

ARTICLE FEATURED ON:

INNOVATIE NU | DECEMBER 2020

VAN RAAM

UPSCALING USER-CENTRED PRODUCTION
WITHOUT STANDARDISATION

Article published in
collaboration with:

Van Raam



**ADVANCED
MANUFACTURING
CENTER**



VAN RAAM

UPSCALING **USER-CENTRED
PRODUCTION** WITHOUT
STANDARDISATION

You can find more about Van Raam on their website: www.vanraam.com



FROM SPECIFIC CONFIGURATIONS TO CUSTOM MODIFICATIONS, VAN RAAM MAKES BICYCLES FOR EVERYONE.

Innovation requires exploring new opportunities and inducing change. In the times of Industry 4.0, this means to digitalize all processes and collect data that supports you in making the right decisions to streamline manufacturing.

Van Raam Reha Bikes B.V. is an SME specialized in design, development, and production of bikes for people with a disability based in Varsseveld. Their bikes are tailor-made according to the needs and wishes of their customers; “We build unique bikes in a standardized production process”. The biggest challenge they are facing is to continue growing while maintaining their tailor-made focus. Van Raam intends to upscale their production through optimization of processes without standardizing

their unique customer tailored products. This means that they do not compromise their service and product, but dynamise rigid processes to upscale production efficiently.

To reach their goal, Van Raam decided to closely collaborate with FPC to develop a digital infrastructure and work together on reaching their vision of having a digital factory that provides a clear overview and enhances flexibility of all processes. They chose FPC to be their partner because

“We think the wide knowledge and experience in the area of Industry 4.0 and Digital Twinning combined in a mixed and international team of (young) professionals will provide us the necessary tools to speed up our digital evolution process without losing track of quality and strategy.”

- VanRaam

Based on the needs of Van Raam, FPC developed a proposal for a development trajectory. The trajectory starts off with a current state analysis that informs the implementation plan. The result is a tailored decision-support tool based on a digital twin. Current challenges are connecting data that is acquired throughout the product lifecycle for fast and efficient decision-making. Solving this will provide deeper insight into production processes, improve the overall communication within the production environment and facilitate optimization of production for upscaling. All these factors contribute to an increased throughput of bikes, bottleneck recognition and control, and higher overall equipment effectiveness. Additionally, the digitalization of their

production environment facilitates the incorporation of user data into the design process. This creates a foundation to enhance customer services, such as configuration to order and providing a direct communication channel to the customer. It enables digital services that improve the overall efficiency and customer experience. At the same time, it positively affects employees as the complexity

in assembly processes can be reduced and direct communication between design and production can be facilitated.

To support Van Raam in the transition to digital, FPC will work closely together with their internal team to ensure the solution is tailored to their needs and supports them in reaching their strategic goals.

VAN RAAM DELIVERS ALL BATTERIES AS SMART IOT OBJECTS



Every Van Raam battery has its own built-in communication module that supports direct communication between the bike and the Van Raam IoT platform. With this information end users, dealers and Van Raam technical staff are provided with analytic data about the usage and well-being of the product. The smart battery is supported with a free-of-charge app for end users and dealers (Android and IOS).

The app can be used as a smart bike computer and provides advisory (push) notifications to extend the lifetime of both the bike and the battery.

Van Raam engineers have remote insight in technical data of the product. Meanwhile a data lake of technical data is filled on which future ML and AI projects can land.



CHIEF TECHNOLOGY MANAGER

CERTIFIED COURSE

ACCELERATE YOUR SUCCESS WITH STRATEGIC INNOVATION THINKING

The rapid development of technologies is influencing business models across all industries, challenging and shaping the roles for future Technology Managers. This course is designed for **professionals with experience in technology related positions** who want to step up to **senior management roles**.

The **5-day course** delivers a unique blend of theory and practical perspectives, through interactions with industry experts, to help develop a strategic view of your organisation's technology architecture and business landscape.

COMING TO TWENTE IN 2021

REGISTER YOUR INTEREST AT
[AMCENTER.EU/CTM](https://amcenter.eu/ctm)