



CLIENT CASE STUDY

How robotics and digitisation are pushing new boundaries in defence engineering



Defence

Expleo is providing naval engineering design for a major defence client. By bringing digital innovation, including Robotic Process Automation (RPA), our team has delivered extensive time and cost efficiencies in a secure way. Expleo's combination of core engineering and robotic automation expertise offers exciting opportunities across the competitive defence sector.

Technology is at the heart of the Expleo offer:

£1m

cost savings on a single process automation

Digital Kanban dashboards

showing real-time data on client KPIs

50–60%

improvements across the project, in the form of quality improvements and reduced rework costs

35,000+

Stage 3 production outputs direct into the client's operations teams

40,000 hrs

of complex Stage 2 change requests delivered to date

Outputs delivered on time and above customer-set quality

95%

right-first-time (RFT) target



Project background & challenge

Expleo has taken responsibility for the outsourcing of a major design element on a critical project for a large defence OEM. To date, we have delivered 35,000+ Stage 3 production outputs direct into the client's operations teams and more than 40,000 hrs of complex Stage 2 change requests. These skills are transferable beyond the production stages into downstream support and in-service, as well as a wide range of different production projects within the secure defence arena.

In the competitive defence market, where margins are squeezed by government budget cuts, digital technology has become a critical asset in the drive to reduce costs. The client has set its engineering teams the challenge of securing process efficiencies through innovative digital solutions.

Solution

£1 million cost savings on a single process

Expleo has a track record of driving cost efficiencies with process automation, working in partnership with clients to optimise the delivery of their automation initiatives, in line with their overall business strategy. Having provided proof of value, our engineering and quality teams introduced RPA as part of a pilot scheme for the client to reduce repetitive tasks that would typically take up 30% of an engineer's time.

Previously, digits that were inputted for a 2D drawing would need to be manually added again into a separate form for the 3D design. Now, the software 'robot' can do that administrative workload automatically.

Centralised dashboard aids RFT production

Expleo's project management team used SQCDP (Safety, Quality, Cost, Delivery and People), Power BI and LeanKit applications to reduce costs through task optimisation, analyse data on interactive consoles and supervise production in line with the client's KPIs. Instead of the traditional whiteboard/paper-based approach, the Kanban is digitised and updated on 75-inch screens on the production floor, which allows real-time progress monitoring.

The centralised dashboard provides a one-stop-shop for data and project management. Client benefits show in terms of efficiency and transparency, and also RFT production through rapid identification and rectification of errors.

“ RPA leads to role augmentation and also improvements in morale, as personnel are no longer faced with the same mountain of repetitive tasks. Engineers can go engineer.”

Rebecca Keenan, Head of Process Automation, Expleo

“ Change management is also critical for success, especially in an industry that is new to the potential benefits of RPA. Our robotics team brought valuable experience from previous projects across different sectors, gaining leadership support and growing the cultural acceptance of RPA.”

Jonathan Taylor, Vice President – Marine, Expleo



“This is just the beginning for the client. There is huge scope to implement various process automation solutions, including machine learning and AI, across multiple streams of work in future that will extensively increase efficiencies across the business.”

Paul Kenyon, Client Director, Expleo

How does process automation work?

Process automation is changing the way that organisations service their customers and workforce. Solutions can include Robotic Process Automation (RPA), Optical Character Recognition (OCR), process mining, analytics, chatbots and artificial intelligence.

Processes to automate with robotics should be:



Rules-based, with digital structured inputs



Working with high transaction volumes



In high demand, or with an existing backlog



Repetitive, traditional processes (which reduce time spent on customer-facing or creative activities)



Facing issues with process adherence and/or quality (in need of consistent logging, recording, and easily accessing data)

Outcome

Expleo aims to achieve 50–60% improvements across the project, in the form of quality improvements that reduce the need to rework faults, due to higher RFT completion rates. The elimination of manual effort also enables resources to be refocused to critical design blockers or allocated to other programmes, saving the client £1 million.

Expleo is seeing significant benefits in the application of robotics and digitalisation in naval engineering. Further benefits are anticipated as the project progresses, but substantial gains have already been realised.

For further information, or if you have any other questions, please write an email to info@expleogroup.com