Design for Artificial Intelligence driven Products

DES 529
IIIT Delhi

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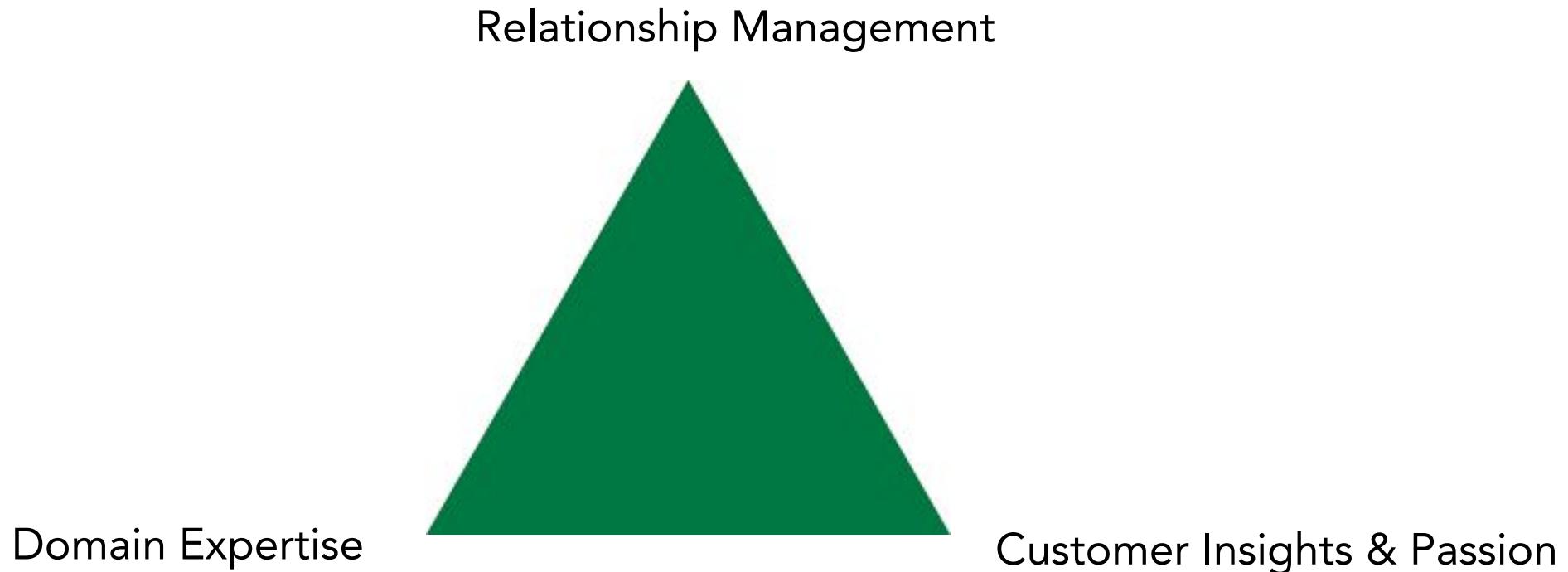
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Lets start simple

1. Who is a Product Manager ?

2. What does Product Management do ?

Product Management

o Product management is the business process of planning, developing, launching, and managing a product or service. It includes the entire lifecycle of a product, from ideation to development to go to market.

o Product managers are responsible for ensuring that a product meets the needs of its target market and contributes to the business strategy, while managing a product or products at all stages of the product lifecycle.

Relationship Management

Domain Expertise

Customer Insights & Passion

Product Management @ Microsoft

- Responsibilities

  - As a Senior Product Manager, you'll be responsible for strategy and execution in significant areas of the product. This will have you contributing to the product vision and roadmap, evangelizing and refining your ideas cross-discipline, and working with engineering, UX design, research, marketing, business planning teams to deliver on it.

- You'll Be Responsible For
  - Product and market strategy - Researching market segments, assessing competitive differentiation, creating decision frameworks, formulating, and validating hypotheses and advocating direction.
  - Launch and evangelism – create product demos, presentations, and other collateral to highlight capabilities.
  - Prioritization – Ruthless prioritization across several competing objectives to make the optimal use of time and resources.
  - Engineering and Design engagement - Close partnership with engineering and design teams to understand technical trade-offs to successfully influence product design.
  - Gather data from multiple sources to measure the effectiveness of new features and identify areas of improvement.
  - Formulate hypotheses and quickly validate with prototypes, user feedback, and experimentation.
  - Have fun while growing the product, customer base and your career with a growth mindset.

Product Management

o A product manager in finance is responsible for developing and managing financial products or services, such as loans, insurance, investments, or payments. They have to understand the needs and preferences of customers, the competitive landscape, and the regulatory environment. They also have to collaborate with analysts, experts, marketers, distributors, and vendors to ensure that the product meets the business objectives and customer expectations.

o A product manager in healthcare is responsible for developing and managing healthcare products or services, such as medical devices, software, diagnostics, or treatments. They have to understand the needs and pain points of patients, providers, and payers, the clinical evidence and outcomes, and the compliance and ethical standards. They also have to work with engineers, designers, clinicians, researchers, and regulators to ensure that the product delivers value and improves health .

Product Management

o A product manager in consumer products is responsible for developing and managing consumer products or services, such as food, beverages, cosmetics, clothing, or entertainment. They have to understand the needs and desires of consumers, the market trends and opportunities, and the brand identity and positioning. They also have to coordinate with suppliers, manufacturers, distributors, and retailers to ensure that the product satisfies quality and safety standards and reaches the target audience .

Additional Information

▪ What Does a Finance Product Manager Do? | Product HQ. https://producthq.org/career/finance-product-manager/.
▪ Careers in FinTech: Product Manager - PwC India. https://www.pwc.in/industries/financial-services/fintech/careers-in-fintech/careers-in-fintech-product-manager.html.
▪ Job Description of a Product Manager in Financial Services. https://work.chron.com/job-description-product-manager-financial-services-27285.html.
▪ Product Manager: The role and best practices for beginners - Atlassian. https://www.atlassian.com/agile/product-management/product-manager.

Product Management

As a product manager, you will have to perform various tasks, such as:

o Conducting research and investigative analysis: You will have to understand the customers' needs, the competition, and the market trends. This will help you define the problem that your product will solve and the value proposition that it will offer.

o Develop strategy: You will have to create a product vision and a roadmap that aligns with the overall goals and brand of the company. You will also have to prioritize features and requirements based on their impact and feasibility.

Product Management

- **Communicate**: You will have to communicate your product vision and roadmap to various stakeholders, such as executives, engineers, designers, marketers, and customers. You will have to gain their buy-in and feedback, and manage their expectations.

- **Coordinate**: You will have to work closely with cross-functional teams to ensure that the product is being built according to specifications, within budget and timeline. You will also have to test and validate the product before launching it.

- **Launch and manage**: You will have to plan and execute the go-to-market strategy for your product, including pricing, positioning, promotion, and distribution. You will also have to monitor and measure the performance of your product after launch, and make improvements based on customer feedback and data.

Product Management is similar to ......
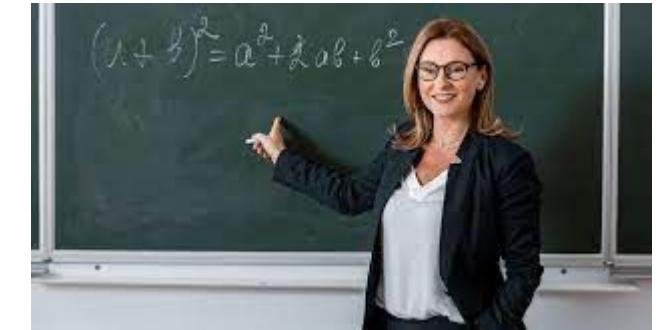
Product Management

o   Product management is like being a chef: you have to create a menu (product vision) based on what your customers want (market research), gather the ingredients (resources), cook the dishes (develop features), serve them (launch), and get feedback (measure).

o   Product management is like being a movie director: you have to come up with a story (product vision) based on what your audience wants (market research), hire actors and crew (resources), shoot scenes (develop features), edit them (launch), and get reviews (measure).

Product Management

o **Product management is like being a teacher**: you have to design a curriculum (product vision) based on what your students need (market research), prepare lessons and materials (resources), teach classes (develop features), grade assignments (launch), and get feedback (measure).

o **Product management is like being an architect**: you have to design a building (product vision) based on what your clients want (market research), hire contractors and suppliers (resources), oversee construction (develop features), deliver it (launch), and get feedback (measure).

Product Management

"Product Management is the process of conceiving, planning, developing, testing, launching, delivering and withdrawing products in the market"

- Internal: current teams, management
- External: supply chain, market
- Upstream: planning, development, launch
- Downstream: ongoing lifecycle management

Product Management's Purpose
- o Create Customer Value
- o Measurable Business Benefits
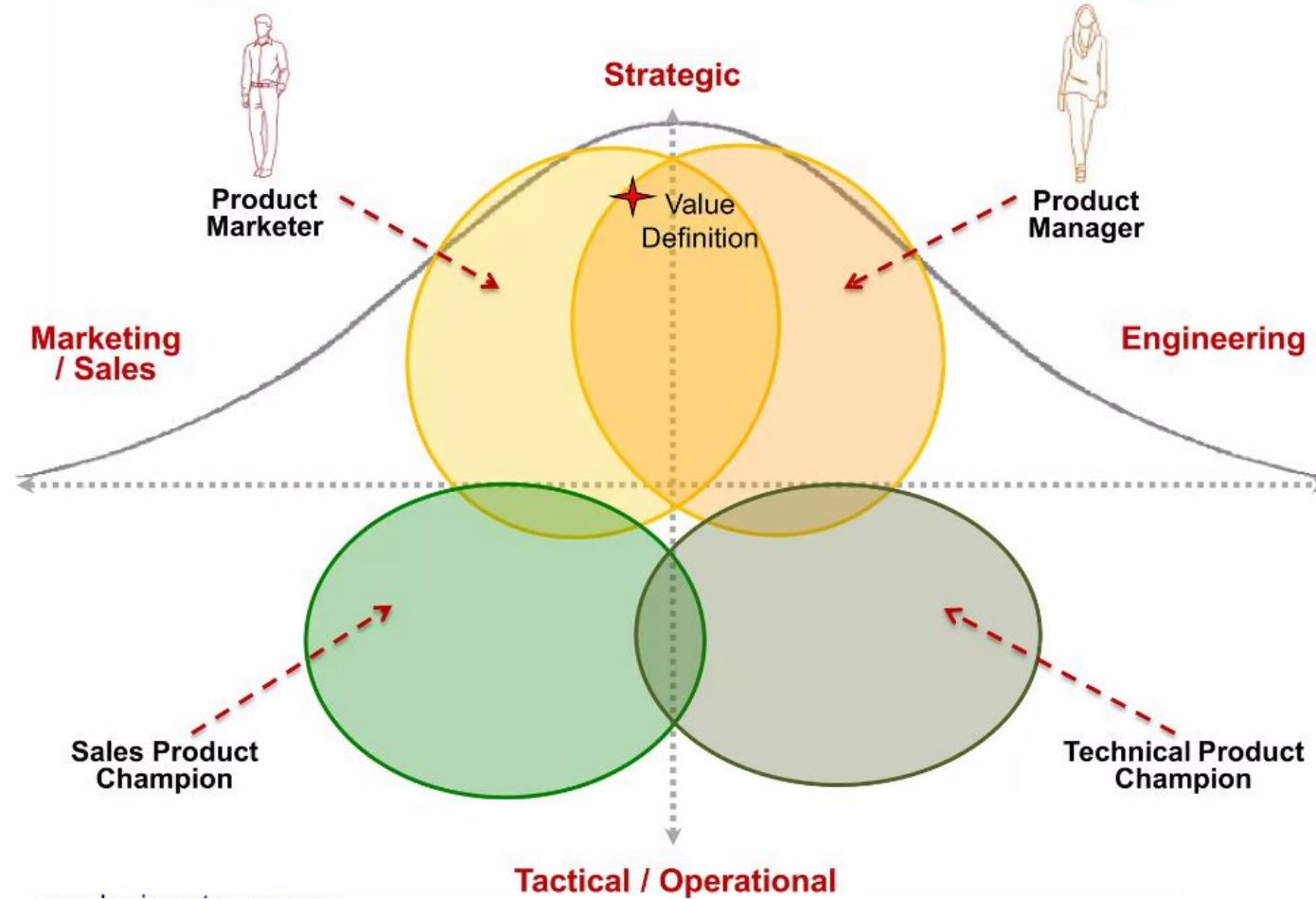
Product Management Domain
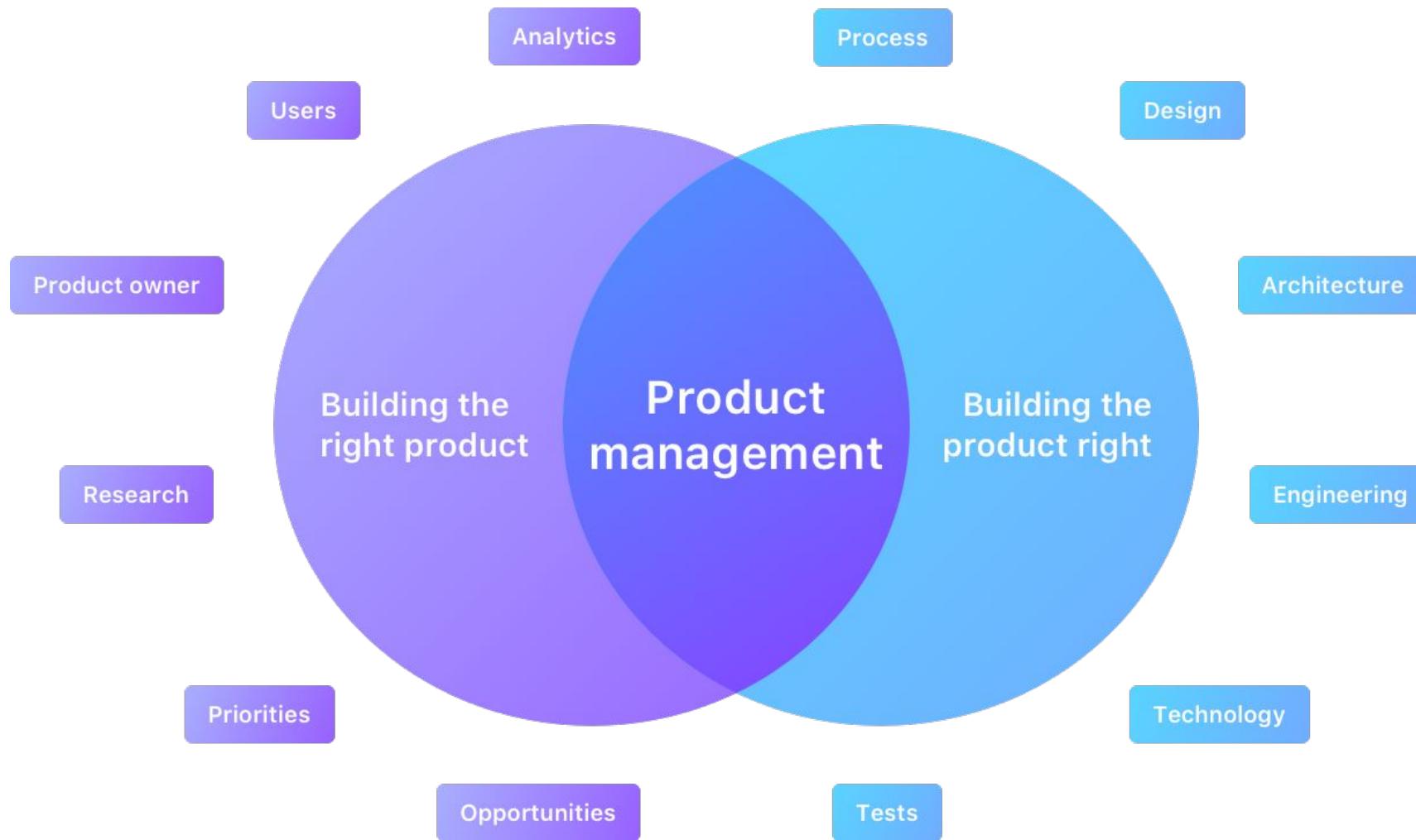
Product Management Domain

Role Specialisation Within Product Management

Product Management

Analytics

Process

Users

Design

Product owner

Architecture

Building the right product

Product management

Building the product right

Research

Engineering

Priorities

Technology

Opportunities

Tests

Product Management

Good Product Management is about **delivering products that customers love**.

Product Managers use **logic**, **insight** and a degree of **creativity** in **defining**, **developing**, **deploying** and **maintaining** these products.

Product managers must **guide** and **collaborate** with other parts of the business and external stakeholders.

Product managers have a duty to **deliver measurable benefits** to their organisation.

Session 2 – Readings and Cases

1. Core Competencies

   - conducting customer interviews and user testing
   - running design sprints
   - feature prioritization and road map planning
   - the art of resource allocation (it is not a science!)
   - performing market assessments
   - translating business-to-technical requirements, and vice versa
   - pricing and revenue modeling
   - defining and tracking success metrics

2. Emotional Intelligence

   - Relationship Management
   - Self-Awareness
   - Self Management
   - Social Awareness

3. Company Fit

- Company philosophy about PM
  - PM drives Engineering
  - Engineering drives product
  - The PM – Engineering Partnership

- Stage of the company
  - Startup – wide; Jack of all trades
  - Mature – narrow; specialists

MVP **vs** **MLP**
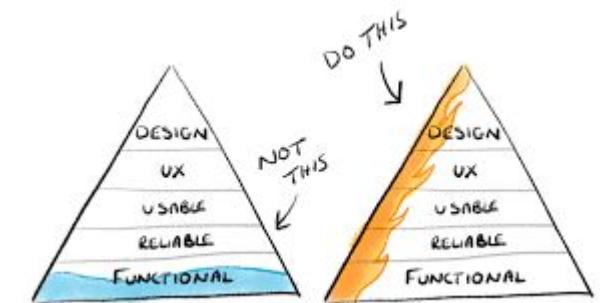
Viable   Lovable

#2 Product

- **Primary goal.** MVP is designed to confirm or refute the software idea, collect feedback on the product, and think about the further development strategy. MLP, on the other hand, needs to win over early adopters, so to say.

- **Time and financial costs.** Building lovable products takes more time and effort than developing an easier-to-implement MVP.

- **UI/UX.** When creating an MVP, little attention is paid to UX, because it's not a key task. But if you intend to build MLP, you have to take care of the product usability and work on the interface design. After all, MLP should appeal to users.

- **Relationships with users.** After testing the MVP, users simply express their opinion about the software and say if everything works as it should. But interaction with MLP must hook and interest them; ideally, it causes the word-of-mouth effect.

MVP	MMP	MLP
The fastest among others to develop	Fast to develop	Slower to develop than an MVP
Minimum features to check the product idea	Minimum features to promote a product at the market	Minimum features to gain user's following
There is no emphasis on UX & UI design	Not necessarily focused on UX & UI design	Focus on lovable UI & enjoyable UX
Effective to use if there are only one or few rivals	Effective to use in a different competition environment	Effective to use if there are many alternative options on the market

https://agilie.com/blog/minimum-lovable-product-what-a-mlp-is-and-how-to-create-one

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Product Management Roles

Pre- AI Ecosystem

- Product managers acted as coordinators between business, design, and engineering.

- Their role was largely about requirement gathering, prioritization, and roadmap execution.
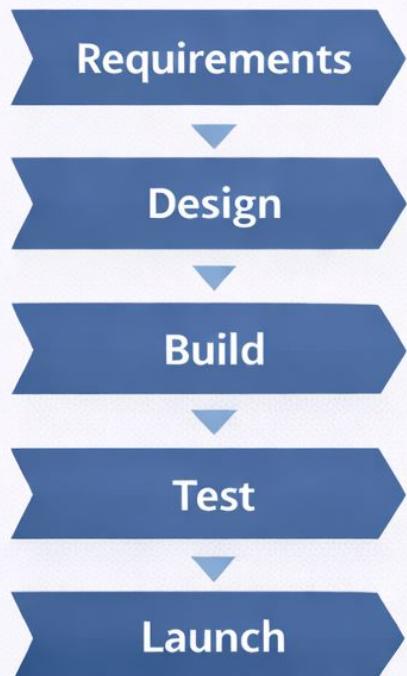
AI Ecosystem

- Product managers must understand data science, machine learning workflows, and ethical implications.

- They act as translators between AI researchers, engineers, and business stakeholders, ensuring feasibility and responsible deployment.

Product Development Lifecycle
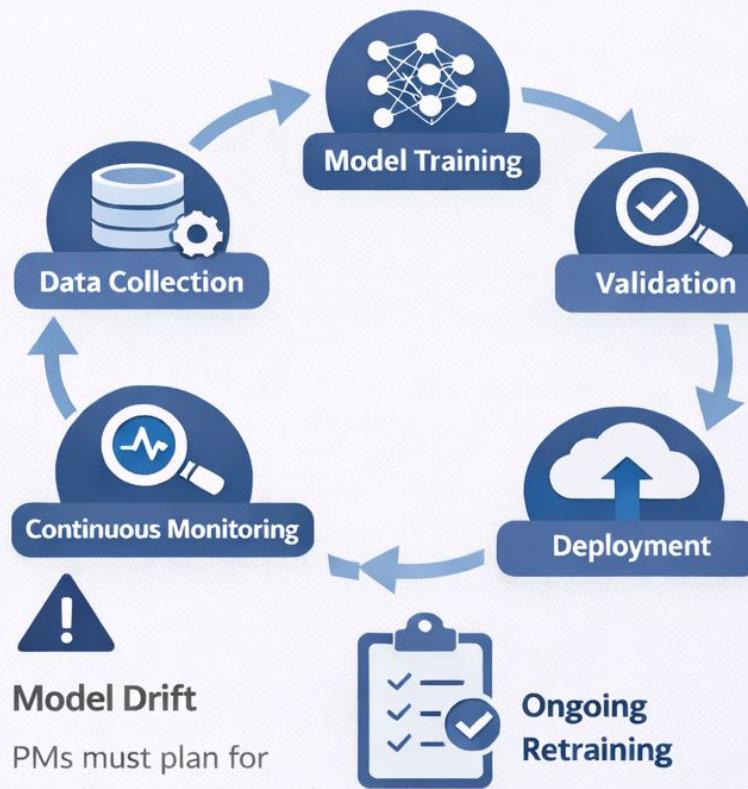
Changing Success Metrics, Skills, and Risks in the AI Era

	Pre - AI	AI
Metrics of Success	• Feature adoption • Revenue growth • Customer satisfaction • Timely feature delivery	• Model performance (Precision, Recall, F1 score) • Fairness • Transparency • Ethical compliance • Traditional Business KPIs
Skills Required	• Strong Communication • Market Analysis • Project management • Stakeholder Alignment	• Added skills in Data Literacy • AI ethics • Experimentation design • Ability to evaluate technical trade-offs
Risk Management	• Market fit risk • Usability • Competition	• Algorithmic bias • Data privacy • Regulatory compliance • Unintended consequences of autonomous systems
Collaboration	• Engineers • Designers • Marketing teams	• Data scientists • ML engineers • AI ethicists • Legal Compliance teams

Role of PM Tools such as Lovable in the AI Ecosystem

- **Agent Orchestration**: Lovable enables PMs to design and manage intelligent agents without deep coding skills.

- **Rapid Prototyping**: PMs can quickly test workflows, validate ideas, and iterate before committing engineering resources.

- **Risk Management**: Embeds ethical checks (bias detection, compliance monitoring) into workflows, aligning with modern AI governance needs.

- **Collaboration Hub**: Bridges communication between business stakeholders, engineers, and data scientists by providing a shared, visual workflow.

- **Shift in PM Role:** Moves product managers from feature coordinators to ecosystem orchestrators, balancing usability, accuracy, fairness, and compliance.

Product Manager's Soft Skills

o Product Portfolio
- What do they offer ?
- How many languages ? Leading ones ?
- Mathematics, Music
- Ref website, annual reports, investor presentations, articles….

o Product Managers
- Who are they ? What is the organization structure ?
- What do they do ?
- What is requited to be a PM here ?
- Ref website, linkedin, online search …