Self-funding Efficiency

Biesse's Robbie O'Neill explains how simple changes can have a profound effect on your production and profits.

I f someone challenged you to make more money out of the products you're producing, how would you set about the task? Would you beat a better deal out of your raw materials suppliers to cut cost? Would you invest in a new machine, a new line, or additional staff to produce more product? Would you put your prices up? Any of these might produce results to a greater or lesser degree – but what if there was a much simpler way, a way that had a positive effect on your product quality, a way that didn't cost you much at all (or even self-funded) and gave you a competitive edge? You'd be interested, right?

The answer for many factories is remarkably simple, yet most manufacturers in the UK – and that includes some of the biggest – have either failed to notice completely what's staring them in the face, or have bought another machine, or machines, to make up for perceived shortcomings without analysing the need properly.

Let me take you on a cursory factory tour (of somebody else's factory) and see how many of the key indicators you recognise.

Starting in the warehouse, are there large stocks of boards that don't seem to be moving? In the factory, are the sawing, edgebanding and drilling operations usefully close to each other, or does it look like the machines have been sited where they'll fit? As the panels are cut, are the edgebander and

the drill keeping pace with the beam saw, or have more panels been cut than appear to be needed? Is it all getting a bit congested with cash piles of panels awaiting the next process? Over in the corner there's a substantial rest part pile. Does it look likely these offcuts will be dumped or burned because they're occupying space and no one has time to sort them out?

Logically enough, after the last process the larger cut-and-edged panels are at the bottom of the stacks that are palletised on trolleys. That means the assembler has to de-

stack them to get to the ones he needs first. He's working hard but he's wasting time. How many dropped or damaged panels do you think the manufacturer will have to remake? How many staff are working on cutting, edging, drilling and assembly? Five? Six? Ten? More? Does the factory strike you as well-organised and running like clockwork? Does everything have a place and is everything in it?

It's very possible that as many as eight or nine out of 10 furniture-making factories in the UK aren't as well organised, or as efficient as they could be and most would make a lot

There are many Winstore options and no two are ever the same.
Inset: The Winstore display screen.

Labelling components is a giant step in the direction of organisation.

more money if they implemented a few very simple changes – some of which will be entirely self-funding in next to no time.

"In furniture, nobody wants the same as the guy next door," Biesse's Robbie O'Neill explains. "Everyone wants uniqueness and it's a challenge to achieve that. There is more made-to-order, the variety is enormous and the quality, lead and delivery times are shorter. The workforce is increasing in costs, skills are fewer, people are in short supply, so maintaining quality is a real challenge.

"What manufacturers need to do is reduce the order-to-cash timeline and make what they need when they need it. Any manufacturer can easily forget how long it takes to make the product. The longer it takes, the more expensive the product becomes and they only get paid when it goes out of the door. We can make them more money, more competitive and give them a leaner process very easily."

Organisation is the key, and for many companies, the solution is nothing more earth-shattering than swapping horizontally-stacked trolleys for vertically-stacked racking. "By stacking vertically, you're stacking at source. You can optimise in a different way - by colour if you like - but if you have 15 kitchens and they're all white, you can group three batches together and then optimise, but tag each part with a batch identifier (this can be easily done on our software). If you have three racks in front of the saw or nesting

machine, you can populate them easily with each individual batch and it will reduce the space and distance an operator has to move when unloading. Now you can move the batch through each process together. Instantly, you get less damage and the heartbeat of the factory becomes consistent."

The more organised and the more consistent your operators are, the less time the job will take and the more product you'll get out of the door. With vertical stack management, you don't have to destack and re-sort and if your operators are super-organised, they'll stack base ends in one place, towers in another, wall ends in another, rails in another and bottoms in another. When they reach for a part, it'll be second nature where to find it.

"You can move the trolleys from process to process without damage and the parts are in assembly order when the assembler gets them. It's so much more efficient. We've improved production dramatically for some manufacturers just by adding a simple thing like a trolley. It changes the way you produce."

Robbie admits, giving manufacturers little gems like this doesn't help Biesse sell machines to begin with, but by helping companies realise greater efficiency in a small way, on many occasions it's led to interest in achieving efficiency in other areas – and that's where Biesse technology comes into its own.

Stand alone edgebanders and drills can be seen in most factories, but by automating both

the gaps between the processes and the machines themselves, that's where the real money is. Clever, but remarkably simple software programs and machines that talk to each other provide information feedback that enables everyone to know what's going through production, when it will be finished, how much production capacity is being taken up and how efficient material usage is. Biesse software is now able to do some of the tasks of a Manufacturing Execution System, like tracking and capacity planning via either bProcess or bCabinet 4. It enables you to split all the information from the ERP (or your order system), send it directly to the machines and track it so you are constantly up to speed with the production flow. If you already have an SAP, bProcess will distribute the programs as and when they are needed to every machine and process and it will create feedback.

"We're helping manufacturers achieve effective manufacturing," says Robbie. "We need to drive that improvement for the customer. Every customer says rest part management is a problem. Intentions are always good, practice isn't. The key is being organised – and being organised is a form of automation. Because the material is sorted, you can optimise it for better productivity, collect the parts and release them to complete the job. You get far more utilisation and you don't need robots. You can apply this
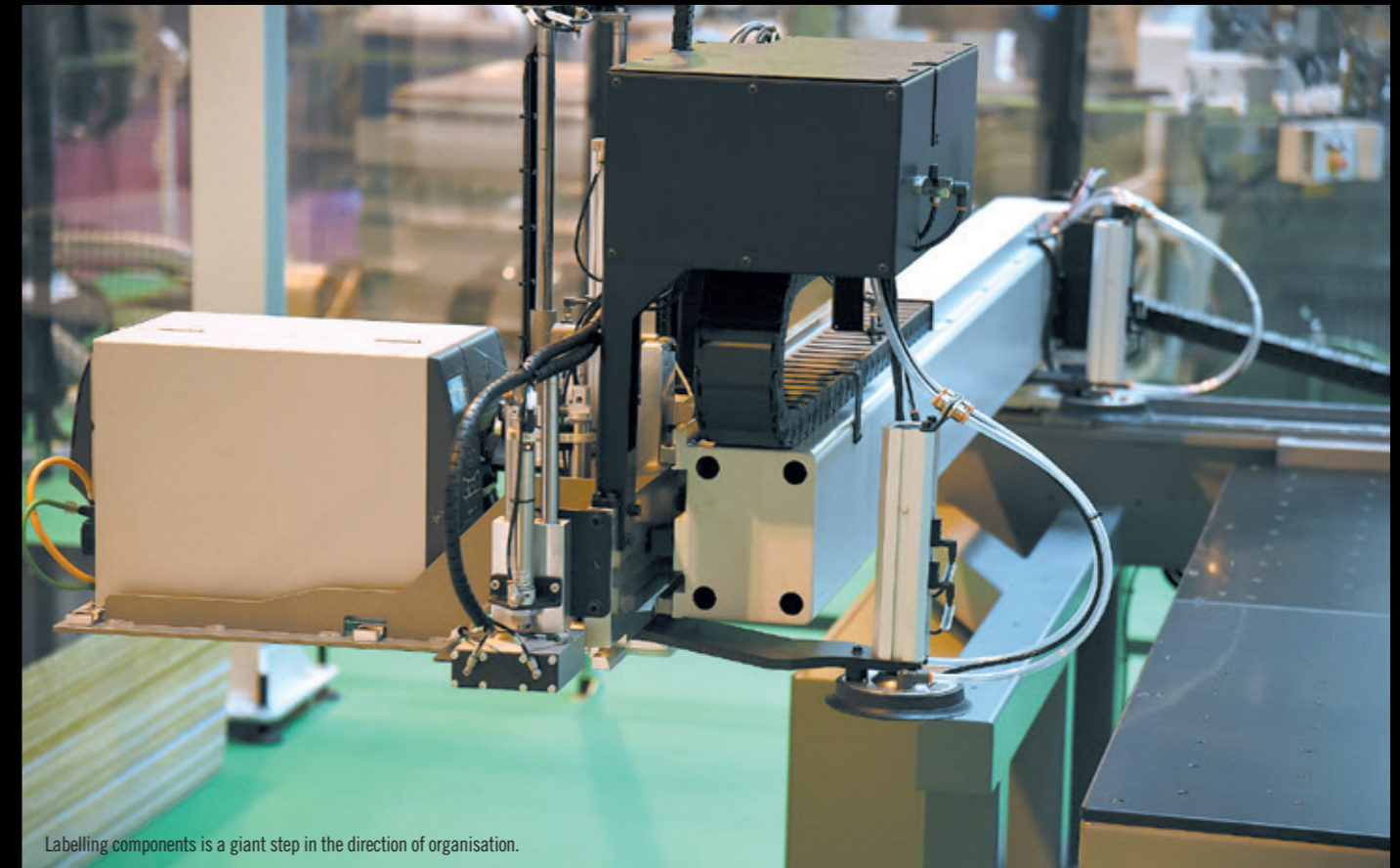
to any company. Sorting and stock control are the start. The first step is to sort waste and parts and determine what your buffers are."

The curious thing is most manufacturers have automated warehouse mentality but because they are metaphorically fighting fires to keep pace with orders, they use it in the wrong place – after machining has started, not before it. They'll buy extra panels in advance, just in case they need them, then space gets congested. Put all that before the beam saw and suddenly you are driving the process instead of cluttering your manufacturing space with cash piles on the shop floor.

Of course, add a smart warehouse like a Winstore before your beam saw and instantly, everything that should be in a warehouse is in the warehouse, your rest part pile will turn into a usable (and findable) asset and your efficiency will increase for very little cost. "Winstore is an ideal place to start because you know where everything is and you know what you've got," says Robbie. "Whatever you take out you have to put back in. If the Winstore has a capacity of 250 sheets, the most you can do is take out 125 boards and bring 125 back in a single shift. You could take 250 out but the second shift becomes a fill shift, so keeping to single shift working will keep costs down. The Winstore enables replenishment in idle time, which is a lower cost option, either in the evening or overnight while the other machines are

sleeping. You can prepare stacks for the next day's process so the machines can run autonomously while the Winstore is replenishing or sorting. It takes longer to bring some pieces to the saw than others so we map the Winstore so fast-moving product is nearby and slow-moving product is further away. If you could, you'd have every position with a different colour or board but that takes a lot of space, so we use rainbow stacks for slow movers. The Winstore will run a defragmentation sequence to sort them so they are always optimised."

So, does a smart warehouse – or a smart factory – cost you money, or make you money?

The Winstore produces higher machine availability and it drives your production – that's the key difference. Panel handling becomes easier and safer, storage space is reduced massively and the operation time is always a certainty. "Winstores offer a wide range of capacities to suit every production requirement so you don't have to have a big factory to have an efficient factory," says Robbie, "And it's very easy to see the tangible financial benefits:

"From a cost point of view, if you have no automation, the cost of a simple factory could be about £600,000. A smart solution is a £280,000 upcost for automation but here we've got a 42% increase in capacity. Workforce costs go down from £330,000 to

£120,000 per year, saving £210,000. Work that took five days to do now takes three, so you've gained two days. Raw material costs have dramatically reduced from £835,000 to £500,000 – so, taking everything into account, in the first year you've saved nearly £500,000. This is without other benefits like reduced damage and getting it right first time. With a smart solution, you could have a system that's completely self-funding. Our mission at Biesse is to show we can improve performance and quality in your factory, and we know by doing this we can drive the cost down.

"With a Winstore, a beam saw, an edgebander and a drill – a cut, edge and drill operation – and vertical rack systems you can produce 10-12 kitchens a day with three operators. Typically, factories like this are using 10-12 people. If there are small distances between the processes, it's all organised, and it goes from step to step logically, that's the future in our industry and what you have is a scalable factory in terms of productivity. It is easier to find three people than ten and with more profit in the business, you can afford to pay them at a premium. That creates loyalty."

To talk to Biesse about making your factory more efficient, call 01327 300366 or, if you are reading the online App edition of Furniture Journal with your smartphone or tablet, tap **here** to be linked to Biesse UK's website.