



Vattenfall Europe Distribution Berlin relies on automation
VATTENFALL'S INNOVATIVE EMERGENCY MANAGEMENT IMPROVES CUSTOMER SATISFACTION

Client



Sector

Energy supply

Problem

Vattenfall Europe Distribution Berlin GmbH sought a solution for the automated management of high volumes of incoming calls in the event of disruptions to energy supply, but also offering the option of providing qualified responses. The solution should also deliver immediate information to management representatives and produce accurate and reliable documentation of all activities involved.

Solution

In 2001, distribution network operator Vattenfall introduced F24 AG's **FACT24** Notification and Conferencing Service plus customized call management solution (information hotline). This system alerts specialist staff and emergency operations teams within minutes, and provides customers calling with information concerning the cause and extent of the fault or emergency. Vattenfall report that thanks to **FACT24** both internal and external transfer of information have been optimized, which is ultimately reflected in enhanced customer satisfaction.

Benefits

- „Call peaks“ are handled by the emergency hotline with 210 parallel lines and automated customer information
- Rapid transfer of information by telephone
- Optimal tracking of information transfer - confirmation of contact is registered
- Since **FACT24** is a service, no investments in technology are required

Vattenfall Europe Distribution

Berlin GmbH – formerly known as Bewag AG – is responsible for all management tasks related to operation of the low, medium and high-voltage networks in Berlin in its capacity as network owner. Vattenfall provides maximum power supply reliability to all users regardless of their energy supplier. Should disruption to the network occur, the 24-Hour Fault Management Centre is the main point of contact. Incoming information is analysed to give clues to the type and cause of the fault. In addition, the service coordinates all remedial actions required to restore power supply as rapidly as possible.

Vattenfall Europe Distribution Berlin is the network operator for the Greater Berlin area, which covers 890 sqkm and has around 2.1 million customers. The distribution network has a total length of around 43,000 km. On average, one medium-voltage network fault (affecting around 1,000 to 1,500 customers) and five low-voltage faults (affecting around 100 customers) occur every day. Even if only a few of these customers call the company to enquire, at peak call times hundreds of calls may come in. The company may receive up to 11,000 calls per month.

BASELINE POSITION AND CHALLENGE ::

In the event of disruption to the power supply or other fault, customers call in to enquire about the cause, extent and probable duration of the outage. Under the company's old system, the telephone switchboard quickly reached full capacity, resulting in stress for the staff and annoyance on the part of the customers. In addition to processing incoming customer calls, essential tasks are the rapid notification of service technicians and, in major disruptions, immediate information

of management representatives. Vattenfall is a modern service company. First-class service standards are therefore built into its corporate philosophy – including emergency situations that place regular operations under strain. Vattenfall was quick to realize that the quality of its emergency management could only be guaranteed by introducing a high-performance communication solution for alerting and emergency management. With the aim of improving efficiency and enhancing customer satisfaction, the company decided to seek a more advanced solution than one-to-one telephoning or the use of answering machines in dealing with service disruption messages.

SOLUTION ::

Vattenfall's predecessor Bewag AG had already been aware of **F24** and its services. In an evaluation phase the company tested a number of further solution options; however, none offered such a large number of parallel telephone lines without the need for major investments. The decision in favour of **FACT24** required no company investment in hardware or technology. At the end of 2001 a clear vote was given in favour of the solution package designed by **F24 AG**, including not only **FACT24** Notification and Conferencing Service, but also a custom voice box for call management on the emergency hotline. Since its launch, the service has provided recorded messages giving information on current power supply disruptions to callers via multiple parallel lines. This frees up the emergency operations team to concentrate on alerting and notifying specialists and management and restoring power as rapidly as possible.

REALIZATION ::

High-quality fault management comprises two levels: on the one hand (telephone)



customer service and competent public information, and on the other localization and analysis of the fault and transmission of the fault report to the appropriate internal offices, together with documentation of these actions. The services supplied by **F24 AG** meet all the requirements of these processes. **FACT24** is used for rapid notification of management levels and alerting of emergency operation teams. In addition, a customized information hotline was designed to the specifications of Vattenfall's customer service division. Specialist staff and service engineers are now notified and alerted by separate direct calls, also enabling their requests for further information to be dealt with directly and immediately.

Fault hotline call management

F24's solution for managing call peaks was designed specifically for the needs of service and fault hotlines, and is basically a kind of giant answering machine capable of taking up to 210 calls at once. Callers to Vattenfall's fault management service number at 0180-2 11 25 25 hear a recorded message of all relevant information on current power supply disruptions in Berlin.



24h Fault Management Centre

In Vattenfall's case, the telephone service provided by **F24** is based on a modular voice dialogue system. The emergency management team can update the hotline, for example by changing the introductory text or including fault report updates, by telephone or Internet in real time. The Web interface also features „text-to-speech“ function enabling voice modules to be generated and stored as voice files for later reuse.

In the event of a fault in power supply, Vattenfall's **FACT24** system administrator generates an appropriate recorded mes-

sage and selects the following parameters depending on the type of fault:

- the affected area(s)
- the desired customer information (e.g. type of fault), from a list of options predefined by Vattenfall. A further option here is the addition of a variable, situation-specific customer information message (free text)
- the probable duration of the fault, from which the probable time of repair is automatically calculated

If multiple fault messages are activated simultaneously, they are displayed as a list in the Web interface. The fault manager can deactivate active messages or activate additional recordings with a click of the mouse. All fault reports are "time stamped" and listed in the desired order in a general message.

If callers desire more detailed information or are calling on a different matter, the voice dialogue system connects them directly to a member of the emergency management team via a dedicated line. However, experience shows that almost 80% of all callers do not require further information after listening to a recorded message.

Alerting and communication with FACT24

FACT24 informs the necessary specialists and management representatives of network faults and alerts the emergency operations team. For Vattenfall Europe Distribution Berlin, a crisis could be, say, a large-scale power outage with especially severe conditions involving damage or destruction to plants.

Vattenfall's **FACT24** service stores a list of around 150 names with responsibility for such events. Customers store and manage their emergency plans as "alert or conference scenarios" on the **FACT24** Web interface. All data are SSL encrypted for transfer to **F24's** main systems. To log in, users must enter a user and PIN number for authentication.

In the event of an emergency, **FACT24** is activated directly from Vattenfall's fault management control centre via Internet or by using a telephone voice dialogue system. As a special feature, scenarios are not fully configured until the appropriate



Service is increasingly important

« Power outages are an increasingly sensitive issue for our customers. F24 AG has helped us to advance the optimization of our “Fault Hotline” service, and since then we have benefited from a definite rise in customer satisfaction »

Olaf Ziemann, Head of Network Operations at Vattenfall Europe Distribution Berlin GmbH

communication measures are activated. In other words, messages are recorded and linked to the groups to be notified at the time of activation only, enabling fault reports to be limited to specific regions as precisely as possible.

FACT24's redundantly structured alarm servers immediately launch the required notification, alerting or telephone conference procedures on up to 240 parallel ISDN channels to landlines or mobile phones. If specific individuals in the notification lists are unavailable, the alarm servers automatically call their predefined representatives. All staff that are successfully contacted by the service are asked to confirm receipt of the call on their telephone keypad (e.g. by entering 0 to confirm receipt of information or entering the time they require to reach the scene).

These feedback reports are assembled at regular intervals into a series of alarm reports and faxed to the fault manager, giving an overview of persons contacted and enabling a second call-out to be launched if necessary – a procedure which can gain valuable time in an emergency.

Prospects

„**FACT24** and the information hotline are economically interesting, technically and functionally outstanding solutions serving both the internal and external transfer of information“, comments Olaf Ziemann, Network Operations Manager at Vattenfall Europe Distribution Berlin GmbH, on **F24's** solutions. “We have registered significant improvements to our customer information

service, and thus to customer satisfaction levels.“

Vattenfall introduced a high-performance integrated fault and emergency management concept focusing on the services of **F24 AG** at the end of 2001. **F24** was always quick to implement new ideas and met customer requests with flexibility. The benefits generated by the service led the network operator to introduce **F24's** solutions in the fault and emergency management system for its Hamburg distribution network in 2005.



Administration centre, Vattenfall Europe Berlin



110-kV indoor switchgear



Medium-voltage local network station

Pictures: Vattenfall Berlin GmbH



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