# Lab: Review a Product Development Scenario

**Overview:**

In this lab, you will review a scenario with the goal of defining the role of a product manager and creating a list of skills required for the product manager working in the given scenario. You are also given a comprehensive list of skills in the attached Excel spreadsheet, from which you can select the skills that you think the product manager will require.

**Scenario:**

You are a product manager at Heavy Auto Manufacturer, Inc., working on a new AI feature for semi-trucks. Your company specializes in developing trucks that have automatic controls. For example, some of the vehicles have automatic braking systems that intervene when a vehicle gets too close to the truck and adjusts speed based on distance and weight.

The CEO asks the VP of product development to develop a product that will help the company stand out from the competition. He’s friends with some professors at the state college, and they have been working on AI technology that enables automated controls. The first area they want to target is the fuel system. The idea is to reduce fuel consumption and regulate the amount of fuel the truck needs based on current conditions rather than a constant supply of fuel. The AI system would inform the driver how to steer the vehicle based on conditions and have a feature where the system takes more control. They have discussed the possibility of testing the system on their trucks and possibly integrating it into their systems, depending on how the testing goes. If it is a success, Heavy Auto Manufacturer, Inc. has a chance to lead the market for AI and trucks.

You are the product manager, and before you get to work, you need to figure out what’s needed to get the project off the ground. You will be responsible for the product level and have the opportunity to work with another senior product manager who thinks more at a strategic level.

**Exercise:** Define the role of a product manager and create a list of skills required for the product manager working in the given scenario.

**Step 1:** Review the given scenario and list at least 2 items for each of the following:

Risks you will face:

* The AI system may fail testing and not integrate successfully into the truck
* Delays in technology implementation could result in missed market opportunities
* Operational costs may increase, and ROI could be uncertain
* Regulatory or safety approvals may not pass, delaying product launch

Rewards you will get:

* Successfully developing innovative technology can significantly enhance market competitiveness
* The company could become a market leader in AI applications for trucks
* Improved fuel efficiency will deliver greater value to customers
* Opportunities to collaborate with academia may lead to continuous innovation

Challenges you will face:

* Aligning goals and resources across departments (e.g., R&D, marketing, manufacturing)
* Making product planning decisions under uncertain technical maturity
* Keeping communication and strategic alignment with the senior product manager
* Balancing customer demands with technological feasibility

People with whom you would need to collaborate:

* Senior Product Manager (responsible for strategic oversight)
* Engineering teams (for AI development and hardware integration)
* Testing and quality assurance teams
* University research teams (who provide technical collaboration)

Scope of your work:

* Drafting product requirements and specification documents
* Leading cross-functional collaboration and tracking project progress
* Planning and executing the product testing process
* Evaluating both business and technical risks prior to market launch

**Step 2:** Identify the skills that you think would be most applicable for you as a product manager working on this project. You can select skills from the list below. (Feel free to add your own skills too.)

* Artificial Intelligence and Data Analytics: Understanding how AI algorithms and sensor data optimize fuel control logic
* Engineering: Required to comprehend systems involving autonomous control and hardware integration
* Communication Skills: Essential for coordinating with stakeholders and reporting progress effectively
* Project Management Skills: To monitor schedules, resources, risks, and milestones
* Business Acumen: To evaluate the commercial value and risks of AI implementation
* Product Lifecycle Management: To plan the entire cycle from design and testing to product retirement
* Change Management: To lead internal process transitions and overcome resistance to new systems
* Quality Systems Management: To ensure the product complies with safety and regulatory standards
* Market Research: To analyze the AI trucking market and understand competitor positioning

**Product manager skills list:**

* Collaboration
* Scoping and prioritization
* Engineering
* Operations
* Market research
* Focus groups
* Marketing
* Reliability engineering
* Quality systems management
* Relationship building techniques
* Testing
* Change management
* Product lifecycle management
* Sales
* Advertising
* Artificial Intelligence and data analytics
* Assembly
* UX (User Experience) Design
* Business Acumen
* Analytical Skills
* Strategic Thinking
* Communication Skills
* Project Management Skills