Gigafactory provides more intelligent manufacturing for Panasonic Energy

Capgemini implements SAP S/4HANA for real-time decisioning at Panasonic Energy Corporation of North America

Client: Panasonic Energy Corporation of North America

Region: North America

Industry: Manufacturing

Client challenge:

Panasonic Energy Corporation of North America needed greater visibility into its manufacturing data to drive efficiency.

Solution:

Working with Capgemini, PECNA implemented SAP S/4HANA in its Reno, Nevada, gigafactory to build a smarter facility.

Benefits:

• Reduced lead times created better cash flow for the business.
• Simplified processes and automation reduced the number of days needed to close the books.
• Data was leveraged to reduce waste and increase operational efficiency.

Opportunities in battery EV manufacturing

Panasonic Energy Corporation of North America (PECNA) develops, manufactures, and sells lithium-ion batteries for electric vehicles, secondary and primary batteries that service social infrastructure, and dry cell batteries that support our daily lives. The lithium-ion batteries are the safest, highest quality, and lowest cost in the world.

PECNA factories produce six million batteries per day – that is one billion batteries every six months. A leader in the industry, the company perfected its processes over the last six years to reach this kind of scale.

CIO Justin Herman sees his role as enabling technology to support the bottom line. His focus is on three key areas: supply chain, costs, and technology.

"The lesson from COVID was to bring more of the supply base to North America, to be less reliant on overseas materials or single-source items," Herman said. "An EV battery is about 30 percent of the cost of the vehicle, so any reductions we can make are a major impact. On the technology side, it is changing rapidly with the advent of generative AI and agentic AI. While there are challenges, there are also opportunities within battery EV manufacturing."

Achieving operational efficiency

The focus is on operational efficiency and examining every business process to leverage technology to be more efficient. This needs to be combined with agility, so the company can turn on a dime.

"It's a fast-paced world and we have to be agile in everything we do," he said. "Our transactional database is quite extensive at PECNA, so we needed to be able to take that and marry it into artificial intelligence platforms (AIPs) and extract value for the business."

The challenges for the technology team were twofold. First, multiple disparate data sources at its gigafactory needed to be consolidated. And the second was how to leverage technology to improve processes and the end-user experience. PECNA needed greater data visibility so it could reduce lead times and increase cash flow for different areas of the business. This process simplification would also allow employees to leverage automation and focus on more value-added activities.

The move to SAP S/4HANA

PECNA was already on SAP ECC, so the move to SAP S/4HANA as its foundational platform was a natural progression. The company knew this industry-standard platform was the most suitable option to simplify processes, while focusing on best practices, and it chose to work with Capgemini on the implementation based on extensive experience and deep industry knowledge.

"I think any successful ERP program should be measured by how you are adding value to the business," Herman said. "Metrics like reducing lead times, freeing up cash flow, and improving the end-user experience are all important."

PECNA implemented SAP S/4HANA in only seven months. Herman wanted an efficient project timeline, and he also recognizes projects are 80 percent organizational change management (OCM) and 20 percent technology. There was a significant amount of time spent with the business to ensure the OCM and project management offices were in place to help drive the change. It was also critical to achieve key metrics, such as overall equipment effectiveness (OEE) improvement and reducing inefficient processes aligned to the business case.

"ERP implementations are one of the most difficult to do, but it is amazing what you can achieve if you really put the constraints at the door and push both internally and with vendor partners to achieve goals," he said. "I firmly believe that the days of nine to 16-month implementations are behind us. We really have to look at creating value for our business and we have to iterate as quickly as possible to show value."

More intelligent industry

PECNA was actually an early adopter of SAP Cloud Analytics, as it was attached to its ECC instance before the move to SAP S/4HANA. The company identified 34 key customized reports in the ECC system and converted them to SAP Analytics Cloud. That provided real-time visibility into transactional databases.

"It is very intuitive for our business because it gives real-time data," he said. "That integration directly with SAP S/4HANA is also key. It really helps from a business decision-making process and not necessarily from just the top-down but, more importantly, from the operational perspective. Our operators on the ground can use that data to make more informed decisions."
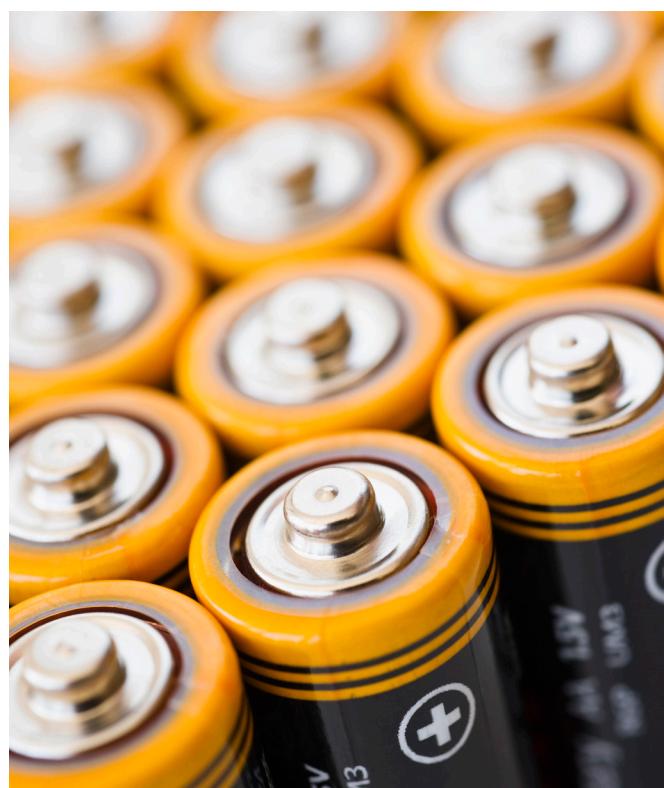
Keeping the core clean

PECNA was also dedicated to keeping a clean core. One team member kept a big "No" button on the desk for any time someone came to ask for a change. Unless there was a value proposition that involved Panasonic IP and would create value for the business, the core was left unchanged.

"We made sure we were clearly communicating to the business and our technologists why the clean core was important," he said. "We produce six million batteries per day, so we cannot afford downtime as we upgrade a system."

PECNA uses SAP Business Technology Platform extensively and it has been a game changer for keeping the core clean and automating processes. It also helped to connect the AIP platform to the ERP, so they are harmonized to create a smart factory. Now PECNA is looking at moving into the agentic AI era with its data and AIP platforms. For example, creating co-pilots for HR could add value to the business, or platforms could be augmented with humanoid robots in manufacturing.

Creating a smarter factory

"We chose Capgemini as a partner on our SAP S/4HANA journey because they brought a tremendous wealth of experience and industry knowledge," Herman said. "And you always judge a vendor not by what they do when things go right but what they do when things don't go as well, and how they really come forward as a partner.

"For us, it was finding that balance of really pushing hard for the change but understanding there's a business reason why you can't go as fast as you might want to, and then working with your business on it. We are still working with our business to create those efficiencies and remove processes that are not a value add."

Herman also credited Capgemini's willingness to be agile and bring in extra resources and subject matter experts when needed.

About Capgemini

Capgemini is a global business and technology transformation partner, helping organizations to accelerate their dual transition to a digital and sustainable world, while creating tangible impact for enterprises and society. It is a responsible and diverse group of 340,000 team members in more than 50 countries. With its strong over 55-year heritage, Capgemini is trusted by its clients to unlock the value of technology to address the entire breadth of their business needs. It delivers end-to-end services and solutions leveraging strengths from strategy and design to engineering, all fueled by its market leading capabilities in AI, generative AI, cloud and data, combined with its deep industry expertise and partner ecosystem. The Group reported 2024 global revenues of €22.1 billion.

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