

The City of The Hague Maintains Order in Public Spaces Using Mobile Handhelds



City of The Hague
The Hague, The Netherlands
www.denhaag.nl

Industry:

Public Sector

Employees:

7,800

Oracle Products & Services:

Oracle Database
Oracle Spatial
Oracle Database Lite Mobile Server
Oracle Database Lite Client
Oracle WebLogic Server
Oracle Service Registry
Oracle SOA Suite
Oracle JDeveloper
Oracle Application Development Framework
Oracle Universal Content Management
Oracle Data Integrator
Oracle Identity and Access Management Suite
Oracle Support

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Redora bv
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– Martijn J. Peltenburg, Operations Coordinator for the Division of Livability and Surveillance, Department of City Management, City of The Hague

In 2009, The Netherlands implemented the Fixed Penalty Notices Act, which specifies a new procedure for local government intended to make enforcement related to environmental offenses such as littering and minor disorders much more efficient. The law applies to the four largest municipalities in The Netherlands, known as the G4 (The Hague, Amsterdam, Rotterdam, and Utrecht).

Under the new law, the special investigating officers of The Hague’s Division of Livability and Surveillance within the Department of City Management work directly with the Haaglanden police force. The special investigating officers have the power to investigate and issue tickets on the spot for offenses in public spaces related to, among other things, littering, dogs, advertising, hotel, restaurant and café licenses, traffic, and parking. By using the fixed penalty there is no need for intervention by the courts to get a criminal conviction, and failure to pay the fixed penalty leads to higher penalties and even imprisonment.

Prior to the advent of the Fixed Penalty Notices Act, The Hague issued all tickets on paper. In the new situation, the City of The Hague and the Central Fine Collection Agency (CJIB) of the Ministry of Justice must issue and process tickets that are completely digital, based on electronic data interchange (EDI). The entire process, from the issuing of the ticket on the street right up to the CJIB’s logging of the ticket, must be paper-free.

Key Benefits:

- Became the first municipality to implement the mobile element and digital back office for the Fixed Penalty Notices Act
- Saved time and prevented errors with a structured back-office process
- Gave surveillance teams the best possible support to carry out their work efficiently
- Guaranteed the quality of the information and optimized security
- Made the progress and status of the production process completely transparent
- Enabled optimal connection and data exchange with external organizations such as the Central Fine Collection Agency
- Provided maximum functionality with minimal ICT effort with a “solution as a service” approach
- Freed surveillance officers from reliance on mobile network availability, allowing them to issue tickets at any time

To support this process efficiently, the Division of Livability and Surveillance needed a robust and scalable IT system. It selected a “solution as a service” from Oracle Partner Redora, based on Oracle Fusion Middleware and Oracle Database technology. Together, Redora and Oracle were able to provide the City of The Hague with a fully functional IT system in a very short time frame. The new system supports the entire process from the digital issuing of the ticket via a handheld computer to monitoring, processing, and settlement at the CJIB. With the new system, The Hague became the first municipality to successfully establish and implement the mobile element and the digital back-office for the Fixed Penalty Notices Act.

“The surveillance teams of the City of The Hague’s Department of City Management work hard to improve the livability of the city. They do this seven days a week in three shifts. Redora’s standard solution, based on Oracle Fusion Middleware and Oracle Database technology, enables surveillance teams to process tickets issued much more efficiently and accurately using mobile handheld computer devices. What’s more, the entire back office is now very transparent and well-organized,” said Martijn J. Peltenburg, operations coordinator for the Division of Livability and Surveillance, Department of City Management, City of The Hague.

Peltenburg added, “The short time frame, in particular, was the most critical factor for us. This meant that we absolutely needed proven technology.”

Replacing Paper-based Processes

The Hague’s new electronic ticketing process has brought about an enormous improvement in terms of efficiency.

Peltenburg explained, “In the past, we issued tickets for offenses such as dog offenses on paper. Only when the ticket got back to the office was the administrative staff able to process it.”

Manual processing was necessary to be able to generate management information and notify other parties, such as the CJIB and the police. These other parties had to input the information from the paper ticket manually into the computer systems within the justice system that provided for penalties and adjudication.

“The City of The Hague now has all the functionality it needs within an integrated solution that fully meets the requirements when it comes to security, scalability, system protection, and connectivity with a range of external systems. This is based on optimal fine-tuning of the Oracle solutions and the use of open standards.”

Martijn J. Peltenburg
Operations Coordinator
Division of Livability and Surveillance
Department of City Management
City of The Hague

Peltenburg also noted that as the tickets were hand written, the process was laborious and error-prone. Not only that, but the paper ticket form did not include any business rules governing how users were to fill it out, which resulted in required fields that were often left blank. In addition, it was difficult to get and maintain insight into the status of specific tickets as well as the overall production.

“Here in The Hague, we wanted to make the ticketing process more efficient and user-friendly for the special investigating officers, but the general public benefits too. We can now focus more on the quality of the process, something that, in the framework of legal certainty and the equality of rights, is good for members of the general public who are, in fact, involuntary clients of our organization,” Peltenburg said.

Fulfilling Rapid Development Requirements

The Division of Livability and Enforcement faced various challenges when it came to introducing the new system. The biggest of these, though, was the time pressure.

“Orientation started in September 2008, with January 1, 2009 set as the target date for implementation. Despite the short time frame, we did not want to make any compromises when it came to the robustness, scalability, availability, or security of the system. In addition, user functionality was a key focus. Users had to be able to work efficiently on the street and have access to all the relevant data. Connectivity was, therefore, also crucial. At the same time, administration processing had to be well executed, including the ability to provide data to the Central Fine Collection Agency in a structured way,” Peltenburg explained.

Oracle business partner Redora met all the needs of The Hague on all these fronts with a solution-as-a-service, based on Oracle technology. This standard solution supports the entire process, including workflows, options for dossier building, and checks on data quality and integrity.

Leveraging Software-as-a-Service

The Hague opted to have Redora take over the entire technical side of the solution, enabling the city to concentrate on the organization side in relation to the introduction of the legislation. This was made

possible by the fact that the IT system is a standard solution delivered as a service.

At the City of The Hague's request, Gemnet, an information and communication technology (ICT) service provider for the Dutch public sector, is hosting the solution in a dedicated administrative environment that The Hague also obtains in the form of a service. This takes concerns regarding the solution's ICT aspects out of the city's hands.

"Choosing Redora's Oracle-based solution and Gemnet gives us an effective and well-functioning whole. Moreover, it means we now have a three-part subdivision of the system in the presentation layer (handhelds), mid- and back-office (Oracle), and data management and data connectivity via Gemnet. This allows us to be very flexible in relation to our partners, like the CJIB and the police. We can always choose the best solution based on one of these three areas, since we, as a professional organization, aim to be able to provide our employees with the best tools available," Peltenburg said.

Facilitating a Complex Data Exchange

The solution efficiently supports a complex and interlinked collection of subprocesses, including data exchange with third parties. This requires seamless connectivity of all the components and the use of open standards.

Special investigating officers input the tickets electronically on the street and print a ticket for the offender via the mobile handheld and printer. If, for some unexpected reason, there is no connection, the special investigating officers can still issue fines on location. On such occasions, the handheld stores the data locally and then synchronizes it with the back office when it later re-establishes a connection.

With Oracle technology, Redora has provided the city with a complex chain of functionality in a very short period of time. Oracle Application Server, with its multiple nodes, guarantees scalability. This is important because even though the application was initially launched with 100 users, over time other services will also use the back-office system.

Further, the system has optimal availability thanks to the decision to choose a hosting model via Gemnet.

“We were looking for a partner that we could rely on, not least because our people are working outside the office on the street. Malfunctioning software can mean the difference between conflict or no conflict with a suspected offender. Oracle provided the standards-based, reliable technology we needed.”

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Department of City Management
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The Hague ensures security and dependable mobile communication with Oracle Identity and Access Management Suite, as well as Oracle Database Lite Mobile Server and Oracle Database Lite Client. The seamless document management process, including storing of the ticket data, is possible due to Oracle Universal Content Management.

When it comes to connectivity and management of the various subprocesses, The Hague has benefited from use of Oracle Enterprise Service Bus, Oracle Data Integrator, Oracle Application Development Framework 11g, and Oracle BPEL Process Manager. Redora built a specific user interface based on these system components using Oracle Application Development Framework 11g. This provides users with a very intuitive and easy-to-use interface for their tasks.

“When we started out and let it be known what our technical ambitions were, these were received with a degree of skepticism within the organization. It was clear that things had gone wrong all too many times in the past, especially in relation to complex processes like this one. Choosing superior technology was the key to making our challenge easy again,” Peltenburg said.

Transforming to Information-Led Processes

The new system is allowing The Hague’s Department of City Management to transform from a complaint-led organization to an information-led one. The city plans to continue to expand the system and leverage this advantage.

“We can expand the use of the system in the future. One example is license enforcement, but it’s relatively easy to use it for other purposes. For instance, we are thinking about the notification or reporting of problems in public spaces. We could link such reporting, for example, to sanitation teams who could then swing into action right away,” Peltenburg said.

He added, “GPS technology on the handhelds will allow us to pro-actively notify our special investigating officers in the course of their surveillance activities. Let’s say they’re walking past an outdoor café where there appears to be nothing out of the ordinary. The handheld informs them that an amended license has recently come into force for the café. The special investigating officers can then immediately carry out a check on the café and

send the results straight back to the department that granted the license. That means that we can better reconcile the paper license and the reality on the ground, thus reducing the likelihood of violations while improving livability. That is our ultimate and only aim.”

Why Oracle?

The City of The Hague has chosen Oracle as one of the standards across its operations.

“We were looking for a partner that we could rely on, not least because our people are working outside the office on the street. Malfunctioning software can mean the difference between conflict or no conflict with a suspected offender,” Peltenburg said.

The City of The Hague now has all the functionality it needs within an integrated solution that fully meets the requirements when it comes to security, scalability, system protection, and connectivity with a range of external systems. This is based on optimal fine-tuning of the Oracle solutions and the use of open standards.

Implementation Process

The implementation process went very smoothly and with little effort from the Division of Livability and Surveillance due to the selection of a hosted solution.

“We were already on Gemnet. By choosing a hosted solution we were able to concentrate fully on the organizational side of things, such as training our staff on how to use the handhelds and explaining to the surveillance teams how processing worked and how to retrieve and use the data. We initially launched the system with a team of 10 people. We gradually expanded from there and we now have more than 100 special investigating officers working with the handhelds and the back-office system,” Peltenburg said.

The Hague is the third largest city in The Netherlands, with a population of more than 480,000. It is located in the west of the country, in the province of South Holland.