

# Balancing the value of integrated data and privacy in today's data economy



Talei Parker, ABS University Partnership Manager

Australian Bureau of Statistics  
Informing Australia's important decisions



# The ABS DataLab

## Overview



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Welcome to  
**ABS DataLab**



**Access** is only to approved researchers and ABS or government staff



**Files** remain in the secure ABS environment



Analytical information does **not include name and address**



All **analytical outputs** are checked by ABS staff

# Data access and release

## Five Safes Framework



Safe people



Safe projects



Safe settings



Safe data



Safe output

Is the researcher authorised to access and use the data appropriately?

Is the data to be used for an appropriate purpose?

Does the access environment prevent unauthorised use?

Has appropriate and sufficient protection been applied to the data?

Are the statistical results non-disclosive?



# MADIP

## Overview



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# Overview of MADIP

The **M**ulti-**A**gency **D**ata **I**ntegration **P**roject (MADIP) is a secure, person based research data asset combining information on health, education, government payments, income and taxation, employment, and population demographics to create a comprehensive picture of Australia over time..



## MADIP Uses

- Answer policy questions
- Program evaluation
- Empirical research on socio-economic issues
- No identification of individuals
- Used only for statistical and research purposes (never for compliance)



## MADIP Partner Agencies

- Australian Bureau of Statistics
- Australian Taxation Office
- Department of Health
- Department of Social Services
- Department of Education, Skills and Employment
- Services Australia



## Nationally important datasets



MADIP data is securely held by the ABS – access is only made available to approved researchers for approved purposes.

# Analytical content and Enduring data in MADIP



# What research questions can MADIP answer?

What is the **impact of Paid Parental leave** on income shifting and the health and health care use outcomes of Australian women?

What are the **impacts of international migration** on Australia?



What are the **benefits of educational attainment**?

What risk and protective factors influence **student learning trajectories** through school?



What are the **outcomes for job seekers** who cease participating in employment services programs in remote Australia?



What factors prevent Australians from completing tertiary education and **transitioning to employment**?



What factors are important to consider when **targeting interventions in relation to opioid misuse**?

What are the **differences in health care usage** of people from culturally and linguistically diverse backgrounds?





## Case Study:

# *Helping vulnerable Australians survive heatwaves*

- National mortality increases by **2%** during heatwaves
- Large rural towns have the highest elevated risk for heatwave deaths



See [MADIP case studies](#) and visit the [MADIP Research Projects](#) for the full list of projects

# BLADE

## Overview

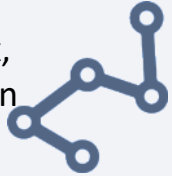


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# Business Longitudinal Data Analysis Environment

The Business Longitudinal Analysis Data Environment (BLADE) is an economic data tool combining tax, trade, and intellectual property data with ABS data to provide a better understanding of the Australian economy and business performance over time...



## BLADE Uses

- Insights on business performance and dynamics
- Answer policy questions
- Program evaluation
- No identification of individuals
- Not used for compliance (only for statistical and research purposes)



## BLADE Partnerships

- Australian Bureau of Statistics (ABS)
- Australian Taxation Office (ATO)
- Department of Industry, Science, Energy and Resources (DISER)
- IP Australia
- Treasury
- Department of Agriculture, Water and the Environment (DAWE)
- Department of Home Affairs (DHA)



## Nationally important datasets



BLADE data is securely held by the ABS – access is only made available to approved researchers for approved purposes.

# Business Longitudinal Analysis Data Environment



## Understanding entrepreneurship dynamics in Australia

Using BLADE microdata to create a better picture of the drivers behind firms' productivity and performance

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### BACKGROUND



- Recent data indicate that:
  - Australia's productivity performance has weakened
  - Entrepreneurship rates are declining
- We need a better understanding of the key drivers of productivity and their impact on industry and firm performance

### DATA SOLUTION

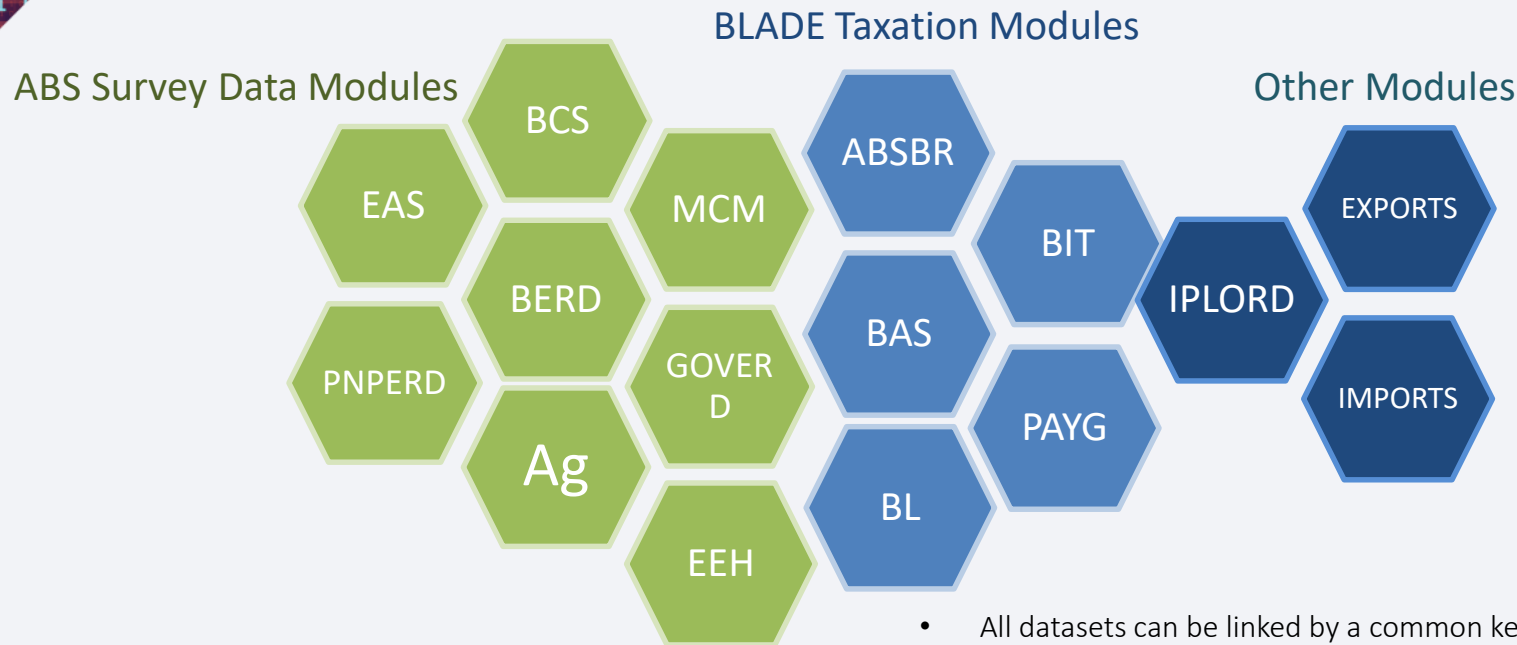


- Enables longitudinal study of business performance, innovation, job creation, competitiveness and productivity
- Firm-level microdata in BLADE presents increased opportunity to use empirical economic research to improve policies
- Increases the evidence base on productivity-related dynamics, by analysing the drivers of the decline in entrepreneurship

### OUTCOMES

- More effective and better targeted policy design, encouraging a productive and efficient Australian economy
- Practical advice to businesses to develop strategies and practices for growth

# BLADE Data Modules



- All datasets can be linked by a common key
- Full data item list available upon request

# Enhancing BLADE

- **ATO datasets** are being updated with **19-20 financial year data**. Estimated timeframe is April/May 2021.
- **Improved methodology** – BLADE logic is being redesigned to facilitate different levels of output (ABN level, different linking methods)
- **Quarterly data** – Changes in method now allow for quarterly updates for some data inputs, this will be phased-in during 2021
- Work is underway to **utilise new data sources** such as:
  - i. Single Touch Payroll (at the ABN level)
  - ii. Indicative data for agricultural businesses
  - iii. Survey of Employee Earnings & Hours

A range of other Federal and State agencies are currently being engaged for inclusion of additional data into the BLADE asset



# Integrated Person and Business Data

- ABS has enabled the integration of some BLADE datasets with information about employer characteristics to employee data within the Multi-Agency Data Integration Project (MADIP) asset over time
- Business and person-level data are brought together via the ABN of a person's employer, where this is recorded on a MADIP dataset
- BLADE data linked with MADIP is limited to BLADE Core and the Business Characteristics Survey (BCS) with limitations on the use of BCS and Business Income Tax to the creation of flags
- Standard governance arrangements apply and costs are subject to project technical assessment by ABS



# Keeping data safe

We have many protections in place to keep your data safe, including:

**Legislation**

**Separation  
principle**

**Functional  
separation**

**Data  
minimisation**

**Data  
storage**

**Safe access:  
the Five Safes**

**Data  
security**

## ***The Census and Statistics Act 1905***

**Information cannot be released in a manner likely to enable the identification of individuals and organisations**

- ABS and seconded officers are legally bound to uphold the confidentiality of MADIP information.
- The MADIP is collected under this Act, which requires the ABS to publish and disseminate compilations and analyses of statistical information and to maintain the confidentiality of information collected

## ***The Privacy Act 1988***

- Data collection, use, and disclosure is authorised by law
- There are protections for data against unauthorised access and disclosure, or loss.

## ***Other agencies' legislation***

- Each agency is authorised by law to collect personal information as part of its core functions, to share that information with the ABS for MADIP in order to use it for policy analysis, research, and statistical purposes.

## ***Australian Government standards***

- Strong security arrangements for all IT systems: Australian Government Information Security Manual
- Strict control of access to premises: Commonwealth Protective Security Manual

## ***Future Data Sharing and Release Act (DS&R Act)***

When passed, this Act will:

- Promote better sharing of public sector data
- Build trust in use of public data
- Dial up or down appropriate safeguards
- Maintain integrity of the data system and
- Establish institutional arrangements.

# The separation principle

## SEPARATE TRANSFER

Receipt of analytical information and personal identifiers is in **separate files at separate times**.

## SEPARATE STORAGE

Personal identifiers are **stored securely and separately** from the analytical information.

## SEPARATE ACCESS

No-one can access both personal identifiers and analytical information at the same time.

Each person working on the project is assigned a role, and is **only able to access the information necessary to perform that role**.

### Personal identifiers

Such as:

- Name
- Address
- Date of birth

### Analytical information

Such as:

- Occupation
- Income
- Health services use
- Types of Government payments

# Functional separation

A person working on a project can only hold **one role at a time**.

This means that **personal information and analytical information cannot be accessed at the same time**, and no person can ever see all of your information together at any point in the process.



Librarian

The **Librarian** prepares information for linkage



Linker

The **Linker** links information together



Assembler

The **Assembler** creates files for analysis



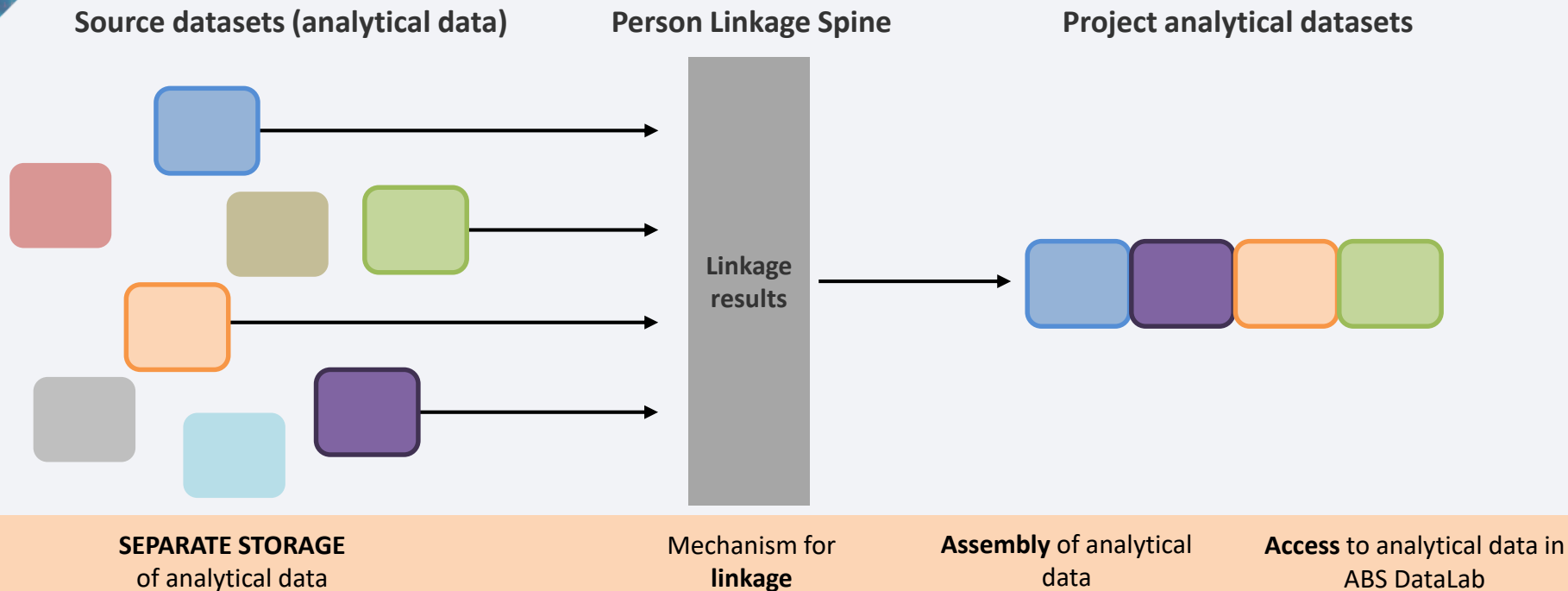
Analyst

The **Analyst** analyses linked information

Only accesses data  
without direct  
identifiers

# MADIP data linkage, assembly and storage

Separate datasets are able to be brought together for specific projects



# MADIP data security

Regular independent reviews of security arrangements and an ongoing program of security audits

IT security arrangements that conform with government standards for information security (the Australian Government Information Security Manual)

Logging and monitoring of access and use of information

Staff security checks and restricted access to data

Clear accountabilities and risk management processes

Assessed under the Information Security Registered Assessors Program (IRAP)

Information is only combined in a secure environment within the ABS, by a dedicated team

Secured internet gateway

Data supply via secure transfer methods (e.g. Secure Deposit Box)

# Data Availability and Transparency Act

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# Permitted Purposes



## Permitted Purposes



Government service delivery



Government policy and programs



Research and development

## Precluded Purposes



Enforcement related purposes:

- Law enforcement
- Compliance



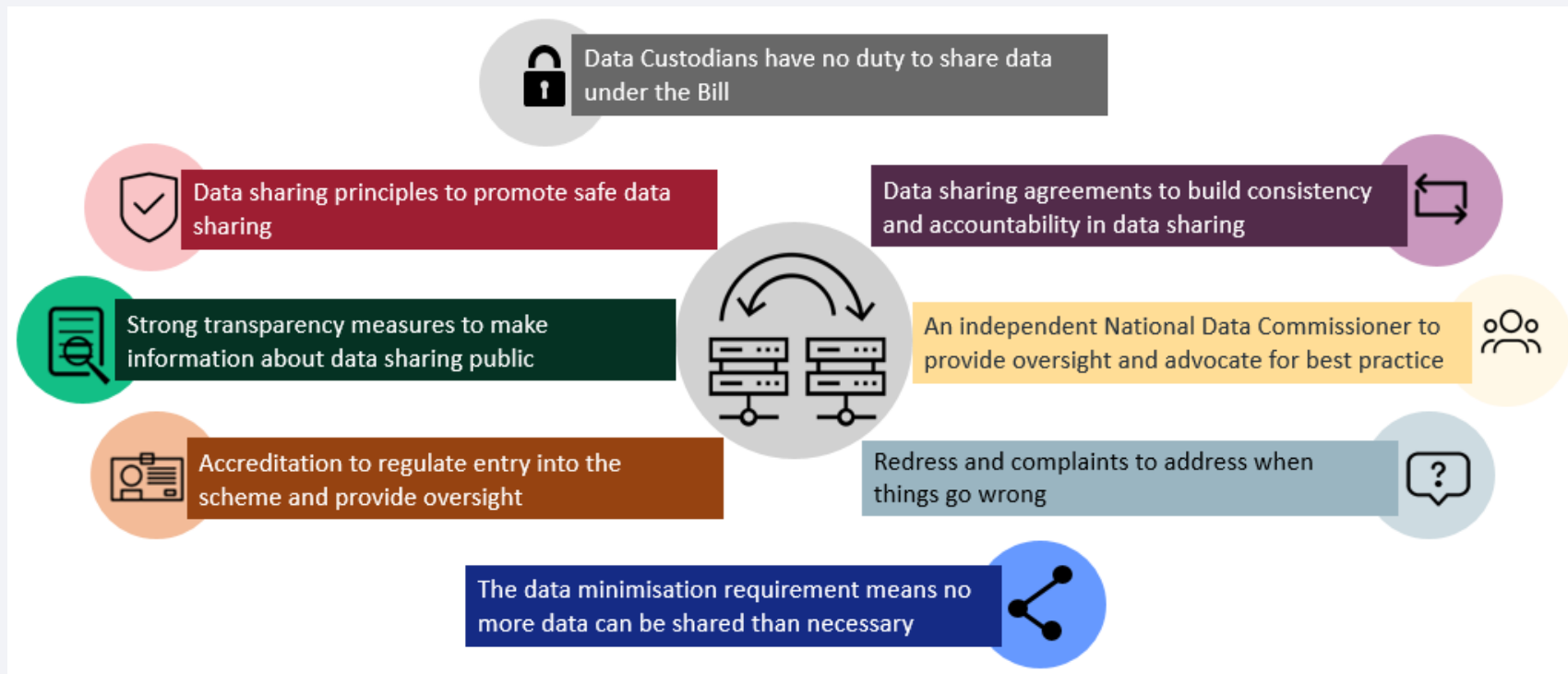
National security purposes, including:

- Unlawful activities that prejudice national security
- Activities to protect national security





# Layers of Defence



# Questions?