How to Implement Product Frameworks: AI

A step-by-step guide to setting up your org and processes around Yuying Chen-Wynn's AI framework

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Defining the AI Product Management Framework

In the dynamic world of technology, AI product management stands out as a distinct and rapidly evolving field. Not long ago, AI product managers were predominantly seen in major tech companies such as Amazon and Apple, contributing to the development of groundbreaking products like Alexa and Siri. Now, with AI technology surging into the mainstream, the demand for experts in the field has dramatically increased.

AI product management is complex and diverse, requiring a blend of technical skills such as software engineering, data analysis, and risk management in addition to traditional product management abilities.

Central to this craft, however, is a profound understanding of AI technology and its capacity to solve user problems in innovative ways.

Enter the AI Product Management Framework by Yuying Chen-Wynn, Head of Artificial Intelligence at PEAK6. Yuying's structured approach is specifically designed to tackle the unique challenges of developing and managing AI products. Whether you are an aspiring AI product manager or a seasoned professional looking to deepen your expertise, you'll find valuable insights and practical knowledge to build excellent AI products in this guide.

Before we begin, what exactly is AI product management and how does it differ from traditional product management?

AI product management is a specialization of product management, similar to "growth PM" or "go-to-market PM", that focuses on creating AI products. AI product managers have a deep understanding of AI technology and how it can be used to solve user problems. Beyond the core competencies required in traditional product management—user research skills, the ability to identify the right problem and the right solution, and strong user empathy when designing—they also need technical skills such as software engineering, data management and analysis, and risk management.

AI product managers are adept at grasping and communicating complex technical concepts to the broader business audience. By bridging the gap between technical and business perspectives, they play a crucial role in realizing both the product and the company's vision.

When to Use the AI Product Management Framework

- You are creating products or features with explicit behaviors driven by requirements and specifications
- Your team is launching a new AI product

✅ PROS

Innovate:

Design the right solution for users—including ones they didn't even know they needed—creating a competitive edge by staying at the forefront of technological advancements

Improve Customer Adoption & Retention:

Deliver customer value by automating the tasks that end-users need to complete

Market Expansion:

Enable the creation of new products and services, opening up different opportunities for revenue growth and market expansion

❌ CONS

It may be difficult to adapt to changing user behavior and data patterns while ensuring products remain ethical and avoiding privacy concerns

Anatomy of an Excellent AI Product Strategy

Before you can develop strong AI products, you need a strong product strategy. And though the fundamentals of product strategy remain consistent regardless of specific technologies or trends, AI presents unique opportunities and challenges for guiding the direction of a product.

COMPONENTS

Yuying Chen-Wynn identifies three components that make up an excellent product strategy.

1 **The Right Problem to Solve**
Just as with a traditional product strategy, an AI product strategy should focus on addressing significant problems faced by users and solving them in innovative ways. The aim is to utilize AI in ways that generate value for both the business and its customers. To uncover these pain points, AI product managers must develop deep empathy and a genuine curiosity about customers by engaging directly with them, diving into feedback, and analyzing emerging trends.

2 **The Right AI Solution**
Once you've uncovered the right user problems, the next step is to evaluate how AI can provide the best solution. Yuying differentiates her recommendations based on old, unsolved problems that can be tackled by AI and new emerging ones.

How to Leverage Generative AI to 10x Your User Experience

Type of Risk	Old, unsolved problems	New, emerging problems
Areas of Focus	Content-rich areas that require specialized knowledge. AI can provide value when it comes to access to that knowledge. Prime examples include legal, medical, and technical fields.	User problems caused by the emergence of Generative AI or Generative AI shortfalls.
AI Solutions	• Democratization of specialized knowledge • Lowered cost economics for coding and app development • Reduced cost economics for content creation • Intent-based UI/UX paradigm allowing quick software updates over time • Hyper-personalization	• Addressing the challenge of excessive mediocre content generated by AI and distinguishing high-quality content in a crowded space • Intellectual property issues in AI — developing a system for attributing training data sources and establishing IP ownership or shared ownership of new creations • Handling Generative AI hallucinations by improving accuracy and implementing automated mechanisms to detect hallucinations • Exploring new business models, pricing strategies, and market approaches specific to these emerging technologies and experiences

3 Strategic Differentiation

Rarely are great ideas unique, and others have likely thought of the same concept. The essence of a winning product strategy, therefore, is in how you differentiate yourself – what unique advantages do you have that provide an edge in the marketplace? Common factors that affect all product strategies include financial resources, influence, and access.

Here are the differentiators that are particularly relevant in the current AI product landscape:

- Access to a broad customer base.
- Access to a pool of specialized talent.
- Deep domain expertise in a horizontal use case or specific industry vertical.
- Defensible intellectual property that provides an advantage in addressing key risks like hallucinations and repeatability.
- Exclusive access to specialized datasets.
- Unique ability or channel for effective monetization.

At present, this approach is what will provide you with a defensible position, preventing your AI product from being overshadowed by competition.

Your Step-By-Step Implementation Guide

Let’s dig into how to successfully achieve each step so you can move onto the next.

* Once you have a winning product strategy in place, Yuying’s AI Product Management Framework provides a structured approach to developing and managing AI products, ensuring that innovative solutions are brought to life and deliver their intended value. This framework encompasses several key components that address the unique challenges associated with AI product development.

1 Set the direction of the product with concept and design

During the concept and design phase, it is critical to gain a thorough understanding of your organization's technological strengths and limitations. The principles of traditional product management play a key role, with product managers focusing on identifying user problems and designing solutions that effectively tackle these challenges. This stage is fundamental in setting the direction for the product, ensuring that the AI solution is aligned with both user needs and broad organizational goals.

Clearly define user problems: Your planned AI must be fueled by customer needs. Comprehensive user feedback can come from surveys, interviews, internal customer support teams, user testing, and reviews, among others. Gather insights from all these sources—it wouldn’t hurt to chat with customers directly over the phone, either—and consolidate them to help identify trends in the feedback.

2 Undergo data planning

In AI product management, the complexity of data analysis significantly surpasses that of traditional product management. That’s why careful data planning is essential from the outset when building AI products. This involves understanding the data sources, quality, and infrastructure required to support the AI model.

Identify data sources: Determine where your data will come from. This could be internal data (from within your organization), external data (public datasets, data purchased from third parties), or a combination of both. Confirm that the sources are high quality and relevant to the problem you're solving.

Plan your infrastructure: Determine the infrastructure needed for data storage, processing, and analysis. This could involve cloud services, on-premises servers, or a hybrid approach, depending on the scale of data and computational requirements.

Good AI is future-proof: Plan for scalability, considering how your data needs might grow over time. This includes having scalable storage and processing capabilities and considering future data sources.

Mastery of these data skills is essential to build AI products that are both effective and aligned with the intended objectives.

3 Select your model

The selection of the appropriate technology model (e.g., linear regression, decision trees, LLMs etc.) is a pivotal aspect in the development of AI products, as it fundamentally shapes both the capabilities and limitations of the final product.

Know the characteristics: There are various types of machine learning and AI models, so knowing things like the scope of the dataset, performance metrics for key scenarios, and what's out of scope of the model is critical for choosing an appropriate model.

Don't forget about the business stakeholders: This decision is not merely a technical one; it also has significant business implications. AI product managers need to be actively involved in this process, working in close collaboration with data scientists and engineers. They are also responsible for translating highly technical concepts to business stakeholders clearly and concisely.

4 Analyze your risk

AI products are inherently complex and involve navigating a landscape of emerging technologies and regulatory considerations. A comprehensive risk canvas helps product managers anticipate, assess, and mitigate potential risks so that AI products are developed and deployed responsibly.

Overestimate your budget needs: Yuying recommends that you triple your initial expectations around the timeframe you budget for this step, and you'll have to work hand-in-hand with either your legal counsel or your compliance officer.

Yuying Chen-Wynn's AI Product Risk Canvas

Type of Risk	Considerations
Data	• Assess risks related to the handling of user data, including compliance with privacy laws • Data quality
Technical	• Accuracy and reliability • Scalability
Ethical and Legal	• Bias and fairness • Compliance and legal issues
Operational	• Integration challenges • Maintenance and upkeep
Financial	• User adoption and experience • Competitive landscape
Market and User	• Alignment with company mission and objectives • Agility and adaptability to market changes and the emergence of competition

5 Build, test, and iterate

AI products are not static entities—they continuously evolve and learn through interactions with data and users. That's why taking an iterative approach to AI product development is key, and you have to constantly test and fine-tune to guarantee that you're creating a high-quality experience. If you're using a 3rd party model, remember to continually test to ensure you are aware of model behavior changes.

Bring your customers back in the fold: Remember in Step 1 how important customer needs were for planning? They should also be engaged through the product development process.

Actively seek and incorporate user feedback to understand their experiences, pain points, and suggestions. This user-centric approach helps in refining the product based on real-world usage—conduct beta tests and/or A/B tests, then make sure to listen to the feedback.

6 Deploy and monitor

Once you deploy your AI model into the product, you must implement processes to monitor the model's performance, integration, and user experience. As data evolves, the performance of an AI model can drift. Regular evaluation is necessary so it continues to perform as expected. If performance degrades, the model may need retraining or fine-tuning.

Have regular retraining: Set up protocols for regular model retraining based on the evolving nature of the data. As the distribution of data changes over time, models may become less accurate. Implement a systematic retraining schedule to keep the model up-to-date and aligned with the current data patterns. This can involve periodic retraining or triggering retraining when specific performance thresholds are crossed.

7 Operationalize your continued learnings

The success of AI products hinges on continuous learning and improvement. This requires a structured approach that goes beyond initial deployment, encompassing ongoing monitoring, feedback loops, and governance.

Continuous Learning and Adaptation: AI models learn from new data, which means they can improve or change their behavior over time. This necessitates a development cycle that is flexible and can adapt as the model evolves based on real-world usage.

Integrate user feedback mechanisms: AI products should be designed to incorporate user feedback regularly. This feedback is invaluable for understanding how well it is meeting user needs and where improvements can be made.

Consider ethics and fairness: Continuously monitor and test the AI system for biases and ethical issues. As the data and the model evolve, new biases can emerge, requiring ongoing vigilance and correction.

Collaborate across teams: Foster strong collaboration between data scientists, engineers, product managers, and user experience designers. This interdisciplinary approach ensures a holistic view of the product's development and performance.

The goal is to gather user insights and data-driven evidence of the AI model's effectiveness and to have a process in place that guarantees AI products are developed and used responsibly.

8 Change management

Implementing any new framework requires that all internal stakeholders are prepared for and aligned with the new direction—not just product teams.

Determine the need: Before anything, you must assess the impact of the proposed change on the people, process, and technology. Start by understanding where improvements can be made. Have one-on-one discussions with team members and ask about their work to answer questions like *"What's working well?", "Where do they face challenges?",* and "*How have you tackled problems before?".* Don't reinvent the wheel; people often find effective solutions even without fancy tools, so make sure to uncover existing solutions before making any major investments.

Use the WIIFM communications approach: The "what's in it for me" style of communication enforces value for the change. Map out your stakeholder groups impacted by the change and assess what they will be most interested in. When introducing the change to their stakeholder group, leadership should always start with how this will benefit them.

Have a top-down approach: Change starts at the top. Executive leadership should communicate the rationale for the process change clearly and passionately.

Build your change community: Change starts at the top. While executive leadership should communicate the rationale for the process change clearly and passionately, there should also be change champions that help promote change across the company culture. When it comes to picking change champions, a complementary mix is key.

- **The educator:** They know the framework very well and can help quickly align those who don't, creating performance milestones to keep everyone excited and on track

Follow the 5 D's

To plan on how change will be effectively rolled out and managed long-term, you must Designate, Determine, Decide, Develop, and Decrease. (For more information on the 5 Ds, watch this change management webinar between Productboard and Joshua Childs, Director of Product Management Email Solutions at Validity.)

- **The project coordinator:** They understand what the vision is for the new framework, and with their decent amount of exposure to the rest of the organization, they hold the right people accountable and routinely check in on output and status
- **The team peer:** They are closely tied to the group you want to adopt change, so it's important that they really understand the vision and the framework to become an influencer for the rest of the group

Provide (continuous) training and documentation: Supporting the transition will not be a one-off conversation. Put new / updated processes, goals, and KPIs in writing.

7 Test and validate

Develop and test your new solutions before sending them out into the market.

Validate: Create prototypes for testing with your target customers and any other key stakeholders.

Continuously iterate: Use A/B testing or gather user feedback to refine your product, making improvements based on user insights. Continuously update the software based on validation results.

Ways to Measure Success

Measuring the success of your product management strategy for AI involves evaluating aspects related to the product's performance, impact on business goals, user satisfaction, and adaptability to changing requirements. Here are key metrics and approaches to measure a successful product (and implementation strategy):

Key Metrics & Approaches

User Engagement & Satisfaction

- ☐ ^ Active users
- ☐ ^ Session duration
- ☐ ^ Feature utilization rates
- ☐ User surveys (form fills, CSAT, etc.)
- ☐ ᵥ Customer support tickets

Business Impact & ROI

- ☐ ^ Revenue
- ☐ ᵥ Costs
- ☐ ^ Market Share

Adoption Rate

- ☐ ^ New users
- ☐ ^ User retention rates
- ☐ ^ Rate of adoption
- ☐ ᵥ User churn rates

Model Performance

- ☐ ^ Accuracy
- ☐ ^ Precision
- ☐ ^ Recall
- ☐ ^ F1 score
- ☐ ᵥ Model drift
- ☐ ᵥ Degradation
- ☐ ᵥ Bias

Time to Market & Iteration

- ☐ ^ Speed to market
- ☐ ^ Speed in iteration cycles
- ☐ ^ Speed in responding to feedback
- ☐ ^ Accuracy over time

Helpful Tooling

To best align your product strategy to your company mission—and to ensure that you are dedicating resources and time to the right AI initiatives—you need a product management tool that was built to support the development of innovative features based on customer needs.

You need Productboard, the first of its kind customer-centric product management platform to help teams scale. With Productboard, you can leverage a single source of truth for AI product teams, providing real-time insights into user needs and preferences. With this level of knowledge at their fingertips, AI product managers are positioned to solve the right customer problems with AI.

> Want to learn more about how Productboard can help you develop a successful AI product strategy and assist you throughout the product development process? **Try Productboard for free to see how we help you get the right products to market, faster.**

Productboard can assist product teams in navigating this framework at scale—no matter how small of a startup you may be:

WITHOUT PRODUCTBOARD	WITH productboard
Spotting high-value, low-cost features is certainly possible, but it will take rigorous effort. Rather than prioritize by customer value and business outcomes, product teams sometimes are forced to prioritize based on the loudest voice—especially when your delivery backlog is messy and analyzing all that customer feedback to identify the most promising ideas takes time.	**Identify & prioritize your most strategically important AI features:** How does each AI solution contribute to your business's overall objectives? With the prioritization matrix, objectives can serve as criteria to prioritize AI feature ideas and organize them on your roadmaps. Additionally, you can score features based on their value in advancing each objective. This enables the sorting and filtering of features to highlight the most strategically relevant ideas.
You could do this... manually. Without Productboard, this ability is not automated.	**See what AI feature ideas are worth to your business:** What if you could assign a monetary value to each AI feature idea? With Productboard's aggregated company fields, you can consolidate any numerical data related to customer companies, like their payments, and calculate the total value of each feature idea based on their requests. This method helps ensure that your features are not only viable but also beneficial for your business in the long term.
For the exciting (and therefore costly) AI initiatives, your team may end up spending more time trying to get senior leadership buy-in than actually working on the build.	**Keep leadership informed with dynamic roadmaps:** Productboard Roadmaps keep the business aligned and informed on upcoming AI product initiatives. This empowers leadership to access the information they need independently, stay informed about upcoming projects, and collaborate with AI product teams in real-time.
Project management is done on a department-by-department basis and typically lives in siloed systems. This means it's hard for the product team to know what CS is up to and vice versa. This breaks down communication when it comes to prioritizing the best AI features or products.	**Supercharge collaboration:** Productboard offers a unified workspace for organizing cross-functional teams to exchange ideas and insights, communicate product plans, and collaborate on AI projects. In Teamspaces, every team gets a dedicated area to manage boards and data, facilitating smooth collaboration.
Other simpler solutions don't include workflows for managing high volume. Plus, it's hard for AI product managers to identify emerging trends across various sources of feedback when all incoming transcripts, notes, and call recordings are submitted from multiple places and must be reviewed and categorized manually. All of this impedes innovation and the ability to move fast.	**Ingest and incorporate user feedback at scale:** Productboard's Insights Board provides a centralized repository for ongoing feedback as well as capabilities to surface trends and patterns on a real-time basis. In the Insights board, teams gain access to: • A centralized, searchable repository for collecting and analyzing all product feedback, consolidated from many sources like Zendesk, Slack, Salesforce, and more • User insights behind every feature idea in your backlog or on your roadmap • Relevant, recent, or trending themes in collected feedback, updated in real-time, that can be spliced by customer segment • AI-powered intelligent summaries of thousands of pieces of feedback
Ever build and deploy a feature the team was excited about, only to find it to be a flop? Historically, it's been difficult for product teams to fully validate their ideas before committing to building them. That's because, before Productboard, feedback was scattered across many tools that product managers often didn't have access to—and that weren't optimized for categorizing feedback in a way that was useful to product teams.	**Validate solution ideas:** With Productboard's Portal, empower users to influence the roadmap by providing direct feedback to your AI product teams. Share the Portal with customers to show what's planned, collect feedback and votes on AI feature ideas, and source new requests. This allows you to validate that you're building the AI solution needed to 10x your user experience before you even start building.

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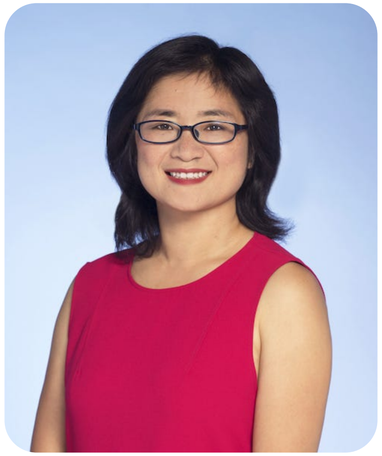

About Yuying Chen-Wynn

Yuying is a global product, technology, and AI strategy executive with 20+ years of experience building EdTech, FinTech, and Technology products across D2C, B2B, and SaaS segments and leading global teams. She got her start in product management at Microsoft Windows when Bill Gates still worked there and yelled at developers for their code. She is currently the Head of Artificial Intelligence at PEAK6, a private investment firm with a portfolio of diverse companies.

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About Productboard

Productboard is the customer-centric product management platform that helps teams get the right products to market faster. Over 6,000 companies, including Microsoft, 1-800-Contacts, and UiPath, use Productboard to understand what users need, prioritize what to build next, and rally everyone around their roadmap. With offices in San Francisco, Prague, and Vancouver, Productboard is backed by leading investors like Tiger Global Management, Index Ventures, Kleiner Perkins, Sequoia Capital, and Bessemer Venture Partners.

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