innovation for a safer world.

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# The Maldives choose CAE again

Six years after the first contract, the **Maldives Meteorological Service** (**MMS**) continues to choose CAE technology. A new order has arrived, including the supply of **Compact Plus data loggers, PG10 rain gauges and DV20/VV20 anemometers**.

Consolidation of the relationship stems from the good foundations laid at the beginning by supplying quality products and providing training on them, in person, remotely and at the CAE site, so that local technicians can manage them independently.

Since then, new technologies have been developed and this order means some network components can be upgraded, such as the data loggers, which will change from Mhaster to **Compact**. Because of CAE's focus on backward compatibility, there will be no problems with replacement, so much so that, again thanks to the **training** already provided as well as CAE's constant willingness to **support** its customers, the Maldives Meteorological Service's own technicians will upgrade the stations themselves.

Review of the highlights of this collaboration over the years:

**2018** - Expansion of the national meteorological monitoring network with 25 new stations and a control centre (click here)

**2019** - Supply of 3 new automatic weather monitoring stations

**2020** - Supply of 6 new automatic weather monitoring stations

**2020** - Software for storing and displaying data from stations of other suppliers (Adcon and Campbell)

**2020** - Supply of a public web portal to show weather conditions in real time

**2020** - Supply of 2stand-alone rain gauges (PG4i). ■

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# 40 new PG4i stand-alone rain gauges for Morocco

In 2023, CAE supplied three **PG4i stand-alone rain gauges** to its partner in **Morocco**, and an order for another **40 units** arrived in the last few days.

Once again, even abroad, **professionalism** and **quality** products are appreciated and repurchased.

This supply will serve the **Tensift River Basin Authority** as part of the project to **improve flood warning networks and land use control in areas subject to flooding**.

In fact, the Tensift Basin has suffered floods over the past decade, resulting in significant economic, social and environmental repercussions, especially the floods of 2014 and 2016.

The PG4i proves to be a product that suits everyone's needs; in this case it will be installed independently by the partner, who will take care of the metalwork and **power it with a battery charged by a small solar panel**, local SIMs will be used and data will be sent via FTP to the end-user's servers.

"*We are happy to have consolidated our presence in Morocco thanks to the openness, reliability, robustness and interoperability of CAEtech products. We continue to work to ensure the satisfaction of all customers who care about protecting populations in the face of risks from extreme weather events and more,*" says Alberto Bertocco, International Account Manager at CAE S.p.A.■

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# CAE and cybersecurity: a perfect match

CAE has always been **security**-conscious, as also stated in the company's payoff, creating a **safer world** is part of its mission.
The topic has many facets. In the age in which we live, where cyberattacks on both companies and individuals are increasing exponentially, the focus is on **cybersecurity**.
From this perspective, CAE is committed to ensuring the utmost security for its customers. As far back as 2015. CAE was certified ISO/IEC27001 - Information security management systems, and subsequently also ISO/IEC 27017 - Code of practice for information security controls for cloud services, and ISO/IEC 27018 - Code of practice for protection of personally identifiable information (PII) in public clouds acting as PII processors.

The company's "Innovation and Technology" area, which carries out R&D activities but is also responsible for all the company's IT activities, is committed to adopting security and privacy policies by design, i.e. from the conception of each product, and to subsequently carrying out **Vulnerability Assessment** and **Penetration Tests** on all CAE applications and data loggers, i.e. vulnerability tests to protect data and privacy. This is a continuous process that allows the company to assure its customers that its products are always in line with the latest safety standards, in accordance with the OWASP guidelines. In particular, by using ZAP, one of the tools provided by OWASP.
In addition to being controlled as described above, the Compact line of **data loggers** have been deve-

loped with **only secure protocols** and **firewalling rules** to recognize and limit attacks, and they also implement the latest VPN technologies.

Last but not least, with regard to **servers** and **control centre installations**, CAE software uses ***Single Sign On*** (SSO) authentication technology. This technology allows users to access multiple applications with a single authentication, reducing the need to store and manage multiple credentials. The security benefits include greater protection against phishing attacks and more effective access management.

CAE is ready to comply with **Directive (EU) 2022/2555 (NIS 2)** by 28 February, as required of private organizations operating in essential sectors. This directive establishes a high common level of cybersecurity in the European Union, increasing the security of technological infrastructures and effectively combating the risks caused by cyber crime. NIS 2 is part of the European Commission's Digital Strategy to create a single market for secure and resilient products and services, and complements various European data protection and privacy regulations and guidelines, such as the General Data Protection Regulation (EU) 2016/679 (GDPR), the DORA Regulation, the ERC Directive, the Cyber Resilience Act and, at a national level, the National Cybersecurity Perimeter. ■

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# Calabria: hydro-geological risk protection in building works

Recent events make it clear that protection against **hydro-geological** risks must be a key parameter for the approval of building works. In addition to analysing the construction terrain and consulting hazard and risk maps as soon as the construction site is opened, installing a monitoring system can be useful.

This is what is being carried out in the area where the future Hospital of Vibo Valentia (VV) will be constructed. Here, for **Guerrato S.p.A.**, CAE will install a **system to measure rainfall and water level parameters in the rainwater drainage network**, which is useful to verify the **performance of that drainage network and to generate alert messages** in relation to rainfall and water level thresholds so that the site managers can implement safety procedures if working areas and times are in danger of being compromised.

The system consists of two stations with **Compact data loggers** equipped with **ULM30 ultrasonic hydrometers** to verify that the drainage and lamination functions of the newly constructed drainage network are working properly, and to assess the outflows passing through the main

line. In addition, for each hydrometric measuring section, a **hydrometric rod** is provided to manually and visually measure the hydrometric level in different hydrological conditions (lean, soft, full). The system also includes a **PG10 rain gauge** to manage the pre-alert phases set out in the emergency plan and a camera to visually monitor the channels.

All data produced by the system at the monitoring points can be viewed and managed directly from the **control centre**, thanks to the CAE software suite comprising **Aegis, Datalife** and **Sentry**, which allows even complex alarms to be set.
To maximize continuity of the monitoring activity, CAE will provide 12 months of maintenance from system activation. ■

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# A hydrometer installed on the Zena at Farneto

**CAE** is a company **based in San Lazzaro di Savena** that works in Italy and worldwide to address the risks arising from **hydro-geological instability**. For 47 years, it has been at the side of administrations and authorities responsible for managing emergencies and safeguarding the population, infrastructure and environment. The company now employs 115 people to **design, create and service reliable and effective systems for real-time monitoring, decision-making support and alerts during emergencies**.

*"Following the flood of 19 October 2024 that hit the Zena Valley, and in particular the "Farneto" locality, we wanted to do something useful and concrete* ***for the community and the area of which we are a part****. That is why we decided to give the municipality a* ***rainfall and water level station with camera on the Zena river****, along which there was no monito-*

*ring point,*" says General Manager Giorgio Bernardi. He continues: "*This station will provide rainfall and water level data and images of the river in real time. This* ***data is essential to make informed decisions during an emergency, but also in the long term, to study possible hydraulic works to be carried out to increase the safety of the population***."

The station is installed on the Farneto bridge along the SP3 to monitor the water level of the Zena river 24 hours a day, and is equipped with:

- CompactPlus data logger;
- WLR/s radar hydrometer;
- PG10 rain gauge;
- camera.

The station, which has been active since November, will **supplement the regional watercourse detection and monitoring system**, which did not include any specific monitoring for the Zena river until now.

"*This monitoring station is a fundamentally important tool for us because it* ***finally allows us to understand the hydrometric situation of the river in real time and with reliable data***," explains mayor Marilena

Pillati. "*This is no small thing if we consider that during the last two floods, the greatest damage to our area was the result of the Zena overflowing, which, unlike the Savena and Idice, has never had dedicated monitoring. Today, thanks to CAE's donation, we have overcome this shortcoming and will be able to act even more effectively in emergency situations.*" "*Our hope*," adds Sara Bonafè, deputy mayor and councillor for local defence and care, "*is that we will now think about monitoring upstream on the Zena as well, to create an even more effective control system for the benefit of Farneto residents as well as those living further downstream, since the waters of the river flow into the Idice*."

The rainfall and water level station with camera is **powered by solar energy** and contains an internal storage battery that ensures it can operate even during foggy days. Its **data is available to the municipality's technicians 24 hours a day, and will soon be entered into the regional alert management network** in order to provide full monitoring of a new watercourse. ■

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