

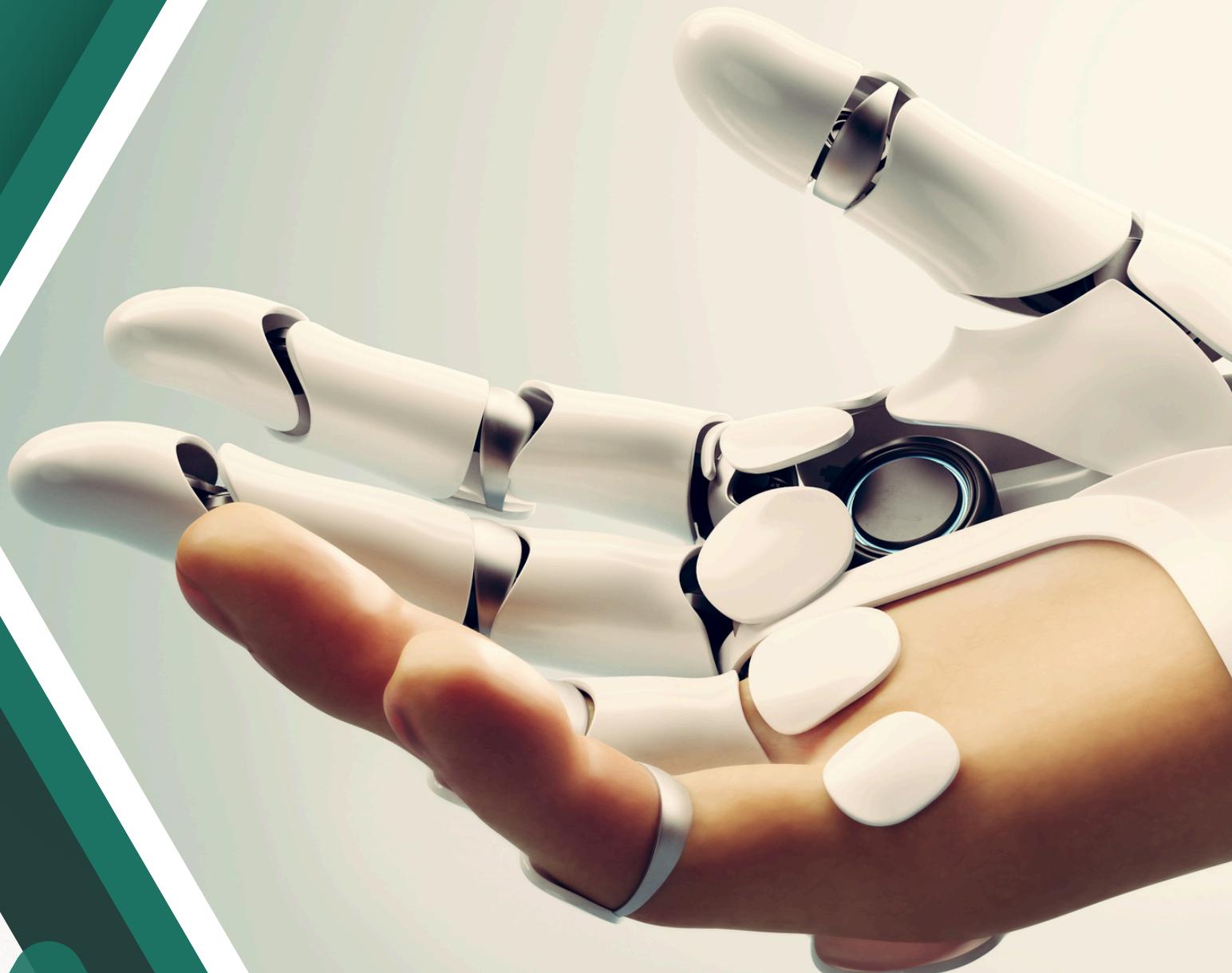
INTEGRATED PROJECT & CONTEXT-BASED LEARNING (IPCBL) FRAMEWORK IN ICT EDUCATION

jacquim.github.io\icpbli

Date: 31 July 2025

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AGENDA

- Background & Introduction **01**

- Research Design **02**

- Technical Considerations **03**

- Framework Implementation **04**

- Results & Findings **05**

- Future Work **06**

- Conclusion **07**

BACKGROUND

► **Industry-Relevant Skills**

A need for innovative teaching and learning methodologies that better equip students with practical, industry-relevant skills exists (Khasawneh, 2024).

► **Real-World Applications**

Traditional assessment methods lack the integration of real-world applications (Janse van Rensburg, 2022).

► **Competency-Based Learning**

A framework that promotes competency-based learning through project-driven and context-aware education is needed (Pratisto and Danoetirta, 2025) & (Molina-García et al., 2024).

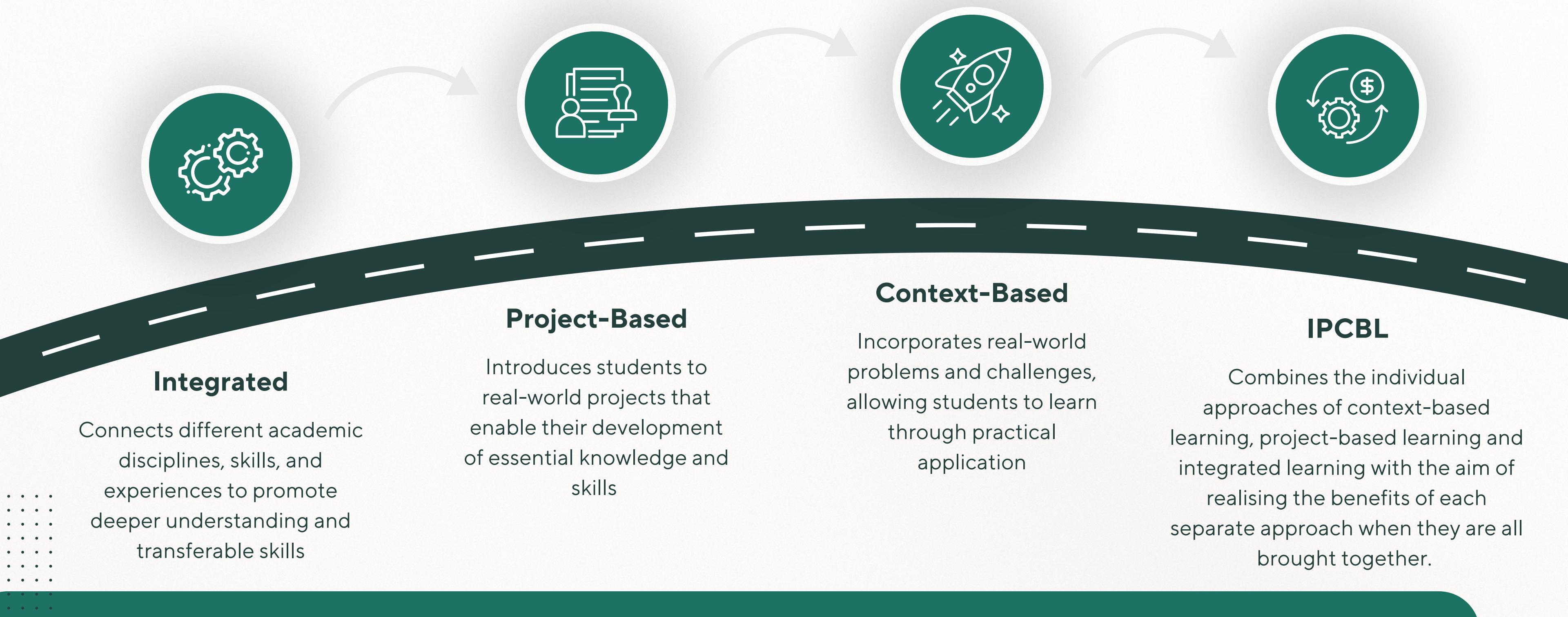


OBJECTIVE

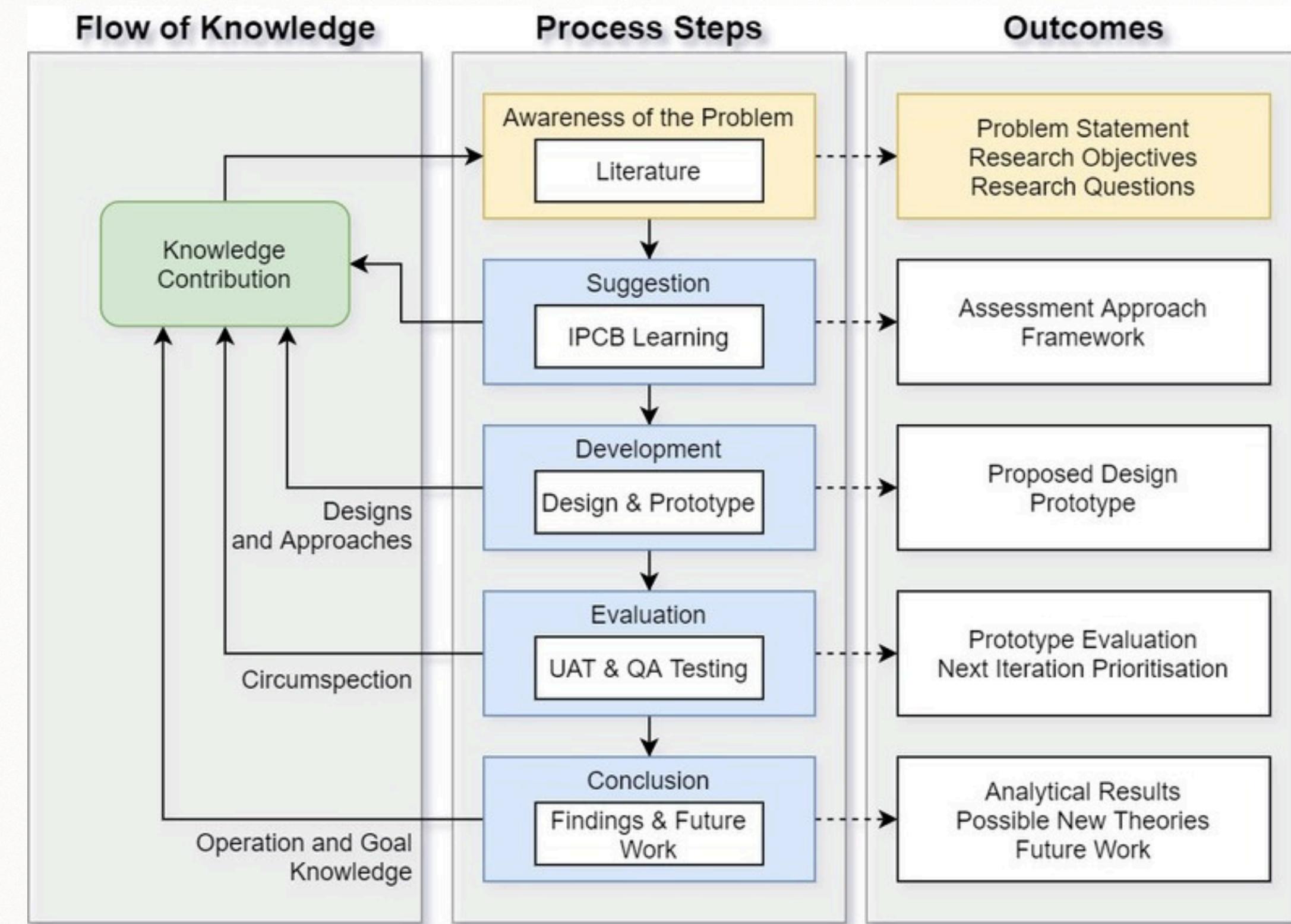
To develop and evaluate a framework that fosters deep learning, problem-solving, and skill acquisition within an ICT education context.



IMPLEMENTATION PLAN



RESEARCH DESIGN



IPCBL IMPLEMENTATION

Industry Workplace

Context

Capstone Project #1

Discipline - Foundational Theory

Static Delivery Type

Individual Team Composition

Capstone Project #2

Discipline - Progressive Theory

Static Delivery Type

Individual/Interdisciplinary Team Composition

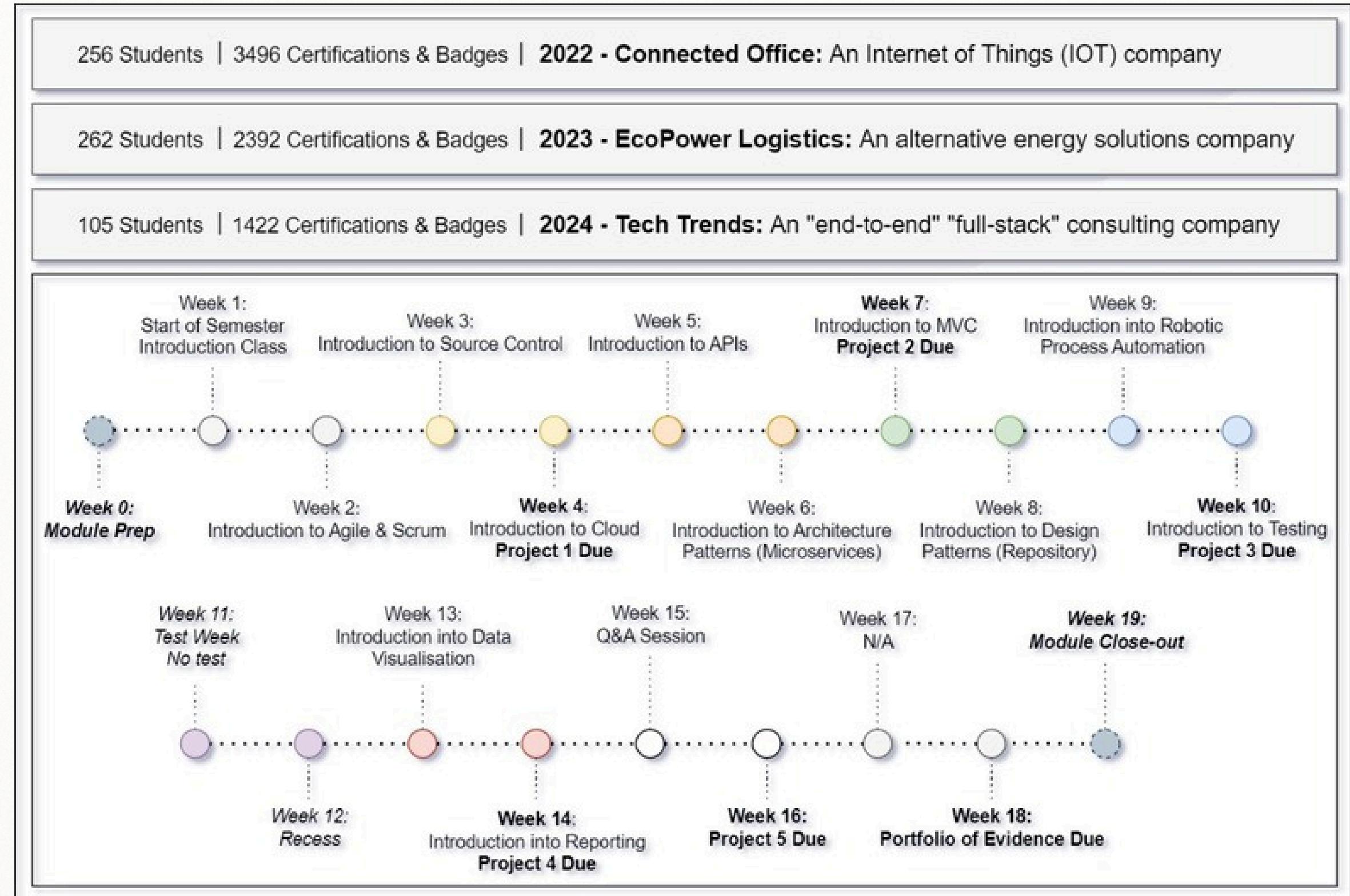
Capstone Project #3

Discipline - Practical Theory Implementation

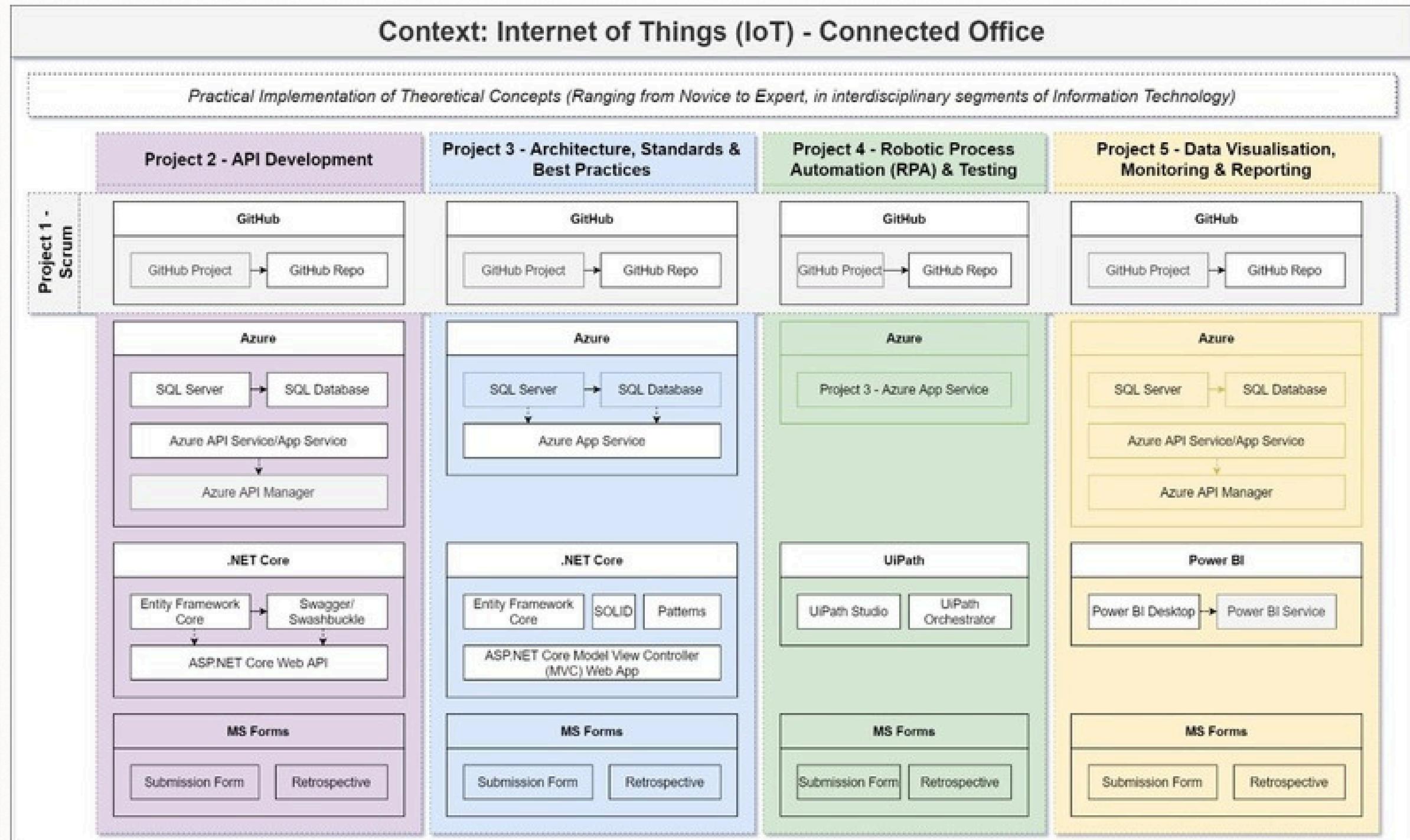
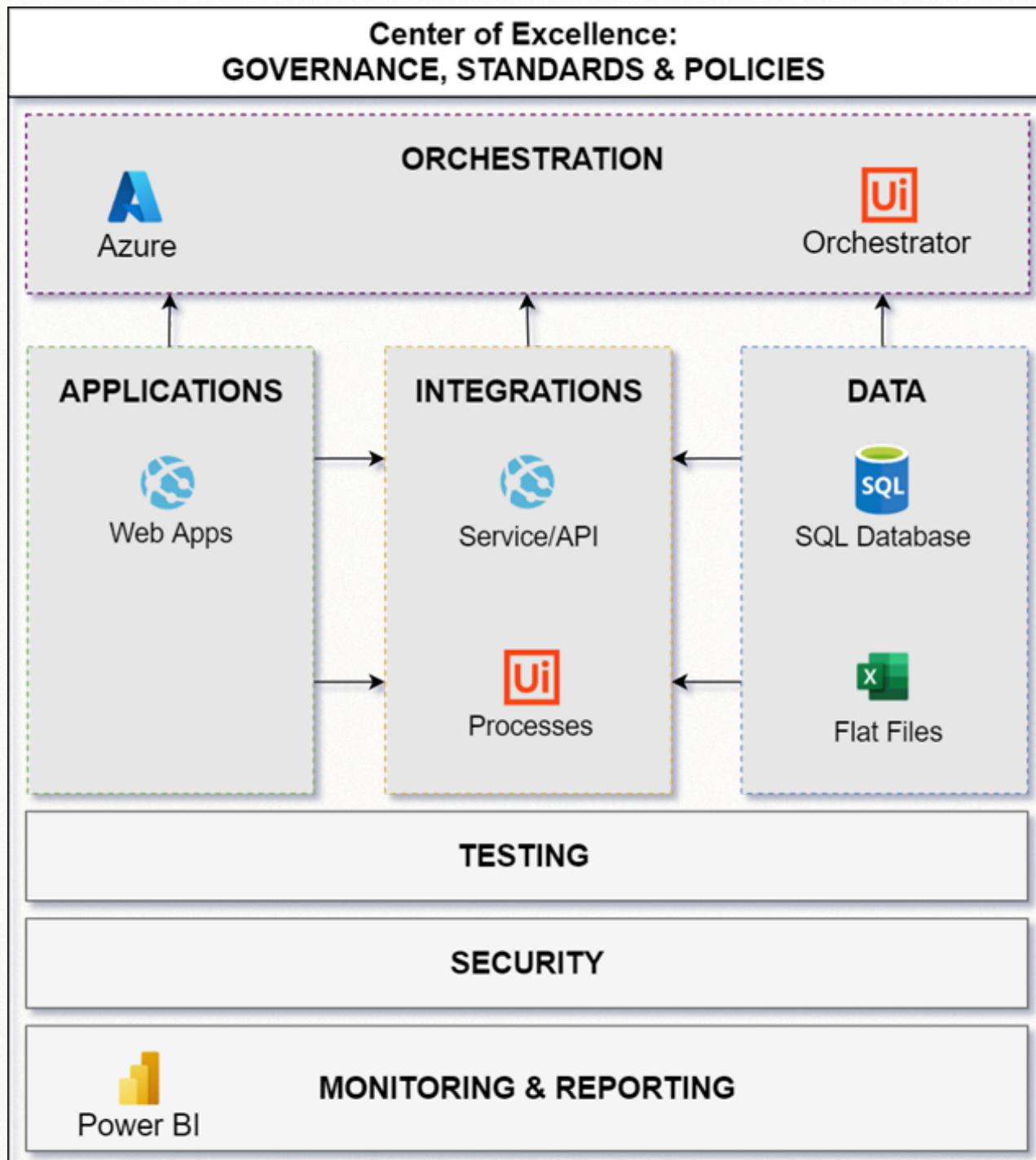
Dynamic Delivery Type

Interdisciplinary Team Composition

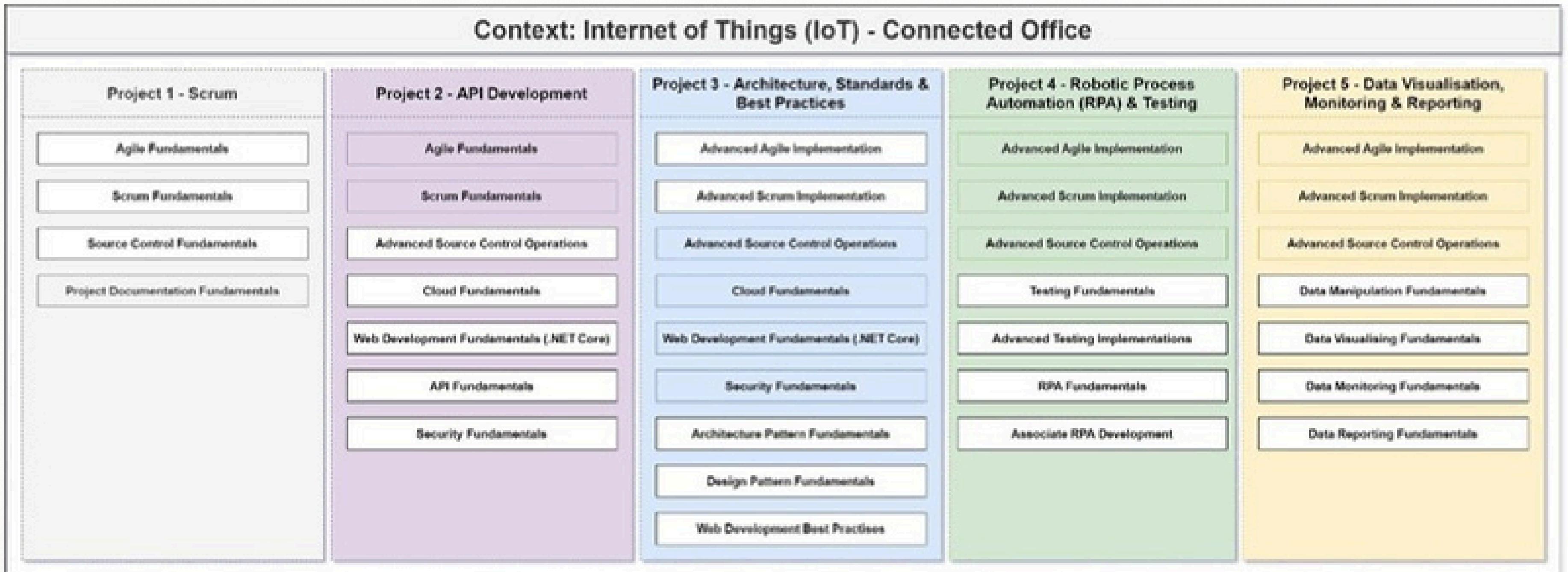
IMPLEMENTATION PLAN



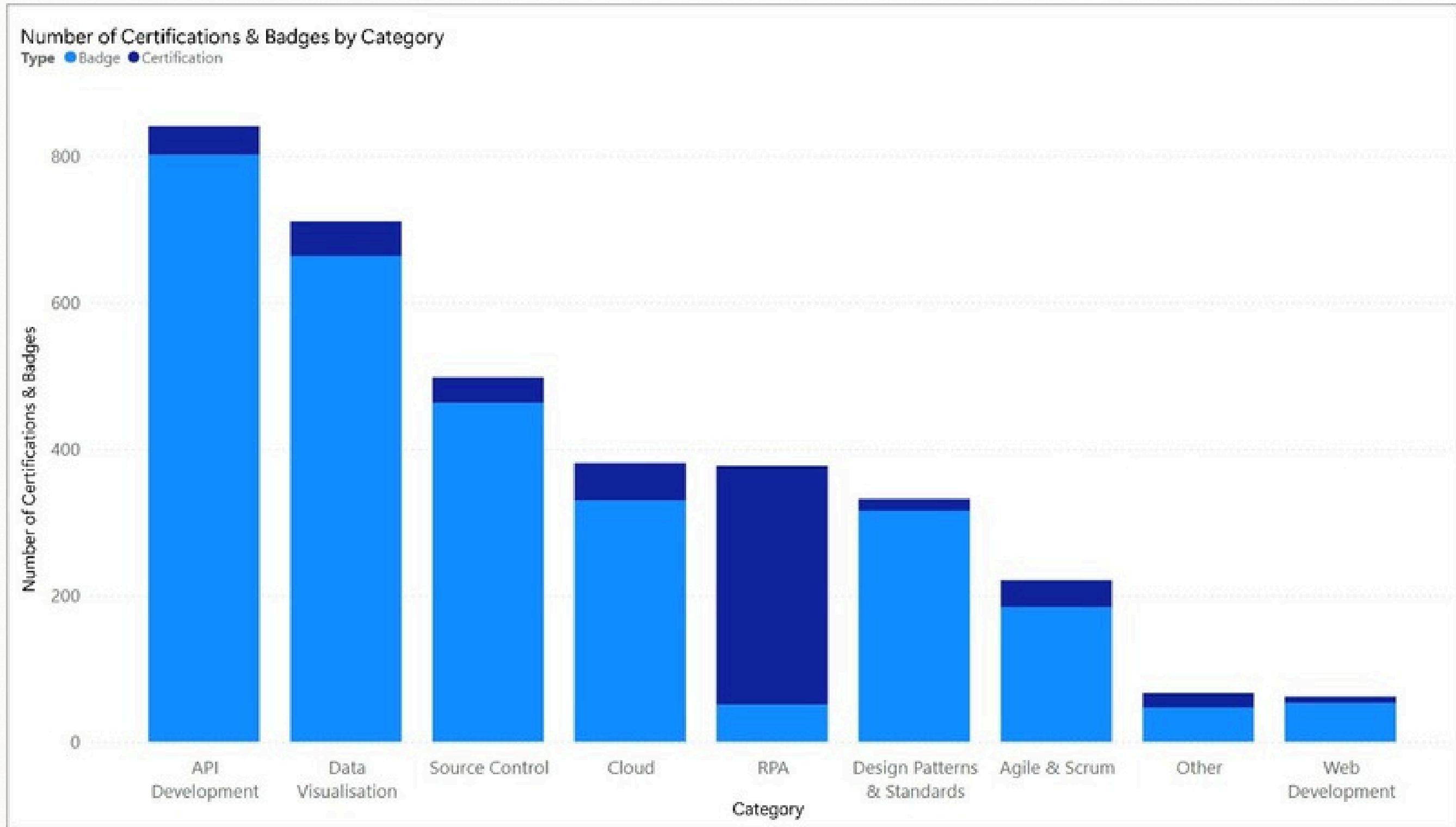
FIRST ITERATION



FIRST ITERATION (CONT.)



FIRST ITERATION RESULTS



APPROACH COMPARISON

ADVANTAGE	CONTEXT-BASED LEARNING	PROJECT-BASED LEARNING	INTEGRATED LEARNING	INTEGRATED PROJECT CONTEXT-BASED LEARNING
Improved motivation & engagement	✓	✓	-	✓
Improved retrospective understanding of critical concepts	✓	✓	✓	✓
Development of essential skills	✓	✓	-	✓
Transferability of knowledge	✓	✓	✓	✓
Real-world application	✓	✓	✓	✓
Encourages critical thinking	✓	✓	✓	✓
Encourages creative thinking	-	-	✓	✓
Encourages problem solving	✓	✓	✓	✓
Encourages external training & certification	-	✓	-	✓

FUTURE WORK

► **Module Outcome Curriculum Development**

Encapsulate the approach proposed by Muller and Greeff (2022) to develop a curriculum shaped specifically to incorporate pre-defined skills that can be aligned to a module-outcome-level binary rubric.

► **Portfolio of Evidence Template**

Enhance the template of the content required in the portfolio of evidence that illustrates the progression of student skills and application of knowledge through the IPCBL learning approach.

► **Training & Certification Milestones**

Introduce external training milestones into the approach to ensure certificates are obtained timeously and within integrated capstone project context, contributing to the overarching module context.



THANK YOU!

