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# Roots Software improved PDF generation speed 10X using iText in Car-Pass

## THE CHALLENGE

As the volumes and complexity grew, Car-Pass was significantly struggling with the performance, maintainability, scalability, traceability and security of their current IT solution. To remedy this, Roots Software was selected to completely rebuild the Car-Pass platform. Moreover, Car-Pass requested to have its new platform in production within one year from the start of the project.

Regarding the document requirements (PDF tool), Car-Pass insisted on the implementation of a fast and reliable tool to generate Car-Pass certificates and other PDF documents, based on templates adjustable by the end-user. This solution should keep the footprint (PDF size) to a minimum and come with a transparent and affordable license.



## BACKGROUND

### Roots Software

Specializes in business driven, sustainable and customized software solutions.

### Car-Pass

A non-profit agency responsible for preventing second-hand car odometer fraud in Belgium.

- Manages a central database of odometer readings and issues Car-Pass certificates to sellers.
- In 2013 collected 14,676,983 odometer readings coming from 6,143,554 active vehicles.
- Issued 777,790 Car-Pass certificates.

### Project

Completely rebuild the Car-Pass IT system dating back from 2006.

- Handle the speed and volumes required for processing mileage and delivering Car-Pass certificates.
- Use the reliable and high-performance iText PDF library to build the business critical PDF document generation requirement including dynamic PDF templates and QR codes.

## THE SOLUTION

After comparing tools, suites and platforms versus different Application Programming Interfaces (APIs), Roots Software selected iText as the perfect solution for the Car-Pass system needs. Several characteristics of iText were the deciding factors:

- Lightweight – iText did not require any large applications, servers or manuals to engage. Coding with iText can be very concise, with clean and efficient code.
- Powerful – iText gave flexible approaches with full control of PDF structure. It allowed developers to work on a high-level to manipulate documents, or use a low-level API to perform advanced PDF development.
- Comprehensive – iText had all the features needed to support QR codes, manage PDF templates with Acrobat Pro, and produce documents that comply with PDF standards in any PDF tool.
- Fast and efficient – iText helped manage footprint (from 106 GB to 20 GB savings on internet traffic) and allowed for fast document generation speed.
- Scalable and easy to maintain – iText easily integrated in a SOA (even OSGi friendly) and was very low on technical maintenance.

## RESULTS

The biggest source of ROI was achieved through the superb performance for the new Car-Pass system. Thanks to the SOA based architecture and good implementation of iText, document generation speed improved 10-fold, to under 90 milliseconds per Car-Pass certificate (compared to 900 milliseconds before). This way, Car-Pass could render up to 10 certificates at the same time.

The Car-Pass project was completed within deadlines, while achieving all of Car-Pass's critical requirements. As one of the most comprehensive, actively developed and documented PDF libraries, iText helped cut on development time and build quality custom scenarios with less effort.

“With iText we have the peace of mind that we are delivering a solid solution to our client.”



**KOEN DEHAEN,**  
MANAGING PARTNER,  
ROOTS SOFTWARE

Request more information about iText at [itextpdf.com/sales](http://itextpdf.com/sales).

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