

# Beneteau Puts Digital Thread to the Test

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*PLM • 10/31/2019 • Read Time : 7 min*



Groupe Beneteau (<https://www.beneteau-group.com/en/>) is the world leader in the recreational boat manufacturing industry (<https://www.beneteau.com/us>). They have 10 brands of yachts (both sailing and power boats), and more than 200 models of boats. Each model has several versions, and each of those versions has versions. All of these variations are specifically designed to meet the ever-increasing demands of their customers as Beneteau dominates and disrupts the market.

## The Challenges of Being an Industry Leader

Being the world leader in luxury boat manufacturing has been a blessing but has also been a challenge for Beneteau.

Today's market sees the demands of their customers outpacing their capacity to produce the products they want—especially because of this level of product diversity.

One of Beneteau's biggest challenges came from design, to production, to the customer delivery, and to follow-up of their products; in essence, they did not have *an uninterrupted digital flow*. And this caused manufacturing delays and errors.

To keep up with these demands, Beneteau (a long-time customer of PTC) decided to implement a program of digital transformation (</en/industry-insights/digital-transformation>) with the help of our industry-leading and award-winning products centered around digital thread (</en/windchill-blog/digital-thread-is-an-industry-game-changer>).

Put simply, digital thread is a continuous flow of information/data from engineering, down to production, up to customer services, and back to engineering for any given product lifecycle. However, it goes much further than that—let's take a closer look.

## The Digital Thread Solution

As digital thread weaves its way through from product design to manufacturing (orchestrated and managed by product lifecycle management (</en/products/plm>) (PLM), other value-driven technologies get linked by the thread such as the Industrial Internet of Things (</en/products/iiot>) (IIoT).

One of the challenges that Beneteau currently faces is knowing how their customers are using their boats. For example, knowing how much a boater is using their on-board generator or HVAC system would actually help the manufacturer to improve their products.

Beneteau is looking to IoT (similar to IIoT), like smart connected products (</en/products/iiot/smart-connected-products>), to help them meet this challenge.

IoT, through the use of sensors, allows the manufacturer to collect invaluable data about the products as they are used in real-world situations. This data is woven back into the digital landscape of the manufacturer's efforts through the unbroken stream of digital thread.

## PLM Tames the Unwieldy Beast

For this consummate luxury boat manufacturer, PTC's digital thread technology stack has changed the way in which they build and customize their luxurious marine vessels for their discerning customers.

A boat is designed in *Creo Parametric* (CAD) (</en/products/cad/creo>). During this process an EBOM (Engineering Bill of Materials) is created in *Windchill* (PLM) (</en/products/plm/plm-products/windchill>). Next, the boat goes into production (utilizing an MBOM as a roadmap of sorts). This is a lengthy process that involves many, many changes along the way. Work instructions are then delivered to the factory floor leveraging *ThingWorx* (IIOT) (</en/products/iiot/thingworx-platform>) and in the future, *Vuforia* (Augmented Reality) (</en/products/augmented-reality/vuforia>). Sales and Marketing experiences can also be created from this digital thread leveraging Vuforia.

During this process, it is expected that customers will request changes that must be transmitted back to the engineers and shipwrights.

Sending change requests up and down the value chain can be a daunting process. Before PLM, such changes (handled by antiquated means such as spreadsheets) could go all the way back to the product's original designs and takes months or longer to implement. Furthermore, changes due to manufacturing errors, changes in materials, availability of parts, and so on can also occur, causing even more delays. And finally, with all these unwieldy changes and version control issues, human error can creep into the process—making the situation even worse.

However, after PLM, the time in which it takes to implement a change goes from months to weeks and sometimes days.

Errors and cost overruns are reduced when PLM is brought into the process. With PLM managing and orchestrating the Digital Thread, weaving its way through the value chain, systems can be fully interconnected. In fact, Creo, Windchill, ThingWorx, and Vuforia are designed to seamlessly work together. However, through the power of Digital Thread and PTC's open approach, any system from CAD to ERP can be connected serving up invaluable data from BOMs, to schematics, and more.

From this, it is evident that Digital Thread-powered PLM has the ability to connect to any system, as it provides the backbone for a single source of truth (</en/resources/plm/ebook/plm-handbook>) keeping the engineering and manufacturing data current and accurate.

Beneteau CEO, George Armendariz, had this to say about the power of digital thread in a recent article in *Trade Only Today* (<https://www.tradeonlytoday.com/post-type-feature/digital-threads>), "Today, there's a way to write the code that makes it possible for all these pieces to communicate with each other with failsafe integrity."

And of course, another benefit of Digital Thread is a shortened development and time-to-market cycle, while also reducing scrap, costs, and parts redundancies.

## Happy Workforce, Happy Life

Another example of Digital Thread in use at Beneteau is *ThingWorx Navigate* (</en/products/plm/plm-products/navigate>) which is designed to give non-technical users access to value product information throughout the company, without delay and with greater accuracy.

Why is this a benefit?

Because Beneteau is committed to grooming the next generation of shipwrights as the previous one retires. This means that educating their current and future workforce is a vital component to the company's continued success and growth.

Digital Thread leads to happier and more productive workers. And in return, this

helps with employee retention.

## Showcasing Digital Thread in Real Time

PTC doesn't just talk about digital thread as an abstract concept but actually showcases it in action at our state-of-the-art Corporate Experience Center (CXC) ([/en/about/visit-ptc](#)).

Currently, there is a pod dedicated to Groupe Beneteau presenting how digital thread, orchestrated by PLM, drives innovation and enables mass customization of their products.



Our exhibit presents five amazing videos: one deals with our overall digital thread vision, then there are three topical videos (*Achieving Operational Effectiveness*, *Driving Engineering Excellence*, and *Driving Product and Service Differentiation*), and finally a windchill demonstration video that also discusses Beneteau's roadmap for digital transformation.

And the exhibit will soon feature an amazing AR experience built around one of their boats (a scale model that is) that cuts away the hull to reveal interior cabins and components of the vessel right down to the engine, electrical systems, and other mechanics. This is essentially the same presentation that was recently demoed at our summer LiveWorx (<https://www.liveworx.com/>) conference. The only difference being that we had an actual yacht on the exhibit hall floor.

The bottom line though, is that this demonstrates how PLM can manage every aspect of the manufacturing process as reflected in the digital DNA of the boat—exposed for customers to appreciate.

The important take away here is that digital thread is the vital backbone of everything that a manufacturer is trying to accomplish in order to get their products from concept, and into the hands of their customers—or get their customers into their products such as with Beneteau's boats!

In our topical video titled *Achieving Operational Effectiveness*, the overall value of digital thread is discussed as it pertains to Beneteau's production process. "Nowadays, we need to respond quickly to new developments to meet customer expectations," remarks Eric Harzt, Digital Thread Manager at Groupe Beneteau. "We cannot afford delays, so it's very important to make everything in the Digital Thread so we can be more responsive and secure concerning our data. Being about to share information from PLM across the information system to ERP. For example, we will be able to look at the contents of a panel and understand if the part's data was passed correctly."

Hartz also discusses how Digital Thread, working with IoT, produces a new equipment state called predictive maintenance (</en/product-lifecycle-report/iot-slashes-downtime-with-predictive-maintenance>). Essentially, sensors are embedded into machines such as their CNCs (Computer Numerical Control, used to machine parts of tools), which can then tell things like when the motors are overheating due to aging, problems, or excessive effort. With this kind of data at their disposal, they can reduce downtime for any given machine, keeping their factory operations up and running smoothly.

## Digital Thread Disrupts the Market

Digital thread allows Beneteau to propose the best product on the market: the best product is most adaptable to their customer needs. They sell more than boats, they sell **dream products**.

"We want people that have expertise about the implementation, this means partnering the vision with ambition. And we are confident with PTC, vision will have the right functions to go in that direction. IoT, Augmented Reality, we are going more than the market but we do that by defining more products on having each of the products with a stronger set of variants. We have, thanks to the part of PTC since many years, more and more functionable for our Digital Stream [Thread]." *Bertrand Dutilleul*, Global CIO, Groupe Beneteau

In the future, as digital thread-powered IoT helps them to build connected boats, Beneteau will be able to build even better products while more effectively servicing them for their customers.

From there, digital thread weaves its way to a futuristic AR experience that not only improves efficiencies for shipwrights and service personnel, but also helps with Sales as customers can see the AR-driven models of boats before they are even produced!



Finally, digital thread disrupts the market for Beneteau as they put it to the test helping them mass customize the boat of your dreams.

For more on how Groupe Beneteau is a valued PTC *Digital Innovator* (</en/products/plm/digital-innovation>) (and to watch the aforementioned videos online), visit Beneteau's *Innovator Spotlight* page here (</en/products/plm/digital-innovation/innovator-spotlight-groupe-beneteau>).

**Tags:** *PLM, Augmented Reality, Industrial Internet of Things*

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