# AIG-120 Discussion 3

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## Description of Scenario

An Engineering department head, technical team lead, senior engineer and junior engineer working for a logistics company are discussing improvements to an existing cargo tracking system. In order to enhance real-tine tracking and reduce delays, the Engineering department head instructs the technical team to integrate a new AI-powered tracking tool into the system. The technical team must now decide between the three of them the best way to implement this tool. The must assess the feasibility, costs and potential impact before presenting their solution to the Engineering department head.

## Roles

**Aliyyah - Engineering Department Head:** The Engineering Department Head is responsible for ensuring the company’s values and financial viability are upheld with the implementation of the new AI tool.

**Aadil - Technical Team Lead:** The Technical Team Lead is responsible for ensuring integration feasibility, potential cybersecurity concerns and any technical challenges.

**Jonathan - Senior Engineer:** Dive deep into the technical specifications of the new tool, Implementation Planning, provide suggestions for how the tool can be improved or optimized.

**Masoud - Junior Engineer:** May assist in creating proof of concepts or testing small-scale implementations to validate the tool’s claims, help gather data, conduct tests, or analyze how similar tools work in other contexts.

## Each Role’s Thought Process

**Engineering Department Head:** Conduct a meeting with the technical team to recommend the limitations of the current cargo tracking system. Once the technical team has completed their testing and implementation of the new AI tool and presented their model, I will confirm that the tool meets the financial requirements for the company and will not be a burden. I will also confirm the branding and user experience matches the company’s requirements.

**Technical Team Lead:**The Technical Team Lead will evaluate the feasibility of integrating the AI-powered tracking tool, considering system compatibility, cybersecurity risks, and technical constraints. They will oversee the implementation process, ensuring alignment with the company's infrastructure and security policies. Additionally, they will coordinate with the Senior and Junior Engineers, review test results, and refine the solution before presenting it to the Engineering Department Head.

**Senior Engineer:** The Senior Engineer will analyze the given task and develop a comprehensive implementation plan. This includes determining the starting point for data collection, outlining the analysis process, and designing a presentation format tailored to the end users. The findings will be conveyed through graphs and actionable insights to enhance decision-making.

**Junior Engineer:** Follow the instructions from the senior engineer and the requirements of the tool. Testing the tool in a similar environment to where it will be implemented. Gather the test results to present to team lead. Once the information is complied, I will take it in a report to my team lead for critiques.

## Decision and Rationale

### Data Collection & Feasibility Assessment:

The Senior Engineer will determine the sources and methods for collecting relevant data to assess the tool’s effectiveness.

The Technical Team Lead will evaluate the AI-powered tool’s compatibility with the existing cargo tracking system, ensuring it meets cybersecurity standards and operational requirements.

### Technical Evaluation & Testing:

The Senior Engineer will analyze how the collected data should be processed and utilized to optimize tracking efficiency.

The Junior Engineer will conduct testing in a controlled environment, implementing small-scale trials to validate the tool’s performance using real-world data.

### Cost-Benefit Analysis:

The Engineering Department Head will review financial implications, ensuring the tool aligns with budget constraints and provides a measurable return on investment.

### User Experience & Scalability:

The team will assess how the tool enhances real-time tracking, minimizes delays, and integrates seamlessly with existing workflows without disrupting operations.

Data visualization methods, such as graphs and reports, will be designed based on the end-user requirements.

### Final Presentation & Approval:

Once data collection, testing, and analysis are complete, the team will compile their findings into a report.

The report will include feasibility, security considerations, test results, cost analysis, and potential areas for optimization.

The Engineering Department Head will review the final proposal and determine whether the AI-powered tracking tool should be implemented.