

**AI in Product Management**  
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**Lecture - 21**

**Competitive Intelligence with AI**

Welcome to this NPTEL online certification course on Artificial Intelligence in Product. Now we are talking about module 21, which is competitive intelligence with AI, and this is what we are discussing in module 21. So, to give an overview of this module, we will discuss what competitive intelligence is and the various types of competitive intelligence. Then we will understand how AI is changing the competitive intelligence landscape and how to implement AI into your competitive intelligence. Then we will discuss how to use generative AI for competitive intelligence and how AI-driven competitive intelligence accelerates research productivity.

So, what is competitive intelligence? Competitive intelligence, sometimes referred to as corporate intelligence, refers to the ability to gather, analyze, and use information collected on competitors, customers, and other market factors that contribute to a business's competitive advantage. Competitive intelligence is important because it helps businesses understand their competitive environment and the opportunities and challenges it presents. Businesses analyze the information to create effective and efficient business practices.

By definition, competitive intelligence assembles actionable information from diverse published and unpublished sources, collected efficiently and ethically. Ideally, a business employs competitive intelligence by cultivating a detailed enough portrait of the marketplace so it may anticipate and respond to challenges and problems before they arise. Competitive intelligence transcends the simple cliché, 'know your enemy'; rather, it is a deep-dive exercise. where businesses unearth the finer points of competitors' business plans, including the customers they serve and the marketplaces in which they operate.

Competitive intelligence also analyzes how a wide variety of events disrupt rival businesses. It also reveals how distributors and other stakeholders may be impacted. And it telegraphs how new technologies can quickly render invalid every assumption. Within any organization, competitive intelligence means different things to different people and

departments. For example, to a sales representative, it may refer to tactical advice on how best to bid for a lucrative contract.

To top management, it may mean cultivating unique marketing insights used to gain market share against a formidable competitor. For any group, the goal of competitive intelligence is to help make better-informed decisions and enhance organizational performance by discovering risks and opportunities before they become readily apparent. In other words, competitive intelligence aims to prevent businesses from being caught off guard by any opposition forces. What are the various types of competitive intelligence? Let us run through several more specific types of competitive intelligence. This list is not meant to be exhaustive, but it could include one: market intelligence. Market intelligence involves gathering and analyzing data about the market environment in which a company operates. This includes understanding the overall size of the market and its expected growth over time, helping companies gauge potential opportunities and scale their strategies accordingly.

Next is product intelligence. Product intelligence focuses on understanding competitors' products and services in detail. This involves examining the specific features, functionalities, and benefits in detail. Which helps in benchmarking and identifying areas for improvement or differentiation. Next is customer intelligence. It involves understanding the customers of competitors to inform better customer strategies. Analyzing the age, gender, income, location, and other demographic factors of competitors' customer base helps in identifying target market segments.

The next is competitor intelligence. Competitor intelligence involves a comprehensive analysis of competitors' overall strategies and operations. Reviewing competitors' financial statements, profit margins, revenue growth, and cost structure helps in understanding how they operate and how your company could be operating. Technological intelligence focuses on tracking technological advancements and innovations within the industry. Keeping an eye on emerging technologies such as AI, blockchain, and IoT ensures that companies stay competitive and up-to-date with how they do things.

Now let us look at how AI is changing competitive intelligence. Forward-thinking companies are using AI in competitive intelligence to collect, analyze, and use data. For decision making. AI provides data-driven insights that would otherwise be impossible to derive manually. Here is how AI is changing competitive intelligence.

The first is automating data collection and analysis. Gathering data requires more time and energy than most people can afford to spend. Taking people, even an entire department, to gather and sift through tons of data would be incredibly time-consuming. However, humans are prone to errors, and their productivity and efficiency can be affected by many factors inside and outside the business environment.

Machines, on the other hand, are more accurate and can provide consistent results if well maintained. Artificial intelligence automates data collection while improving the efficiency and integrity of the data collected. The second is enhancing market and customer insights. Competitive intelligence programs allow marketers to understand market dynamics better. AI in competitive intelligence helps you see how

The market is responding to changes in the economic and social environments and how you can take advantage of the situation to achieve a competitive edge. If there are market gaps that need to be filled, AI will point you in the right direction. In fact, 61% of leaders believe AI helps them discover new business opportunities. What's more, artificial intelligence and machine learning algorithms help analyze market data and identify patterns and trends. They act as surveillance for multiple sources, ensuring you don't miss out on any important updates about your industry.

The third is improving forecasts and predictive modeling. Today's businesses are driven by consumer demand. Unfortunately, the patterns of demand vary from period to period and are determined by a number of factors. This makes it incredibly difficult to develop accurate demand forecasts. Emerging technologies such as artificial intelligence and demand planning software are increasingly being used to improve the accuracy of forecasts.

These technologies are being used to develop accurate forecasts for product demand, raw material requirements, inventory levels, and more. Through advanced analytics and machine learning technologies, AI can help your businesses make more accurate predictions about future market trends and customer behavior. The fourth is enhancing competitive analysis. Thanks to AI, it's now easier than ever to conduct competitive intelligence.

Artificial intelligence and machine learning technologies have made it easier to track everything your competitors are doing, from product development to promotion. If you are a business owner, you will want to know what other businesses are doing to make informed decisions. By leveraging AI in your competitive intelligence efforts, you can effortlessly

track, monitor, and understand what your competitors are doing and improve on it. Even when your competitors change their strategies spontaneously, you can monitor and anticipate their moves with the help of data. Current and historical data that competitive intelligence provides.

The fifth is streamlining internal processes. Artificial intelligence can be used to automate and streamline business processes in a number of ways. For example, it can be used to automate customer service tasks, such as responding to customer queries and personalizing content for individual customers. Today, many businesses use artificial intelligence bots to automate repetitive administrative tasks, such as filing and scheduling appointments.

AI can also be used to optimize inventory management by predicting demand and identifying patterns in consumer behavior. The potential of artificial intelligence to help businesses redefine their processes and grow is vast. By harnessing the power of AI to improve competitive intelligence, companies can automate data collection and analysis, gain in-depth customer and market insights, improve forecasting, enhance competitive analysis, and streamline internal processes. How can you implement AI into your competitive intelligence? So, as more and more companies are using AI tools, simply put, if you are not using them, you will fall behind your competitors.

But why? Competitive intelligence without AI tools is not a pretty picture. Collecting and analyzing data typically takes place manually. There are multiple sources to consider. Competitive websites, social media, industry reports, customer surveys, financial reports, press releases, and the list goes on.

Manually extracting meaningful data from these disparate sources is time-consuming, repetitive, and potentially error-prone. And it leaves companies at risk. How? Well, a significant downside for companies relying on pre-AI data analysis methods is sluggishness in reaction times. New market opportunities or emerging threats can be

Tricky to discern without the aid of AI, meaning companies that cannot keep on top of the increasing data curve may fall behind competitors or fail to recognize existential risks. Using AI in competitive intelligence actions adds an extra layer of strategic enhancement by giving companies comprehensive insights into competitive actions and emerging market trends by automating repetitive tasks. AI frees up your team members to do what humans do best: strategy, creativity, and innovation. So, we have seen the risk of not implementing AI in your competitive intelligence actions. Now let us discover how you can put AI to use and turn AI from a reactive process into a proactive one.

First is to use benchmark AI tools. Leveraging AI is not a one-size-fits-all approach. It is up to each business to identify the AI tools that are most appropriate for their situation. This requires businesses to adopt a pragmatic, goal-centered approach. Easier said than done, right?

Starting this process can be daunting. After all, there are a whole host of AI tools out there. So benchmarking AI tools is a great way to adapt your business to AI. By benchmarking, you can evaluate each tool's respective performance. You can see which tools align with your business needs and goals.

Of course, doing this requires your business to define clear objectives. Perhaps you want to analyze emerging market trends or monitor competitive actions. Narrowing this down makes it easier for you to select the right AI tool. Identifying metrics to benchmark also helps in evaluating the performance of tools. For example, you may want to consider ease of integration or data accuracy.

Ultimately, benchmarking means your business can ensure the best ROI from the AI tools you examine. When benchmarking, select AI tools that are comparable in features and functionality. Want to focus on real-time competitive monitoring? Then compare monitoring tools with similar functions. The next step is to cultivate curiosity.

So, you have benchmarked the relevant AI tools. And you have found the right fit and put the tools to use. Now you need to harness some human creativity to maximize your chosen tool's capabilities. AI algorithms excel at analyzing vast amounts of data and extracting patterns and curated insights. However, only human expertise can fully contextualize and interpret these insights.

This integration of AI tools with human intelligence to enhance decision-making is known as augmented intelligence. Once your experts have the right tools and skills to leverage AI, a cultural shift within your company is required. AI can provide valuable data, but it is up to you to embed those insights into your decision-making. Curiosity and creativity are needed to dive deeper into the data and present it to stakeholders in a way they find helpful.

This is human-AI collaboration at its best. AI makes vast datasets manageable, but humans turn them into insights and innovation. With the correct AI tools, you don't need to be an expert in data science, coding, or NLP, but you do need storytelling skills to present the data in the right way to the right people. Consider how you can serve stakeholders by presenting AI-driven data insights in the form of a narrative.

This could involve visualizing data, clearly identifying key insights, or contextualizing findings. The next step is to adopt continuous learning for both your AI tools and your employees. Again, this step is about the intersection of AI-derived insights with human creativity. Adopting a continuous learning approach to using AI tools allows your business to remain agile in a shifting market landscape. As AI tools speed up your data analysis, increasing its accuracy and comprehensiveness,

Human employees can keep pace by seizing the chances to make data-driven decisions. To foster this, you should provide regular training opportunities, equipping employees to get the most out of AI tools. Something as simple as encouraging employees to experiment with AI tools can be a great way to familiarize your team with new AI techniques. Continuous learning also benefits the AI tools themselves. ML algorithms are self-improving, meaning the more new data they process, the more efficient and accurate they become.

This constant learning from data hones AI into a strategic asset for your competitive intelligence, enabling human employees to take advantage of comprehensive market insights. Consider reinforcement learning. For your AI tools, this forms a continuous learning process that teaches AI systems via trial and error. Over time, this approach can maximize your AI tools' decision-making prowess.

The fourth is to consider cross-functional collaborations, both internally and externally. If you want to leverage AI-driven insights, don't overlook the importance of breaking down silos across different teams. Cross-functional collaborations enable various teams to share knowledge and viewpoints on your AI tools' findings. Multiple perspectives enrich AI analysis by providing valuable interpretations.

Cross-functional collaborations can also result in faster time to insight. By streamlining the sharing of AI-driven insights with key stakeholders, decision-makers can access crucial data in a timely fashion. When seeking a competitive edge, this acceleration of information sharing can be crucial, allowing companies to respond quickly to market trends spotted by AI. Collaboration should also extend to the AI service providers your company selects. Data scientists, analysts, and consultants should be available to ensure businesses get accurate and actionable insights.

This takes ongoing communication, data analysis, and feedback loops to generate constant improvement and adaptation to changing business needs. The onus is on AI service providers to enable users to quickly access AI-driven insights in as understandable a format

as possible. Findings may be delivered in the form of charts, graphs, or templates. Having accessible data-driven analysis will allow your company to make informed decisions in competitive intelligence actions. The fifth is to enhance competitive intelligence even further with

Explainable AI. As we have seen, AI tools exponentially accelerate analysis and insights for competitive intelligence, opening up new opportunities for companies to gain strategic advantage. But as ML algorithms increase in complexity, the need for accountable, comprehensible, AI-driven decision-making also grows. This is where explainable AI comes in. AI seeks to make the decision-making process

of AI models and ML algorithms transparent to humans by providing accountable explanations for AI-derived decisions and insights. Let us look at why this is important. AI decision-making can unintentionally perpetuate human biases in the data it learns from. So, as we saw in the earlier definition of ML, these biases often unconsciously filter into the training data, leading to prejudiced outcomes. Recognizing bias is vital to ensuring AI's ethical and fair use in competitive intelligence.

By making AI-driven decisions understandable to humans, we counter the risk of unintentional bias through the transparency of the sources the analysis is derived from. This transparency allows businesses to justify their AI-driven market intelligence actions and remain confident that these decisions are not unintentionally prejudiced. On an individual level, it means a human being can understand why an AI tool has suggested a specific course of action. Using XAI can also help businesses meet stringent data protection regulations such as GDPR by clearly explaining how sensitive data is used in competitive intelligence. Now, we will see the use of generative AI for competitive intelligence. Generative AI has emerged as a transformative force in competitive intelligence revolutionizing the way businesses gather and analyze data.

This technology leverages machine learning algorithms to process vast amounts of multi-source data, unlocking hidden patterns and generating actionable insights. Generative AI enables firms to perform the following tasks in the context of competitive intelligence. One is to extract insights from multi-source data. Traditional competitive intelligence methods struggle to handle the sheer volume and diversity of multi-source data available today. Generative AI overcomes this challenge by analyzing text and extracting meaningful insights that

Previously inaccessible. With different generative AI tools, consulting firms can unlock the full potential of data and gain a comprehensive understanding of the competitive landscape. Next is timely market monitoring. Staying up to date with real-time market dynamics is crucial in making timely and informed decisions. Generative AI enables managers to monitor a vast network of resources, including news articles and

thought leadership content, providing firms with up-to-date insights. By capturing emerging trends and competitor actions in real time, businesses can proactively respond to market changes and gain a competitive advantage. Next comes enhanced competitor profile creation. Using natural language generation capabilities, generative AI can create detailed competitor profiles by analyzing publicly available information and summarizing key insights. These profiles include financial performance, product development, market strategies, and executive actions. Businesses can receive in-depth competitive reports quickly, allowing for more informed decision-making and strategic planning. Then comes scenario simulation and strategy forecasting. Generative AI can simulate various competitive scenarios based on historical data and market conditions. It can generate possible future moves competitors might take and forecast potential outcomes of different strategies. This helps companies prepare for various competitive challenges and assess the risks or opportunities in different market conditions, enabling better decision-making. Next comes identifying market gaps and opportunities.

By analyzing trends and patterns in the marketplace, generative AI can highlight unmet customer needs or gaps in competitors' product offerings. It can also generate insights about emerging market opportunities that competitors may have missed. Companies can capitalize on these gaps by developing products or services that address these needs, gaining market share, and staying ahead of competitors. Next comes automated competitive content creation. Generative AI can automatically generate competitive analysis reports, summaries, and strategic recommendations.

By analyzing competitors' online presence, advertisements, and content strategies, the AI can draft responses. Or suggest new strategies to counter competitors' moves. This allows businesses to quickly craft counter strategies, optimize marketing campaigns, or adjust product positioning based on competitor actions. Scalability of Competitive Intelligence Operations: Generative AI can scale competitive intelligence activities by processing vast amounts of data from multiple competitors and markets simultaneously. It can generate insights across different geographies, industries, and customer segments without additional resources.



This scalability ensures that businesses with global operations or multiple product lines can maintain a comprehensive competitive intelligence program without needing to expand the workforce significantly. Now we will look at AI-driven competitive intelligence and research productivity. Companies are increasingly leveraging AI competitive intelligence toolkits to remain competitive in our fast-changing business landscape. In fact, 64% of B2B marketers consider AI invaluable in their marketing efforts. AI helps crawl through vast reservoirs of data to mine for customer and market gems and can easily find more insights than a human ever could.

As it is a volume game, and AI is an insatiable computational engine. AI in competitive intelligence helps professionals respond more rapidly to market changes in the economic and social environments and also identify white spaces that deserve acute attention. In fact, 61% of business leaders believe AI helps them discover new business opportunities and solutions in the CRM market segments, which is one of the highest AI ROI investment areas for B2B companies. After all, securing the right customers with the right product-market fit is a cornerstone of profitable revenue growth. So, to conclude this module.

We have discussed what competitive intelligence is and the various types of competitive intelligence. Then, we have understood how AI is changing the competitive intelligence landscape and how to implement AI into your competitive intelligence. Finally, we have discussed how to use generative AI for competitive intelligence and how AI-driven competitive intelligence accelerates research productivity. These are some of the sources from which the material for this module was taken. Thank you.