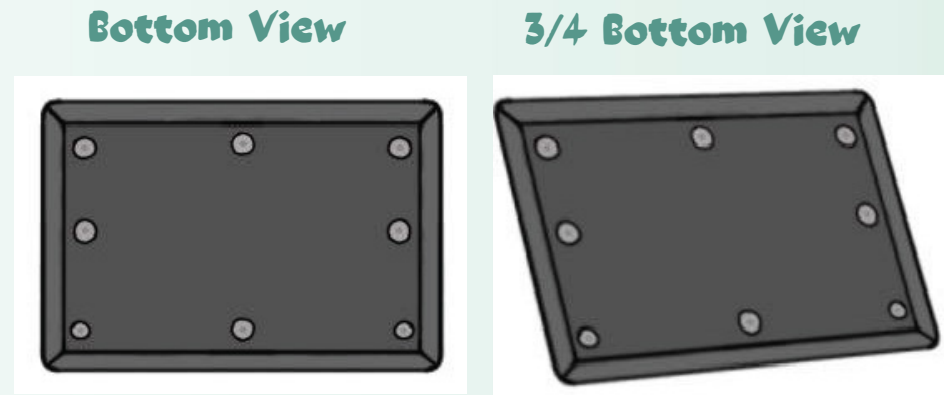


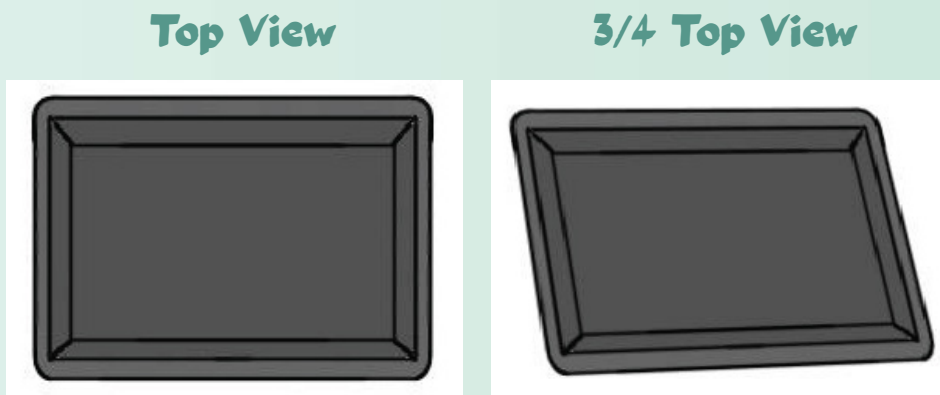
T379 Product Design AY 2025 FA

Graded Assignment

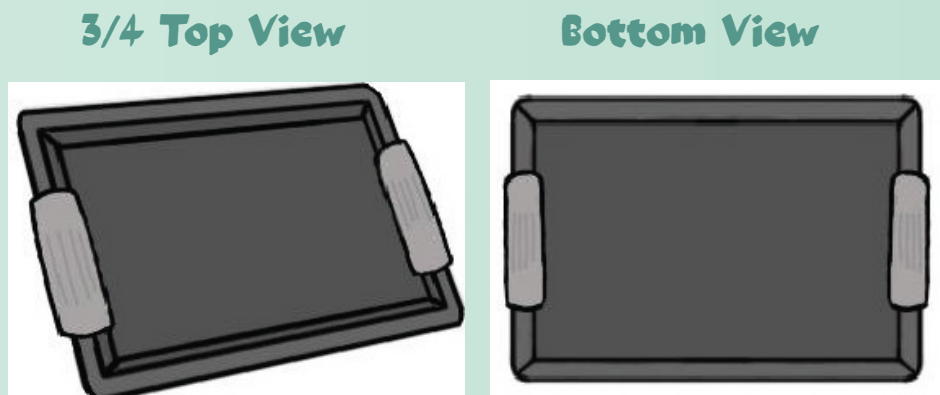
Sketch 1



Sketch 2



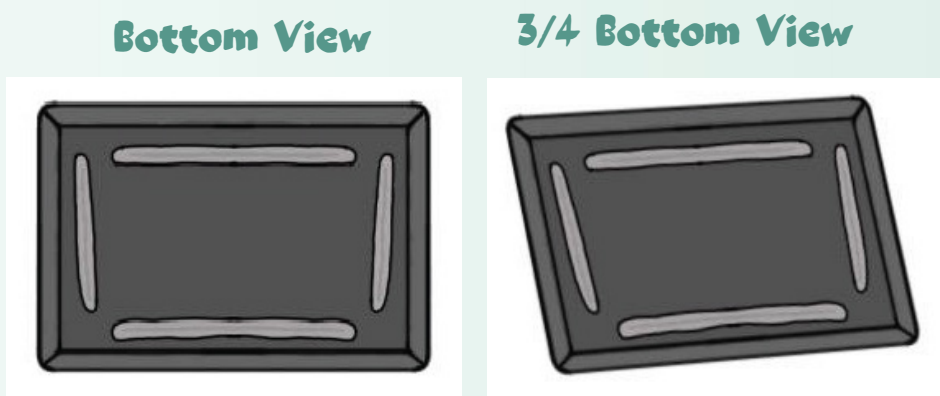
Sketch 3



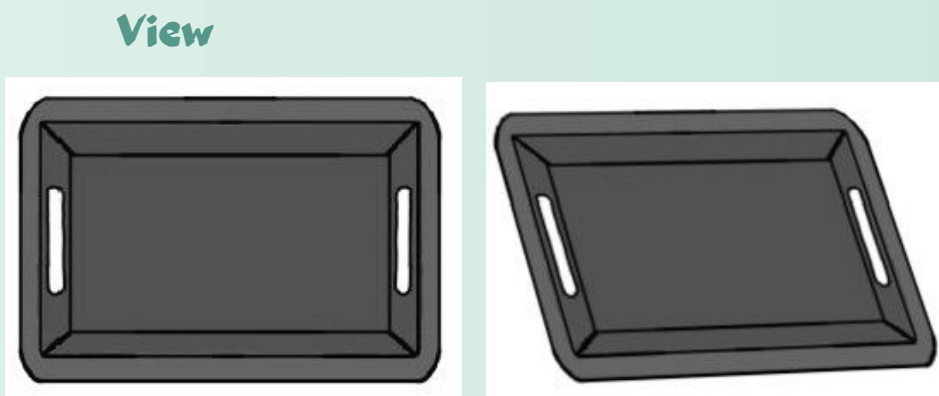
Sketch 4 Top View 3/4 Top View



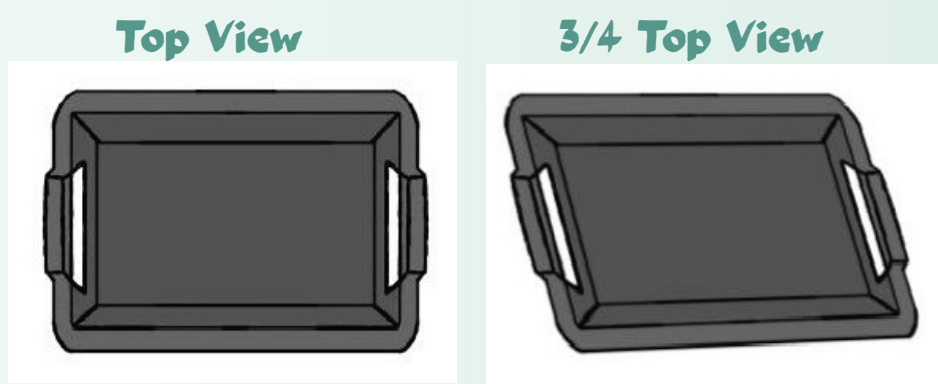
Sketch 5



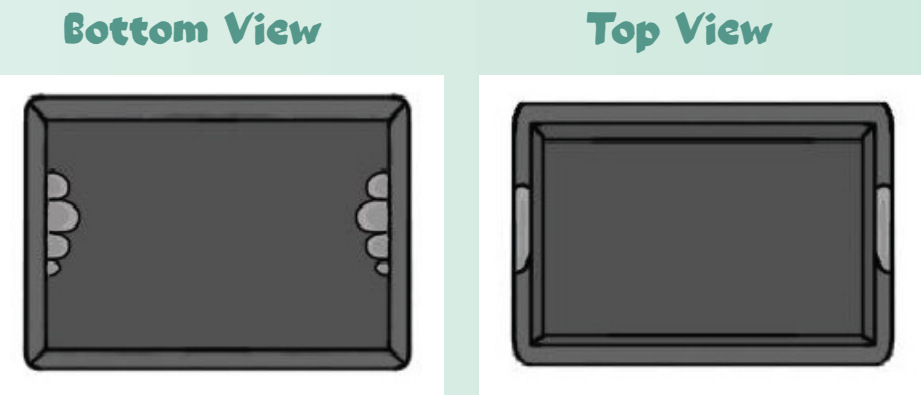
Sketch 6 Top View 3/4 Top View



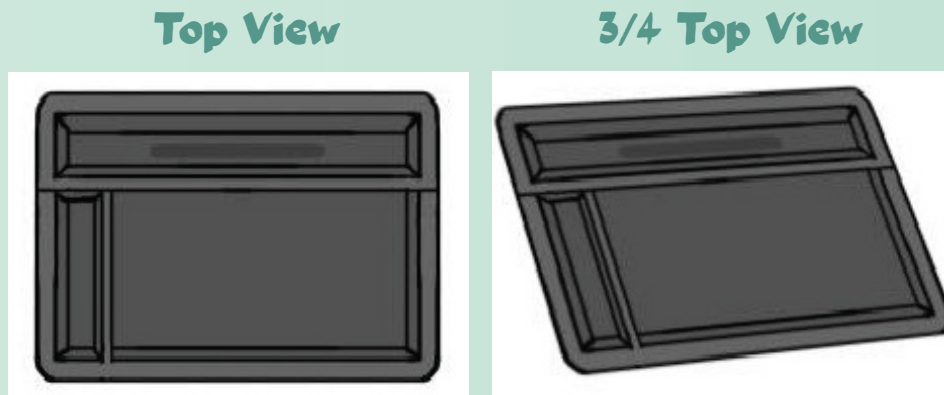
Sketch 7



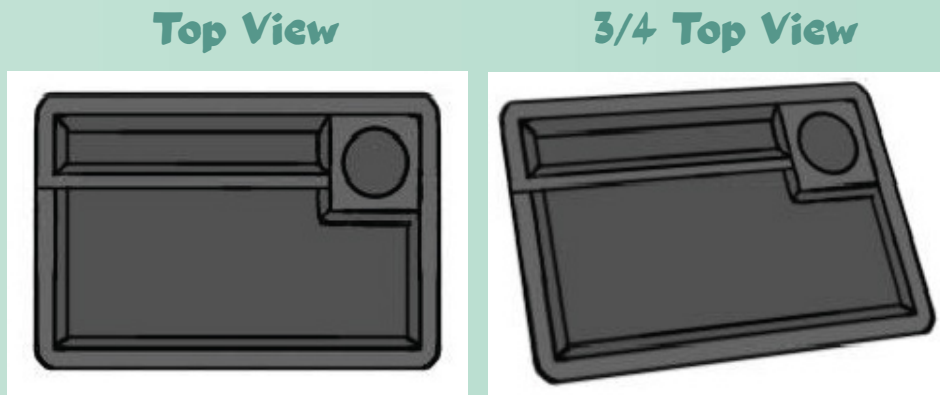
Sketch 8



Sketch 9



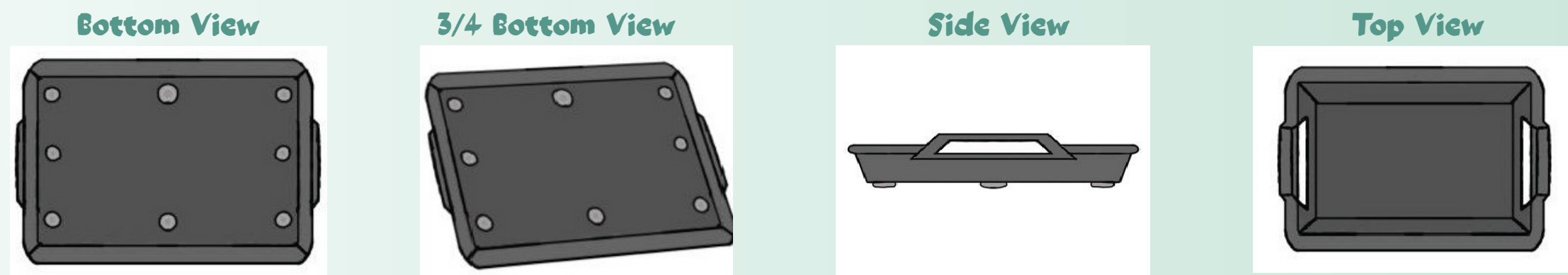
Sketch 10



Descriptions of sketches | IKEA Prod

- Sketch 1: Rubber circles at the bottom of the tray for anti-slip
- Sketch 2: Increased height for better support, preventing items from falling off the tray
- Sketch 3: Rubber attached at two sides of the tray for better grip
- Sketches 4, 6 and 7: Handles for better grip to prevent tray from falling off hands
- Sketch 5: Rubber strips at the bottom of the tray for anti-slip
- Sketch 8: Finger-shaped rubber grips to prevent tray from slipping away from fingers
- Sketches 9 and 10: More compartments in the tray for better organization

Chosen Design: Combination of Sketches 1, 2 and 7



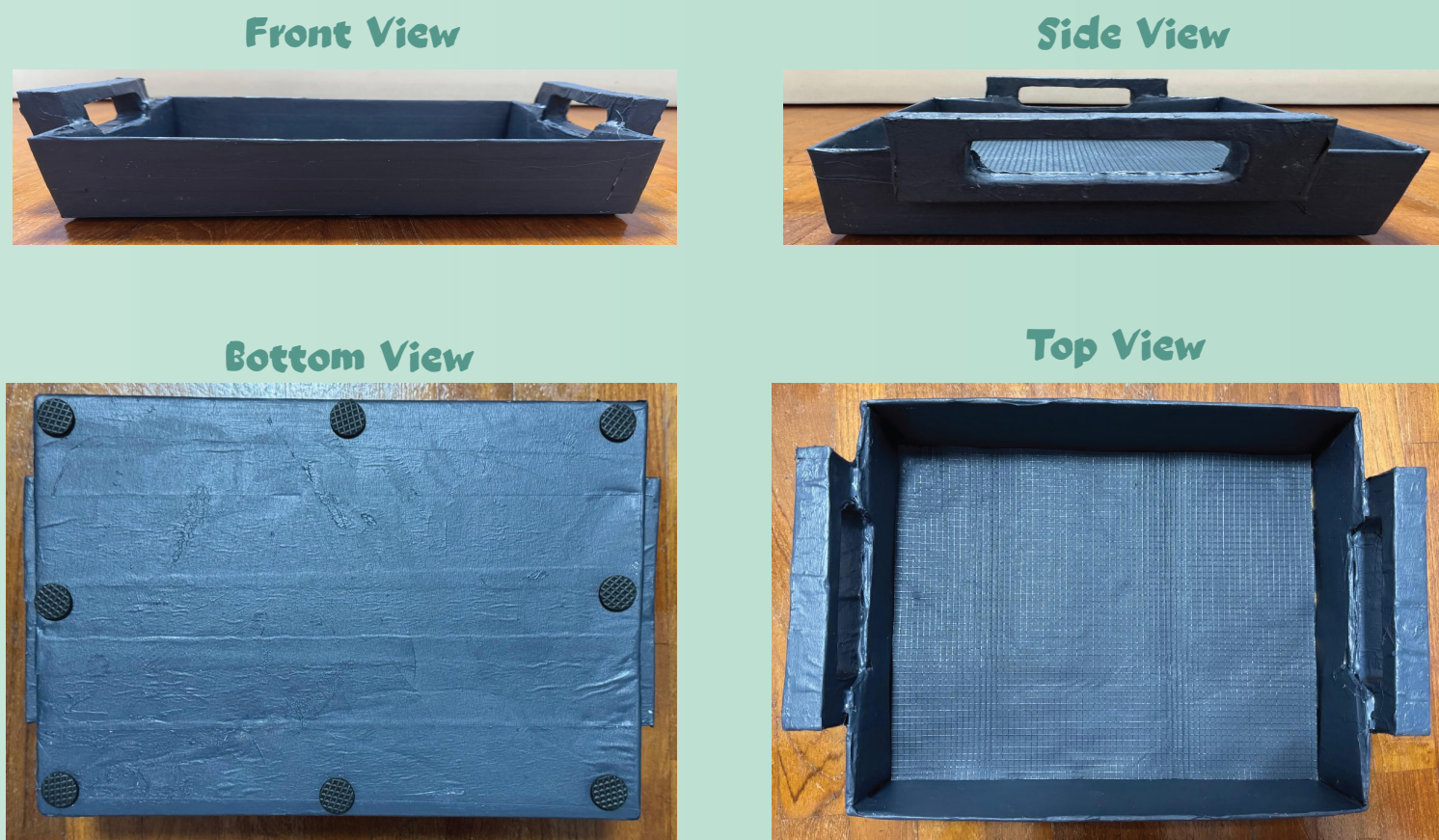
- Target Users 1: Primary School Students
- Age: 7-12
 - Body size: Small to average
 - Hand function: Comfortable textured grip to prevent slippage
 - Control/Display Design: Soft and firm handles for comfort
 - Forces: Lightweight due to limited strength

- Target Users 2: Working Adults
- Age: 21-40
 - Body size: Average to big
 - Hand function: Easily accessible grip to allow effortless handling of items
 - Control/Display Design: Easy grip to prevent slipping while handling food
 - Forces: Lightweight to prevent wrist strain

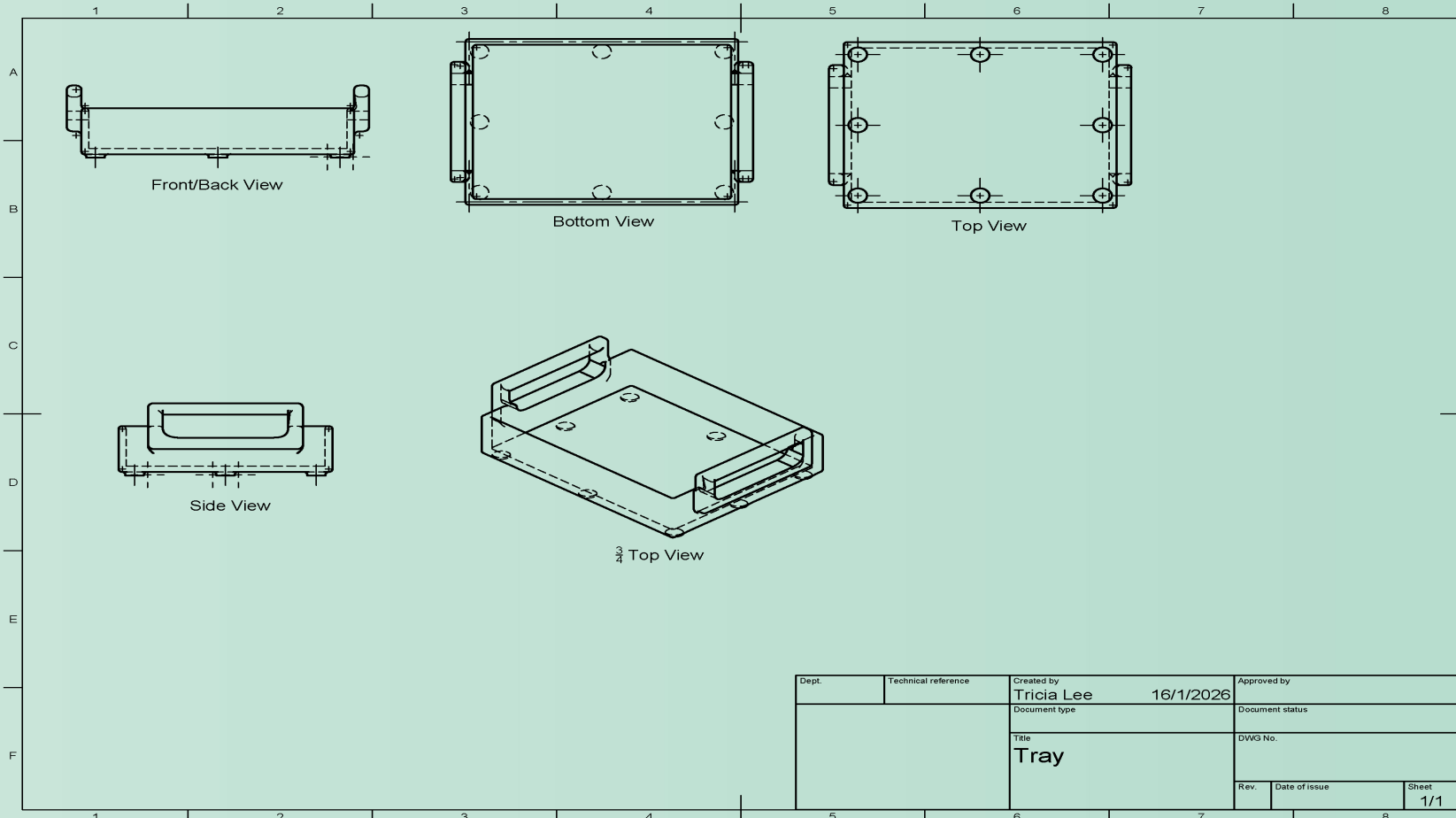
- Target Users 3: Senior Citizens
- Age: 60 years and older
 - Body size: Average
 - Hand functions: Wider grip for secure hold
 - Control/Display Design: Soft and firm handles to reduce hand strain and maintain control
 - Forces: Lightweight to reduce strain on wrists and fingers

Conclusion: The product is designed to be usable by children, adults, and seniors through a lightweight and ergonomic form. Handles on both sides provide a comfortable and secure grip, helping to reduce strain, improve control, and support safe use for users with different hand sizes and strength levels. An added anti-slip feature at the base prevents the tray from sliding on smooth surfaces, improving stability during everyday use. The increased height of the tray allows items to be held more securely, reducing the risk of spills. Overall, the design reflects IKEA's core values of sustainability, affordability, and practicality while addressing the physical needs of a wide range of users.

Physical Mock-up:



Orthographic Drawing



CMF Persona

CMF Persona (Profile) - IKEA Tray CMF Design

Isadore

Office Admin Staff

Working in a tech company, female, 42 years old, Singapore.

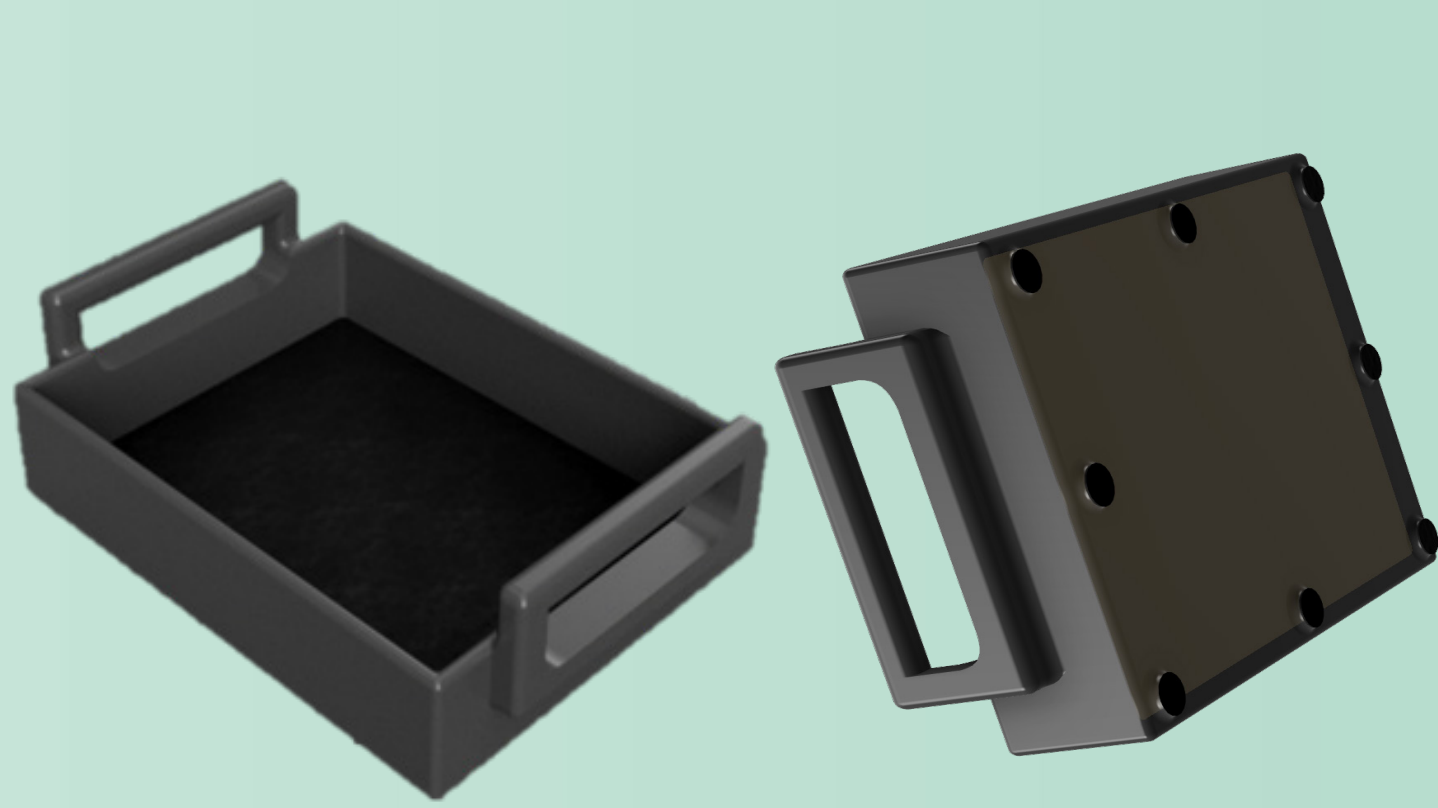
She works from 8 a.m. to 5 p.m. and she eats her food in the food court during lunch time. She also likes watching Korean Dramas while having her lunch.

She not only uses the tray to carry her food, she also uses it to carry daily use items to her office desk, such as her water bottle, cup, etc.

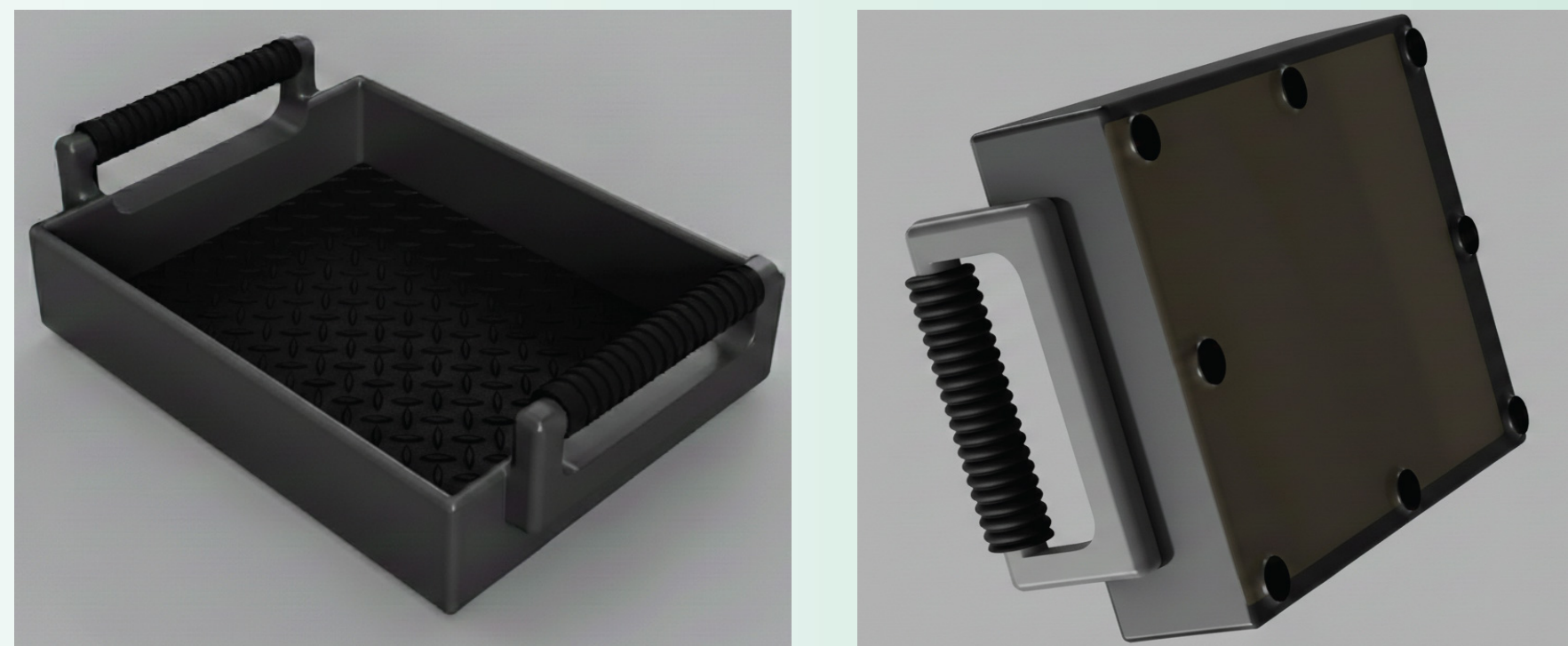
CMF Strategy

CMF Strategy - TILLGANG Tray				
	Basic	Standard	Premium	
Colors	#000000 #333333 #666666	#000000 #333333 #666666 #999999 #CCCCFF	#000000 #333333 #666666 #999999 #CCCCFF	
Materials	PP with rough surface	PEKK with smooth surface Hard rubber	PEKK with glossy surface Soft rubber Hard rubber	
Finishes		Anti-slip finish	Anti-slip finish	

Rendered Images



Final Product Photo



Design Rationale

The tray's CMF design focuses on being practical, durable, and comfortable to use. The main body and handles are made from PEKK, giving the tray a strong, rigid structure with a clean, industrial grey finish that looks professional and long-lasting. Soft rubber grips are added around the handles to improve comfort and provide a secure, non-slip hold when carrying heavy items. The inner surface is lined with hard rubber to prevent items from sliding around during movement, increasing safety and usability. On the underside, eight hard rubber stoppers improve stability by preventing the tray from slipping and by absorbing minor impacts. The contrast between the smooth PEKK surfaces and the textured rubber elements clearly communicates function while maintaining a simple, robust, and utilitarian visual identity.