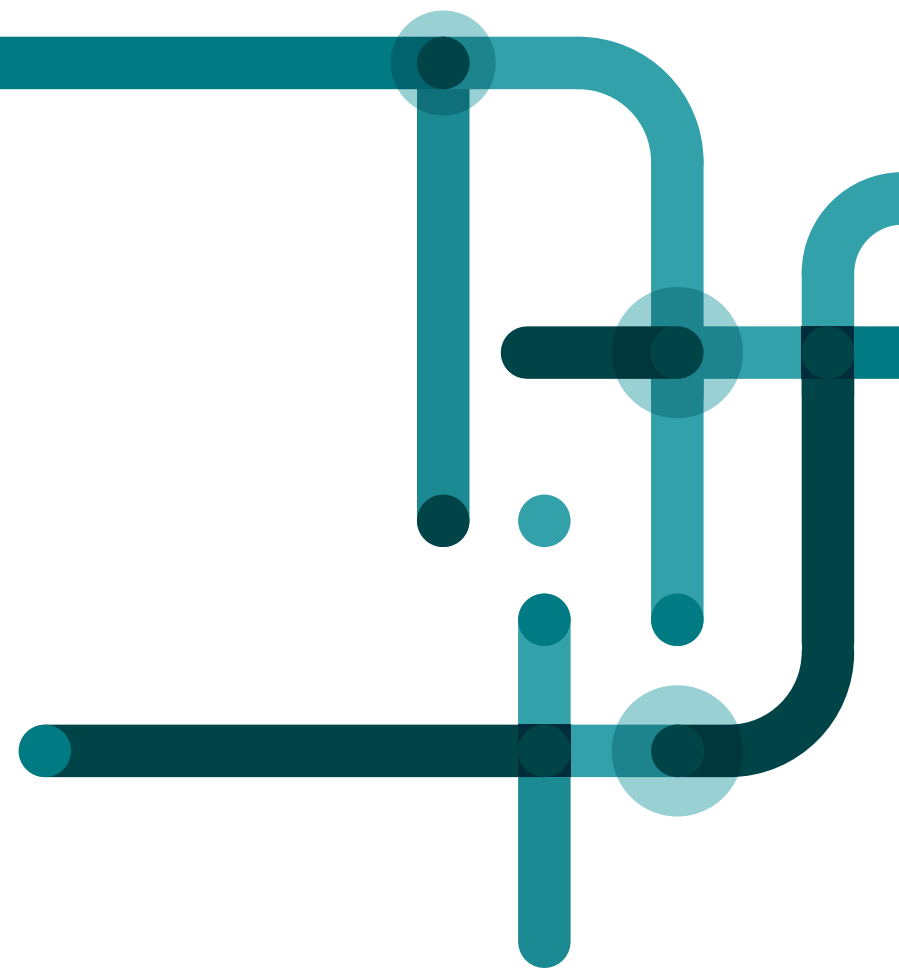A-to-Be

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Mobility-Beyond

CASE STUDY

Automating Manual Tolling
Brisa

2008

Operation optimization has for long been a trend in order in Brisa. In 2007, following some field trials on controlled environments, Brisa's Operation challenged A-to-Be® to design a fully automated and auditable toll booth. It would target all toll collection scenarios, lowering operation costs and increasing service levels for road users.

A-to-Be® devised a project codenamed **eToll**, starting on May 2008 in Brisa concession. **Following this first successful implementation, Brisa chose to adopt the solution on all its concessions, which ultimately resulted on over 300 units fully operational throughout Portugal, as of 2010.**

The basic challenge was in optimizing human resources' usage, fulfilling all toll collection scenarios. Also full compatibility with already existing systems and infrastructure would have to be assured. Lanes should be commutable (human operated or automated modes); Tolling processes in place within the Operator's organization had to be redesigned.

For certain toll plazas and periods of the day, not only traffic can be extremely low, but the labor cost is higher, especially during night time shifts. If these toll collection points became fully automated, significant operational expenditure could be achieved. Besides all the technical and operational issues, human behavior and acceptance also had to be cared for. A new working scenario with remote operators, the customer learning curve, and the social impact were raised by the deployment of such machines.

As Brisa's primary contractor for toll solutions, A-to-Be® team used its 20 year experience on toll systems to devise the technical solution and design the operation workflows and interfaces.

Both hardware and software projects were managed in-house, along with supplier selection, production and deployment. Our innovation network also played a key role on specific phases.

Our R&D unit designed all prototypes and managed the entire tolling network management system and Back office software releases, along with high-level maintenance support. Our Logistics unit efficiently handled the **product's industrialization**; Installation's unit dealt with the tight scheduled and geographically dispersed deployment programs. Maintenance services' unit commits daily so that the best possible operation levels of service are delivered to the road user.

From the Toll Road Operator perspective, operational costs were significantly optimized, and the transaction cost dropped. This implementation was a case-study, so much so that other road concessions' operators were encouraged to adopt our solution.

Operation of automated toll booths revealed itself efficient on its purpose – **major cost savings were a reality**. **Service levels increased**, since every existing toll lane is now available without relevant cost increases.

As A-to-Be®'s operation was integrated on the daily routine, **opportunities for further return were identified**: the handling of new devices gave room for **new maintenance competences**, and considering the operations scale, the **potential for new external technical services and partnerships** is a reality; moreover, considering the system's highly detailed and real time cash monitoring level, **money handling activities can be optimized, thus reducing even further the operation cost**.

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Facts & Figures

300
Units
Fully Operational

Cost saving
Significantly optimized operational costs

Service Levels Increased
Significantly optimized operational costs

Project Location

www.a-to-be.com