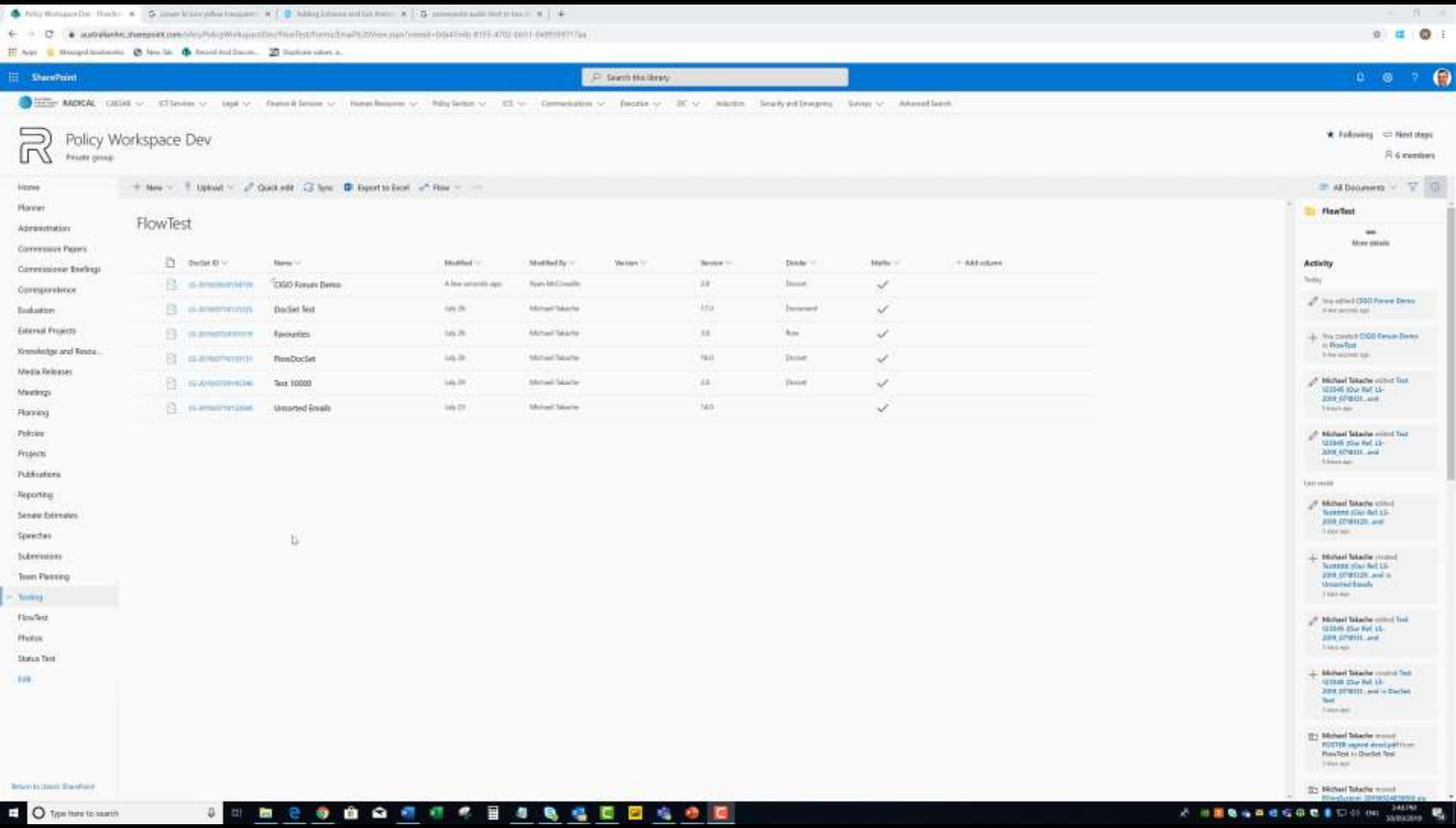
Go with the Flow

DocSet ID in subject line

CC to dedicated shared mailbox

Email filed into DocSet by Flow

Email headers transferred to SharePoint


SharePoint
Search this library
Policy Workspace Dev
Private group
Following
Next steps
6 members
Home
Planner
Administration
Commission Papers
Commissioner Briefings
Correspondence
Evaluation
External Projects
Knowledge and Resou...
Media Releases
Meetings
Planning
Policies
Projects
Publications
Reporting
Senate Estimates
Speeches
Submissions
Team Planning
Testing
FlowTest
Photos
Status Test
Edit
New
Upload
Quick edit
Sync
Export to Excel
Flow
All Documents
FlowTest
DocSet ID
Name
Modified
Modified By
Version
Review
Divider
Maths
Add column
CIGO Forum Demo
DocSet Test
Favourites
FlowDocSet
Test 10000
Unsorted Emails
FlowTest
More details
Activity
Today
Return to classic SharePoint
Type here to search

Records365 Exchange Connector

In-place email management

Use filters to define which emails to capture

Lessons learned

RADICAL isn’t a silver bullet

Context isn’t available (yet)

ML needs a lot of data for training

Don’t forget your users in system design

Questions

NATIONAL ARCHIVES OF AUSTRALIA

Sonya Sherman & Jon Palin
Objective

INFORMATION GOVERNANCE: WHERE TO NEXT?

Chief Information Governance Officers Forum, 1 Oct 2019

GREAT GOVERNANCE
BETTER BUSINESS

Objective

INTRODUCING

SONYA SHERMAN
DIRECTOR INDUSTRY SOLUTIONS

JON PALIN
CHIEF PRODUCT OFFICER

CORPORATE OVERVIEW

237 EMPLOYEES

- 72 Software Engineers
- 65 Professional Services Consultants
- 22 Customer Care Consultants

3 DEVELOPMENT LABS

- Sydney, Australia
- Maidenhead, UK
- Palmerston North, NZ

1,847

Organisations use Objective software

EXPERTISE IN

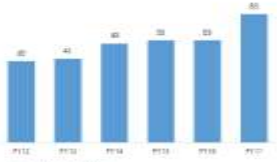
- Government
- Health
- Financial Services & Insurance
- Energy & Infrastructure

LONG TERM GROWTH & FINANCIAL STABILITY IN THE TECH SECTOR

FOUNDED 1987

LISTED ASX

ASX: OCL Since 2000



REVENUE

R&D

GREAT GOVERNANCE »» BETTER BUSINESS

Objective

AGENDA

INTRODUCTIONS

GOVERNANCE BY DESIGN

GOVERNANCE EVERYWHERE

QUESTIONS

DIGITAL TRANSFORMATION - TECHNOLOGY

DIGITAL TRANSFORMATION - PEOPLE

Customers want:

- Fast, accessible services
- Engagement and participation
- Seamless user experience

DIGITAL TRANSFORMATION - PEOPLE

Employees want:

- Fast, accessible processes
- Right information, right time
- Seamless user experience

DIGITAL TRANSFORMATION - PROCESSES

> …is the integration of digital technology into all areas of a business, fundamentally changing how it operates and delivers value to its customers.

- Info Gov ANZ

DIGITAL TRANSFORMATION - PROCESSES

Fueled by data and information:

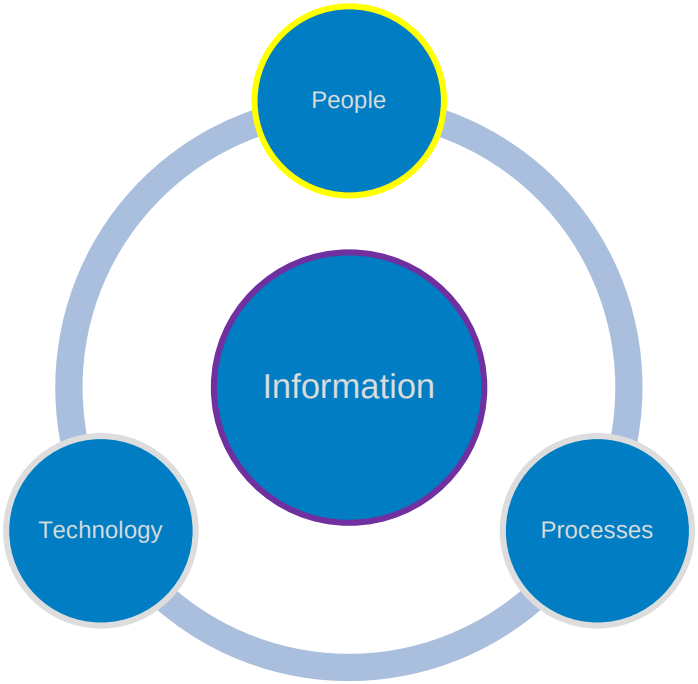
- Creating and collecting
- Using and sharing
- Protecting, preserving, disposing

DIGITAL TRANSFORMATION- GOVERNANCE

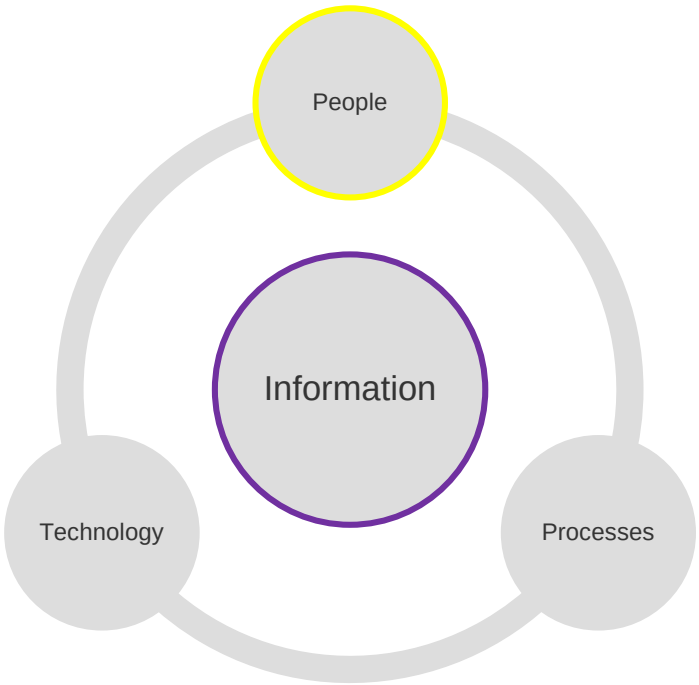
Role of governance is growing:

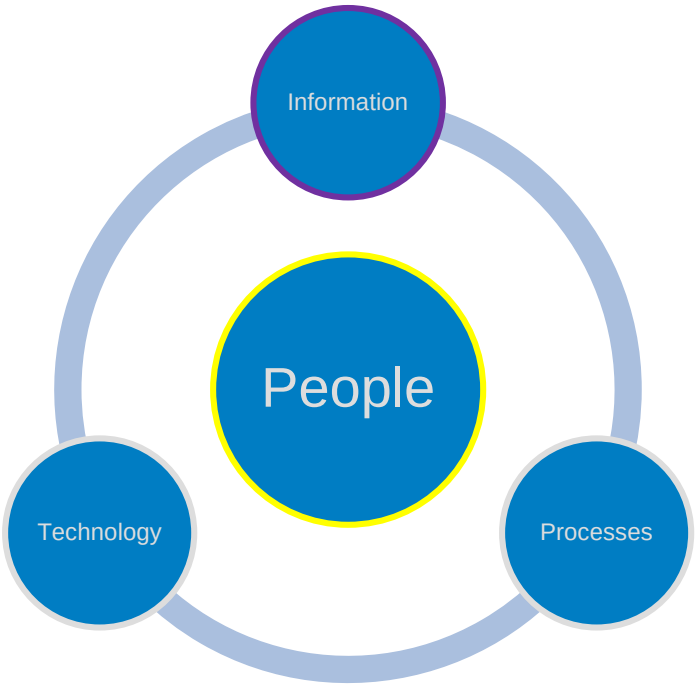
- Accountability: beyond compliance
- Business needs
- Customer expectations

DIGITAL TRANSFORMATION - GOVERNANCE



DIGITAL TRANSFORMATION - GOVERNANCE





INFORMATION GOVERNANCE - BY DESIGN

Three key enablers:

- Embed governance into processes
- Better use of existing systems
- Measure business value

INFORMATION GOVERNANCE - BY DESIGN

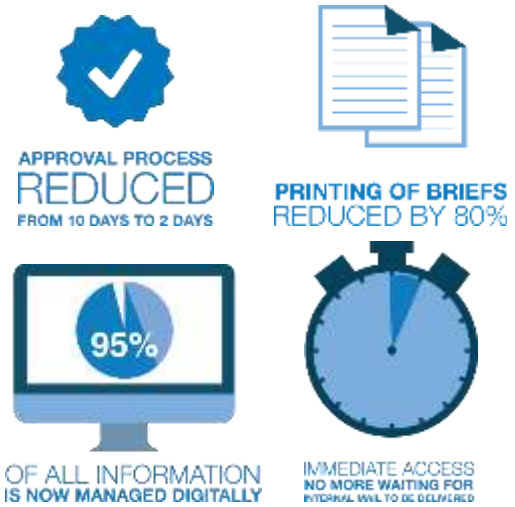
Better use of existing systems:

- Grow and improve, not replace
- Leverage defined policies, controls
- Extend into process workflows, collaboration workspaces and the wider ecosystem

INFORMATION GOVERNANCE - BY DESIGN

Measure business value:

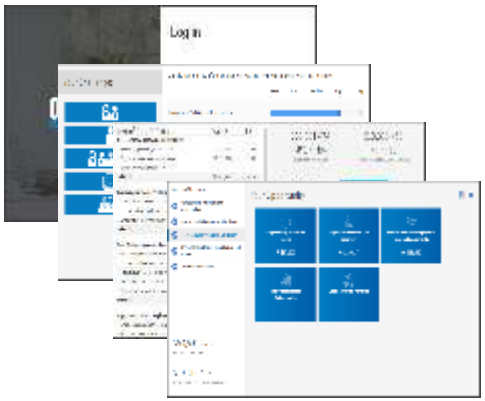
- Business case, executive support
- Change management, user support
- Return on investment, benefits realisation



VALUE ASSESSMENT PROGRAM

Discovery

Metrics



Value Tool

Present & Report

SUMMARY

Accelerating transformation:

- Information fuels decisions and services
- Governance fuels trust and participation
- Need to extend the reach of governance
- Demonstrating value drives change, delivers outcomes

AGENDA

INTRODUCTIONS

GOVERNANCE BY DESIGN

GOVERNANCE EVERYWHERE

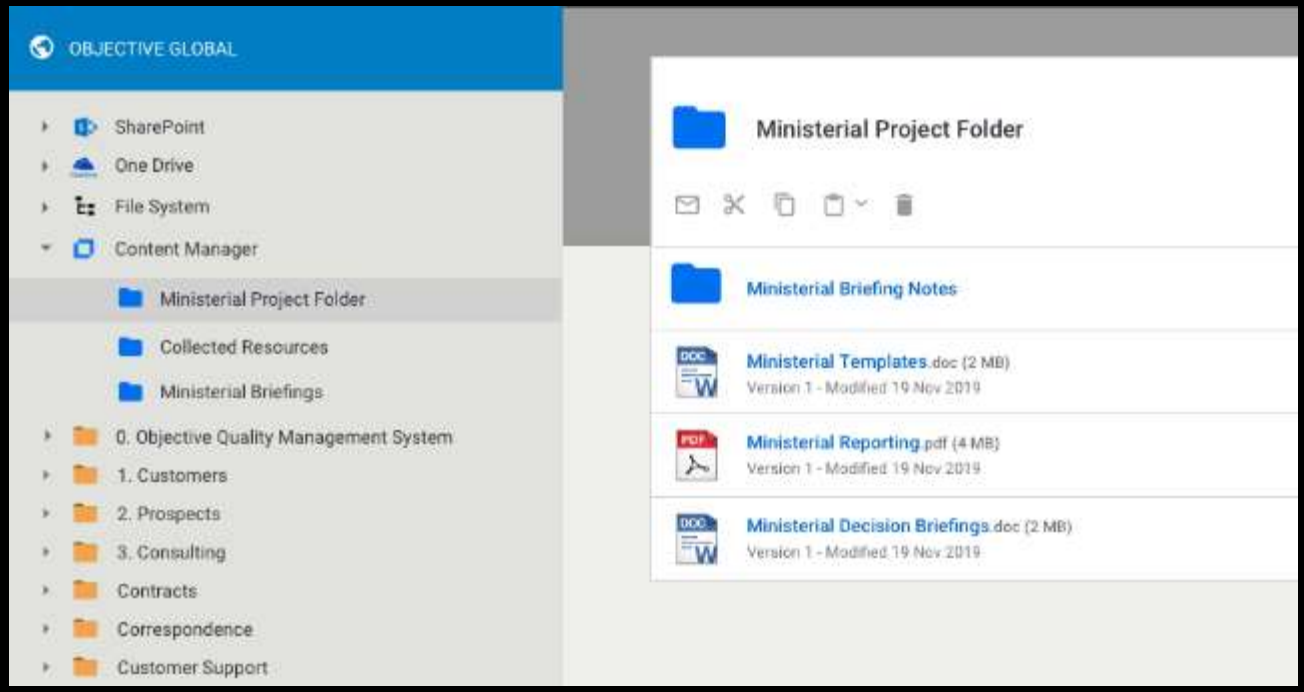
QUESTIONS


The Economist
Crunch time in France
Ten years on: banking after the crisis
South Korea's unfinished revolution
Biology, but without the cells
The world's most valuable resource
Data and the new rules of competition
Google
amazon
Google
TESLA

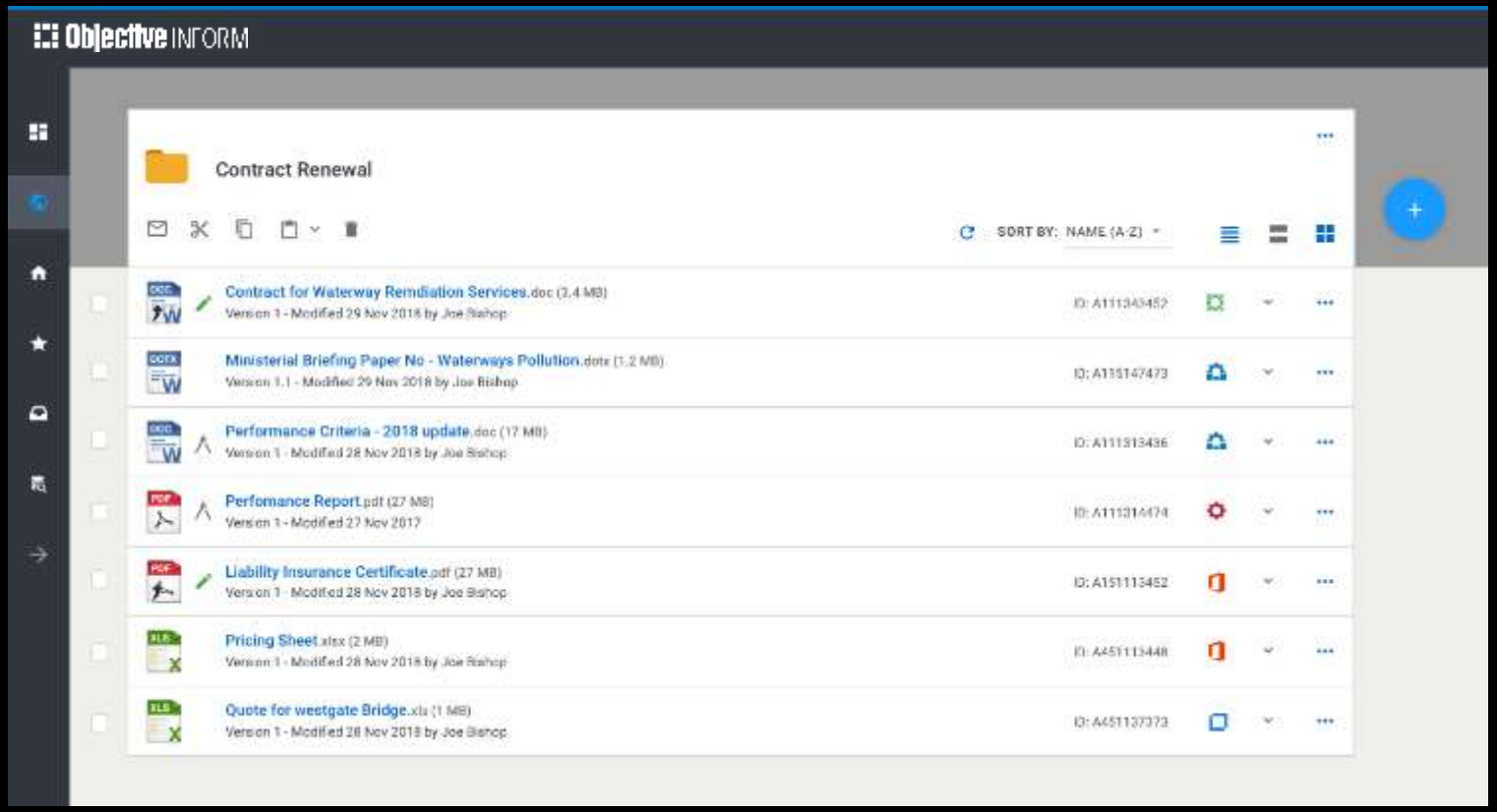

If you think it's expensive
to hire a professional to do the job, wait until
you hire an amateur
Red Adair
American Oil Firefighter

EXPLORE

EXPLORE


OBJECTIVE GLOBAL
SharePoint
One Drive
File System
Content Manager
Ministerial Project Folder
Collected Resources
Ministerial Briefings
0. Objective Quality Management System
1. Customers
2. Prospects
3. Consulting
Contracts
Correspondence
Customer Support
Ministerial Project Folder
Ministerial Briefing Notes
Ministerial Templates.doc (2 MB)
Version 1 - Modified 19 Nov 2019
Ministerial Reporting.pdf (4 MB)
Version 1 - Modified 19 Nov 2019
Ministerial Decision Briefings.doc (2 MB)
Version 1 - Modified 19 Nov 2019

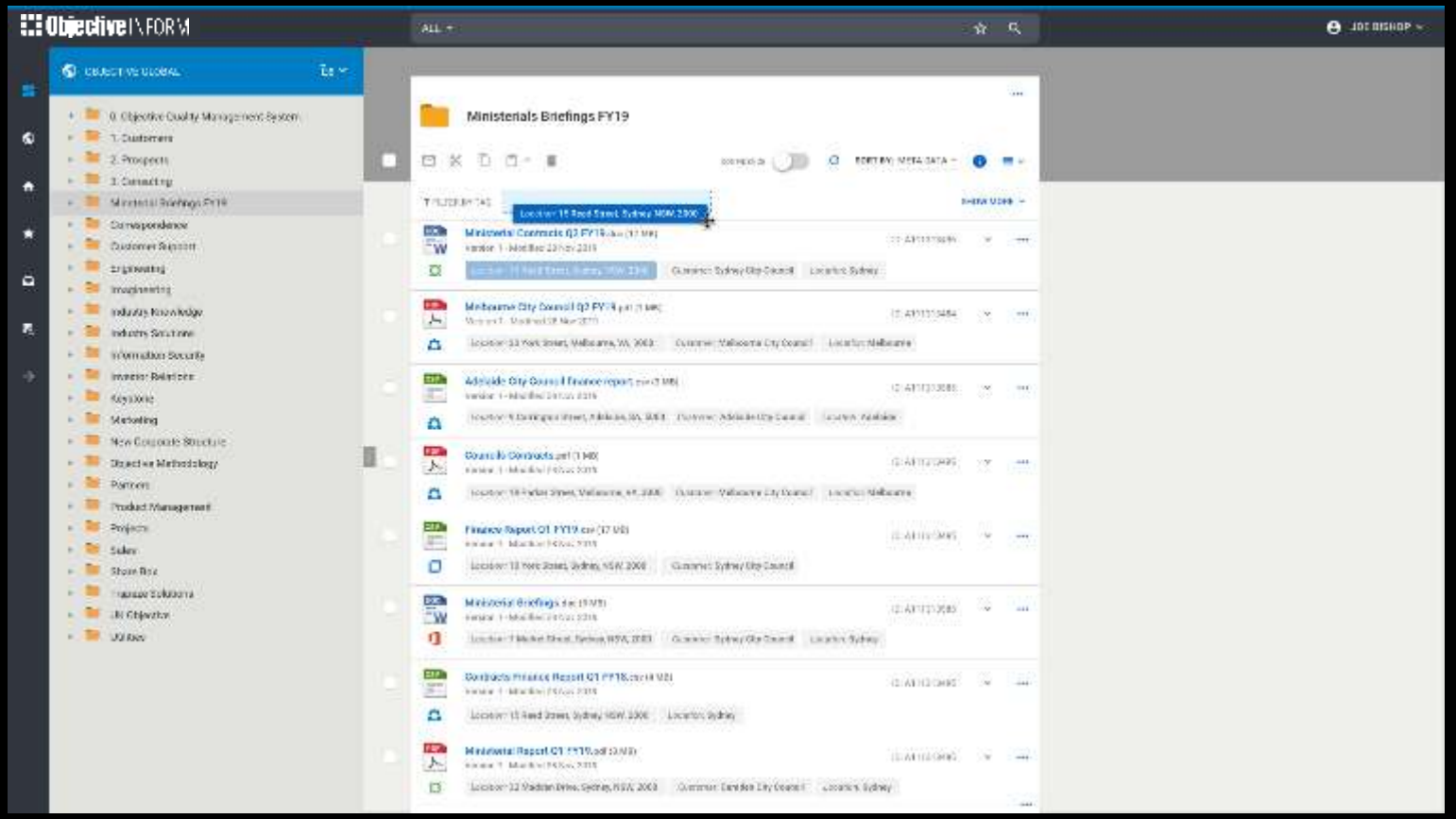
EXPLORE


Objective INFORM
Contract Renewal
SORT BY: NAME (A-Z)
Contract for Waterway Remdiation Services.doc (2.4 MB)
Version 1 - Modified 29 Nov 2018 by Joe Bishop
Ministerial Briefing Paper No - Waterways Pollution.dotx (1.2 MB)
Version 1.1 - Modified 29 Nov 2018 by Joe Bishop
Performance Criteria - 2018 update.doc (17 MB)
Version 1 - Modified 28 Nov 2018 by Joe Bishop
Perfomance Report.pdf (27 MB)
Version 1 - Modified 27 Nov 2017
Liability Insurance Certificate.pdf (27 MB)
Version 1 - Modified 28 Nov 2018 by Joe Bishop
Pricing Sheet.xlsx (2 MB)
Version 1 - Modified 28 Nov 2018 by Joe Bishop
Quote for westgate Bridge.xls (1 MB)
Version 1 - Modified 28 Nov 2018 by Joe Bishop

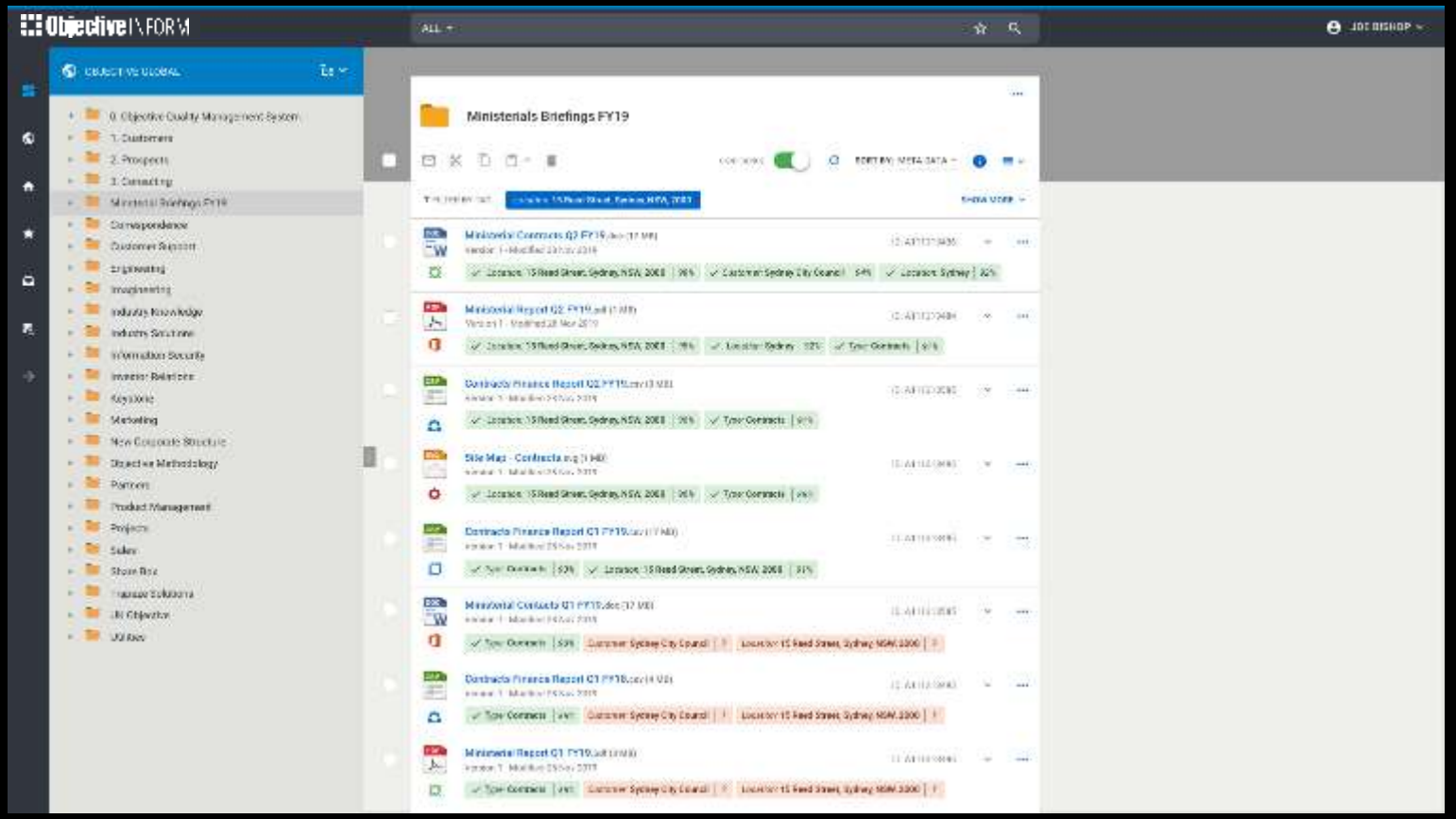
EXPLORE

ENHANCE

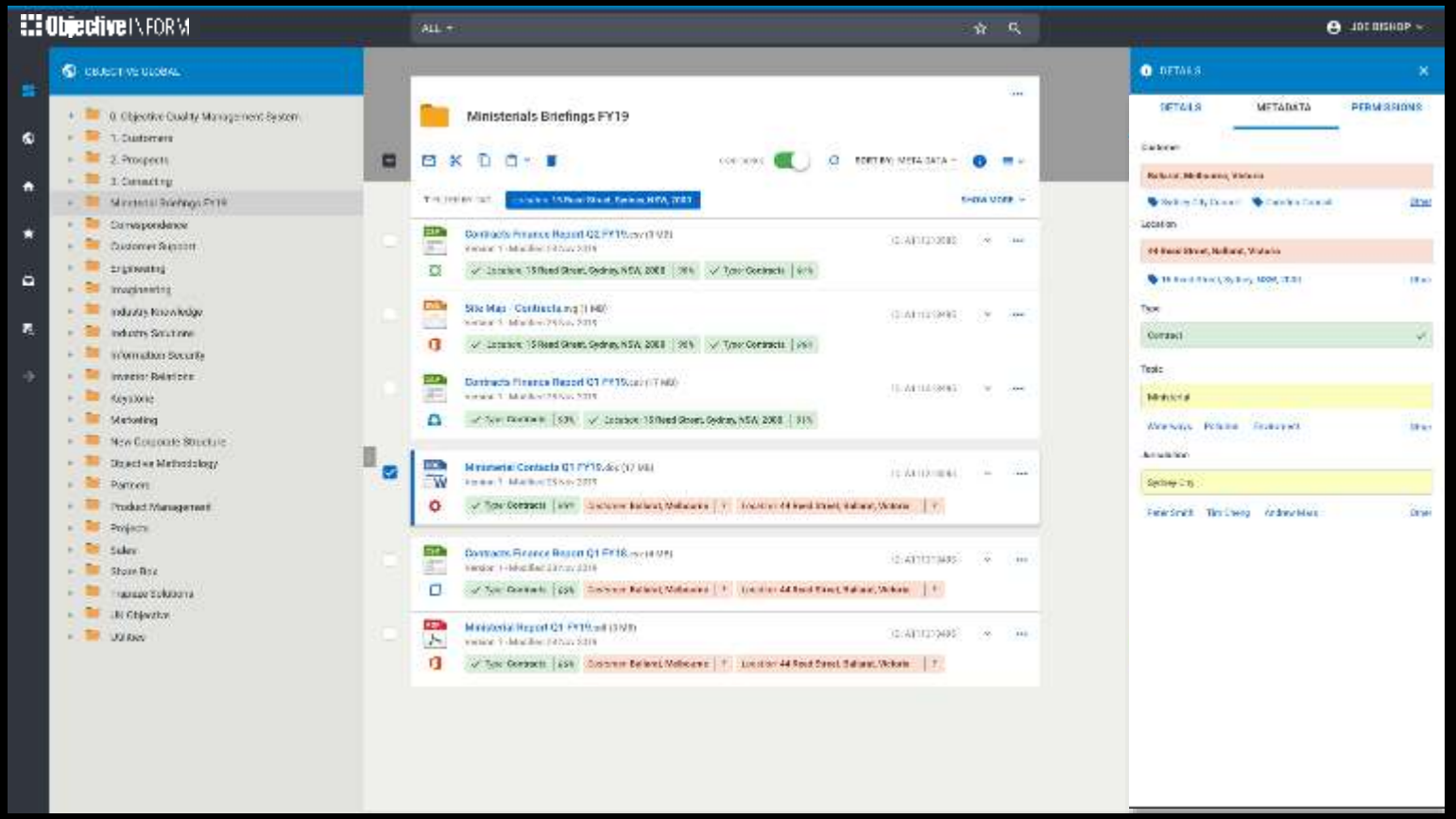
ENHANCE



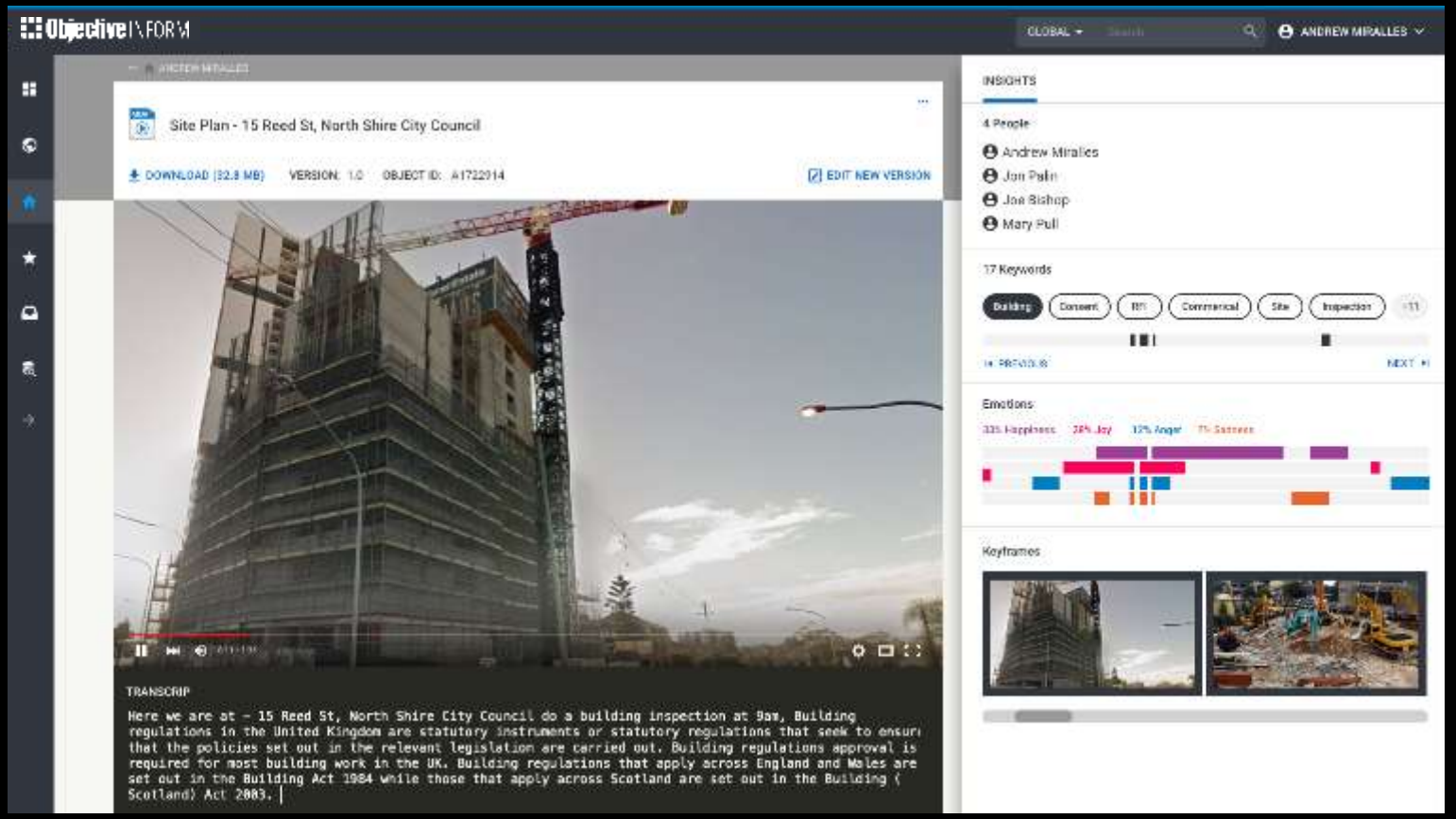
ENHANCE



ENHANCE


Ministerials Briefings FY19
DETAILS
METADATA
PERMISSIONS

ENHANCE

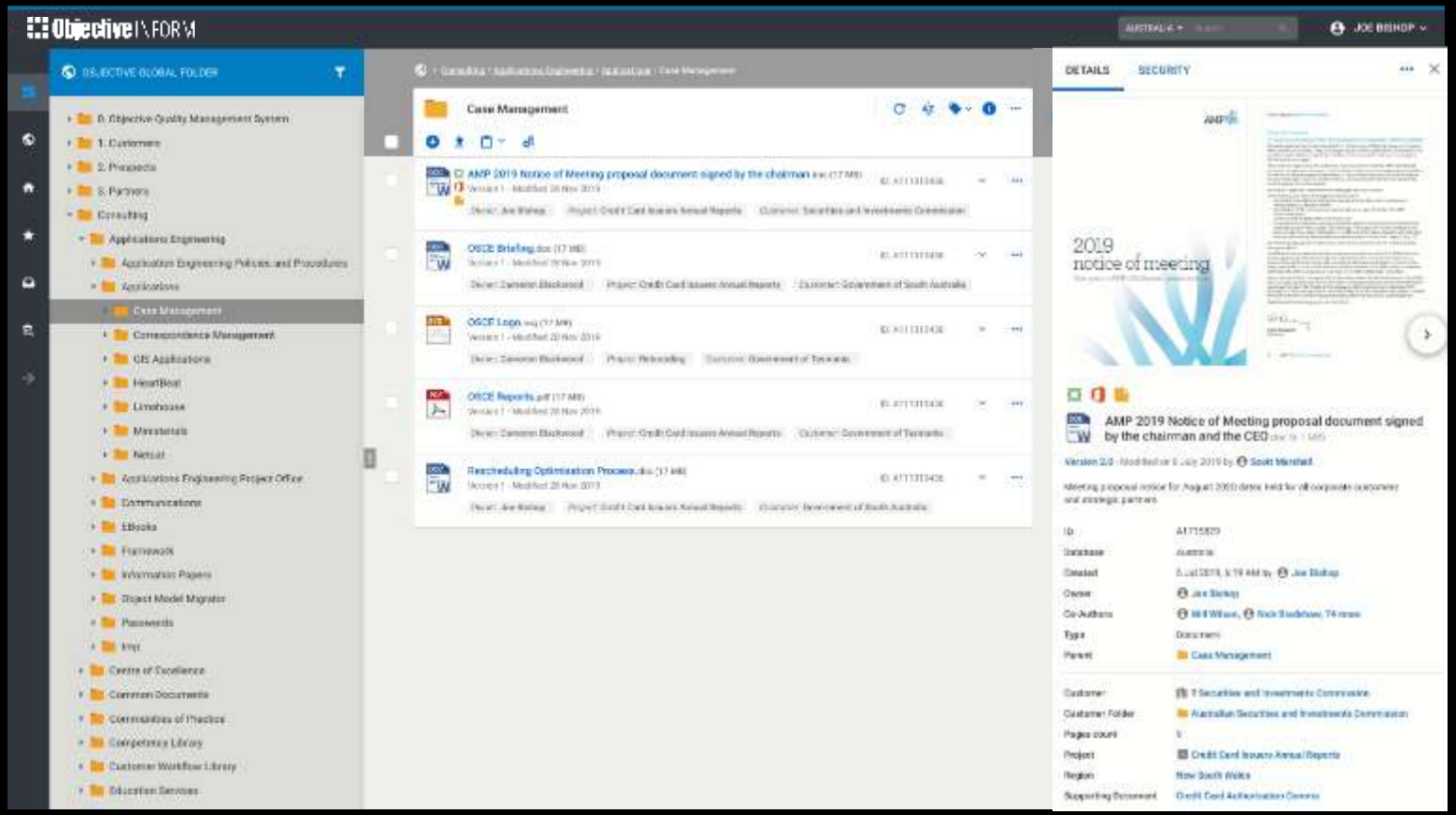

Site Plan - 15 Reed St, North Shire City Council
DOWNLOAD (32.8 MB)
VERSION: 1.0
OBJECT ID: A1722914
EDIT NEW VERSION
TRANSCRIP
Here we are at - 15 Reed St, North Shire City Council do a building inspection at 9am, Building regulations in the United Kingdom are statutory instruments or statutory regulations that seek to ensur that the policies set out in the relevant legislation are carried out. Building regulations approval is required for most building work in the UK. Building regulations that apply across England and Wales are set out in the Building Act 1984 while those that apply across Scotland are set out in the Building (Scotland) Act 2003.
INSIGHTS
4 People
Andrew Miralles
Jon Palin
Joe Bishop
Mary Pull
17 Keywords
Emotions
Keyframes

EXPLORE

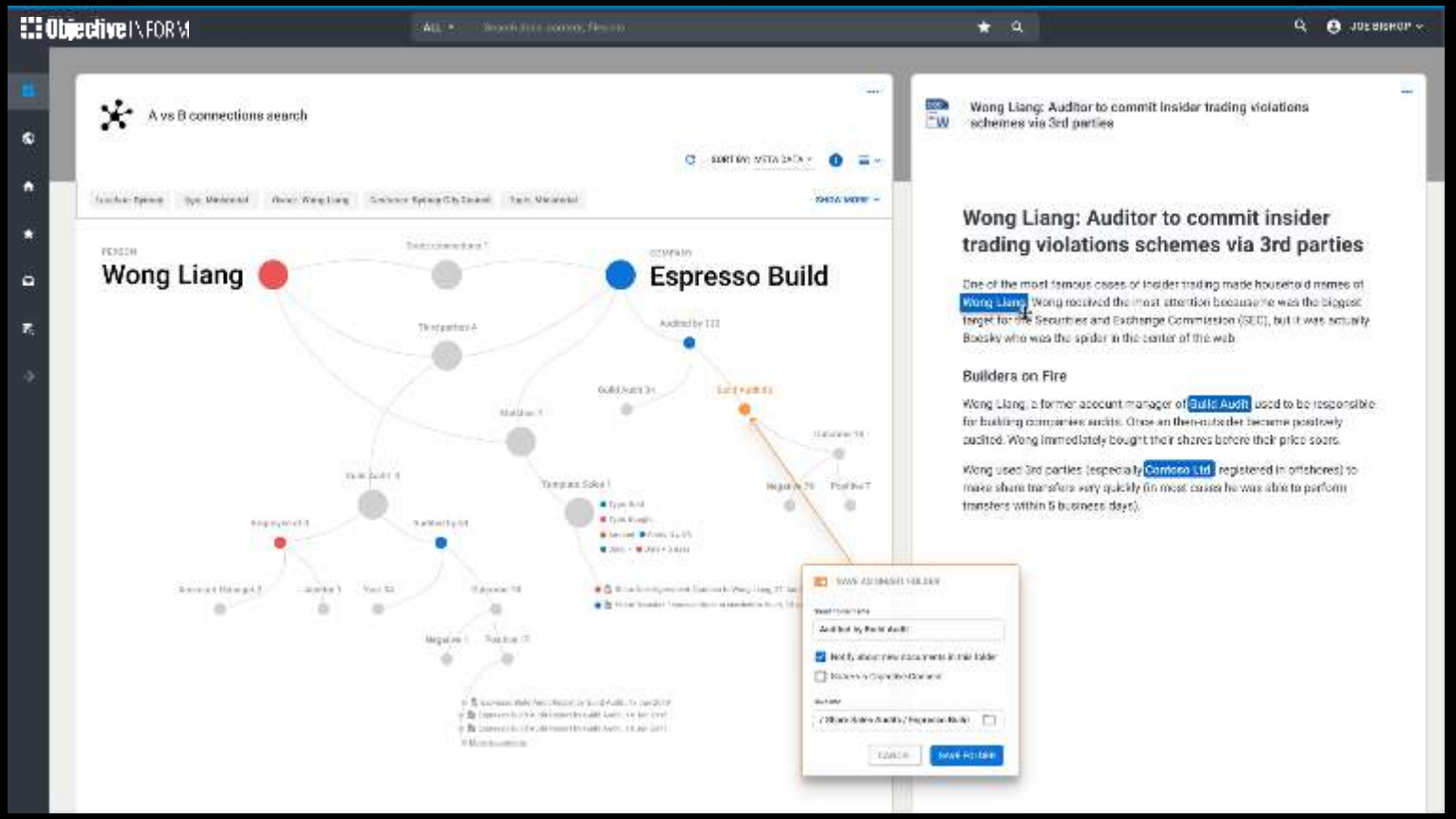
ENHANCE

EXPLOIT

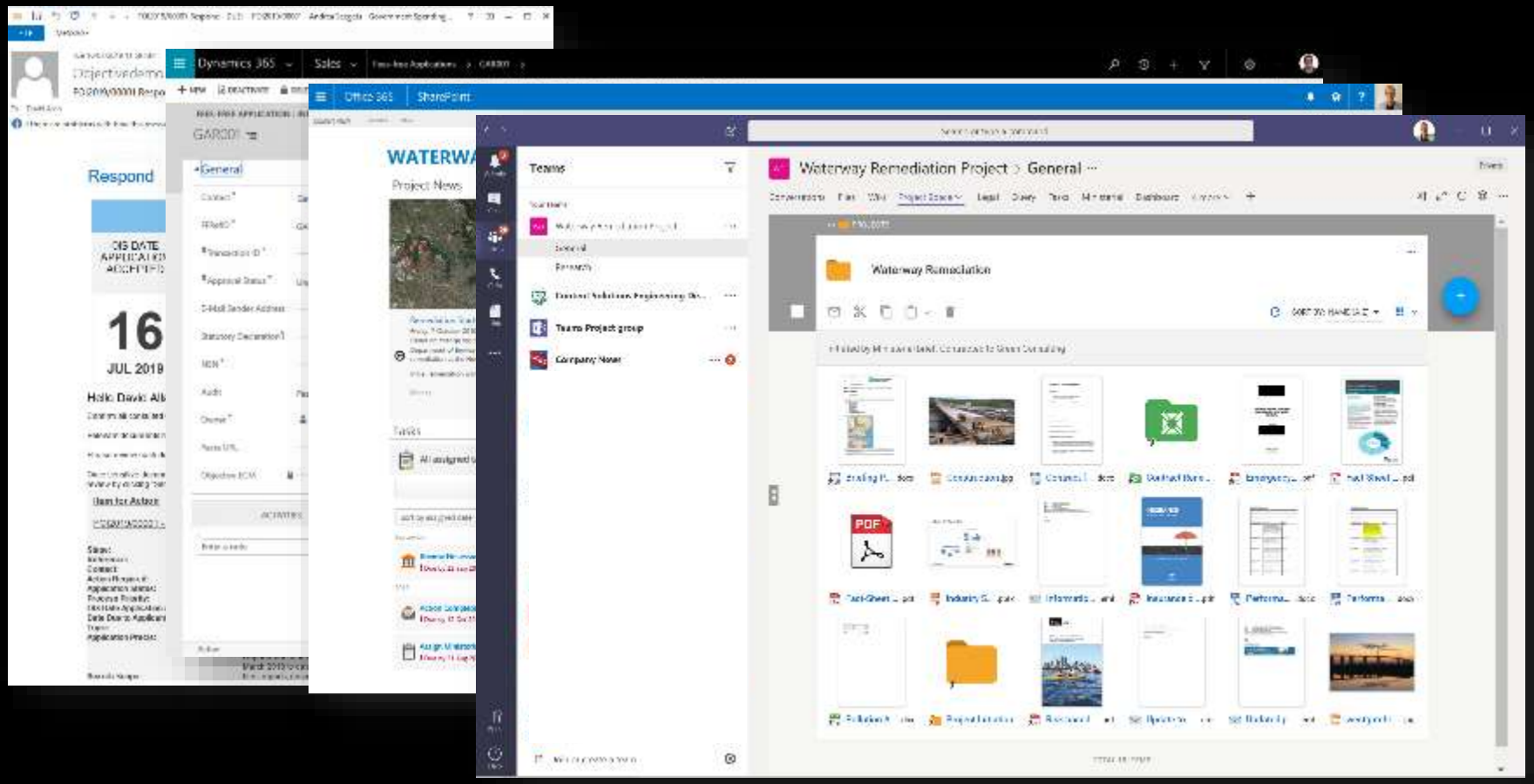
EXPLOIT


Objective
JOE BISHOP
OBJECTIVE GLOBAL FOLDER
Case Management
DETAILS
SECURITY
2019
notice of meeting
AMP 2019 Notice of Meeting proposal document signed by the chairman and the CEO

EXPLOIT


Objective INFORM
A vs B connections search
Wong Liang
Espresso Build
Wong Liang: Auditor to commit insider trading violations schemes via 3rd parties
Wong Liang: Auditor to commit insider trading violations schemes via 3rd parties
Builders on Fire

EXPLOIT


Dynamics 365
Sales
Respond
16
JUL 2019
Office 365
SharePoint
WATERWA
Project News
Teams
Teams Project group
Company News
Waterway Remediation Project > General
Waterway Remediation
PDF

EXPLORE

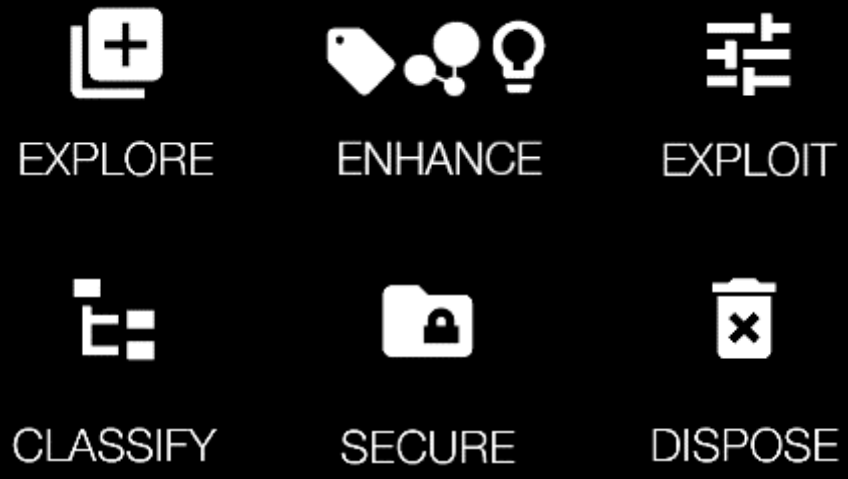
ENHANCE

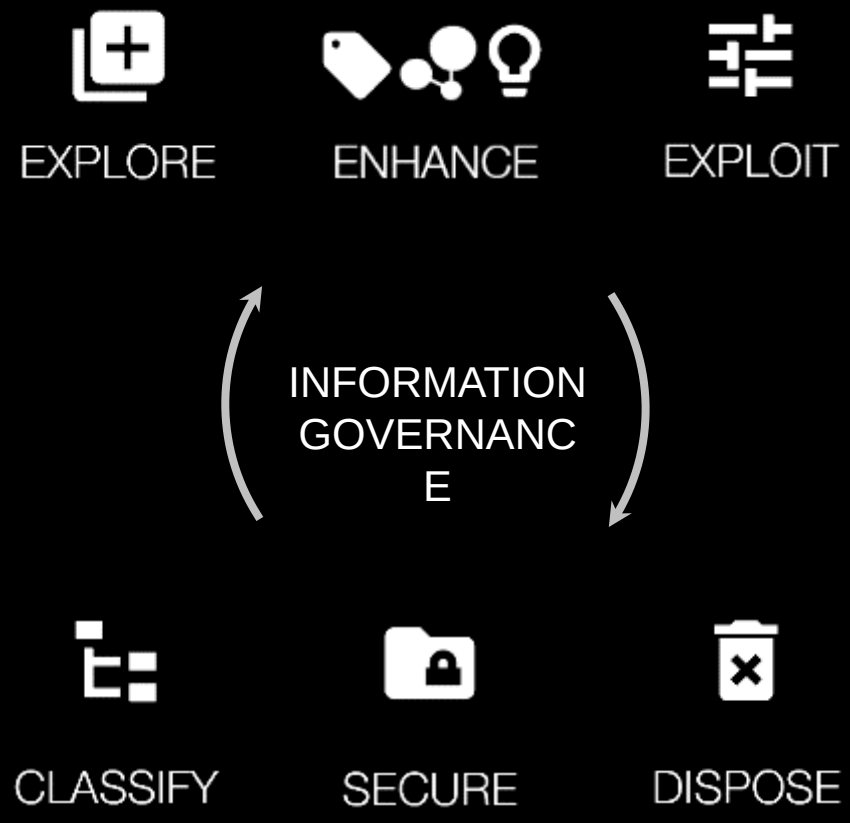
EXPLOIT

exploit

verb
/ɪkˈsplɔɪt,ɛkˈsplɔɪt/

1. make full use of and derive benefit from (a resource).
   "500 companies sprang up to exploit this new technology"
   synonyms: utilize, make use of, put to use, use, use to good advantage, turn/put to good use, make the most of, capitalize on, benefit from, turn to account, draw on; More
2. make use of (a situation) in a way considered unfair or underhand.
   "the company was exploiting a legal loophole"


EXPLORE
ENHANCE
EXPLOIT
CLASSIFY
SECURE
DISPOSE


EXPLORE
ENHANCE
EXPLOIT
INFORMATION GOVERNANCE
CLASSIFY
SECURE
DISPOSE


Objective

QUESTIONS

GREAT GOVERNANCE
BETTER BUSINESS

Objective

Australian Government

National Archives of Australia

naa.gov.au