



## Process Automation

*Robotics, Cobotics, and Additive Manufacturing*

### What is Process Automation?

Process automation refers to using advanced technologies to streamline repetitive tasks, reduce errors, and optimise operations. Key enablers include robotics, cobotics (collaborative robots), and additive manufacturing (3D printing). These technologies enhance productivity, improve precision, and support innovative approaches across various industries.

### Key Technologies in Process Automation

<b>Robotics</b>	<ul style="list-style-type: none"><li>Machines designed to perform tasks autonomously or semi-autonomously, often replacing manual processes in manufacturing, assembly, and logistics.</li></ul>
<b>Cobotics</b>	<ul style="list-style-type: none"><li>Collaborative robots that work alongside human employees, enhancing efficiency by handling repetitive or strenuous tasks while humans focus on higher-value activities.</li></ul>
<b>Additive Manufacturing</b>	<ul style="list-style-type: none"><li>Commonly known as 3D printing, this process builds objects layer by layer from digital designs, enabling cost-effective production of complex, customised components.</li></ul>

### How Can Process Automation Help Your Business?

<b>Increased Efficiency</b>	<ul style="list-style-type: none"><li>Automate repetitive and time-consuming tasks to boost productivity.</li><li>Reduce downtime with robotics performing 24/7 operations.</li><li>Improve accuracy with precision manufacturing and assembly.</li></ul>
<b>Cost Reduction</b>	<ul style="list-style-type: none"><li>Lower labour costs by automating manual processes.</li><li>Reduce material waste through precise additive manufacturing techniques.</li><li>Minimise maintenance costs with predictive insights from automated systems.</li></ul>
<b>Improved Safety</b>	<ul style="list-style-type: none"><li>Deploy robotics and cobotics to handle hazardous or heavy-duty tasks.</li><li>Reduce workplace injuries by limiting human exposure to dangerous processes.</li></ul>
<b>Customisation and Innovation</b>	<ul style="list-style-type: none"><li>Leverage additive manufacturing for rapid prototyping and bespoke product designs.</li><li>Respond quickly to market demands with flexible and scalable production methods.</li></ul>

The Digital Transformation Flexible Fund (DTFF) is delivered by all local authorities in Northern Ireland under the Full Fibre Northern Ireland Consortium (FFNI) and supported by Invest NI. The project is part funded by the NI Executive, UK Government, Department of Agriculture, Environment and Rural Affairs (DAERA) and all local authorities in Northern Ireland.

## Examples of Process Automation Applications under DTFF Funding

<b>Manufacturing</b>	<ul style="list-style-type: none"><li>• Use robotics to automate assembly lines, enhancing production speed and quality.</li><li>• Integrate cobotics to assist workers in tasks like welding, lifting, or packaging.</li></ul>
<b>Warehousing and Logistics</b>	<ul style="list-style-type: none"><li>• Employ automated guided vehicles (AGVs) to streamline inventory movement.</li><li>• Implement cobots for order picking, improving accuracy and efficiency.</li></ul>
<b>Healthcare</b>	<ul style="list-style-type: none"><li>• Utilise 3D printing for medical implants, prosthetics, and surgical tools.</li><li>• Deploy robotics to assist in precision surgeries or laboratory testing.</li></ul>
<b>Construction</b>	<ul style="list-style-type: none"><li>• Print custom building components with additive manufacturing.</li><li>• Use robotics for site inspections, bricklaying, or material handling.</li></ul>
<b>Retail and Hospitality</b>	<ul style="list-style-type: none"><li>• Automate inventory tracking and replenishment with robotics.</li><li>• Use cobots for tasks like food preparation, customer assistance, or cleaning.</li></ul>

## How DTFF Can Support Process Automation

The Digital Transformation Flexible Fund (DTFF) provides funding to help small and micro businesses invest in cutting-edge process automation technologies.

Eligible businesses can receive support for purchasing capital equipment, software, or bespoke system development, enabling transformative advancements in operations.

## Key Benefits of Process Automation for Your Business

<b>Efficiency</b>	<ul style="list-style-type: none"><li>• Faster processes and fewer errors.</li></ul>
<b>Scalability</b>	<ul style="list-style-type: none"><li>• Adapt to growing business demands with ease.</li></ul>
<b>Competitiveness</b>	<ul style="list-style-type: none"><li>• Stay ahead by embracing advanced technologies.</li></ul>
<b>Innovation</b>	<ul style="list-style-type: none"><li>• Enable rapid prototyping and customisation.</li></ul>

For further support or more information on DTFF funding and how process automation can revolutionise your business, visit [dtff.co.uk](https://dtff.co.uk) or contact the DTFF team.

The Digital Transformation Flexible Fund (DTFF) is delivered by all local authorities in Northern Ireland under the Full Fibre Northern Ireland Consortium (FFNI) and supported by Invest NI. The project is part funded by the NI Executive, UK Government, Department of Agriculture, Environment and Rural Affairs (DAERA) and all local authorities in Northern Ireland.