

# State of Innovation Project – Insights Note #3

## Innovation Diffusion

**Innovation diffusion** encompasses two main ideas<sup>1</sup>:

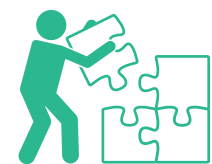
**Knowledge diffusion:** How ideas spread

**Output diffusion:** How ideas are adopted

Businesses are active in innovation diffusion when they:



**Adopt** products or business processes



**Build upon** original products or business processes



**Enable** others to use their innovations or knowledge

This Insights Note is one of four which draws on the findings of a 2023 **State of Innovation collaborative research project** between the Department of Environment, Science and Innovation (DESI) and **Bond University** profiling **innovation-active firms in Queensland**.

It provides a snapshot of Queensland business innovation diffusion.

Results are benchmarked against other jurisdictions where relevant.

## Incremental innovation is driving diffusion in Queensland businesses

The majority of innovation relates to introducing existing products, services and processes to the business.

It is estimated that about 2% of Australian businesses introduce a new to world innovation, leading to increased productivity.<sup>2</sup> According to the Productivity Commission, 98% of Australian businesses have less potential for new to world innovation. In this way, diffusion will often involve the incremental adoption of widely available innovations.

The impact of small changes across many businesses is impactful. According to the Productivity Commission, fostering the adoption and use of new and established technologies and ideas by the majority of businesses in the economy represents a big opportunity to increase productivity.

Queensland's innovation diffusion is mostly occurring within the business (74%). New to world innovation introduced by businesses in the state is a higher (8%) rate than Australia.

<sup>2</sup> Productivity Commission, 2023. 5-Year Productivity Inquiry: Innovation for the 98%. Australian Government.

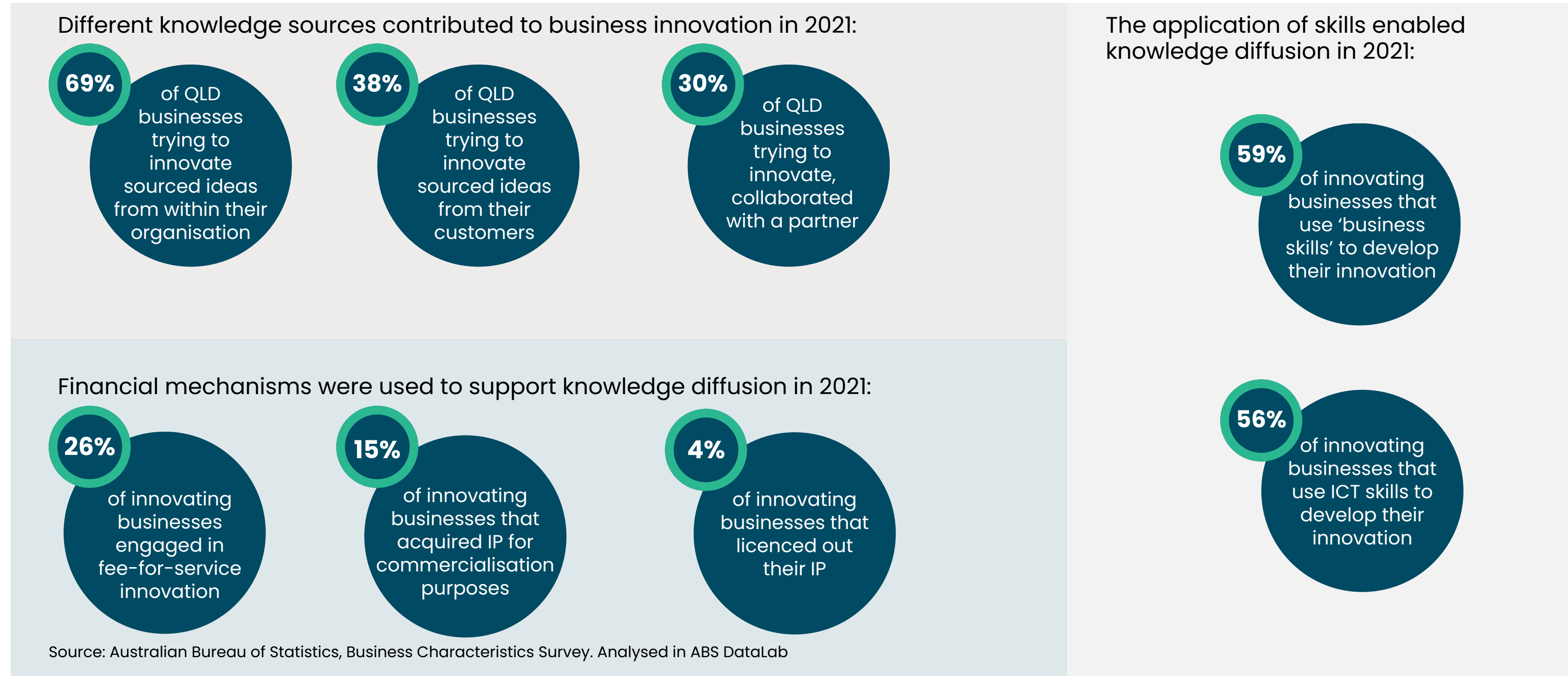
### Products and services innovation introduced by Queensland businesses



Source: Australian Bureau of Statistics, Business Characteristics Survey. Analysed in ABS DataLab

# Knowledge diffusion is occurring across the Queensland innovation system

Knowledge, including ideas, is an important resource for businesses. Knowledge may come from within the business or externally.<sup>3</sup> Knowledge is diffusing across a variety of methods by Queensland businesses.



<sup>3</sup> Productivity Commission, 2023. 5-Year Productivity Inquiry: Innovation for the 98%. Australian Government.

# Innovation diffusion is hampered by funding and skills

Funding and skills are a common barrier to innovation diffusion in Queensland but this is a similar story across Australia.

## **For all Queensland businesses, key factors hampering innovation:**

- 20% lacked access to additional funds
- 17% lacked skilled persons within the business
- 17% lacked skilled persons within the labour market
- 7% lacked access to knowledge or technology

## **For Queensland businesses trying to innovate, key factors preventing collaboration:**

- 23% limited funds
- 21% limited time
- 8% limited skills
- 5% limited knowledge

## **For Queensland businesses that delivered an innovation, the key factors hampering commercialisation:**

- 24% insufficient funds
- 11% lacked commercialisation skills within the business
- 8% lacked knowledge or advice on commercialisation

# Background & more information

## State of Innovation Project

The State of Innovation (SOI) Project was established in 2021 to develop rich data and insights on the Queensland innovation system to support evidence-based policy and decision making.

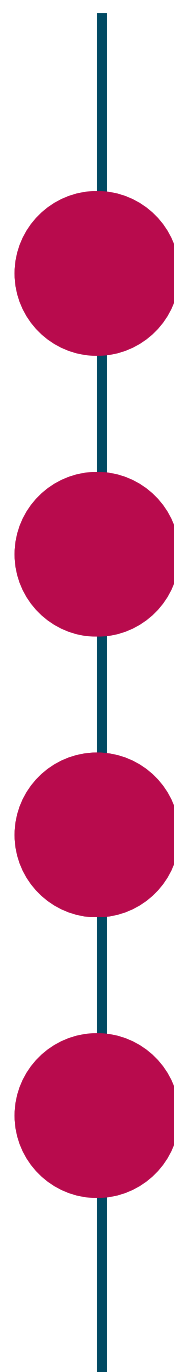
## Profiling Business Innovation in Queensland - a collaborative research project with Bond University

This research project was developed to generate multi-jurisdictional insights about Queensland innovation-active firms between 2011 and 2021.

## More information

For more information about the SOI Project, the collaborative study and or this Insights Note contact: [advancequeenslandcorro@dtis.qld.gov.au](mailto:advancequeenslandcorro@dtis.qld.gov.au)

Department of Environment, Science and Innovation



## Data Source

This Note uses the Australian Bureau of Statistics (ABS) Business Longitudinal Analysis Data Environment (BLADE) dataset.

The primary data source utilised within BLADE is the Business Characteristics Survey (BCS) and from 2021 the Innovation Module. The ABS administer this annual survey and collects data on business characteristics, including innovation.

## Limitations

The results here may differ from the publicly available BCS results. Weightings may have been applied by the ABS in their analysis for the publicly available results.

Due to privacy and ABS disclosure restrictions, some data is missing in certain years.

Furthermore, the BCS has had changes over the years. For example, 2021 data should be read with some caution as this is the first iteration of a biennial survey period.