Manufacturing 2024 Insights and 2025 Outlook

February 2025

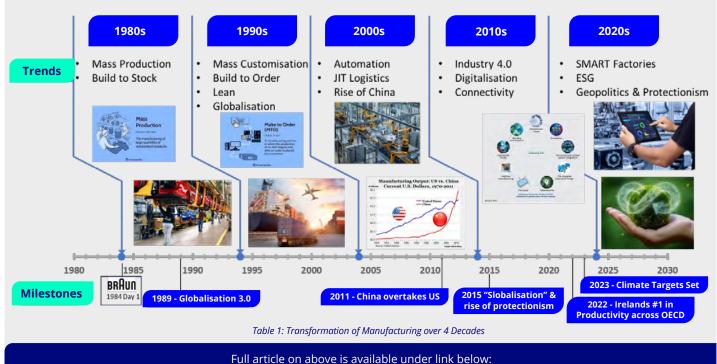


Classification: Green

2024 - A year of persistent contraction, lower inflation, strong employment, growing conflicts, complex geopolitics, global growth, consequential national elections, the threat of US tariffs escalates, a growing realisation that ESG carbon targets are under serious threat, and Artificial Intelligence gains ground

On a personal note, 2024 marked 40 years for me in Manufacturing. Four decades of disruptive change, exponential growth in Ireland, and now a sector that is the cornerstone of our economy.

Table 1 below provides a visualisation of the trends and milestones which have driven this phenomenal growth from €5.8Bn contribution to GDP in 1984¹ to peaking at €199Bn in 2022.²



Bank of Ireland: Manufacturing is the cornerstone of our economic future – only complacency can cost | Business Post

These headline trends above for 2024 played out as follows:

Persistent Contraction: Irish Manufacturing started 2024 on an asymmetric mix of optimism and caution. Optimism on the back of solid performance in 2023, but caution as global demand slowed. EU manufacturing has been a full year in contraction, with sluggish demand and new orders. While Irish Manufacturing has fared better with only moderate contraction, activity has been overall sluggish and a sustainable upturn remains elusive.

Lower Inflation: Interest rate hikes have had the desired effect with inflation falling back to 0.5% (HICP) in Nov but rising to 1.0% in Dec.³ The reality is though that input prices remain elevated and Manufacturing must have a laser focus on cost and margin improvement.

Strong Employment: Employment has remained strong in 2024 in Ireland and US. However this is a lagging indicator and signs are that without a material upturn in demand, Manufacturing including Ireland will cut capacity. December 2024 EU PMI report⁴ noted that "Manufacturers are still cutting jobs. Although the pace of job trimming slowed slightly in December, it is still relatively high, and this trend is likely to continue well into the new year given all the news about companies restructuring". Anecdotal evidence suggests leavers are not being replaced and business will align their cost basis to business activity.

World Conflicts: Ongoing conflicts in Ukraine and The Middle East with no clear pathway to resolution create huge uncertainty and

trigger a slowdown in consumption and demand for goods. The Middle East crisis has opened a whole new supply chain uncertainty for manufacturing with container ships rerouting away from the Red Sea adding significant time and cost to manufacturing inputs. Fingers crossed that latest ceasefire deal will endure.

Complex Geopolitics: 2024 saw an increase in the risks and uncertainties for manufacturing associated with geopolitics. A growing move away from globalisation to protectionism because "business trust" is broken, creates tension between trading partners. VUCA - Volatility, Uncertainty, Complexity, Ambiguity, is the new norm.

Global Growth: Despite regional differences, with Europe in recessionary territory, global GDP growth will land around +3.2% in 2024 with US at +2.8% and Euro area at +0.8%.⁵ Global growth is forecast stable and resilient at +3.3% in 2025 and 2026 despite uncertain times. Ireland GDP 2024 is forecasted at -1.1% but Modified Domestic Demand is positive at 3.2% reflecting the domestic economy. GDP 2025 is forecasted to be at 4.5%.⁶

US tariffs: 2025 braces itself for tariffs which may have significant material impact on businesses and economies across the globe.

Consequential Elections: 2024 tested democracy as an estimated 4 billion people in more than 50 nations - 50% of the world's population voted in national elections.⁷ The outcomes are likely to shape global politics for years to come not least the new US administration which is promising major upheavals in world trade.

ESG and Climate Change: The urgency of the crisis is not matched by the pace of change. Carbon Targets are not on track and Intent to address is not matched by action. As noted by the UN Emissions Gap report⁸: "No more hot air please - there is a massive gap between rhetoric and reality".

Artificial Intelligence: ChatGPT, Generative AI and Large Language Models gathered momentum in 2024. AI enabled PC sales grew by 99.8% in 2024.⁹

Despite all of these headwinds, Irish Manufacturing has delivered a solid performance in 2024:

- 2024 Value of Irish exports are up YOY by 15%.¹⁰ This spike may be attributed to stock building in fear of tariffs.
- Corporation tax receipts projected at €24.5BN overall, up 2.5% YOY with ca. €10BN from Manufacturing.¹¹
- MNC Employment stayed above 300K with 234 new investments delivering 13500 future jobs.¹²
- SME/Enterprise Ireland Employment grew 7% to 235K.¹³
- Manufacturing are embracing the Green Agenda driven by MNC demands, and strategic imperative.
- SMEs proven to be the engine of MNCs and Manufacturing growth.

In terms of individual sectors, 2024 was a mixed picture but mostly of solid growth:

- Global PC sales have grown 1.8% YOY.¹⁴
- EU Automotive registrations were flat at +0.4% YTD Nov. EVs volumes fell by 5.4%.¹⁵ In Ireland FY registrations down 1% and EVs down by 23.6%.¹⁶
- Record sales of Semiconductor manufacturing equipment at \$113BN up 6.5% YOY driven by AI.¹⁷
- Industrial construction equipment expected to fall in 2024 by 8% to 1.08m. units.¹⁸
- Agri equipment are forecasting falls of 10 to 15% (Region and product dependent) for year end 2024.¹⁹
- Data centres, & Modular construction and sustainability retrofitting all continue strong.
- Continued growth in medical devices sales with CAGR forecasts of 9.8% to \$1.3Tn by 2029.²⁰
- Pharma sales also expected to grow by 5.1% in 2024.²¹

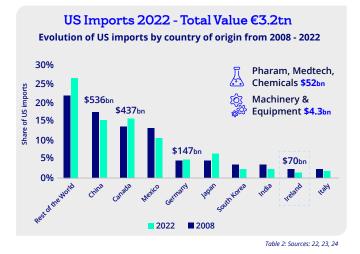
Irish Manufacturing is deeply anchored in all the above supply chains and so individual businesses will feel the pain differently. The optimistic view, sentiment and ambition is that Manufacturing contraction has hit a turning point and that 2025 will see a return to at best moderate growth. However the turning point remains fragile and vulnerable to ever more risky geopolitics. A prolonged contraction, may trigger deeper capacity reductions and further adjustments in employment levels cannot be ruled out.

Summary of Key Impacts

- Geopolitics, Rise in Protectionism, Strategic Autonomy, Democracy: This will continue as a complex picture of economies moving away from mutual benefit of globalisation to national gain of protectionism. 2025 is potentially set to be the year of trade wars and tariffs which will have wide reaching, consequential and unpredictable impacts across global trade and manufacturing supply chains. Irish manufacturing is in a strong position to navigate the potential impacts of above given the deep roots in of both the MNC and SME manufacturing community.
- How real is the threat of tariffs: Trump's favourite word is tariffs and given that incoming administration is more organised than last time round with weaker global pushback, we must be prepared.

Ireland has a significant trade surplus with US driven by significant exports of Pharma and Medtech, putting us along with other economies definitely on the "watch list" for tariffs. See table 2. Irish Manufacturing may be impacted on two fronts. One tariffs on different product categories, and two tariffs on main trading partners, which may impact trading volumes and consequently see some volume decline for Irish suppliers. Bottomline is that tariffs are divisive and ultimately the US consumer will pay.

Hopefully economic and business rationale will prevail that recognises that many of our FDI companies are in Ireland not just for US interests but equally to serve their markets in Europe and beyond. In summary there are only two things we can say with a degree of certainty around tariffs. They are one, unpredictable in terms of their unintended consequences and two, they will hurt the end customer in terms of inflation.



- **Brexit:** Exposed Irish Manufacturing has adjusted and there is no negative noise from enterprises specifically in connection with Brexit. The dominating narrative driven by a sense of "buyer's remorse", is of the new UK administration seeking enhanced trading links with the EU including a recent call to rejoin the customs union.²⁶
- **Russia Ukraine & Middle East Conflicts:** Hopefully 2025 will mark the beginning of enduring resolutions. Supply Chain logistics costs rose in 2024 by 30%²⁷ partly due to the effective closure of the Red Sea route(Table 3). This accounts for 15% of global trade adding 10- 15 days to shipping routes cost driving up manufacturing input costs.²⁸



- **Factory Operations:** With the headwinds of energy inflation and labour shortages, Manufacturing response has been twofold. Behavioural and shift pattern changes to optimise energy usage and an acceleration of the digital agenda and higher levels of automation.
- **Predictable Unpredictability** has become the new normal
- Supply Chain Resilience continues a top priority for manufacturing to maintain business continuity and protect reputation. The bittersweet news is that supply chain constraints are easing with Global Supply Chain Volatility Index GSCVI²⁹ at -0.15 down from peak "bottleneck" values in 2021 of >6. As noted below the latest concerns is stock building to avoid tariffs.
- Inflation (HICP) has eased from 4.6% in Dec 2023 but back to 1.0% in Jan. 2024³⁰
 - Pressure on SMEs to reverse earlier price increases
 - Consumers are justifiably pausing consumption as some big-ticket items like EVs are falling in price.
- **2024 Irish GDP Forecasts**^{31,6} ranged from widely optimistic 2% to 3%, to more data driven results as commentators repeatedly downgraded their outlook. Ireland delivered -5.7% GDP in 2023 of which Industry was -21.6%. Both downward adjustments are understandable given the record year that was 2022. The outlook for 2024 is still negative growth of around -1.5% but improved from 2023.

Current data available for Q1 to Q3 shows we are tracking at -1.7% for economy and -10.6% for Manufacturing. Forecasts for 2025 are in the range of +4.5%.

- Purchasing Managers Index (PMI) data⁴ 2024 has been a year of contraction with latest Dec. 2024 PMI at 49.1 driven by falling orders and lower production output.
- Labour market shortages Economy is at full employment and shortages of key technical skillsets are still the case. These are being partly addressed with increased levels of automation, and in-house employee networks. Availability of affordable accommodation remains a key barrier to attracting talent and some business owners have become landlords. The "abundance" of manufacturing activity is not matched by infrastructure needs of housing, transport, grid capacity.
- ESG, and Digital agendas gain momentum in 2024: All driven by a combination of digital transformation, supply chain reconfiguration, ESG metrics, regulatory compliance and higher fuel costs improving payback periods for electrification and renewable sources.
- Artificial Intelligence gained momentum in 2024: ChatGPT, Generative AI and Large Language Models gathered pace in 2024. It was a dominant theme of the 2024 World Economic Forum Annual Meeting at Davos with Global CEOs excited about 20%+ productivity improvements. The reality is that nobody can keep up with the pace of change but manufacturing must find ways of navigating the opportunities that AI presents which in the end are human centric and deliver Amplified Intelligence and real profit to their business.

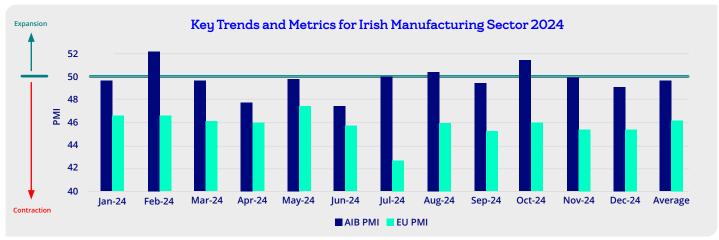


Table 4: Sources: PMI S&P Global Jan 2025



Irish Manufacturing Purchasing Managers Index (PMI)

PMI is a survey of 250 manufacturing companies. A result greater than 50 represents expansion. Ireland has spent most of 2024 in mild contraction with an average score of 49. By comparison, our biggest market, the EU, has averaged much lower at 46 with significant new order decline and weaker demand. Latest data suggests a fragile upward turning point but this needs to be sustained into H1 2025 to avoid capacity adjustments and employment impacts.

Global Supply Chain Volatility Index (GSCVI)

TThe GEP Global Supply Chain Volatility Index, based on data derived from a monthly survey of 27,000 businesses, has fallen from the dizzy heights of 6 during the pandemic to -0.15 in Dec. 2024. The big headline was – "North American Manufacturers Begin Stockpiling To Buffer Against Tariffs" and this mirrors my commentary in December 2024 where I noted that record high Irish exports to the US point to stockpiling to avoid potential tariffs.

In summary the latest data signals persistent weakness in the global economy with recessionary conditions prevailing in Europe. While sentiment going into 2025 may be positive as data indicators slowly improve, it continues to be overshadowed by geopolitical shocks which show no sign of abating.

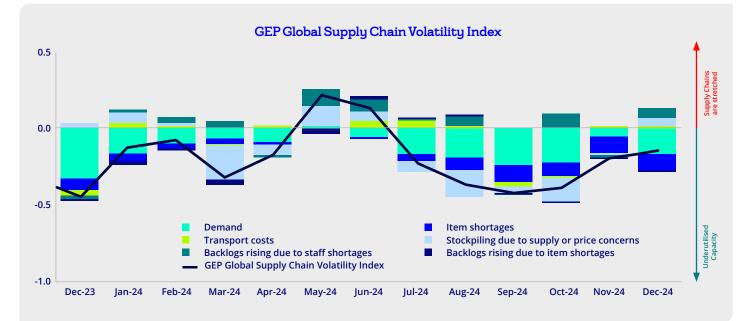


Table 5: Sources: GEP, S&P Global Dec 2024



Imports and Exports, Industrial Output and Turnover 32,33

Imports and exports performance are summarised in graphic (Table 6) for period Jan – Nov 2024. In totality imports were down YOY at -5% while exports are up a massive +15%. This exports performance totalling €189BN to Nov. already exceeds record year 2022 and is concentrated in the Pharma and Machinery sectors up 30% and 22% respectively and to the US up by 36%.

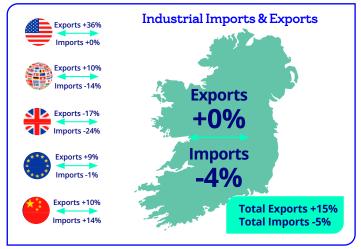


Table 6 Source: CSO Jan2024

The view of this writer is that this is a temporary spike and attributed to stock building in fear of US tariffs.

A mixed picture emerges for Manufacturing production and turnover (Table 7). Total annual comparison January to November is negative but traditional production output performed better than modern (including Pharma) at +4.1% production growth YOY.

Manufacturing Production and turnover Annual

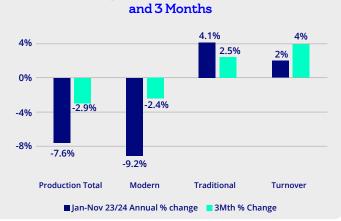


Table 7: Source: CSO Jan 2024

Manufacturing Input Price Inflation 27,34

While inflation (HICP) has continued to ease in 2024 from 4.6% in Dec. 2023 to 1.0% in Dec. 2024, the reality is that manufacturing input prices continue elevated when compared to pre Covid-19 levels. See tables 8 and 9 below.

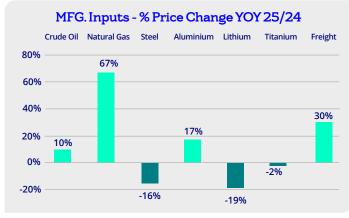


 Table 8: Source: Tradingeconomics Jan 2025

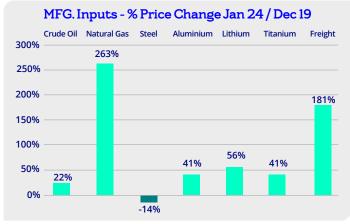


Table 9: Source: Tradingeconomics Jan 2025

Continued Lithium pricing drop is welcome and driven by EVs dropping demand. Natural gas is now almost 4 times its price pre Covid at \notin 47 compared to \notin 13 per MWh. Freight costs continue elevated again in January due to Red Sea closure and there will be renewed upward pressure on oil which uses this route.

Wage inflation is likely to continue in the short term given shortages and some of the 2024 tax reliefs taking effect may slow further downside in inflation. The only positive development above is steel down 16% YOY driven by lower demand and available capacity in China as construction sector has collapsed.



ESG – 2024 – Some progress but falls short of legally binding targets. Intent needs Action

2024 was a year of heightened awareness of the strategic imperative that is ESG for businesses, but as table 10 shows we are falling way short of our legally binding targets across all sectors. Target is -51% for 2030, and we are tracking at -29% For manufacturing the figures are -35% and -11%.³⁵

In exactly the same vain and according to SEAIs National Energy Projections report³⁶, Ireland is on course to miss its legally binding climate and energy targets and we may incur fines up to €8bn or higher in 2030. The report calls for greater speed across all sectors, greater use of grant fundings, disruptive technology change, all combined with strong policies and measures which motivate the right green behaviours.

Total	in economy Ireland's Emissions		Target reduction ¹ 51%	Anticipated reduction ² 29% ³ 42% ⁴
By Sector		% Emissions total ¹	Target reduction	Anticipated reduction
A	Agriculture	34.3%	25%	19%
ţ,	Transport	17.1%	50%	41%
Ð	Electricity	14.4%	75%	62 %
۲	Built Environment	11%	45% Commercial 40% Residential	50% Commercial 48% Residential
<u>.</u>	Land Use, Land Use Change and Forestry (LULUCF)	10.7%	N/A	+15%
ഫ്	Industry	9.7%	35%	11%
٩	Circular Economy	2.8%	50%	21%
Ð	Public Sector	1.1%	51%	49%

Table 10: Source KPMG

Manufacturing must consequently drive Key Actions under headings below to reduce Carbon Footprint.

Carbon Neutral Energy Sources	Electrification & Logistics	
 Heat pumps, SolarPV, Biomass Grants support up to €162,600 from SEAI Energy Management Systems Process heat recovery systems for energy intensive processes Renewable Electricity to increase from 40% to 80% 	 EVs for logistics internal and external Localise suppliers Bulk and consolidated transport Maximise transport utilisation with no empty routes 	
Supply Chain Scope 3 Emissions	Energy Efficient, Digital and Automation Capex Program	
 Pareto suppliers by carbon impact Transparent supply chains in accordance with code of conduct 	 Upgrade assets to Best available technology (BAT) Automation SMART and data driven process steps Artificial Intelligence 	
Waste Mgt. and Circular Economy	People Power	
 Mindset of zero waste Zero polluting emissions Migrate from linear business models to circular ones across product portfolio Design intent for circularity Circularity to increase 2% to 10% 	 ESG is embedded in DNA and Strategy of organisation Power of green behaviour Like safety ESG is everyone's responsibility Measure, track, communicate progress with clear KPIs 	



Survey Roundup – Business Sentiment is higher for 2024 than 2023

Despite the complex and high-risk geopolitical backdrop as we start 2025, many surveys show that CEOs and businesses are positive and optimistic about the year ahead. Here are four highlights:

KPMG 2024 10th CEO Survey: ³⁷ High Optimism -



Table 11: Source: KPMG Nov 2024

PWC 2025 28th CEO Survey: ³⁸ "CEOs report early productivity gains from Generative AI and rising payoffs from investments in sustainability. The challenge is to increase scope and speed.""

IBEC Manufacturing Survey: ³⁹ "Manufacturers remain optimistic about the current business and for the months ahead."

2025 Eurochambres Survey: ⁴⁰ Business Confidence marginally up on 2024 with top 3 challenges of Labour costs, Skills availability and regulatory burden.

Business confidence for 2025

Entrepreneurs are approaching the upcoming year with caution, as economic uncertainty and a challenging business environment continue to temper confidence

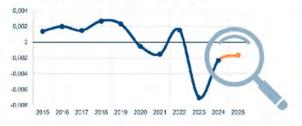


Table 12: Source: Eurochambres Nov 2024

Manufacturing 2025 Outlook and Beyond – Optimism despite growing cloud of Geopolitics with a laser focus on costs and margins.

Tailwinds 2025

- Irish Manufacturing is hugely resilient with enormous positive dividends gained by shocks of COVID-19, Brexit and Ukraine serving it well to navigate the uncertainties of 2025.
- SMEs continue to benefit from MNCs reconfiguring their supply chains to local and more secure partners
- SMEs have benefited from vertical integration changes in response to supply chain headwinds.
- The shocks of energy inflation and shortages are accelerating conversion to environmentally friendlier alternatives.
- Inflation impacts are receding but customers are seeking to reverse increases.
- FDI activity remains robust and will support growth.
- Manufacturing is embracing ESG and rate of adoption is increasing as funding grants increase
- PMI, Exports, Industrial output and GDP data all point with caution to moderate growth in 2025

Headwinds 2025

- Risk of tariffs and wider impacts on global trade. 2024 exports may be overstated.
- The risks pf geopolitics complexity continues high.
- Elevated input costs, including materials, minimum wage, social costs will weaken competitive profile and must be countered with a laser focus on business costs and margins.
- Labour shortages and competition for certain talent in a tight market continues.
- There may be capacity adjustments in certain sectors depending on how macroeconomics plays out.
- Infrastructure of transport, housing, utility grids need to match Manufacturing ambitions and not be a barrier to growth.

The fundamentals of Irish Manufacturing continue to be strong. The optimistic view is that Manufacturing contraction here and in EU has hit a turning point and that 2025 will see a return to moderate growth. However, the turning point is fragile, weak and vulnerable to ever more risky geopolitics. Manufacturing may indeed find itself navigating a downward adjustment in capacity and employment levels until customer orders start to rise in the medium term. The short term will require a sharp focus on cost and margin management.



Sources: CSO, Gov.ie, IBEC, Bank of Ireland, The Economist, S&P Global, Irish Times, Gartner tradingeconomics, ACEA, ECB, ESRI, SEAI, IDA, DETE, PWC, KPMG, GEP, CNN, Renatus, Enterprise Ireland

- Ireland GDP 1960-2025 | MacroTrends Sept 2024
- GDP by Sector Quarterly National Accounts Quarter 3 2024 Central Statistics Office -Dec.2024
- PMI Releases Jan. 2025
- OECD Economic Outlook, Volume 2024 Issue 2 | OECD Dec. 2024
- Quarterly Economic Commentary, Winter 2024 | ESRI Half the World to Vote in 2024, With Global Ramifications (voanews.com) Jan 2024 Emissions Gap Report 2024 | UNEP UN Environment Programme
- Gartner Forecasts Worldwide Shipments of Al PCs to Account for 43% of All PCs in 2025 Goods Exports and Imports November 2024 Central Statistics Office

- Corporation tax receipts 2024 Google Search Record R&D, strong capital investment, and high number of new investors. | IDA Ireland 12
- Enterprise Ireland companies create record job numbers during 2024 The Irish Times Global PC shipments increased in 2024, says IDC
- ¹⁵ New car registrations: -1.9% in November 2024; year-to-date battery-electric sales -5.4% ACEA -European Automobile Manufacturers' Association
- 121.195 New Car Registrations in 2024; Electric Cars Reach 17.459 | SIMI Global Total Semiconductor Equipment Sales Forecast to Reach a Record of \$139 Billion in 2026. SEMI Reports
- Global construction machinery unit sales 2024 | Statista
- John Deere Investor Relations Medical Devices Technologies and Global Market Outlook 20

- ²¹ Pharmaceuticals Industry Trends January 2024 | Atradius January 2024
- 2 Countries & Regions | United States Trade Representative Nov 2024
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- UK needs to rejoin EU customs union, says Lib Dem leader Ed Davey Jan 2025
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 How the Red Sea crisis could clobber the global economy | CNN Business Jan 2024 ²⁹ Global Supply Chain Volatility Index | GEP Jan 2025
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- ³⁹ Manufacturing in Ireland IBEC
- ⁴⁰ Eurochambres Economic Survey 2025 Eurochambres



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Conor joined Bank of Ireland in 2021. He is an accomplished senior executive and brings with him significant business and manufacturing experience gained both In Ireland and internationally. He has a strong track record of business plan delivery, scaling and turnaround and is an expert practitioner in Lean thinking, supply chain best practice and cost management in the Manufacturing sector.

Conor held various senior positions in Cargotec, a global manufacturer of Industrial Equipment for Cargo handling and transport having worked in Ireland, China and Finland.

Prior to Cargotec, Conor worked in the automotive sector with Iralco Automotive and Magna Donnelly in Ireland and Opel AG in Germany. He holds an MBA from Michael Smurfit School of Business, a Mechanical Engineering Degree from UCD, and a Diploma in Business Coaching from Smurfit Executive Development.

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