

## ENERGY AND RESOURCE EFFICIENCY

### CASE STUDY

# Nugent and Gibney Ltd

#### THE COMPANY

Nugent and Gibney is a family owned business established in 1976 that manufactures furniture for the licensed and catering sector worldwide. They specialise in bespoke contract furniture to suit clients' needs in their venue. Within their facility, they have a skilled workforce and specialist equipment to manufacture bespoke products.

#### THE CHALLENGE

The majority of products manufactured by Nugent and Gibney are made from different types of timber supplied in different formats, such as sheets and planks. Timber was the most abundant waste produced onsite, and as a result of a waste investigation, the company identified an opportunity for resource efficiency savings within its timber sheet cutting process.

Wooden chair backs were being cut from timber sheets, and because they used a manual bandsaw to cut irregular shapes from the sheets a large amount of surrounding material was wasted. Even small parts could not be nested closely together on one sheet, so 35% of the sheet was wasted. The equipment Nugent and Gibney had was limiting their attempts to reduce this waste, so the company had to look at alternative methods of producing the chair backs.



## **THE SOLUTION**

**With their knowledge of the equipment that was available on the market, the company identified a suitable machine that was ideal to produce the required product while optimising the use of the sheet the parts were being cut from.**

The company approached Invest NI to apply for assistance through the Resource Efficiency Capital Grant Scheme to enable them to purchase a new 5 Axis CNC machine. The savings were quantified and sufficient, so a successful application for 40% funding towards this project was made in May 2016 and the company installed the new system by January 2017.

## **THE OUTCOME**

The new machine is loaded with drawings and quantities of parts required and nests these closely together to maximise the use of the sheets and minimise the amount of waste sheet left behind. The cutting blade allows the parts to be nested together as it is able to follow irregular profiles, thus not needing surrounding material or taking second cuts as the previous process required. As well as minimising the waste, the parts produced were consistently accurate which resulted in fewer scrap parts.

The benefit for the company in investing and installing this new machine was that they achieved resource efficiency savings accounting for a payback of approximately three years. The current waste produced is now reduced from 35% to 5%, meaning fewer sheets of timber are purchased by the company yet the same output is achieved. Now the company's demand for timber sheet has reduced significantly. This has an environmental benefit beyond the company, due to less demand from forests and the associated CO2 emissions from processing and transport.

**"When we were made aware of Invest NI's Resource Efficiency Grant we had a look at how it could benefit our company. We identified a major opportunity to reduce the waste in our manufacturing process.**

**The grant firstly focussed on looking at waste within our business, which we now continue to monitor, and it helped us to buy the CNC machine that was best suited for our business. Without the grant this project would have taken longer to complete and the machine bought may not have been as efficient and we would not have achieved the substantial ongoing savings we are seeing now."**

Jim Nugent

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