



FIT2002, A1 – Part 1

# DELIVERABLE 1: PROJECT CHARTER & BUSINESS JUSTIFICATION

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Generative AI Declaration:

OpenAI ChatGPT 4o-mini has been used in this piece for research purposes, **some** anecdotal evidence, grammatical corrections, sentence structuring and enhance overall understanding.

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Project Title:

Digital Learning Spaces Enhancement

Project Start: 3<sup>rd</sup> January 2025

Project End: 3<sup>rd</sup> January 2026

Project Overview:

Upgrade existing learning spaces with advanced digital technologies to support hybrid and flexible learning models

Budget Information:

Monash University's *Campus Digitisation Initiative* portfolio is allocated \$3.5 million, with this project's constraint being \$875,000.

The development costs approximate to \$758,000 with a further 5% of the project's budget distributed to an emergency contingency fund.

Project Manager:

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# Objectives

The objectives of this project align with Monash University's *Campus Digitisation Initiative* and the United Nations Sustainable Development Goals (SDGs), particularly SDGs 4 and 9 (Refer to Appendix A).

1. Complete a needs assessment by Q1 2025 of all teaching spaces to identify those that do not support the University's hybrid concurrent teaching model (Monash University, 2022).
2. Acquire and install necessary hardware for hybrid teaching in 50% of identified spaces by Q2 2025.
3. Test all new installations within two weeks to ensure 100% compliance with OHS safety standards (Faculty OHS Committee, 2016).
4. Provide formal training and learning modules to enhance IT support capabilities post-deployment by 31st August 2025.
5. Ensure all digital content complies with WCAG 2.1 guidelines by Q1 2025 (W3C, 2018).
6. Improve Moodle quizzes with multimedia, gamification, and AI feedback to increase student engagement before Semester 1, 2025, with final updates by 31st July 2025.

# Business Justification

## Background

The Digital Learning Spaces Enhancements Project is part of Monash University's broader *Campus Digitisation Initiative*, which aims to transform the campus with smart, sustainable technologies (Monash University, 2025). This project focuses on:

- Equipping classrooms with advanced digital tools.
  - Improve efficiency and implementation
  - Increased adoption of current and new technologies
- Improving student experience and accessibility for remote and on-campus students.
  - Improve student experience (satisfaction and engagement)
  - Promote and achieve greater equity and diversity
- Increasing student engagement through interactive technologies.
  - Improve student experience
  - Increase digital literacy

Monash University is a global leader in higher education, ranking 44th globally and 2nd in Australia (Monash University, n.d.).

## Project Alignment

Advanced digital technologies are the way forward in higher education whereby a strategic priority in transformative learning experiences is a key factor in modern learning. It can particularly support teacher-student interactions that ultimately lead to improved reported outcomes in satisfaction, retention and engagement.

This project aligns with the University's commitment to inclusivity and accessibility by complementing its current hybrid learning models. This supports the University's role in promoting active learning and, "fostering a learner centred environment by providing opportunities for students (Monash University, n.d.-b)."

Furthermore, this project also aligns the University's strategic goals by including those such as its sustainability initiatives for increased energy efficiency of digital technologies and that of SDGs 4 and 9. With multiple focuses, promoting equitable access to resources for on-campus and remote students and; implementing accessibility measures for a range of diverse needs empowers the project to facilitate positive outcomes in inclusivity, quality education and innovation both in local and global contexts.

Key Performance Indicators (KPIs) are a useful tool to measure the project's performance in correlation with the University's broader vision and SDGs. By confirming at least 40% of all classrooms are equipped with advanced digital tools and ensuring 90% of teaching staff integrate at least one tool into their teaching, it supports the drive for innovative and high-quality

education and aligns with the University's vision for cultivating advancements in modernisation therefore enhancing quality of education and preparing students for the future.

Further, achieving at least 85% student satisfaction with higher learning, 5% annual growth in enrolment from underrepresented groups (low SES, Indigenous and students with disabilities), 10% increase in international student enrolment through hybrid learning models and 100% compliance with WCAG 2.1 accessibility standards for all digital learning spaces align closely with another of the University's wider aims in fostering inclusivity, encouraging collaboration and communication and ensuring global access to high-quality education.

Aiming for 75% of students actively using interactive technologies, such as virtual collaboration tools, and 90% of students completing digital skills training modules support the University's wider ambitions for enhancing digital competencies across disciplines while also aligning with SDG 9 for technological innovation and advancement.

## Current Situation & Problem

Although the University has distinguished itself nationally as an industry leader, some hindering challenges need to be overcome to further deliver engaging higher education that meets modern expectations.

Presently, there is no recent data which illustrates the current state of classroom technology within the teaching spaces that effectively support the hybrid and flexible learning models. Consequently, this has led to a gap in comprehensively managing resources which is vital in excellent teaching and learning.

According to Photopoulos et al. (2022), this has the potential danger of lower engagement in hybrid classes compared to in-person modes where Independent Schools Victoria (2022) found by as much as 27%. Furthermore, Elkins (2015) found lacking oversight and resource management of courses involved in hybrid and flexible learning models has led to a 10-20% lower satisfaction rate compared to those in which are completely in-person.

The University's strong focus on advancing its use of digital technologies is important in also benchmarking and remaining competitive alongside other notable institutes, both globally and nationally. Renowned establishments are significantly investing into the digital capacity of their teaching spaces such as the University of New South Wales, Adelaide University, Massachusetts Institute of Technology and Stanford University, ultimately manifesting a risk of deterring prospective students, talented candidates, potential research funding, partnerships and global prestige without similar investments.

These details emphasise the urgent concern to assess the specific technological and pedagogical needs of the University to implement impactful solutions tailored to its diverse teaching and learning environments.

## Opportunities

The Project is prospective to the University beyond just the lucrative possibilities of modernising hybrid and flexible learning environments. By further embracing advanced digital technologies,

there is also potential for a lasting impact that benefits the University in diverse and meaningful ways.

Each objective is connected to measurable KPIs that ensure the project delivers tangible value. A comprehensive understanding of technologies in 100% of all teaching spaces within the University drives data supported decision making and efficient resource allocation (O<sup>1</sup>1). This evaluation is vital in economically upgrading the hybrid learning capabilities, thus contributing directly to improved student satisfaction with hybrid delivery while further advancing the University's mission of providing flexible, innovative education (O2).

Completely adhering to OHS compliance by achieving 100% safety approval for all installations, reinforce the University's commitment to safe, inclusive learning environments that also align with its broader goal of nurturing a safe and inclusive environment for students and staff (O3).

Further enhancing the capabilities of IT support (O4) by aiming to achieve 90% in first time resolution rates harmonises with the University value of operation excellence and consequently also benefits student and staff satisfaction.

Achieving 100% compliance in WCAG 2.1. demonstrates the University's efforts in upholding the highest web accessibility standard, thereby embracing inclusivity and supporting its vision for reducing inequality. Combining this benefit with further innovation of digital learning tools like Moodle (O6) with particular focus to usability, user experience, features and behaviourally (non-functional) enables the potential for improvements in student engagement, satisfaction and participation (in activities and other formative learning materials).

Coordinating with SDGs benefits the University beyond just the project lifespan, fostering future growth and adaptability. By advancing digital competencies, accessibility and inclusivity, the University embraces its role in preparing students for global challenges while reinforcing its commitment to equitable education. This strategically oriented approach further fortifies the University as a forward-thinking institution, delivering lasting societal and academic benefits.

## Cost-Benefit Analysis

(Refer to Appendix B for full cost breakdown)

According to Hays (2024), total IT personnel costs in Year 0 were calculated as \$348,332 with further consideration given to partial employment requirements of certain roles like the QA and BA due to the hybrid developmental approach (further discussed in Development Approach p. 8.)

The projected hardware costs, including procurement and installation, for the teaching equipment needed to facilitate hybrid learning environments (based upon KPI objective) is \$300,000 as an analogous estimate sourced from other similar industry projects reputable vendors. A further \$75,000 is estimated for the necessary components to perform the needed enhancements to Moodle and accessibility tools to ensure compliance with WCAG 2.1. guidelines.

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<sup>1</sup> O: refers to objective from Objectives, p. 3.

Training and documentation forecasts costs of \$35,000 with a reasonable approximation of \$25,000 for training materials, conducting workshops and certifying staff depending on the scale and magnitude of participants. \$10,000 is a conservative estimation for comprehensive user guides, system manuals and online help documentation for Moodle and other new classroom technologies.

Finally, a contingency fund is allocated 5% of the budget in anticipation of events (known unknown) that can potentially threaten the project.

The resulting cumulative total of these components equates to \$802,082, which remains within the bounds of the project's cost constraint.

#### Net Present Value (NPV) & Return on Investment (ROI)

(Refer to Appendix C for full NPV Analysis and ROI Calculation)

Using the current official discount rate of 4.35% from ASX (2024), this project's financial performance is predicted to yield an NPV of \$137,788 in Year 5. This value combined with an ROI of 17.2% is indicative of financial viability and a modest dividend upon initial investment. However, the project's intrinsic value is seen through the long-term strategic benefits it delivers to learning outcomes, project and broader goals and further lasting impact for the University and stakeholders.

The key sources of benefits in the analysis of cash inflows are:

- 10% annual improvement in international student enrolment resulting in average revenue of \$30,000/year per student.
- 5% annual improvement in underrepresented groups resulting in average revenue of \$15,000/year per student
- Increased student satisfaction leading to decreased student withdrawal by 2% resulting in revenue per student retained of \$20,000/year
- Forecasted revenue of \$20,000/year by reducing administrative costs from enhancing hybrid teaching
- Increased student satisfaction and improvement to the University's reputation is expected to yield improved participation in university organised events, increased merchandise sales and enablement of potential leveraging of its physical assets (e.g. lecture halls, conference rooms etc.) for private hire. This generates an additional \$10,000/year of revenue.

The yearly ongoing/maintenance costs have been calculated as \$88,000 which apply from Year 1 of the project's lifespan. These figures have been derived from analysis of anecdotal data from professionals in the field and further analogous estimates.



## Success Criteria

This project's success is defined in its ability to effectively achieve strategic goals, deliver measurable improvements in learning environments and contribute to the University's wider vision and long term goals.

Such success criteria involving KPIs associated with the project's objectives are:

- Improved hybrid and flexible learning satisfaction rates by 15%
- Total compliance with WCAG 2.1. accessibility standards
- Increased reported student engagement by 20%
- Operational gains in IT support indicated by 90% resolution rate for first time queries.
- Growth observed from the first year following project completion:
  - o 5% annual rise in enrolment from underrepresented groups
  - o 10% increase in international enrolments in hybrid learning capabilities

Additionally, some further benchmarks involving the project constraints are:

- Successful completion of project objectives within the scheduled timeframe for planning, executing, monitoring and controlling and closure.
- Successfully achieving all project outcomes, products and deliverables within the allotted budget of \$875,000

## Development Approach

By carefully considering the project's objectives and the nature of the product, outcome, and deliverable outputs, hybrid development is deemed the most suitable approach for this endeavour given the need to balance structure and flexibility (Leach, 2020). Predictively approaching Objectives 1 (needs assessment) and 3 (compliance testing) is the most appropriate strategy given they require thorough planning, documentation, and sequential execution, thus highly resonating with the traditional phases of the Waterfall framework (Boehm & Turner, 2018). The remaining objectives most benefit from an adaptive approach, whereby iterative development of Objective 2 (installing hybrid learning technologies) and 6 (renovating Moodle content) enables more effective incremental testing, gathering feedback, and adjustments (Larman & Vodde, 2016). Moreover, IT support training can leverage an iterative approach by refining materials based on received feedback (Rigby et al., 2016).

Thus, a hybrid development model ensures flexibility to adapt to stakeholder feedback and potential technical or logistical challenges while adhering to project deadlines and achieving KPI targets (VersionOne, 2020).

## Roles & Responsibilities

PROJECT ROLE	NAME	POSITION IN ORGANISATION	CONTACT INFORMATION	STAKEHOLDER SIGNATURE
<b>PROJECT MANAGER</b>	Akhil Boda	Senior Systems Engineer	<a href="mailto:akhil.boda@itprojectmanagement.com">akhil.boda@itprojectmanagement.com</a> +61 412 345 678	
<b>BUSINESS ANALYST (BA)</b>	Emily White	Junior Business Analyst	<a href="mailto:emily.white@itproject.com">emily.white@itproject.com</a>	
<b>SOFTWARE DEVELOPER</b>	David Green	Junior Software Developer	<a href="mailto:david.green@itproject.com">david.green@itproject.com</a>	
<b>QUALITY ASSURANCE (QA) SPECIALIST</b>	Sarah Brown	Quality Assurance Technician	<a href="mailto:sarah.brown@itproject.com">sarah.brown@itproject.com</a>	
<b>IT SUPPORT TRAINER</b>	Mark Davis	IT Support Manager	<a href="mailto:mark.davis@monash.edu.au">mark.davis@monash.edu.au</a>	
<b>ACCESSIBILITY SPECIALIST</b>	Olivia Turner	Entry-Level Web Developer	<a href="mailto:olivia.turner@itproject.com">olivia.turner@itproject.com</a>	
<b>STAFF REPRESENTATIVE</b>	Dr. Alex Johnson	Chief of Staff	<a href="mailto:alex.johnson@monashleadership.edu.au">alex.johnson@monashleadership.edu.au</a>	
<b>STUDENT REPRESENTATIVE</b>	Natalie Harris	Director of Student Services	<a href="mailto:natalie.harris@monashleadership.edu.au">natalie.harris@monashleadership.edu.au</a>	
<b>SYSTEMS ADMINISTRATOR</b>	Tom Williams	Senior IT Administrator	<a href="mailto:tom.williams@monash.edu.au">tom.williams@monash.edu.au</a>	
<b>COMMUNICATION AND REPORTING</b>	Rachel Adams	Project Coordinator	<a href="mailto:rachel.adams@monash.edu.au">rachel.adams@monash.edu.au</a>	
<b>PROJECT OWNER</b>	Max Lord	Chief Information Officer	<a href="mailto:max.lord@monashleadership.edu.au">max.lord@monashleadership.edu.au</a>	

## Comments

[Additional comments from stakeholders]

## Sign Off

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Akhil Boda, Project Manager

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Max Lord, Project Owner

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# Appendices

## Appendix A: SDG Goals

- United Nations SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (United Nations, 2015)
- United Nations SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation (United Nations, 2015)

## Appendix B: Project Cost Breakdown

### i) Personnel Costs: **\$348,332**

Role	Monthly Rate (AUD)	Duration (Months)	Total Cost (AUD)
Project Manager	\$12,500	12	\$150,000
Software Developer	\$10,000	4	\$40,000
Quality Assurance (QA)	\$9,167	4	\$36,668
Business Analyst (BA)	\$10,833	8	\$86,664
IT Support Trainer	\$7,500	2	\$15,000
Accessibility Specialist	\$10,000	2	\$20,000

NB: Approximate costs for IT personnel are according to the (Hays, 2024) Salary Benchmarking Report.

### ii) Hardware and Software Costs: **\$375,000**

Item	Estimated Cost (AUD)
Hardware (cameras, microphones, smart boards)	\$300,000
Software and Licenses (Moodle enhancements, WCAG tools)	\$75,000

### iii) Training and Documentation: **\$35,000**

Item	Estimated Cost (AUD)
Training Materials and Sessions	\$25,000
Documentation and User Manuals	\$10,000

### iv) Contingency Reserve (5% of project budget): **\$43,750**

v) **Total Cost Breakdown**

Item	Estimated Cost (AUD)
Personnel	\$348,332
Hardware and Software	\$375,000
Training and Documentation	\$35,000
Contingency Fund	\$43,750
Total Estimated Cost: <b>\$802,082</b>	

## Appendix C: NPV Analysis and ROI Calculation

$$NPV = \frac{R_t}{(1 + i)^t}$$

$$ROI = \frac{\text{Total Discounted Benefits} - \text{Total Discounted Costs}}{\text{Year 0 Costs}}$$

**Ongoing/Maintenance Costs (annually): \$88,000**

Category	Estimated Annual Cost (AUD)
IT Support and Staff (1 part time staff)	\$50,000
Hardware Support and Maintenance	\$3,000
Software Licenses and Updates	\$15,000
Training and Skill Updates	\$5,000
Administrative Overheads	\$5,000
Miscellaneous Expenses (unforeseen minor costs or necessary repairs outside of contract terms)	\$8,000

Discount rate	4.35%						
Discount factor	1.00	0.96	0.92	0.88	0.84	0.81	
Year	0	1	2	3	4	5	TOTAL
Project 1							
Costs (cash outflows)	\$802,082	\$88,000	\$88,000	\$88,000	\$88,000	\$88,000	\$1,242,082
Benefits (cash inflows)	\$0	\$265,000	\$282,250	\$301,113	\$321,744	\$344,313	\$1,514,420
Net cash flow	(\$802,082)	\$177,000	\$194,250	\$213,113	\$233,744	\$256,313	\$272,338
Discounted costs	\$802,082	\$84,332	\$80,816	\$77,447	\$74,219	\$71,125	\$1,190,020
Discounted benefits	\$0	\$253,953	\$259,208	\$265,004	\$271,357	\$278,286	\$1,327,808
Discounted cash flow	(\$802,082)	\$169,621	\$178,392	\$187,557	\$197,138	\$207,161	\$137,788
Cumulative disc cash flow	(\$802,082)	(\$632,461)	(\$454,068)	(\$266,512)	(\$69,373)	\$137,788	
NPV	\$137,788						
ROI	17.2%						

## Assumptions

- This Project Charter and Business Justification assumes that the scope excludes activities beyond Monash University's Clayton campus.
- Benefits analysis involving student revenue acts only as a general indication and is not an exact calculation involving unit/degree tuition costs.