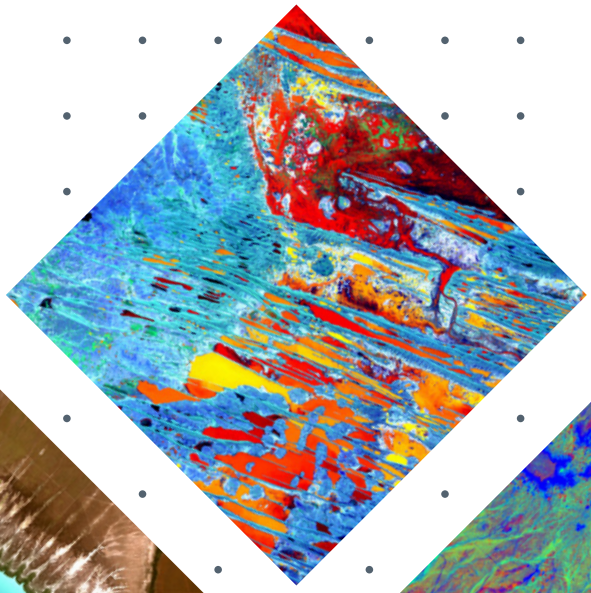
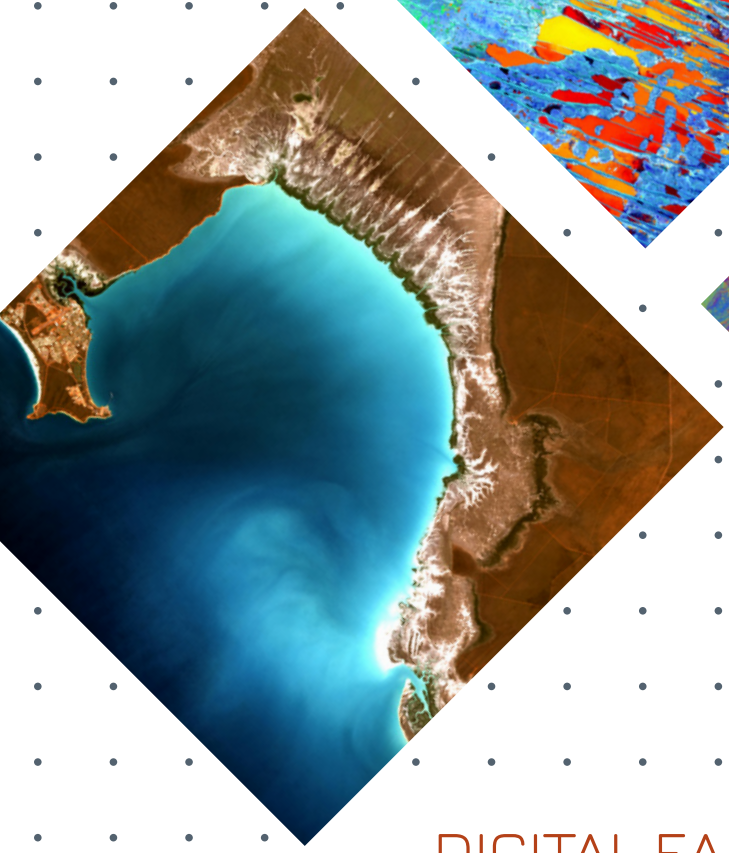
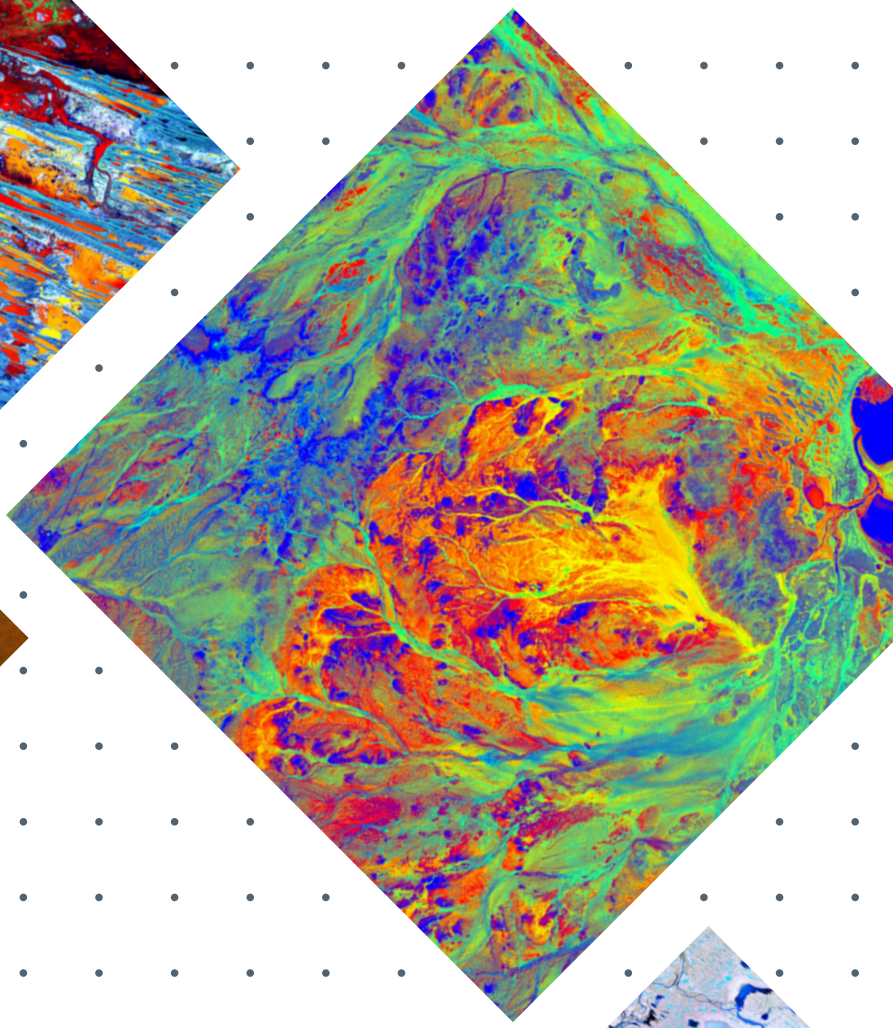
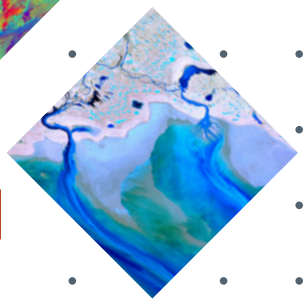








DIGITAL EARTH AUSTRALIA
INDUSTRY CONSULTATION
FIRST IMPRESSIONS

26 JULY 2018

Australian Government
Geoscience Australia

FRONTIER SI

Digital Earth
AUSTRALIA

CONTENTS

1. EXECUTIVE SUMMARY

Digital Earth Australia (DEA) is a world-class analysis platform for satellite imagery and other Earth observations (EO). DEA will provide Australian businesses with access to standardised Analysis Ready Data (ARD)[1], analytic capability, and tools that will support industry productivity and innovation and the development of new digital products and services. This will increase the profitability and productivity of businesses, and enable them to be competitive in global markets.

In order to ensure that DEA generates value for Australian businesses, the DEA Program will undertake extensive industry consultation nationally. The consultation will be aimed at understanding the requirements of Australian businesses for Earth observations, data infrastructure, and information products as well as to provide an opportunity for industry to experience DEA first hand. The exercise will culminate in the creation of an industry-backed strategy for DEA (Industry Strategy).

This document marks the beginning of the conversation, and presents the first impressions emerging from interviews with 30 industry leaders across the spatial and other growth sectors for EO data in Australia. It includes interviewees' quotations and the following insights:

- There are current barriers to utilising EO data, the main ones being:
  - Accessibility: data has a high cost and it is difficult to use
  - Education and capacity: lack of specialised professionals and market education
  - Technical: cost of data processing and storage, as well as inconsistencies in data quality and reliability
  - Governance: government plays a key role in building data infrastructure, but can become an obstacle when taking on industry competences such as the provision of value-added products

1. "Analysis-ready data" refers to Earth observation satellite data that have been processed to a minimum set of requirements and organised in a standardised manner that allows immediate analysis by users

- DEA has the potential to help businesses extract unprecedented value from EO data
  - 80% believe that DEA is or could be useful to their organisation
  - Visual and analytical time series tools, standard data formats and value-added products are considered the top strengths of DEA
  - Difficult access to the platform, unclear licencing and IP and having an open source codebase are key weaknesses stated for DEA

- Future expectations for DEA from industry include:
  - Having access to computing and/or processing capabilities (63% of participants consider this important)
  - Provision of commercial standard service levels (99.9% guaranteed up time, a factor 87% considered important)
  - Pay for the service or cloud compute time if it provides value, but not for the public data itself (100% of participants agreed)
  - Platform focused on hosting public satellite imagery, and potentially adding Radar data as a valuable dataset
  - Provision of same day data, or data which is no more than a few days old (75% of participants)
  - Education and facilitation to help users access DEA, understand its capabilities and discover new uses of the platform and its tools

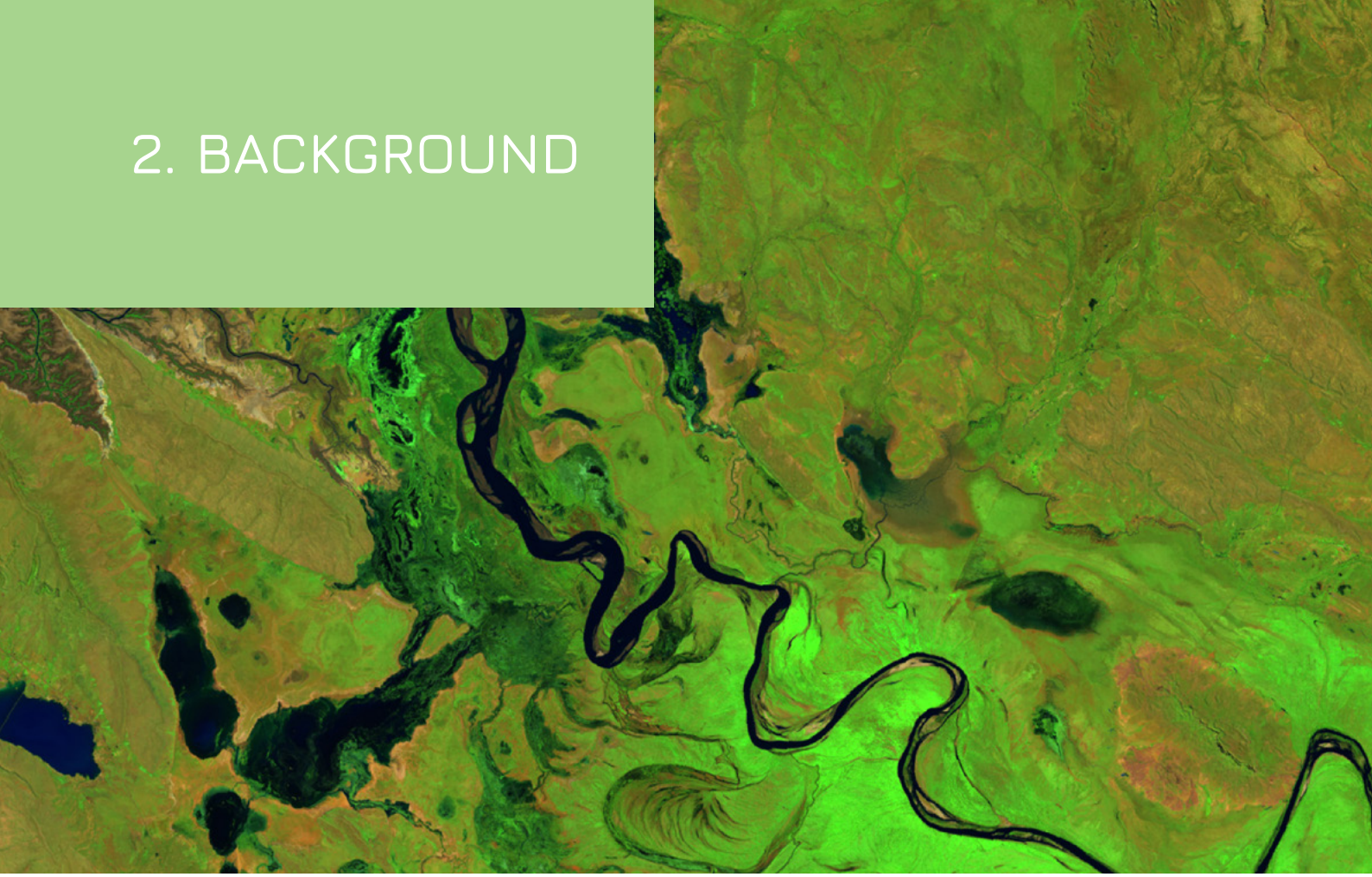
- Application markets that were identified as having the potential to greatly benefit from improved EO capability
  - Agriculture, environmental monitoring, mining, built environment and local/state government ranked as the top 5 potential application markets of DEA
  - Evidence suggests the mining sector is effectively using pre-competitive data to lower exploration risks and enhance healthy competition
  - Some businesses in the insurance and finance sector are starting to look at using EO data as they consider it vital to their future operations

- Future clarifications are needed with respect to DEA
  - The differentiation of DEA versus alternative platforms
  - The fine line between public and private competences for the creation of value-added products
  - How to ensure DEA keeps up with rapid global technology developments

Over the coming months, the DEA industry consultation will take place across Australia. This is a unique opportunity to directly engage with the program and influence the development of this platform to suit your business needs. If you want to be involved and have your say, please register your interest at: frontiersi.com.au/dea

Or get in touch with the industry engagement team:
Phil Delaney (pdelaney@frontiersi.com.au), Eva Rodriguez (erodriguez@frontiersi.com.au), or dea@frontiersi.com.au

2. BACKGROUND



2.1. DIGITAL EARTH AUSTRALIA

Digital Earth Australia (DEA) is world-class digital infrastructure that uses satellite data to detect physical changes across Australia in unprecedented detail. It identifies soil and coastal erosion, crop growth, water quality and changes to cities and regions. DEA provides government and industry and individuals with the high-quality data and tools required for policy and investment decision-making.

The Australian Government's data archives hold decades of invaluable information about our land and water resources. DEA will take these petabytes of satellite data, tailor it for the Australian environment and make it available to governments and industry for easy use. This historical data will be combined with data from an ever growing range of new satellites, providing regular updates for the entire country. DEA will produce tools and information that provide insights about the changing Australian environment, supporting industry productivity and innovation and the development of new digital products and services.

The potential to develop satellite applications and services tailored for the regional and global markets is huge, with recent studies suggesting the geospatial services sector generates US$400 billion in revenue per year globally. On average, the Australian Government invests around half a billion dollars a year in monitoring, protecting and enhancing Australia's land, coasts and oceans.

DEA will enable small businesses and industry to more readily access near real-time information and satellite data to innovate and create new products. This will increase the profitability and productivity of businesses in sectors such as land planning, construction, agriculture and mineral exploration.

2.2. DEA INDUSTRY STRATEGY

A key goal of DEA is enabling Australian industries to exploit the full value of Earth observation (EO) information to enhance their business and be competitive in global markets. Understanding the requirements of Australian businesses for EO data, data infrastructure, and information products is integral to the success of DEA, and to realising the broader benefits of spatial information.

THE 2026AGENDA AND DEA

Released in April 2017, the 2026 Spatial Industry Transformation and Growth Agenda (2026 Agenda) Action Plan represents a step change for the Australian spatial sector, and aims to act as a catalyst to maximise the innovation, productivity and competitiveness of the industry across the country. Collectively created in consultation with over 500 individuals from business, government, academia and spatial-user organisations, the Action Plan is underpinned by 34 transformational initiatives and will be delivered through a rolling 10-year roadmap. An underlying theme of the Plan is that the success of the spatial industry is linked to the ability to drive success in key growth sectors of the economy, such as transport, agriculture, smart cities and health.

The Plan has six key pillars of transformation. DEA is included under the "Public Infrastructure and Analytics" pillar as a key initiative. Other key national spatial infrastructure platforms considered include:

- National Positioning Infrastructure (NPI)
- Foundational Spatial Data Framework (FSDF)
- Nationwide Spatial Data Infrastructure (NSDI)
- Australian Geoscience Data Cube, now known as Digital Earth Australia (DEA)
- Land Registries Reform

All information on 2026Agenda is accessible at: www.2026agenda.com

In fact, DEA was identified by the *2026 Spatial Industry Transformation and Growth Agenda* (2026Agenda) as a priority data infrastructure to be included in the nationwide infrastructure framework.

Taking such insights into consideration, Geoscience Australia (GA) is working with the Cooperative Research Centre for Spatial Information/FrontierSI to develop an Industry Strategy that will ensure that DEA will generate value for the spatial industry, key growth sectors of the Australian economy, as well as the wider Australian economy including its digital economy.

Over the coming months, the DEA industry consultation will take place across Australia. It will be aimed at understanding the requirements of Australian businesses for Earth observations, data infrastructure, and information products as well as to provide an opportunity for industry to experience DEA first hand. The exercise will culminate in the creation of an industry-backed strategy for DEA (Industry Strategy) that will identify industry's requirements, decide how DEA will engage with Australian businesses and uncover the anticipated benefits of this engagement to industry.

2.3. THIS REPORT

This report marks the beginning of the conversation, and presents the first impressions emerging from interviews with 30 industry leaders across the spatial and other growth sectors for EO data in Australia. It identifies:

- Barriers to the use of EO data
- Opportunities that DEA offers to the private sector
- Future expectations from DEA
- Application markets for DEA
- Future clarifications with respect to DEA

Note: quotations included in this report express the different views of interviewed participants.

3. BARRIERS TO EO USE

"We don't do a lot of remote sensing work due to several reasons: the cost of data acquisition; clients don't know what data they own or have access to, processing data before even starting the analysis work makes it cost prohibitive, and because we have a limitation in time and space for people to develop the understanding of remotely sensed data"

DEA works with EO data at its core. This initial consultation aimed to first find out whether there were any barriers to the use and adoption of EO data that could constrain the use of DEA. Interviewees were all aware of what EO data is, although use and experience were diverse.

Four key themes emerged as barriers to adoption of remotely sensed data in Australia. The barriers relate to the adoption of all EO data types in the Australian market, not just the publicly available data currently offered in DEA. These are:

- Accessibility
- Education and Capacity
- Technical
- Governance

The lack of awareness both at market and professional level was a barrier significantly, higher than expected, and one that inhibits wide scale innovation and adoption of EO data. Cost was an expected barrier – as EO data is traditionally expensive – however interviewees' emphasise costs not only relate to data but also to the labour involved in preparing suitable datasets. Data quality, consistency and lineage continue to restrict use, or result in data being used for unsuitable purposes. Finally, opinions were significantly divided on the role of the government in creating value added products. DEA is ideally suited to overcome many of these barriers through careful consultation, a well-considered and constructed strategy and effective communications.

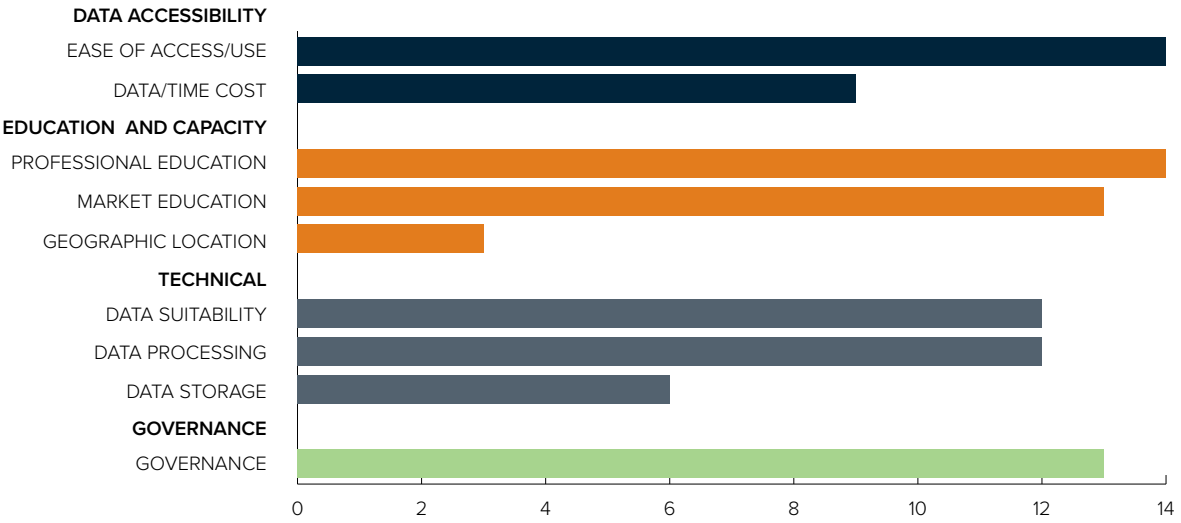
FIGURE 1 highlights the frequency of the issues raised during the interviews, as well as the sub-issues within each major theme. Explicit points were raised for each of them:

"As a small business, it is prohibitively costly resource wise to locate, download, store locally and then run intensive processes to find what you want".

Accessibility	
Cost	The high commercial cost of satellite imagery is a significant barrier, particularly for smaller businesses. The time for staff to pre-process satellite image data into a usable format often makes it cost prohibitive for the private sector to competitively bid for projects. Direct financial costs to access cloud storage and computing can be prohibitive. Many commercial companies licensing and revenue share models are complex and unfavourable to scale business ideas using commercial satellite data.
Ease of use	Many private companies do not have equitable access to data and computational resources currently used for free by the public and academic organisations. Expectations of simplicity set by Google and other app/data providers are hard for many data platform providers to match, as they do not have the resources to devote to user experience and design. Applications using remote sensing data are typically built without considering user decision needs, and without consideration for user experience, which currently drives away potential users and advocates.

Education and capacity	
Professional education	Many specialised spatial higher education courses at universities and TAFEs do not teach the higher end capabilities required to fully extract insights from complex EO data; Often, commercial businesses do not have the in-house expertise to access existing data infrastructures, and lack the resources to train staff in the required technical capacity (such as API development or Python coding)
Market education	There are many sectors of the economy that could benefit from increased utilisation of EO data, but without clear, business driven communication to educate the potential market, this section of the market remains inaccessible. Many potential users who are aware of EO data do not understand what types of questions can be answered utilising this data, nor the different imagery characteristics such as resolution and bands
Geographic location	Australia's geographic position away from the perceived EO "hotbeds" of Europe and North America is seen as a disadvantage for the industry, which is perceived as being unable to stay ahead of global trends and changes.

FIGURE 1: BARRIERS TO EO DATA USE AND EXPLOITATION, FREQUENCY OF ISSUE AS RECORED THROUGH CONSULTATION



Technical	
Data processing	This barrier relates to the costs of accessing cloud computing resources for small companies, and the inability of private companies to compete on cost for projects. This is due to the large amount of time invested in pre-processing data to analysis ready formats
Data storage	Storage of datasets is seen as a major barrier for two reasons: cloud storage is too costly for large scale applications, and offline storage is not efficient for continent wide applications.
Data quality and reliability	In addition to the data accessibility barriers, the following data-related issues were mentioned: • Data often has unknown provenance and lineage. • Data is not delivered in a timely manner. • Data has too many gaps. • Cloud masking is poor and very inconsistent between providers. • Data is often not high enough resolution for the intended application. • Data is hard to find (accessibility). • Rights to access data are inconsistent (accessibility).

Governance

Many participants see government as an enabler, and value government agencies facilitating access to data. However, government current role with respect to EO data is seen as barrier in some cases.

There were divided opinions on the role of government providing value-added products, including:

- Organisations who were very happy with the government providing consistent, national products that could be ingested, improved and interpreted by the private sector for their clients and users.
- Organisations who were happy for government agencies to provide corrections and data infrastructure, but not to provide any value-added products at all, and sometimes not even corrections.
- Organisations that questioned the government's open source strategy for data infrastructure, and argued it should be purchasing infrastructure off the shelf instead. Importantly this last category is not only made up of companies with platforms to offer, but also from several existing users of EO data.

"Long term public sector investment is needed to enable long term private investment to flow".

4. WHAT DEA CAN OFFER

Two important considerations for the DEA Industry Strategy will be the awareness of the infrastructure within the target end user segments (spatial companies and companies from key growth sectors), and perceptions (both positive and negative) of its technical capabilities and reputation.

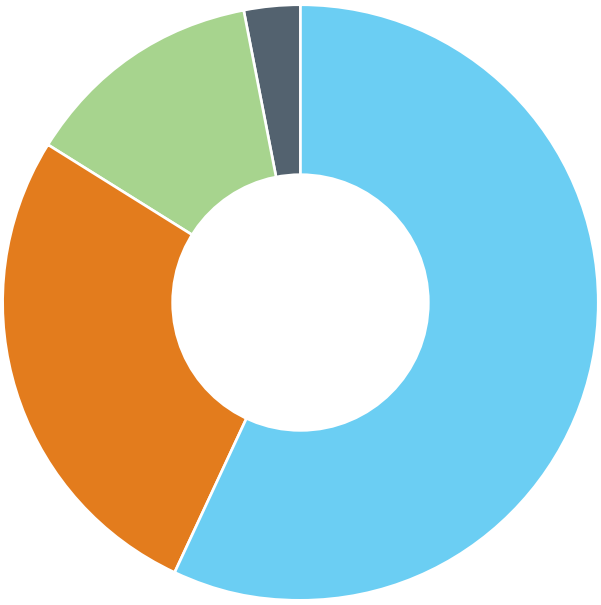
The interviews provided a sample of the target market, and within this group approximately 75% of those were aware of Digital Earth Australia.

4.1. THE VALUE OF DEA

Over 80% of participants believe that DEA is, or could be useful to their organisations, with improvements or clarifications.

Participants were also asked to expand on this assessment. These results have been stratified into strengths and weaknesses of DEA's current capabilities. Note that sometimes the same characteristic is listed both as a strength and a weakness. This reflects the diversity of opinion surveyed participants.

FIGURE 2 PROPORTION OF SURVEYED PARTICIPANTS IDENTIFYING WHETHER DEA IS USEFUL TO THEIR ORGANISATIONS



"We have been focused on reactive questions, without enough proactive questions. This is a core gap that DEA could help us close if it can provide us with business ready, deployable solutions".

4.2. STRENGTHS AND WEAKNESSES

The following strengths and weaknesses were identified by participants based either on their existing knowledge of DEA or emerged in response to DEA descriptions provided as part of the interview.

Strengths

Time series: standardised, simple time series visual and analytical tools are seen as both a key strength and key differentiator for DEA

Standardised data format: this is seen as a strong differentiator, with the mining sector stating that a lack of standardised data is a key barrier to wide scale use of EO data. Spatial companies state that undertaking standard, pre-processing on datasets would lower their time and cost barriers of entry to utilising EO data for their clients.

Value-added products: Many organisations welcome DEA providing standardised data products for integration in to their workflows, applications, and services. However, it was identified that the ability for the private sector to modify and improve these products will be a key to wider scale adoption.

Cloud masking: cloud masking is the process of identifying and precisely masking out regions within imagery that contain cloud. The cloud masking layers and API access were seen as a significant strength of DEA, with participants wanting the same level of cloud masking quality DEA currently has for Landsat to be translated over to the new Sentinel products. This cloud masking is seen as world leading.

Open source codebase: some participants saw strong potential for open source to open up new markets for them, such as accessing World Bank projects that require open source software. The mining sector saw open source as being a strong reinforcement of Geoscience Australia's role in providing pre-competitive data and tools to the sector.

Weaknesses

Ease of access: industry finds it frustrating that they cannot access DEA already. Additionally, the use of the National Computing Infrastructure (NCI) or Python to access the infrastructure is a technical hurdle. APIs would be industry's preferred method instead, followed by an online web portal.

Licensing: Licensing and ownership of derived products is an open question for the industry, and as such a key business risk.

Protection of IP: without being able to securely protect IP used with DEA, there is significant business risk that could greatly inhibit its adoption.

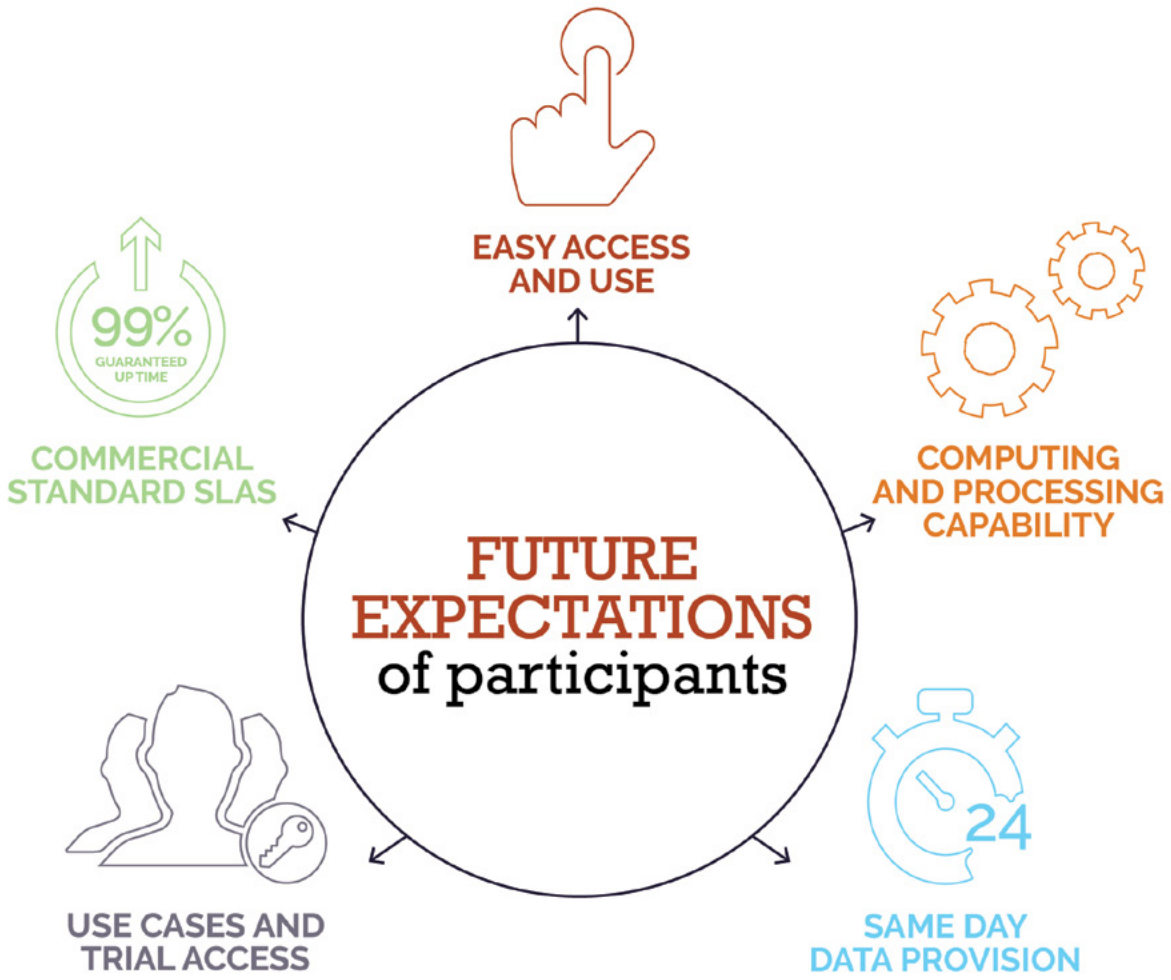
Open source codebase: two issues were identified regarding the use of open source as a key element of DEA:

- Platform providers who don't see it being simpler to add functionality to existing off the shelf products.
- Users who want the focus to be on stability, and perceive open software as unstable.

Value-added products: many participants felt that the creation of value-added products should be exclusively the realm of the industry, with government only providing the data and platforms.

Sentinel data quality: some participants expressed doubts about the quality and usability of Sentinel data, its derived products (such as NDVI) and cloud masks.

Language: many participants found the current descriptions of DEA inaccessible to people who are not already familiar with spatial technology, even the simple one paragraph addressed to the general public.



"If data was more easily available, we would invest more time internally or with partners to improve change detection. Data every 5 days would help with fraud detection, allowing the validation of claims after natural disasters".

4.3. FUTURE EXPECTATIONS

Participants listened to two descriptions of DEA provided by Geoscience Australia. Based on these descriptions of the current and future capabilities, participants were asked to provide improvements that would make the current platform more attractive to the private sector and their expectations on future capabilities provided by DEA. The following tables summarise the most frequently raised issues points based on the recurrence of participant's answers. Note that these are not recommendations but a summary from the interviews.

"Value-added data is critical to the sustainable future of the minerals sector. A big issue for the mining and METS sectors is the inability to access computing power to do what they want to do with data. Combining this computing power with the open source code base and standardised data will be hugely beneficial to the mining and METS sectors, and their supporting consultants and academic groups".

"Geoscience Australia's work is giving confidence in the use of remotely sensed data. They are doing background leg-work that many industries can build upon in innovative ways."

4.3.1. SERVICE PROVISION

Service provision

Easy access: easy to discover information on how to access and use DEA. For example, one participant noted "I have no idea how to actually interact with DEA right now".

Secure services/IP: participants expect to be able to create public or private products. This includes the ability to protect algorithms used in product development, as this will be IP which gives business a competitive advantage, leading to sustainable business growth.

Execution engine:

- 63% of participants consider it important to have access to computing and/or processing capabilities, whereas only 16% of participants consider it important to have their own data stored in DEA
- Users expect to be able to deploy custom algorithms. The expectation is to be able to this simply and quickly, as with Google's Earth Engine "I have this algorithm, I want to use it over this area over time, now build me a map".

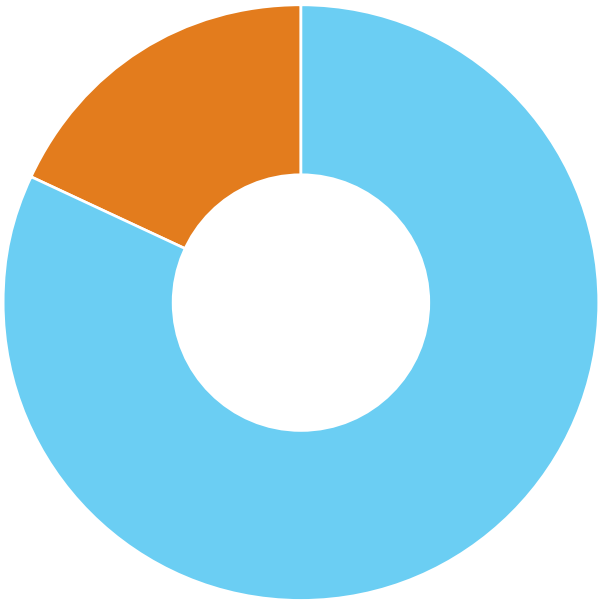
Commercial standard SLAs: 87% consider guaranteed up time to be important (99.9% as minimum), and the need for outages to be communicated well in advance

Pay for value: 100% would pay for the service(s) if it provides value, but not for access to public data only

Most respondents would expect to pay for access to storage and processing time on the High Performing Computer (HPC), but not for access to the publicly accessible data itself. In fact, several respondents identified the cost of data as a significant barrier to accessing the system. However, over 20% of respondents believe that people will pay for the service if the value message is clearly communicated.

Additional useful features for future service/platform development related mainly to analytical and processing capabilities, including the provision of bespoke statistic services, multi-source products and the ability to run and chain processes and calculations.

FIGURE 3 PROPORTION OF PARTICIPANT RESPONSES TO THE QUESTIONS "HOW IMPORTANT IS COST IN YOUR DECISION TO USE DEA?"



- WOULD PAY FOR CAPACITY/PROCESSING OR COMMERCIAL DATA, NOT PUBLIC DATA
- IF THERE IS A VALUE, WHY NOT PAY?

4.3.2. DATA

Data

Focus on public data provision: only 17% consider commercial products and services needed as part of the DEA. Commercial data provision is seen as useful but not essential.

High resolution data: many users identified that higher resolution data provides more value. For example the energy (power) sector would not have any operational or strategic use for low and medium resolution satellite data.

Radar data: there is a significant gap in the offering of radar data, particularly for spatial, agricultural and mining companies

Same day data: 75% expect provision of data captured on the same day, or data which is no more than a few days old

"Geoscience Australia with a group of scientists will likely have the expertise to produce high value derivative data products from earth observations that will save organisations the time and effort required to create these products themselves. If Geoscience Australia could then deliver these data products through DEA this would increase the ability of small companies to create value and insights for their customers".

THE RADAR DATA GAP

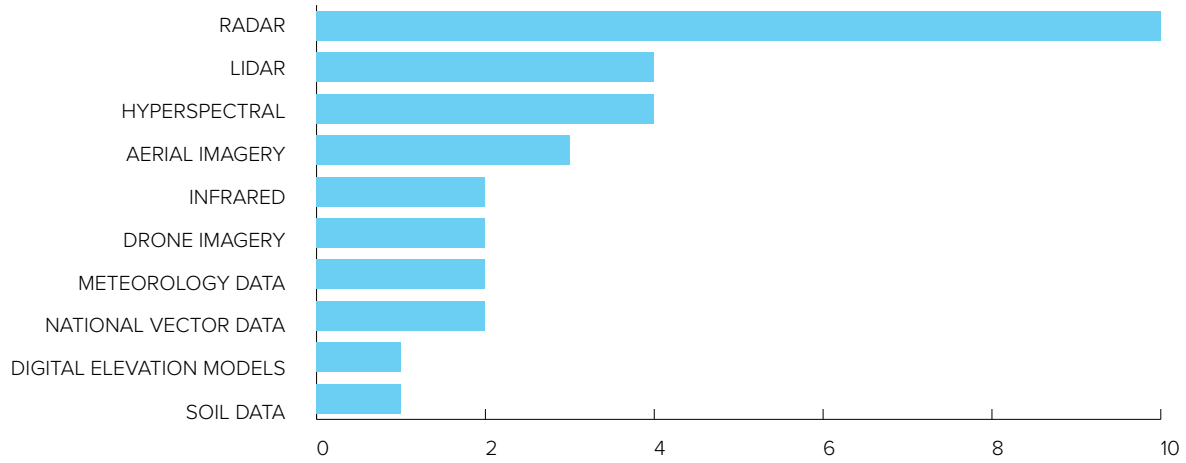
Participants were asked an open-ended question regarding additional data types which would be useful in DEA. It is important to note that over half of participants thought that satellite imagery alone was fine. However, for those who suggested additional data, radar arose as the most important dataset to include, followed by LiDAR and hyperspectral imagery. A full breakdown of data types can be seen below.

In addition, alternative data formats such as HDF5 or Cloud optimised GeoTIFF were considered useful. So were the provision of both the standardised, corrected imagery and raw, uncorrected imagery.

4.3.3. EDUCATION AND FACILITATION

Education and facilitation
Communicate to the non-tech: both high level and more detailed technical explanation are only understood by people who are familiar with geospatial data already. Participants feel that DEA needs to evolve its branding and explanations to be accessible to non-spatial people.
Use cases to educate users: easy to understand use cases could help educate and explain DEA to users and customers, as well as to generate new creative ways of using its functionalities
Trial access to computing resources: this would allow companies to try the services before fully committing to integrate DEA into their business processes

WHAT ADDITIONAL DATASETS WILL BE OF USE IN DEA?



5. APPLICATION MARKETS AND OPPORTUNITIES

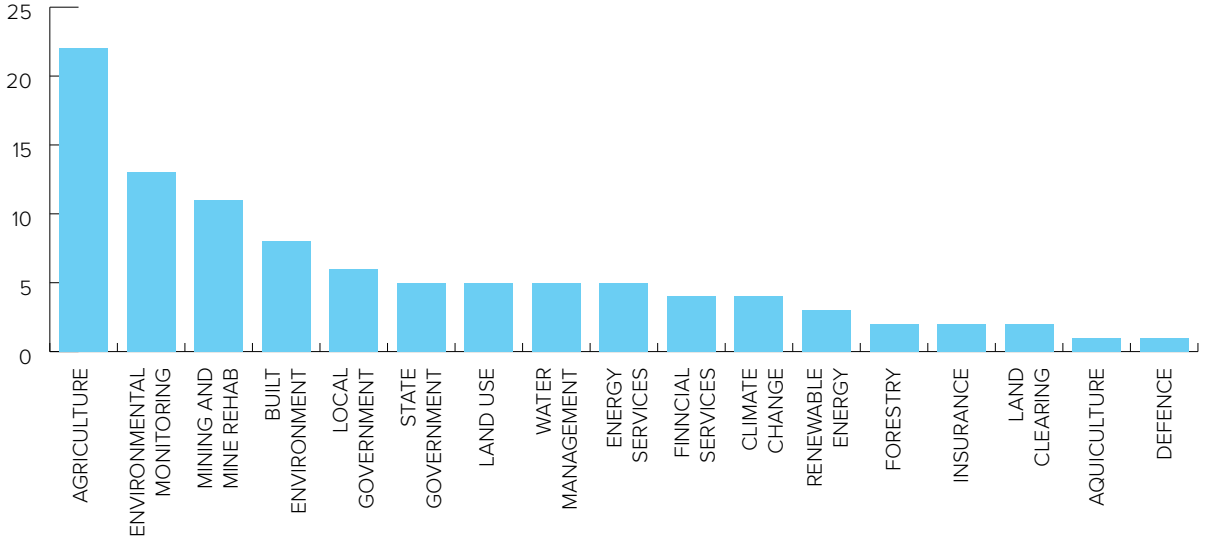
THE BENEFITS OF PRE-COMPETITIVE DATA

In the mining exploration stage, pre-competitive data plays a really important part in regional scale analysis to identify areas for detailed investigation. In this case, pre-competitive data acquisition involves the gathering of geological and geophysical data, and analysis of that data to identify areas with potential for energy and mineral resources. Governments undertake such work because it creates a prospectus for the nation's resources and lowers exploration risk by identifying those areas most likely to contain resources.

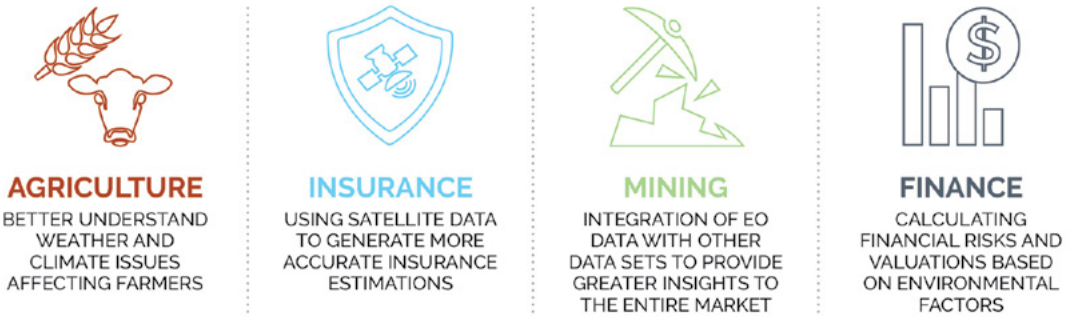
Geoscience Australia is well recognised for providing trusted, accurate pre-competitive data.

Participants were asked to identify which sectors of the Australian economy would most benefit from improved capability in EO data and services. Agriculture was the clear leader in terms of potential impact, followed by the environmental management sector, mining, built environment and local government sectors; with most participants stating that DEA would be able to help realise the potential benefits in each industry. However, the applicability of DEA to the built environment was questioned, as data resolution was considered not to be sufficient to address many of the challenges faced in this sector.

FIGURE 4 FREQUENCY OF MENTIONED GROWTH SECTORS FOR EO DATA



EO DATA USE in Application Markets



Individual interviews were conducted with organisations in the agriculture, insurance, mining and the finance sectors. Here are some selected insights.

Application Market	Insights
Agriculture	Changes in weather and climate are putting a lot of financial pressure on farmers and their ability to better predict what is occurring in their region. The agriculture industry could be using EO data and services more extensively to help it understanding yield, climate, large scale trends, and to examine specific issues at scale across Australia. Industry bodies in this sector identified that most producers are not using satellite data extensively yet. A recurring barrier still to overcome in this area is the need for education – understanding what farmers and industry bodies can do and how to do it.
Insurance	Publicly available satellite data is underutilised in the insurance sector, as this industry often relies on higher resolution imagery or more responsive data gathering techniques. There is significant value generation potential in the insurance market by focusing on solving business problems such as: • Asset monitoring: such as crop monitoring for month by month adjustable insurance premiums, calibrated to satellite estimated crop value. • Change detection: understanding local and regional change after major events, rather than the current labour-intensive door-to-door data gathering techniques. • Customer experience improvement: by automatically extracting building and property features to shorten application processes for people investigating new insurance policies.
Mining	The mining industry has a very wide spread of use, understanding and adoption of EO data. It is often a user of off-the-shelf products due to a general lack of in-house specialist capabilities. Utilisation varies across organisations: • Academic institutions: experienced in accessing and analysing satellite data for exploration. • Large mining companies: relatively experienced in the use of EO data, focus is often on high resolution data over small areas. • Small and medium mining enterprises: low or no adoption of EO data, due to a lack of in-house technical capability and/or awareness of EO data potential The true value of EO data to the mining sector could emerge from the integration with other business datasets and contextualised to provide benefits to the entire value chain.
Finance	EO data is not used extensively yet in the banking sector. However, representatives of organisations in this sector have identified EO data as being vital to the future of two of its key processes: valuation services and risk management. • Financial valuation increasingly includes the value of natural capital. It is currently labour intensive, and lacks market transparency. As an example: how can a bank know that last year's profits were not the result of environmental degradation, which significantly impacts the likelihood of future profitability? • In the case of risk management, the exposure of assets to climatic risks, including bushfires, storms, floods, and sea level rise, is very important.

6. FUTURE CLARIFICATIONS

A number of recurring questions were raised by surveyed participants with respect to DEA and its future. The Industry Strategy will be key to finding answers to these, whilst carefully taking into consideration the view of Australian businesses.

1. WHERE IS THE PUBLIC/PRIVATE LINE FOR CREATING VALUE-ADDED PRODUCTS?

Companies have concerns that if DEA moves into data products generation it may reduce private sector work and innovation, and possibly devalue the remote sensing industry.

2. HOW IS THIS DIFFERENT FROM OR COMPLIMENTARY TO OTHER PLATFORMS OUT THERE?

Information released about DEA did not sufficiently explain the differentiation factors between this platform and commercial offerings (e.g. DigitalGlobe, Planet and Google).

3. CAN GEOSCIENCE AUSTRALIA MOVE FAST ENOUGH TO KEEP TECHNOLOGY IN LINE WITH BEST PRACTICE AND NEW GLOBAL DEVELOPMENTS?

Ability of Geoscience Australia to keep the DEA in line with rapid global technology developments.

4. WOULD HIGHER RESOLUTION DATA PROVIDE HIGHER VALUE?

Is there scope to include high resolution datasets in DEA? If so, at additional cost to users, or added under a data purchase agreement between Geoscience Australia and satellite vendors?

5. IS THIS THE BEST INVESTMENT OF THE MONEY, AND WHY IS GEOSCIENCE AUSTRALIA BUILDING, NOT BUYING?

Need for more information and transparency regarding the allocation of funds, the drivers behind building vs. buying technology, and understanding the interaction of DEA with private data platforms.

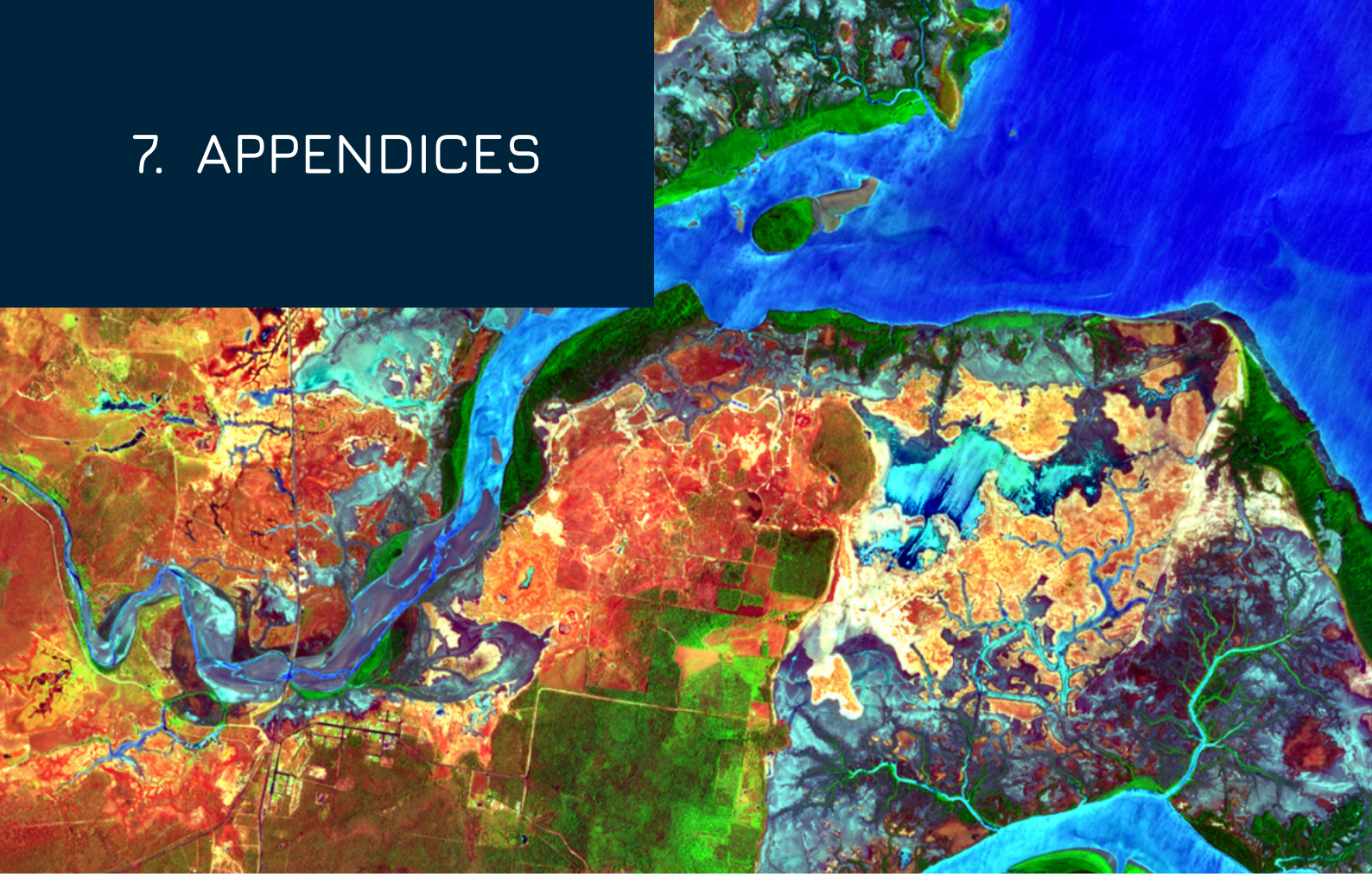
6. IS THERE LONG-TERM FUNDING SECURITY?

Concerns by the private sector about modifying business practices and technology base to include DEA if there is not long-term certainty around the availability and capabilities of DEA.

7. WHAT WILL BE THE LICENSING REQUIREMENTS ON PRIVATELY CREATED VALUE-ADDED PRODUCTS?

Confusion with respect to whether data products created using DEA will be broadly accessible to all users or only available to the company that created it.

7. APPENDICES



7.1. APPENDIX A: ORGANISATIONS CONSULTED

AAM

AEOCCG/UQ RS

Ausnet Services

Clarivate Analytics

Data and Integrity Systems Company

Digital Globe

EOMAP Australia Pty Ltd

Farmer

FluroSat

Geoplex

GHD

Indigenous Land Corporation

Insight GIS

Insurance Australia Group

Jacobs

Lockheed Martin

MLA

MRIWA

NAB

NGIS

OVASS

Ozius Spatial

PDN Ventures

Planet

PSMA

RBC

SatDek

Spatial Vision

STELaRLabs

UQ/QLD DSITI

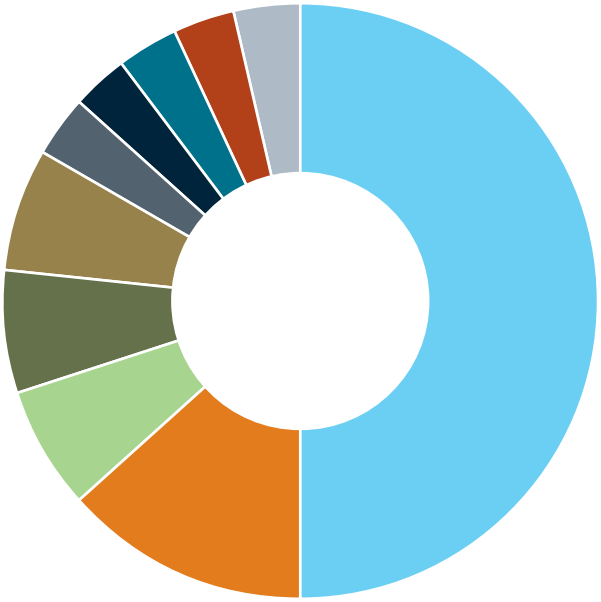
7.2. APPENDIX B: CONSULTATION PROCESS

One-on-one interviews were undertaken by the FrontierSI team to examine the barriers, opportunities and requirements relating to both EO data and data infrastructure in Australia. Interviews with 30 thought leaders from the spatial industry, as well as key growth sector businesses across the Australian economy were completed.

Interviewees were identified through the following means:

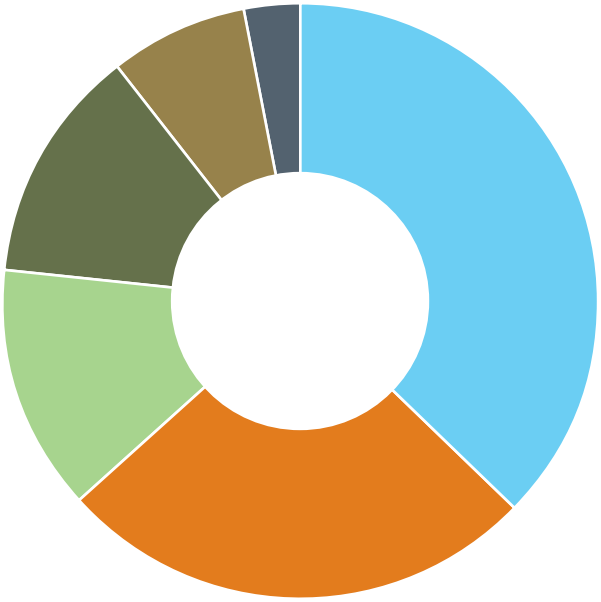
- Companies that work in the Earth observation domain and use EO data for business
- Companies interviewed through the 2026 Agenda process
- Companies identified through the Spatial Industry Business Association
- Companies identified through the CRC for Spatial Information partnership base, including Geoscience Australia
- Companies identified through the Australian Earth Observation Community Coordination Group (AEOCCG), who developed the Australian Earth Observation Community Plan 2026.

INTERVIEW PARTICIPANTS BY INDUSTRY



- SPATIAL
- AGRICULTURE
- FINANCE
- DEFENCE
- DATA ANALYTICS
- ENERGY
- MINING
- CONSULTING
- AGRICULTURE/ TOURISM
- INSURANCE

INTERVIEW PARTICIPANTS BY COMPANY SIZE

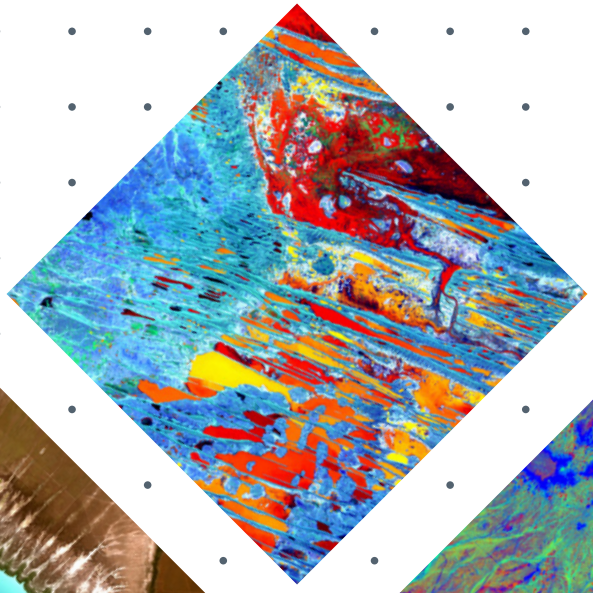


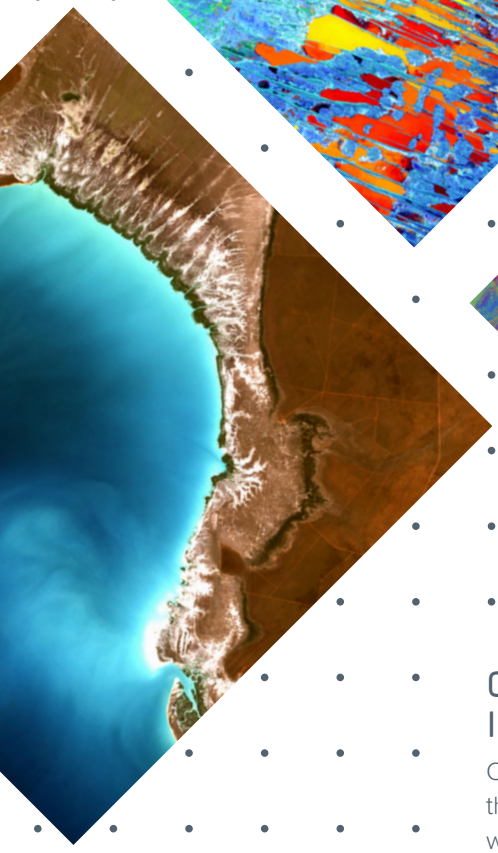
- SME
- ENTERPRISE
- MULTINATIONAL
- START UP
- RESEARCH
- INDIGENOUS CORPORATION

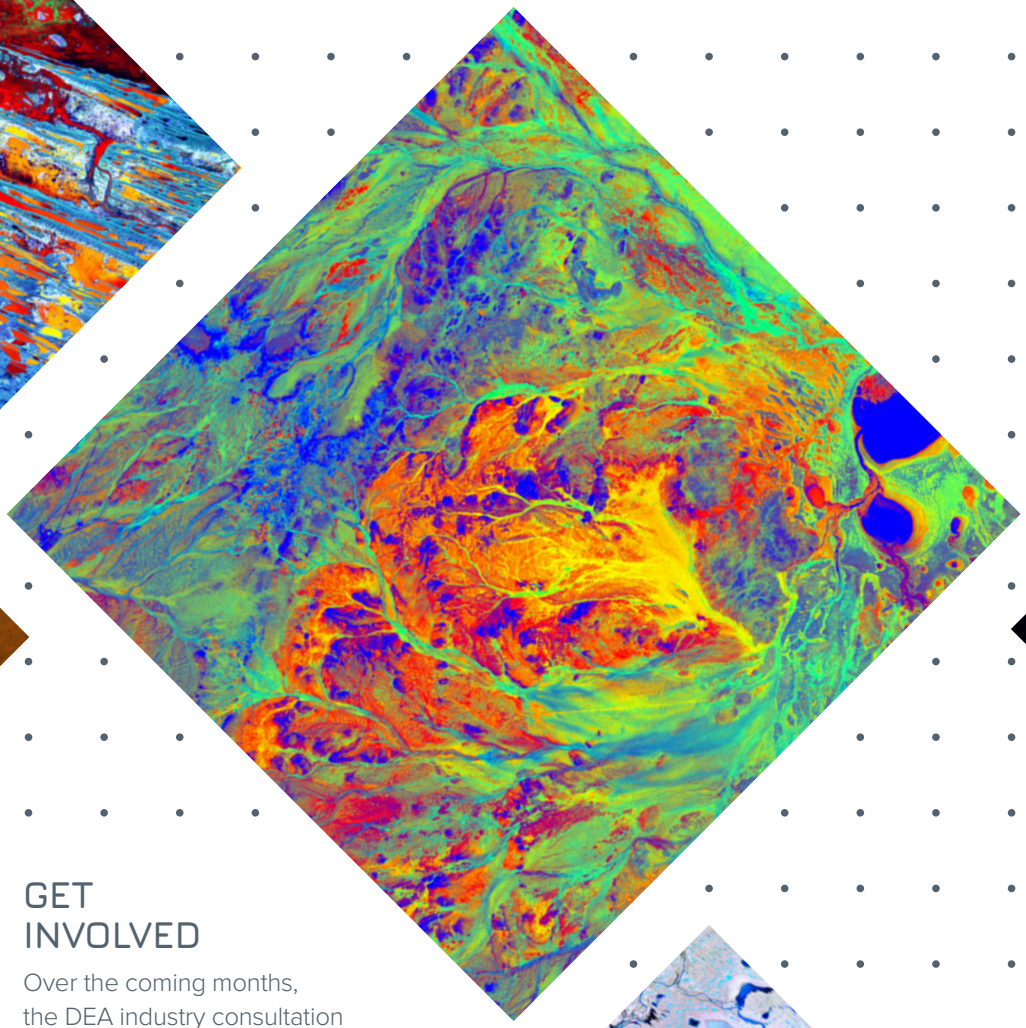
- Growth industry contacts from the 2026 Agenda process, the 2026 Agenda leadership group, as well as key growth industries identified in the European Association of Remote Sensing Companies (EARS) industry survey.

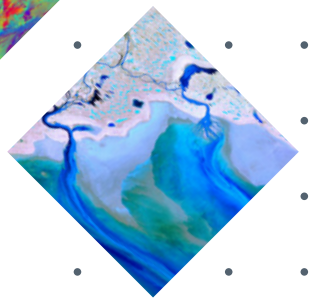
Interview questions were stratified into three themes regarding industry expectations and their understanding of remotely sensed data. These themes are:

- Establish baseline understanding, barriers and use of remote- sensing information,
- Examine current understanding and expectations on DEA, and
- Uncover desired future applications within Australia









GET INVOLVED

Over the coming months, the DEA industry consultation will take place across Australia. This is a unique opportunity to directly engage with the program and influence the development of this platform to suit your business needs. If you want to be involved and have your say, please register your interest at: frontiersi.com.au/dea

Or get in touch with the industry engagement team:
Phil Delaney (pdelaney@frontiersi.com.au),
Eva Rodriguez (erodriguez@frontiersi.com.au),
or dea@frontiersi.com.au

Australian Government
Geoscience Australia

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