



YANMAR ENERGY SYSTEM

A Unified Approach to Data Management Improves Customer Service

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Keiji Otsubo
Planning Division,
Yanmar Energy System

A comprehensive solution for managing customer information and related product data through design, manufacturing, and service enables efficient business processes and best-in-class customer service at Yanmar.

Yanmar Energy System is a leading Japanese manufacturer of air conditioning and power generation systems. The company manages business, development, manufacturing, sales, construction and maintenance of energy system equipment for co-generation system, emergency power generation equipment, engines for pump driving, and gas heat pumps for air conditioner. With a focus on sustainability, their line of energy-efficient heating and cooling and energy generation systems are used in buildings around the world, including in their zero-emissions headquarters Yanmar Co., Ltd. in Osaka, Japan, its parent company.

Yanmar Energy System

Existing System:

- ▶ **DMS:** Lotus Notes
- ▶ **CAD:** Pro/Engineer & AutoCAD
- ▶ **Product Data:** Standalone spreadsheets, proprietary solutions

With product lifecycles that can extend ten to 20 years for air conditioning units and 20 to 30 years for power generation systems, having an efficient and long-lived information management system is mission critical.

For example, when designing, manufacturing, and installing air conditioning units, extensive preliminary work is done to determine the optimal configuration of the system. This includes comprehensive CAD drawings of the installation site as well as calculations detailing the ideal output power for the system based on the square footage of the building. Additionally, once the unit is in place, maintenance documentation is needed for the entire ten to thirty year life of the system.

In order to deliver best-in-class customer service, easy access of this data on a customer-specific basis is critical, and must include information about the entire

service lifecycle of the product from delivery to system maintenance as well as removal and replacement.

In prior years, Yanmar Energy System stored this information using a combination of data management systems, including PDM software, a sales logistics solution and standalone spreadsheets. With so many disparate systems, the company lacked a unified file server for storing product data, construction information and maintenance information as well as associated customer information. As the business grew, interdepartmental storage and retrieval of customer-specific data became even more ineffective, especially as a lack of permissions meant that in some cases, files were accidentally deleted and were unable to be recovered. Additionally, the compliance and approval documentation needed for each installed air conditioning or power generation unit was growing more complex to maintain since each new record needed to include information about the previous work done on the system.

“To further complicate matters, the licensing fees for the document management system (DMS) we were using were also very constricting,” says Keiji Otsubo, Planning Division at Yanmar Energy System. “The per-user license model and additional per-user fees for the document management tools meant that we operated the system with a limited number of users. Therefore, information from different departments -- such as customer information from the customer service department and the related system install information from the engineering department – wasn’t stored in the same place.”

With growing concerns about the efficiency of the system as the business expanded and more users needed access, Yanmar began searching for a more effective and economical solution.

“It was an ideal time for us to start considering a new solution since not only was the business growing, but the impending upgrade of the server OS meant that we were being forced to pay for an upgrade to the DMS as well,” says Otsubo.

While considering if they should continue using the DMS or replace it with a PLM system, Yanmar discovered Aras Innovator®, and decided to explore it further.

“From a business perspective, Aras was an easy choice not only because of the subscription model and lower total cost of ownership, but also because upgrades and training were included in the subscription price,” said Otsubo. “On top of that, it provided the unified file storage and management solution we needed, along with extensive capabilities to manage user permissions.”

- ▶ **Challenge:** Legacy document management system and use of standalone spreadsheets meant critical customer information was hard to find
- ▶ **Solution:** Aras Innovator provides a unified PLM backbone that is accessible by all users in multiple departments and locations
- ▶ **Benefit:** Product and customer information is stored correctly and remains easy to locate, resulting in more efficient business processes.

PLM Solution Deployment

For the migration from their old systems to Aras Innovator, Otsubo and the team at Yanmar worked with Aras Japan. During the implementation, Yanmar was still able to use the legacy DMS and could replace it incrementally by department.

The first phase of the implementation was to make sure that customer data could be stored properly and was easily accessible by the customer service department. Instead of customer information being stored in various locations, the Aras Innovator platform allowed them to store all of the related customer information in a single file vault, including customer service documents and installation specifications. Permissions were easily assigned to users by title, group, or location, protecting the data from unintentional deletion while simultaneously allowing both the engineering department and customer service department to have access.

One of the benefits of Aras that Yanmar discovered was the ability to customize the solution in-house. “After receiving training from Aras Japan, we were able to customize many areas of the solution ourselves,” says Otsubo. “This is a huge advantage because we can spec out and implement the ideal configuration for our needs without having to first explain them to a consultant.” Yanmar has found added benefit in the fact that they are able to continue to identify and implement new processes while Aras is in use. “The drag and drop tools are easy to use, and they allow us to continually update and customize our processes as new business needs arise,” says Otsubo. Additionally, comprehensive versioning allows everyone involved in a project to see who last made changes.

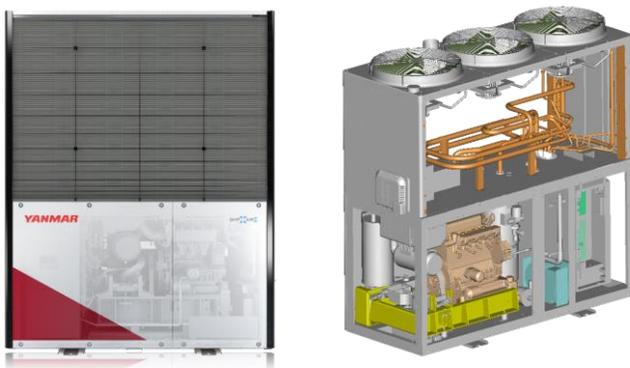
Otsubo describes how new processes are implemented to the platform: “When we deploy a new solution, we can do this using a Plan-Do-Check-Act Cycle (PDCA Cycle), which involves faster and more frequent cycles of improvement. Not only does this mean we can make incremental updates as our business grows, but the subscription model means that we can do so with more predictable payments.”

Future Directions

With the new Aras Innovator solution in place, Yanmar is able to more easily find relevant customer data, which improves not only customer service, but also their ability to grow as a company. “With all of our product and customer data managed in a single location, we’ve been able to improve the speed at which we can respond to service requests, as well as the turnaround time it takes to put together specifications for a new customer project,” says Otsubo.

As Otsubo and the Yanmar team continue to use Aras Innovator, they plan on attending more trainings and the ACE conference in order to make sure that they are taking advantage of all that the solution has to offer.

“We’ve been very impressed with the processes and workflows we’ve set up so far. Because of Aras Innovator’s flexibility and maturity, we know that there are always more ways we could take advantage of it. We are able to continuously improve our implementation and so we know that it will be valuable for many years to come.”



Example of a Yanmar Gas Heat Pump Air Conditioning System and CAD drawing. This air conditioning system is used in restaurants, shops, hotels, office buildings, schools, factories and other facilities.

About Aras

Aras® offers the best Product Lifecycle Management (PLM) software for global businesses with complex products and processes. Advanced PLM platform technology makes Aras more scalable, flexible and resilient for the world's largest organizations, and a full set of applications provide complete functionality for companies of all sizes.

By rethinking the way PLM is designed, Aras has taken a fundamentally different approach with a focus on the Business of Engineering. Aras solutions support processes for global product development, systems engineering, multi-site manufacturing, supply chain, quality and more.

Companies running Aras include Airbus, Boeing, Bombardier, GE, Hitachi, Honda, Kawasaki, Magna, Microsoft, Motorola, Nissan, TOSHIBA, Xerox, the US Army and hundreds of others worldwide.



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