DIGITAL TWIN
MICROCREDENTIAL

OVERVIEW DOCUMENT

TABLE OF CONTENTS

INTRODUCTION

TEMPO was established to fill a void, and ignite an opportunity.

The built and natural environment sector and the policy making that shapes it, along with the practitioners who plan and design it, has struggled to keep pace with digital transformation. And the challenge is real - the pace of change is eyewatering.

The way digital and data is shaping the built environment, and the economy, is the challenge for the decade. A decade that is relying on dramatic transformation to achieve our climate commitments, productivity gains and enhance human prosperity and wellbeing.
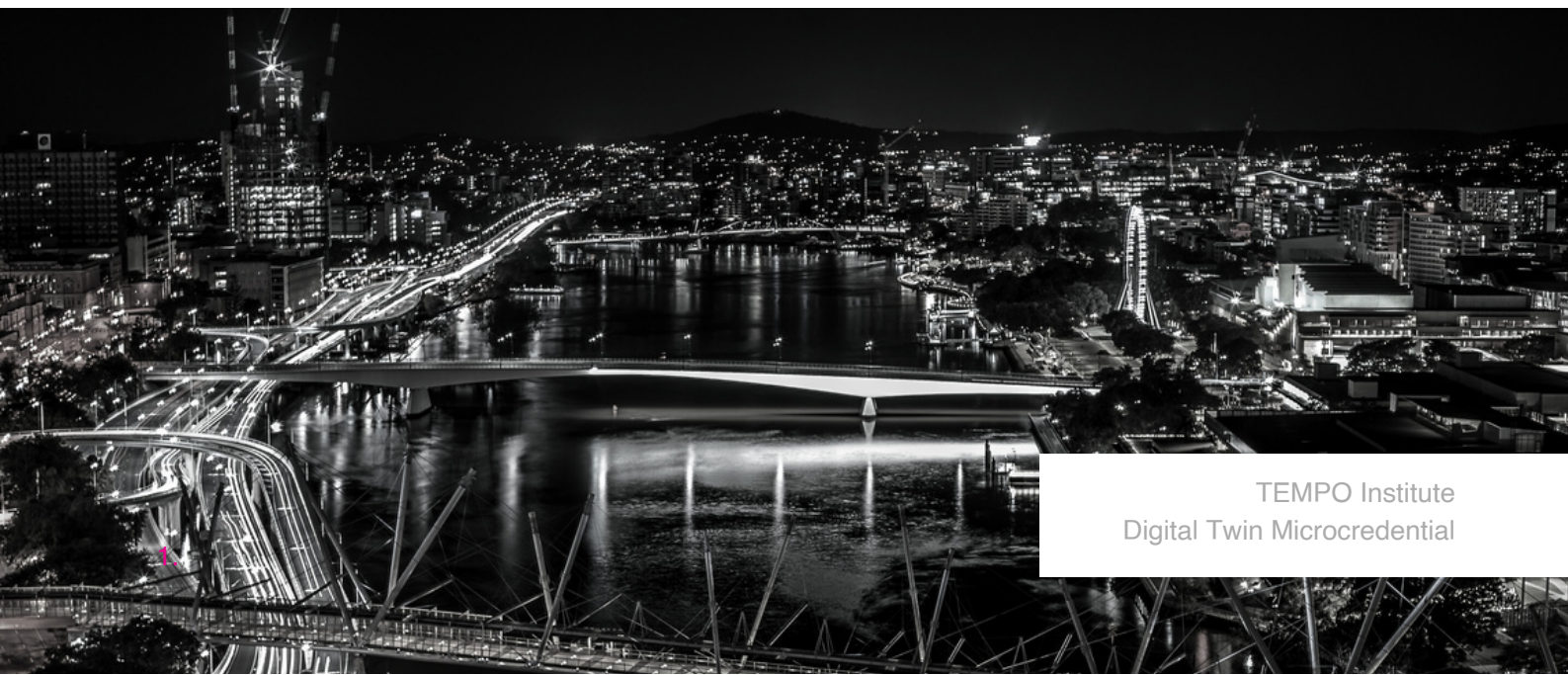
The built environment (that we shape) is one of the most significant contributors to our wellbeing and prosperity, and at TEMPO we believe digital and data can play a critical role.

With a combined 60 years of experience in the built and natural environment, the Co-Directors of TEMPO have shaped this Digital Twin microcredential based on years of practice, research, policy advisory, standards development and industry advocacy.

Comprising a suite of learning modules underpinned by standards, driven by best practice and informed by real life experience, this microcredential is the first of it's kind globally.

The goal is to support the capability development of policy makers and practitioners in shaping high performing built environments.

Digital Twin is the starting point for this transformation, and this microcredential is the enabler for action.

LEARNING OUTCOMES

The Digital Twin microcredential equips policy makers, practitioners and enthusiasts alike with knowledge through four (4) modules.

The learning outcomes of the microcredential include:

- Building your understanding of Digital Twin, what benefits it can bring to an organisation or project, and how you build a roadmap to success
- Orienting you with a deep understanding of the five (5) core Digital Twin capabilities
- Creating a roadmap that will guide your Digital Twin strategy and leadership efforts
- Gaining hands-on experience in building Digital Twin use cases
- Growing your knowledge of the necessary technology and data enablers to support Digital Twin capability.

" To build awareness and understanding of how to apply Digital Twin capabilities in urban contexts.

MICROCREDENTIAL STRUCTURE

The Digital Twin microcredential is arranged into four (4) modules, each with a focus on building awareness and capability around the key areas that enable Digital Twin action.

Each of these modules is delivered in a way that maximises learning and networking. Parts are offered as self-paced recordings, and others online and in real time.

MODULE 1: Fundamentals

It all starts with the fundamentals - the what, why and how. This module will cover definitions, benefits, standards, capabilities maturity and examples of use cases and case studies. The four step Digital Twin pathway will also be overviewed.
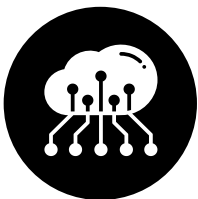
MODULE 2: Strategy and Leadership

Building the necessary strategy and leadership capabilities, along with technical capabilities, is essential for Digital Twin success. Module 2 will cover these issues in an interactive session and equip you with the know how on building a Digital Twin Roadmap for your organisation or project.

MODULE 3: Use Cases

This module involves an overview of how to build a use case library for your organisation, in a way that is aligned with your organisation's goals, community aspirations and built environment context. Students will participate in a hands-on use case ideation workshop.

MODULE 4: Technology and Data Enablers

The last piece of the Digital Twin puzzle is to have a plan to grow your technology and data capability to support the needs of your strategy and the use cases you have developed. In this Module you will be oriented with the key decisions you must navigate in selecting your technology and data enablers, and their purpose.

MODULE SCOPE

Each of the modules contained in the Digital Twin microcredential have been developed based on the collective experience of the course instructor's in developing Digital Twin strategy, deploying Digital Twin projects, curating leading industry content for Digital Twin capacity building and involvement in the development of Digital Twin standards.

MODULE	SCOPE	
Module 1: Fundamentals	• Definition • The core capabilities • Benefits and rationale • Maturity models	• Contexts and applications • Use case examples • Case studies
Module 2: Strategy and Leadership	• Going deep into the four phase Digital Twin pathway • Hands on activity with the Digital Twin Strategy Canvas template	• Constructing a roadmap to guide your action and investment
Module 3: Use Cases	• What makes a good use case and why • Structuring use cases • Connecting use cases with business goals	• Use case ideation workshop • Sorting and prioritising use cases
Module 4: Technology and Data Enablers	• Matching technology and data enablers to your strategic needs and use cases	• Constructing the procurement questions you will need to ask • Showcase of solutions

ASSESSMENT

Each module of the Digital Twin microcredential is accompanied by an assessment item.
Awarding of credential's is only given upon successful completion of the assessment item
for each relevant module(s). These are summarised below:

MODULE 1: Fundamentals

This assessment item comprises two parts:
1. an online assessment of 20 multiple choice questions (75% pass mark)
2. a reflection of no more than 500 words outlining your perspectives on how
   Digital Twin capability can support your work. This is awarded as either a
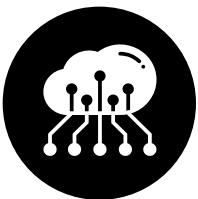   pass or fail.

MODULE 2: Strategy and Leadership

This module includes a combined assessment item with Module 3 involving a
short-form written piece of no more than 500 words refelcting on the Module 2
workshop. This item is reviewed and awarded as either pass or fail.

MODULE 3: Use Cases

This module includes a combined assessment item with Module 2 involving a
short-form written piece of no more than 500 words refelcting on the Module 2
workshop. This item is reviewed and awarded as either pass or fail.

MODULE 4: Technology and Data Enablers

This assessment item involves completion of an online form, summarising
your technology and data needs to support your strategic goals. The
completed form is reviewed and awarded as either pass or fail.

Where possible, the assessment items have been constructed as reusable templates that
can support the students real world application of Digital Twin capability.

CREDENTIALS

There are three progressive awards that form the Digital Twin microcredential. At the successful completion of all modules, the microcredential is awarded.

The awards are offered as follows:

Award 1: Fundamentals
- Awarded after successful completion of Module 1: Fundamentals and a pass is attained for the assessment item

Award 2: Strategy and Leadership
- Awarded after successful completion of Module 2 (Strategy) and Module 3 (Use Cases) and a pass is attained for the assessment items

Award 3: Digital Twin Microcredential
- Awarded after successful completion of all four modules, including Modules 1-3 and Module 4: (Technology and Data Enablers), and a pass is attained for the Module 4 assessment item

Each of the three awards depicted above are designed to be 'stand alone', with participants having the option to complete the modules relevant to their learning needs. The full microcredential (the third award) can only be recieved after successful completion of all four modules.

FACULTY

TEMPO's Director's, Adam Beck and Gavin Cotterill, are the lead faculty members delivering the Digital Twin Microcredential. They have a combined 55+ years in the built environment.

Adam Beck | Co-Founder and Director, TEMPO Institute
Adam is Head of Digital Urbanism at ENE.HUB, a digital infrastructure company helping shape high quality public places and spaces. He is an urbanist who has worked for private sector consultancies and leading global non-government organisations for almost 30 years.

Adam established the Smart Cities Academy while in his role as Founding Executive Director at Smart Cities Council Australia New Zealand. He created the training program for the EcoDistricts Accredited Practitioner program in the United States, and before that led the education business at the Green Building Council of Australia in his capacity as Executive Director.

Gavin Cotterill | Co-Founder and Director, TEMPO Institute
Gavin is the founder and managing principal of GC3 Digital and is an acclaimed Digital Twin expert, who is trusted by public and private executives to develop world leading Digital Twin strategies and programs.

With a career spanning three decades and with diverse experience across the built and natural environment Gavin demonstrates a unique blend of policy, strategy, and business case experience. Gavin is a visionary leader committed to building a greener, more equitable world. He champions a better future through his leadership efforts in various industry groups.

REGISTRATION

TEMPO is accepting registrations for its bootcamp series for 2023/24, with the following dates scheduled:

Bootcamp 1: December 2023
- Monday 4th | 9:00am - 12:00pm and 1:00pm - 4:00pm AEDT
- Tuesday 5th | 9:00am - 12:00pm and 1:00pm - 4:00pm AEDT

Bootcamp 2: February 2024
- Monday 5th | 9:00am - 12:00pm and 1:00pm - 4:00pm AEDT
- Tuesday 6th | 9:00am - 12:00pm and 1:00pm - 4:00pm AEDT

Bootcamp 3: May 2024
- Monday 6th | 9:00am - 12:00pm and 1:00pm - 4:00pm AEST
- Tuesday 7th | 9:00am - 12:00pm and 1:00pm - 4:00pm AEST

TUITION FEES

Participants can register for modules individually, or at a reduced full package rate, as follows:
- Module 1: $450 (+GST)
- Module 2 and 3: $900 (+GST)
- Module 4: $450 (+GST)
- All four modules ($1,800 - 20% discount): $1,440 (+GST)

Price on application for organisations seeking multiple staff participation, or in-house delivery options.