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CASE STUDY
GTR Windows 10 Migration

LEGACY BOX
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THE CLIENT

As the UK's largest rail operator, GTR runs Southern, Thameslink, Great Northern and Gatwick Express services, equating to 24% of the country's daily passengers across an 800 miles-long network.

UK operator Govia Thameslink Railway has extensive experience running complex and challenging rail operations and has managed significant change programmes in recent years.

Most recently this includes the £2 billion multi-fleet roll-out programme which saw more than 1,500 new carriages introduced, making one of the UK's oldest fleets, one of the most modern, in order to meet rapidly rising passenger demand.

THE CHALLENGE

GTR had already migrated their office-based PC estate to Windows 10, but faced a challenge to complete the roll-out to the fleet maintenance team. Trains need to be diagnosed and tested for faults when trains return to the depot for maintenance. The problem was that many of the software applications used were 16-Bit or 32-Bit legacy applications, some 25 years old!

GTR needed a way to continue to use these applications in a secure way as trains are classified as national critical infrastructure, therefore any solution would need to comply with the National and Information Systems (NIS) regulations.

THE PROBLEM

40 applications were initially identified as being problematic or having issues running on the new standard Windows 10 64-bit OS so specialist solutions and expert knowledge was required.

> "GTR had approached me about some legacy applications causing delay to their Win10 go live. As their trusted technology advisor, I knew Triangulate's niche Win10 solutions would be of help. For customers who have really old business applications they cannot get rid of or modernise, I would highly recommend having a conversation with Triangulate."
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> **Tugba Yilmaz, UK Travel and Transport Technology Strategist at Microsoft**

GTR approached Microsoft for a solution who recommended an engagement with Triangulate Distribution, experts at dealing with legacy applications. Triangulate have the technical expertise to analyse each application with multiple tool-sets to migrate to Windows 10.

THE SOLUTION

Triangulate recommended a two-pronged approach to remediate the identified problematic applications. The preferred route would be to get as many of the applications running natively on Windows 10 64-Bit, with the remaining applications put into a secure containerised solution. A project was initiated and 75% of the problematic applications were packaged by the Triangulate's professional services and packaging team to run natively in Windows 10 64-Bit. The remaining 25% could not be packaged to run natively. After having tried and tested a number of solutions, Legacy Box was proven to be the best solution for these older applications to work and ensure that GTR could meet the requirements of the NIS Regulations.

THE TECHNICAL DETAILS

These applications connect directly to a variety of different trains in GTR's rolling stock, many using RS232 Serial cables. This meant that to get these applications working on Windows 10 64-Bit they would need to be containerised with a solution that supported USB pass-through. Legacy Box was developed specifically to solve the remaining legacy application issues and is now deployed to all of GTRs fleet engineering teams. Further, hot swap-able USB means that fleet engineers can change applications and choose which USB devices they want to use for the containerised applications.

"We were pleasantly surprised that Legacy Box worked first time, out of the box, whereas others required a fair amount of config changes to suit our needs. Having this means that we do not need a specialised build for the teams in the depots. We're able to issue standardised laptops with a single and simple build process, so regular Feature Updates and Autopilot are now easily within our grasp".

**Steven Turner,
EUC Consultant Architect at GTR**

THE BENEFITS

Having implemented new Application Lifecycle Management processes GTR are now using Triangulate as their packaging partner to ensure all applications, in their portfolio, are packaged properly and tested to ensure they work as required, across all depts within GTR. Moving forward with changes to meet the ongoing business needs, the ever changing security landscape, along with Microsoft's feature updates can now been planned with confidence, with greater control over the Application Portfolio for the estate.

"Triangulate focused on understanding the challenge before proposing solutions. This ensured that no application has been left behind in our journey to Windows 10. The business worked collaboratively with GTR's internal IT and Fleet teams, and now package all of our applications. As a trusted partner we can rely on their proven packaging experience, knowledge and support in proposing open solutions to allow us to manage our Windows 10 evergreen estate."

**Aidan Shanahan,
Head of Information Technology at GTR**

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