Nick Draper

Security Clearance

Negative Vetting Level 2

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Experience

- *Solution Architecture*
- *Data Warehousing*
- *Business Intelligence*
- *Data Science*
- *Data Propagation*
- *IoT*
- *Cloud*
- *Containerisation*

A driven professional with a proven track record for delivering solutions to clients across the public and private sectors. His technical knowledge and business acumen enables him to provide value in all phases of the project lifecycle; from requirement gathering, analysis, development, testing through to implementation and in-service support. His diverse background has provided him with the unique perspectives of the customer, the technical team, architect and project manager across a diverse portfolio of initiatives. This insight enables him to identify the information requirements and translate them into decision support solutions that address the business needs and expectations.

In 2007, he joined the Department of Defence's Data Warehousing Program after three years consulting for clients in Victoria and New South Wales. Shortly after joining the Data Warehousing Program, he took on the opportunity to manage operations and revitalise an ageing platform that was rapidly losing customer confidence. In collaboration with Industry partners and the internal Infrastructure team, he successfully implemented a comprehensive architectural and software upgrade across three environments.

After establishing this sound foundation, he developed and obtained executive endorsement to assemble an integrated team of internal and external resources to develop the next generation of business intelligence solutions. Over a five-year period, Nick built and led a dynamic team of business analysts, developers, support operators and consultants that delivered solutions to customers across Defence. Working closely with governance boards and senior management, he implemented reforms that brought the organisation in line with leading Information Management practices and delivered quantifiable value to customers across Defence. Through strong leadership and clear technical direction; he established the Data Warehouse Program as an asset within the organisation.

Land Engineering Agency recognised the success of the program and they hired him as the Solution Architect for the Health & Usage Monitoring System (HUMS) Program. In collaboration with the Chief Information Officer Group, he implemented an innovative solution that transmits data from land vehicles into the Defence Protected Environment for processing and downstream input into the Military's Logistics Information System. In parallel, he led the delivery of a decision support system that provides Army an integrated view of the vehicle condition, maintenance activities, and costs.

In 2021, he delivered the Data Science Lab (DSLab) within the Data Division Private Analytics Cloud (DPAC). He is currently leading an integrated project team project between Land Engineering Agency, IBM Australia and Data Division to migrate the DSLab onto a next generation hyper-converged architecture- Spectrum Fusion HCI.

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Technology

Platform

- *Mainframe (zSeries)*
- *Distributed (pSeries/x86)*
- *Docker*
- *Kubernetes*
- *RedHat OpenShift*

Storage

- *DB2 LUW & zOS*
- *Oracle*
- *MySQL*
- *MS SQL Server*
- *HDFS*
- *Object & File*

Propagation

- *WebSphere Q Replication*
- *InfoSphere Change Data Capture*
- *Apache ActiveMQ*
- *Web Services*
- *Database Federation*

Integration

- *InfoSphere Information Server*
- *SQL Server Integration Services*
- *WhereSpace RED*

Analytics & Web

- *Cognos Analytics*
- *SPSS*
- *PowerBI*
- *Tableau*
- *R/Python*
- *Java*
- *NodeJS/React/D3*
- *IBM HTTP Server*
- *Ngnix*
- *WebSphere Application Server*

CI/CD

- *BitBucket/GitHub/GitLab/ Azure Repos*
- *Ansible*

November 2021 - present : Data Science Lab (DSLab) - Solution Architect, Land Engineering Agency

Leads an integrated team of permanent and contracted personnel that are responsible for the deliver of advanced analytics capabilities for Land Domain.

- *Established a modern containerised advanced analytics analytics platform that provides collaborative data science platform for Land & Air Domain within the Data Division Private Analytics Cloud (DPAC).*

- *Demonstrated the use of Computer Vision tools to automated the Terminal Ballistics assessments for the LAND 159 Lethality System Project.*

- *Leveraged Natural Language Processing algorithm to automate the extract configuration data from technical documents in support of the migration to the new Defence ERP platform.*

- *Migrating the HUMS Bridge from the Defence External Supplier eHub (DESE) to a containerised solution within IBM Cloud.*

July 2015 - November 2021 : Vulcan - Data Engineering & Analytics Workspace - Solution Architect, Land Engineering Agency

Led an integrated team of permanent and contracted personnel that are responsible for the design and development of Land Domain's Data Engineering and Analytics requirements. Assembled a persistent team of data engineering and analytics resources responsible for responding to the constantly evolving business environment.

- *Established an adaptive analytics platform that provides decision makers with the visibility needed to deliver effective Land Materiel sustainment. The platform provides an integrated view of the vehicle condition, maintenance activities, and costs for stakeholders across Army Headquarters, Fleet Managers and Army Unit Workshops.*

- *Implemented an Oil Condition Monitoring framework which integrates datasets received from land vehicle components (i.e. engines and gearboxes), usage history and maintenance records to evaluate the condition of equipment and to automate maintenance actions. This capability is showcased within the Defence Data Strategy on page 28 & 29. https://www.defence.gov.au/sites/default/files/2021-08/ DataStrategy2_0.pdf*

- *Delivered a mobile application (using Python & React) for Army personnel to complete vehicle inspections. The application was able to operate without a web connection with the ability to save inspection data.*

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Knowledge

Management

- *Program Development*
- *Project Management*
- *Contract Management*

Analysis

- *Business Analysis*
- *Requirements Gathering*
- *User Interface Design*

Development

- *Solution Architecture*
- *Agile Development*
- *Data Modelling*
- *Business Intelligence*

Testing

- *Unit*
- *User Acceptance*
- *System Integration*

Migration

- *Application Upgrades*
- *Content Migration*
- *Server Migration*

July 2015 - October 2017 : Health & Usage Monitoring System (HUMS) - Solution Architect, Land Engineering Agency

Led the design and implementation of an automated end-to-end IoT network that calculates usage and condition metrics from sensors fitted to land vehicles distributed across Australia, for ingestion into the logistics system within the Defence Protected Environment.

- *Worked with ICTSB to obtain security accreditation for the solution at the OFFICIAL:Sensitive level.*

- *Augmented an existing Data Warehousing platform with R Project to address the advanced analytics needs of the solution data alignment (i.e. interpolation) and digital filtering (i.e. signal processing) of vehicle data.*

November 2010 - June 2015 : Data Warehouse Program Manager, Defence Materiel Organisation

Managed a team that delivered an end-to-end business intelligence service to the organisation; from requirements analysis, through to development, implementation and sustainment.

- *In collaboration with an Industry leader, conducted an Agile Maturity Assessment and optimised the development model using a combination of techniques from Scrum & and Kanban. Reduced the length of development cycles from months to weeks and provided regular demonstrations to customer representatives.*

- *Delivered the DMO Major Acquisition Project Performance Dashboard that integrated data from the corporate program management systems and delivered a single view of the current and historical performance of the Defence's capital acquisition program. In addition, the dashboard was augmented with a commentary workflow to manage projects that breached the mandated cost and schedule performance targets.*

- *Implemented a Data Quality Framework to measure and monitor data compliance with established business policies. This information enabled remediation initiatives to focus on the critical data elements that impact decision makers in the organisation. A commentary application was embedded into the dashboards to enable data stewards to comment on their initiatives.*

- *Automated the production of a suite of annual reports that compiled the last three years of contract performance information. The reports were are sent to publications team for printing and distribution to the Senate, Defence executives and Industry partners.*

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Management

- Program Strategy
- Project Management
- Agile Framework

Customer

- Business Engagement
- Business Requirements
- User Guides

Technical

- System Architecture
- Development Standards
- Interface Dependency Agreements
- Detailed Design
- Implementation Plan

September 2008 - October 2010 : Data Warehouse Sustainment Manager, Capability Acquisition & Sustainment Group

Managed the in-service support team of the Data Warehouse Program; a diverse team of five full-time staff, and various external project teams.

- *Fostered and maintained a working relationship with the Infrastructure Services team to ensure the platform was configured to optimise performance and stability.*

- *Delivered presentations to the Governance and Architecture boards to obtain approvals for Infrastructure change proposal projects.*

- *Rejuvenated ageing platform through a series of initiatives to address architectural components, infrastructure overheads, and software support concerns. These challenging projects required the coordination of internal and external resources at multiple sites across multiple teams*

    - *Upgraded application components database (DB2), Data Integration (InfoSphere Information Server) and Business Intelligence (Cognos).*

    - *Implemented a four tier virtual server architecture: Database, Data Integration, Business Intelligence and Web.*

    - *Improved database performance by distributing storage across eight locations.*

    - *Reduced infrastructure costs by relocating the onsite development environment into the primary data centre.*

- *Liaised regularly with the Information Assurance team to maintain the Security Accreditation for the evolving Data Warehousing Program*

June 2007 - August 2008 : Business Intelligence Specialist, Capability Acquisition & Sustainment Group

Responsible for development and support of the Cognos Business Intelligence capability of the Data Warehouse Platform.

May 2004 - May 2007 : Consultant, Bearing Point Australia (formerly KPMG Consulting)

A Data Warehousing & Business Intelligence developer working for a range of clients in Victoria and New South Wales.

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Presentations

Defence

- Business Operations
- Capital Acquisition Program Managers
- Engineering Authorities
- Defence Industry Engagement
- Logistics & Sustainment Offices
- Enterprise Architecture Board
- Data Centre Governance Board
- Software Licensing & Compliance
- Certification & Accreditation

Industry

- IBM
- KPMG
- Deloitte
- Certus Solutions
- Atos
- DWS
- Altis
- RXP Services
- EY
- Aurecon Group
- Cornerstone
- Nova Systems

Draper & Abadear (Canberra - Sep 2013) - Business Analytics User Group
Integrating user commentary within Cognos reports, and real life experience with Agile development in a Public sector environment

Draper (Las Vegas - Oct 2012) - Information On Demand
Helping enable Information Governance within the Australian Defence Materiel Organisation

Draper (Canberra - Dec 2011) - Business Analytics User Group
The road to data quality in Defence

McManus & Draper (Sydney - Nov 2011) - ProjectChat
Data quality governance in the project performance world: information reliability concerns?

Publications

O'Donnell & Draper (Prato - Jul 2004) *An experimental evaluation of an alternative to the pivot table for ad hoc access to OLAP data,* Proceedings of the IFIP International Conference on Decision Support Systems (DSS2004)

Education

Bachelor of Information Management & Systems (Honours in Decision Support Systems)
Monash University, Caulfield, Victoria

Victorian Certificate of Education (VCE)
Salesian College, Chadstone, Victoria

Certifications & Training

- Managing Successful Programmes (MSP) Practitioner

- PRINCE2 Practitioner

- IBM DB2 Database Associate

- Agile Software Development

- Dimensional Modelling in Depth (Ralph Kimball)

- SAP Analytics Cloud