AI in Product Management
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Lecture - 35

Product-Led Growth using AI

Welcome to this NPTEL online certification course on artificial intelligence in product management. Now, we are talking about module 35, which is product-led growth using AI, and this is what we are discussing. Now, we have started discussing part A, which is new product development using AI, and we are talking about module 35. So, to give an overview of this module, we will start by understanding what product-led growth is, how it has emerged, and its key concepts. Then we will discuss the benefits of product-led growth and how AI can be harnessed within its principles.

Understand how to boost product-led growth using AI. How AI chatbots can be used in various product-led growth strategies and what considerations should be kept in mind while using AI for product-led growth. So, let us start with the emergence of AI. To understand the emergence of product-led growth, we need to look back at the history of business and technology. In the past, companies relied heavily on traditional marketing and sales approaches, such as cold calling, email campaigns, and advertising.

While these approaches can be effective in some cases, they often result in low conversion rates and higher user acquisition costs. In the early 2000s, however, a new trend emerged in the startup community. The rise of product-led growth by product-led growth companies. Companies such as Dropbox, Slack, and Zoom recognized that their products could sell themselves if they were designed to be user-friendly, intuitive, and accessible. They focused on delivering an exceptional in-product experience that would encourage users to invite their friends and colleagues to join, thus creating a viral loop that would drive organic growth.

Now let us look at what is product-led growth. At its core, PLG, which stands for product-led growth, is all about putting the product first and the users second. This may seem counterintuitive, but it makes sense when you consider that users are more likely to buy and recommend a product they love and use regularly. Some of its key components are as follows.

The first is A user-centric approach. The second is user adoption and engagement. The third is in-product experience. Fourth is viral loops and network effects.

And the fifth is data-driven decision-making. Now we will look at each concept of product-led growth. So first is the user-centric approach. PLG starts with the user and their needs, not the company's product or services. By focusing on the user,

Companies can design products that are tailored to their specific needs and preferences. The second is user adoption and engagement. PLG is all about getting users to adopt and engage with your product. This means designing an intuitive and user-friendly interface, providing helpful onboarding and support resources, and continuously improving the product based on user feedback. The third is in-product experience.

PLG emphasizes the importance of the in-product experience as it is the primary way that users interact with and experience the product. This includes everything from the user's interface and features to the performance and reliability of the product. Viral loops and network effects: PLG leverages the power of viral loops and network effects to drive organic growth. This means designing products that are inherently social and encouraging users to invite

their friends and colleagues to join. Data-driven decision-making. PLG relies heavily on data to make informed decisions about product design, marketing, and sales. By analyzing user behavior and feedback, companies can identify areas for improvement and optimize the product to better meet the needs of the users. Now, let us talk about the benefits of

Product-led growth. The first is lower user acquisition cost. PLG reduces the need for expensive marketing and sales campaigns as users are more likely to adopt and recommend a product that they love and use regularly. The second is higher user retention and loyalty. PLG emphasizes the importance of the in-product experience and ongoing engagement.

Which leads to higher user retention and loyalty, increased revenue growth. PLG drives revenue growth by encouraging users to upgrade to premium or enterprise versions of the product and by providing in-product upselling opportunities. Faster time to market and product iterations. PLG enables companies to quickly bring products to market and iterate based on user feedback. Which is crucial in today's fast-paced digital landscape. Now, let us look at AI-led PLG. The convergence of artificial intelligence and product-led growth creates an opportunity in how organizations can and will approach customer acquisition, retention, and success. But it is not just about automation or efficiency.

It is about reimagining the entire customer journey in an AI-enhanced landscape. The PLG model, which relies on the product itself as the primary driver of customer acquisition and expansion, has already revolutionized the SaaS industry. And now, with the integration of AI, we are entering a new era of possibilities that promises to take PLG to unprecedented heights. So, this is software as a service. Now, let us look at harnessing AI in PLG principles.

So, the power of AI can be harnessed within the following principles of PLG. First is providing a free user experience. Second is delivering a moment as soon as possible. The third is committing to best-in-class usability. The fourth is delighting users and encouraging stickiness.

The fifth is making purchasing feel like the natural next step. And the sixth is building in virality at every turn. So let us start with the first one, that is providing a free user experience. This is where any product-led growth strategy has to start because there is no better sales vehicle than the product itself. Lengthy product demos and follow-up sequences take time from sales reps and become more

friction points for prospects. Instead, teams should let users see the product's value for themselves whenever it is convenient for them. Usage of AI, that is providing a free user experience, with its ability to quickly identify patterns from large databases, AI can help in determining the right set of features for a freemium product. For example, AI can analyze product usage data from paid products, identify patterns, and recommend which features to include in free products. Ideally, an AI-powered product analytics tool would be able to proactively flag insights like users who engage with X feature Y times in their first three months go on to stay engaged in the product for the remainder of their subscription terms. Delivering the moment as soon as possible. Successful product-led growth requires products that immediately let users discover a moment, which is when they first experience the product's key benefits.

There are multiple ways to ensure users get to moments quickly. But a particularly useful one is with an in-app guide that takes the user directly to the experience or features that lead to the moment. Although they are extremely powerful, it is not always simple to produce an aha moment. With AI though, you can make a moment happen in more ways and identify and test them at a much faster pace. For example, an AI tool

can analyze product usage data as well as data on past conversions and upsells and identify potential moments. From there, we can quickly test these recommendations by building in-

app walkthroughs that introduce users to these features. After that, we can again use AI to analyze behavior data to determine if usage of those features correlates with higher engagement and conversion. Committing to the best-in-class usability. A key way to get users to the moment is to design the free products with optimized usability.

The last thing users want is a cluttered or unintuitive digital experience that leaves them unsure about where to go or what to do. As part of ensuring seamless usability, companies should make a point to collect feedback from users about what is working and what is not. Continuing with the usage of AI and committing to best-in-class usability, with an AI-powered product experience platform, AI can help with usability by analyzing user behavior to identify friction points and even automatically suggest resources to users based on their behavior. An advanced tool might even track what resources users select and feed

That information back into the model to improve its recommendations in the future. This ability to automatically provide users with the right resources can have a massive impact on their experience with the free product. The next is delighting users to encourage stickiness. Getting users to a moment is one thing, but they are not going to stick around unless They have reasons to.

That is why the best free product keeps users coming back and wanting more. Robust feedback collection and product usage data are crucial here since they can help product teams prioritize the right features and functionalities in their roadmaps. Now, how to use AI in delighting users to encourage stickiness? With AI, product managers can sort through and draw insights from more feedback data than they could on their own. AI tools can quickly categorize feedback into themes and, in combination with product usage data, identify where to focus our efforts.

Whether that means improving what we have already built or prioritizing a certain feature in the roadmap, in the end, AI can help product managers better ensure they are building features and functionality that keep users coming back, making purchases feel like a natural next step. The most forward-thinking product teams design free products that include many key features while leaving others as part of the subscription model. They also make a point to let users know what they are missing without the paid version and make it easy and natural for them to upgrade when they are ready. Now, how to use AI in this? AI can help product managers get even smarter with in-app messages that encourage users to purchase at the right moment in their journey. For example, an AI tool can analyze usage data from the free product as well as NPS feedback and past conversion data to identify moments in

the user journey that we might not have flagged on our own. Similarly, AI and machine learning algorithms can analyze users' behavior company characteristics, and purchase patterns to generate personalized product and feature recommendations. This way, users are exposed to additional functionality that meets their specific needs, which increases their likelihood of purchasing.

The next step is building in virality at every turn. In the end, the goal is to continually surprise and delight users so that they eventually become evangelists for your product. Building in elements of virality helps these super users spread the word quickly and easily and adds a whole new dimension to your PLG motion. The result is even greater momentum as more and more users discover the value in your product and let the world know about it. How to use AI in building virality at every turn?

Rather than the more traditional purchasing funnel, Product-led growth is built on the idea of viral growth loops, also known as the flywheel. So, please refer to the business flywheel discussed in module 3. Similar to the other five principles, AI can help product managers analyze behavior data to identify which users are most likely to share the product in their current workflows. From there, we can leverage generative AI to generate any in-app content.

That we can use to promote the users to share and collaborate. It is still up to the product managers to identify the innate virality of their product, but AI tools can help them get to answers and implement virality tactics faster. For instance, an e-commerce platform can use AI to generate personalized product recommendations or gift ideas that users can easily share with their friends and family. A photo editing app can provide AI-powered tools that allow users to jointly create visually appealing collages or unique effects.

These encourage users to share the collaborative outcomes on social media. AI can also be utilized to integrate social media functionality seamlessly into the product. For instance, a productivity tool can automatically generate social media friendly snippets or summaries of users' progress within the app that users can share. Now, how to boost product-led growth using AI? Use AI to know what users are trying to tell. Google spent $585 million on Google Plus, a social networking site intended to tear Facebook down, but eight years after launching Google pulled the plug on it.

This is because it was hard for users to find any compelling reason to switch to it. Google also failed to listen to the users who expressed frustration with the platform's messy interface. Worse, many did not like how it required users to sign up for Google Plus to use

other Google-owned platforms. Google learned in a very expensive way that users are the true bosses. With the power of AI, managers can bet

where the odds are in their favor. The technology uses predictive analytics to scout, recognize, and analyze patterns in users' digital footprints on various online platforms, such as previous buys and transactions done online, previous leads from their past interactions with bots, real-time user sentiment shared on social media, rating and review sites, and other networks. Having this information provides managers with the ability to innovate based on what users want. They do not have to invest time, money, and other resources in something that may not be fruitful or, even worse, affect the company negatively. Use AI to equip customer support teams with speed and agility. How you feel about the experience with customer support has a direct impact on the ability to win and retain their business.

One negative experience can result in churn, so speed, efficiency, and personalization in services are more crucial than ever. This is not a feeling. And as per the data, 90% of customers find a quick response from customer support to their questions important or very important. 50% will leave the chat if there is no response within one minute. 84% will leave after two minutes.

Unlike human agents, AI chatbots can answer several common queries tirelessly. They are always ready, always on, and reply right away. We will discuss in detail the use of AI chatbots for product-led growth later in the module. Now, how can we use AI to anticipate user needs before they arise? Another game-changing application of AI in the PLG sphere is predictive analytics.

By analyzing vast amounts of user data, AI can identify patterns and trends that would be impossible for humans to discern manually. This capability allows us to anticipate user needs and proactively address potential issues before they become roadblocks. Three in four consumers will spend more with businesses that provide a good customer experience. AI can flag users who are at risk of churning based on their usage patterns and engagement levels.

This early warning system enables customer success teams to intervene at the right moment with targeted assistance or value-added offers, significantly improving retention rates. The ethical implications of such predictive capabilities cannot be ignored. Leaders at SaaS organizations must be vigilant about data privacy and transparency. Users should always be aware of how their data is being used and have control over their information.

Use AI to enhance, not replace, human interactions. One area where the integration of AI has shown immediate and tangible benefits is customer support. AI-powered chatbots and virtual assistants can handle a significant portion of routine queries, freeing up human support staff to focus on more complex issues that require empathy and creative problem-solving. But the goal is not to eliminate human support entirely.

Rather, it is about creating a symbiotic relationship between AI and human support teams. AI can handle the initial triage, gather relevant information, and even suggest solutions. But complex problems still benefit from human intervention. The key is to design these AI support systems in a way that seamlessly escalates to human agents when necessary. This hybrid approach ensures that customers receive rapid responses to their queries.

While still having access to human expertise when they need it the most. Use AI for continuous optimization. Perhaps the most profound impact of AI on PLG is its ability to drive continuous optimization of the user experience. Algorithms can analyze user behavior at a granular level, identifying subtle patterns and correlations that can inform product improvements. This capability allows for rapid iteration and A/B testing, at a scale that was previously unimaginable. Features can be tweaked, workflows adjusted, and messaging defined based on real-time data, ensuring that the product is always evolving to meet user needs more effectively. Like other benefits of AI,

This power comes with responsibility. As we lean more heavily on AI-driven optimization, we must be cautious not to lose sight of our core product vision. There is a risk of over-optimizing for short-term metrics at the expense of long-term value creation. Striking the right balance requires strong leadership and a clear strategic vision. Tailor AI to custom-fit your strategy.

While the potential of AI in PLG is exciting and vast, it is crucial to recognize that there is no one-size-fits-all solution. The effectiveness of AI integration depends heavily on each company's unique needs, customer base, and product offerings. As leaders, we must think critically about how AI can be tailored to our specific PLG strategies. For some companies, AI might be best utilized in enhancing customer support.

While for others, its primary value might lie in personalizing the onboarding process, the key is to identify where AI can provide the most significant impact in your specific context. This requires a deep understanding of the product, the user, and the growth bottlenecks. The balance between automation and human touch is crucial. Great product experiences often hinge on that personal connection, the feeling that there is a real understanding of the

user's needs. As we implement AI solutions, we must offer personalization at scale with products as the driver and lead.

Use AI to accelerate time to value. To ensure customer satisfaction and reduce churn, it is essential to deliver value as quickly as possible. By using predefined templates and personalized onboarding experiences, businesses can guide users toward realizing the benefits of their products swiftly. The underlying premise is what can we do to get the user to actually start getting the intended benefits as soon as possible. This is where generative AI can help products and services that rely on users

on user segment-based personalization and content. New templates can be created very quickly in almost any area to cater to more granular customer requirements. For example, social media image templates can be provided In design products and expert quizzes, templates can be created for interactive content. This allows users to deliver their first output within a few minutes rather than struggling with their design or content writing skills.

Even customized help content can be generated quickly so that customers can look up relevant reference material without a lot of searching. How to use AI to enable direct customer inputs? Enabling direct customer inputs involves capturing zero-party data, which refers to the information customers share voluntarily about their preferences, needs, and goals. The data is invaluable for businesses to deliver personalized experiences, improve user engagement, and drive growth. By leveraging a combination of generative and predictive AI, companies can effectively gather and utilize this direct customer input.

Effectively gather and utilize this direct customer input. Zero-party data can be received through quizzes, surveys, or other interactive tools that encourage users to share their preferences and provide feedback. Through an analysis of the responses, we can extract valuable insights into user preferences, pain points, and desired outcomes. By leveraging generative AI, companies can directly analyze and utilize this data to create personalized experiences that resonate with the user.

For example, B2B services and software companies can utilize direct customer input in the form of maturity model assessments to understand user goals and pain points. Based on this information, we can create tailored onboarding experiences, customized content libraries, or product templates. Predictive AI can then analyze user behavior and usage patterns to predict future needs, offering proactive recommendations, feature suggestions, or support resources that align with each user's unique goals and preferences. Use AI for

smooth onboarding experiences. AI can play a significant role in reducing friction and improving the onboarding experience.

By analyzing user data, AI can recommend personalized workflows and automate the onboarding process. This will not only help users understand the value of the product but also encourage them to become active and engaged customers. Use AI to move beyond linear Onboarding flows. Traditionally, onboarding flows have been linear and structured, often consisting of click-by-click interactions.

With AI, companies can provide a more personalized and user-centric onboarding experience. By allowing users to express their goals and pain points in natural language. AI can understand individual needs and tailor the onboarding journey accordingly. This natural language processing capability enables companies to deliver a more intuitive and effective onboarding experience. Then use AI to personalize at scale.

One exciting prospect at the intersection of AI and PLG is the ability to deliver hyper-personalized experiences at scale. Traditionally, providing tailored guidance and support to each user has been a resource-intensive endeavor, and yet it cannot be understated how important the relationship with the customer is. More than half of the customers will switch to a competitor after only one Bad experience, and nearly 90% of consumers would switch to a different company if it could provide a better experience.

This is where AI changes this equation dramatically. Imagine an onboarding process that adapts in real time to user behaviors, learning style, and goals. Algorithms can analyze user interactions, identify pain points, and dynamically adjust the onboarding flow to ensure maximum engagement and value realization. This level of personalization was once a pipe dream, but AI makes it a reality. However, there is a challenge of striking the right balance.

How do we ensure that AI-driven personalization enhances rather than replaces the human touch? The answer lies in thoughtful integration of AI, where AI augments human capabilities rather than supplanting them entirely. BCG's personalization strategy book, Personalized Customer Strategy in the Age of AI, demystifies personalization at scale. Distilling the formula for success. Now, let us look at how to use AI to personalize at scale.

The five promises of personalization are promises the company makes to the customer and needs to live up to in order to deepen digital customer relationships. In the age of AI, every one of these promises must be delivered by bringing together a human touch and the right technology. So, these are the five things. Empower me. Know me.

Reach me. Show me and delight me. So, this is the first one: empower me. Empower me is the overarching and most important promise of personalization. It represents your effort to put the customer in the driver's seat of the relationship by helping them reach a goal, such as a personal assistant.

To accomplish this, brands must consider where customer data can be used to make the experience better, faster, and easier. What Use cases should be personalized next to provide an ideal experience. How can we enable common pathways for more of our customers? The second is know me.

Know me is foundational to enabling the other promises of personalization. Success is measured by the breadth and depth of your customer relationships. To accomplish this, brands must consider: How effective is our approach to growing the volume of digital customer relationships over time? How do we provide value in return for users sharing their personal data? What do we directly ask customers about, as opposed to merely drawing inferences? How well do our data governance processes ensure consistent and clear management of data. The third is, reach me is the promise that personalization can be relevant and timely based on the unique context of the individual customer. Brands accomplish this goal by reaching out to the right customers in the right channel at just the right moment.

To accomplish this, what we can do is increase contact opportunities across the customer base by channels, determine what portion of our activation is triggered versus scheduled, and explore how we develop the The key types of data science models that support these efforts. The fourth is 'Show Me,' which is about customer experiences and the content that you are personalizing for them. Fulfilling this promise requires having the right content at the customer's fingertips and tailoring it precisely to their individual needs. How can we accomplish this?

What types of personalized content are most critical for delivering a great experience? How finely targeted is our content? In our most important channels? How should we apply generative AI to increase the volume of content generation? The fifth is 'Delight Me.'

'Delight Me' is the promise that makes personalization feel magical. Getting the experience just right requires deeply knowing the customer and discovering what creates joy for them over time. To accomplish this, how well are we aggregating and using insights from customer responses to our personalized experiences over time? Are we building

experimental design into how we activate in order to support learning from each customer interaction? How long does it take us to measure the impact of a campaign?

So, incorporating conversational AI into a product-led strategy. Imagine a thriving digital town square where like-minded individuals share their passion, experiences, and knowledge. Think of a platform that seamlessly connects hosts, with travelers, customers with drivers, and people with their favorite brands. It is a world where user communication fuels growth, and communities emerge as the driving force. What if your app does not naturally fit this mold? What if you are not in the business of connecting travelers, athletes, or hobbyists?

Can you still harness the power of user communication to drive product-led growth? The answer is a resounding yes. The key lies in integrating the innovative capabilities of conversational AI chatbots, powered by cutting-edge, large language models, into your product-led growth strategy. AI chatbots can elevate your app's PLG strategy, regardless of whether you are a two-sided network giant like Zomato or a fast-growing niche player. Generative AI chatbots

are leveling the playing field, enabling businesses to drive user engagement, user retention, conversion, and product success through the art of conversation. Now, let us look at the PLG strategy using AI. So, first is increasing app engagement with AI chatbots. With the rise of generative AI, for the first time, chatbots can engage in human-like conversations, fathom context, and be accurate in their answers. With conversational AI driven by models like GPT, Palm 2, Lama 2, or the latest Mistral, any prospect expects to engage with an AI chatbot that will resolve their problems.

It is critical to realize that through conversations, humans create an emotional connection with your brand, which drives long-lasting relationships. Games like PUBG and New State from Krafton leverage the power of live chat to connect users and increase in-app retention and advocacy. Human connection is at the crux of retention with a PLG strategy. A company like PicPay witnessed a 2x increase in transactions when elevating financial transactions to social interactions. Personal communication became a foundational component of their business growth.

Today, with generative AI, chatbots' mere point-and-click navigation turns into human-like conversations. Elevating commodity interactions to engaging and rich experiences. Second, streamline user onboarding with generative AI chatbots. Consider a marketing professional tasked with adopting a new software-as-a-service platform to boost their

team's digital marketing efforts. As they log in for the first time, they are greeted by a helpful conversational AI chatbot.

The chatbot introduces itself as their onboarding assistant and asks if they need any guidance. The marketer seeks assistance and types in a query about setting up their first email marketing campaign. The chatbot responds promptly, breaking down the process into easy-to-follow steps. It guides the user through creating a campaign, selecting a target audience, designing email templates, and scheduling delivery. As the conversation progresses, the AI chatbot adapts to the user's pace and provides clarification whenever necessary.

What could have been a time-consuming onboarding process? Becomes a seamless experience, all thanks to the assistance of conversational AI chatbots. Chatbot workflows consist of predefined sequences designed to steer users along a specific path, helping them accomplish their objectives. In our example, these sequences represent various learning paths to a successful onboarding process. We should ensure that AI chatbot services include workflows so new users get to value faster and become loyal advocates of the product.

The third is to enhance customer experience with efficient problem resolution and personalization. Imagine you are an online shopper looking to purchase a popular smartphone model. From your favorite e-commerce platform. You are keen on knowing if the specific color you want is in stock and whether any new promotions are available. Upon visiting the e-commerce site, an AI chatbot pops up to assist you.

You ask about the smartphone's availability and potential discounts. That is where functionality calling comes into play. AI chatbot function calling From OpenAI allows GPT-powered AI chatbots to interact with external online services via application programmable interfaces. For example, an AI chatbot can retrieve weather forecast data from a publicly available database and integrate it into its responses.

The AI chatbot, powered by the retrieval capability, instantly gets real-time data from the e-commerce platform's inventory system. It checks the current stock status for the desired smartphone color and scans ongoing promotions. In seconds, the chatbot informs you that the smartphone is in stock in your preferred color and that there is a limited-time offer with a discount. It even suggests accessories based on past purchases. Thus, the AI chatbot provides personalized and accurate information, ultimately enhancing your shopping experience.

The fourth is elevating the user experience. So let us start with contextualizing AI chatbots using R-A-G. RAG, short for Retrieval-Augmented Generation, represents a transformative technique that bolsters the capabilities of large language models like GPT-4. LLM models, while proficient, operate on extensive datasets that lack specialized knowledge. RAG facilitates ingesting expert content specific to your business into LLMs, resulting in more comprehensive and valuable responses.

The next is keeping control on generative AI. Addressing AI hallucinations. A crucial feature to consider in AI chatbots is bypassing the generative LLM engine and providing verified answers directly. This feature eliminates the variability in response quality, especially when considering the potential of AI hallucinations. Prioritizing user experience with this approach ensures consistent and trustworthy interactions.

Going beyond text with AI chatbots, card views, file sharing, and quick replies. Chat interfaces and AI chatbots have evolved to offer a multi-faceted interaction that caters to various use cases. For instance, in an e-commerce marketplace, card views within the chat interface are indispensable. These card views enable shoppers to visually explore product displays featuring images, descriptions, and pricing. In other scenarios, like customer support, chat interfaces may incorporate features like attachments for sharing documents, images, or screenshots. This capability expedites issue resolution by allowing users to convey complex problems visually. Moreover, interactive buttons and quick reply options have become prevalent in chat interfaces, reducing the need for typing. These buttons can enable actions like confirming appointments, selecting preferences, and initiating specific tasks

with a single click. Now, what are the considerations while using AI for PLG? The first is data quality. So, generative AI models are only as good as the data they are trained on. It is important to ensure that the data is clean and accurate before using it to train a generative AI model.

The second is model complexity. The complexity of the generative AI model will affect the time and resources required to train it. It is important to choose a model that is appropriate for the specific task at hand. Biases.

Generative AI models can be biased, just like any other machine learning model. It is important to be aware of the potential for biases and to take steps to mitigate them. Interpretability. It is important to be able to understand how a generative AI model works. This can help businesses make informed decisions about how to use the model.

Integrating at core. Adopt large language models as a central element of your business strategy. Discover how these models can optimize decision-making processes and automate complex tasks. Optimize workflows by using AI to automate and enhance your operational processes. Learn to create intelligent workflows that increase productivity and reduce human error.

Measure the impact of AI by utilizing key specific performance indicators to evaluate the effectiveness of your AI initiatives. These metrics will help you adjust your strategies and maximize the return on investment in your AI projects. To conclude, we have discussed the concept of product-led growth and how it has emerged. Then, we discussed the key concepts and benefits of product-led growth. Thereafter, we talked about how AI can be harnessed within the principles of product-led growth.

We have also discussed how AI can boost product-led growth and how AI chatbots can be incorporated into product-led growth strategies. Finally, we have discussed some key considerations to keep in mind while using AI for product-led growth. These are some of the references from which the material for this module was taken. Thank you.