Ascendi Group: Transforming Toll Collection with Automated SAP® Software

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Company
Ascendi Group

Industry
Transportation and logistics

Products and Services
Toll management and collection services

Web Site
www.ascendi.pt/index.php

SAP® Solutions
The SAP® Electronic Toll Collection package

Partner
Accenture (www.accenture.com)

When Ascendi Group – one of Portugal's largest toll operators – needed to automate collection processes on the Grande Porto and Costa da Prata highways, it turned to the SAP® Electronic Toll Collection package. The result was a multilane free-flow collection system, comprised of 48 toll gantries. The package, which is integrated with Ascendi's back-end SAP ERP application, allows the company to expedite payment collection and provide better customer service via centralized management of data.

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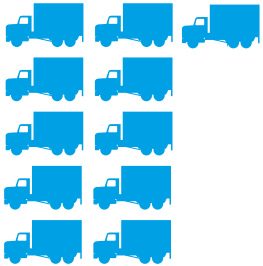
Going global – one continent at a time

Ascendi Group is a Portuguese company that specializes in managing and developing transport infrastructure concessions, or toll collection systems, on three different continents. It is part of Mota-Engil Group, a civil engineering and construction firm (owning 60%), and the Espírito Santo Financial Group (owning 40%).

In Portugal, Ascendi Group handles interests in both road and rail segments and has become the second-largest player in the market. It currently manages approximately 1,600 km of infrastructure, including 1,300 km of the country's primary road network. "We also have road concessions in four other countries: Mexico, Brazil, Spain, and Mozambique, totaling approximately 3,000 km of transport infrastructure," states Pedro Pinto, IT and toll director at Ascendi. Altogether, the company manages assets worth €6 billion in Portugal and €11 billion globally.



€11 billion

Assets managed globally

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Running transport infrastructure concessions profitably

Ascendi Group's mission is to manage and develop transport infrastructure concessions as profitable, long-term businesses worldwide. "Our vision is to innovate new ways of running concessions – to be ahead of the market in how we use technology to enable highly effective business processes," explains Pinto. "This requires partnering with trusted solution providers."

When the Portuguese government mandated changes to concessions along the Grande Porto and Costa da Prata highways, the group realized it needed to think outside the box. "Replacing the existing 'shadow toll' roads with traditional, manual toll systems was technically impossible and cost prohibitive," explains Pinto. "We needed an automated, multilane free-flow system – something that we'd never implemented or managed before."

The ideal multilane free-flow (MLFF) collection system would eliminate the need for human intervention; drivers would simply pass through concessions without stopping, and the vehicle would be detected by fully electronic devices – via transponders or through optical character recognition (OCR) technology for reading license plates.

"We also wanted an MLFF solution that could cluster all of the transactions of a given driver's journey – in other words, from entrance to exit off the toll road – and charge it as a single business transaction," explains Pinto. "It also had to support multiple payment options and systems."

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Searching for an integrated, vertically focused solution

Ascendi went on a search to find the best solution. Says Pinto, "SAP didn't have a vertical solution for our industry at the time, so we spent several months looking at specialized suppliers. We found good roadside equipment vendors, but they did not offer adequate support for commercial business processes like billing and customer care. We needed a more comprehensive solution."

Since Ascendi had been using the SAP ERP application since 2002, it reached out to SAP, hoping for some guidance. It found that SAP had a new industry-related solution under development. "The SAP Electronic Toll Collection package offered all the functionality we needed – and it could be integrated relatively easily with our existing SAP business enterprise software," comments Pinto. "This, for example, would simplify revenue management and invoicing due to data flow from the MLFF back-office solution to SAP ERP."

> "SAP Electronic Toll Collection was clearly the best fit for our needs – and it would integrate with our back-office SAP software for fast, efficient invoicing and other processes."
>
> Pedro Pinto, IT and Toll Director, Ascendi Group

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Leveraging best-in-class IT expertise and project management

Ascendi chose SAP partner Accenture to perform the implementation because of the consulting firm's extensive experience in the industry. "We knew there was no margin for mistakes, due to the project's social impact and high visibility," says Pinto, who then adds, "Accenture provided deep knowledge of the electronic toll-collection process and best-in-class IT systems integration and project management expertise." As an early adopter of the SAP Electronic Toll Collection package, Ascendi also participated in the SAP Ramp-Up program, which allows customers to take advantage of accelerated support channels and coaches.

The implementation involved a mix of standard and custom functionality. "Because the roads are owned by the government, we required some specialized processes," explains Pinto. In addition to legacy systems used for toll-collection activities on two additional roads, Norte and Grande Lisboa, Accenture integrated third-party toll and MLFF equipment with Ascendi's new SAP Electronic Toll Collection package.

48

Charging points installed across two concessions

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A streamlined, automated toll-collection process

Ascendi's new MLFF system consists of three main components:

- Roadside equipment at the charging points, such as antennas, video cameras, and lasers used to detect and classify vehicles
- Operational back-office software to process transactions as vehicles move through toll gantries
- Back-office business software from SAP to bill customers and manage their information

Soon after going live, Ascendi began processing in excess of 400,000 trips per day at the 48 gantries on the Grande Porto and Costa da Prata highways. Cost is automatically determined depending on the type of vehicle and other factors. SAP Electronic Toll Collection also performs all procedures required for payment collection, sending and receiving data from external entities, handling customers, and enforcing debts.

Finally, SAP Electronic Toll Collection provides an integrated view of the customer and supports violation processing. Ascendi is now able to more effectively manage communications with customers – which involves around 1 million pieces of correspondence per year and some 1,000 calls per day. "If customers have questions, we have full transparency into their transaction histories," says Pinto. "We can even drill down to the photo of a car's license plate where a toll was charged."

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Realizing the power of an integrated, automated solution

Ascendi's toll-modernization project was cited as one of the 10 leading technological projects in Portugal for 2011 by the research firm IDC. Currently, the company's MLFF solution processes more than 200,000 vehicles per day, generating approximately 1 million transactions on a daily basis. And because SAP Electronic Toll Collection aggregates transactions into "trips," customers can easily comprehend their invoices. In addition, they now get better care, since reps can resolve 90% of all issues on the first call, due to fast access to customer details.

There are other benefits too. "We can centrally manage payment collection for all incoming transactions and quickly open new concessions using roadside technology from any vendor. That's because everything rolls up automatically into the back-office SAP software using centralized, standard processes," says Pinto. "This gives us great agility and control over our processes. And it provides us with the transparency we need to operate efficiently." The software also makes it easy to ensure exemptions and discounts are given to certain vehicles as defined by Portuguese regulations.

In addition, the solution is helping to facilitate new business. Ascendi Group is now known for having a state-of-the-art, cost-effective system, and governments are proactively contacting the company to learn more.

> "We've benchmarked our solution and found that we're getting great performance. And we've beaten all predefined key performance indicators, such as employee productivity and efficiency."
>
> Pedro Pinto, IT and Toll Director, Ascendi Group

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