



## E-ticketing development – The Future Processing Way

Future Processing successfully developed smart card and other applications as part of an e-ticketing platform for Parkeon.

### Objectives:

- Parkeon required rapid software development at short notice
- The development had to meet a tight budget
- The software delivered needed to be of extremely high quality
- The in-house Parkeon team wanted to work closely with the outsourcer's team and develop a strong relationship with them

### Background

The Parkeon Group is the UK market leader in transport ticketing systems. In 2008 the firm began developing a new, powerful smartcard-based e-ticketing platform, called eBus, that would support a number of smartcard types defined by the ITSO standard. The standard allows passengers travelling across the UK to use the same card with various ITSO-compliant services providers.

### Why outsource?

Parkeon runs a core in-house IT development team in the UK. When development for the eBus platform came up, the Parkeon team decided that outsourcing would be the most appropriate route.

Christopher Octon, Product Development Manager at Parkeon, explains, "Our in-house team cannot accommodate larger projects and adding to the team is not cost effective. Outsourcing provides us with exactly the right level of expertise – sometimes skills and

### Results

The project was 40% less expensive than outsourcing it in the UK or developing it in-house, with comparable, if not better results.

Testing time for entire product reduced by 90%

The high-quality software delivered met all of Parkeon's requirements and addressed additional points too

The outsourced work became a key to the success of the overall e-ticketing platform



experience that we don't have in-house. It's also really flexible as most of the time we aren't running large-scale projects and so can do the required development ourselves. "

Initially the Parkeon team thought it would outsource the eBus development to India, but then began to consider near-shoring to Poland as an option. Octon continues, "Poland met our requirements across the board and appealed to us on several levels. It is at least as cost-effective as other off-shore destinations and considerably better value than outsourcing in the UK. Polish software development houses seem to offer a lot of flexibility in terms of approach. We also found they combined a similar working culture to us, particularly in terms of communication, with exceptionally high-quality technical skills."

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The Parkeon team visited six different software development companies in Poland. They chose Future Processing because of its 'can-do' attitude and range of skills. The company's chief executive, Jaroslaw Czaja also had extensive UK experience having previously worked and studied in England.

### **Implementation**

Parkeon asked Future Processing to work on aspects of the smartcard related development, including operations on, Desfire and MiFare. The multi-user distributed software architecture consisted of many layers and Future Processing's responsibilities lay in various areas including development of back office subsystems as well as ticketing machine components. The software utilised .NET framework and was built around web services as a means of integrating the whole system. The software Future Processing developed became a key part of the overall smartcard platform.

### **Testing**

The nature of the project meant that it required extensive testing in order to meet the ITSO standard. Future Processing's quality assurance team designed hundred of test cases, most of which were performed automatically. This automation, developed jointly by Parkeon and Future Processing, was used by the company not only on the sections of the project Future Processing worked on, but across the entire eBus product, resulting in a testing time-saving of 90% for the platform.

According to Octon, "The testing automation delivered the same quality in the one tenth of the time. We are going to use this testing method for most of our software development from now on."



## Project Management

The near-shoring approach paid off for Parkeon from the outset. Before the project even began, Future Processing sent some of its senior developers to the Parkeon offices to fully understand and discuss the project. Octon says, “There are many outsourcers, who because of location, rely on a paper spec to develop something but when you see what they have done, it isn’t what you wanted because they never really understood the project. The Future Processing team made the effort to come on site, understand what we wanted and discuss their ideas for delivering it with us. It made a huge difference to the end result.”

In addition because Poland is just a three-hour flight away, Future Processing team members travelled regularly to the UK, often coming just for a few days. Outsourcers based further away often have to send project staff for a single, longer block of time and are unable to change the staff on site to meet the evolving skills needed for each stage of the project. “Having the right people on site at the right time and having just one hour’s time difference with Poland meant that the Future Processing team were able to resolve any issues extremely quickly and easily,” adds Octon.

While the Parkeon in-house team was itself ultimately responsible for the project management, it was impressed with Future Processing’s approach to the project. “We developed a strong relationship with developers and I would say that everyone on the team wanted the project to succeed. They had a very positive attitude, but also offered great integrity. For example, if there was a hiccup they told us straight away and didn’t try to brush it under the carpet. That honesty helped our relationship which in turn contributed to the success of the project,” comments Octon.

## The Future

Since Future Processing completed its work on the eBus project, Parkeon has outsourced increasingly complex software development to the company and has continued to use the automated testing it developed. Octon says that he plans to continue working with Future Processing due to three key reasons: the high-quality software it delivers, the cost-savings it offers and the flexibility of approach, which makes working with the company so easy. He concludes, “I remain convinced that the high level of design and the quality of testing provided by Future Processing has resulted in increased quality and a faster time to market for our systems. It’s hard to see our software development future without Future Processing.”

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