# Sustainability
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ADDNODE GROUP

# Case Study
# Nordic Museum

## Digital solutions that contribute to sustainable development

SWG, part of the Design Management division, has supported the Nordic Museum with digitised drawings and the creation of digital 3D models of the museum's buildings and facilities.

After the Notre Dame fire in 2019, the Nordic Museum realised the value of having well-documented and updated building information. They also lacked sufficient internal resources to manage its physical drawing archive and did not have the tools to easily search, read, measure and comment on the drawings of its historical facilities.

**SWG** is an Addnode Group company that creates digital solutions for Facility Management, Property Management and Asset Management. They assist their customers with valuable building data, 3D building models and digital drawings.

**Nordic Museum** is a foundation comprising of several historical buildings, including castles and iconic buildings. With its comprehensive collection of about 1,5 million historical objects and six kilometers of archive material, it is of great importance to preserve the Nordic Museum-building.

## NEED.

The Nordic Museum needed digital documents to facilitate repairs and maintenance in order to ensure that the buildings retain their historical profile.

## SOLUTION.

SWG supported the Nordic Museum by making a 3D laser scan of the buildings, which was then transferred into complete 3D digital models and digital drawings. SWG's efforts have also helped the Nordic Museum to improve the quality of its building data, and the digital format also enables all building information to be easily updated in one place.

## SUSTAINABLE BENEFITS.

A benefit of having digitised building information is that it will make it easier for repairers to plan maintenance in advance, thereby limiting travel time and costs.

# Case Study

# Mocci last-mile delivery

## Digital twins of vehicles for last-mile deliveries

TECHNIA, part of the Product Lifecycle Management division, has helped German start-up Mocci with a virtual twin of its Smart Pedal Vehicle (SPV) for last-mile deliveries of goods in urban environments.

The Mocci SPV is optimised for commercial and carbon-neutral deliveries in cities. Mocci's engineers needed a tool to create a 3D model that could also simulate the components in the model and create manufacturing instructions.


**TECHNIA** is an Addnode Group company, a global provider of solutions for digitalising product lifecycles – from idea, design, simulation and manufacturing to sale, aftermarket, and repurposing. For our customers, the benefits are shorter lead times, greater innovation, and increased efficiency and traceability, making product creation sustainable.

**Mocci** is a startup company founded in Munich with a strong focus on sustainability. The company was founded in 2019 to develop and manufacture Smart Pedal Vehicles (SPVs) – a work and cargo bike for urban mobility.

## NEED.

Mocci needed tools that could contribute to better internal collaboration, faster product development, higher quality and better fulfilment of sustainability goals.

## SOLUTION.

TECHNIA assisted Mocci in creating a virtual twin of its SPV. Using 3DEXPERIENCE as a collaboration platform made it easier to share data between users. TECHNIA also supported Mocci in implementing CATIA as its CAD software for simulating and designing the SPV model

## SUSTAINABLE BENEFITS.

Having a digital twin makes it possible to optimise the design and manufacturing process, resulting in less material and energy use. Simulating the manufacturing process also makes it possible to identify opportunities for improvement, offering further potential to reduce the climate impact.

# Case Study
# Bane NOR

## Digital signaling system modernises railway

Decisive, part of the Process Management division, has implemented the new European Rail Traffic Management System for the Norwegian infrastructure company Bane NOR.

Bane NOR leads one of Norway's largest public digitalisation initiatives to date which is an important step in modernizing the railway system. Once operated mechanically and manually, railways are now becoming more high-tech and digital.

**Decisive** is an Addnode Group company in division Process Management, and Norway's largest competence environment for rule-based IT solutions. Their business area is development and introduction of rule-based IT solutions, with a particular focus on decision support, automated case management and rule analysis.

**Bane NOR** is a railway infrastructure company in Norway. It oversees operations, maintenance and construction of railways throughout the country.

## NEED.

Bane NOR needed help with the implementation of the new digital signaling system. It also needed the development of new business processes for system monitoring and quality assurance.

## SOLUTION.

Decisive, a leader in rule-based IT-solutions, successfully implemented the new signaling system. New business processes were established to ensure compliance with extensive regulatory requirements for railway operations.

## SUSTAINABLE BENEFITS.

By investing in the new system, Bane NOR has helped to strengthen the competitiveness of the railway system as a logistics solution. Having more people travel by train and more goods transported by rail helps to reduce CO2 emissions and increase energy efficiency. According to a report by the European Environment Agency, rail travel is the most environmentally friendly mode of passenger transport in Europe and the second most environmentally friendly mode for freight.