

Theme 4: Support the Organisation

The output of maintenance analytics creates new decision-making challenges for maintainers, engineers, and managers. The most significant risk is that the information is simply not used in Organisations.

This theme will adopt a multilevel perspective to build a comprehensive picture of the factors that support decision making when using complex data. This aspect of the project translates the core research programs into business practice by integrating user issues hierarchically at three levels of analysis:

- 1

Cognitive - is particularly important for maintainers using information delivered through novel media and in a context that is different to traditional maintenance systems,
- 2

Task demands - is particularly important for engineers designing models, and for the maintainers using models. Use of data will be inhibited if the output of models is not a meaningful part of the overall task requirements of maintainers or generates tasks that cause fatigue, boredom, or distress
- 3

Organisational culture. is particularly important for managers implementing decisions based on analytic models. For example, if an underlying cultural belief places primacy on the intuition and implicit skill of senior managers, then analytics models can undermine the role of managers and limit the use of data output

This translation project will work with the industry partners to implement a plan based on research at each level to integrate across the three levels.

A framework around "person, tasks, and culture" will be developed that is specific to the maintenance context of the organisation and involves stakeholders from the maintainer, the engineer, and the manager groups. It is essential that the overall system, not just individual elements, supports the translation of analytic models into business practice.

Publications

- [A deep dive into worker psychological well-being in the construction industry: A systematic review and conceptual framework \(...\) —](#)

Journal Article

[Dr Keyao Li](#)

Authors: Keyao Li; Dan Wang; Zitong Sheng, and Mark A. Griffin,
2022-05-28

- [Building a data-driven future for construction team? Capabilities matter \(...\) —](#)

Conference Publishing

[Dr Keyao Li](#)

Authors: Keyao Li, Dan Wang, Mark Griffin
2022-06-05

- [Embedding data science innovations in organizations: a new workflow approach \(...\) —](#)

[Dr Keyao Li](#)

Authors: Li, K., Griffin, M.A., Barker, T., Prickett, Z., Hodkiewicz, M.R., Kozman, J., and Chirgwin, P.
2023-11-03

- [How Do Non-Work Individual Factors Affect Worker Well-Being in the Construction Industry? A Systematic Review and Meta- Analysis. \(...\) —](#)

Conference Publishing

[Dr Keyao Li](#)

Authors: Li, K, Wang, D, Sheng, Z and Griffin, M

2021-09-06

- [Managing Disputes for a Sustainable Construction: A Perspective of Settlement Facilitating Elements in Negotiations \(...\)](#) —

Journal Article

[Dr Keyao Li](#)

Authors: Sen Lin, Keyao Li and Saion Cheung

2023-10-12

- [Prevention-focused leadership and well-being during the pandemic: The mediating role clarity and workload \(...\)](#) —

Journal Article

[Dr Keyao Li](#)

Authors: Li, Keyao Griffin, Mark A

2022-07-25

- [Safety behaviours and job satisfaction during the pandemic: The mediating roles of uncertainty and managerial commitment \(...\)](#) —

Journal Article

[Dr Keyao Li](#)

Authors: Dr Keyao Li, Prof Mark Griffin

2022-09-01

- [Unpacking human systems in data science innovations: Key innovator perspectives \(...\)](#) —

Journal Article

[Dr Keyao Li](#)

Authors: Keyao Li, Mark A. Griffin

2023-09-11

- [Using job characteristics to inform interface design for industrial maintenance procedures \(...\)](#) —

Conference
Publishing

[Prof Mark Griffin](#)

Authors: Woods, C., Griffin, M. A., French, T., &

Presentations

- A data fit organization and new approach in building organizational data capabilities (...) —



Dr Keyao Li

Research Fellow

Theme 4
2022-03-03

- Are we ready for a rational discussion? The existence of biases in construction dispute negotiation (...) —



Dr Keyao Li

Research Fellow

Theme 4

2022-05-29

- Are we ready to transform?
Building capability to adopt
data science solutions. (...) —



Dr Keyao Li

Research Fellow

Theme 4

2021-05-14

- [Building a Data Fit Organisation \(...\)](#) —



THE UNIVERSITY OF
**WESTERN
AUSTRALIA**

Prof Melinda
Hodkiewicz

Chief Investigator

Theme 1

2022-09-07

- [Data fit organisation pilot research project: Insights from a data workflow by Eden Li and Mitin Hirani \(...\)](#) —



Dr Keyao Li

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Theme 4

2022-03-11

- [Employee Digital Capabilities and Talent Development \(...\)](#)



Dr Keyao Li

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Theme 4

2022-03-29

- [Global PM Days Keynote Speech \(...\)](#) —



Dr Keyao Li

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Theme 4

2022-05-29

- [How Do Non-Work Individual Factors Affect Worker Well-Being in the Construction Industry? \(...\)](#) —



Dr Keyao Li

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Theme 4

2021-09-13

- [Human Side of Data Science](#)
[Innovation Management \(...\)](#) —



Dr Keyao Li

Research Fellow

Theme 4

2022-09-07

- Key features of future work and capability requirements for a thriving workforce (...) —



Prof Mark Griffin

Theme Lead

Theme 4

2022-02-03

- Master Class - Rethinking Technology-Led Maintenance Transformation Implementation People are the Key to Success (...) —



Dr Keyao Li

Research Fellow

Theme 4

2021-03-04

- Nurturing Collaboration? A Skill Set for University-Industry Collaboration Champions (...)
-



Dr Keyao Li

Research Fellow

Theme 4

2021-06-16

- [The International Conference on Smart Computing & Communications \(ICSCC 2019\) \(...\)](#) —



Prof Andrew Rohl

Training Centre
Director

Directorate

2019-06-29

- [Unlocking the Potential of Data Science: Developing an Assessment Tool for Organisational Capability \(...\)](#) —



Dr Keyao Li
Research Fellow

Theme 4
2023-05-19

Tools

Content by label

There is no content with the specified labels

The Team

Lead

- [Prof Mark Griffin](#) (...) —



[Prof Mark Griffin](#)

Theme Lead

[Theme 4](#)

Partner Investigators

Content by label

There is no content with the specified labels

Research Fellows

Content by label

There is no content with the specified labels