CREATIVITY, PROBLEMS SOLVING INNOVATION

ARYAN LANGHANOJA
92200133030

ARYAN MAHIDA
92200133011

DHRUVI PATEL
92200133029

KIRTAN MAKWANA
92200133031

MALHARKRISHNA SHAH
92200133016

Railway Station Scenario SCAMPER chart

S

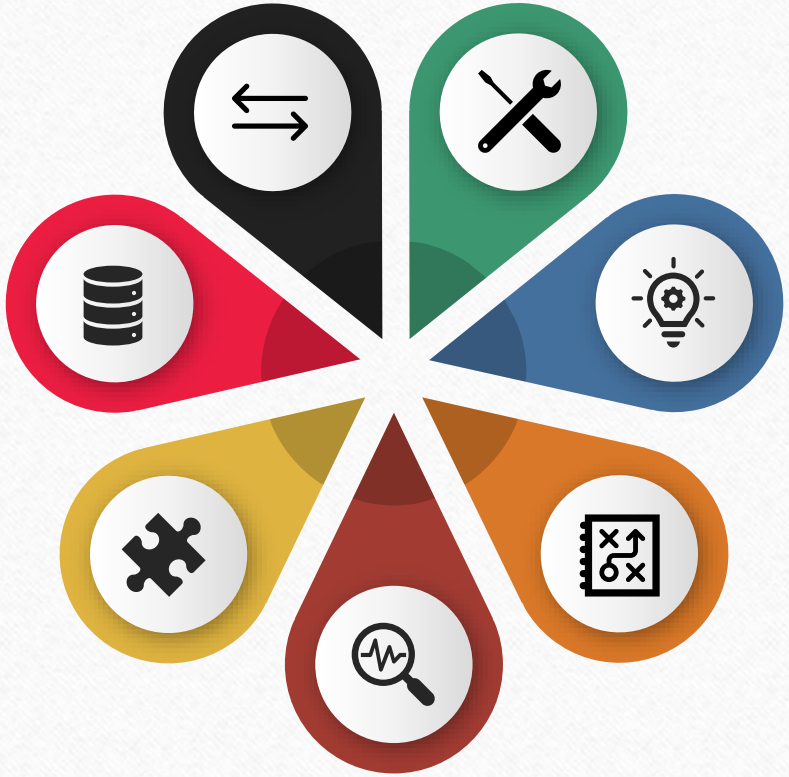
The notion of substitution is about asking what elements of a product or process can be replaced without diminishing its value

C

Combining involves merging elements of two or more products or processes to create something new or to enhance functionality.

A

Adaptation asks us to consider how elements of one product or process can be adjusted or repurposed to serve another function.



M

Modification encourages tweaking elements to improve a product or process, focusing on change in form, shape, or attributes.

P

This element involves thinking about how a product or process could be repurposed or used in a context for which it wasn't originally intended.

E

Elimination focuses on simplifying by removing unnecessary or less effective elements – or even elements that might SEEM important.

R

This principle suggests looking at the opposite of what you currently do, or rearranging components to see if a better solution emerges.

SUBTITUTE

- **E-Ink Displays:**
- Replace traditional LED boards with e-ink displays. These consume minimal power and maintain high readability in varying lighting conditions, including direct sunlight or low light. The boards can refresh only when content changes, ensuring cost-effectiveness.

- **AI-Powered Virtual Assistants:**
- Substitute manual announcements with AI-powered voice assistants. These assistants can make real-time announcements in multiple languages, adapting to the linguistic preferences of the region or the crowd composition at any moment.

- **Augmented Content:**
- Replace text-only information with animated infographics, showing train paths, expected delays, or capacity visually. For example, a train approaching could be shown as an animated train icon moving closer to a station icon.

COMBINE

- **Real-Time GPS and Train Information:**
- Integrate live GPS data with the board to show a visual representation of where trains are currently located, alongside the schedule. Passengers can see not just "Train X is delayed" but also how far it is from the station in real-time.

- **Touch Screens with Multi-Functional Displays:**
- Combine the announcement board with a touchscreen kiosk. Passengers can tap to get personalized details like routes, seat availability, ticket pricing, or even book tickets. The same screen could also display advertisements or nearby amenities like food outlets.

- **Environmental Data Integration:**
- Merge the board with weather forecasts or air quality monitors. For instance, a passenger might see, “Train A delayed due to heavy rainfall. Expected arrival in 15 mins” alongside weather updates.

ADAPT

- **Airport Innovations:**
- Adapt the large-format OLED screens used in airports, which offer high clarity, dynamic color changes, and immersive visuals. These can cycle through detailed train information, station maps, or emergency announcements without clutter.

- **Augmented Reality Features:**
- Using AR technology, passengers could point their smartphones at the announcement board, and their screens would overlay real-time updates, directions, or platform guides. For example, a passenger could see the exact platform path to their train in AR.

- **Crowd Management Systems:**
- Adapt AI-based crowd density sensors to adjust information on the board. For instance, if a platform is overcrowded, the board could suggest alternative waiting areas or notify passengers to avoid certain zones.

MODIFY

- **Modular Displays:**
- Redesign the board into modular sections. For example:
  - Section 1: Upcoming departures with countdown timers.
  - Section 2: Real-time delays and cancellations.
  - Section 3: Local maps showing station amenities. This segmentation reduces confusion and allows for easy scalability.

- **QR Code Integration:**
- Modify the board to include dynamic QR codes passengers can scan to get personalized information, updates, or even multimedia guides for the station.

- **Interactive Notifications:**
- Include features like a passenger input section where users can search for specific train schedules, disruptions, or platform changes, creating an interactive, responsive system.

PUT TO ANOTHER USE

- **Public Service Platform:**
- During off-peak hours, use the announcement board to display public service messages, emergency information, or educational campaigns.

- **Advertising Revenue Streams:**
- Use parts of the screen for targeted advertising based on time or crowd demographics. For example, show breakfast offers from nearby cafes in the morning and dinner promotions in the evening.

- **Emergency Response Hub:**
- During emergencies (e.g., fire or evacuation), the announcement board could automatically switch to guidance mode, showing arrows, maps, or safety tips for quick action.

ELIMINATE

- **Dependency on Text:**
- Remove the reliance on long-text announcements by incorporating universally recognized icons and symbols. For instance, a train delay could be represented by a clock icon with a red cross.

- **Manual Updates:**
- Eliminate manual errors or delays by using a fully automated IoT-based system that syncs directly with train operation databases to provide real-time updates.

- **Static Platforms:**
- Instead of fixed boards, deploy mobile or wearable announcement systems (e.g., staff carrying portable screens or digital wristbands for on-the-go updates).

REVERSE

- **Passenger-Centric Design:**
- Reverse the passive role of passengers by enabling interactive announcement boards. Passengers could input their destination, and the board would highlight the relevant train schedules, platform numbers, and nearby amenities.

- **Roaming Digital Assistants:**
- Instead of static boards, create roaming digital assistants, such as robots with built-in screens that navigate crowded areas, providing train updates and guidance.

- **Interactive Soundscapes:**
- Reverse the traditional visual-only boards by adding context-sensitive audio. For example, nearby passengers might hear personalized audio updates about their trains when they approach the board.