Toyo Engineering Corporation

Business Strategy Briefing

December 10, 2024

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Toshiyuki Koga	Deputy General Manager, Value Chain and Business Investment Department, Carbon Neutral Business Division, Business Development and Marketing Unit
Noriaki Seo	General Manager, DXoT Planning & Promotion Center
Takashi Kawahara	Managing Director, Toyo Engineering India Private Limited
Yoshifumi Shiraishi	General Manager, Corporate Communications Department

Presentation

Shiraishi: As it is now time, let us begin. Thank you very much for participating in the Toyo Engineering Corporation business strategy briefing today. My name is Shiraishi from the Corporate Communications Department, and I will be your moderator.

Allow me to explain today's agenda. First, we will discuss TOYO's challenge to build value chains for fuel ammonia and create foundation for sustainable profits. Second, we will cover TOYO's digital transformation, challenging sixfold productivity and sustained value creation. Third, we will address Toyo-India's challenges and growth strategy, including its outlook on the Indian market and the execution of global projects.

These three topics will each be explained by the respective person in charge. After 20 minutes of explanation for each topic, we have planned a 10-minute Q&A session.

This slide represents the two strategies of our medium-term management plan for FY2021 to FY2025. It consists of two pillars: the green-colored Sustainable Technology and Business Development Strategy and the blue-colored Advanced EPC Operation Strategy.

The first topic, fuel ammonia, is one of the key business areas under the Sustainable Technology and Business Development Strategy. The second topic, DXoT, represents a specific measure aimed at advancing the Advanced EPC Operation Strategy. The explanation of the third topic will be about Toyo-India, which plays a central role in the Group operations under the Advanced EPC Operation Strategy.

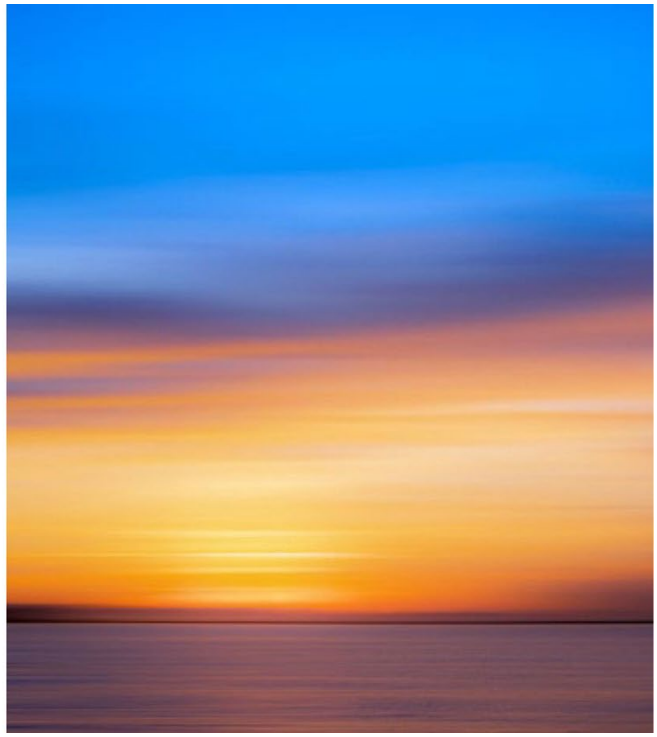
Now, let me hand things over to Toshiyuki Koga, Deputy General Manager of the Value Chain and Business Investment Department, who will explain the first topic: TOYO's challenge to build value chains for fuel ammonia and create foundation for sustainable profits.

Koga: Allow me to introduce myself once again. My name is Toshiyuki Koga, from the Carbon Neutral Business Division's Value Chain and Business Investment Department. Thank you for your time today.

I will be discussing the topic of TOYO's challenge to build value chains for fuel ammonia and create foundation for sustainable profits.

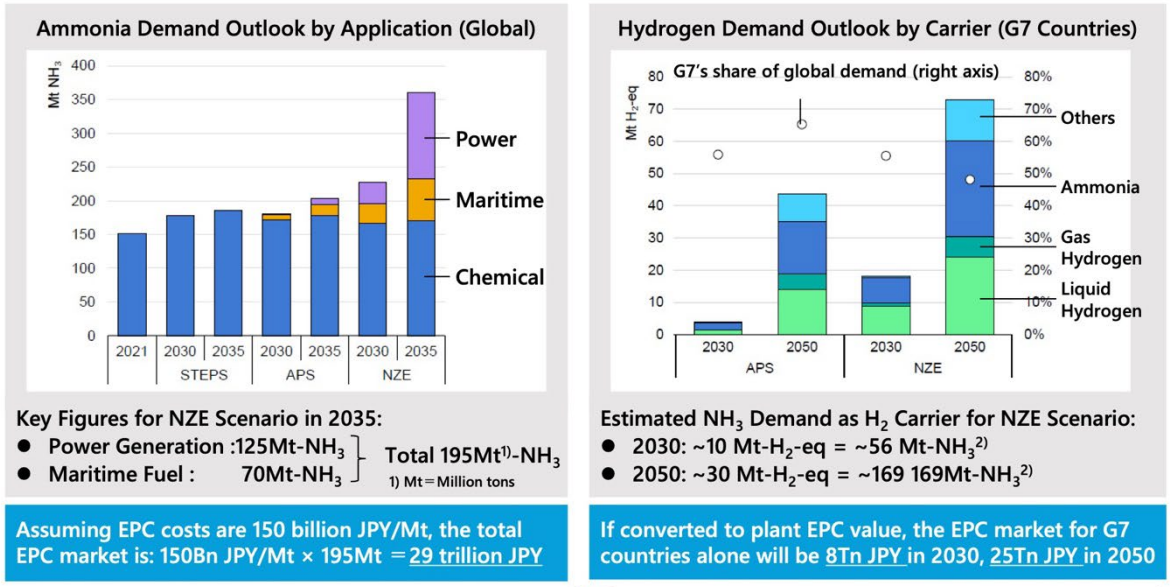
1. **Ammonia Demand Outlook**
2. TOYO's Strengths in Ammonia
3. Value Chain Development Initiative:

   Hybrid Green Ammonia Project “GAIA” in Indonesia



Today’s content is structured into three parts. The first point is the outlook for ammonia demand. The second point will cover our company’s strengths related to ammonia. The third point will present what initiatives we are currently undertaking to build the value chain, using the example of a green ammonia production project that utilizes an existing ammonia plant in Indonesia.

Ammonia (NH_3) Demand Outlook by Application



Source：IEA, "Towards hydrogen definitions based on their emissions intensity"【Link】 2) 5.63 t-NH_3/t-H_2 (Mole base. Yield should also be considered.)

3

First, let us look at the demand forecast for ammonia by application and on an EPC basis for manufacturing plants. While some of you may already be familiar with this, I would like to explain the current outlook once again. On the left side, we see the global demand forecast for ammonia by application. The leftmost section represents 2021, and the vertical axis shows the volume of ammonia in units of millions of tons; 50 million, 100 million, and 150 million tons, respectively.

The color-coded segments indicate usage for chemicals, shipping, and power generation. These projections are based on estimates provided by the International Energy Agency (IEA). Looking at these figures, we can see the forecast numbers for 2030 and 2035, divided into three scenarios. The first scenario, STEPS, is based on already decided policies. The second, EPS, assumes that government targets in each country will be fully achieved by their deadlines. The third, NZE, represents a scenario in which net-zero emissions are achieved by 2050.

In the NZE scenario, by 2035, the demand for ammonia is expected to reach approximately 125 million tons for power generation and around 70 million tons for shipping, totaling about 195 million tons.

When this is translated into the monetary scale of plant EPCs, while accounting for potential future inflation, our current estimate assumes that each plant with a capacity of 1 million tons would cost roughly JPY150 billion. Multiplying this by 195 million tons, we project the market scale to grow to approximately JPY29 trillion.

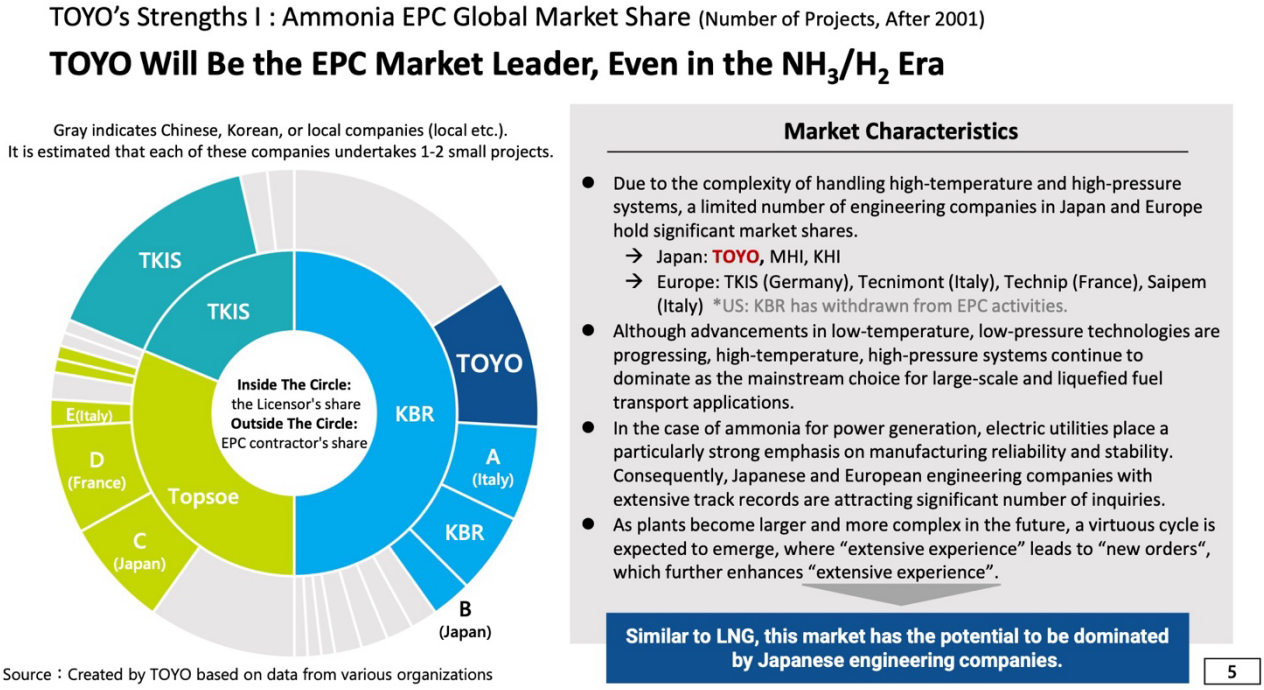
Similarly, moving to the chart on the right, this represents the demand forecast for hydrogen carriers. This focuses not on global demand as a whole but rather on imports to G7 member countries, primarily advanced economies, and how hydrogen will be imported by these nations. This impacts the demand breakdown shown here.

The vertical axis again indicates volume, with the color-coded sections representing different forms of hydrogen transportation: liquefied hydrogen at the bottom, compressed gas transported under high pressure, ammonia as a carrier, and others.

As with the previous chart, there are EPS and NZE scenarios. In the net-zero emissions scenario, the demand for ammonia as a hydrogen carrier, the blue section, reaches about 10 million tons in hydrogen terms by 2030. Converting this to ammonia, it corresponds to 56 million tons.

This figure is based on a theoretical molar comparison without accounting for conversion efficiency. In actual operations, some energy loss occurs when converting hydrogen to ammonia in the plant, meaning that the actual ammonia required will exceed this theoretical figure. However, this chart reflects only theoretical values.

By 2050, the demand for hydrogen grows to 30 million tons, which equates to 169 million tons of ammonia. In EPC terms, this translates to approximately JPY8 trillion by 2030 and around JPY25 trillion by 2050, just for the G7 member countries. We anticipate that such a vast market will emerge. I would now like to explain how TOYO plans to generate revenue within this market.



What becomes crucial in this context is identifying TOYO's strengths that differentiate us from our competitors. These strengths are essential for transitioning from commercialization to revenue generation. Allow me to explain this in detail. There are two primary strengths. The first is that TOYO currently holds a significant share in the global EPC market for ammonia plants. We take pride in our belief that even in the era of a hydrogen society arising from ammonia, TOYO will remain a market leader in the EPC domain.

Why do we believe this? If you look at the graph on the left, the inner circle represents the market share of technologies and licenses used to produce ammonia. Globally, there are mainly three methods: the KBR process, the Topsoe process, and TKIS technology. Currently, the KBR process accounts for about half of the market share, and TOYO holds the top share within this segment.

The gray portions in the chart might be unclear in certain areas. These represent various projects built globally, including fertilizer plants, aggregated across different regions. Some involve contributions from Chinese and Korean companies or local contractors, so these are included in the total.

However, such cases are typically carried out by a single local contractor operating in a limited area. Looking at the overall share, TOYO, along with Italian players, KBR, and Japanese companies, as well as other European and Japanese players, maintain a dominant position.

The reasons behind this dominance are explained in the characteristics of the market on the right. Producing ammonia requires handling high temperatures and high pressures, a field in which Japanese and European engineering companies excel.

Among Japanese engineering companies, it is not only TOYO but also Mitsubishi Heavy Industries and Kawasaki Heavy Industries that have demonstrated strength. While Kawasaki Heavy Industries has not been active recently, they previously engaged in the KBR process.

Among European companies, firms such as TKIS, Tecnimont, Technip, and Saipem stand out. In the US, KBR used to be involved in EPC but now focuses solely on licensing.

On the other hand, while there is ongoing development of new technologies aimed at operating under low temperatures and low pressures, these are more suited for local consumption. When it comes to intercontinental transport or the use of ammonia as a large-scale energy source, high-temperature and high-pressure technologies remain more suitable in terms of both cost and proven technical reliability. Thus, we believe this will continue to be the mainstream approach.

Turning our attention to customers, this time, ammonia is not being used as a fertilizer but as an energy source. In this case, particularly from electric power companies, there is a strong demand for reliability and stability in ammonia production, essentially, a stable supply.

If this process stalls, it would cause bottlenecks upstream in the value chain, significantly impacting power supply. For this reason, there is notable demand for engineering companies from Japan and Europe with extensive track records in plant construction.

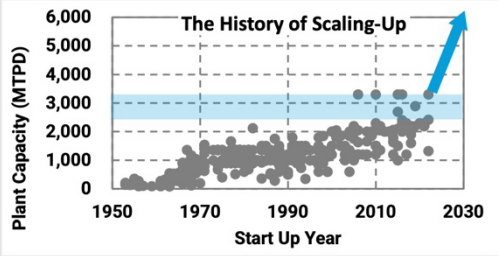
Given this background, we anticipate further increases in plant scale and complexity. As companies with rich experience continue to attract projects, leading to further orders and accumulating even more experience, this creates a virtuous cycle. We expect this to eventually lead to a market where Japanese engineering companies, like in LNG, hold a dominant position. This is our first key point.

TOYO's Strengths II: Cost Reduction in Ammonia Production Plants

TOYO leverages its extensive EPC experience and expertise to achieve significant cost reductions

Plant Scaling-Up

- The current mainstream capacity stands at approximately 3,000 MT[1)]/day, with future plants anticipated to scale up to 6,000 MT/day or even 10,000 MT/day.
- Based on historical rules of thumb, the expected CAPEX[2)] reduction effect can be approximated as expansion rate × 0.6 power.



Cost Reduction Measures Beyond Scaling-Up

- Building plants with the same production capacity in parallel reduces overall CAPEX
  - → Reducing Design Man-Hours by Leveraging Repeatability
  - → Consolidating orders results in lower costs for equipment and materials
  - → Cost reduction through shared utility facilities
  - → Flexibility for future expansion
- Selecting sites with low construction and tax costs, with existing OSBL (Outside Battery Limit) facilities, including CO_2 pipelines.
- Utilizing a flexible vendor list that balances QCD (Quality, Cost, and Delivery) and prioritizing vendors with cost competitiveness.
- Modularization should only be employed when construction site risks are high, as it generally does not contribute to cost reductions.

Source：TOYO 1) Metric Ton (MT) 2) Capital Expenditure

6

The second point is that, for ammonia to be utilized in the future, including as hydrogen, reducing costs becomes an absolute imperative. The question then is how we, as an engineering company, can contribute to this goal.

TOYO has built many plants to date, and we are continually evolving in terms of cost reduction know-how and generating new approaches. Looking at the history of plant scaling on the left side, the current mainstream is plants with a capacity of 3,000 tons per day, or approximately 1 million tons annually. The graph's vertical axis represents plant capacity, while the horizontal axis indicates time. The blue segment shows the current mainstream capacity. While plants were much smaller decades ago, over the past 50 to 70 years, capacity has grown to approximately 3,000 tons per day.

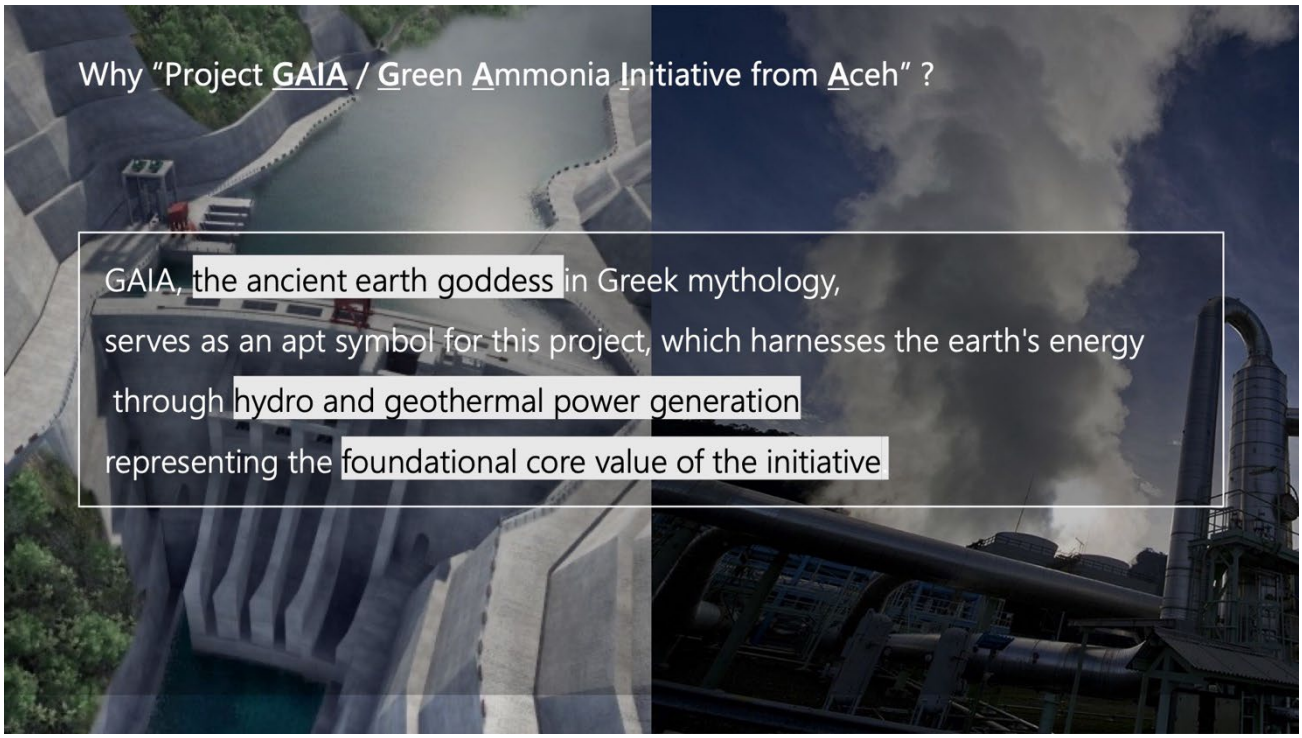
As ammonia becomes increasingly used as energy, similar to LNG, plants will likely become larger. The question then is how we can contribute in this regard. Incidentally, scaling up plants in itself brings CapEx reduction benefits, which must be taken into account. In addition, TOYO is leveraging its accumulated know-how to implement other cost reduction measures daily.

To provide a few examples, constructing multiple series of plants with the same production capacity allows us to capitalize on design replication, thereby reducing design labor hours. Similarly, bulk procurement reduces the cost of materials and equipment. We can also standardize utility facilities, such as those for electricity and steam, needed to operate the plants.

Additionally, scalability plays a significant role; if there is adjacent land available, plants can be expanded, offering flexibility for future growth. These measures collectively help reduce CapEx. The choice of location is another critical factor. We target locations that offer cost-effective construction and tax advantages. For blue ammonia, CO2 must be stored, so proximity to appropriate pipelines and the presence of well-equipped Outside Battery Limit (OSBL) facilities are also essential considerations.

Furthermore, we employ a flexible vendor list. This approach is a testament to our track record and expertise, enabling us to select the most suitable vendors for each project from among our many established partnerships.

One additional concept we consider is modularization, which can be a method of cost reduction. However, modularization is only viable when the construction cost risk is particularly high. Simply modularizing a plant does not automatically lead to cost reduction. Therefore, we carefully evaluate site-specific conditions to determine the optimal approach.

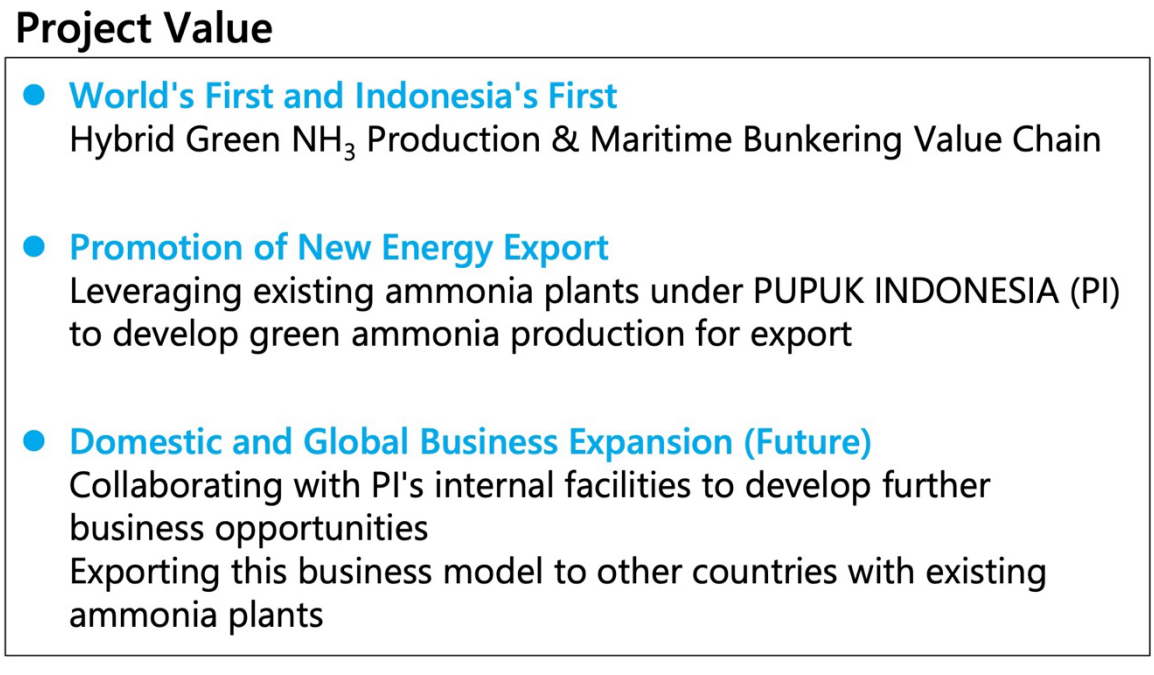


With these considerations in mind, how do we move forward with commercialization? While there are already large-scale plants operating in regions such as the Middle East and North America, we do not expect vertical takeoff to occur immediately. Building a solid track record and establishing a value chain itself is of utmost importance. Even on a smaller scale, we aim to contribute to the construction of the value chain.

Up to now, we have operated as contractors. However, to foster this industry in its nascent stages, we are prepared to take on risks ourselves. By actively participating, we aim to help spread ammonia and hydrogen value chains worldwide. This will expand the market pie and, in turn, increase TOYO's EPC revenue.

To achieve this, we are not content with merely constructing plants and leaving the rest to others. We are stepping in as business participants to help build these value chains. One such effort is in Indonesia, where we are utilizing an existing ammonia plant to create a green ammonia value chain. We are directly involved in developing this initiative as a business entity.

Allow me to elaborate. The project is called GAIA, which stands for Green Ammonia Initiative from Aceh. The name GAIA also refers to the ancient Greek goddess of the Earth. This project, based in Sumatra, uses electricity from hydropower and geothermal sources to electrolyze water, producing green hydrogen. The green hydrogen is then integrated into an existing ammonia plant to produce green ammonia, which is exported as marine fuel. The project name GAIA symbolizes the value of this initiative.



This project has three key values: First, it is a world first and a pioneering effort for Indonesia. What makes it unique is the hybrid green approach, utilizing an existing plant not only for fertilizer production but also for creating a value chain for marine fuel. This value chain, in this case, extends to Singapore.

Second, it contributes to the establishment of a new export industry for Indonesia. Our partner in this joint venture is the local fertilizer company, which owns the existing plant. This project enhances the value of their facility.

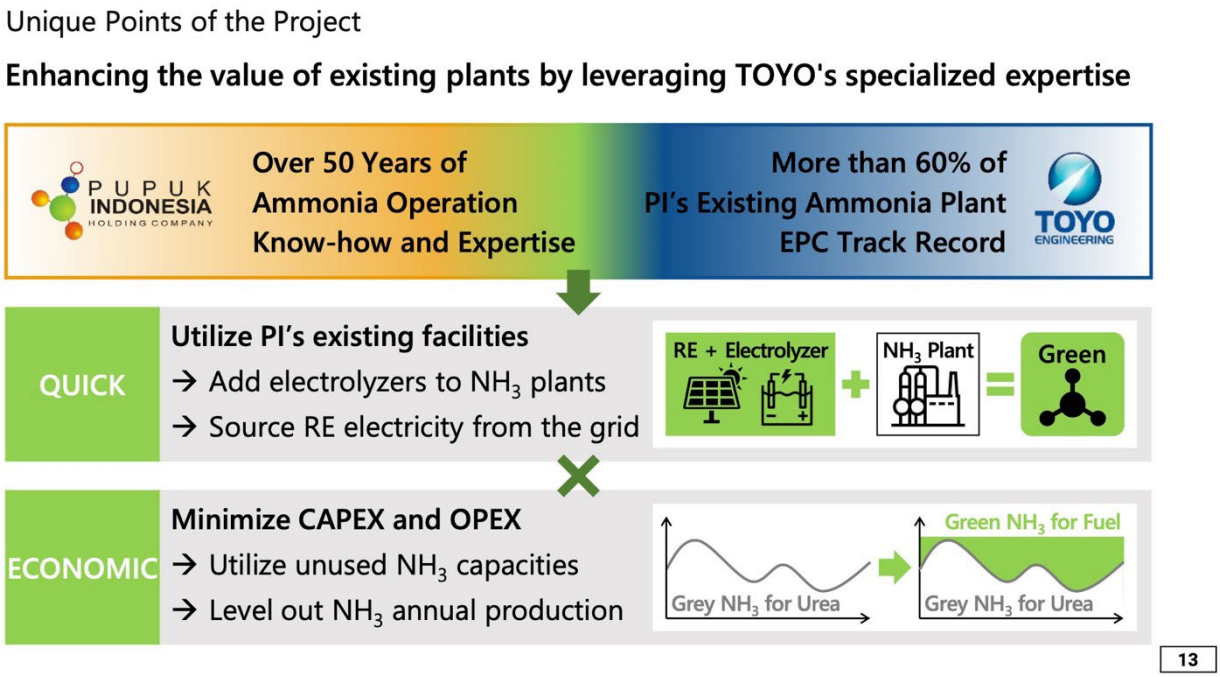
Third, looking further into the future, the same concept and business model can be expanded domestically and internationally. Specifically, the fertilizer company owns multiple existing plants, and we aim to replicate this model across those facilities. Beyond that, we plan to extend it to other countries where TOYO has built ammonia plants in the past. This scalability represents the long-term value of the GAIA project.

Let me explain in more detail how this project is being carried out. We are fortunate to have received various forms of support from both the Japanese and Indonesian governments, which has been instrumental in advancing the commercialization of this initiative. On the Indonesian side, we are benefiting from incentives provided by the local economic special zone. On the Japanese side, we have secured funding through the Global South subsidy program, creating a more favorable environment for accelerating the business.

In this context, a joint venture company has been established involving PUPUK INDONESIA, the state-owned fertilizer company on the Indonesian side, and ITOCHU Corporation along with TOYO on the Japanese side.

This joint venture will handle the production of ammonia. Unlike conventional EPC work, the goal this time is to secure stable revenue through business investments.

Regarding the value chain, the process involves purchasing electricity generated from hydropower or geothermal sources from PLN, Indonesia's state-owned electricity company. This electricity powers the electrolysis equipment, installed on land adjacent to the existing ammonia plant, which TOYO originally constructed. The green hydrogen produced is then supplied via pipelines to the ammonia plant, enabling the production of ammonia. This ammonia is subsequently supplied to ITOCHU Corporation's bunkering business in Singapore.



Today, I'd like to focus on the manufacturing aspect of this initiative. What makes this green ammonia project unique is the way it fully leverages the combined experience, know-how, and track records of PUPUK INDONESIA and TOYO to enhance the value of existing assets.

PUPUK INDONESIA has over 50 years of experience and expertise in ammonia production. TOYO, on the other hand, has designed and constructed more than 60% of the fertilizer company's existing plants. Together, this collaboration allows for the swift and efficient utilization of these existing facilities.

The approach is not only quick but also highly economical. As we refine the FS and FEED, we are optimizing both capital expenditure and operational costs. A key feature is the ability to use the surplus production capacity of existing ammonia plants to produce green ammonia. For example, gray ammonia produced for fertilizer applications is subject to seasonal fluctuations. By utilizing the surplus capacity during these fluctuations, green ammonia can be produced, thereby stabilizing operations throughout the year. This approach improves operational efficiency, which is one of the defining strengths of this project.

Estimated Schedule

Focus on the success of GAIA first, and then, expand the business

Aug. 2024	~ Mar. 2024	1H FY2024	FY2027	FY2028 ~
FEED* has started 【ongoing】	JVC Establishment 【Target】	Final Investment Decision (FID) 【Target】	Commercial Operation Date 【Target】	Expansion to PI's other plants 【Target】

Public announcement of the signing of Joint Development Agreement at AZEC in August 2024

Public announcement of the signing of Shareholders' Agreement at COP29 in November 2024

*Front-End Engineering Design

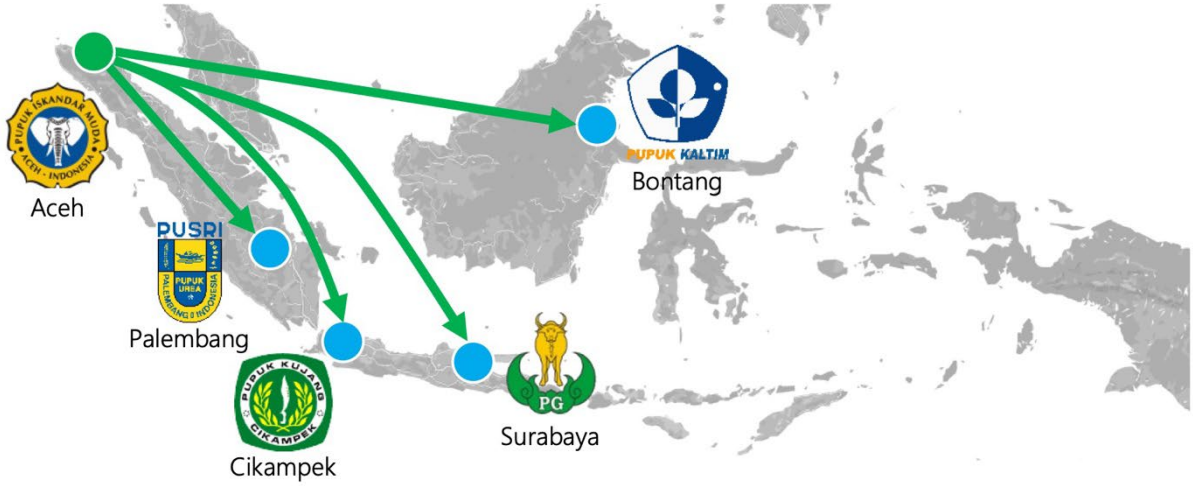
14

With this context in mind, let me outline the future schedule. Currently, the three companies involved are progressing with the Front-End Engineering Design (FEED). In August, during the ASEAN Zero Emission Community (AZEC) ministerial meeting held in Jakarta, we signed the Joint Development Agreement. Furthermore, in November, at COP29, we announced the signing of the Shareholders' Agreement.

Moving forward, the goal is to establish the Joint Venture Company (JVC) within FY2024, aiming for a final investment decision (FID) in H1 of 2025. Following this, the project will proceed through the EPC phase, targeting the start of commercial operations in 2027. From 2028 onward, we plan to expand this model to other plants.

Future Expansion Opportunity

Expand the success of PJ GAIA to other existing NH_3 plants



15

Finally, regarding the scale of future expansions, the initial plant in Aceh is designed to produce 100 tons to 150 tons per day, equating to an annual capacity of approximately 30,000 tons to 45,000 tons. After successfully operating this plant and gaining valuable experience, we aim to expand horizontally to other subsidiaries under the umbrella of the fertilizer company.

In total, we anticipate that this initiative could achieve an annual production scale of several hundred thousand tons of green ammonia. This suggests the potential for the business to expand several times over its current size.

This concludes my explanation of TOYO's current challenges in the fuel ammonia sector. Thank you very much.

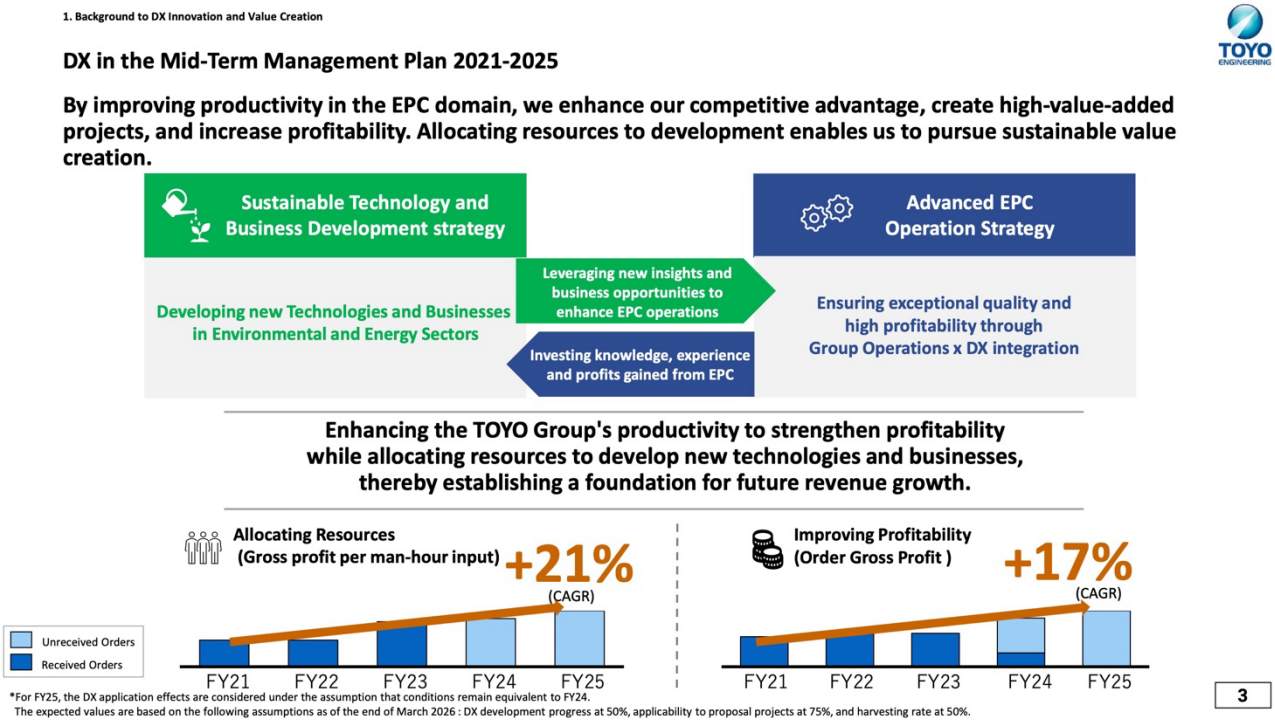
Presentation

Shiraishi: Next, we will have Noriaki Seo, General Manager of the DXoT Promotion Department, present the second theme: TOYO's digital transformation, challenging sixfold productivity and sustained value creation. Seo-san, over to you.

Seo: Allow me to introduce myself once again. My name is Noriaki Seo, General Manager of the DXoT Promotion Department at Toyo Engineering Corporation. Thank you for taking the time to join us today.

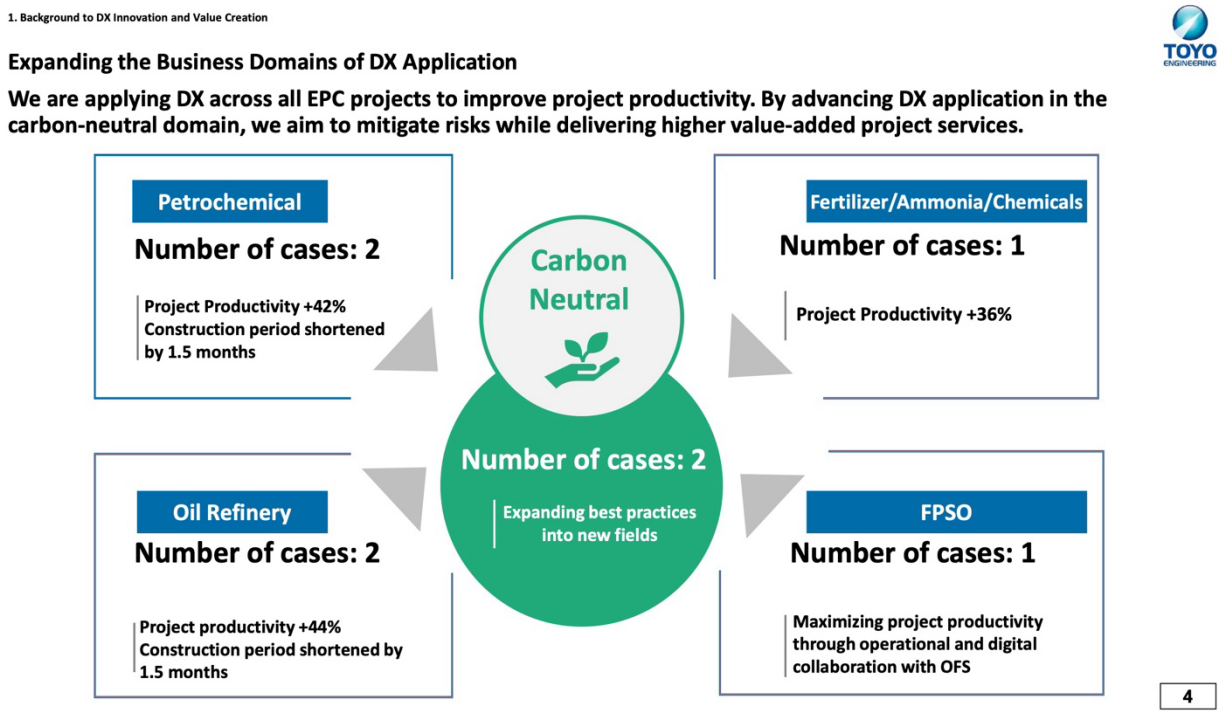
Today, I will be discussing the theme of TOYO's digital transformation, its challenge to achieve sixfold productivity, and its pursuit of sustainable value creation. Thank you for your attention.

The content I will cover today is as follows. First, I will explain the background and value creation of our digital transformation. Next, I will discuss the challenge of achieving sixfold productivity, the expansion of DX strategies, and the reevaluation of profit growth. Following that, I will share specific achievements to date and the returns they have generated. Finally, I will present the outlook for the future and provide a summary.



Let me begin with the background and value creation of our digital transformation. In our medium-term management plan, we aim to strengthen our competitive advantage by improving productivity through the Advanced EPC Operation Strategy. This involves generating high-value-added projects and enhancing profitability. Additionally, through the Sustainable Technology and Business Development Strategy, we are advancing the allocation of resources to new fields, establishing a future revenue base, and balancing efforts between optimizing existing operations and exploring new business opportunities.

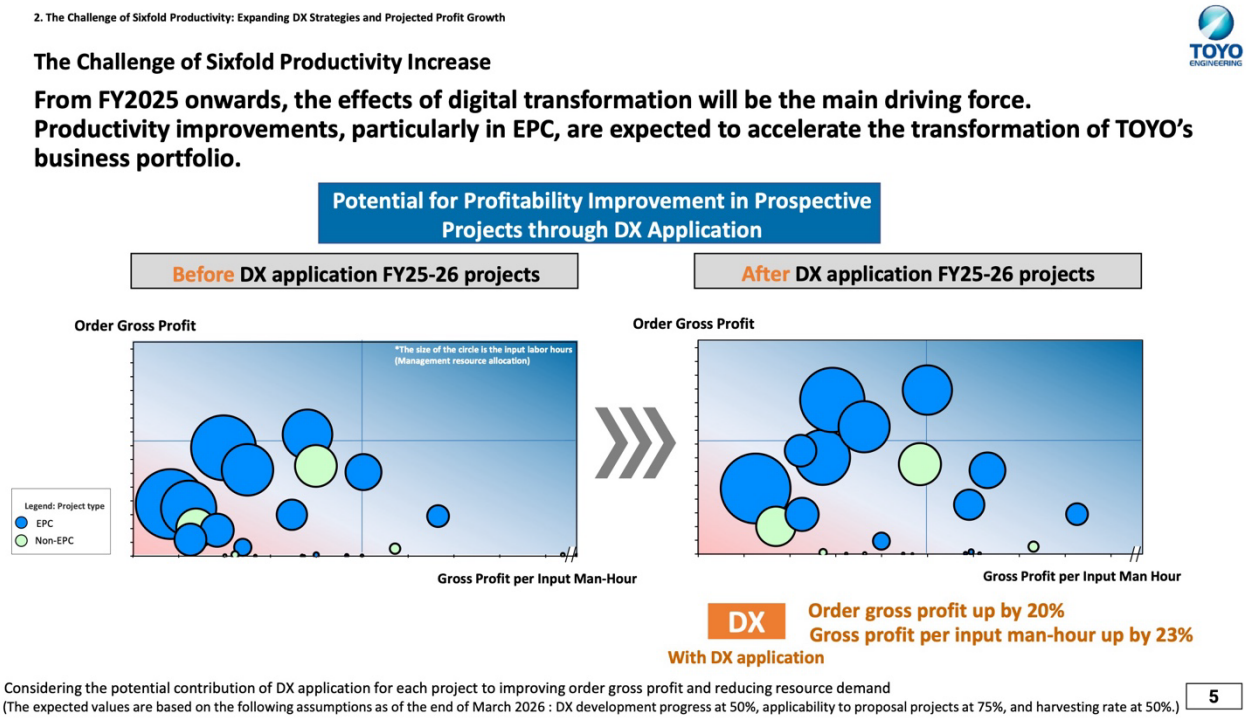
The core indicators of this strategy are gross profit per unit of input labor, which reflects resource efficiency, and order gross profit, which measures profitability. We anticipate annual average growth rates of 21% and 17% for these indicators, respectively. Digital transformation plays a significant role in driving this growth, contributing to both efficiency improvements and revenue enhancement.



With regard to the application of DX to projects, we have strengthened governance this fiscal year to make DX a global standard across all EPC projects.

As a result, the scope of DX application has expanded, leading to productivity improvements of 30% to 40% in several projects within existing fields, as well as shortened project timelines. Furthermore, in the FPSO domain, we have deepened collaboration with MODEC in both operational and digital areas to maximize project productivity.

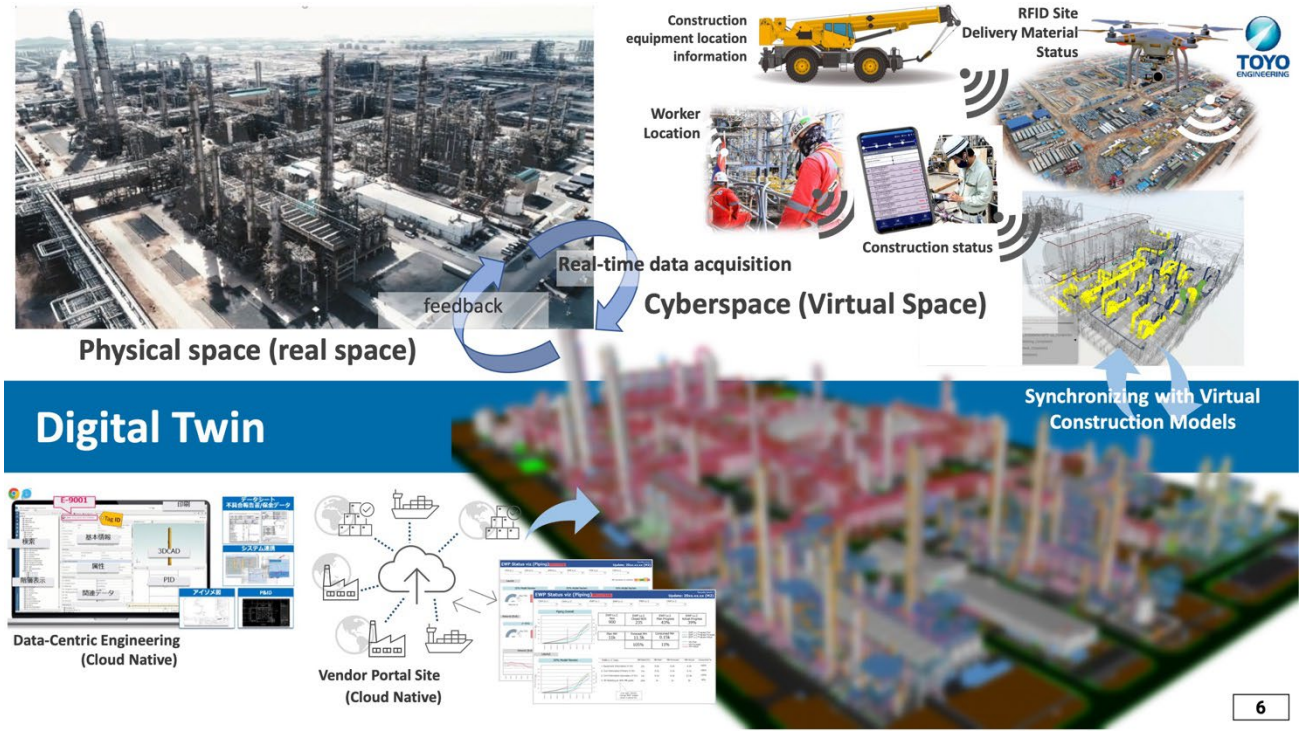
In the increasingly central area of carbon-neutral initiatives, we are applying DX to two projects, aiming to deliver higher-value project services.



As such, the application of DX to EPC projects is steadily advancing, transforming our projects into more efficient and highly productive undertakings.

This chart illustrates the status of projects for the 2025 to 2026 period. The horizontal axis represents gross profit per unit of input labor, while the vertical axis indicates order gross profit. The size of each circle represents the labor input. The chart compares conditions before and after the application of DX, with the pre-DX application data on the left.

As you can see, the effects of DX application have shifted project productivity upward and to the right. Specifically, we expect an average increase of 20% in order gross profit and a 23% improvement in gross profit per unit of input labor.



Now, let me introduce some specific examples of our efforts to improve project productivity, focusing on how we address project-specific risks and strengthen risk management. To enhance risk management, we are advancing the construction and utilization of digital twins for our projects. A digital twin uses advanced technologies such as cloud computing and IoT to recreate in virtual space all the data, design information, procurement details, and construction progress necessary for plant construction.

Going beyond conventional simulations, a digital twin constructs a virtual replica of the real object in real-time, enabling efficient project management and accurate reproduction of the project as it evolves. To demonstrate how digital twins strengthen risk management, we will now show a video example.

[Video Begins]

https://youtu.be/KUoEkJ8My0s

TOYO utilizes digital twin and simulation technologies to minimize risks during the planning phase and strengthen risk management during execution. By integrating real and virtual technologies, we ensure project success.

In the planning stage, for example, we input construction strategies such as on-site construction or modular methods and perform simulations of the overall plan. Considering risks associated with each strategy, our proprietary tool, EffiMate, automatically generates process plans and proposes multiple scenarios based on risk factors. These plans are simulated on 3D models, allowing for detailed verification and analysis.

Additionally, by leveraging AI technology, we can reference past trouble data to preemptively identify and address similar delay-prone areas. Ultimately, we determine the optimal plan that aligns with the strategy based on the simulation results.

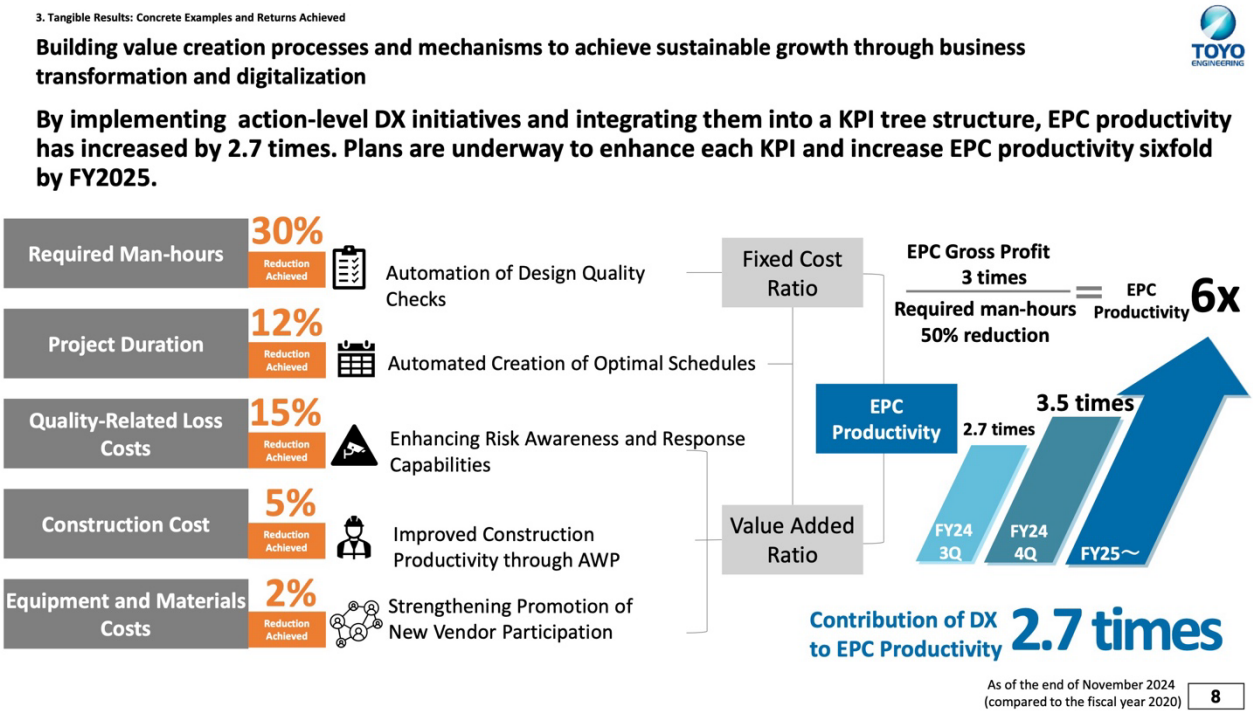
During the execution phase, we mitigate material management risks using RFID technology, which allows for the rapid acquisition of material status and location data on-site. Progress data can be easily and quickly input via smartphone apps, eliminating discrepancies between actual construction progress and reports. This

ensures real-time and accurate monitoring of on-site progress. The collected data is visualized on 3D models, and delay risk alerts help identify gaps between the plan and execution. Furthermore, by integrating on-site conditions with the 3D models, decision-making is accelerated, and the precision of risk management is further enhanced.

By combining advanced simulations aligned with strategies, comprehensive risk elimination, and robust adaptability to disruptions, we have built an execution framework that significantly enhances the reproducibility of plans and ensures successful outcomes.

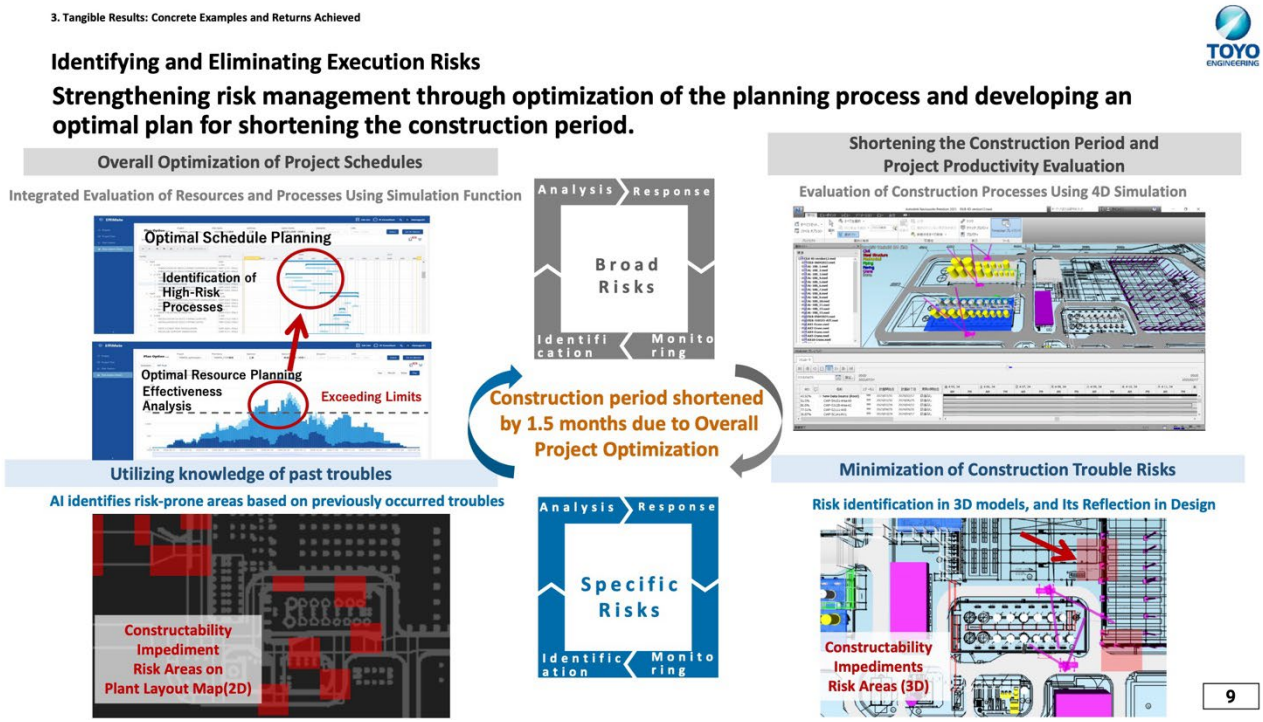
[Video Ends]

Seo: Thank you. As shown in the video, we are steadily achieving tangible results from our DX initiatives, and these are being applied to real-world projects.



On the other hand, our company has set a goal of tripling gross profit, reducing required labor input by 50%, and ultimately achieving sixfold productivity by the FY2025. As of now, we have achieved progress equivalent to 2.7 times productivity, and we are on track to reach 3.5 times productivity by the end of this fiscal year, aiming for sixfold productivity next year.

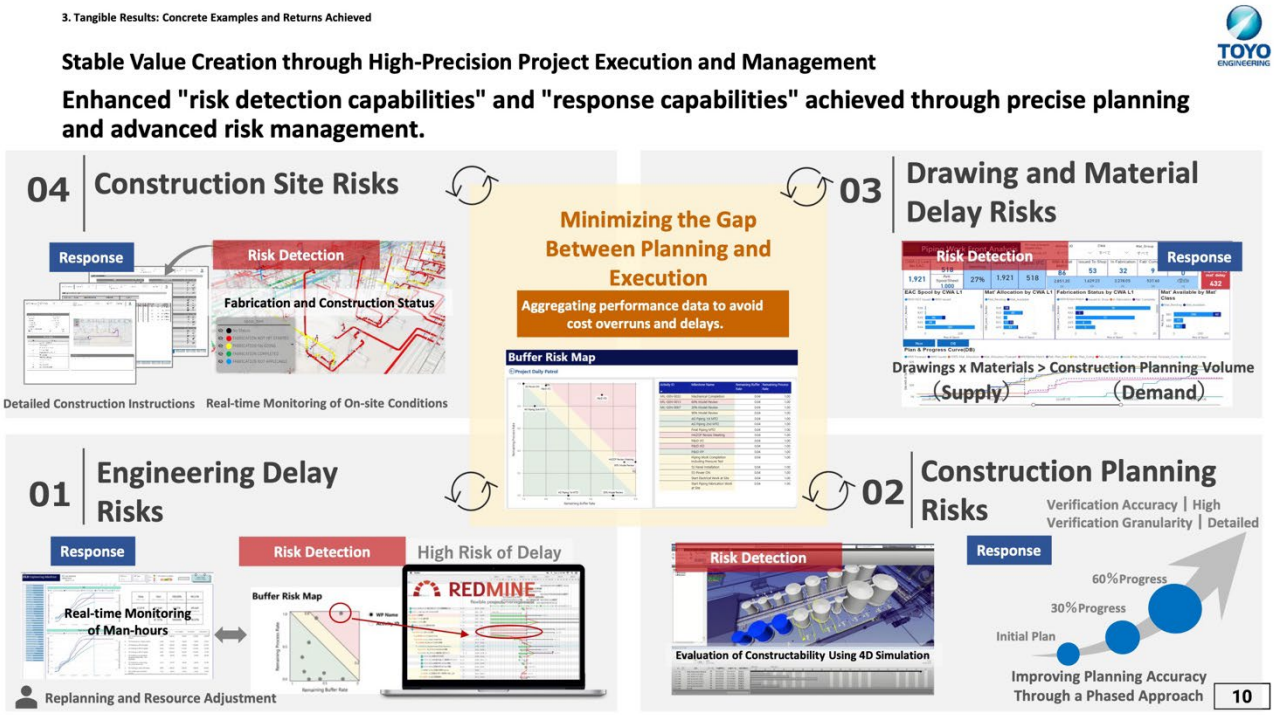
Furthermore, the various initiatives under our DX promotion are integrated into a KPI tree structure, enabling real-time monitoring of progress. This system supports the steady execution of plans and contributes to the consistent enhancement of corporate value.



To strengthen risk management for projects, we are not only improving execution capabilities but also enhancing the planning processes. Specifically, we have established processes to identify potential risks for individual activities, analyze and address them, and monitor the responses. We then integrate these risks into the overall schedule to prevent them from materializing.

For instance, as shown in previous videos, we use AI to identify risks based on past trouble data, examine countermeasures in 3D, and reflect these measures in our designs. Furthermore, by employing automated project scheduling tools, we identify risks for each process, incorporate them into 3D models, andthe plan is optimized by simulation ina4D.

This framework minimizes risks while enabling shorter project timelines and allowing us to deliver higher-value project services.



Next, to enhance the precision of planning reproducibility, we have worked to strengthen our ability to detect and address risks during project execution. For example, in the engineering domain, engineers previously managed tasks using Excel, which led to fragmented information, lack of coordination, and delays in responses.

To address this, we implemented the task management tool REDMINE. By enabling all team members to use REDMINE on the cloud, all tasks and risk-related information can now be shared and managed in real time. This has significantly improved early risk detection and swift response, resulting in enhanced risk management.

In the area of construction planning, plans were traditionally established during the early stages and rarely updated in response to engineering progress. To remedy this, all information required for construction planning is now consolidated into 3D models. This allows construction plans to be automatically updated in line with engineering progress, strengthening risk management and improving the accuracy and adaptability of plans.

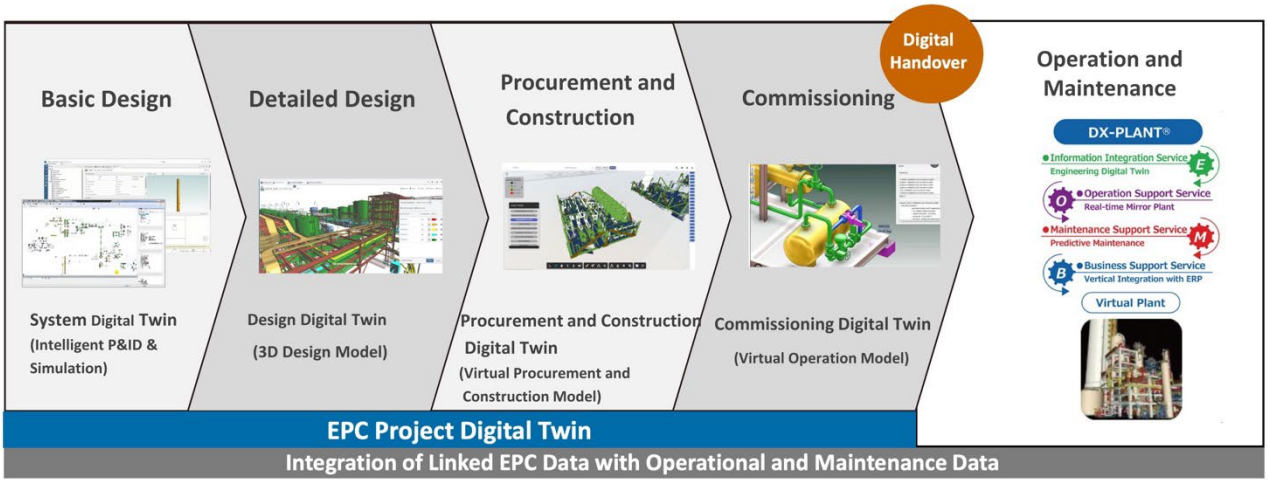
Additionally, in construction, where work cannot begin without the necessary drawings and materials, we have implemented a system to ensure this alignment. By using demand forecasts from construction teams and supply forecasts from engineering and procurement teams, we achieve optimized matching.

At the construction sites, we have introduced a system to monitor real-time site conditions, minimizing risks during on-site execution. Furthermore, by packaging and providing contractors with all necessary information, such as updated drawings, materials, and situational data, work progresses more smoothly.

These measures reduce rework and waiting times, resulting in shorter project timelines and cost reductions, thereby significantly improving productivity. Through these efforts, we have enhanced project execution capabilities and achieved more flexible and accurate plan execution.

Digital Twin for Realizing the Plant Life Cycle

Starting with enhancing added value in EPC, we provide high-quality design data and equipment information. We realize efficient maintenance planning and rapid troubleshooting, contributing to customer growth and the achievement of a sustainable society.



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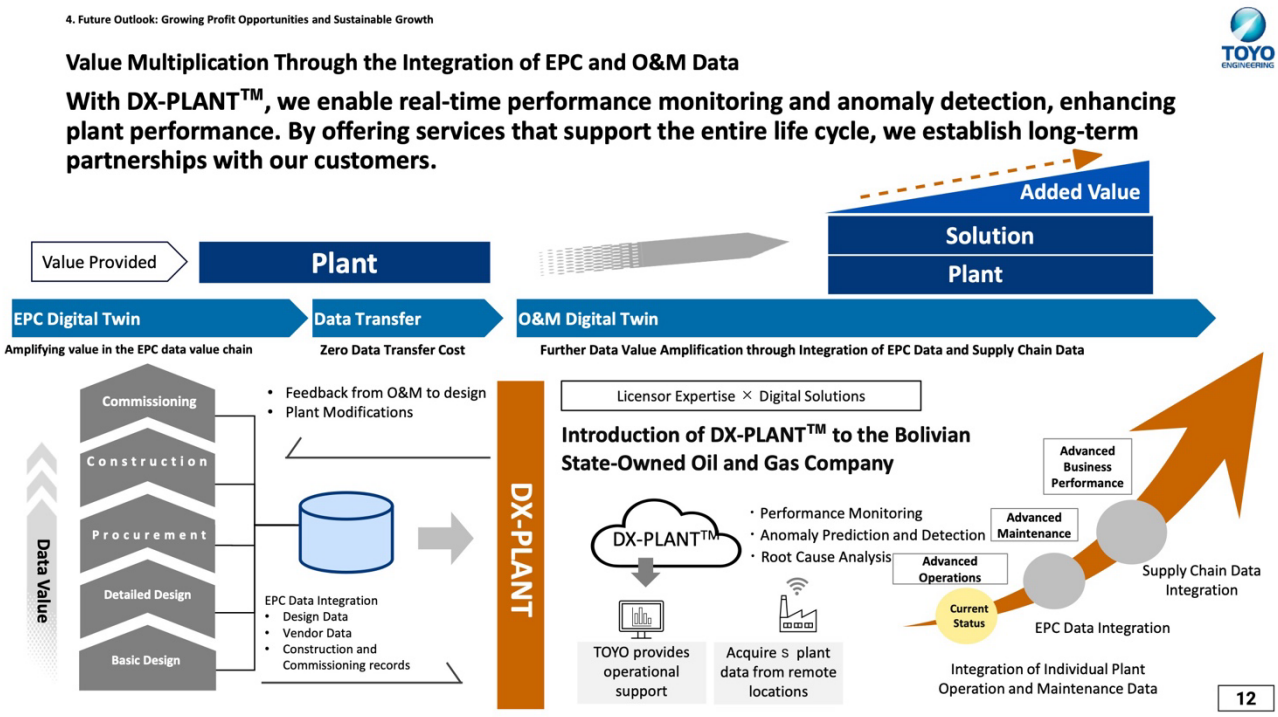
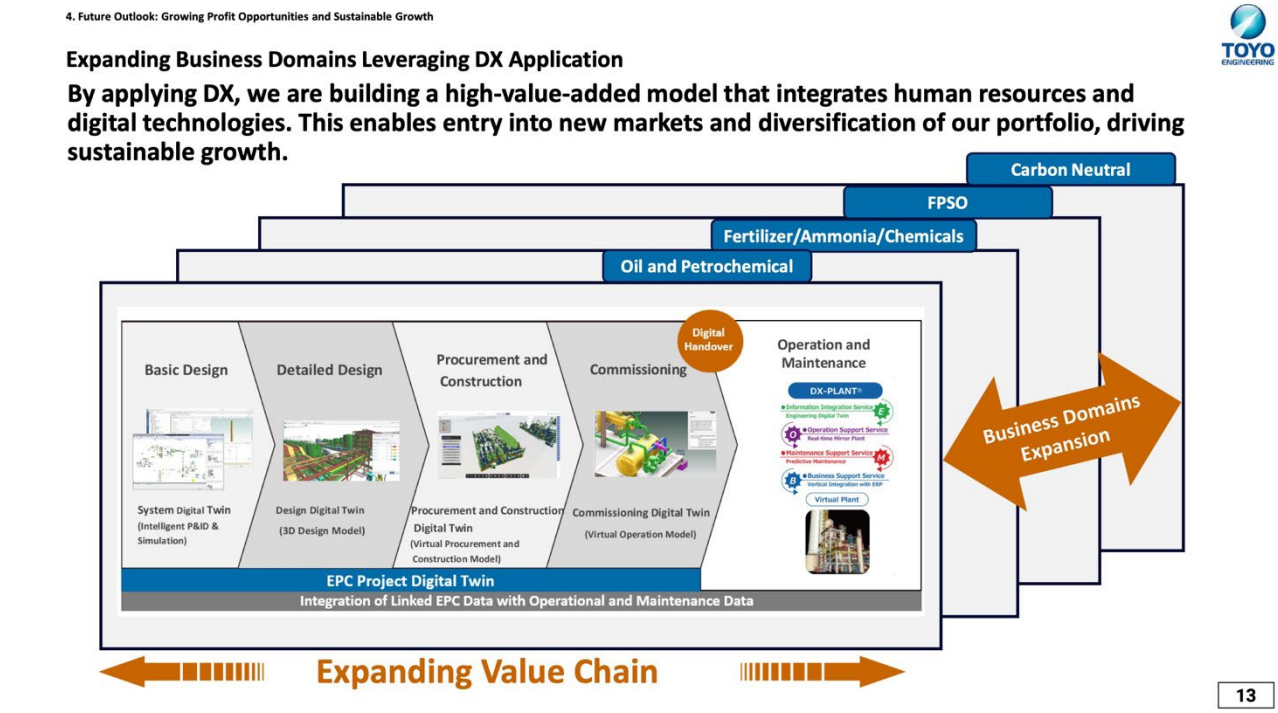
As explained thus far, the advancement of digital transformation in EPC has improved the value added by our EPC operations. This enhanced value addition has created an environment where high-quality design data and equipment information can be efficiently delivered. Consequently, these data can be transferred as digital resources post-EPC, enabling the creation of efficient maintenance plans and swift troubleshooting, providing additional value.

Furthermore, as part of our operational and maintenance services, we have developed DX-PLANT™, further strengthening these benefits.

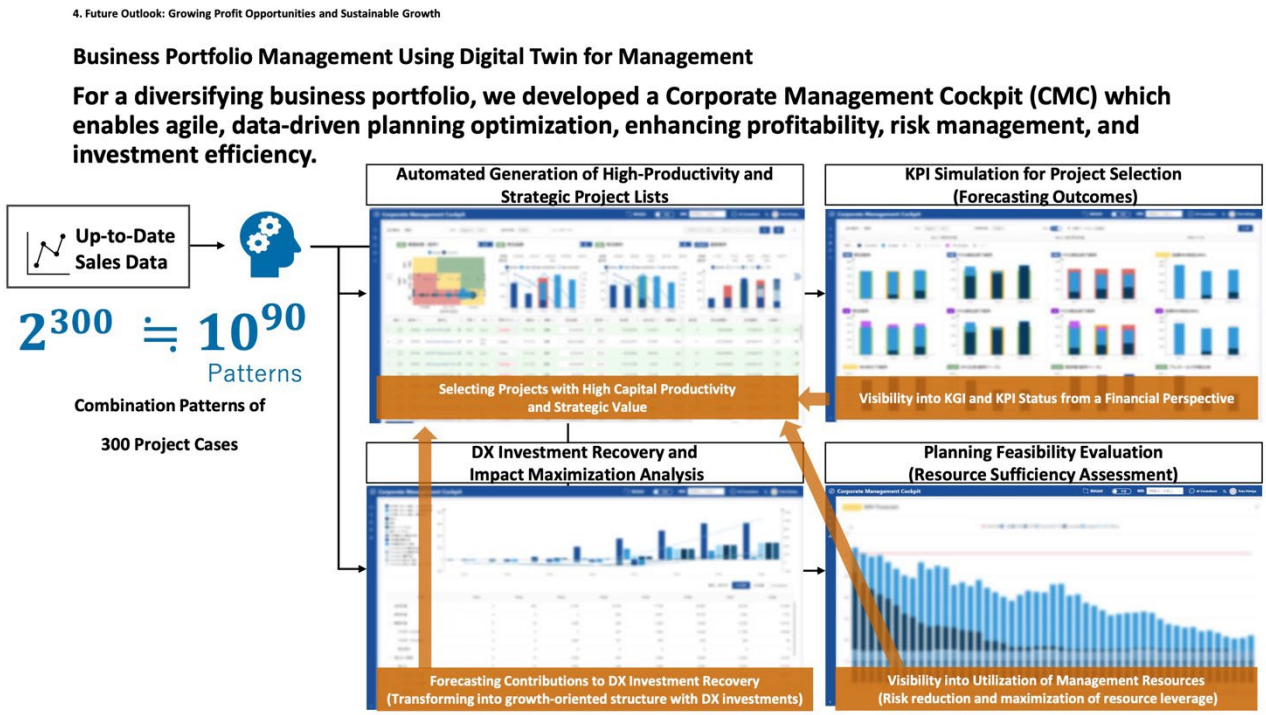


DX-PLANT™ is a DX service platform developed by our company to enhance plant operational efficiency and is implemented on the cloud. In October 2024, we signed a technical advisory agreement with a Bolivian state-owned enterprise to support plant operations. Moving forward, we plan to integrate it with upstream EPC processes and digital twin technology, expanding it as a comprehensive service that supports the entire plant lifecycle. Through this plant-plus solution, we aim to deliver greater added value and build long-term partnerships with our clients.



By applying DX, our company has become more flexible in responding to changes and needs, advancing into new fields and diversifying our business portfolio. This diversification accelerates growth in new areas, such

as the carbon-neutral sector, in addition to our traditional EPC business. It also promotes strategies that balance sustainable societal development with corporate growth.

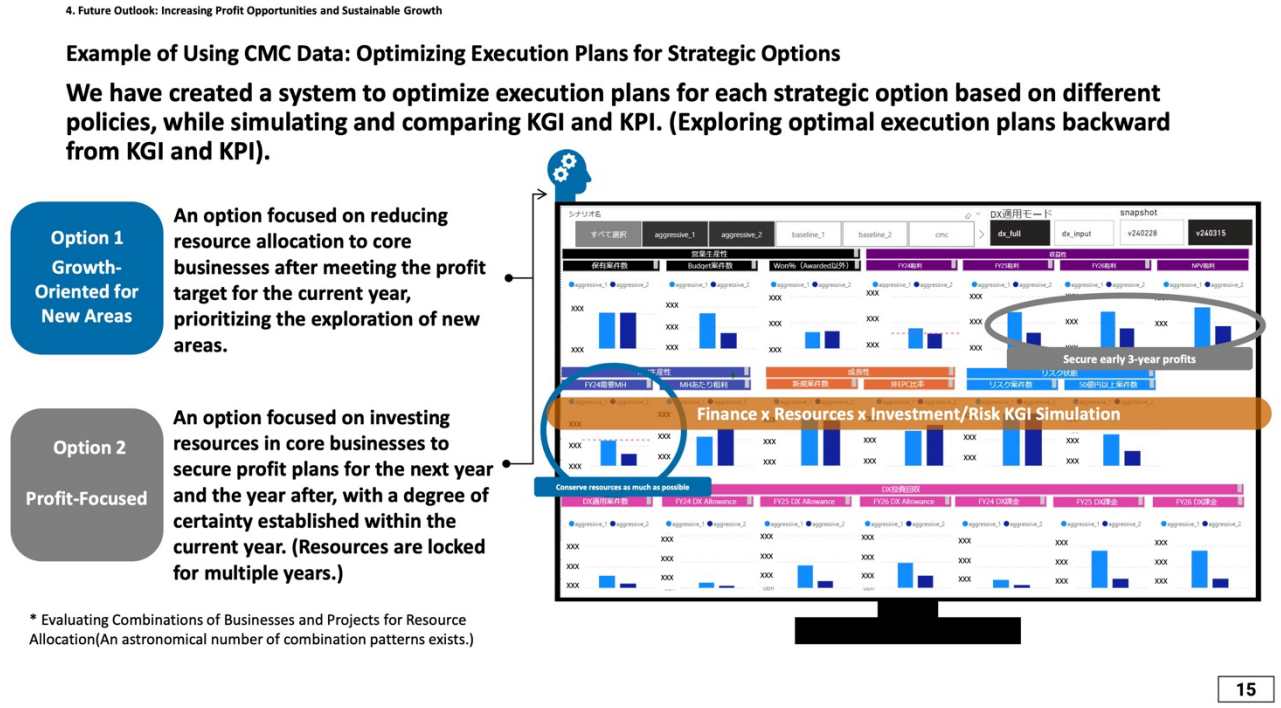


Our company focuses on small- to medium-scale projects to build a stable revenue base. This approach diversifies risk and ensures more predictable and sustainable income while allowing flexibility to adapt to market fluctuations. However, the number of small- to medium-scale projects is vast, with approximately 300 projects currently under management. This has increased the complexity of project selection and portfolio management.

The possible combinations of these projects reach two to the power of three hundred, an astronomically large and complex number. Previously, such projects were managed manually and in a highly person-dependent manner, which posed significant challenges to efficiency and consistency. Manually managing this volume of projects is no longer realistic, and decision-making in terms of time and accuracy faces inherent limitations.

To address this, we introduced the Corporate Management Cockpit (CMC), which enables integrated and real-time evaluation of all projects. This system consolidates financial, DX investment, and management resource information into one platform, facilitating precise and rapid decision-making.

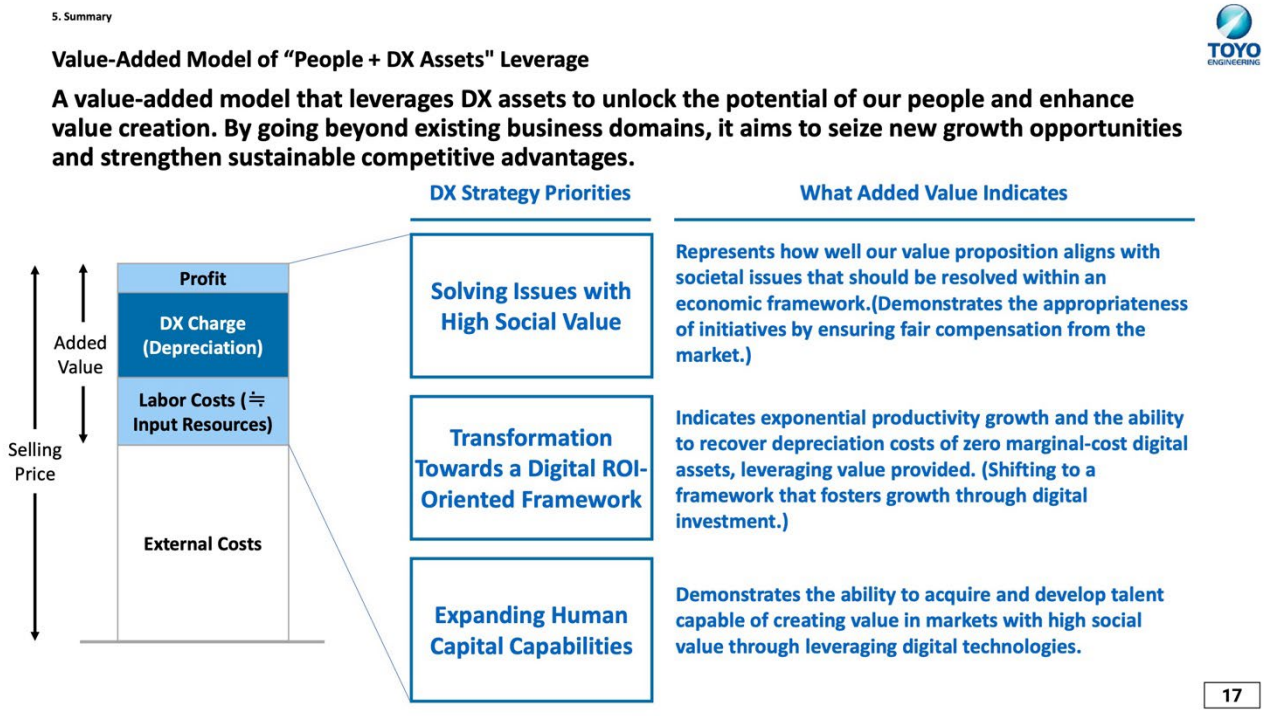
With the CMC, we can efficiently manage the previously overwhelming and complex combinations of projects. It optimizes resource allocation and significantly strengthens the system that supports a stable revenue base. The Corporate Management Cockpit allows us to perform a triune evaluation from the perspectives of finance, investment, and management resources, enabling the selection of highly productive and strategically valuable projects.



The Corporate Management Cockpit (CMC) also provides various insights to support management decisions. For example, it includes mechanisms that optimize execution plans based on different strategic options and allows for simulation comparisons of KGIs and KPIs. As shown here, the system supports business portfolio management by evaluating resource allocation and combinations of business projects tailored to different strategies, whether they are growth-focused, profit-focused, or targeting new domains.

Let me now summarize. So far, I have explained the transformations we are pursuing in both projects and corporate operations. To roll out these new systems to all employees globally, it is essential to enhance cross-functional expertise and strengthen global governance.

In terms of improving project execution capabilities, we have established a support structure driven by globally selected teams using advanced technology. By incorporating cutting-edge tools like the Corporate Management Cockpit, we are strengthening organizational support and creating a dual-layer propulsion framework to drive progress.

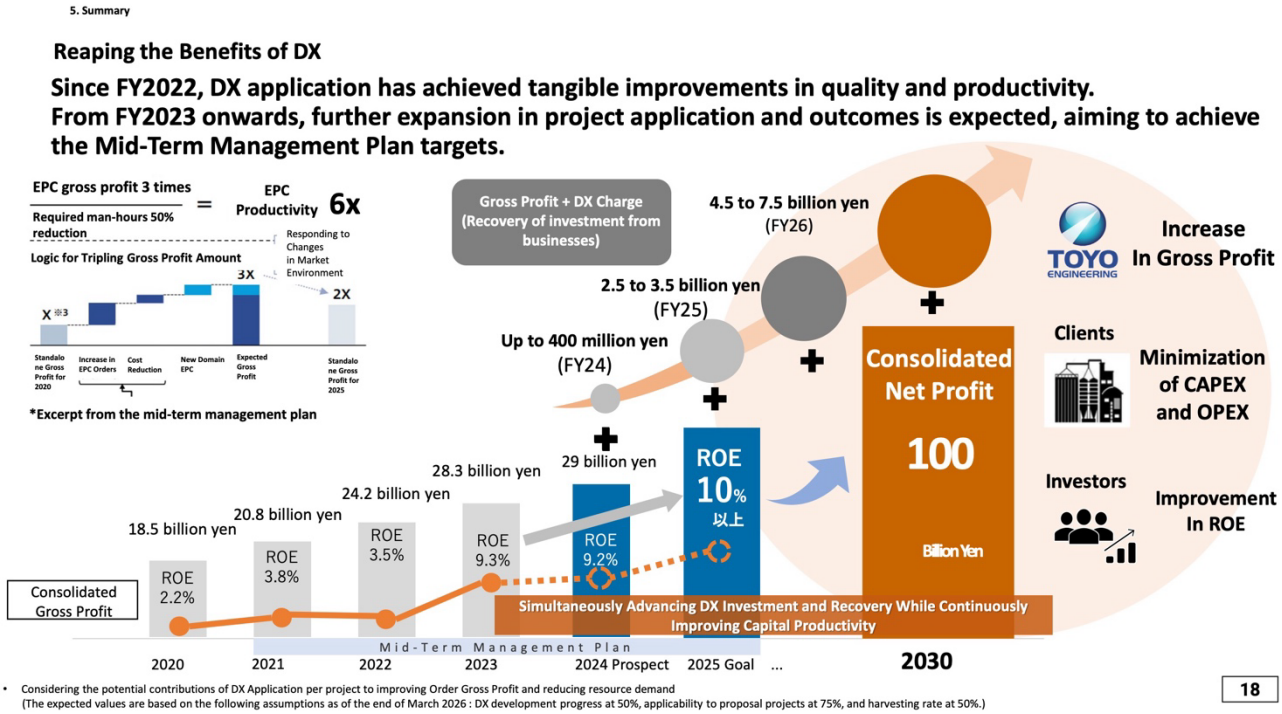


In this era of technological innovation, often referred to as the Fourth Industrial Revolution and centered around AI, our company is transitioning from the traditional people-plus-leverage model to a people-plus-DX-assets, leverage-based value-added model.

This people-plus-DX-assets, leverage-based value-added model is a system that maximizes the potential of human resources while accelerating the value provided through the use of DX assets. The conventional value-added structure, which focused on labor costs plus profit, is evolving into one that incorporates labor costs, DX-related charges, and profit.

The improvement of value-added has three significant implications. First, it demonstrates that the value we provide aligns with addressing societal challenges. Second, it maximizes the benefits of digital technology's characteristic of near-zero marginal costs, accelerating the recovery of digital investments while enhancing the value delivered. Third, it shows that we are successfully acquiring and nurturing talent capable of achieving results in socially valuable markets.

By maximizing the value we add in this way, we are going beyond our current business domains to create new growth opportunities and further strengthen our sustainable competitive advantage.



Finally, our DX efforts are not just about improving corporate performance; they are also aimed at contributing to society as a whole. By improving productivity and quality, we are helping to establish social infrastructure and promote sustainable growth, laying the groundwork for a better future.

At the same time, we are advancing DX investments while generating returns, continuously improving capital productivity. By FY2025, we aim to create an added value of JPY2.5 billion to JPY3.5 billion, and by FY2026, we expect this to increase to JPY4.5 billion to JPY7.5 billion. By achieving these goals, we aim to enhance corporate value while fulfilling our social responsibilities.

We will continue to leverage DX to pursue new avenues of value creation while striving for sustainable growth. I sincerely thank you for your continued support and cooperation. Thank you very much for listening.

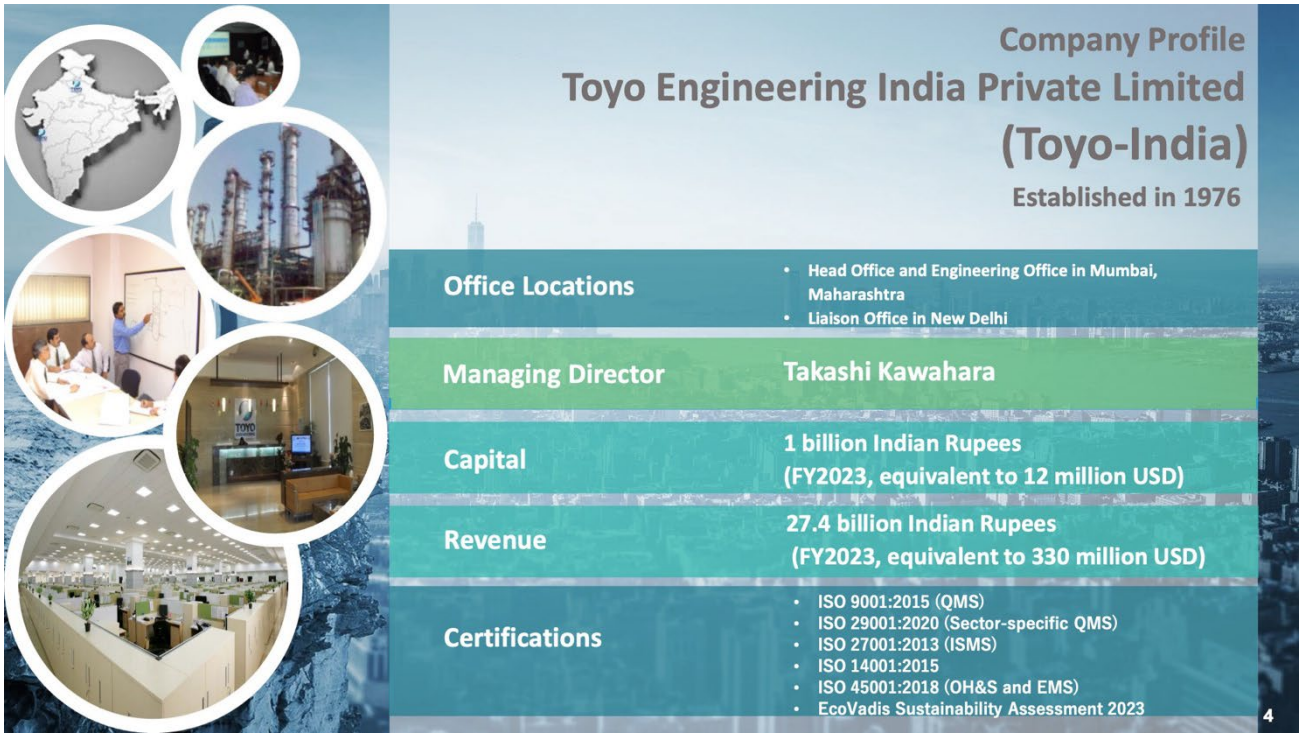
Presentation

Shiraishi: Now, for our final topic, we will have Mr. Kawahara, President of Toyo-India, present on Toyo-India's challenges and growth strategy, the outlook for the Indian market, and the execution of global projects.

Kawahara: Thank you for joining us today. My name is Kawahara, and I am the President of Toyo Engineering India Private Limited. I appreciate your time and attention.

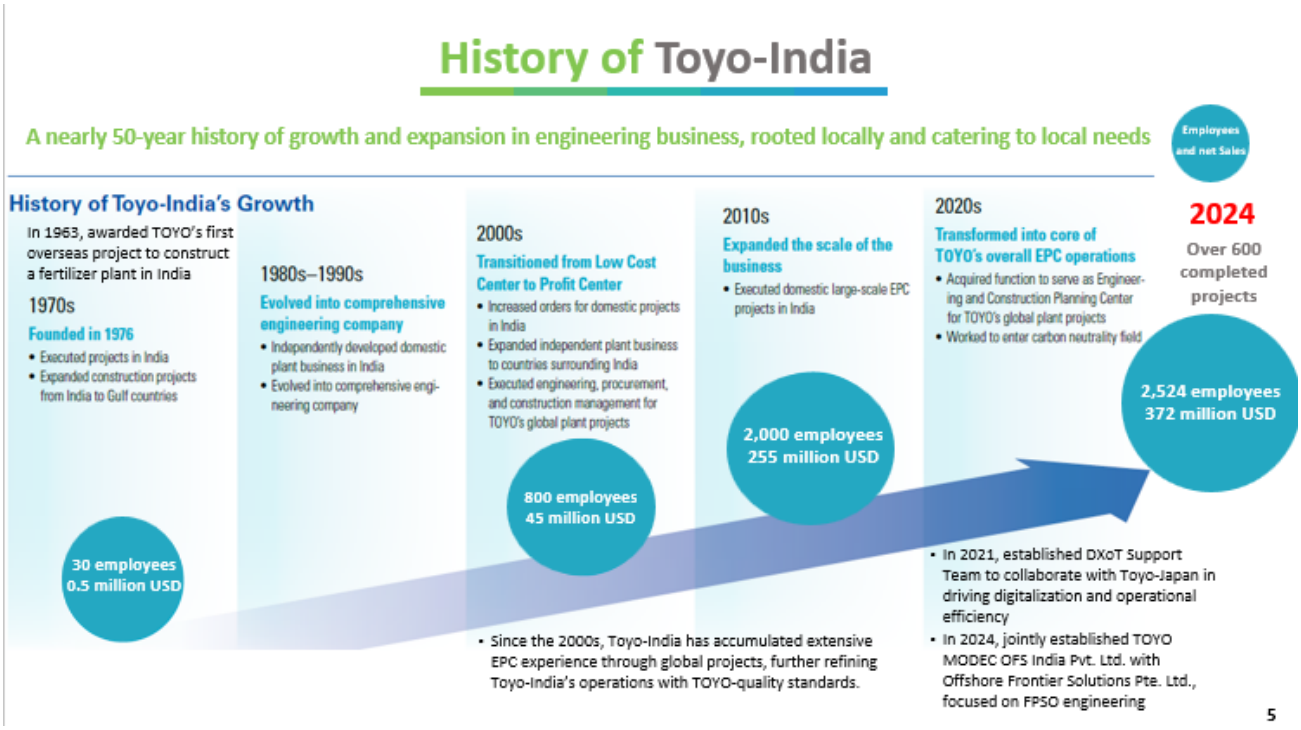
Today, I would like to talk about Toyo-India's challenges and growth strategy under the theme of the outlook for the Indian market and the execution of global projects.

Here is the content I will cover today. First, I will introduce Toyo-India. Second, I will explain the market environment, which is key to Toyo-India's growth. Third, I will highlight Toyo-India's competitive advantages. Lastly, I will conclude with a summary.



Let's begin with an introduction to Toyo-India. The company name, as mentioned earlier, is Toyo Engineering India Private Limited, referred to as Toyo-India. Established in 1976, the company is headquartered in Mumbai, Maharashtra, where we also have a comprehensive engineering center. Additionally, we maintain a liaison office in New Delhi to support customer relations.

I serve as the President of the company. Toyo-India has a capital base of INR1 billion, and its revenue for FY2023 was INR27.4 billion, equivalent to approximately USD330 million. To provide EPC services, we hold a full suite of necessary ISO certifications.



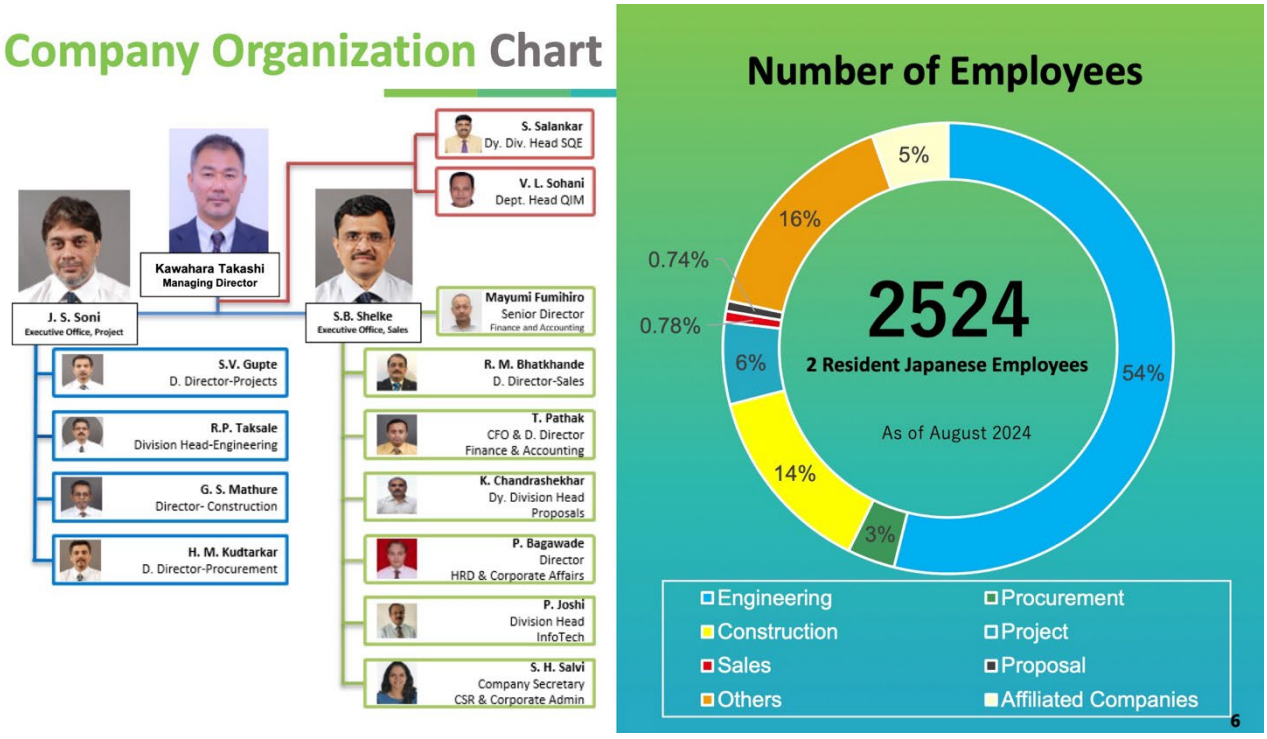
Next, I would like to share the history of Toyo-India. Toyo-India has grown over 50 years as a regionally rooted engineering business in India. The journey began in 1963 when TOYO secured its first overseas project, a fertilizer plant in India. Building on this foundation, Toyo-India was established in 1976. During the 1980s and 1990s, the company developed into a comprehensive engineering firm.

By the 2000s, Toyo-India transformed from a low-cost center into a profit center. In the 2010s, we expanded the scale of our business, and by the 2020s, Toyo-India had become a central player in TOYO's global EPC operations. As of 2024, Toyo-India has completed over 600 projects, demonstrating an extensive track record of project execution.

When it was founded, Toyo-India was a small company with just 30 employees. Over the years, the company has grown significantly in scope and scale. Today, we have 2,524 employees and annual revenue of USD372 million.

In addition to EPC operations, we established a DXoT support team in 2021 in collaboration with Toyo-Japan. This team, which was mentioned earlier in Mr. Seo's presentation, promotes digital transformation and operational efficiency.

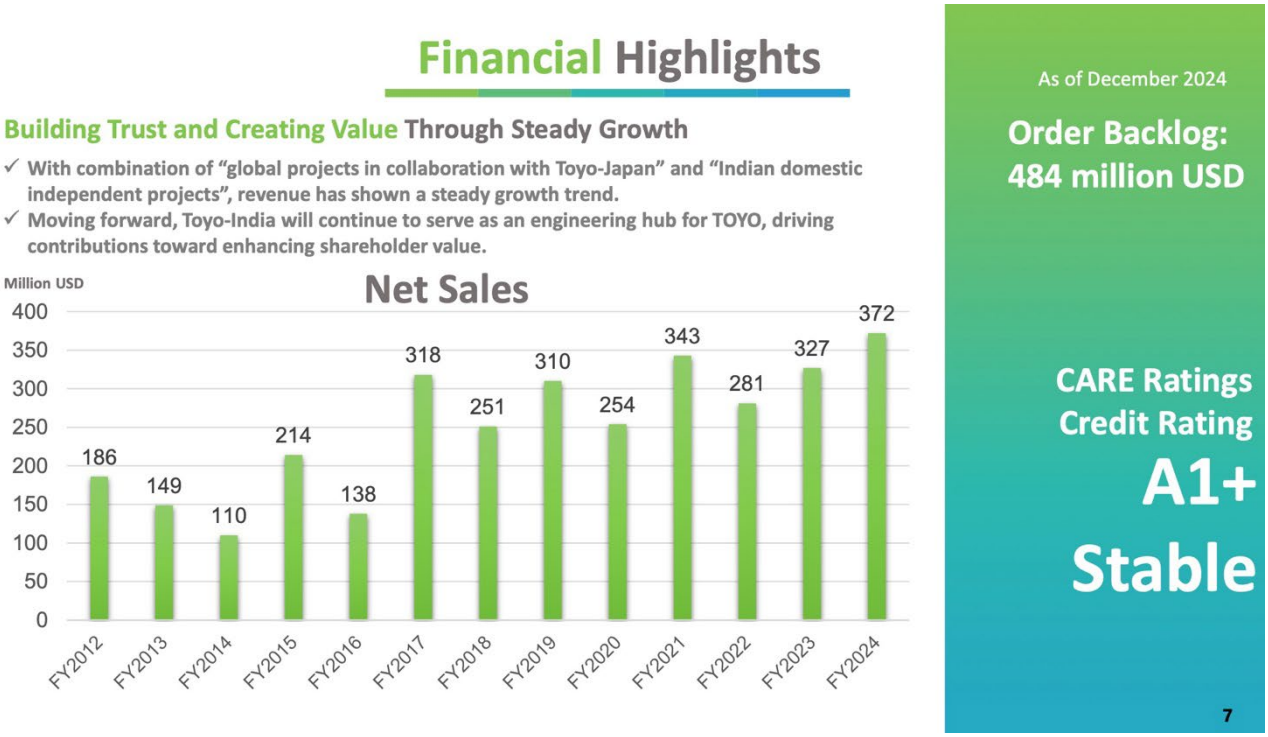
Furthermore, in 2024, we established TOYO MODEC OFS India in Bangalore, specializing in FPSO design. This initiative aims to strengthen our capabilities and focus on FPSO design operations, driving further growth and development in this area.



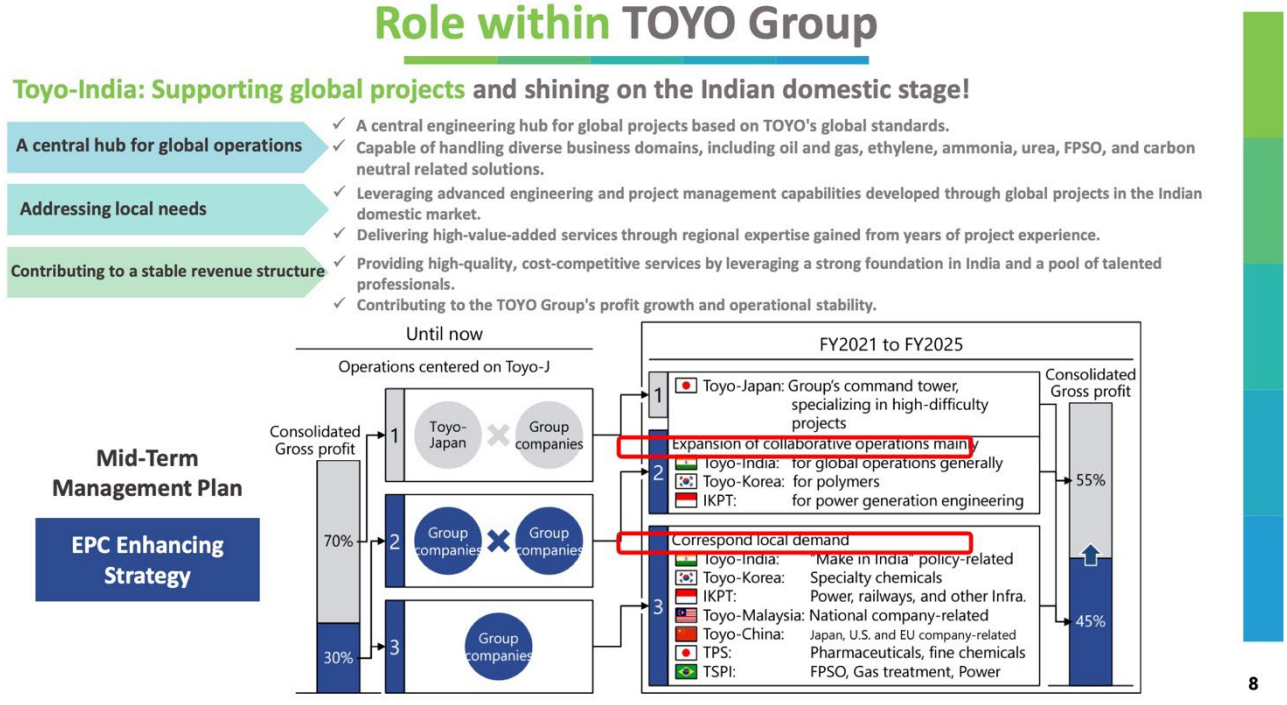
Next, let me explain the organizational structure of the company. As you can see from this chart, there are only two Japanese members in the organization, myself and Mayumi. The rest of the team consists entirely of Indian personnel. Among them, the directors, Soni and Shelke, have been with Toyo-India for over 35 years. They deeply understand TOYO's mission, vision, and values, and they manage the company alongside me based on these principles.

As of August 2024, Toyo-India has 2,524 employees, of which 54% are engineers and design engineers. In terms of numbers, this means we have approximately 1,360 engineers.

If we include engineering, procurement at 3%, construction at 14%, and projects at 6%, these categories together account for 77% of our workforce. This amounts to about 1,950 employees, just shy of 2,000, who are directly involved in projects. This project-oriented capacity is one of Toyo-India's defining characteristics.



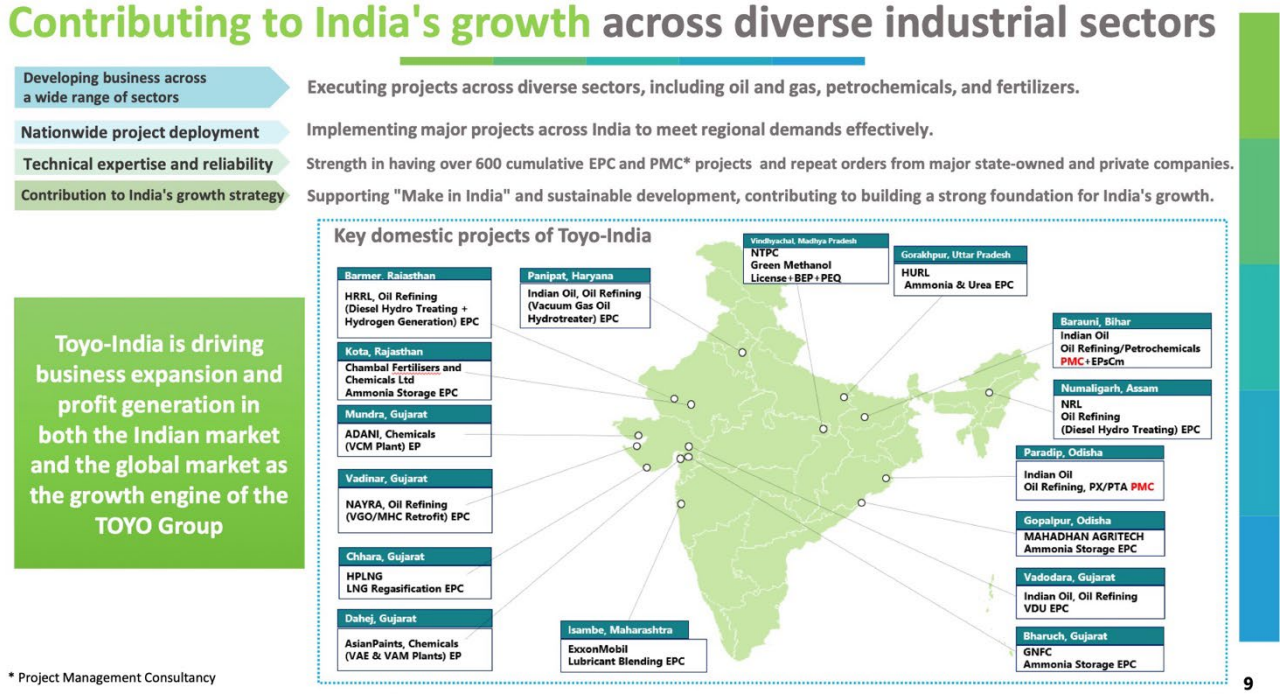
Next, I would like to present our financial highlights. As shown here, the number of employees has been steadily increasing, reflecting a growing number of projects. Consequently, revenue has also been rising year after year, demonstrating consistent growth.



Now, regarding Toyo-India's role within the TOYO Group, I would like to emphasize three key points. First, Toyo-India serves as a central hub for TOYO's global operations. We have the capability to handle a wide range of products, including oil and gas, ethylene, ammonia, urea, FPSO, and decarbonization-related projects. Toyo-India plays a core role as a design center for global projects, adhering to TOYO's global standards.

Second, Toyo-India addresses local needs. Leveraging the design and management expertise honed through global projects, we apply these capabilities in India's local market. Additionally, with our extensive experience operating projects in India over many years, we provide high-value-added services to customers, incorporating regional know-how.

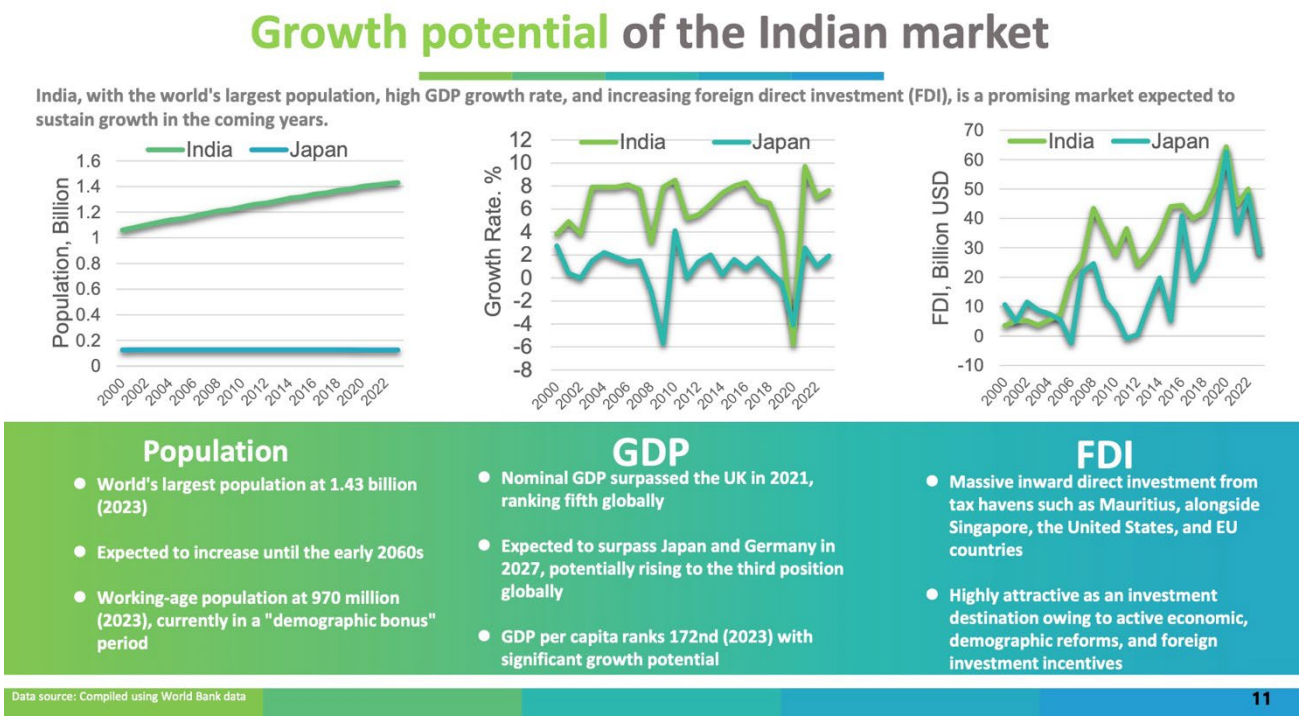
Third, by supporting both global and local needs, Toyo-India contributes to the TOYO Group's profit growth and business stability. Historically, Toyo-India functioned primarily as a dedicated design unit for Toyo-Japan. However, moving forward, we are enhancing collaboration among TOYO's global bases while increasingly catering to local needs in India. By strengthening the contributions of the second and third roles, we aim to further boost Toyo-India's contribution to consolidated gross profit.



Next, let me discuss Toyo-India's track record in India. This slide shows the details of the projects Toyo-India is currently executing and their respective locations.

At present, most projects are concentrated in the central and northern regions of India. However, we have also executed projects in southern cities such as Mangalore and Kochi. Toyo-India provides business and project services, including EPC, across the entire country.

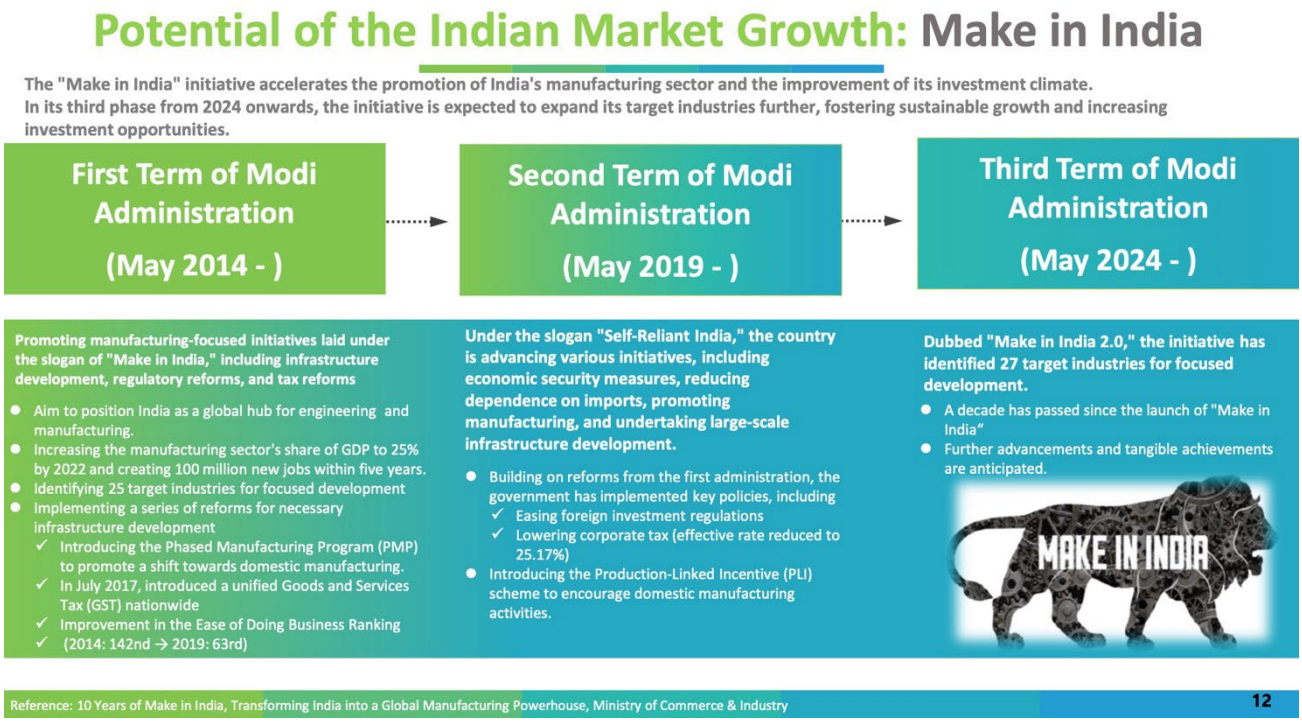
In addition to EPC services, we also engage in Project Management Consultancy (PMC), supporting project execution on behalf of the owners. This has led to numerous repeat orders from both major state-owned enterprises and private companies.



Now, I would like to explain the market environment, which is key to Toyo-India's growth. Regarding the growth potential of the Indian market, as many of you know, India's population has become the largest in the world, reaching 1.43 billion as of 2023. This growth trend is expected to continue until around 2060.

What is particularly notable is the productive-age population, which stands at 970 million. India is currently experiencing a demographic dividend period, positioning it as a country with significant room for growth. In terms of GDP, India surpassed the United Kingdom in 2021 and is expected to overtake Japan and Germany by 2027, potentially becoming the world's third-largest economy.

At the same time, when looking at GDP per capita, India ranks 172nd globally, indicating considerable room for further growth. Foreign direct investment in India is also steadily increasing. From these three perspectives, India is clearly a country and market with immense growth potential.



The second point concerning India's growth potential is the Make in India initiative. Under the leadership of Prime Minister Modi, the Make in India policy has been implemented as a measure to promote the manufacturing sector and improve the investment climate in India. During the first term of the Modi administration, initiatives were advanced under the Make in India slogan, including infrastructure development, regulatory reforms, and tax system improvements. The goal was to increase the manufacturing sector's share of GDP to 25% and create 100 million new jobs within five years.

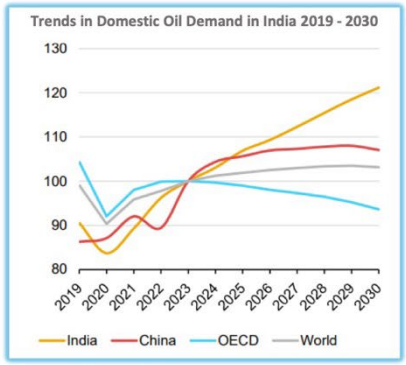
In the second term, the slogan shifted to Self-Reliant India, and various measures, including manufacturing promotion and large-scale infrastructure development, were implemented. Now, in Modi's third term, the government has introduced Make in India 2.0, identifying 27 industries for further advancement. With these government initiatives, the Indian market shows tremendous potential for continued growth.

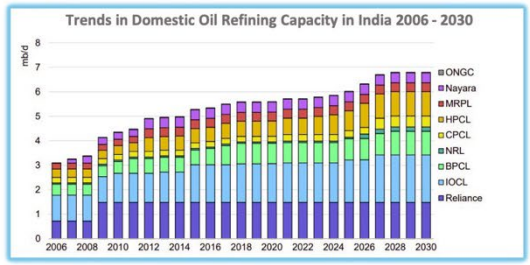
Business Environment in India: Oil Refining

Increase in both Demand and Refining Capacity expected

- Major Crude Oil Importer and Refining Capacity: India stands as the world's second-largest crude oil importer and holds the fourth-largest oil refining capacity in the world.
- Operational Refineries: As of 2023, the country operates 23 refineries with a combined capacity of approximately 5.8 million barrels per day (BPD)
- Government Investment: The Indian government has allocated $14 billion for investments in the oil sector for the fiscal year 2024.
- Projected Refining Capacity Increase: Projections indicate that by 2030, India's oil refining capacity will reach 6.8 million BPD, reflecting a substantial increase to meet growing energy demands.
- Integration with Petrochemical Plants: The state-owned oil refining companies aim to integrate 25% of their operations with petrochemical plants by 2030, a significant rise from the current 7%.
- Ethanol Blending Targets: India plans to achieve a 20% ethanol blend in gasoline by 2025, promoting cleaner energy.
- Biojet Fuel Blending in Aviation: The country has set targets for blending biojet fuel into aviation fuel for international flights departing from India, aiming for 1% by 2027 and 2% by 2028, aligning with global sustainability trends.

Reference: IEA Report, Indian Oil Market Outlook to 2030, BP Energy Outlook - 2024, RystadEnergy





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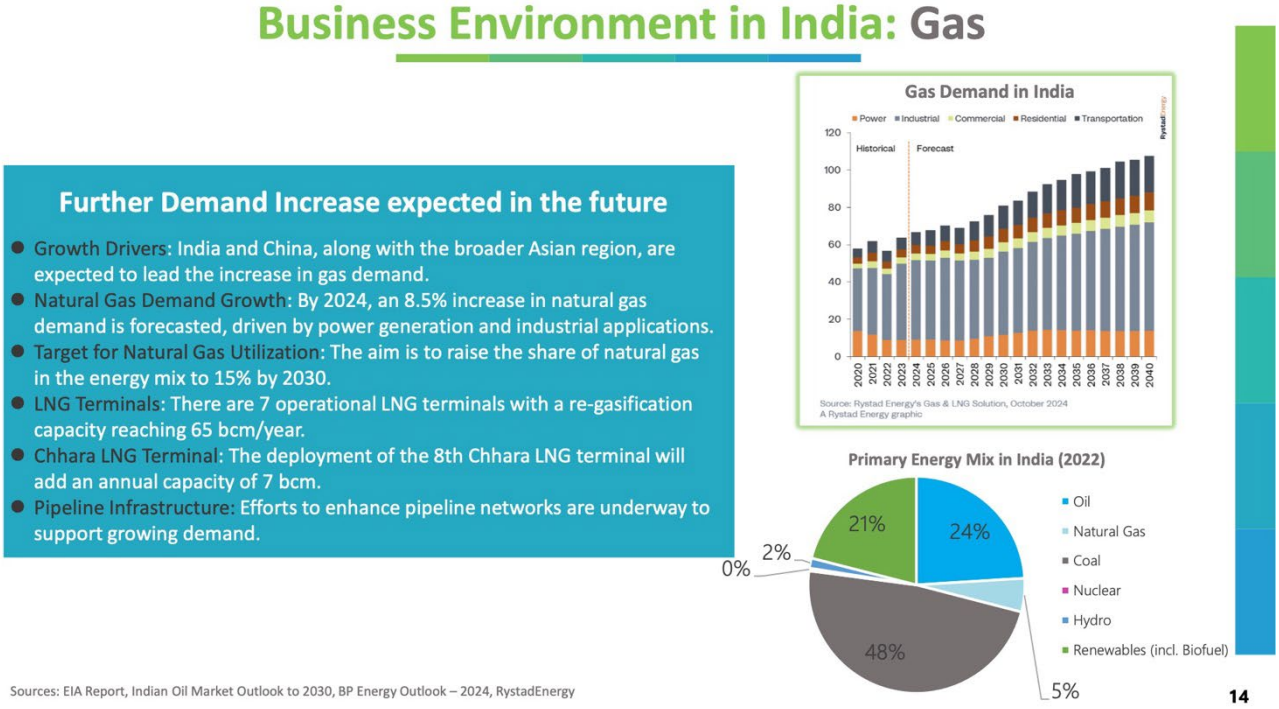
Let's now take a closer look at the trends in various sectors, starting with oil refining. In the oil refining sector, this graph, sourced from an IEA report, illustrates demand trends. The orange section represents India, showing a consistent upward trend in demand. In contrast, China appears to have reached saturation, with its demand plateauing. India, however, continues to experience robust growth in demand.

The graph below shows the aggregated refining capacity of state-owned and private oil refining companies in India. As you can see, capacity is steadily increasing to meet this growing demand, with ongoing investments and expansions in refining capacity.

India is the world's second-largest crude oil importer and holds the fourth-largest oil refining capacity globally, with 23 refineries currently operating nationwide. Refining capacity is projected to reach 6.8 million barrels per day (BPD) by 2030. Additionally, a noteworthy trend is the increasing integration of oil refineries with petrochemical plants, creating more value-added facilities.



Next, let's talk about gas. India's gas demand is primarily driven by the power and industrial sectors, both of which are on a steady upward trajectory. At the same time, looking at India's primary energy composition, 48% is still reliant on coal. The goal is to reduce coal's share while increasing the use of gas and renewable energy sources.

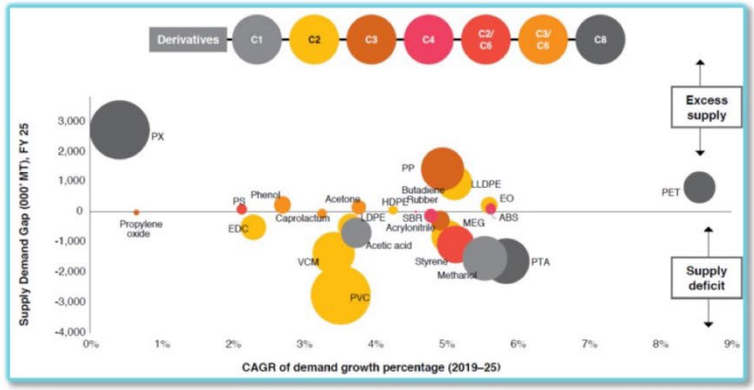
Gas demand is expected to continue growing. Currently, there are seven LNG terminals in operation in India, with an eighth terminal set to commence operations in January next year. This will significantly boost regasification capacity, allowing India to better meet its robust gas demand.

Business Environment in India: Petrochemicals

High Demand Across a Wide Range of Products

- Major Consumer of Petrochemical Products: India ranks among the world's largest consumers of petrochemical products.
- Export-Oriented Products: Petrochemical products like paraxylene, polypropylene, and PET are in an export position.
- High Import Dependence: By 2030, India is expected to remain heavily reliant on imports for basic chemicals and other petrochemical products.
- Per Capita Polymer Consumption: India's per capita polymer consumption is 13 kg, only one-fifth that of Japan, highlighting significant potential for demand growth.
- Future Demand: The Indian Ministry of Petroleum forecasts demand for petrochemical products to reach USD 1 trillion by 2040.
- Investment Outlook: Over the next decade, the petrochemical sector is expected to attract investments of USD 87 billion.
- Integration of Refining and Petrochemical Plants: Growing trend towards the integration of oil refining and petrochemical plants to enhance efficiency and output.

Supply and demand forecast for petrochemical products in India 2019 - 2025



Sources: PwC India: A global manufacturing hub for chemicals and petrochemicals

15

Moving on to petrochemicals. Demand is strong across a wide range of products. This chart, sourced from a PwC report, highlights exports on the upper side and imports on the lower side.

India is a major exporter of paraxylene, polypropylene, LLDPE, and PET. However, other petrochemicals, such as PVC, VCM, and products in the vinyl chain, as well as styrene, methanol, and PTA, are still heavily imported due to insufficient domestic production to meet demand.

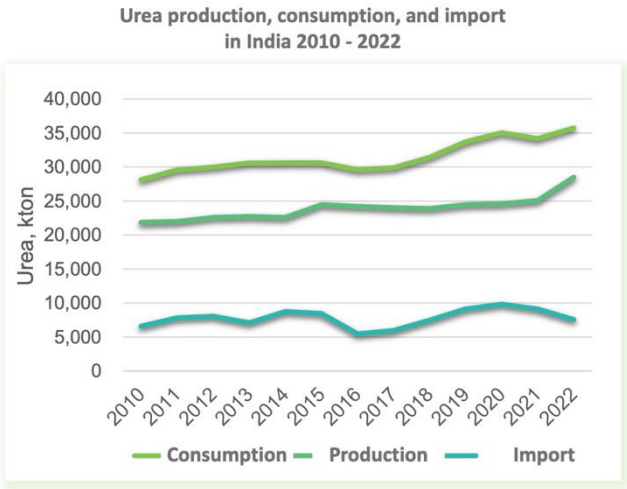
India remains highly reliant on imports for basic chemicals and other petroleum-based products. When we consider per capita polymer consumption, it stands at just 13 kilograms, about one-fifth of Japan's level, indicating significant room for growth in demand.

The Ministry of Petroleum and Natural Gas in India projects continued growth in this sector. Substantial investments in petrochemical facilities are expected, and demand is strong. This is driving a clear trend of expansion in plant construction within the sector.

Business Environment in India: Fertilizers

Rising Domestic Production and Consumption Government's Focus on Fertilizer Self-Sufficiency

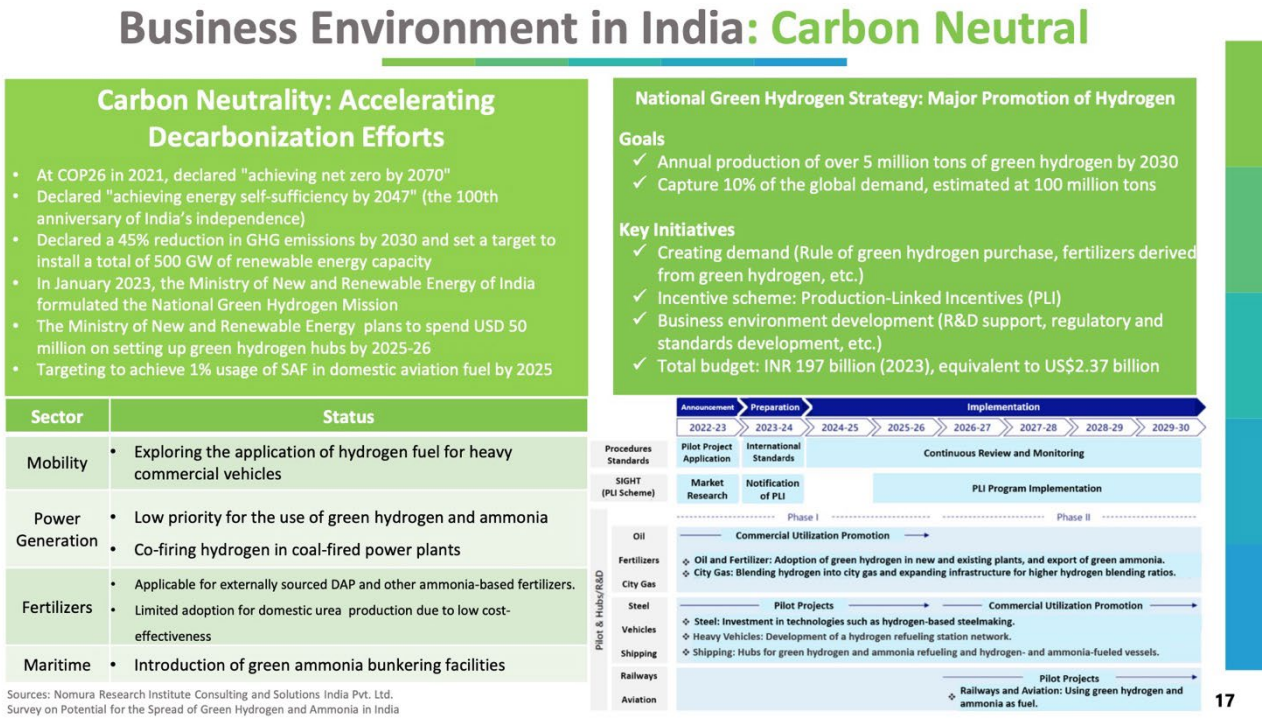
- India's Total Fertilizer Production: Fertilizer production in India is expected to reach 45 million tons in FY2024, with the following breakdown:
  - ✓ Urea: 21 million tons
  - ✓ NPK Fertilizers (Nitrogen, Phosphorous, Potassium): 6.5 million tons
  - ✓ DAP Fertilizer (Diammonium Phosphate): 3.1 million tons
- Government Push for Self-Sufficiency: The Indian government is promoting self-reliance in fertilizer production, leading to a declining trend in imports of urea, NPK fertilizers, and DAP fertilizers.
- Urea Self-Sufficiency Target: The government aims to achieve self-sufficiency in urea production by FY2025 through increased domestic production.



Sources: Created based on Indian Journal of Fertilizers

16

Next, let's move on to the fertilizer sector. Looking at the domestic production and consumption of fertilizers, the graph here shows a steady increase in consumption. Production is also rising in line with this trend, while imports have plateaued and are now showing a decline. One of the reasons for this is the Indian government's efforts to promote self-sufficiency in fertilizer supply. To achieve self-reliance, the government is also introducing products like nano urea, which is being actively developed and adopted.



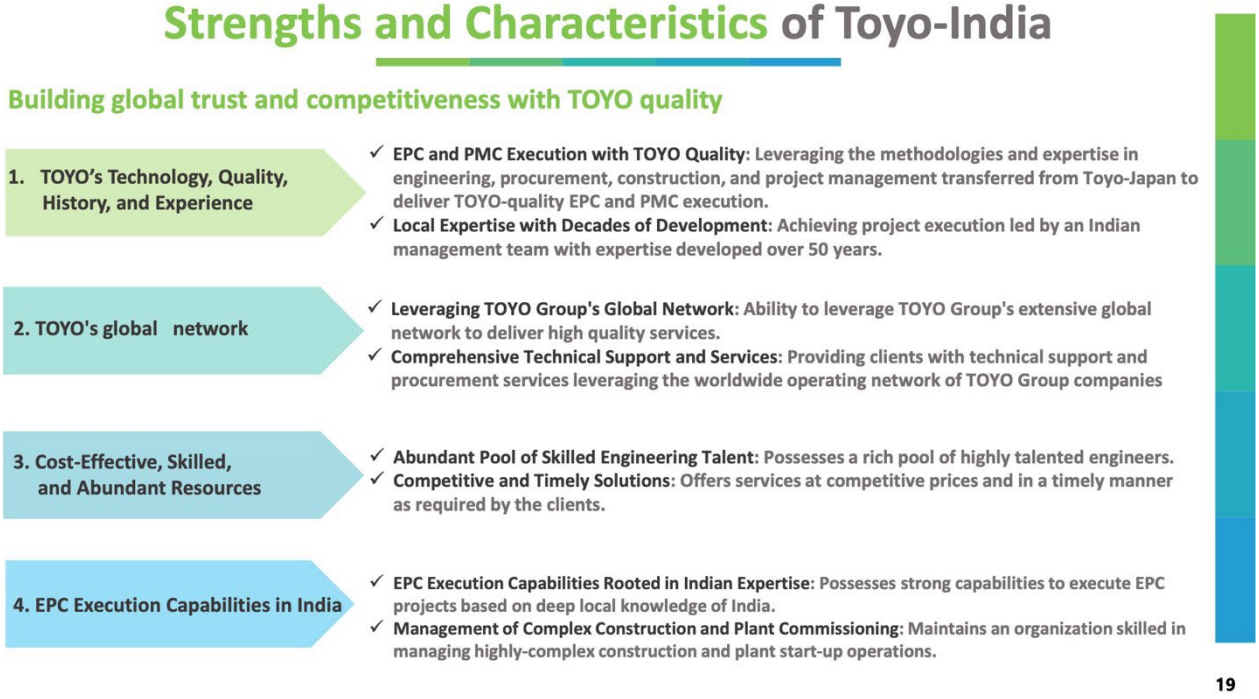
Now, moving to carbon neutrality initiatives. As you may know, at COP26 in 2021, India pledged to achieve net-zero emissions by 2070. Additionally, it announced plans to achieve energy self-sufficiency by 2047 and to reduce greenhouse gas emissions by 45% by 2030. Alongside these goals, India aims to deploy 500 gigawatts of renewable energy capacity.

To facilitate this transition, the government has launched numerous initiatives, one of which is the National Green Hydrogen Mission, formulated in January 2023.

This chart summarizes developments in various fields related to renewable energy. In mobility, there is consideration of applying green hydrogen to large commercial vehicles. In the power sector, the use of green hydrogen and ammonia has a lower priority, with a stronger inclination toward directly using electricity for generation. While there are discussions about co-firing coal with hydrogen, these are quite limited.

For fertilizers, urea plants synthesize urea using CO2 captured from ammonia plants and ammonia itself, meaning there is limited benefit to applying green hydrogen to urea plants. Instead, the focus is on using the ammonia produced here for other fertilizers, such as DAP, which currently rely on externally sourced ammonia.

In shipping, the use of ammonia for bunkering is under active consideration. This roadmap outlines the hydrogen promotion strategy under India's National Green Strategy.



Lastly, let me address Toyo-India's competitive advantages, which I will outline in four key points. The first advantage lies in TOYO's technology, quality, history, and experience. Toyo-India fully leverages the methodologies and expertise in design, procurement, construction, and project management transferred over decades from Toyo-Japan. This enables Toyo-India to execute EPC and PMC operations with TOYO-quality standards.

The second advantage is the ability to utilize TOYO's global network. This network is especially valuable for procurement services and technical support services.

The third advantage is access to a large pool of skilled and cost-effective resources. Toyo-India has a substantial number of highly capable engineers in India, allowing us to provide competitively priced engineering talent to customers when needed.

The fourth advantage is Toyo-India's EPC execution capabilities within India. This extends beyond design to include construction execution and plant commissioning management, which are key strengths of Toyo-India.

We are establishing a new base in Bangalore dedicated to FPSO design, further specializing in this area.

In addition, working in collaboration with Mr. Seo's team, Toyo-India plays a central role in DX promotion. We support the development, practical application, and operation of digital transformation initiatives, such as Advanced Work Packaging. This dedicated team is another key strength of ours.

Now, let's move on to our growth strategy. The fundamental policy is to expand product adaptability and leverage digital technologies to enhance our competitive advantage.

In the global market, we aim to advance the engineering center functions of the TOYO Group. This involves enhancing our ability to provide cutting-edge technical support and advanced analytical capabilities, deepening relationships with licensors and equipment manufacturers, and achieving higher productivity and quality through design automation. These initiatives serve as the drivers of our growth.

In the Indian local market, we strive to be the most trusted Tier-1 engineering company for our customers. This includes expanding our offerings in existing sectors, increasing our capabilities in green and carbon-neutral fields, and applying DX technologies to deliver highly efficient and high-value-added EPC and PMC services.

Finally, in summary, Toyo-India will continue to grow. First, we will pursue opportunities in the rapidly growing Indian market, which offers immense potential and strong demand. Second, we will enhance our competitiveness in the global market, leveraging our 50 years of experience to strengthen our position. Third, we will expand our capabilities in green and carbon-neutral sectors, extending our range of products beyond conventional offerings to deliver higher added value.

Thank you very much for your attention.

Shiraishi: Thank you very much.

[END]

Document Notes

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