



DUG Technology

FY2023 Investor Presentation

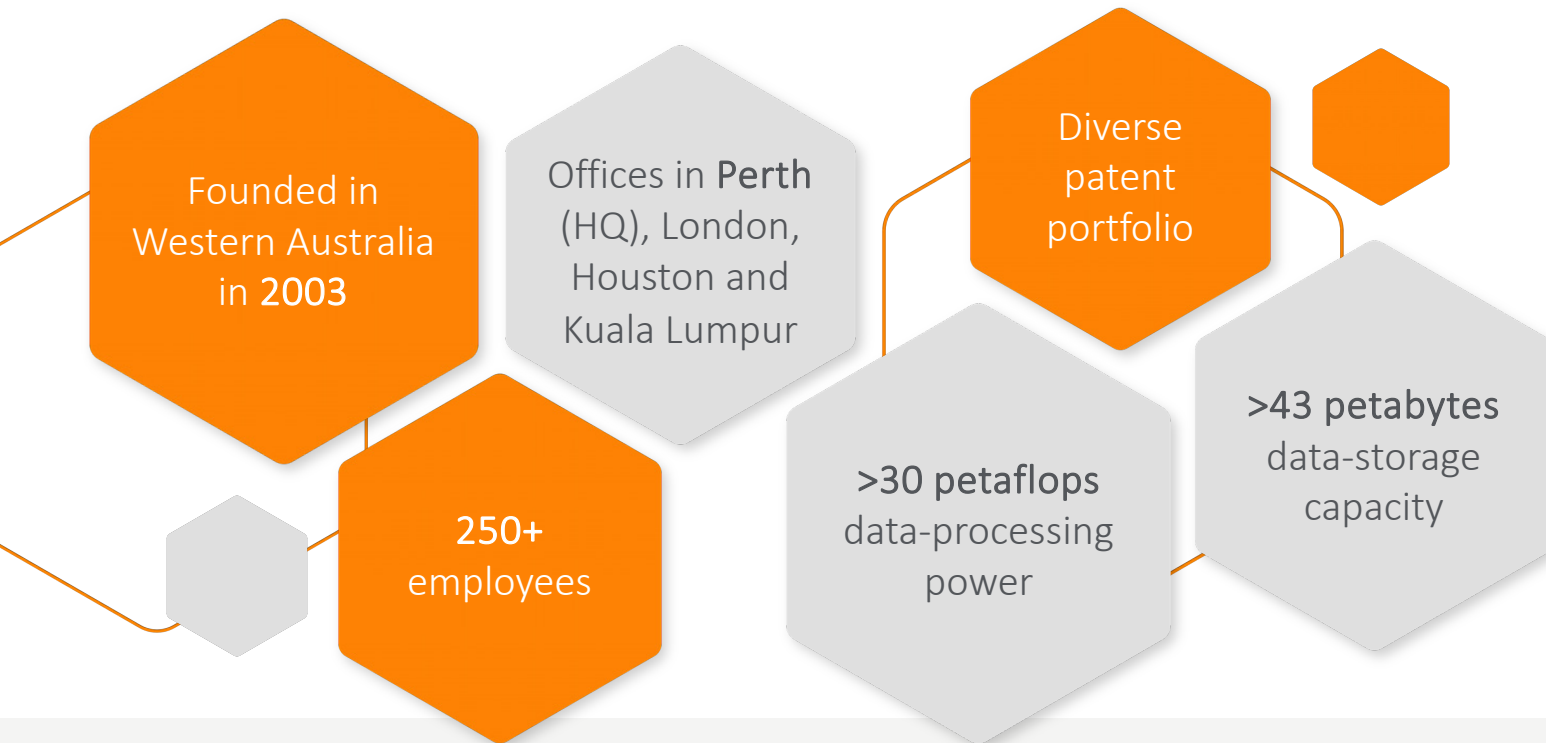
28 August 2023

Who we are



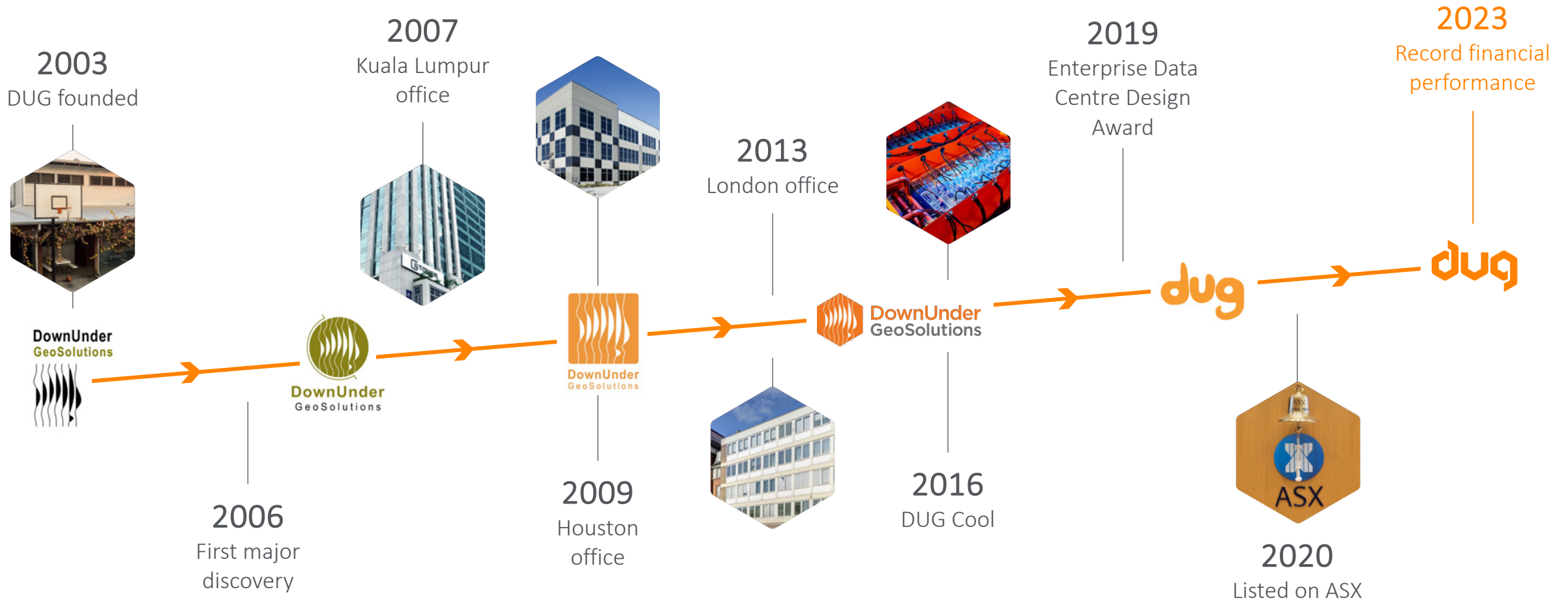
DUG is an ASX-listed tech company that provides innovative processing and storage solutions to leverage big data.

DUG's numerical scientists *develop technology* and *deploy expertise* using software and high performance computing (HPC) for real-world applications.



Co-founders Dr Matt Lamont and Dr Troy Thompson

Our 20-year journey



Global footprint



REVENUE

US\$50.9 million

(FY22: US\$33.8 million)

EBITDA

US\$15.1 million

(FY22: US\$2.8 million)

PROFIT AFTER TAX

US\$4.9 million

(FY22: loss of US\$9.3 million)

OPERATING CASH INFLOWS

US\$13.4 million

(FY22: outflow of US\$0.4 million)

NET CASH POSITION

US\$5.2 million

(FY22: net debt of US\$1.8 million)

SERVICES ORDER BOOK
AS AT 30 JUNE 2023

US\$27.9 million

(FY22: US\$22.2 million)



Oil & Gas

A leading service provider for 20 years. Currently the primary driver of revenue and earnings.

DUG's technology helps clients make more timely, well-informed, operational decisions. DUG's products and services have contributed to numerous significant discoveries.



National Security & Space

Actively progressing opportunities by leveraging capabilities developed by servicing the oil & gas industry.

In particular, competencies in numerical data, software and HPC solutions.



Enterprise

Increasing demand for HPC from industries with proliferating data.

DUG has established agreements with numerous organisations (education, research, applied science) to support their data processing and storage needs.



Software

- Analytic software development
- Algorithms and optimisation
- Big data processing and visualisation
- DUG Insight in 59 countries



Services

- Data science & management
- Geoscience & seismic data processing
- Multi-parameter FWI Imaging



High Performance Computing (HPC)

- Powerful, bare-metal compute & storage
- Complete, integrated HPC environment
- Patented DUG Cool immersion technology
- Design, own, operate some of the largest and greenest supercomputers on Earth
- Big data processing supported by experts

FY2023 Product Line Performance



Software

- Analytic software development
- Algorithms and optimisation
- Big data processing and visualisation
- DUG Insight in 59 countries

Revenue: US\$6.6 million ↑ 8%

- Software revenue continues to grow strongly year-on-year, sales team has grown during FY2024
- Significant new oil and gas client signed in January 2023 on a five year licence deal worth US\$3.2 million over five years
- Top three software clients account for >US\$1.3 million revenue per annum, contract terms from 3-5 years
- DUG's software is currently under evaluation with leading global oil and gas companies.



Services

- Data science & management
- Geoscience & seismic data processing
- Multi-parameter FWI Imaging

Revenue: US\$40.3 million ↑ 70%

- Record high revenue for the year following sustained order intake since March 2022
- Growth in global sales force during FY2023
- Houston office a strong contributor with revenue of US\$25.2 million (↑160%), growth driven from a number of projects in the Middle East and with domestic US clients
- US\$50 million of new Services projects awarded during FY2023



High Performance Computing (HPC)

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Revenue: US\$4.0 million ↑ 2%

- Strategically important new client wins including:
 - Committed compute and storage with Monash University
 - On-demand services for University of Western Australia and Murdoch University
- Investment made in key hires to accelerate growth in FY2024 and beyond

Business Update

Geraldton HPC Campus



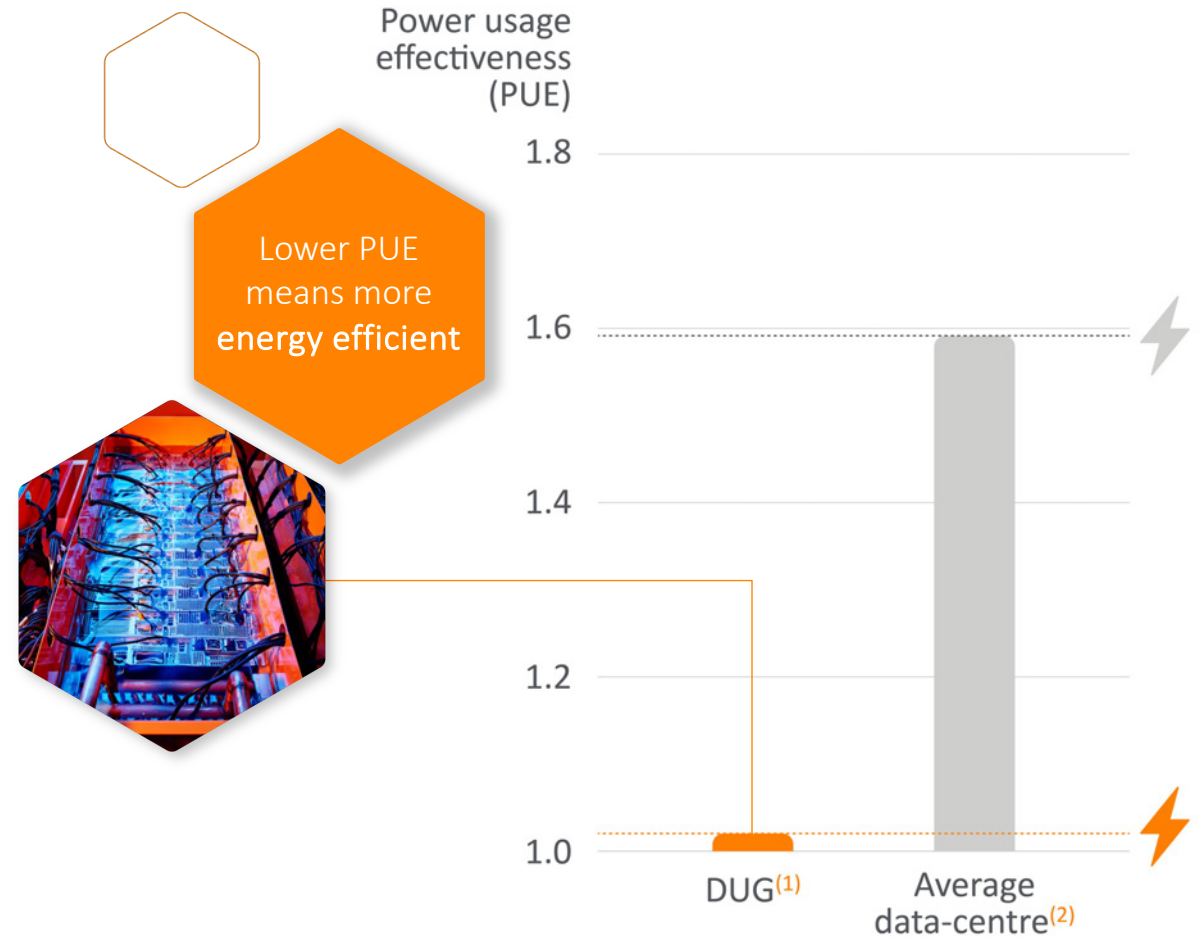
- A\$5 million grant funding from WA State Government
- Funding will support up to half of initial infrastructure build, hardware will be asset financed
- First data hall planned to have a 400 petaflops capacity
- Access to renewable energy solutions
- Plan to commence construction during H1 FY2024



Immersion Cooling



- Some of the greenest supercomputing installations on Earth
- Help meet clients' environmental, social and governance requirements
- Patented DUG Cool immersion-cooling technology
- Reduces power consumption by ~51%
- Uses 85% less synthetic refrigerants



(1) Based on 12-month rolling average measurement values

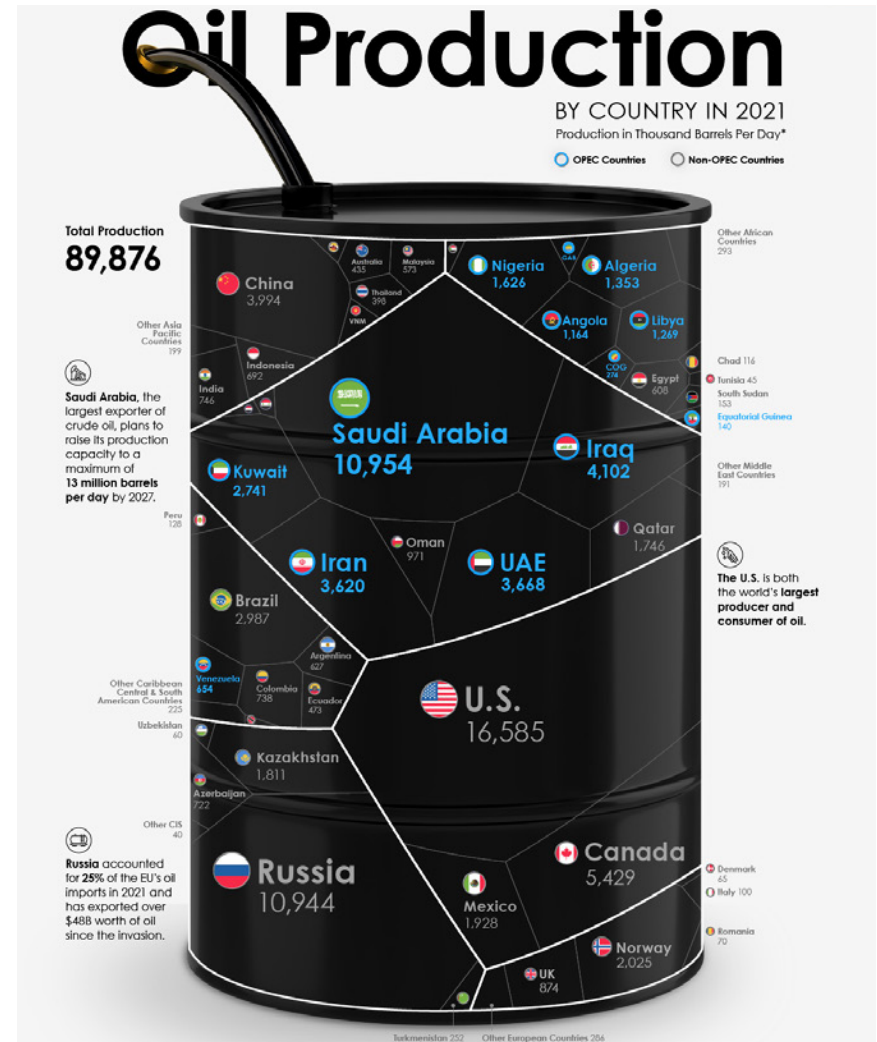
(2) https://www.missioncriticalmagazine.com/ext/resources/whitepapers/2020/2020AnnualSurvey_EndUser_v4s.pdf

Middle East Update



- The Middle East is the largest producing oil region globally ⁽¹⁾
- An increasingly important sales market for DUG and a strong contributor to FY2023 revenue
- Multiple software evaluation trials underway with local producers
- DUG has made significant progress in establishing a presence in the Middle East during FY2024

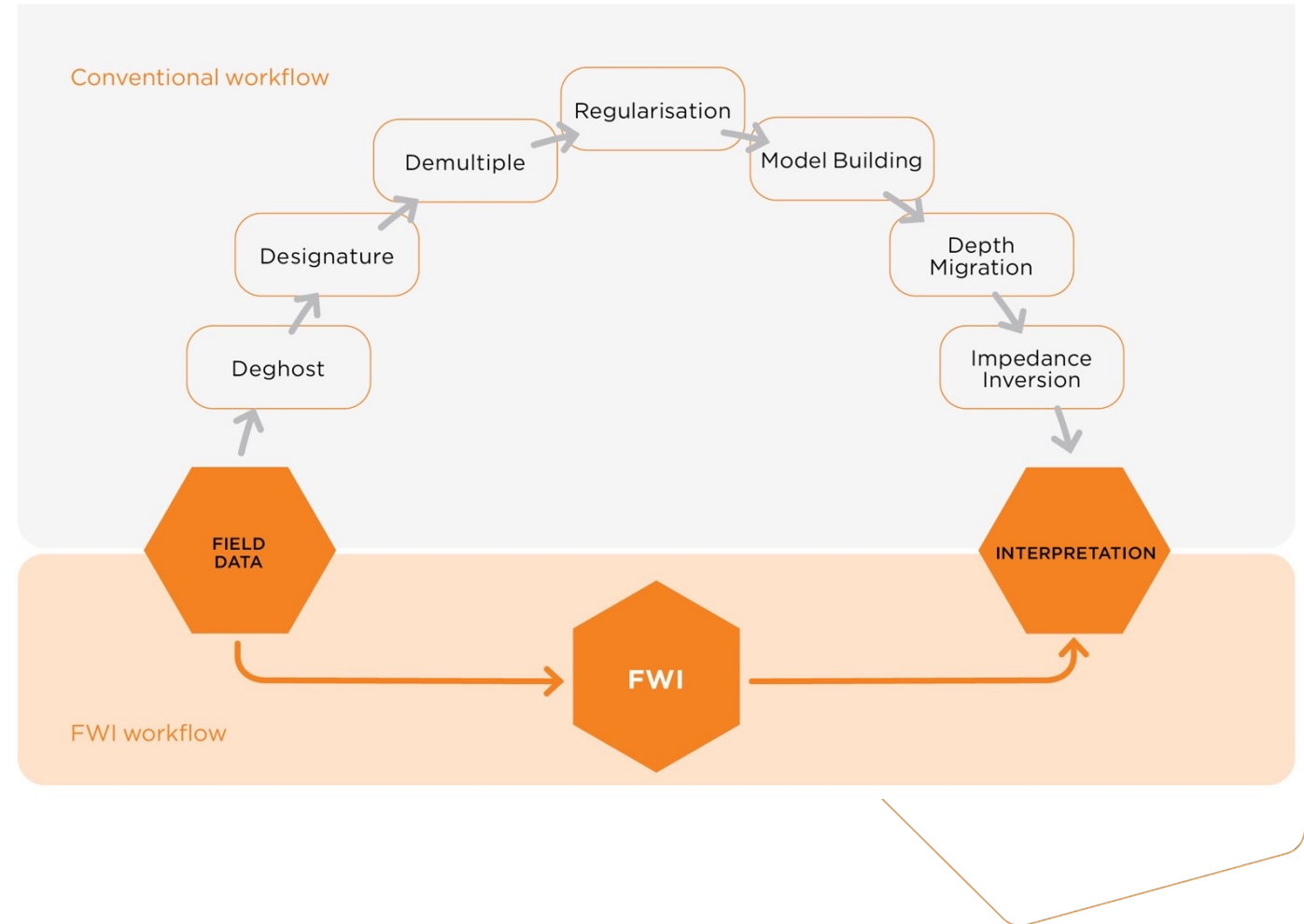
Image sourced from: <https://www.visualcapitalist.com/visualizing-the-worlds-largest-oil-producers>
using source of BP Statistical Review of World Energy 2022 (reference for (1))



Multi-parameter FWI Imaging



- DUG R&D has revolutionised seismic data processing with Multi-parameter Full Waveform Inversion (FWI) Imaging
- Replaces traditional processing workflows
- Superior results in significantly shorter timeframes
 - ~10% of the time—from 12 months to approximately 5 weeks
 - ~7% of the labour with 15 times more compute



Global MP-FWI Projects



Outlook

- July 2023 saw the largest recorded single month of Services orders with US\$18.6 million of new tenders awarded, increasing the Services order book to US\$42.2 million at 31 July 2023. The Services business shows no signs of slowing down.
- MP-FWI presents a new direction for oil & gas companies as it can replace the traditional processing & imaging of seismic data. The campaign to demonstrate its capability is gathering pace with many projects now completed or underway in many jurisdictions around the globe. Companies are getting excited as they see its potential. The role out of this new technology is becoming very exciting!
- New computer hardware will be installed in Houston during October 2023 to support a significant increase of compute requirements from internal projects. This US\$7 million investment will be asset financed.
- During July and August to date, DUG's cash position has continued to improve. The first installment of the WA State Government grant of A\$1.25 million was received as well as A\$7.1 million following the sale of shares under a loan funded share plan arrangement by a former executive of DUG who departed in October 2021.
- The pipeline for new Software customers is strong with a number of evaluations underway with major companies.
- The Company is bolstering its team to further grow HPC revenue in FY2024. Whilst a number of new customers were signed during the year, growth during FY2023 was subdued.
- DUG does not intend to issue earnings guidance for FY24.

FY2023 Financials

Profit and Loss



- Revenue increased by 51% driven mainly from Services
- Other income reduced due to a gain recorded in FY2022 on remeasurement of a lease in London
- Increases in employee benefit costs and other operating costs were controlled relative to revenue increases due to operating efficiencies and improved project margins
- Record high EBITDA result and margin
- Depreciation and amortisation costs have reduced due to accelerated depreciation charges in FY2022 upon the early exit of a lease in London
- Reduced financing costs from arising from lower debt levels
- Record high Net Profit after Tax of US\$4.9 million.

USD'm ¹	FY2023 ¹	FY2022 ^{1,2}	% Change
Revenue			
Software	6.6	6.2	8%
Services	40.3	23.7	70%
HPCaaS	4.0	3.9	2%
Total Revenue	50.9	33.8	51%
Other income	2.5	3.8	(35%)
Employee benefits	(27.9)	(25.4)	(10%)
Other operating costs	(10.5)	(9.4)	(12%)
EBITDA	15.1	2.8	436%
EBITDA margin	30%	8%	257%
Depreciation and amortisation	(6.4)	(7.7)	(16%)
EBIT	8.6	(4.9)	277%
Finance expense	(1.2)	(1.6)	25%
Net profit before tax	7.5	(6.5)	↑
Net profit after tax	4.9	(9.3)	↑

¹ Numbers are rounded and may not add to sub-totals

² FY2022 results have been restated, refer FY2023 Annual Report for further details.

Balance Sheet



- Net assets improved significantly as a result of the profit for the year
- Net cash of US\$5.2 million up from net debt of US\$1.8 million at 30 June 2022 following strong operating cash flows
- At 30 June 2023, US\$2.5 million remained outstanding on DUG's term debt facility with CBA which is due to be repaid by 1 July 2024
- Contract assets have increased by US\$2.3 million from large services contracts billed on milestone completion
- Increase in all working capital lines, driven by revenue growth

USD'm	30 Jun 2023 ¹	30 Jun 2022 ^{1,2}
Current Assets		
Cash and cash equivalents	8.0	2.7
Trade and other receivables	6.6	4.9
Contract assets	2.6	0.3
Other	1.2	1.7
Total Current Assets	18.4	9.6
Non Current Assets		
Property, plant and equipment	17.8	19.1
Right of use assets and other	10.9	10.4
Total Non Current Assets	28.7	29.5
Total Assets	47.1	39.1
Current Liabilities		
Trade and other payables	6.5	2.9
Loans and borrowings	2.8	2.0
Contract liabilities	1.6	0.5
Lease liabilities	1.8	1.6
Provisions	2.4	2.8
Total Current Liabilities	15.1	9.8
Non Current Liabilities		
Loans and borrowings	-	2.5
Lease liabilities	10.9	10.8
Provisions	0.1	0.1
Total Non Current Liabilities	11.1	13.4
Total Liabilities	26.2	23.2
Net Assets	20.9	15.8

¹ Numbers are rounded and may not add to sub-totals

² FY2022 results have been restated, refer FY2023 Annual Report for further details.

Cash Flow



- Operating cash inflows of US\$13.4 million was a record high for the company following a strong EBITDA result
 - Non-cash EBITDA items include government grants for R&D expenditure in Australia and a lease re-measurement in London in FY2022 following the early exit of a lease.
- Financing cash outflows of US\$4.9 million included debt repayments of US\$2.6 million
- During the period, US\$3.1 million was invested into capital expenditure, mainly for HPC storage assets to support DUG's services projects.

USD'm	FY2023 ¹	FY2022 ¹
Cash flow from operating activities		
- EBITDA	15.1	2.8
- Movement in working capital	0.9	1.8
- Non-cash items in EBITDA	(2.3)	(3.9)
- Other	(0.3)	(1.1)
Total net cash flows from operating activities	13.4	(0.4)
Cash flows from financing activities		
- Net proceeds from issue of shares	-	11.7
- Drawdowns on financing facilities	0.8	-
- Net repayment of financing facilities	(2.6)	(13.5)
- Net repayment of leases	(1.9)	(2.2)
- Financing costs	(1.2)	(1.3)
- Other	-	0.1
Total net cash flows from financing activities	(4.9)	(5.2)
Cash flows from investing activities		
- Purchase of assets	(3.1)	(1.5)
- Disposals of assets	0.1	-
Total net cash flows from investing activities	(3.0)	(1.5)
Opening cash balance	2.7	10.0
Net cash flows	5.5	(7.1)
Effect of foreign exchange	(0.2)	(0.2)
Closing cash balance	8.0	2.7

¹ Numbers are rounded and may not add to sub-totals

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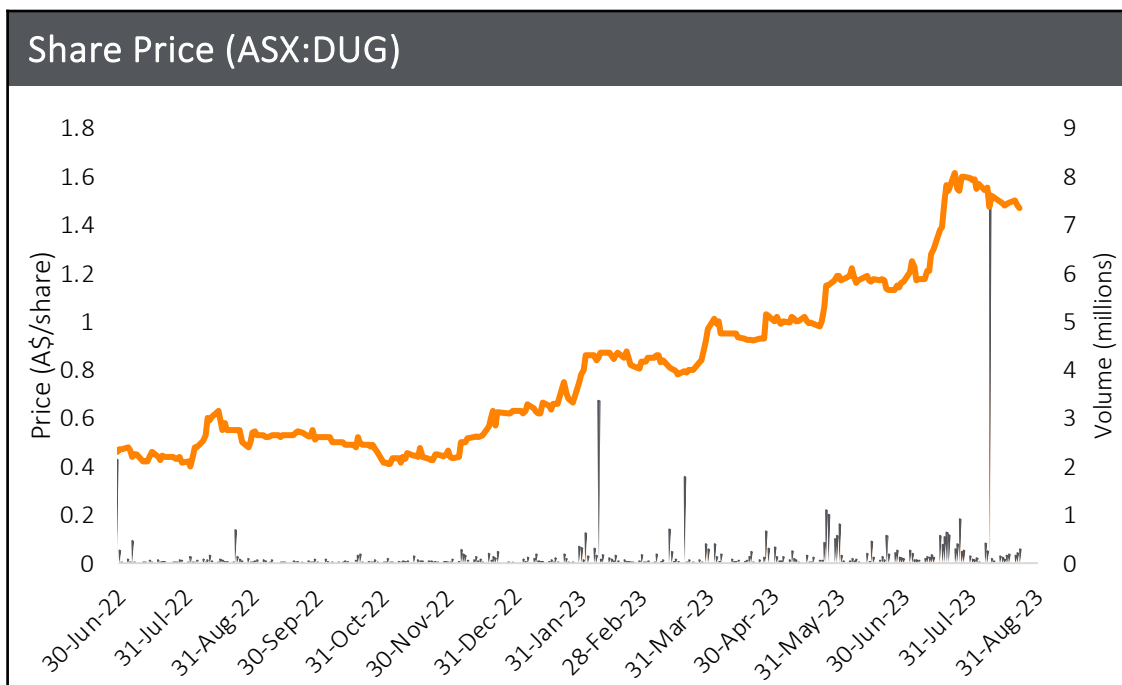
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All amounts are in United States Dollars (US\$) unless otherwise stated.

Appendices and Case Studies

Corporate summary



Board of Directors

Frank Sciarrone	Non-Executive Chairman
Matthew Lamont Ph.D.	Managing Director
Louise Bower	Non-Executive Director
Mark Puzey	Non-Executive Director

Corporate Structure	Units	
Share Price (as at 24 August 2023)	A\$/sh	1.53
Shares on Issue	#m	118.1
Market Capitalisation	A\$m	180.7
(+) Financial Debt ¹ (as at 30 June 2023)	A\$m	4.4
(-) Cash at Bank ¹ (as at 30 June 2023)	A\$m	12.6
Enterprise Value	A\$m	172.5

Substantial Shareholders (as at 14 August 2023)

Mr Matthew Lamont	20.4%
Perennial Value Management Limited	14.5%
Regal Funds Management Pty Ltd	11.2%
Thorney Investment Group	6.7%
Top 20 Shareholders	75.7%

- Ship design specialists at Austal perform resource-intensive computational analyses to improve the efficiency and performance of defence and commercial vessels
- Austal required quick access to different hardware and an efficient, flexible HPC platform to meet its increasing computational demands, while reducing its greenhouse-gas emissions
- DUG provided tailored support and bespoke, code-optimisation expertise, ensuring Austal's software and workflows could leverage DUG's HPC Cloud

With DUG's support, Austal has developed an advanced artificial intelligence toolset, DeepMorpher, helping the company's Australia-based designers to explore broader design spaces whilst significantly reducing resource requirements for complex hull optimisation routines

"With the support of HPC provider DUG Technology, we can reduce the timeframe for hull form optimisation in conjunction with computational fluid dynamics by an order of magnitude."

Max Haase,
Development Hydrodynamics Specialist at Austal



Out-of-this-world processing of astronomy data



- The Square Kilometre Array (SKA) Project is one of the largest international scientific research projects in history
- The Murchison Widefield Array (MWA) telescope had amassed a backlog of data that was being processed using the Pawsey Supercomputing Centre
- DUG HPC experts took two weeks to optimise the academic code used to process the MWA data and achieved run-times that were **125x faster**



DUG's support and HPC expertise allowed the ICRAR team to process their data backlog in three hours, using just a fifth of DUG's supercomputer in Perth

DUG's green HPC was credited for lowering emissions

ICRAR published a paper two years ahead of schedule, with 100+ citations

- Smart-satellite provider LatConnect 60 is working to promote a subscription-based monitoring service to enhance crop management
- To sustain a large-scale deployment of the service, LatConnect 60 required a tailored, cost-effective and efficient solution
- DUG provided the required compute capacity and an optimal software environment for LatConnect 60 to run its workflows and analyses

“We have been thoroughly impressed by the speed and scale at which DUG’s HPC offering has been able to support our agriculture analytics services. Data-processing tasks which took us weeks in the past can now be completed in hours. This is a game-changing development for us.”

Venkat Pillay, CEO of LatConnect60

LatConnect 60°



Supercharging medical research at Perkins



- Researchers at the Harry Perkins Institute of Medical Research (Perkins) must constantly develop new algorithms and methodologies to keep pace with the rapid evolution of bioinformatics
- Perkins required a fully supported HPC system designed to let them store, process and analyse colossal amounts of genomic data in their unconventional ways
- DUG provided Perkins researchers with tailored HPC expertise and support, ensuring their workflows could leverage state-of-the-art processors and storage systems such as VAST Data's massive scalable storage system that can service any I/O load



DUG's bespoke HPC solution gave Perkins researchers quick and easy access to their huge datasets without computational restriction

Perkins said: "Trusting the technology to the experts at DUG, we can now get back to our #1 priority - saving lives."

- The Frontier Development Lab AusNZ approached DUG to provide the HPC service and support for Data Quest 2020—a research sprint incorporating artificial intelligence (AI) into firefighting
- Predicting and preventing bushfires are arduous tasks due to the complexity of the processes involved, coupled with obsolete tools that require manual input
- DUG supplied HPC resources and data science expertise, enabling the researchers to efficiently test AI-powered systems by leveraging **terabytes of satellite data**

A number of innovative AI solutions for bushfire prevention and management were successfully developed

Clear, demonstrable pathways and deployable tools for future use by fire experts and first responders



- Biotech company GenieUs Genomics (GenieUs) developed DiGAP™, a bioinformatic tool for analysing whole-genome sequencing
- GenieUs faced long processing times for each sample, and the large size of datasets made unit testing difficult—resulting in a backlog of samples that were impeding research efforts
- DUG provided GenieUs researchers with tailored HPC expertise and workflow-optimisation support, enabling the dynamic allocation of compute nodes and storage as demand required
- DUG also crafted a compliant environment that supported continuous integration with GenieUs' preferred software

With DUG's support, GenieUs researchers optimised the use of HPC resources for their specific needs—improving the speed, scale, and efficiency of their computational workflows

Some parts of the workflow were up to 60 times faster!



GenieUs

- Computational biologists at Indigenous Genomics (IG) at the Telethon Kids Institute are developing novel healthcare solutions for Indigenous Australians, which entail the analysis of large, complex and sensitive datasets
- The IG research group required a new HPC cloud solution that could deliver both secure data management and rapid processing, while allowing collaboration with research partners
- DUG's HPC Experts optimised their workflows so they could scale up with DUG HPC Cloud
- DUG's powerful, bare-metal compute and storage delivered efficiency, security and privacy

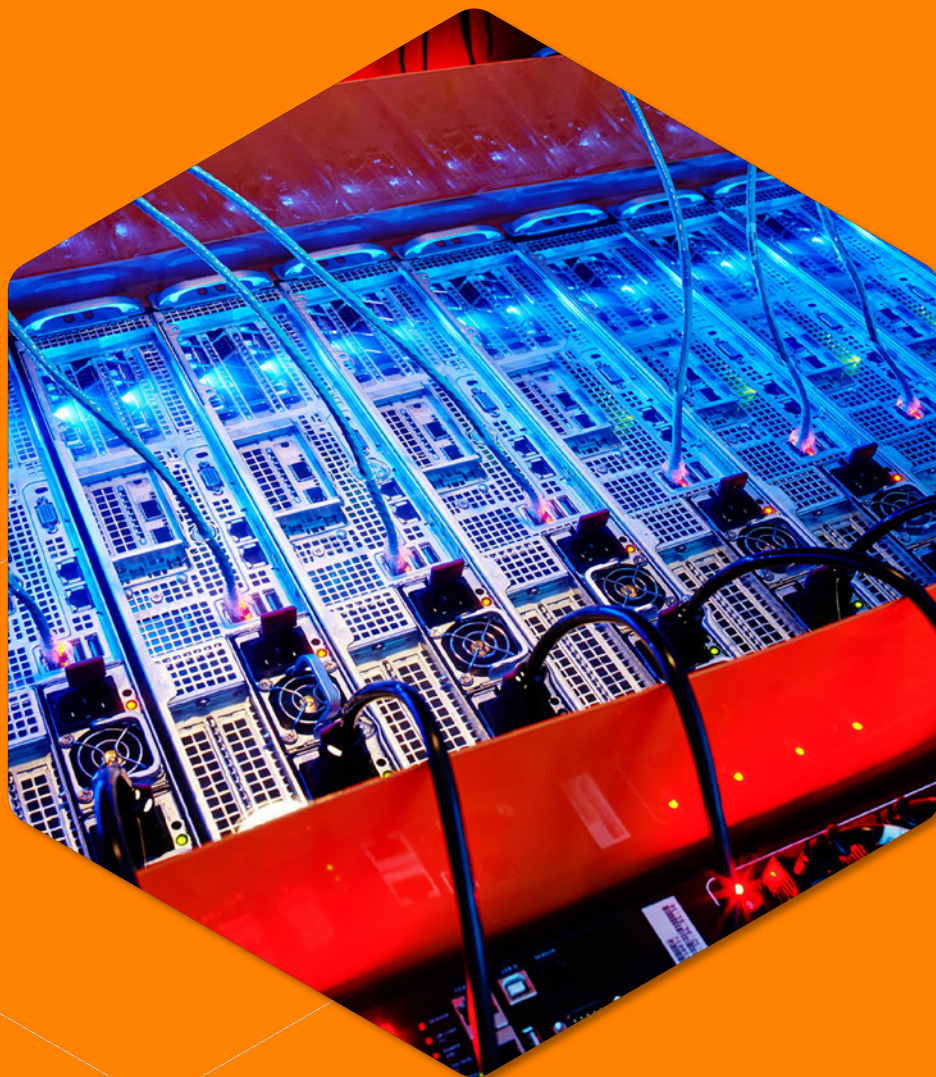
In one study, DUG's tailored HPC solution enabled the IG group to process 1287 whole genomes in 140 hours—a workload that was historically taking many weeks to complete

IG researchers are investigating how the genetic architecture of Indigenous Australians relates to the incidence of type-2 diabetes—driving the improvement of healthcare outcomes for the community



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