



Ansprechpartner

Daniel Seewald

Head of Tunnel & Traffic Infrastructure

T. +43(0)3178 21800-136

M. +43(0)664/88 34 11 54

daniel.seewald@evon-automation.com

Projekt /// Digital tunnel
Auftraggeber /// ASFINAG
Anlagenstandort /// Austria

evon GmbH
Wollsdorf 154
8181 St. Ruprecht an der Raab
T. +43(0)3178 21800-0
F. +43(0)3178 21800-110
office@evon-automation.com
www.evon-automation.com

evon evolution in automation

Success Story

Digital tunnel

Successful partnership for the future of tunnel operations: evon develops digital tunnel for ASFiNAG

At the beginning of 2025, evon GmbH was commissioned by ASFiNAG to develop an innovative software solution for the so-called “digital tunnel.” The aim of this forward-looking project is to improve quality in tunnel systems and significantly reduce the time needed for troubleshooting. By using state-of-the-art technologies, ASFiNAG will be able to carry out automatic tests more efficiently and largely in advance in the future – without constantly affecting real tunnel operations.

Digital innovation based on evon XAMControl

The digital tunnel is based on the proven evon XAMControl software platform and offers intuitive web visualization. Its ease of use ensures that both ASFiNAG and external testing companies can use the application efficiently. The software enables realistic simulation of tunnel systems by virtually triggering various system components such as fire alarms, emergency call systems, or door openings and testing their responses.

The signals from these components are transmitted via the OPC UA protocol to the local control units and the tunnel head computer. At the same time, commands are sent to actuators such as traffic lights, ventilation systems, or lighting devices, and their feedback is recorded. This allows all functions to be comprehensively tested and realistically displayed in the tunnel builder's visualization.

Standardized interfaces for easy integration

One of the core requirements was a standardized connection to every tunnel system. This is ensured by the use of the OPC UA protocol and the ASFiNAG object catalog. The object catalog defines all relevant system components and data, enabling simple and flexible configuration of new tunnel systems without additional programming knowledge. This standardization allows for efficient integration and facilitates ongoing operation and future expansions.



Success factors and long-term benefits with implementation planned for May 2026, this project sets new standards in digital tunnel monitoring. The digital tunnel not only offers considerable time savings, but also ensures greater efficiency, safety, and optimized maintenance. The most important advantages at a glance:

- L Reduced testing times thanks to simulation-based automated tests
- Intuitive web visualization for easy operation
- Standardized connection through use of the ASFiNAG object catalog
- Simple configuration of new tunnel systems without programming effort

→ Long-term maintenance and lifecycle assurance for the next 10 years

With this innovative project, evon is setting new standards in the field of digital tunnel monitoring and underlining its role as a reliable partner for smart automation solutions.