

SCENARIO-BASED DESIGN: CRAFTING FUTURE TECHNOLOGIES

All technologies tell stories, intricately woven with context, people, and places. In this group assignment, you'll embark on an exciting journey through Scenario-Based Design to explore the novel human-technology relations enabled by Generative AI! Scenario-Based Design envisions and interrogates possible futures shaped by technology, often materialised through scenarios, stories, visualisations, or prototypes. These artefacts embody design thinking, research insights, and speculative exploration in a form that can be shared, discussed, and built upon.

Scenario-Based Prototyping is a powerful design method for imagining and shaping technologies. By creating and analyzing scenarios, you'll gain insights into how technology can evolve and impact people, society and the environment. Some of the benefits of this method include:

Explore Possibilities: By envisioning various futures, you can explore a wide range of possibilities and outcomes.

Identify Challenges: Scenarios highlight challenges & pitfalls, early in the design process, allowing you to address them proactively.

Foster Innovation: By thinking creatively & critically about the future, you can generate possibilities that might not emerge through traditional design methods.

THE ASSIGNMENT

You are invited to imaginatively inhabit and explore the possible futures that might emerge from humans combining generative AI capabilities into everyday technologies at massive scale. Examples include novel models like ChatGPT which can see, hear, and converse, providing follow-up questions, redirecting discussions, connecting related concepts, changing arguments and topics, and assuming different roles and situations. As capabilities like these are combined with everyday technologies, including personal devices, home appliances, robots, classrooms, homes, vehicles, and entertainment technologies, and they propagate across society, they can influence our perceptions of certain topics and shape creative exploration and critical thinking. It is vital today to recognize these evolving dynamics to explore their future through design.

How would this new interaction paradigm transform relationships between humans, their technologies, society, and the environment?

Step 1: Form groups of 3 to 4 (maximum) people where all members are either from Undergrad (3900) or Postgrad (6390) in week one (this week!). If you do not have a group by the end of the week, we will assign you to one. All your team members have to also be from the same class, either on Mondays or Wednesday, no cross day groups are permitted as there will be in-class group activities.

Step 2: Read and discuss together in your group and delve into the resources provided below. Engage in thoughtful discussions to uncover the nuances and implications of interaction design, human-computer interaction and scenario-based design.

- **Interaction design and HCI refresher weeks 1-3 from** 6 ed. of Interaction Design: Beyond Human-Computer Interaction Sections:
1.4 What to Design, 1.5 What Is Interaction Design?, 1.8 Accessibility and Inclusiveness, 1.9.1 Usability Goals, 1.9.3 Design Principles.
Pay close attention to the definition of each goal and principle as these will help you articulate your technology!
- **Download and read the scenario-based design template (on wattle) as well as this accompanying paper to learn about what generative AI offers as an interaction paradigm:** Andres et al. 2024. *Understanding and Shaping Human-Technology Assemblages in the Age of Generative AI*. <https://arxiv.org/pdf/2404.18405>
- **Study Chapter 3 by** John M. Carroll. 2003, *Making Use: Scenario-Based Design of Human-Computer Interactions* **to learn about the many ways in which scenarios can be used in technology design.** <https://direct-mit-edu.virtual.anu.edu.au/books/book/1900/chapter-standard/52321/Scenario-Based-Design>

Step 3: Carefully complete the provided scenario-based design template as a group.

Step 4: Be ready to show and tell the created scenario in week 3. This will be a peer group to peer group activity.

THE ASSESSMENT PROCESS

1. The quality of your scenario-based design and the use of key interaction design and HCI terminology provided in *1.8 Accessibility and Inclusiveness, 1.9.1 Usability Goals, and 1.9.3 Design Principles* to illustrate key aspects of human-computer interaction will be assessed.

2. Your capacity for reflection on how the scenario and the technology proposed benefits and affects people, society, environment will be considered.
3. Your teams' capacity to describe the created scenario to your peers and your capacity to constructively provide and receive feedback will also be considered.
4. Remember to include a cover sheet!

This creative, people and technology focused, and analytical assignment follows the standard ANU grading system and has been aligned to meet internal ANU, Australian University and Government (TEQSA) expectations, including evaluation of a number of the required learning outcomes for the course.

GRADING RUBRIC

The following Grading Rubric will be used for assessment of this assignment.

TOTAL MARKS /20	POOR (N)	SATISFACTORY (P)	GOOD (CR)	SUPERIOR (D)	EXCEPTIONAL (HD)
Explain and Illustrate Key Aspects of Human-Computer Interaction (/6)	Does not use appropriate terminology or demonstrates understanding of key aspects of human-computer interaction. (0-2.5 marks)	Uses limited terminology, with some gaps in understanding key aspects of human-computer interaction. (3 marks)	Uses some terminology to articulate the proposed concept, showing an adequate understanding of key aspects of human-computer interaction. (4 marks)	Uses terminology effectively to articulate the proposed concept, showing a good understanding of key aspects of human-computer interaction. (5 marks)	Uses terminology from the provided resources to articulate the proposed concept comprehensively, demonstrating a deep understanding of key aspects of human-computer interaction. (5.5-6 marks)
Reflects on the Implications of the Technology Proposed (/6)	Does not reflect on the benefits and impacts or uses the provided terminology.	Reflects on the benefits and impacts, but with limited use of provided terminology and superficial insights.	Reflects on the benefits and impacts, using some of the provided terminology to articulate insights.	Reflects well on the benefits and impacts, using the provided terminology effectively to articulate insights.	Reflects critically on the benefits and impacts of the technology, using the provided terminology to

	(0-2.5 marks)	(3 marks)	(4 marks)	(5 marks)	articulate insights comprehensively. (5.5-6 marks)
Apply Multiple Perspectives, Theories, and Ethical and Inclusive Considerations (/6)	Does not use accessibility and inclusiveness principles or reflects on the proposed scenario. (0-2.5 marks)	Uses limited accessibility and inclusiveness principles, with significant gaps in articulation or reflection. (3 marks)	Uses some accessibility and inclusiveness principles to articulate or reflect on the proposed scenario, but with some gaps. (4 marks)	Uses accessibility and inclusiveness principles effectively to articulate or reflect on the proposed scenario, ensuring it is accessible and fair. (5 marks)	Uses accessibility and inclusiveness principles comprehensively to articulate or reflect on the proposed scenario, ensuring it is accessible, fair, and beneficial to diverse populations. (5.5-6 marks)
Openness to Providing and Receiving Feedback (How well you work in your group and with your peers) (/2)	The student is not open to or does not provide constructive feedback to others. (0 marks)	The student shows limited openness to feedback, with significant areas for improvement. (0.5 marks)	The student provides and receives feedback, but with some areas for improvement in effectiveness. (1 mark)	The student is open to and provides constructive feedback to others effectively. (1.5 marks)	The student is open to and provides constructive feedback to others in a highly effective manner. (1.5-2 marks)
Cover sheet	Missing or incomplete cover sheet -2 marks				