

# Exalead<sup>®</sup> “Tracks and Traces” Vehicles for GEFCO



## About GEFCO

GEFCO is the market leader in integrated logistics for manufacturers. The company provides multimodal transport and end-to-end supply chain services for industrial clients in the automotive, two-wheel vehicle, electronics, retail, and personal care sectors. A wholly-owned subsidiary of PSA Peugeot Citroën, GEFCO is one of Europe's top 10 logistics groups, generating revenue of €2.888 million in 2008. GEFCO's 10,000 employees serve customers in more than 100 countries on 6 continents. When GEFCO's vehicle track and trace service for automotive manufacturers began to falter under a heavy load, GEFCO tapped CloudView for an innovative, award-winning makeover that boosted performance, enhanced usability, and enabled operational business intelligence—at half the cost of the legacy solution.

**Website:** [www.gefco.net](http://www.gefco.net)

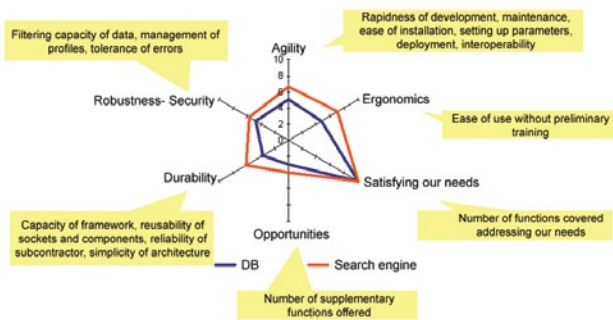
## Business Needs

- Cut data refresh & query processing rates
- Provide high performance for large data volume: 80 countries, 600,000 vehicles, 100,000 daily events
- Minimize upgrade costs; preserve existing IT investments
- Offer customers an innovative service

## Solution Benefits

- Data latency cut from 24 hrs to 15 minutes
- Query processing reduced from 10-30 seconds to 2 seconds maximum
- Costs reduced 50%; data access shifted from Oracle databases to search index
- Deployed rapidly, with a quick ROI
- Innovative operational reporting generated on-the-fly

## GEFCO Comparative Study: Search Engine vs. Classic Database Functions



## GEFCO's Challenge: Better Product "Track & Trace"

### Success = More Users & Data

GEFCO had an unfortunate problem with happy roots. They were attracting more and more clients in an expanding number of countries. At the same time, through a regular investment in new technologies (bar codes, GPS, PDAs, etc.), GEFCO was successfully capturing supply chain events at an increasingly granular level. The result of all this success was a rapid increase in the data volume, data sources and system users their vehicle track and trace portal needed to manage.

### Needs Outpacing Technology

GEFCO's existing portal could not keep pace with these changing demands: query response times were slowing to an unacceptable level, and simple yet voluminous information requests were impacting internal transaction processing.

### Unacceptable Compromises

"We were facing a true operational efficiency problem. Because our system could not scale to meet our evolving needs, we had to strictly limit direct access to production information to avoid degradation of transaction systems," explains Guillaume Rabier, Manager of IT Studies and Projects for GEFCO. "This meant shifting routine customer inquiries to replicated data that was batch updated once a day—a true handicap when one needs to share information in a timely manner to support effective decision making," adds Rabier.

### Time for Change

Against this backdrop, GEFCO decided it was time to revamp their portal. "We wanted to quickly provide our more than 10,000 users (partners, customers, sales and marketing staff, operations staff, senior management, etc.) with a simple, easy to use tool for tracking vehicles in real time across GEFCO's worldwide logistics network, while guaranteeing the security of highly confidential client data, ensuring the stability of our systems, and limiting our TCO," states Rabier.

## Selection Criteria

Following an intriguing suggestion by a former Technology Director at Caggemini, Guillaume Rabier began to envision an alternative architecture for the company's new Track & Trace service: a searchbased application, or SBA. Rabier's team launched an intensive study, and the results indicated an SBA would deliver better performance, agility, usability, and security—at a lower cost—than their current database-centered model. So, the team put together their requirements for a search engine:

- Global, real-time view of events
- Simple, Google-style keyword search; natural language querying
- Rich reporting and drill down on unlimited data facets
- Sub-second query processing
- Capacity to scale to any volume
- Support for real-time data updates (differential and incremental indexing)
- Security management at search engine rather than portal layer
- Rapid, non-intrusive deployment
- Reduced infrastructure cost
- Fast return on investment
- Agile, service-oriented architecture for fast adaption to evolving needs

*"With a search engine model, we were in another dimension. Our system was bottlenecking with a database of about 3 terabytes (3TB). But for Exalead, who regularly works with databases larger than 100TB, our 'overwhelming' volume was a drop in the bucket."*

Guillaume Rabier

## The Exalead Choice

During the diagnostic phase, Exalead was able to produce an operational prototype in only 10 days. It was immediately clear the platform would provide the Web-style simplicity GEFCO was seeking, with a single textbox for launching complex queries, support for natural language processing, and 'fuzzy' results matching. After a trial period of a few weeks, GEFCO was also convinced CloudView could efficiently address all the challenges linked to its complex database, specifically maintaining high performance in the face of large data volumes and a large user base, furnishing real-time information, deploying rapidly, and supporting fast, nonintrusive modification.

The GEFCO team was also pleasantly surprised at the platform's capacity to produce rich, on-the-fly operational reporting. They had not anticipated that a search engine could be so easily tuned to produce dynamic tables, charts, and graphs based on unlimited data facets. And the familiarity of the Web search engine interface meant users could simply sit down and start working with the tool - no training needed. Finally, the engine provided the strong, integrated security GEFCO required. Security was enforced down to the metadata level, and it was managed at the search platform level instead of the portal application layer.

## Deployment

In collaboration with ST Groupe (GEFCO's integrator), a production installation of the new portal serving several thousand users was deployed in a just few weeks, with a full version serving all users launched in 6 months. With this release, GEFCO was able to successfully scale information access without having to scale the underlying database infrastructure at considerable cost. It was also able to guarantee the future scalability and adaptability of its applications while preserving its existing infrastructure investments: the new platform runs on a basic Linux server farm while the Oracle database infrastructure remains on a high-capacity Unix cluster (pSeries IBM). This means the portal can be adapted and scaled as requirements evolve at a markedly reduced cost.

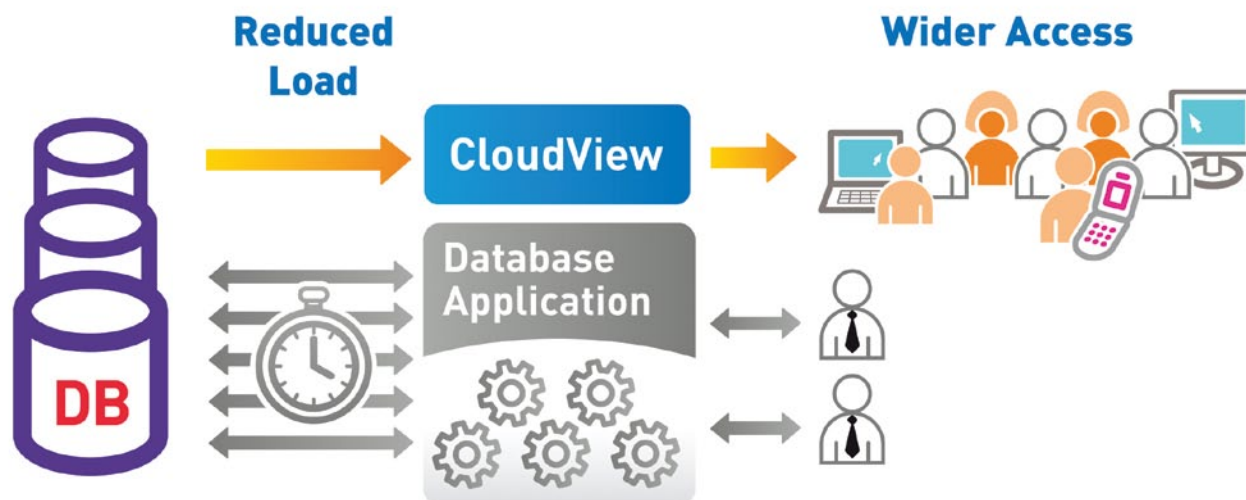
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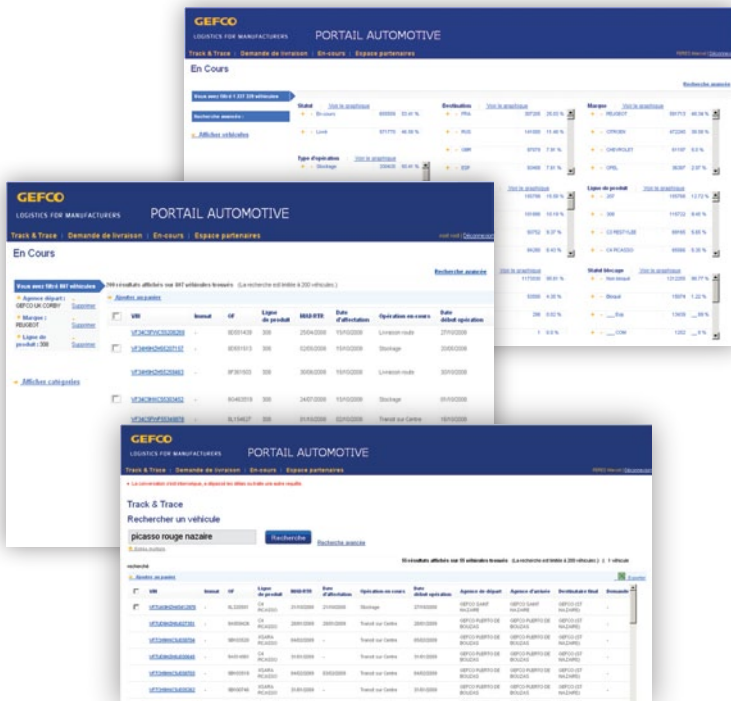
- An accelerated data refresh rate, cut from 24 hours to 15 minutes
- A 50% cut in the cost per user
- A 99.98% availability rate with a limited material investment
- A great improvement in information accessibility, with a simpler user interface, exposure for far more data facets, and the addition of quasi-real time operational reporting

*"Why didn't anyone think of this before?..."*

*Every day, I see thousands of events consolidated in real-time and I log on to the system just to be sure it's real!... The stability and performance of the application is astonishing given its highly innovative character."*

Guillaume Rabier





### ...And After

GEFCO continues to add new operational reporting functionalities, opening a wider window on production data. Performance remains high as these new functions are added, even though the client base continues to expand: "The system is extremely supple," notes Rabier. "With a search engine architecture, adding a new manufacturer is effortless, even though it means a substantial increase in data volume and users." Now, the company is preparing to deploy the same model for automotive suppliers, helping them optimize the provisioning of parts to automobile factories. This effort involves a database 10 times more voluminous than the vehicle track and trace system, and is particularly demanding in terms of data timeliness and quality. Launch for this application is expected by the end of 2009.

### What is 'Track & Trace'?

**Tracking:** Identify an item's current location ("Where is Mr. Smith's car?")

**Tracing:** Following the route an item has taken ("Where has Mr. Smith's car been?")

**Operational Reporting:** Realtime summary and analysis of activities ("How many cars of type X are in transport?")

Applicable to any type of product and any industry supply chain, a superior track and trace system provides:

- A fully unified, organization wide view of operations
- End-to-end pipeline visibility
- Real-time activity monitoring and reporting
- Workflow integration for just-in-time management

Collectively, these functions provide Operational Business Intelligence (OBI). With OBI, an organization can respond to risks and opportunities effectively and in real-time.



**Contact us** to discover for yourself why Exalead is the right search platform to work with your structured and unstructured information.

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### About Exalead

- E.U. Headquarters, Paris, France - U.S. Headquarters, San Francisco, CA
- Offices in 7 countries
- 250+ customers worldwide
- Founded in 2000 by AltaVista executives

Exalead is a division of Dassault Systèmes, whose 9000 employees and 6000 partners provide 3D based applications, PLM based applications, and Search based applications to more than 115,000 customers in 80 countries.

### Contact Us

**Exalead, S.A.**  
 10, place de la Madeleine  
 75008 Paris  
 France  
 Tel: +33 (0)1 55 35 26 26  
 Fax: +33 (0)1 55 35 26 27  
[www.exalead.com](http://www.exalead.com)