Week 12 Learning Summary: Creative Problem-Solving Frameworks for Railway Station Scenario

Framework 1: Edward de Bono's "Six Thinking Hats"

Video Reference: Week 12 - Video 2
Framework Overview:
The "Six Thinking Hats" framework organizes thinking into six distinct perspectives:

1. **White Hat:** Focus on facts and data.
2. **Red Hat:** Address emotion and intuition.
3. **Black Hat:** Assess risks and exercise caution.
4. **Yellow Hat:** Highlight optimism and benefits.
5. **Green Hat:** Explore creative ideas.
6. **Blue Hat:** Manage processes and control the discussion.

Brainstorming the Scenario:

Problem: Monsoon-related disruptions at railway stations, including delays due to track flooding and inefficiencies caused by manual ticket-checking bottlenecks.

Using the "Six Thinking Hats" approach:

1. **White Hat:**
    - Collect historical data on delays during the monsoon season.
    - Identify predictive analytics needs for weather conditions and passenger volume during disruptions.
2. **Red Hat:**
    - Address passenger anxiety caused by delays and potential schedule disruptions.
    - Intuition suggests that automated solutions can alleviate stress.
3. **Black Hat:**
    - Consider the risk of system failure during extreme weather conditions.
    - Highlight the high installation costs of an automated ticket-checking system.
4. **Yellow Hat:**
    - Automating systems can lead to greater passenger satisfaction and reduced manual labor.
    - Long-term cost savings through efficiency improvements.

5. **Green Hat:**
    - Propose an RFID-based automated ticket-checking system.
    - Develop an AI-powered weather alert system to manage potential delays proactively.
6. **Blue Hat:**
    - Define actionable steps:
        1. Collect relevant data.
        2. Prototype and test the RFID ticketing system.
        3. Pilot the AI-based weather alert system.

Learning Outcome:
The "Six Thinking Hats" framework provided a systematic and balanced approach to addressing the scenario. It enabled identifying root causes, risks, and benefits while fostering innovative and practical solutions.

Framework 2: Provocation and the "Po" Tool by Edward de Bono

Video Reference: Week 12 - Video 8
Framework Overview:
The "Po" tool encourages breaking habitual thinking patterns through provocative and seemingly unrelated ideas to stimulate creative solutions.

Brainstorming the Scenario:

Provocation:
"What if railway stations were completely staff-less and operated autonomously?"

Ideas Generated:

1. **Smart Gates:**
    - Install RFID-enabled smart gates at entry and exit points to manage ticketing without human intervention.
2. **Drones and Robots:**
    - Deploy drones or track-mounted robots to monitor track conditions in real-time, ensuring safety by identifying flooding or blockages.
3. **Interactive Passenger App:**
    - Develop an app that allows passengers to:
        - Report issues.
        - Check train status.
        - Access instant support through AI-powered chatbots.

Learning Outcome:
The "Po" tool enabled out-of-the-box thinking by challenging traditional problem-solving approaches. It fostered unconventional yet practical ideas, such as automated track inspections and interactive support systems, paving the way for futuristic solutions.

Final Reflection:

Both frameworks—**"Six Thinking Hats"** and **Provocation with the "Po" Tool**—were instrumental in addressing the Railway Station scenario. The structured approach of the Six Thinking Hats helped identify and balance practical concerns with creative possibilities, while the "Po" tool pushed boundaries and stimulated innovative solutions.

The integration of these approaches provided actionable insights, including:

- RFID-based ticket-checking systems.
- AI-driven weather alert systems.
- Automated track monitoring and interactive passenger support solutions.