



# EN TGM Expert

Your Turbine-Generator Maintenance Expert

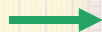
*"The First Virtual Maintenance Expert built for Hydropower Excellence..."*

## TGM Expert Suite

TGM O&M | TGM AI | TGM Digital Twin | TGM Economics & Performance  
TGM Monitoring | TGM Inventory Management | TGM Learning | TGM News

### Designed for:

- Small to large size plants
- Impulsion & Reaction type turbines
- Vertical & Horizontal shaft units



Francis



Francis-Pump

Kaplan



Propeller

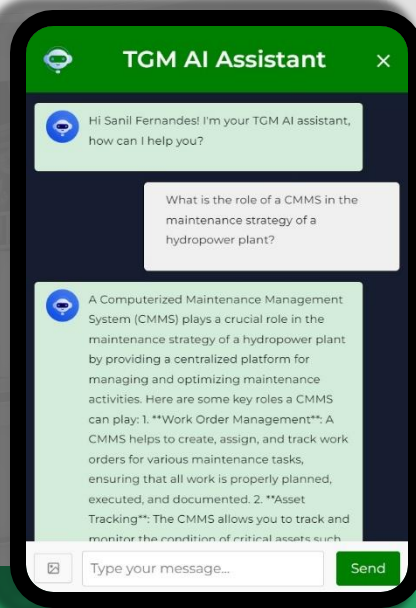
Diagonal

## Key Benefits



### Features

- **Flexible evaluation period \***
- Expert CMMS specifically designed for hydropower
- Artificial Intelligence & Digital Twin
- Interfaces with any ERP (SAP, IBM Maximo, etc.)
- Visualization of Economics, KPIs & Budgets
- Compatible with iPadOS, MacOS, iOS, Windows, and Android, and with any screen size
- Ability to work offline
- Integrates Hybrid Plants (Floating Solar, Wind)
- Smart Hydro Chatbot
- **Intellectual Property**



**Shape the Future of Hydropower Maintenance with the Virtual Expert "TGM Expert"**

**Contact us today and dive into a unique maintenance management experience!**

www.ensolutions.ca | hello@ensolutions.ca | +1.514.501.9202 |  
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\* Experience the benefits at half the price! - Up to 50% discount on your evaluation.



## Software Modules

### Fleet Management

This module allows the management of units and assets within a hydro fleet or plant, visualizing the main technical characteristics of the plant's units, the history of the units' conditions, as well as the history of maintenance and downtime (Availability, MTBF, MTTR, etc.).

### Users Management

This module allows administrators to manage user profiles, access levels, login history, etc. It facilitates secure and efficient user management, ensuring appropriate access and accountability.

### Assets

As a hydro CMMS, common components are pre-integrated already, and users only have to enable or disable assets as needed. This module is ideal for maintaining an up-to-date inventory of all assets, tracking their status, and making necessary updates or removals.



### Maintenance

Dedicated to preventive maintenance, it enables hydropower plants to efficiently plan and track routine maintenance.

### Intervention

Dedicated to corrective maintenance, it enables plants to effectively address emergencies or failures.

### Library

This module provides a list of common failure modes for every component of your hydropower unit with proven troubleshooting approaches, and root causes with recommended actions.

### Drawings & Documentation

It helps you store and organize relevant documentation (drawings, manuals, old maintenance records, etc.) for any unit or its components

### Continuous Improvement

This module includes features like "Lessons Learned" for capturing insights from work orders or "Root Cause Analysis" for investigating maintenance issues. It aims to improve operational outcomes by learning from past experiences.

### O&M Best Practices

This module provides a compendium of best practices from experience, standards, and various guides relevant to the hydropower field.



TGM O&M

**The 1<sup>st</sup> Hydropower Maintenance Expert designed to understand your needs and assist you.**

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## Software Modules

### Economics

This module provides top management with insights into O&M economics, including revenue loss and maintenance costs. It helps in making informed financial decisions and understanding the economic impact of maintenance activities.

### KPIs and Budget

This module allows top management to access KPIs across 4 main categories (Financial - HSE - Plant - Social Impact). Performance tracking and budget management are facilitated to ensure goals are met.

### CAPEX Projects

This module utilizes data from "Maintenance" and "Intervention" to streamline the planning and execution of refurbishment activities, ensuring timely and necessary upgrades to equipment and infrastructures.



### TGM Economics & Performance

### Material Management

It enables to effectively manage materials, track inventory and it provides lists of reliable local and regional suppliers, wherever possible.

### Tenders

Utilities can directly connect with hundreds of contractors, professionals, suppliers, turbine and generator manufacturers, and other specialized companies.



### TGM Inventory management

### AI Assistant

AI Assistant is an AI-powered assistant trained in hydroelectric expertise. It answers technical questions, suggests maintenance actions, analyzes performance, and supports team collaboration through an internal chat system.



### TGM AI



### TGM Monitoring



### IoT & Real-Time Monitoring

This module connects SCADA and real-time operational data to TGM, giving plants full visibility of live equipment status. It enables predictive maintenance by automatically triggering work orders based on real-time conditions.

### Digital Twin

With this module, users can upload 3D models of key components and run real-time simulations based on live data. It helps predict failures and automatically generate maintenance tasks to prevent downtime.



### TGM Digital Twin



### TGM Learning



### Learn

TGM Learning offers a built-in training platform with pre-recorded courses, certification tracking, and hydro-related resources. Users can upload content and follow progress across their teams easily.

### News (Hydro & Energy)

Discover the latest hydropower and energy news, from groundbreaking research to real-world applications driving the global energy transformation.



### TGM News

**TGM Expert for proactive, simplified, and efficient Hydropower Maintenance.**

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## Key Highlights

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- Designed for the hydropower field
- Competitive pricing
- Integrated inspection checklists
- Flexible and customizable
- 24/7 Support
- Educational resources
- Personnel safety & system isolation
- Driven by artificial intelligence



## AI Features

\*\*\*\*\*

- 01 Real-time Failure Predictive Model/Maintenance
- 02 Digital Twin
- 03 Smart Hydro Chatbot
- 04 Image Recognition Of Hydropower Components



## Business Model

\*\*\*\*\*

- Promotion:** 50% discount on your evaluation.\*
- Pricing model:** Annual subscription plan and One-Time perpetual licensing.
- Pricing according** to the customer hydropower fleet capacity
- Deployment mode:** On-Premise & Cloud.
- Number of users:** Unlimited.
- Etc...

## Our products and services



### Products

- TGM Expert
- TGM Inspector
- TGM Markets



### Consulting

- Technical support
- Reliability Centered Maintenance (RCM)
- Preventive Maintenance Optimization
- FMECA and RCA Workshops
- Predictive Maintenance Implementation
- O&M Audits



### General Services

- Quality
- Condition Assessment
- Electrical Tests
- Unit balancing & Commissioning
- Data acquisition



### Training

- TG1:** Overview of hydropower operation and machinery
- TG2:** Basics of hydropower maintenance

Interested in knowing more about the product, the pricing grids, VME packages, AI-features offered and even more?

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