



School of Information Technology

Diploma in Applied AI & Analytics **AY2025 S2**

IT2392
Emerging Technology Synthesis

Assignment Guide

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1 Introduction

In today's rapidly evolving digital economy, emerging technologies hold the potential to revolutionize business operations, creating new opportunities for growth and innovation. This learning unit aims to equip learners with the skills to continuously identify technological trends, evaluate their impact, and propose solutions to enhance business performance. Emphasis is placed on lifelong learning, teamwork, and effective communication to foster holistic competencies in technology screening, cost-benefit analysis, and business recommendations.

This assignment synthesis theoretical understanding and practical application, focusing on teamwork, technology evaluation, and clear documentation and presentation of findings.

To explore emerging technology trends for a specified industry by conducting market research into the products or services by using frontier technologies such as AI, Immersive Media, Cybersecurity or IoT etc. There are also many environmental issues to be faced by people in Singapore. Some of the areas include climate changes, food security, public health etc. Many of the emerging technologies mentioned in IMDA technology roadmap would likely be part of the solutions.

<https://www.imda.gov.sg/about-imda/research-and-statistics/sqdigital/services-and-digital-economy-technology-roadmap>

2 Project Scope & Scenario

The total marks of this assignment is 50 and it constitutes 50% of your total assessment marks for this competency unit

Students are going to form a team of 4-5 students to:

- Research into one organization in the following sectors:
 - Medical
 - Financial
 - Tourism
 - Manufacturing
 - Logistic
 - Hospitality
 - Construction
 - Education

Once the team has chosen one organization/company, each member should take on one or two of the emerging technologies to elaborate on the following topics:

- Analyze and describe the current problems and challenges faced by the organization
 - Identify the market size and the potential revenue of the organization.
 - Describe how any of the emerging technologies identified by IMDA such as AI, Immersive Media, Cybersecurity or IoT can improve the business process which can be any activity in the value chain.
 - Explain how this technology will disrupt the digital economy and their future markets.
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- Elaborate on the impacts and benefits to the company and its customers of that industry sector. Cost analysis and key challenges for the adoption of technology.
- You may want to substantiate your points with realistic examples, diagrams, charts, or calculations.

Your team should refer to the IMDA, Gartner website and other references for ideas.

3 Assignment submission requirements

- a. Team Proposal
 - i. A team proposal (in MS word) with a maximum of 5 pages per team member, applicable to the main body only.
 - ii. The proposal is to be submitted to BrightSpace. Report with contents similarity of 25% and above will be penalized. This is to minimize plagiarism. The team leader will submit deliverables on behalf of the whole team.
 - iii. Label individual contribution clearly in the proposal.
 - iv. Provide all the website url as references. Use of diagrams and charts are encouraged.
 - v. Submit the above deliverables to Brightspace Week 18 Sunday 2359 (22 Feb 2026).
- b. Presentation – Week 18 class time
 - i. Total presentation time is calculated based on 5 minutes for each student. Eg, a 4-students group will be allocated 20 minutes, 5 student group will be allocated 25 minutes. Presentation time will be tracked at group level rather than individual level.
 - ii. The presentation should cover the key points in the report.

Please refer to Annex A for assessment rubrics.

Annex A**Individual Components: 30 marks**

Assessment Components	Advance	Proficient	Functional	Developing	Not Competent
Business Understanding (10 marks)	[8 to 10]	[7 to < 8]	[6 to < 7]	[5 to < 6]	[0 to 5]
	<u>Understanding Context</u> <p>Demonstrates exceptional insight into business goals, challenges, and opportunities, links clearly to value chain.</p> <u>Relevance of Analysis</u> <p>Analysis is highly relevant and customized to the business case.</p>	<u>Understanding Context</u> <p>Demonstrates strong understanding with minor gaps; links well to goals and challenges.</p> <u>Relevance of Analysis</u> <p>Analysis is relevant, with minor generalizations.</p>	<u>Understanding Context</u> <p>Demonstrates adequate understanding; limited depth in linking goals to challenges.</p> <u>Relevance of Analysis</u> <p>Analysis is somewhat relevant; lacks specific tailoring to the case.</p>	<u>Understanding Context</u> <p>Basic understanding; links are superficial or unclear.</p> <u>Relevance of Analysis</u> <p>Analysis is overly generic with limited relevance.</p>	<u>Understanding Context</u> <p>Lacks understanding; no clear connection to context.</p> <u>Relevance of Analysis</u> <p>Irrelevant or missing analysis.</p>
Identifying Emerging Technology (5 marks)	[4 to 5]	[3.5 to < 4]	[3 to < 3.5]	[2.5 to < 3]	[0 to 2.5]
	<u>Relevance of Technology</u> <p>Technology is highly relevant and clearly justified in context.</p> <u>Explanation of Features</u> <p>Exceptionally clear and thorough explanation of technology features and applications.</p>	<u>Relevance of Technology</u> <p>Technology is relevant with clear reasoning.</p> <u>Explanation of Features</u> <p>Clear and detailed explanation; minor omissions.</p>	<u>Relevance of Technology</u> <p>Technology is moderately relevant, with some gaps in reasoning.</p> <u>Explanation of Features</u> <p>Adequate explanation with limited depth.</p>	<u>Relevance of Technology</u> <p>Technology is of limited relevance, weak justification.</p> <u>Explanation of Features</u> <p>Partial or unclear explanation of features and applications.</p>	<u>Relevance of Technology</u> <p>Technology is irrelevant or not justified.</p> <u>Explanation of Features</u> <p>Incomplete or inaccurate explanation.</p>
Technology Evaluation and Proposal (10 marks)	[8 to 10]	[7 to < 8]	[6 to < 7]	[5 to < 6]	[0 to 5]
	<u>Evaluation Framework</u> <p>Cost-benefit analysis is exceptionally detailed, practical, and insightful.</p> <u>Solution Alignment</u>	<u>Evaluation Framework</u> <p>Analysis is detailed and practical; minor gaps in reasoning.</p> <u>Solution Alignment</u>	<u>Evaluation Framework</u> <p>Analysis is adequate but lacks depth or practical insight.</p> <u>Solution Alignment</u>	<u>Evaluation Framework</u> <p>Cost-benefit analysis is exceptionally detailed, practical, and insightful.</p> <u>Solution Alignment</u>	<u>Evaluation Framework</u> <p>Cost-benefit analysis is exceptionally detailed, practical, and insightful.</p> <u>Solution Alignment</u>

	Solution is innovative, well-justified, and aligns perfectly with business needs.	Solution is clear, justified, and aligns with needs	Solution is somewhat justified; alignment with business needs is partial.	Solution is poorly justified or weakly aligned with needs.	No clear solution or alignment with needs.
Presentation (5 marks)	[4 to 5]	[3.5 to < 4]	[3 to < 3.5]	[2.5 to < 3]	[0 to 2.5]
	<u>Clarity of Delivery</u> Presentation is highly engaging, clear, and logically structured.	<u>Clarity of Delivery</u> Presentation is clear and logically structured with minor lapses.	<u>Clarity of Delivery</u> Presentation is understandable but lacks strong organization.	<u>Clarity of Delivery</u> Presentation is disorganized and lacks clarity.	<u>Clarity of Delivery</u> Presentation is unclear or poorly delivered.
	<u>Use of Visuals</u> Visuals are highly professional, relevant, and enhance the presentation significantly	<u>Use of Visuals</u> Visuals are professional and relevant; minor gaps in quality or relevance.	<u>Use of Visuals</u> Visuals are somewhat relevant but lack polish or coherence.	<u>Use of Visuals</u> Visuals are of limited relevance or quality.	<u>Use of Visuals</u> No visuals or irrelevant/incomplete visuals.

Group Components: 20 marks

Assessment Components	Advance	Proficient	Functional	Development	Not Competent
	[8 to 10]	[7 to < 8]	[6 to < 7]	[5 to < 6]	[0 to 5]
Content and Organization (10 marks)	<ul style="list-style-type: none"> Clear & well organisation of the following sections with no errors or omissions: <ol style="list-style-type: none"> Title Page Table of Contents List of Illustrations Executive Summary Introduction Body Conclusion The proposal's content shows very substantial research effort The main points are well elaborated 	<ul style="list-style-type: none"> Clear organisation of the following sections with no errors or omissions: <ol style="list-style-type: none"> Title Page Table of Contents List of Illustrations Executive Summary Introduction Body Conclusion The proposal's content shows good research effort The main points are clearly elaborated 	<ul style="list-style-type: none"> Fairly clear organisation of the following sections with some errors or omissions: <ol style="list-style-type: none"> Title Page Table of Contents List of Illustrations Executive Summary Introduction Body Conclusion The proposal's content shows fair research effort The main points are sufficiently elaborated 	<ul style="list-style-type: none"> Poor organisation of the following sections with many errors or omissions: <ol style="list-style-type: none"> Title Page Table of Contents List of Illustrations Executive Summary Introduction Body Conclusion The proposal's content shows little research effort Some of the main points lack elaboration 	<ul style="list-style-type: none"> The proposal did not adhere to the format below, with one or more missing sections: <ol style="list-style-type: none"> Title Page Table of Contents List of Illustrations Executive Summary Introduction Body Conclusion The proposal's content shows no research effort Most of the main points lack elaboration

Command of Language (10 marks)	[8 to 10]	[7 to < 8]	[6 to < 7]	[5 to < 6]	[0 to 5]
	<ul style="list-style-type: none">• Excellent use of proper grammar with no spelling errors	<ul style="list-style-type: none">• Good use of proper grammar with no spelling errors	<ul style="list-style-type: none">• Fairly good use of grammar with 1 – 4 spelling errors	<ul style="list-style-type: none">• Fair use of grammar with some spelling errors	<ul style="list-style-type: none">• Poor use of grammar with multiple spelling errors