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The Art of Software Development

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**An application for managing  
emergency calls in the Natural  
Gas Distribution sector**

## Key Information



### Industry:

Energy - Natural Gas Distribution



### Project duration:

2 years in total for 2 versions



### Team Size:

6 specialists



### Technologies:

- PHP
- CodeIgniter
- MySQL
- JavaScript



### Services:

- Analysis
- Architecture and design
- UX/UI design
- Implementation
- Testing
- Maintenance
- Project management

## Highlights

- The application manages emergency calls and intervention teams in the Call Center of a leading gas distribution company.
- It ensures **real-time monitoring of emergency situations** and **efficient dispatching of teams**.
- The system integrates seamlessly with SAP, enabling smooth data flow.
- The user interface is fast, responsive, and includes **autocomplete functions for quick data entry**.
- Robust project management features integrated in the system ensure **timely issue handling through reporting** and **escalation processes**.

## Product Overview

This application is developed for use in the Call Center of a natural gas distribution company. It manages emergency calls received from consumers regarding malfunctions in the use of gas distribution systems, monitors emergency calls, manages intervention teams, and **generates reports on intervention teams' efficiency.**

The screenshot shows a table of incidents with columns: Incident No., Incident Description, Dispatch Priority, Address, Applicant, Treating, Date entered, SLA Allocation, and Agent. The table contains 10 rows of incident data.

Incident No.	Incident Description	Dispatch Priority	Address	Applicant	Treating	Date entered	SLA Allocation	Agent
308	Explosions	0	2 Sabalet Street, Bucarest	Ada Ada Mbr: 123456789	Immediately	2008-11-05 16:11:59	18' 11:59	18:40:51
305	Incident caused by lack of pressure	3	23 Ogrino Street, Buzau	Mihail Ivan Mbr: 987654321	Immediately	2008-07-04 10:04:12	18' 1:05:00	21:56:30
303	Fire	1	83 Grant Street, Bucarest	Popa Vasile Mbr: 210456789	Immediately	2008-03-02 17:44:00	18' 1:05:00	18:50:23
300	Explosions	0	50 Iulius Street, Oradea	Tran Vasile Mbr: 012345678	Immediately	2008-08-08 17:15:49	18' 1:05:00	20:52:13
295	Explosions	0	28 Fagur Street, Oradea	Popa Elena Mbr: 123456789	Immediately	2008-09-28 16:33:23	18' 1:05:00	20:57:31
293	Explosions	0	12 Oakes Street, Oradea	Mihail Vas Mbr: 987654321	Immediately	2008-09-28 16:33:23	18' 1:05:00	20:57:31
291	Explosions	0	31 Fagur Street, Oradea	Popescu Ovidiu Mbr: 321654321	Immediately	2008-05-20 16:13:35	18' 1:05:00	20:27:23
279	Explosions	0	12 Ogrino Street, Oradea	Mihail Vas Mbr: 987654321	Immediately	2008-05-22 16:13:35	18' 1:05:00	20:47:23
268	Explosions	0	21 Abernethy Street, Bucarest	Pop Vasile Mbr: 123456789	Immediately	2008-05-21 16:42:14	18' 1:05:00	20:59:46
219	Explosions	0	12 Oak-Henry Street, Bucarest	Neicu Cristian Mbr: 123000789	Immediately	2008-09-21 15:41:12	18' 1:05:00	21:56:06

## Requirements

The project requirements included the real-time monitoring and management of emergency situations, ensuring **efficient dispatching and tracking of intervention teams.** Comprehensive reporting capabilities were also required, along with integration with existing systems, such as SAP. All this and more through a fast-responsive, user-friendly interface.

The screenshot shows a table of incident types with columns: Active, Name, Category, Comp Level, Group Priority, Treating, SLA Treating, SLA Movement, AD Action, and OEE Notification. The table contains 8 rows of incident type data.

Active	Name	Category	Comp Level	Group Priority	Treating	SLA Treating	SLA Movement	AD Action	OEE Notification
<input checked="" type="radio"/>	Should call in 72 hours from the same address	Troubleshooting	Minimum (2)	3	Planning	0 sec	0 min	0 min	YES
<input type="radio"/>	Call to user of house require	Information	Info (4)	3	Info	0 sec	0 min	0 min	YES
<input type="radio"/>	Call for another CAD	Redirect	Info (4)	0	Info	0 sec	0 min	0 min	NO
<input type="radio"/>	Call for C.C. Checks	Redirect	Info (4)	2	Info	1 sec	0 min	0 min	NO
<input type="radio"/>	Call for incident at another structure	Troubleshooting	Info (4)	1	Info	0 sec	0 min	0 min	NO
<input type="radio"/>	Analysis of calls about gas pressure in the European network	Information	Medium (2)	2	Urgent	0 sec	0 min	0 min	YES
<input type="radio"/>	Analysis of calls about gas pressure in the European network	Redirect	Medium (2)	3	Urgent	0 sec	0 min	0 min	YES
<input type="radio"/>	Water dropped	Redirect	Minimum (2)	0	Planning	0 sec	0 min	0 min	NO
<input type="radio"/>	Water that requires repairs	Redirect	Minimum (2)	1	Planning	5 sec	5 min	5 min	NO
<input type="radio"/>	Change in installation without gas leaks	Redirect	High (1)	9	Urgent	0 sec	0 min	0 min	NO

## Challenges

The project faced challenges in integrating with external systems, specifically SAP.

High load and ensuring real-time updates and alerts also presented a challenge that was resolved through a **robust and scalable architecture.**

## Provided Solution

The software system provided real-time monitoring and alerting functionalities that are crucial in a call center that deals with emergency cases of a gas distribution system.

A rich GUI was created, featuring **quick response autocomplete for fields**.

A robust project management process was implemented in the system, encompassing **planning, reporting, and issue escalation**, to insure that all disorders reported in the Call Center are handled in a timely manner.

The screenshot displays a web application interface for incident management, divided into three main sections:

- New Incident Form:** A form for creating a new incident. It includes a sidebar menu with categories like Admin, Planning, Incidents, and Reports. The main form fields include: Applicant type (Other utility companies), Applicant (Full Name, Request date, Phone number), Incident Location (Own location, Country, City, Street, No., Building, Sc., App., Floor, Interphone), and Location landmark.
- Incident Types Management Table:** A table listing incidents with columns for Date, Status, and Action. The table shows a list of incidents with dates ranging from 2008-10-30 to 2008-06-01. The status includes 'Closed incident', 'Unassigned intervention agent', and 'List of telephone confirmation of arrival at the incident site'.
- Message Detail View:** A detailed view of a message. It shows a 'Message: Incident Closed' notification. The details include: Description: Incident 298 has been closed. Recipient: Paveltecu Adrian. Request Date: 2008-10-30 09:38:14. Applicant: Popescu Gabriel. Address: 33 Lunel Street, Ap. 8, Cluj-Napoca, Cluj County.

## Let's get in touch

ArtSoft Consult is a trusted partner in the IT industry, providing tailored solutions to address your unique business challenges.

With our proven expertise our team delivers innovative solutions and development services.

Drawing from years of experience and industry insights, we deeply understand this industry and we look forward to working with your business.

For more details on our services and team, please [contact us](#).

**ArtSoft**  
consult

Str. Eugen Ionesco, nr. 1A  
Cluj-Napoca, Romania, 400357

 [www.artsoft-consult.ro](http://www.artsoft-consult.ro)

 [office@artsoft-consult.ro](mailto:office@artsoft-consult.ro)

 +40 0264 403 662

+40 0264 403 489

