# Product R&D 3Ts Activity – Students in Practice

Educators can use the Team-Think-Talk (3Ts) (see Figure 1) activity to simulate a product research and development process using the four MAIC modules.

TEAM **TALK** 6. Discussion 1. Narrative 3. Solution 4. Prototype 5. Market 2. Pair with Al and Construction Proposal Generation Simulation **Evaluation** Human Human

Intelliaence

Al Exemplification

Al Simulation

Intelligence

Figure 1: The Team-Think-Talk (3Ts) Activity

The following discussion details sample prompts used at each phase to complete this particular activity. The three phases of the 3Ts activity are detailed below:

## 1. TEAM Phase (Stages 1-2)

**Al Cooperation** 

Al Inquisition

In this stage, students receive a specific assignment requiring them to research a topic. For example, students identify a particular consumer product available in the Malaysian market using traditional research methods (i.e., Google search) and complemented with Al. Once sufficient details have been obtained and cross-checked, students construct a narrative of the concerned topic. An example of an Al inquisition prompt is as follows:

**Prompt**: What is in high demand in Malaysian food and beverages market?

Next, students pair with AI to validate further insights. For instance, upon identifying the product, students determine possible implementation improvements. A sample AI Cooperation prompt is illustrated below:

**Prompt**: Can you help us identify current issues faced by customers related to this product idea? Give us a few suggestions for improvement.

### 2. THINK Phase (Stages 3-5)

The Think phase occurs right after students brainstorm with the assistance of AI to uncover potential weaknesses, technical flaws, or consumer concerns related to the selected product. Students use the information gathered thus far via Google search and/or AI to design a proposed solution or course of action for the chosen product. This stage requires students to work independently of AI, primarily relying on human intelligence.

The following sample questions are provided to students as a guide to ensure they have a direction for the upcoming market simulation stage:



Figure 2: Sample questions provided to students

Students use the sample questions to derive the necessary information required. A sample student answer is shown below:

Figure 3: Sample student answer

1. Describe your company.

NasiBox Express sells pre-packed Malaysian fusion meals in biodegradable boxes.

2. How much do you plan to sell your product for?

SGD20 - SGD50.

What country do you target? Why?Singapore because it is developed market with high consumer spending power.

4. What kind of customers are you are targeting?

We target working adults who are busy and may not have time to cook their own meals.

Once students have conceptualized, refined, and redesigned the product to address the identified issues, they move to prototype generation. This stage utilizes the AI Exemplification module to visualize their revised product. This hands-on process encourages practical application of AI in generating a finalized output of students' thought processes. A sample AI Exemplification prompt is provided as follows:

**Prompt**: Based on this list of new features, can you generate a visual idea or description of what this product would look like? Help us to design a logo for the product.

Then, AI generates a sample product based on earlier discussions and student input, including potential solutions to improve the product from the prior Stage 3. Figure 4 below shows a sample student output designed using the AI module.

Figure 4: Sample product and logo designed





Once the product and company logo have been designed with AI's help, students progress to the simulation stage. This phase allows students to put their business plan to the test! They will explore what happens when their company and the product designed earlier enter a new market.

Students can get a quick preview of what might happen and potential roadblocks in their expansion journey. This exploration helps them to obtain possible feedback via a market simulation achieved using the following prompt:

**Prompt:** Simulate a product launch in [country/market]. What would customers say? What challenges might we face?

Suppose students would like a more immersive experience to understand real-world entrepreneurship. A choice-based AI simulation would allow them to step into the role of a decision-maker to experience strategic choices made to shape the future of their company. The AI will produce unexpected scenarios for students to respond to and apply what they have learned, think critically, and forecast long-term outcomes of their strategy. A sample prompt to derive a choice-based simulation is shown below:

Prompt: Pretend you are simulating the choices of a CEO. I will give you a background story of my company and its product. I will tell you which country I am choosing to start expanding and selling my product. I will tell you how I plan to enter the foreign market. What I need you to do is to use the information and simulate a random event that happens to my company. I will then make a choice, and you must use that choice to design what happens next. Make sure the choices given are in simple English. After 10 rounds of simulations, you need to predict how my 10 choices will shape the future of the company. Show a timeline of each year onwards of my company. My company can either be successful or be a failure. If it is successful, show the expected valuation of the company. If you expect it to fail, show me the timeline until my business collapses and list the reasons why my company failed. Keep the language simple and sentences brief and short.

The AI then generates a brief explanation of the situation and provides options for students to choose. A sample output is shown as Figure 5 below.

Figure 5: Sample of choice-based AI simulation

Great! Let's begin the **CEO simulation** for **NasiBox Express**, now expanding into **Singapore** with central kitchen operations and delivery through platforms like **GrabFood** and **Foodpanda**.

### ROUND 1: Year 1 of Expansion – 2025

#### Random Event:

Your central kitchen in Singapore gets unexpected media attention after a popular food blogger gives NasiBox a glowing review.

#### ? Your Choices:

- A. Hire more staff and increase meal production
- B. Stay cautious and keep the current pace
- C. Raise prices since demand is going up

What do you choose? A, B, or C?

The AI uses the choices made by students to project the company's future standing. This activity provides students with a hands-on approach to making real-time business decisions. Once the simulation is complete, students must compile their choices and the company outcome for the final "Talk" phase.

# 3. TALK Phase (Stage 6)

The final phase of the 3Ts activity focuses once again on human intelligence. This stage measures student learning and how AI has helped guide student thoughts and choices. There are three primary aims of this phase:

- i. To help students think critically about each step in the project
- ii. To ensure students understand how AI supports their ideas rather than replacing them
- iii. To ensure students use AI as a learning partner and not as a shortcut

Educators can provide a guiding set of questions to students to begin reflecting on the entire activity. This activity can be conducted as an individual reflection or in a group discussion format. For example, Figure 6 below shows how the Talk phase was conducted in a classroom setting.

Figure 6: Student engaging in the Talk phase



The following list of questions is given to students to encourage dialogue among students:

- i. How did Al help you improve or expand your product idea?
- ii. What did Al reveal about your target country and customers?
- iii. What did you learn from making CEO-level decisions? How did AI make you think about real consequences?
- iv. Did AI help you imagine your brand or packaging better?
- v. How would your project have been different without AI?

The Talk phase aims to educate students that, despite the powerful capabilities of AI, real learning comes from their thoughts, choices, and reflections. This phase is also meant to serve as a reminder that AI works best when combined with student creativity, teamwork, and critical thinking.