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# WOMEN IN MANUFACTURING

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“EEF’s second report on FTSE 100 – Women in Manufacturing. We update the previous findings and with our focus on the bigger picture for manufacturing, we also examine SMEs, which account for nearly 60% of manufacturing employment.”

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# FOREWORD

Jenny Willott MP, Minister for Women and Equalities



*Women in manufacturing* there undoubtedly are. This report shows just how many women are in manufacturing and how important they are to manufacturing. The question it poses for the future is not merely how many women work in the sector but at what level?

Encouragingly the report shows a positive trend developing. I am pleased to see that all the twenty-eight FTSE 100 manufacturing companies now have female board representation, compared to January 2013 when only two manufacturing companies were without female representation on their boards.

This is a great achievement – against the backdrop of the last three years in which we have seen real progress, with women’s representation on FTSE 100 boards now 20.8%, up from 12.5% in 2011. As of March 2014 there remains only one all male board in the FTSE 100. The FTSE 250 have achieved 15.6% of women board members, up from 7.8% in 2011 and 83 of the FTSE 250 all-male boards in 2011 have now recruited one or more women onto their boards. So progress, but still a way to go.

What you might term an ‘ice-ceiling’, inhibiting the progression of able women to realise their potential at senior level is steadily thawing. The personal experience in the case studies in the report indicate that it is women themselves who are helping to change the temperature.

Their accounts emphasise self-help, and above all self-confidence, as decisive factors and seem to mirror the Government’s backing for a voluntary business approach to removing unnecessary barriers.

Whereas there is no enthusiasm for quotas from the women represented in the report,

they do voice a call for practical action to promote STEM subjects and careers to girls and women: the inspiration that other women who have made it to a senior position can offer is a recurring theme.

This is something my department has consistently tackled: the importance of role models. The STEMNET organisation, which is funded by the Department for Business, Innovation and Skills, sends into schools 27,000 ambassadors promoting science and technological careers, 40% of whom are female role models reporting back from the front line of their STEM careers.

Last November’s Perkins’s Review of Engineering Skills brought in its wake a series of other strategic measures backed by funding from the Government, including £200 million in capital investment in STEM teaching facilities for high cost subjects such as engineering, and initiatives like Tomorrow’s Engineers, which is engaging employers to encourage children in schools to consider engineering careers. I know the EEF has been very supportive of this project.

We remain fully committed to achieving long term sustainable change on gender equality in the boardroom and the benefits this will bring to British business and the UK economy in the future. And I am delighted that this report shows that change is happening – as well as offering some useful insights on ways in which we can all contribute to getting more girls and women into manufacturing.

**Jenny Willott MP**  
Minister for Women and Equalities

# FOREWORD

Terry Scuoler, CEO of EEF, the manufacturers' organisation



This is our second annual report looking at women in manufacturing – celebrating the successes, identifying the challenges and highlighting the changes that need to be made if we are to see more women choosing to make their career in our sector.

There are plenty of positives to report: women now account for two in ten (21%) directorships in FTSE 100 manufacturing companies. Over a third (36%) of manufacturers are at, or above, the 25% Davies target for female board representation. And, most important of all, every single FTSE 100 manufacturing company now has at least one woman on their board.

So should we now be saying 'job done'? Not at all, because as our findings show and as the inspirational women showcased within this report tell us, there's still a long way to go.

Women continue to be under-represented at most levels, including apprentice and graduate-entry level where our sector seeks its future stars. As we look to the future – towards the innovators, the makers and the doers who will carry the flag for 'Make it Britain' – it is clear that the women with the required skills and talent are not coming through quickly enough.

This issue affects companies of all sizes. The female role models in our report this year are all representatives from SMEs. SMEs employ almost 60% of the manufacturing workforce with the majority of UK manufacturing companies falling firmly into this camp.

Importantly, these women reinforce the points made by their FTSE 100 peers in last year's report. They advocate increasing gender diversity through encouragement and development. They do not agree with quotas

or a forced solution. Instead they want to see companies taking further steps to identify and nurture the talented women they already have, while taking bigger strides in showing that manufacturing and engineering is an attractive and exciting career option for all.

The simple message is that if we want to be the best, we need to attract the best and that means competing with other industries perceived to be more dynamic, more interesting or even simply more glamorous. Those of us working in the sector know that the opportunities to create, innovate and be truly 'cutting-edge' are manifold – we're just not very good at telling people about them.

We all have a role to play and it is very much a 'two-way street'. There needs to be even more interaction between schools and local companies. STEM subjects need to be taught with passion and with particular effort to encourage young women. Schools also need to provide better careers advice and champion apprenticeships and vocational pathways for girls as well as boys.

It is in everyone's interest to show just how modern, diverse and technically advanced manufacturing and engineering are today. I'm proud to say that in October 2013 EEF opened a £2 million state-of-the-art apprentice centre in Birmingham, designed to train the 'makers' of the future. This future very much includes women who, with the right encouragement and support, will play a vital role.

A handwritten signature in black ink that reads "Terry Scuoler". The signature is written in a cursive, flowing style.

**Terry Scuoler**  
CEO of EEF, the manufacturers' organisation

# INTRODUCTION

Welcome to EEF's 'Women in Manufacturing' publication. This independent report by EEF's Information and Research Team builds upon our previous research 'FTSE 100 Women in Manufacturing' (launched 2013) and is sponsored by Lloyds Bank. The original work was driven by one of the key recommendations from Lord Davies in his 2011 report that FTSE 100<sup>1</sup> companies should aim for a minimum of 25% female board representation by 2015.<sup>2</sup>

In addition to providing a benchmark of women on boards, following on from our original research, the report also shines a light on the careers of successful high-level women within small and medium enterprises (SMEs) across manufacturing. SMEs account for 99.5% of all businesses and nearly 60%<sup>3</sup> of employment within the sector. We felt it was therefore extremely important to assess female career development within these smaller companies. The aim is to continue to report on progress within the largest organisations whilst providing inspiration to our members, the wider manufacturing sector and to women climbing the career ladder.

The first section of the report provides a summary of statistics relating to female board representation in manufacturing FTSE 100 companies. Across these organisations there are 305 directorships, with women accounting for 21% of the total. Importantly, every single manufacturer within the FTSE 100 now has at least one female board member.

The number of manufacturers already at or above the 25% Lord Davies board target has increased by 5% since our last report. New female board appointments continue across these companies, with 9 new positions filled during the 12 months to 11th March 2014.

The second part of the report offers case studies of five women who have proven careers in manufacturing and have reached senior operational roles within SMEs. The case studies summarise their career success and their wealth of experience provides insight into what can be done in the industry. Two snapshots of female apprentices have also been included, highlighting their journey so far and why they would recommend others to join them.

The interviews and our wider research have shown that through engagement with schools, manufacturers can help dispel myths about the industry. Science, Technology, Engineering and Mathematics (STEM) subjects need to be encouraged from an early age to capture children's interest and to ensure the next generation consider a career in manufacturing, guaranteeing that the sector will continue to be a global competitor. As part of this approach there needs to be equal championing of vocational and academic pathways. Finally, in our view, continual development and mentoring are essential in the workplace to help career progression and the development of the talent pipeline.

<sup>1</sup> The Women in Manufacturing Report is independently compiled by "EEF". The Women in Manufacturing Report is not in any way sponsored, endorsed, sold or promoted by FTSE International Limited ("FTSE") or the London Stock Exchange Group companies ("LSEG"), (together the "Licensor Parties") and none of the Licensor Parties make any claim, prediction, warranty or representation whatsoever, expressly or impliedly in relation to the Women in Manufacturing Report or related material. None of the Licensor Parties have provided or will provide any financial or investment advice or recommendation in relation to the Women in Manufacturing Report to any party. None of the Licensor Parties shall be liable (whether in negligence or otherwise) to any person for any error or omission in the Women in Manufacturing Report or related material. FTSE® (the "Trade Mark") is a trade mark of LSEG and is used by FTSE under licence. EEF has been licensed the Trade Mark by FTSE for use in the Women in Manufacturing Report and related material.

<sup>2</sup> Lord Davies, 'Women on Boards', February 2011

<sup>3</sup> Department for Business Innovation & Skills – business population estimates for the UK and regions 2013. Manufacturing SMEs account for 33.3% of turnover, 58.1% of employment and 99.5% of businesses within the sector.

# BACKGROUND

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Since the publication of the 2011 Lord Davies ‘Women on Boards’ report which examined the situation on FTSE 350 boards and set out 10 recommendations to increase female board representation, the proportion of females on FTSE 100 boards has increased from 12.5% to 21% (as of 11th March 2014). The UK’s current approach to tackling the gender divide at board level remains voluntary and industry led, unlike the quota-based measures introduced in other countries such as Norway, Spain, Italy and France.

Although the UK Government does not follow, or currently agree with, a quota-based system to increase the number of women at board level, listed companies are required to either comply with the provisions set out in the Corporate Governance Code,<sup>4</sup> or explain why they have not. The Code, which is overseen by the Financial Reporting Council, acts as a guide to good corporate governance and effective board practice. The Code is generally updated every 2 years; the latest iteration – ‘the 2012 Code’ – applies to reporting periods beginning 1st October 2012.

In addition to industry taking action independently, the UK Government has kept the issue of board gender diversity high on the agenda. In January 2014 Business Secretary Vince Cable and Lord Davies wrote to all FTSE 350 Chairmen setting out three measures companies could put in place to boost boardroom gender diversity.<sup>5</sup> This comes ahead of the 2015 deadline as set out within the ‘Women on Boards’ report, for FTSE 100 companies to aim for a minimum of 25% female board representation.

SMEs are particularly important to manufacturing given that they account for the largest part of the industry, representing nearly 60% of employment. However, these companies are also vital to the wider economy where they help drive economic growth. They are seen to do this through innovating, spurring competition and making a large contribution to job creation.<sup>6</sup>

Companies have been classified as manufacturing according to their SIC code, details of which can be found in the methodology.

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<sup>4</sup>Financial Reporting Council – The UK Corporate Governance Code, September 2012

<sup>5</sup>These measures include: 1. aiming to appoint an additional female director, 2. giving two female candidates from senior management the opportunity to serve as NEDs at other organisations, 3. stating clear targets for the number of women at senior management and board level and what steps are being taken to achieve those targets.

<sup>6</sup>Department for Business Innovation & Skills, SMEs: The key enablers of business success and the economic rationale for Government intervention, December 2013

# 1. WOMEN IN FTSE 100 MANUFACTURING COMPANIES

Twenty-eight manufacturing companies were listed in the FTSE 100 as of 11th March 2014.<sup>7</sup> When our last report was produced in January 2013 there were 29. This change is reflective of the fact the constituents of the index are reviewed quarterly. Evraz plc, Croda International plc and Tate & Lyle plc no longer feature, whilst Coca-Cola HBC AG and Mondi plc are new entrants.

Female board representation within each of the 28 organisations can be seen in Table 1. The data is arranged by the number of board level women within each company.<sup>8</sup> The information has been taken from the BoardEx database<sup>9</sup> (unless otherwise stated) and is correct as of 11th March 2014.<sup>10</sup>

All of the FTSE 100 manufacturing companies now have female board representation. The majority of organisations (68%) have either 1 or 2 female board directors, with a further 21% having 3 directors.

**36 % of FTSE 100 manufacturing companies are at or above the minimum 25 % Lord Davies female board representation target, up 5 % on our last review**

Diageo plc has 4 and also has the highest percentage of board level women, at 44%. GlaxoSmithKline plc and Unilever plc lead the way, with 5 female board members each.

**TABLE 1 FEMALE BOARD REPRESENTATION IN FTSE 100 MANUFACTURING COMPANIES**

	Company	Number on board (% female board representation)	Number of women on board	Median age of women on board	Female directors	Current role	Chairman
FTSE 100 AVERAGE (21 % female board representation)							
1	GlaxoSmithKline plc	15 (33 % female board representation)	5	58	Dr Stephanie Ann Burns Stacey Lee Cartwright Lynn Laverty Elsenhans Judy Carol Lewent Jing Ulrich	Independent NED Independent NED Independent NED Independent NED Independent NED	Sir Christopher Gent
2	Unilever plc	14 (36 % female board representation)	5	62	The Hon. Laura May-Lung Cha Professor Dr Louise O Fresco Ann Marie Fudge Mary Z Ma Hixonia Nyasulu	Independent NED Independent NED Independent NED Independent NED Independent NED	Michael Treschow
3	Diageo plc	9 (44 % female board representation)	4	58	Deirdre Ann Mahlan Peggy Bertha Bruzelius Laurence Miriel Danon Betsy DeHaas Holden	Chief Financial Officer Independent NED Independent NED Independent NED	Dr Franz Humer

<sup>7</sup> The data cut taken on 11th March 2014 takes into account changes in the FTSE 100 March 2014 quarterly review that take effect from the close of business on 21st March 2014

<sup>8</sup> Where companies have the same number of female board members they have been sorted alphabetically

<sup>9</sup> BoardEx database (www.boardex.com), March 2014

<sup>10</sup> Where other sources have been used they are referenced

**TABLE 1 FEMALE BOARD REPRESENTATION IN FTSE 100 MANUFACTURING COMPANIES**

	Company	Number on board (% female board representation)	Number of women on board	Median age of women on board	Female directors	Current role	Chairman
FTSE 100 AVERAGE (21 % female board representation)							
4	AstraZeneca plc	<b>12</b> (25 % female board representation)	<b>3</b>	<b>58</b>	Professor Dr Geneviève B Berger Dame Nancy Jane Rothwell, DBE Baroness Shriti Vadera	Independent NED Independent NED Independent NED	Dr Leif Johansson
5	British American Tobacco plc	<b>12</b> (25 % female board representation)	<b>3</b>	<b>67</b>	Ann Frances Godbehere Christine Jacqueline Morin-Postel Karen Maria de Segundo	Independent NED Senior Independent NED Independent NED	Richard Burrows
6	Burberry Group plc	<b>10</b> (30 % female board representation)	<b>3</b>	<b>53</b>	Angela Jean Ahrendts Carol Ann Fairweather Stephanie George	Chief Executive Officer Chief Financial Officer Independent NED	Sir John Peace
7	Imperial Tobacco plc	<b>10</b> (30 % female board representation)	<b>3</b>	<b>50</b>	Alison Jane Cooper Susan Elizabeth Murray Karen Witts	Chief Executive Officer Independent NED Independent NED	Mark Williamson
8	SABMiller plc	<b>15</b> (20 % female board representation)	<b>3</b>	<b>51</b>	Lesley Mary Knox Dr Dambisa Felicia Moyo Helen Alison Weir, CBE	Independent NED Independent NED Independent NED	Peter Manser, CBE
9	Smith & Nephew plc	<b>12</b> (25 % female board representation)	<b>3</b>	<b>60</b>	Julie Belita Brown Baroness Virginia Hilda Bottomley Dr Pam Josephine Kirby	Chief Financial Officer Independent NED Independent NED	Sir John Buchanan
10	Arm Holdings plc	<b>11</b> (18 % female board representation)	<b>2</b>	<b>57</b>	Kathleen Anne O'Donovan Janice M Roberts	Senior Independent NED Independent NED	Stuart Chambers
11	Babcock International Group plc	<b>11</b> (18 % female board representation)	<b>2</b>	<b>49</b>	Anna Marie Stewart Kate Elizabeth Swann	Independent NED Independent NED	Mike Turner, CBE
12	BAE Systems plc	<b>11</b> (18 % female board representation)	<b>2</b>	<b>55</b>	Dr Harriet Green, OBE Paula Rosput Reynolds	Independent NED Independent NED	Sir Roger Carr
13	BP plc	<b>14</b> (14 % female board representation)	<b>2</b>	<b>59</b>	Cynthia Blum Carroll Dame Ann Patricia Dowling, DBE	Independent NED Independent NED	Carl-Henric Svanberg
14	CRH plc	<b>13</b> (15 % female board representation)	<b>2</b>	<b>54</b>	Maeve C Carton Heather Ann McSharry	Financial Director Independent NED	Nicky Hartery
15	IMI plc	<b>10</b> (20 % female board representation)	<b>2</b>	<b>56</b>	Anita Margaret Frew Birgit Wøidemann Nørgaard	Senior Independent NED Independent NED	Roberto Quarta
16	Johnson Matthey plc	<b>10</b> (20 % female board representation)	<b>2</b>	<b>59</b>	Odile Desforges Dorothy Carrington Thompson	NED Independent NED	Tim Stevenson, OBE



**TABLE 1 FEMALE BOARD REPRESENTATION IN FTSE 100 MANUFACTURING COMPANIES**

	Company	Number on board (% female board representation)	Number of women on board	Median age of women on board	Female directors	Current role	Chairman
FTSE 100 AVERAGE (21 % female board representation)							
17	Mondi plc	<b>9</b> (22% female board representation)	<b>2</b>	<b>57</b>	Imogen Nonhlanhla Mkhize Anne C Quinn, CBE	Independent NED Senior Independent NED	Fred Phaswana and David Williams (Co-Chairmen)
18	Rexam plc	<b>8</b> (25% female board representation)	<b>2</b>	<b>58</b>	Ros Rivaz Johanna Elizabeth Waterous, CBE	NED Senior Independent NED	Stuart Chambers
19	Rolls-Royce Holdings plc	<b>14</b> (14% female board representation)	<b>2</b>	<b>51</b>	Dame Helen Anne Alexander, DBE Jasmin Staiblin	Independent NED Independent NED	Ian Davis
20	Shire plc	<b>10</b> (20% female board representation)	<b>2</b>	<b>58</b>	Susan Saltzbart Kilsby Anne Elizabeth Minto, OBE	Independent NED Independent NED	Matt Emmens
21	Smiths Group plc	<b>8</b> (25% female board representation)	<b>2</b>	<b>58</b>	Tanya D Fratto Anne C Quinn, CBE	Independent NED Independent NED	Sir George Buckley
22	Weir Group (The) plc	<b>9</b> (22% female board representation)	<b>2</b>	<b>58</b>	Melanie Gee The Hon. Mary Jo Jacobi-Jephson	Independent NED NED	Charles Berry
23	Associated British Foods plc	<b>8</b> (13% female board representation)	<b>1</b>	<b>51</b>	Emma Adamo	NED	Charles Sinclair, CBE
24	Coca-Cola HBC AG	<b>13</b> (8% female board representation)	<b>1</b>	<b>55</b>	Susan Saltzbart Kilsby	Independent NED	George David
25	GKN plc	<b>9</b> (11% female board representation)	<b>1</b>	<b>53</b>	Shonaid Jemmett-Page	Independent NED	Mike Turner, CBE
26	Meggitt plc	<b>9</b> (11% female board representation)	<b>1</b>	<b>56</b>	Brenda L Reichelderfer	Independent NED	Sir Colin Terry
27	Melrose Industries plc	<b>9</b> (11% female board representation)	<b>1</b>	<b>57</b>	Liz A Hewitt	Independent NED	James Miller
28	Reckitt Benckiser Group plc	<b>10</b> (10% female board representation)	<b>1</b>	<b>60</b>	Judy A Sprieser	Independent NED	Adrian Bellamy

Note: Where there is only one female board director the actual age is stated rather than the median  
Note: The age of Jing Ulrich was sourced from FT.com

# ANALYSIS AND STATISTICS OF FTSE 100 MANUFACTURING COMPANIES

## Directorships: NEDs compared to EDs

Women account for 21% of the 305 directorships across manufacturing firms in the FTSE 100. This represents a 2% increase in female directorships since our previous report (Table 2).

Manufacturers are in line with the FTSE 100, in which women currently account for 21% of all directorships (26% of NEDs and 7% of EDs).

One quarter of all NEDs and 8% of EDs are women. The proportion of female EDs remains the same as in 2013, but NEDs have seen a slight increase (2%).

Women account for 21 % of total directorships in FTSE 100 manufacturing companies

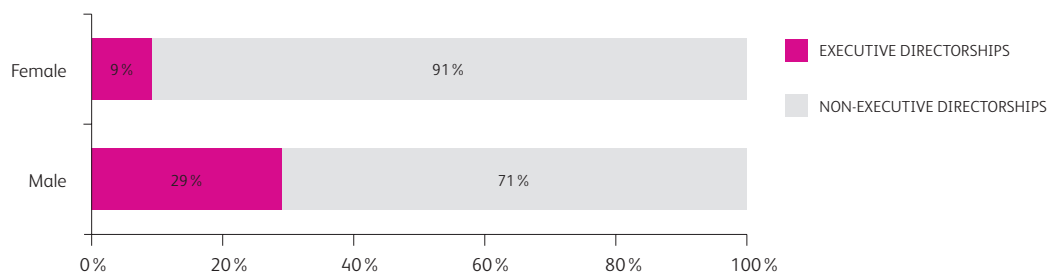
**TABLE 2** DIRECTORSHIPS WITHIN FTSE 100 MANUFACTURING COMPANIES

	EXECUTIVE DIRECTORSHIPS		NON-EXECUTIVE DIRECTORSHIPS		TOTAL	
	2013	2014	2013	2014	2013	2014
Female	7 (8%)	6 (8%)	52 (23%)	58 (25%)	59 (19%)	64 (21%)
Male	80 (92%)	69 (92%)	170 (77%)	172 (75%)	250 (81%)	241 (79%)
<b>Total</b>	<b>87</b>	<b>75</b>	<b>222</b>	<b>230</b>	<b>309</b>	<b>305</b>

The 64 manufacturing female board directorships (Table 2) are held by 62 women.<sup>11</sup> The vast majority of these

directorships are NED roles, with only 9% executive positions, compared to 29% of male executive directorships (Chart 1).

**CHART 1** PROPORTION OF EXECUTIVE AND NON-EXECUTIVE DIRECTORSHIPS WITHIN FTSE 100 MANUFACTURING COMPANIES



The 6 female executive directorships come from 5 organisations (Table 3): Burberry Group plc,<sup>12</sup> CRH plc, Diageo plc, Imperial

Tobacco Group plc and Smith & Nephew plc. However, all of the 28 manufacturing firms have at least 1 male Executive Director.

<sup>11</sup> In our 2013 report 59 female directorships were held by 57 women

<sup>12</sup> Burberry Group plc has two female executive positions, as per our 2013 report – Carol Ann Fairweather, CFO and Angela Ahrendts, CEO. Stacey Cartwright is no longer on the board (previously VP/CFO).

**TABLE 3 EXECUTIVE AND NON-EXECUTIVE COMPARISON**

	FEMALE		MALE	
	2013	2014	2013	2014
Companies with Executive Directors	6 (21%)	5 (18%)	28 (97%)	28 (100%)
Companies with Non-Executive Directors	27 (93%)	28 (100%)	29 (100%)	28 (100%)

## Multiple directorships

Susan Kilsby and Anne Quinn, CBE both occupy 2 manufacturing directorships in the FTSE 100 (Table 4).

A further 11 women hold board seats in manufacturing companies and other sectors of the FTSE 100.

**TABLE 4 MULTIPLE DIRECTORSHIPS ACROSS FTSE 100 MANUFACTURING COMPANIES**

	FEMALE		MALE	
	2013	2014	2013	2014
1 board seat	55 (96%)	60 (97%)	227 (95%)	215 (94%)
2 board seats	2 (4%)	2 (3%)	10 (4%)	13 (6%)
3 board seats	0	0	1 (0%)*	0
<b>Total</b>	<b>57</b>	<b>62</b>	<b>238</b>	<b>228</b>

\*Percentages do not add to 100 due to rounding

Of all the women who hold multiple directorships more than three-quarters occupy 1 board seat, 16% sit on 2 boards and a further

5% hold 3 positions. Table 5 details these multiple directorships and where they are held.

**TABLE 5 MULTIPLE DIRECTORSHIPS – WHERE THEY ARE HELD**

DIRECTOR NAME	SEAT 1	SEAT 2	SEAT 3
The Hon. Laura May-Lung Cha	Unilever plc (Independent NED)	HSBC Holdings plc (Independent NED)	
Anita Margaret Frew	IMI plc (Senior Independent NED)	Aberdeen Asset Management plc (Senior Independent NED)	Lloyds Banking Group plc (Independent NED)
Ann Frances Godbehere	British American Tobacco plc (Independent NED)	Prudential plc (Independent NED)	Rio Tinto plc (Independent NED)
Susan Saltzbar Kilsby	Coca-Cola HBC AG (Independent NED)	Shire plc (Independent NED)	
Lesley Mary Knox	SABMiller plc (Independent NED)	Centrica plc (Independent NED)	
Deirdre Ann Mahlan	Diageo plc (Chief Financial Officer)	Experian plc (Independent NED)	
Dr Dambisa Felicia Moyo	SABMiller plc (Independent NED)	Barclays plc (Independent NED)	
Susan Elizabeth Murray	Imperial Tobacco Group plc (Independent NED)	Compass Group plc (Independent NED)	
Anne C Quinn, CBE	Mondi plc (Senior Independent NED)	Smiths Group plc (Independent NED)	
Judy A Sprieser	Reckitt Benckiser Group plc (Independent NED)	Experian plc (Independent NED)	
Baroness Shriti Vadera	Astrazeneca plc (Independent NED)	BHP Billiton plc (Independent NED)	
Johanna Elizabeth Waterous, CBE	Rexam plc (Senior Independent NED)	RSA Insurance Group plc (Independent NED)	Wm Morrison Supermarkets plc (Independent NED)
Karen Witts	Imperial Tobacco Group plc (Independent NED)	Kingfisher plc (Group Finance Director)	

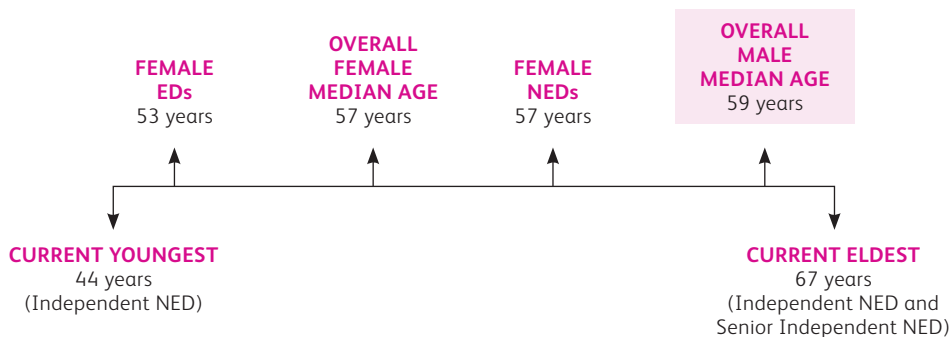
Note: The shaded companies represent FTSE 100 manufacturing firms

## Age

In our 2014 review of FTSE 100 manufacturing companies female NEDs remain slightly older<sup>13</sup> than their ED peers (57 years compared to 53 years respectively). The youngest female board member is currently 44 years old (Independent NED). The eldest two, both of whom are 67, are an Independent NED and a Senior Independent NED.

The youngest female ED is 47, whilst the eldest is 56. This compares to the youngest male director (NED, aged 37) and the eldest male director (NED, aged 77). With a median age of 59 years<sup>14</sup> male directors of manufacturing companies tend to be older than their female counterparts.

**FIGURE 1** MEDIAN AGE IN FTSE 100 MANUFACTURING COMPANIES (as of 11th March 2014)



**All of the FTSE 100 manufacturing companies now have female board representation**

## Tenure

The median female board tenure across the FTSE 100 manufacturing organisations is 3 years. However, the length of service does vary when compared by type of director, with EDs having longer rates of tenure than their NED peers (3.6 years compared to 2.9 years).

Dr Pam Kirby is currently the longest serving female director with 12 years on the board of Smith & Nephew plc, as an Independent NED. Karen Witts (Independent NED) at Imperial Tobacco Group plc, took up a new role with the company in February 2014 and currently has the shortest board tenure at 1 month.

With regard to Executive Directors, having spent 8.2 years on the board, Angela Ahrendts

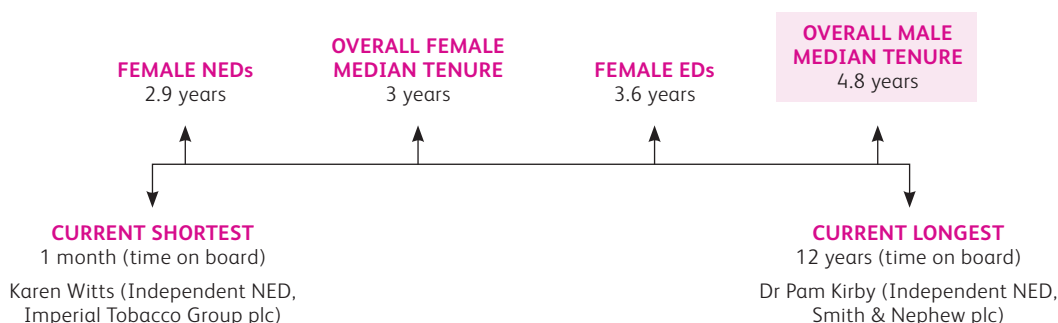
(CEO) of Burberry Group plc was (as of 11th March 2014)<sup>15</sup> the longest-serving female ED across the manufacturing companies and the wider FTSE 100. Subsequently, with board tenure of 6.7 years, Alison Cooper, Chief Executive Officer of Imperial Tobacco Group plc has become the longest-serving female manufacturing ED following the departure of Angela Ahrendts. The most recent appointment of a female manufacturing ED was also at Burberry Group plc: Carol Fairweather (CFO), has spent 7 months on the board.

Male EDs and NEDs continue to have slightly higher rates of tenure (6 years and 4.5 years respectively) compared to their female counterparts.

<sup>13</sup> Median figure used

<sup>14</sup> Median age of male (within manufacturing FTSE 100) NEDs is 62 years and EDs 55 years

<sup>15</sup> It was announced in October 2013 that Angela Ahrendts would be joining Apple Inc. as Senior Vice President of Retail and Online Stores during Spring 2014

**FIGURE 2** MEDIAN BOARD TENURE IN FTSE 100 MANUFACTURING COMPANIES (as of 11th March 2014)

## New appointments

Nearly a fifth of new board appointments are going to women within manufacturing firms in the FTSE 100. This is a little below the target (one-third) for new female appointments as outlined in the 2011 Davies report. Reflecting

findings within the 2013 ‘Women on Boards’ report, Cranfield University School of Management found that “headline figures for women on the boards of our largest PLCs continue to rise, but at a much decreased pace.”<sup>16</sup>

**TABLE 6** NEW DIRECTORSHIPS WITHIN FTSE 100 MANUFACTURING COMPANIES

	DIRECTORSHIPS WITH TENURE OF 1 YEAR OR LESS (11TH MARCH 2014)	
	2013	2014
New female directorships	13 (36%)	9 (19%)
New male directorships	23 (64%)	39 (81%)
<b>Total new directorships</b>	<b>36</b>	<b>48</b>

## The new female directors

Four of the new female board appointments have previously served or are currently serving on other FTSE 100 boards. The Hon. Laura May-Lung Cha, Susan Kilsby and Karen Witts all currently sit on other boards, whilst the Hon. Mary Jo Jacobi-Jephson has FTSE 100

board experience. Although the majority of these new appointees have had no prior FTSE 100 board experience, they have all held a variety of senior roles across a range of sectors in public and privately listed organisations.

**TABLE 7** NEW DIRECTORSHIPS IN FTSE 100 MANUFACTURING COMPANIES (12 months to 11th March 2014)

NAME	POSITION	COMPANY
The Hon. Laura May-Lung Cha	Independent NED	Unilever plc
Odile Desforges	NED	Johnson Matthey plc
Carol Ann Fairweather	Chief Financial Officer	Burberry Group plc
Liz A Hewitt	Independent NED	Melrose Industries plc
The Hon. Mary Jo Jacobi-Jephson	NED	Weir Group plc (The)
Susan Saltzbart Kilsby	Independent NED	Coca-Cola HBC AG
Mary Z Ma	Independent NED	Unilever plc
Ros Rivaz	NED	Rexam plc
Karen Witts	Independent NED	Imperial Tobacco Group plc

Note: The shaded rows represent women with FTSE 100 board experience

<sup>16</sup> ‘Women on Boards’: Benchmarking adoption of the 2012 Corporate Governance Code in FTSE 350 - <http://www.som.cranfield.ac.uk/som/dinamic-content/research/documents/WomenonBoards2012Code.pdf>

## 2. KEY MESSAGES FROM LEADING WOMEN IN SMEs

The focus in this second year of the research is to assess the progress of women on boards of the FTSE 100 manufacturers. As the majority of manufacturers in the UK are SMEs, employing nearly 60% of all those in the sector, we are also examining some positive examples of female progression in this size of organisation.

This section concentrates on women who have proven careers in manufacturing and have reached senior operational roles within SMEs. We spoke to five women at director level and above. The interviews have been summarised into case studies of their careers and give their views of what can be done to encourage more women into manufacturing. Two snapshots of female apprentices have also been included, highlighting their journey so far and why they would recommend others to join them.

### Encouragement and development, not enforcement

Our five senior women serve as role models for others, demonstrating that it is possible for women to progress into high-level jobs in manufacturing. Having reached their current positions through a variety of routes – from law to accounts, IT, production and sales – what is clear is that there is a fulfilling and rewarding career to be had in the industry. All five have spent the vast majority, if not all, of their working lives in manufacturing.

Senior levels of the manufacturing sector remain male-dominated, therefore increasing gender diversity is essential to ensure we have the best talent to compete on the world stage. However, in agreement with the FTSE board women from year one, this year's interviewees are opposed to quotas and advocate change through encouragement and development, not enforcement.

There should be equality of talent and opportunity in the entirety of the workplace, whilst recognising not all men and not all women, aspire to sit on a board. Companies should actively seek to support the promotion of Executive Directors, looking particularly at their senior management team as future candidates for the board. As part of growing the talent pipeline, manufacturers need to set out clear career pathways and programmes that better support women in the workplace.

### Addressing the industry's image

One of the means to address the gender balance must be improving the image and perception of manufacturing. The industry has advanced beyond recognition in recent years, but the stereotypical views of it being dirty and unglamorous still persist. Benefitting from the link to modern technologies, some of the sub-sectors, such as electronics, are starting to see improvements. This illustration of manufacturing as 'advanced' and 'innovative' now needs to be applied across the whole sector, to raise awareness of the depth and breadth of the industry.

To ensure a pipeline of talent into the industry, manufacturers are engaging with the education system. Seven in ten firms currently provide work experience for young people and more than half offer to speak to schools and host site visits.<sup>17</sup> Our interviewees have demonstrated that engagement with schools can really help; however, even more businesses have to be willing to help drive change, to dispel the myths about the sector and inspire the next generation. Such industry engagement is particularly important as teachers can often be uninformed of local labour market opportunities, particularly within industries such as manufacturing.

<sup>17</sup> EEF Skills Survey, 2012

We want to see better communication and interaction between schools and local businesses. Teachers should be encouraged to engage with local industry to better understand job opportunities and what employers expect from young people when entering the workplace.

Many manufacturers, particularly small firms, also cite a range of real and perceived practical barriers to engagement with schools. Whilst there is perhaps some myth-busting to do around areas such as health and safety regulations and insurance liability, there are undoubtedly real obstacles, which extend beyond time and cost. For example, manufacturers face difficulties when attempting to make contact with schools.

### Teaching STEM subjects with passion

Education is key and as part of this teachers must develop children's interest in the STEM subjects. Encouraging STEM participation from as early as primary education onwards ensures that youngsters will have the skills and therefore the choice to go on to a career in manufacturing.

Schools should be engaging with industry through initiatives that promote STEM subjects and careers. There are ample opportunities for this. Primary Engineer, STEMNET and Tomorrow's Engineer are just a few examples of organisations that act as a brokerage between schools and local businesses. In addition, industry experts should themselves go into schools to bring manufacturing to life and demonstrate how the STEM subjects that young people are taking are used in the everyday working environment.

### Championing vocational pathways

In 2013 the age at which young people can finish their education was raised to 17 and will rise to 18 by 2015. However, the fact that schools do not appear to be promoting apprenticeships and other vocational opportunities and focus instead on academic pathways, is of great concern to manufacturers. Raising the awareness of apprenticeships is key to ensuring the next generation take an interest in the sector.

Sixty per cent of manufacturers believe that better careers advice in schools would encourage more young people into manufacturing.<sup>18</sup> This suggests pupils also need access to independent careers advisors who are better placed to explore the various opportunities and pathways.

Sufficient incentives need to be in place to ensure that schools are equally championing both academic and vocational routes.

### Continuing development in the workplace

Our interviews have shown the significance of education at school and also the on-going development of employees in the workplace, to ensure they reach their full potential. Encouraging and funding further studies is important in these companies, with measures driven and endorsed by senior management. In order to help succession planning and to build the talent pipeline, it is crucial that employees have opportunities to take on new challenges and move up the career ladder. We are seeing promising signs of this in the wider industry, with more than half of manufacturers currently supporting existing employees through university.<sup>18</sup>

### Mentoring for progress

Mentoring is an important way to drive individual progression and improve confidence. This message came out in our first report and was strongly echoed by the women we spoke to this year. Four of the five articulated the benefits they received from informal mentoring, with the fifth expressing regret at the lack of opportunity. The general consensus is that mentoring not only boosts confidence, but also gives the chance to seek advice on business decisions and personal progression. Our SME role models put their views on mentoring into practice, with most acting as informal mentors either to aspiring employees in their companies, or to up-and-coming women in the wider business community.

All manufacturers, regardless of size, should consider how they can find ways to implement and therefore reap the mutually beneficial rewards of formal and informal mentoring.

<sup>18</sup> EEF Higher Education Survey 2013

# ANDREA HOUGH, OBE

Managing Director, AT Engine Controls Ltd



The Managing Director of AT Engine Controls Ltd, a specialist systems company that manufactures electronic components to support the helicopter and oil & gas industries. Andrea started at the company as a Commercial Apprentice and rose through the ranks to become Managing Director in 2006.

AT Engine Controls Ltd started in 2004, when Andrea and her business partner Terry Madden bought the company from Vosper Thornycroft which had also existed under other names and ownership for more than 40 years.

Chair of EEF's North West Regional Advisory Board, Andrea was awarded an OBE for services to manufacturing, in the 2014 New Year's Honours.

## IT'S UP TO MANUFACTURERS TO INFORM AND INSPIRE THE NEXT GENERATION

At the age of 16, Andrea left school and signed up for a four-year Commercial Apprenticeship at Hawker Siddeley Dynamics Engineering. On completion of her apprenticeship, Andrea was placed in the IT department as a trainee IT Clerk, where she developed and progressed through to supervisor and then became IT Manager serving the whole company. A change in her career path came when, recognising her wider potential, her manager moved her from IT into production control. This led to a role as Production Manager, covering two sites, in Portsmouth and Manchester. Her final promotions came when she and her business partner bought the company in 2004 and she moved into the role of Operations Director, taking over as Managing Director in 2006.

Andrea has more than 30 years' experience in the industry. In that time she has seen an increase in the number of senior women in manufacturing, but progress has been slow. She recalls turning up at events with her Manager at the very start of her career, where people would assume she was the secretary. Things have improved in the last 10 years, but it is still hard to find women at manufacturing exhibitions and conferences. Perhaps this is unsurprising, as Andrea explains that even as recently as the late seventies and early eighties, the female apprentices where she worked were discouraged from even going onto the shopfloor and it was naturally assumed that girls would go into office-based apprenticeships and boys into craft.

In Andrea's experience, women are still in the minority in manufacturing and those women who have achieved senior roles tend

to be business owners rather than having been promoted through the ranks. She also finds that the senior women she encounters "are in the financial, HR or Health & Safety side of business, rather than in manufacturing."

With unwavering support from her managers and limited resistance from those reporting into her, Andrea has not faced too many challenges as a senior manager in a male-dominated environment. She has, however, had to make important choices, especially in terms of work-life balance. She told EEF "You have to make that choice if you want to have a family and a career, one of them has got to take the back step." However, support from her husband has enabled Andrea to travel the world with her job and successfully raise a family.

Andrea puts her success down to luck, but it is clear that it is more than fortune that has brought her to a senior position. As a non-technical person in a highly technical environment she has succeeded by having the skill to find the right people to help her in her business and empowering them to be able to perform. She has used her organisational abilities to help with the running of the company as well as to juggle her career with family life.

Her natural instinct to be calm in a crisis and to thoroughly assess a scenario before acting, has really helped her lead others. Andrea feels this trait is not unique to her; it is something she has seen in other women. Such skills, in addition to the different perspective women can bring to the table, highlight the need for diverse companies. Women are essential at senior operational levels. However, Andrea



echoes the women we spoke to for our 2013 report, in her adamant dislike for boardroom quotas. She says “It would be forcing companies to promote anybody, whether they be male or female, to the board, just because you want to get the numbers right.”

When she needed advice, Andrea had people she could turn to. With support and encouragement she moved out of IT into production and overcame the challenges that she faced as a female senior manager running a male-dominated manufacturing site. She told EEF “You just need somebody who is mentoring you in the background or somebody you can turn to, to ask if you have got it right.” She doubts this need for reassurance is purely a female trait, but being able to seek counsel and having someone push you outside of your comfort zone really helps you to achieve.

Having seen the benefits herself, Andrea has implemented mentoring in her own company. Along with two other colleagues on the senior management team, she mentors aspiring employees. A good example of this is the work she is doing with her Production Manager, who has moved from Purchasing to Production. Mentoring has helped to build her confidence in her new role. In addition to this one-to-one mentoring, the company also try to pair up new starters with more experienced team members. New employees have a ‘buddy’ they can approach with the questions they may not want to ask their managers.

Andrea is passionate about influencing the next generation of girls to consider manufacturing and engineering as a career. Her voluntary work with Business Economic Solutions under an initiative called ‘Challenging Stereotypes’ involves her and other business women engaging

with girls in secondary schools in Manchester. She told EEF: “It is worrying that you go into these schools, even today and a lot of young girls just think what they can do is be a beautician or be a hairdresser.” Very few have ever considered a career in manufacturing. Bringing female role models into schools can influence girls’ choices, especially if they can associate with them. Andrea has seen first-hand the effect a first-year female Craft Apprentice from Rolls-Royce had on pupils when she spoke about her job. Young people and girls in particular, need to aspire to someone from a similar age and background to them.

It is Andrea’s belief that changing the perception of engineering and manufacturing and encouraging the next generation into the industry requires effort from schools as well as businesses. The work done by organisations like Primary Engineer is starting to take effect. Schools, however, need to do more with careers guidance. More manufacturing businesses need to be involved by inviting schools to gain first-hand experience and to inspire those who influence our future workforce. Andrea told EEF that she would like to do even more of this work in the future: “In manufacturing you can’t sit back and moan about not getting young people coming through the ranks, if as businesses and business owners, you don’t want to inform.”

Andrea’s advice for women coming up the career ladder in manufacturing is simple: do not let insecurities get in the way, find someone who can help and mentor you and give you that added confidence. Women do not always see the opportunities. Andrea has been successful as she took every chance she was given to progress and that is why she is in her role. Therefore, she suggests to other women “Be positive and take your opportunities.”

# JULIE KENNY, CBE, DL

Chairman and CEO, Pyronix Limited



Chairman and Chief Executive Officer of Pyronix Limited, a world leading manufacturer of electronic security equipment. Julie founded the company in 1986 and it now employs more than 150 staff at its site in Rotherham and exports to more than 70 countries. The first female president of the Rotherham Chamber of Commerce, she was previously the Chair of the Small Business Council and the British Security Industry Association, and currently serves as commissioner of the UK Commission for Employment and Skills. Julie was appointed to the Office of High Sheriff of South Yorkshire for 2012 and 2013. She won the National First Women Award for Engineering and Manufacturing in 2012 and the Vitalise Business Woman of the Year Award in 2013. She was awarded a CBE for services to industry in Yorkshire and Humberside in 2002.

## CELEBRATE EACH SUCCESS AND YOUR CONFIDENCE WILL GROW

At the age of 18 Julie started her career as a junior secretary in a legal firm. She soon realised that she had an aptitude for the law and chose to undertake part-time studies, enabling her ten years later to qualify and work as a litigation lawyer.

In 1986, Julie founded Pyronix Limited. Her husband had been made redundant and they took the opportunity to fulfil his dream to create a company to design and build passive infrared sensors. She already had an entrepreneurial attitude and made the bold decision to fund the set-up of the company by selling her home. For three years after Pyronix was established, Julie continued to work full-time as a lawyer in the day whilst also working to develop the business in the evenings.

In 1992, Julie became the first female director of the British Security Industry Association and went on to become Chairman. In 1997 she bought the business outright and became the sole owner and Managing Director. After thirteen years running the company, she began to get an increasing number of responsibilities outside of Pyronix that required her time and attention. This included her forthcoming role as High Sheriff and her task to close the Regional Development Agency for Yorkshire and Humber. Therefore, in 2010, she took the decision to promote her deputy into the role of Managing Director and she became Chairman and CEO. Julie would like to continue to follow her passions and further grow her business and is currently focusing on succession planning. Outside of her company she also hopes to do additional work in advising government.

Julie has had to make sacrifices along the way, dividing her time between work – including overseas travel – and her children. However, as she explained to EEF “It’s OK to have a career and you can have it all; you just have to make some choices sometimes.”

Drive and determination to succeed, combined with an entrepreneurial spirit have contributed to Julie’s career achievements. As a manager she feels that understanding the value of your team is crucial: you cannot accomplish anything without them. It is also essential to believe in yourself, but this confidence can and will grow as you progress through your career. Julie told EEF “Nobody wakes up or is born confident; you learn confidence by success.” She maintains that in her early working life at Pyronix she was very self-critical, but over time and with experience she has become self-assured. Nonetheless, she is also keen to point out that achievement is an individual measure and it is not necessarily about everyone trying to get to the top.

Her enthusiasm for manufacturing is clear. Although Julie knew very little when she started in the industry, as part of building the company, she has experienced most levels of work and now understands and loves manufacturing. Her position as Chair of her local Academy enables her to encourage youngsters to consider all their options for a career. She feels it is her duty and the responsibility of other manufacturers, to inform young people of the opportunities they have. She also engages in schemes where she goes into schools and talks to pupils about her own career. Her aim is to inspire

them to want to achieve and to realise that they can have a career in manufacturing and if they want it and work for it, they can follow a similar path to her own into senior management. However, it is not just about businesses taking the initiative: Julie points out that parents have a responsibility to encourage their children and to open their eyes to all the options that are available to them. Similarly, schools must be willing to engage with businesses – an area where she has seen some improvement, in her region in recent years.

Julie is a role model for girls and other women. She believes that being able to see more women in the industry and to hear about the experiences of those who have climbed the career ladder will inspire young women to follow their footsteps. In turn, this will lead to greater diversity on boards and in senior operational roles, which she feels leads to better decision making. She told EEF “It doesn’t mean that all-male boards make bad decisions; it just means that at least you have the opportunity to debate things in a different way.” Pyronix sets a good example of diversity at the top, with women occupying the roles of Operations Director and Finance Director, as well as Julie in the roles of Chairman and CEO.

Julie takes time out of her busy schedule to mentor business-women outside of her own

company so that she can share her knowledge and experience. She is committed to this work, as she wants to not only provide others with the chances she was given, but also ensure that everyone reaches their full potential.

Julie is a big believer in developing employees, saying “You are never too old to learn.” Pyronix will pay for any employee to undertake additional studies and qualifications that are relevant to their job. The company also has a scheme for employees where they can take the opportunity to trial a more senior role without experience, secure in the knowledge that if it does not prove to be successful, they can return to their original role. In Julie’s words, this “allows everybody to have an opportunity to be promoted and progress through the company.”

Julie’s advice to other women is to embrace your success and learn from your mistakes. She thinks that “women tend to be more confident when they have small successes, so celebrate each success.” Focus on the positive rather than beating yourself up about the things that have not gone quite as planned. Finally, mentoring can really help. Her suggestion is, if you want someone you admire to mentor you, ask them; the worst they can say is no and chances are they will be happy to help.

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# DEBBIE MELLOR

Managing Director, Keighley Laboratories Ltd



## THERE ARE NO GLASS CEILINGS IN MANUFACTURING

Debbie has been with Keighley Laboratories for her whole career, having started as an office junior in the Accounts Department when she left school. She spent her early years developing and progressing in the finance function, which eventually led to her controlling the department. By 1997 she was Company Secretary.

Optimism, drive, persistence and compassion are the attributes Debbie believes she brings to the role of Managing Director. Confidence is another of her strengths, something she feels is essential in senior roles, but which can be developed throughout your career and with mentoring. Contrary to popular belief, she is not convinced that women lack confidence over men; furthermore, she does not believe that this is the main barrier to either gender progressing in their careers. Instead, she believes it has more to do with whether they have the willingness to learn and develop. Additionally, in her experience, “The opportunities are there to be had,” but the awareness of these chances may be lacking.

Development of staff is a high priority at Keighley Laboratories. The company not only assists employees who request further development, but also proactively identifies aspiring individuals and encourage them to take on additional skills and qualifications so that they can progress within the company. Debbie’s only restriction in developing employees can be finding suitable external training, such as relevant apprenticeship programmes.

Debbie sees the value in having diversity at board and senior management level, as she thinks this “gives a breadth of experience and opinion.” Nevertheless, she is adamantly opposed to any form of positive discrimination in favour of women, whether this is quotas for boards or policies within companies to support female progress. In her view, “If somebody has the drive and wants to progress, then it will happen naturally.”

Managing Director of Keighley Laboratories Ltd, a specialist metallurgical services facility, which provides analysis, testing and heat treatment of metals.

The company, which is located in Keighley, West Yorkshire, was set up in 1920 and currently employs around 60 people.

Debbie joined the company in 1986 in the Accounts Department and became Managing Director in 2008.

Debbie is also Director on the management committee of the Contract Heat Treatment Association (CHTA).

Although Debbie had ambitions to become a director at the company, her move into the role of Acting Managing Director in 2007 was unexpected. She stepped in and took over the reins when the former Managing Director became ill. She took the permanent role of leading the company the following year and has now been Managing Director for more than five years. She told EEF that having a financial background is beneficial when running the business, but it did not prepare her for the level of interaction with customers and external bodies, when she became the face of the company.

Having taken on the role by circumstance rather than design, Debbie has relished the challenges and rewards the job has brought. She says “It’s a very demanding role, but I wouldn’t change it.” However, one thing she would alter is the opportunity to have had a mentor. Having a mentor would have helped her make the transition from Finance to Managing Director and enabled her to seek advice on wider business decisions. In fact, her belief in mentoring to grow and develop employees has led Debbie to act as an informal mentor for her senior management team. She explained to EEF, “I am there as an advisor, a mentor and a confidante.”

She feels the poor image of the manufacturing industry is its biggest challenge in attracting the next generation. Young people in particular are more drawn towards office-based occupations in more glamorous sectors. This is why she believes that even though senior women can act as role models, at this time, this will do little to entice women into the industry.

Debbie believes the industry's unpopularity as a profession is compounded by the structure of the current education system, where there are two main stumbling blocks for driving talent into manufacturing. Firstly, the lack of promotion of the importance of the STEM subjects to pupils limits the career opportunities open to them. Secondly, she considers the way in which schools and colleges are funded is a disadvantage. They are paid to retain pupils in education through to A-Level, which means they are unlikely to encourage youngsters to consider vocational careers, such as taking up apprenticeships. She also feels this may have

a detrimental effect on the level of interest in manufacturing from local schools. For example, Debbie told EEF the company's representatives would willingly accept invitations to talk in schools; however, the last visit they undertook was several years ago.

In the past, Keighley Laboratories has run work placements and site visits for schools, but again this has stopped. The company is still very keen to work with them, but the schools find the paperwork associated with complying with risk assessments for Health & Safety too onerous to make it a viable option.

Regardless of the concerns she has about the wider perceptions of manufacturing, Debbie is keen to point out that women can advance in the sector as, in her experience, "There are no glass ceilings, anybody can progress." Her final suggestion for aspiring women is, "Work hard, be determined, and have faith in your abilities."

## CHARLOTTE ROSS

Apprentice at Trolex Ltd

Charlotte is in the final year of her apprenticeship, studying for a Level 3 National Certificate in Operations and Maintenance in Engineering. She is undertaking her training with Trolex, a leading manufacturer of gas detectors, environmental monitoring systems and sensors.

An apprenticeship gives Charlotte the opportunity to develop her technical skills and helps to create a route into her desired career as a Design Engineer. She describes herself as a 'hands-on' person with good practical skills.

Charlotte has been appointed a mentor, which she feels will greatly help her achieve her ambitions. One-to-one sessions ensure she has her mentor's full attention and benefits from tailored advice and guidance.

"If you are the type of person who wants a rewarding challenge, then I would say that an apprenticeship is right for you," is her message to other young females considering an apprenticeship in manufacturing and engineering.

# JACQUI MILLER, MBE

Global Sales and Marketing Director, Miller UK Ltd



Global Sales and Marketing Director for Miller UK Ltd, Jacqui joined the company in 1981, two years after it was founded by her brother. The company manufactures attachments for earth-moving equipment, including quick couplers and buckets. It is a global operation and has its UK manufacturing base and head office in Cramlington, Northumberland.

Jacqui is also an active member of the Genesis Initiative, a forum dedicated to communicating the problems faced by SMEs to Parliament.

Winner of the award of North East Best Woman in International Business 2013, Jacqui was also nominated for the 2013 First Women in Manufacturing awards. In January 2013 she was awarded an MBE for services to industry and international trade.

## TAKE RESPONSIBILITY FOR YOUR OWN DEVELOPMENT AND PROGRESSION

Having shown her sales flair at the company's first exhibition, Jacqui started full-time work in the family business at the age of only 17. Her sales role has grown with the company and her natural talent for sales and marketing, combined with family loyalty, has helped the business expand in the UK. In recent years she has been instrumental in the drive to move the business into international markets. Jacqui's current role of Global Sales and Marketing Director means she is responsible for the company's sales and distribution, as well as the marketing approach. She is also a member of the company board, having been a director and the Company Secretary since 1991. She told EEF that her decision to remain in manufacturing initially came from her desire to support her brothers, but this was replaced in the longer term by her growing love of the industry.

Jacqui is a natural problem solver. Her other major strength is her ability to see the bigger picture, which she believes is an attribute that women tend to have. She is keen to be judged on her own merits and not to be given preferential treatment on the basis of her gender. She told EEF she is against quotas for boards, "I believe we have to earn our own way in the world and if you want to be respected then you should be on a board because of what you have achieved, not because you are female." However, she does think that having a mix of men and women on boards and in senior operational roles makes business sense. Without representation from both halves of the population, you are unlikely to have a balanced mix of views, personalities, strengths and experiences. She feels women "bring a different dynamic to the boardroom."

Female role models in senior positions in manufacturing will encourage more women and girls to consider manufacturing as an attractive and viable career. However Jacqui was keen to stress that in her sub-sector of the industry, where they fabricate large metal products, it is often less suitable for women to work on the manufacturing side and undoubtedly less appealing than the more advanced manufacturing sectors.

Jacqui tries to act as a role model not only to her own children but to other young people as well and aims to show that with hard work and determination you can achieve. She strongly believes that everyone must be responsible for their own development and progression and "not expect that things will come their way just because they should."

In her view, to really move away from a male-dominated manufacturing industry, in which she has seen little change over the past 30 years, you need to go right back to the education system. Schools must focus on the basic skill sets that young people need, to have a successful career. They also need to do more to promote the benefits of continuing to study the STEM subjects.

Jacqui told EEF that business and government need to do more, using a joined-up approach. In her view and experience, manufacturers are willing to be involved and work with schools, but the attempts they currently make are too fragmented and sporadic and therefore make little impact on the cultural misconceptions of the industry.

Miller UK has a strong programme for developing apprentices, but the number of female applicants is low. This is one of the reasons why Jacqui would like to engage more with her local schools and colleges, as she believes, “Getting business women from the manufacturing sector speaking to children will dispel the myth about it being a male environment.”

When asked what she would give as tips for other women wanting to thrive in

manufacturing, her response was, “Firstly make sure this is what you truly want.”

To succeed in business, whether you are male or female, you have to work hard and have passion, drive and determination, as sacrifices will need to be made. In Jacqui’s case this was time spent away from her family. On the other hand, she was keen to stress that women should not try to be super human – something she believes is a gender trait. Instead, take advice and accept help from your family and colleagues.

## SUSANNA PERKINS

Apprentice at Superior Seals Ltd

Susanna is completing a Higher Apprenticeship at Superior Seals, a leading manufacturer of high-integrity o-rings and seals. This includes NVQ Level 4 in Engineering Leadership, alongside an HNC in Manufacturing Management. She is currently in the second year of a four-year course in the material science laboratory.

The apprenticeship offers more than Susanna could have imagined at the onset. The first year involved in-depth and challenging mechanical disciplines. Her second year, however, saw her progress to the company’s materials laboratory, taking her in a direction she had not anticipated. This move has meant Susanna has developed an entirely new skill set and a different way of thinking about engineering as a whole.

Being mentored by her Training Manager and colleagues in the material science laboratory has allowed Susanna access to highly experienced people who are constantly on hand to offer support. Most important was the impact her Training Manager had on her transition from school to the working environment.

Acknowledging that there are a limited number of females taking apprenticeships in engineering, Susanna has been active in promoting the opportunities of STEM careers to other young people. For example, she has attended a ‘Women in Engineering’ event at her local school, highlighting her own experiences, which she says are different from her initial perceptions of the industry. Her message to young females is “to research and find out what a career in engineering involves.”

# FLO WOOD

Managing Director, Datalink Electronics Ltd



The Managing Director of Datalink Electronics Ltd, a company that specialises in the design and manufacture of high-technology electronic products and sub-assemblies. Flo joined the company in 2001 as Operations Manager and took over as Managing Director in 2010.

Datalink Electronics Ltd has been in existence for 30 years and employs around 50 staff at its site in Loughborough.

Flo has more than 20 years' experience in the manufacturing industry and in the electronics sector, with expertise in operations management and an MBA from Loughborough University.

## A TOP-DOWN APPROACH IS NEEDED TO DEVELOP ASPIRING EMPLOYEES

After finishing her O Levels, Flo began her career in the textiles industry at Courtauld's Textiles Group. Her move into the electronics sector came with the decline in the textile industry. After taking voluntary redundancy from Courtauld's she chose to take a job at Ericsson Mobile Communications, as a Progress Chaser. At Ericsson she was given the opportunity to take on project work, which led to a move into planning and was followed by a promotion into the role of Team Leader. Flo thoroughly enjoyed the manufacturing and operations work and she undertook further studies to gain an HND in Operations Management. The downturn in the telecoms sector led to the closure of the Ericsson factory in Worksop. Flo then moved to Datalink Electronics as Operations Manager. Within a couple of years she was encouraged to study for her MBA, which then led to her promotion to Operations Director and eventually her move to Managing Director 4 years ago.

She has remained in the industry for more than 20 years and has found working in the electronics sector to be exciting and interesting. She explains, "I just like the making of things and the solving of problems, whether it is planning resources for people, equipment, materials or supply chain management: all of these things come together in manufacturing." When Flo was at school, girls were not encouraged to study subjects such as sciences and manufacturing was not a career that therefore appealed to girls. However, Flo believes that today the situation has vastly improved, with significant advances in the electronics sector, especially in internet

and mobile communications. It is a very appealing field to work in and she thinks that "it should be more attractive to females now than ever before."

A combination of self-motivation and encouragement has enabled Flo to combine furthering her education with her career. She believes this has been important in not only increasing her knowledge, but also improving her business confidence, therefore allowing her to rise to the challenges of more demanding roles as she has progressed into senior management. She was, however, keen to stress the importance of being prepared to give up your time to further your studies and therefore progress your career.

The ethos of Datalink is centred on educating and progressing employees so they can achieve their potential. The Managing Director at the time, Eric Luckwell (now Chairman), encouraged Flo to undertake her MBA. The company has funded several other MBAs and similar level qualifications. Flo told EEF that Eric Luckwell has always believed in educating and developing all staff, regardless of gender. She explained, "It's different here because the owner of the business champions both males and females equally."

She believes this top-down approach, where senior management create the right culture and programmes to develop their aspiring employees, is the key to creating the talent pipeline for the future.

Mentoring has been a feature in Flo's career progression. She has received strong support



from managers at both Ericsson and Datalink. In fact, at Datalink, advice and guidance goes hand in hand with the drive for further development. The Chairman is engaged in the mentoring of senior employees, which gives senior managers the necessary business skills, knowledge and confidence. It is important to have someone in this role to guide and encourage aspiring employees to advance, but not to force their progression.

Female role models can make all the difference for girls. Climbing the career ladder is achievable, especially if they have someone to look up to. Flo remarks, "This is what will make it believable for them: they need to be able to see it happening." This is something that Datalink is demonstrating with a female Managing Director, a female Finance Director and other women progressing within the company.

Manufacturing businesses must do more to encourage youngsters to understand and be

attracted to work in the industry, especially as manufacturing has been seen as the poor relation to the service sector for many years. Datalink regularly invites schools to visit and tour the premises and the company works with local schools to bring in pupils for work experience.

The role of schools is crucial in order to capture the attention of youngsters and interest them in manufacturing from an early age. They need to encourage those with an aptitude for maths, the sciences and skills in problem solving. Young people need to understand and embrace the appropriate skills and qualifications needed to undertake a career in the industry. If it is left until they are deciding on careers at secondary school, it is too late, and the opportunity is missed.

A good education, starting at school and continuing in the workplace, is the main advice Flo would give to aspiring women. She suggests, "Get the education and qualifications behind you and be brave enough to go for it."

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# LLOYDS BANK'S COMMENTARY

David Atkinson, Head of Manufacturing, Lloyds Bank Commercial Banking SME

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## EXPANDING THE MANUFACTURING TALENT POOL

The UK's manufacturing industry has experienced decades of change to the extent that it now only contributes a tenth of the economy, and the re-balancing of the economy calls for manufacturing to contribute a greater share. There is however a significant obstacle to this with the somewhat limited availability of skilled labour in the UK.

With Europe's lowest percentage of female engineers, the UK needs to work at attracting girls to pursue engineering career opportunities in sufficient numbers.

Many barriers in what is still a male-dominated industry have already been broken down, but more work is needed. There are many opportunities for women to succeed in engineering careers, but more can be done to change the outdated perceptions that manufacturing jobs are poorly paid and that it is an unpleasant environment to work in. These images need to be replaced with the reality that manufacturing is a creative and innovative environment with exciting, well paid career opportunities for young women and men.

Educating people so that they clearly understand what engineering is about is an important step to help change these perceptions. Many people associate it with car mechanics rather than with the highly skilled individuals that are making significant contributions to the research and development of innovative technologies that are helping to improve the UK's standing in the global market.

It is important that a solution is found to inspire girls to pursue STEM subjects and explore engineering career paths, and to increase Britain's talent pool which will help drive long term sector and economic growth.

Many manufacturers do visit schools but often it is when pupils have already made their GCSE subject options, and we are encouraging manufacturers to engage with school children at a younger age to inspire them and help to improve their STEM subject skills.

More work is needed to support budding engineers once they leave school. Lloyds Banking Group has demonstrated its commitment to backing the UK manufacturing sector through the recent launch of the Lloyds Bank Advanced Manufacturing Training Centre (LBAMTC) at the Manufacturing Technology Centre, Coventry. Supported by Lloyds Bank, the centre will help address the sector's skills gap in the UK and will develop more than 1,000 engineering apprentices and trainees. The building of the centre will begin in 2014 and it will open in 2015.

A generation of young entrepreneurs have been inspired through programmes like 'The Apprentice' and the creation of a prime time programme where the next generation of young engineers have to overcome challenges to win a lucrative job contract could go a long way to inspire youngsters to enter the manufacturing industry.

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**LLOYDS BANK**

Inspirational female role models are vital if we are to increase the number of women opting for careers in engineering and close the gender gap, and women should be encouraged to come forward and share their stories to inspire diversity. Mentors who understand the challenges faced in engineering can provide invaluable support and advice to female apprentices and people starting out on their engineering career path.

It is not just about attracting women into the workforce that is crucial, but keeping them

there in the long-term. More help is required for women returning to work after a career break, as engineering can change quickly in a short period of time.

Whilst there is a shortage of women engineers, the findings of this report are more encouraging for women progressing through the ranks to sit on the boards of UK manufacturers. It is fantastic to see the progress being made by women having a greater influence in running both large and smaller manufacturing businesses.

A handwritten signature in black ink that reads "D. Atkinson". The script is fluid and cursive, with the first letter 'D' being particularly large and stylized.

**David Atkinson**  
Head of Manufacturing  
Lloyds Bank Commercial Banking SME

# METHODOLOGY

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The data for each company was primarily accessed from the BoardEx database, with the ranking of FTSE 100 manufacturing companies compiled from BoardEx data as at 11th March 2014.

The FTSE 100 organisations were classified based on their 2007 SIC code, with codes for each of these companies taken from Avention.<sup>19</sup> A full list of the 28 manufacturing firms and their SIC codes can be found within the appendices.

Other sources were also used, including

annual reports and corporate websites.

All of the data accessed as part of this project has come from the public domain. Where a time period has been focused upon (e.g. new director appointments), the 12 months prior to 11th March 2014 has been used.

Selected women holding high-level operational roles within manufacturing SME companies were contacted in January 2014 and invited to be interviewed to form case studies for the project. The interviews were conducted in the period from mid-January to early February 2014.

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<sup>19</sup> Avention: <http://www.vention.com/> (formerly OneSource)

# APPENDICES

## Glossary

### Non-Executive Directors

NEDs form part of the company board but not part of the executive team. They are not involved in the day-to-day running of the business, but monitor executive activity and help develop and challenge proposals on strategy.

*“Non-Executive Directors should scrutinise the performance of management in meeting agreed goals and objectives and monitor the reporting of performance. They should satisfy themselves on the integrity of financial information and that financial controls and systems of risk management are robust and defensible. They are responsible for determining appropriate levels of remuneration of Executive Directors and have a prime role in appointing and, where necessary, removing Executive Directors, and in succession planning.”<sup>20</sup>*

The Corporate Governance Code states that at least half of the board (excluding the Chairman) should comprise of NEDs determined by the board to be independent. The board must determine whether a director is independent in character, whilst also taking into account anything that could affect the director’s judgment. The board then has to report the reasons for the director being independent, paying particular attention “to the existence of any relationships or circumstances which may appear relevant to its determination.” These include whether a director:<sup>21</sup>

- has been an employee of the company within the last 5 years
- has had any form of business relationship with the company in the last 3 years
- has close family ties with existing directors or senior employees

- has links with existing directors through other companies or holds cross-directorships
- is a significant shareholder within the company
- has served on the board for more than 9 years
- receives (or has received) additional remuneration from the company as well as a director’s fee

### Senior Independent Non-Executive Directors

Boards are required to appoint one of the independent NEDs as a Senior Independent NED. The essential difference with this role is the responsibility in terms of acting as a sounding board for the Chairman and as an intermediary between the Chairman and the other directors. The Senior Independent NED is also available to shareholders should they have concerns that might not be answered by (or be inappropriate for) the Chairman, Chief Executive or other EDs.<sup>20</sup>

### Chairman

The Chairman plays an extremely important role, being responsible for the leadership and operation of the board whilst ensuring that the board is effective in implementing and setting strategy. The Chairman generally has the responsibility of facilitating NED input whilst also maintaining a constructive relationship between EDs and NEDs.<sup>20</sup>

The Corporate Governance Code recommends that Chairmen should be seen to be independent upon appointment, but thereafter independence is no longer considered appropriate.<sup>20</sup> This largely reflects the fact that Chairmen are likely to be more involved and engaged with the day-to-day running of the business than NEDs.

<sup>20</sup> Financial Reporting Council – The UK Corporate Governance Code, September 2012

<sup>21</sup> These are taken from the 2012 UK Corporate Governance Code

## Standard Industrial Classification Codes

**TABLE 8 FTSE 100 COMPANIES SIC CODES (SIC CODES SOURCED FROM AVENTION)**

ORGANISATION NAME	SIC 2007 CODE	ORGANISATION NAME	SIC 2007 CODE
Aberdeen Asset Management plc	6619	Lloyds Banking Group plc	64191
Admiral Group plc	6512	London Stock Exchange Group plc	6611
Aggreko plc	7739	Marks & Spencer Group plc	4719
Anglo American plc	0710	Meggitt plc	3030
Antofagasta plc	0729	Melrose Industries plc	2711
Arm Holdings plc	2611	Mondi plc	17219
Ashtead Group plc	7739	National Grid plc	3511
Associated British Foods plc	1081	Next plc	4771
AstraZeneca plc	2120	Old Mutual plc	6511
Aviva plc	6511	Pearson plc	5811
Babcock International Group plc	3011	Persimmon plc	41
BAE Systems plc	3030	Petrofac Ltd	4221
Barclays plc	64191	Prudential plc	6511
Barratt Developments plc	41	Randgold Resources Ltd	0729
BG Group plc	06	Reckitt Benckiser Group plc	20411
BHP Billiton plc	0710	Reed Elsevier plc	5819
BP plc	1920	Resolution Ltd	6511
British American Tobacco plc	1200	Rexam plc	2592
British Land Co plc	68209	Rio Tinto plc	0710
British Sky Broadcasting Group plc (BskyB)	6020	Rolls-Royce Holdings plc	3030
BT Group plc	6110	Royal Bank Of Scotland Group plc	64191
Bunzl plc	4639	Royal Dutch Shell plc	06
Burberry Group plc	14132	Royal Mail plc	53202
Capita plc	82912	RSA Insurance Group plc	6512
Carnival plc	5010	SABMiller plc <sup>22</sup>	11050
Centrica plc	3522	Sage Group plc	6202
Coca-Cola HBC AG	1107	Sainsbury (J) plc	4711
Compass Group plc	5610	Schroders plc	6619
CRH plc	2351	Severn Trent plc	3600
Diageo plc	1101	Shire plc	2120
Easyjet plc	51101	Smith & Nephew plc	3250
Experian plc	82912	Smiths Group plc	2219
Fresnillo plc	0729	Sports Direct International plc	4764
G4S plc	8010	SSE plc	3511
GKN plc	3299	St. James's Place plc	6511
GlaxoSmithKline plc	2120	Standard Chartered plc	64191
Glencore Xstrata plc	05102	Standard Life plc	6511
Hammerson plc	68209	Tesco plc	4711
Hargreaves Lansdown plc	6619	Travis Perkins plc	4752
HSBC Holdings plc	64191	TUI Travel plc	7911
IMI plc	2814	Tullow Oil plc	06
Imperial Tobacco Group plc	1200	Unilever plc	2042
InterContinental Hotels Group plc	5510	United Utilities Group plc	3600
International Consolidated Airlines Group SA (IAG)	51101	Vodafone Group plc	6120
Intertek Group plc	7120	Weir Group plc (The)	28131
ITV plc	6020	Whitbread plc	5610
Johnson Matthey plc	2445	William Hill plc	9329
Kingfisher plc	4752	Wm Morrison Supermarkets plc	4711
Land Securities Group plc	68209	Wolseley plc	4674
Legal & General Group plc	6619	WPP plc	731

Note: Shaded cells denote manufacturing firms (i.e. those with SIC2007 code of 10-33).

<sup>22</sup> The SIC Code for SABMiller was taken from Companies House: <http://www.companieshouse.gov.uk/>

## ABOUT LLOYDS BANK

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Lloyds Bank recognises the fundamental role that the manufacturing sector plays in rebalancing the UK economy and we are committed to provide access to finance and competitive rates of funding. We offer a broad range of finance beyond just term lending and this spans import and export trade finance, structured and asset finance, securitisation facilities and capital market funding.

We have committed to lend at least £1bn to UK manufacturers each year until 2017. In the year to September 2013 we lent manufacturers £1.3bn exceeding our lending commitment in just nine months. Discounted funding through the Lloyds Bank Funding for Lending Scheme is available. We have agreed 80% of all business loan and overdraft applications in the past year.

We have invested in developing more than one hundred managers who have completed a manufacturing awareness training programme delivered by WMG with the support of the MTA and EEF. Our relationship managers are some of the most knowledgeable in the industry having been accredited in Manufacturing Awareness by WMG.

Lloyds Bank continues its commitment to support the UK manufacturing sector by launching a £5 million Lloyds Manufacturing Academy at the Manufacturing Technology Centre, Coventry to address the sector's skills gap in the UK. The Academy will train 100 engineering apprentices every year over five years and the Academy will open in 2015.

For further information about our manufacturing support visit [www.lloydsbank.com/manufacturing](http://www.lloydsbank.com/manufacturing)



**LLOYDS BANK**

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## ABOUT US

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EEF is dedicated to the future of manufacturing. Everything we do is designed to help manufacturing businesses evolve, innovate and compete in a fast-changing world. With our unique combination of business services, government representation and industry intelligence, no other organisation is better placed to provide the skills, knowledge and networks they need to thrive.

We work with UK's manufacturers from the largest to the smallest, to help them work better, compete harder and innovate faster. Because we understand manufacturers so well, policy makers trust our advice and welcome our involvement in their deliberations. We work with them to create policies that are in the best interests of manufacturing that encourage a high growth industry and boost its ability to make a positive contribution to the UK's real economy.

Our policy work delivers real business value for our members, giving us a unique insight into the way changing legislation will affect their business. This insight, complemented by intelligence gathered through our on-going member research and networking programmes, informs our broad portfolio of services; services that unlock business potential by creating highly productive workplaces in which innovation, creativity and competitiveness can thrive.

The EEF Information & Research Team is in a unique position to provide insight into the trends and behaviours that shape the UK manufacturing sector. The Team is able to provide invaluable research data, assisting with daily business needs whilst also providing the intelligence to help businesses compete, innovate and grow.



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## INFORMATION AND RESEARCH TEAM

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### **Michèle Fordyce, Head of Information and Research**

Michèle has been involved in Information and Research in the City for more than 25 years. Professionally qualified in information, Michele has led Information Teams in both law and investment banking. She took up her position as Head of Information and Research at EEF 5 years ago. As part of the wider remit of this role, Michèle is responsible for ensuring the delivery of high-level, tailor-made information and research projects, built around the clients' individual needs. With their specialist experience of the manufacturing sector, Michèle and her team can offer individual research and an integrated quality product.



### **Amanda Norris, Survey Manager**

With more than 15 years' experience in the field of surveying and benchmarking, backed up by a Masters in Research. Amanda manages all the surveys conducted by EEF, including advising on questionnaire design and compilation of results. In addition, Amanda has experience in a range of research methods from interviewing through to case study work and has delivered high-quality projects for blue-chip clients.



### **Oliver Kelly, Information Specialist**

Oliver joined EEF in April 2012. Prior to this he spent 3 years working in market research and economic development. He has experience across a wide range of sectors and an appreciation of numerous research techniques. Oliver works on bespoke 'intelligence' projects for clients as well as assisting in the management and processing of benchmarking and surveying.

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We foster enterprise and evolution to keep your  
business competitive, dynamic and future focused

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