Big Data Connect
Program Guidelines

Big data is revolutionising the way information and new technology is used by business and supply chains in the 21st century.

Big data refers to the process of collecting, organising and analysing large amounts of data, to discover patterns and other useful information in order to make better decisions.

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Big data helps Mayfield boost productivity

Using the power of big data to respond to project tenders quickly and efficiently was an exciting prospect for manufacturing business, Mayfield Industries.

Established in 1936, the Adelaide-based company provides design, manufacturing, installation of transportable switch rooms and switchboard solutions to customers within Australia and overseas.

With a strong focus on innovation, the company uses research and development and key enabling technologies to diversify their business offering and provide better solutions, products and services for customers.

Mayfield Industries General Manager, Chris Ware, said support from the Big Data Connect Program has enabled the company to successfully reduce response time for bids and provide better pricing accuracy.

"We're often required to submit a project estimate within 48 hours of receiving the customer request for quotation," he said.

"Current methods make it difficult to respond to bids in a timely manner, especially when there are multiple project deadlines. This can often lead to missed opportunities and work for South Australia."

Mr Ware said working with Data to Decisions CRC has enabled Mayfield Industries to use data sets collected from previous tenders to build a system that enables quicker processing of new tenders.

"Before our new system, quotes would often take weeks to complete but with big data tools, we can now provide quotes in minutes, building on historic pricing information to provide accurate estimates for labour, materials and transportation.

"Big data has fundamentally changed the way we operate and run our business. It has offered us a competitive advantage, boosting our productivity that will continue to drive business growth in the future."

www.mayfieldindustries.com.au

Introduction

New processes to capture and analyse big data are emerging. The Big Data Connect Program (BDCP) can help you to understand and apply these in your business to create and capture more value.

The 21st century is a time of rapid innovation and technological change that will be driven by the great challenges we face, including climate change and the demands of an ageing society. This period of change will create both opportunities and challenges for South Australia that will emerge from increasingly open and competitive global markets.

Big data is one of six key enabling technologies the Government of South Australia is focussed on under its Manufacturing Technologies Program. This program aims to assist South Australian manufacturers explore and adopt new technologies with the aim of increasing competitiveness and access to new markets. The other focus areas include additive manufacturing, advanced materials, photonics, robotics and automation, and digital technology.

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Examples of big data use include:

- Analysing production quality issues: manufacturers can take data from sources such as batch numbers, factory temperature and equipment calibration settings and then analyse the information to determine the source of any batch defects.

- Supply chain and production analysis: by using historical data for supply chains and taking into account seasonal trends and other variables, manufacturers can calculate items that can be withdrawn, made for stock or made to order, thereby optimising supply chains and production.

- Improved marketing: by analysing the purchase patterns of customers, manufacturers are able to market other products in their portfolio, as well as using the information to target new customers who have a similar profile.

- Product enhancement: by analysing data transmitted from products sold, manufacturers are able to add value by predicting when maintenance is due, prior to a part breaking down. This can save customers the costs of extended equipment downtime, as well as avoiding unnecessary scheduled servicing.

1. Overview

1.1 Big Data Connect Program (BDCP)

The BDCP will be delivered in 2017-18 by the Data To Decisions Cooperative Research Centre (D2D CRC). The program is funded by the Government of South Australia through the Department of State Development and aims to encourage South Australian manufacturers to explore opportunities for using big data to improve productivity, competitiveness and increase profitability.

The program is offered on a competitive basis and is aimed at businesses that have little or no experience with big data, as well as those who already undertake some data analysis.

Individual projects are expected to be completed within 4-8 weeks.

1.2 Objectives

The objectives of the BDCP are to:

- Raise awareness of big data and how businesses can use the technology to increase their competitiveness and profits
- Demonstrate how big data can lead to new opportunities for South Australian businesses
- Increase the adoption of big data by South Australian small and medium enterprise manufacturers
- Utilise the skills of the D2D CRC, which is based in South Australia, to deliver the BDCP and translate its knowledge to industry
- Accelerate business growth in employment and profitability.

2. Eligible applicants

To be eligible for assistance under the BDCP, an applicant must:

- Be a solvent, financially viable business or commercial enterprise
- Hold an Australian Business Number (ABN)
- Be based in South Australia
- Have been in operation for longer than a year
- Be able to fund the required co-contribution
- Agree to provide information and data, including financial information as required
- Be prepared to commit to Senior Executive or Board level engagement.

3. Project descriptions

There are two types of projects under the BDCP:

- Big Data Investigation (BDI): the D2D CRC will identify opportunities for the successful applicant to use big data to create value by using existing data, as well as external data and the steps required to adopt the technology. A BDI project is expected to take up to four weeks.

- Big Data Development (BDD) – the D2D CRC will deliver a tailored software solution using existing available data and/or open source data. The software developed will be used to solve a business problem, for example analysing production quality issues, supply chain optimisation, demand forecasting, or to enhance an existing product. Open source software will be used where possible. A BDD project is expected to take up to eight weeks.

Businesses can apply for either project type or initially carry out a Big Data Investigation project and then apply for a Big Data Development project (subject to available funding).

4. Application process

Businesses can contact the D2D CRC to discuss their eligibility and potential project including its technical feasibility.

Application forms are available online at *www.d2dcrc.com.au*
Project proposals must describe a discrete project, including planned expenditure, agreed timelines, key performance indicators that will achieve a defined output and expected benefits to South Australia.

Applications will be assessed by an independent assessment panel based on the following criteria:

Area	Assessment criteria
Strategic alignment	• Is the project likely to lead to adoption of big data analytics within the business? • Is the project aligned to the participant's core business? • How will the project contribute to economic development in South Australia?
Likelihood of success	• Has the business identified the appropriate resources to undertake the project? • Do the scope and activities of the project appear viable and technically feasible within the proposed duration – four weeks (BDI) or eight weeks (BDD)? • Are the resources required by the project (data, software and hardware) well defined and available?
Impact	• Is it clear how the outputs of the project will be used? • Is it likely that the project deliverables will make measurable improvements to the business' profitability or competitiveness?

If required, the D2D CRC will assist companies to complete the application form.

The assessment panel will comprise of representatives from the D2D CRC, the Department of State Development and industry. Applicants may be invited to present a project to the panel as part of the application process.

Applicants should note that, irrespective of quality and merit, there is no guarantee that an offer of funding will be made. Final decisions on funding rest with the Minister for Manufacturing and Innovation.

Applications are assessed on a continual basis and applicants will be notified of a decision by the D2D CRC within eight weeks of receipt of an application.

It is expected that approximately 5 projects will be selected to participate in the program in 2017-18.

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5. Participant commitments

Participants will be required to provide a cash payment to the D2D CRC in addition to an in-kind contribution towards their project. The value depends on the type of project as follows:

Big Data Investigation

$5,000 cash plus in-kind of approximately 0.2 FTE for four weeks.
The total project value is approximately $30,000.

Big Data Development

$10,000 cash plus in-kind of approximately 0.2 FTE for eight weeks.
The total project value is approximately $75,000.

6. Research agreement

Successful companies will need to enter into a research agreement to undertake the project with the D2D CRC. An agreement template can be found at **www.d2dcrc.com.au**

It is expected that any intellectual property generated through the project will be retained by the applicant, who will grant the D2D CRC a non-exclusive, royalty free licence to use it in a non-competitive environment.

7. Project reporting and evaluation

Participants will be required to submit a report to the D2D CRC at the end of the project. The report will provide feedback on their experience, what they have learnt and future plans for adopting the technology. A further update on progress and impact will be required twelve months and two years after project completion.

Excerpts from reports may be used by the Government of South Australia for promotional or case study purposes.

8. Confidentiality and conflicts of interest

Protecting participants' confidential information is important to the Department of State Development. Information provided by participants will be considered confidential and treated as such by the Department of State Development and any third parties from which advice is sought. Confidential information will only be released with the participant's agreement or when required by law.

All D2D CRC and Department of State Development staff and any third parties, from whom advice is sought regarding applications, will be required to declare any conflict of interest before having access to confidential information. Assessment panel members will be required to sign confidentiality agreements and declare any conflict of interest.

Contacts

If you are interested in finding out more about the Big Data Connect Program or would like to discuss a potential project, please contact:

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