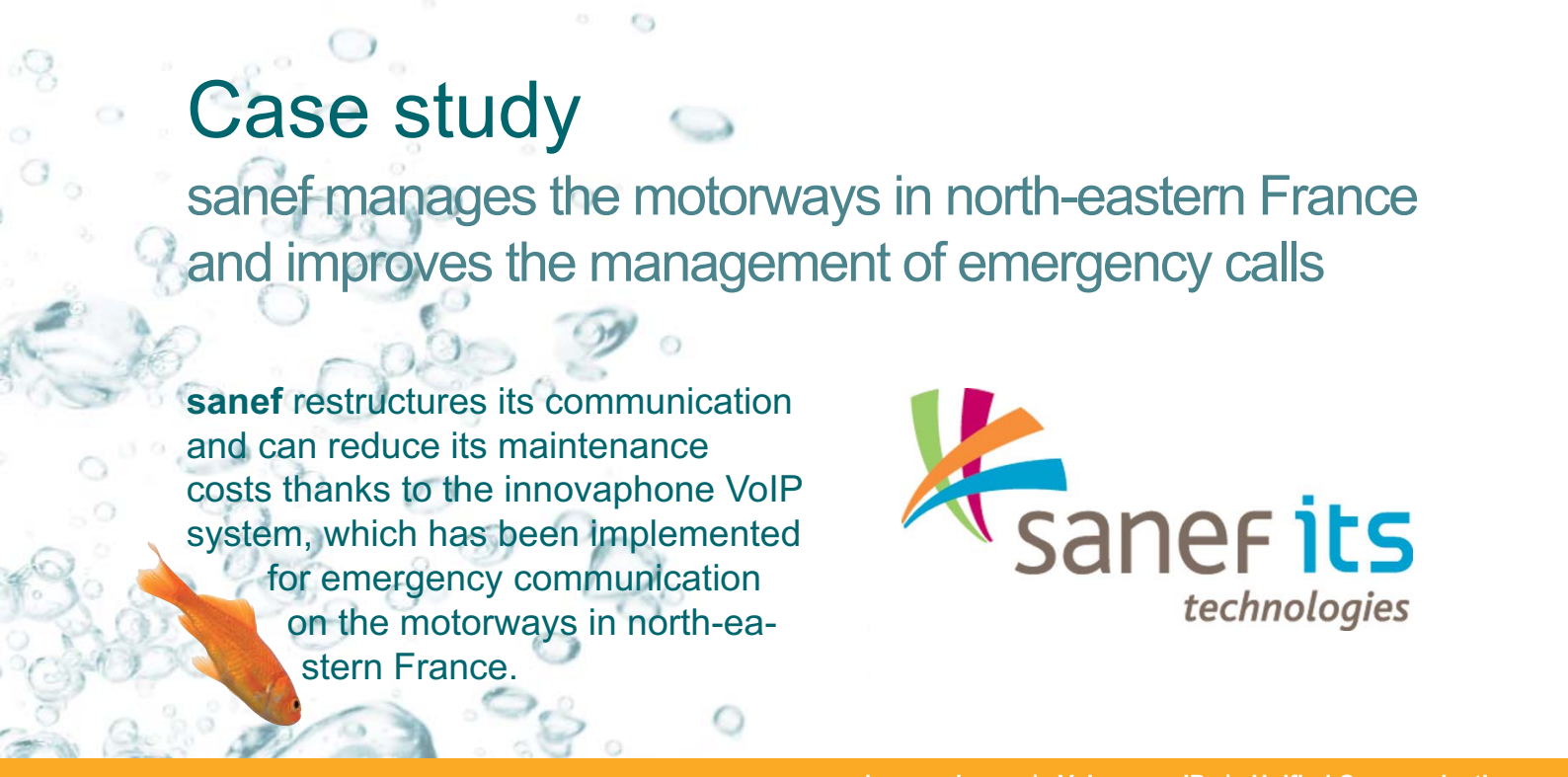# Case study

sanef manages the motorways in north-eastern France and improves the management of emergency calls

sanef restructures its communication and can reduce its maintenance costs thanks to the innovaphone VoIP system, which has been implemented for emergency communication on the motorways in north-eastern France.

sanef its technologies

A powerful and reliable VoIP system, perfectly integrated in the emergency call network structure

In order to take GSM calls at the emergency call points installed across the entire motorway network in North-Eastern France, the company sanef has opted for VoIP and Unified Communication solutions by innovaphone, the German specialists. sanef is one of the leading motorway companies in France.

The customer

- **sanef**, Société des Autoroutes du Nord et de l'Est de la France
- Operation and management of motorway infrastructure
- Approx. 1,901 km of motorway
- Approx. 3,580 employees

In 2006, the renewal of the **sanef** emergency network was put in the capable hands of CS IST, the established suppliers for emergency solutions in France. The company has been trading under the name **sanef its technologies** since October 1, 2012 and is a subsidiary of the **sanef Group**. The System Integrator **sanef its technologies** has the largest range of solutions on the market and is active in four areas: classic toll, freeflow toll, emergency network and back-office solutions. **sanef its technologies** has a total of 220 employees in four offices in Europe (France, UK, Croatia and Poland), three offices in North America (United States, Canada and Puerto Rico) and a branch office in South America (Chile).

Renewal of the sanef emergency network and integration of the VoIP solution

Prior to the changeover of the communication infrastructure, **sanef** mainly used two communication technologies for its emergency network in France: loading coils from telegraph cables (so-called pupin coils), as well as the analogue 3RP radio technology. In order to reduce the maintenance costs incurred by the outdated communications

Info column

network, **sanef** decided in 2006, to renew its emergency network. In order to forward the emergency calls from the 1,700 emergency phone points to the six **sanef** operating centres, the communication network is based on ISDN/GSM networks as well as on IP Ethernet networks in the operation centres. From there, the calls are forwarded to the respective switchboard.

The challenge

- Outdated communications technology
- Forwarding and routing of emergency calls
- 1,700 emergency call points, widely spread over the entire motorway network
- Management of a high call volume
- Reduction of maintenance costs

Because of the great technical challenges, **sanef** wanted to integrate a VoIP system that was both powerful and guaranteed high reliability in managing emergency calls. Didier Silbermann, product manager of the emergency call network at **sanef its technologies**, discusses the reasons that led to the decision in favour of the innovaphone VoIP

system: "An emergency network is a security system. Therefore, we need VoIP equipment of excellent quality that is at the same time reliable and good value for money. However, it should also be open for integration into our emergency call solution. We have been using innovaphone devices for our solutions since 2000 and have had excellent experience with the innovaphone IP phones IP110, IP230 and IP200 and the innovaphone VoIP gateways IP400 and IP800 IP/ISDN. Therefore, there was no doubt about proposing to implement innovaphone devices to our customer, **sanef**."

innovaphone VoIP Gateway IP800

The solution

- Emergency calls are routed in the GSM / ISDN network and via Ethernet IP
- innovaphone VoIP gateways IP800 ensure the management and localization of calls
- One innovaphone VoIP gateway IP6000 manages more than 20,000 calls a day
- IP phones IP230 are used as end devices
- The maintenance costs were reduced thanks to the innovaphone system

New sanef emergency network with integrated VoIP solution

Today **sanef's** emergency call network consists of 1,700 GSM emergency call points, divided into two geographical zones. For each zone, the emergency call points are assigned to two call centres and a PSAP in emergency mode. There is thus six call centres in total. Every call centre has an innovaphone ISDN/IP IP800 gateway to answer the calls from the emergency call points, as well as an innovaphone IP phone IP230 to manage communication. Thus, six innovaphone VoIP gateways IP800 and six IP230 end devices are used in the solution as a whole.

Depending on the geographical location of the emergency call site, the emergency call lands on the VoIP gateway IP800 of the respective PSAP and is forwarded to the responsible administrative body in this region for processing. The caller ID sent by the innovaphone VoIP gateway IP800 is used to identify which emergency call point is calling and thus to be able to exactly locate the call.

In addition, **sanef's** emergency network has a central technology monitoring system that controls the operational state of the emergency call network. To ensure this control system works, each emergency point confirms an (unanswered) test call every two hours. The calls are accepted on an innovaphone VoIP gateway IP6000 ISDN/IP and are then forwarded to the central technology control. With 1,700 GSM emergency call points and 12 calls per emergency call point, this gateway manages more than 20,000 calls a day.

Simple installation and high reliability

The installation of the call centre took only a few days.

Maintenance work on the motorway

Thierry Blond, head of the emergency call network project, assures: "The actual strength of the innovaphone solution is its easy installation and high reliability. Most importantly, we do appreciate that the PBX can be managed centrally. All devices are easy to configure - and require a minimal amount of maintenance. Since 2000, we have been systematically offering innovaphone products (IP230, IP800) with our emergency call network solutions. Currently, we have more than 80 call centres in and outside France using the innovaphone solution.

Other innovaphone Case Studies are available at:
www.innovaphone.com

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