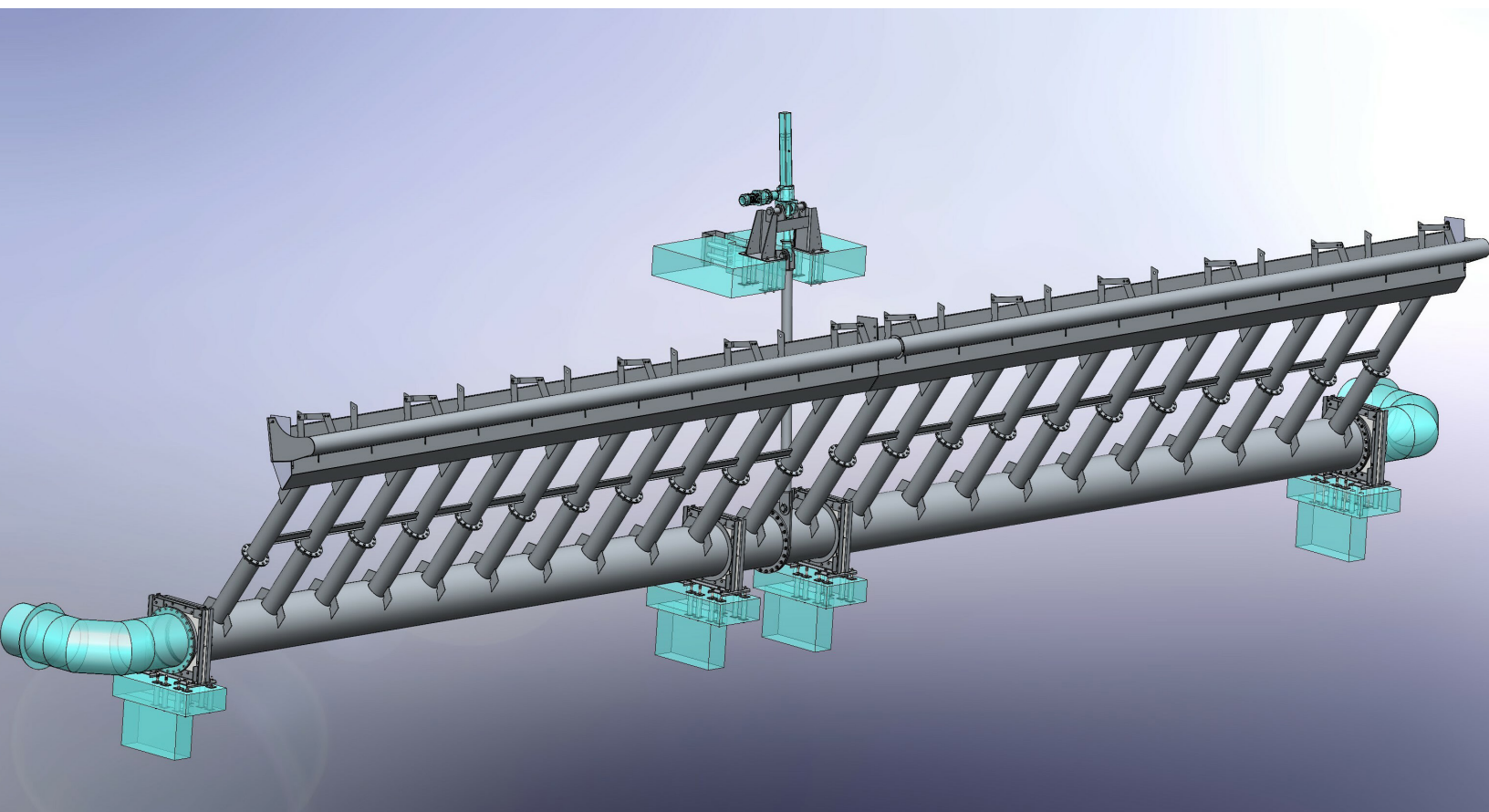


# SFC ENVIRONMENTAL TECHNOLOGIES PVT. LTD.

ACCELERATING DEVELOPMENT OF WASTEWATER TREATMENT SYSTEMS WITH 3DEXPERIENCE WORKS SOLUTIONS

## Case Study



By moving from 2D design tools to **3DEXPERIENCE** Works 3D mechanical design, validation, data management, collaboration, and communication solutions for developing wastewater treatment systems, SFC has shortened time to market while simultaneously improving product quality, data management, design reuse, and collaboration.

### Challenge:

Improve the efficiency and effectiveness of wastewater treatment equipment design and manufacturing by moving entirely from 2D to 3D tools while simultaneously shortening design cycles and time to market through better data management and design validation, and increased design reuse and collaboration.

### Solution:

Replace AutoCAD and Bentley Systems design tools with **3DEXPERIENCE Works** 3D mechanical design, validation, data management, collaboration, and communication solutions—including **3DEXPERIENCE SOLIDWORKS Premium** and **3DEXPERIENCE SOLIDWORKS Professional** roles—on the cloud-based **3DEXPERIENCE** platform.

### Results:

- Cut design cycles by 30 percent
- Shortened time to market by 25 percent
- Reduced errors by 40 percent
- Increased design reuse by 100 percent

SFC Environmental Technologies Pvt. Ltd. is a global company based in India that provides advanced technologies and equipment for the treatment of municipal sewage and other wastewater streams, as well as for handling and treating solid waste. The company's C-Tech Cyclic Activated Sludge Technology treats sewage to recycle quality water in a single-step, biological process; and the firm's OREX Organic Extrusion-Based Segregation Technology is used in the management of municipal solid waste. SFC also provides the latest futuristic technologies—such as turbo blowers, disc filters, and systems for solar drying of sludge—and offers complete design, engineering, procurement, and project management services.

Moving weir decanters are water-driven devices that separate bio solids from sludge in an aeration tank and are a primary piece of equipment used in SFC sewage treatment systems. The decanter moves along the water surface and stops at a



**"With 3DEXPERIENCE Works data management, data is stored in the cloud and arranged systematically, so it can be accessed anywhere at any time, allowing seamless collaboration among cross-functional teams and improved project visibility. With these capabilities, product lifecycle management (PLM) becomes possible, with automatic tracking of design changes made by team members on the 3DEXPERIENCE platform."**

— Mandar Desai Engineering Head

predetermined level to remove the separated liquid. It then returns to the original position and waits for the next cycle. Decanters separate solid materials from liquids in slurries, which is why they play such an important role not only in wastewater treatment, but also in the chemical, oil, and food processing industries. They are made of stainless steel to prevent corrosion and support longer life.

Until August 2022, SFC used the combination of AutoCAD® and Bentley Systems 2D design tools to develop wastewater treatment systems. However, according to Engineering Head Mandar Desai, without data management and revision controls, that approach was inefficient and problematic resulting in delays and errors. "Previously, we worked with pre-existing 2D designs, but the design revision and product data management were not organized," Desai explains. "Cost optimization for our products was hindered by a lack of revision data. There was no effective collaboration between design members and purchase departments, and all data was stored on a local drive, making it difficult to track old data and revision data."

SFC began looking for a scalable, unified product development and business platform that could encompass all of the company's design, engineering, and manufacturing workflows. The company found its solutions in 3D mechanical design, validation,

data management, collaboration, and communication solutions—including **3DEXPERIENCE® SOLIDWORKS® Premium** and **3DEXPERIENCE SOLIDWORKS Professional** roles—from the **3DEXPERIENCE Works** portfolio to replace its existing tools and accelerate development. The product innovation portfolio leverages the cloud-based **3DEXPERIENCE** platform to give customers access to the power of Dassault Systèmes' industry-leading tools for design, manufacturing, data management, and marketing.

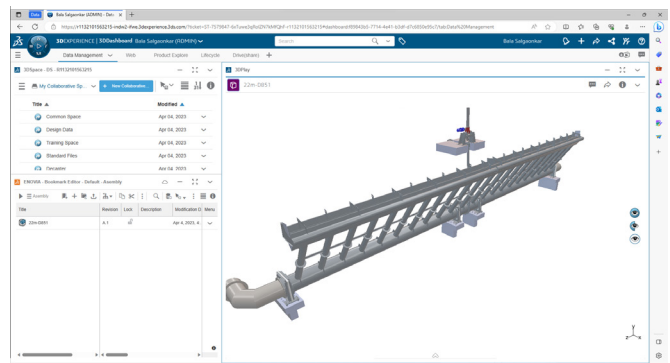
## TRANSPARENT DATA MANAGEMENT IN THE CLOUD

By moving to **3DEXPERIENCE Works** solutions, SFC has solved its data management and revision control issues. “Decaners stand as indispensable mechanical machines in wastewater treatment, ensuring efficient separation of solids and liquids,” Desai notes. “Their design versatility caters to diverse applications, and the integration of modern 3D modeling and the **3DEXPERIENCE Works** data management solution has undoubtedly elevated the efficiency and effectiveness of decanter design, bringing immense benefits to the wastewater treatment industry.”

“With **3DEXPERIENCE Works** data management, data is stored in the cloud and arranged systematically, so it can be accessed anywhere at any time, allowing seamless collaboration among cross-functional teams and improved project visibility,” Desai points out. “With these capabilities, product lifecycle management (PLM) becomes possible, with automatic tracking of design changes made by team members on the **3DEXPERIENCE** platform.”

## IMPROVING QUALITY WITH TIGHTER REVISION CONTROL, VALIDATION

With transparent data management on the cloud, SFC now has complete control over design revisions, resulting in a 40-percent reduction in design errors and a 100-percent increase in design reuse. The company also leverages the simulation capabilities of **3DEXPERIENCE SOLIDWORKS Premium** to validate design concepts, further improving quality and performance.



Using **3DEXPERIENCE Works** data management and validation capabilities, SFC designers have cut design errors by 40 percent through tighter revision controls and validated/simulated product performance.

“The move to **3DEXPERIENCE Works** solutions has ensured better version control and reduced errors,” Desai stresses. “Design validation capabilities enabled us to validate designs, identify potential issues, and make necessary changes to optimize costs, resulting in improved product quality and cost-effectiveness. Data migration from pre-existing 2D data to 3D was made possible by **3DEXPERIENCE SOLIDWORKS**, streamlining the transition and facilitating better utilization of the latest design tools.”

## BETTER COLLABORATION LEADS TO FASTER TIMES TO MARKET

With better collaboration, tight revision controls, and validation tools, SFC has shortened its design cycles by 30 percent and reduced times to market by 25 percent. “**3DEXPERIENCE** Works solutions have empowered our engineers and designers to explore multiple design variations to ensure a decanter’s optimal performance for specific wastewater treatment applications,” Desai says.

“Additionally, it has significantly improved data management and revision control, allowing seamless collaboration between design teams and rapid incorporation of design changes based on evolving project requirements,” Desai adds. “With **3DEXPERIENCE** Works solutions, we have experienced enhanced collaboration, simplified data management, and efficient design validation, leading to more successful and cost-efficient product development processes.”

**SFC Environmental Technologies Pvt. Ltd.**  
Plot No. 2, The Ambience Court  
Hi-Tech Business Park, 21st Floor  
Sector-19D, Vashi

Navi Mumbai, Maharashtra 400705  
India

Phone: +91 22 2783 2647

[www.sfcenvironment.com](http://www.sfcenvironment.com)

**VAR: Best Engineering Aids & Consultancies  
(BEACON), Mumbai, Maharashtra, India**

## Our **3DEXPERIENCE**® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the **3DEXPERIENCE** Company, is a catalyst for human progress. We provide business and people with collaborative virtual environments to imagine sustainable innovations. By creating virtual twin experiences of the real world with our **3DEXPERIENCE** platform and applications, our customers can redefine the creation, production and life-cycle-management processes of their offer and thus have a meaningful impact to make the world more sustainable. The beauty of the Experience Economy is that it is a human-centered economy for the benefit of all – consumers, patients and citizens. Dassault Systèmes brings value to more than 300,000 customers of all sizes, in all industries, in more than 150 countries. For more information, visit [www.3ds.com](http://www.3ds.com).

