

Engineering
a better future

Engineering Industries Ireland Strategy 2022 – 2025



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Forewords

Over the past two years, there have been many successes to be proud of, in particular the resilience and adaptability of business and their leadership teams.

In November 2021, we launched Ibec’s 40th Trade Association, Engineering Industries Ireland to unify the voice of the growing number of engineering businesses in Ireland. Engineering Industries Ireland is committed to shaping a stronger and sustainable future for the sector in the wake of the COVID-19 pandemic.

A thriving engineering sector is vital to Ireland’s economic success and to fundamental challenges facing our society.

The sector is delivering innovation in technologies to support renewable energies and supporting greener

global supply chains through sustainable local manufacturing and engineering services. Our continued success will depend more than ever on our ability to adapt.

Engineering Industries Ireland’s represents over 10,800 enterprises, employing 50,751 people, with exports of €8.8 billion worth of product annually. Together, we will influence policy on shared challenges and encourage companies to innovate and develop solutions towards a better future for Ireland.

I look forward to working with our Board and key stakeholders on the implementation of this ambitious strategy.

Barry Morrissey,
Chairperson



Forewords

Engineering Industries Ireland represents engineering businesses, both indigenous and multinationals, to advocate for a supportive business environment, as well as provide employer relations expertise, industry insight and incomparable networking opportunities for members.

From May 2021, our members have engaged in a detailed process of preparing for the future. The result of this process is our new Strategy 2022 – 2025, Engineering a better future. On behalf of the newly formed Ibec sectoral association, Engineering Industries Ireland, I am delighted to introduce you to our strategy for this period.

Equipped with a strong, clear vision of where we need to be and how we can best get there, our approach is broad in its intent. We are keenly aware that one size does not fit all and we are confident that our approach caters for the many varied requirements of our members.

Through our strategic pillars we are reaching out to those who wish to be involved in the creation of a dynamic future for the engineering sector. Through the provision of high-quality services to our members organisations, Engineering Industries Ireland stands ready to help you to navigate your way forward.

Pauline O’Flanagan,
Head of Engineering Industries Ireland



Industry Outlook

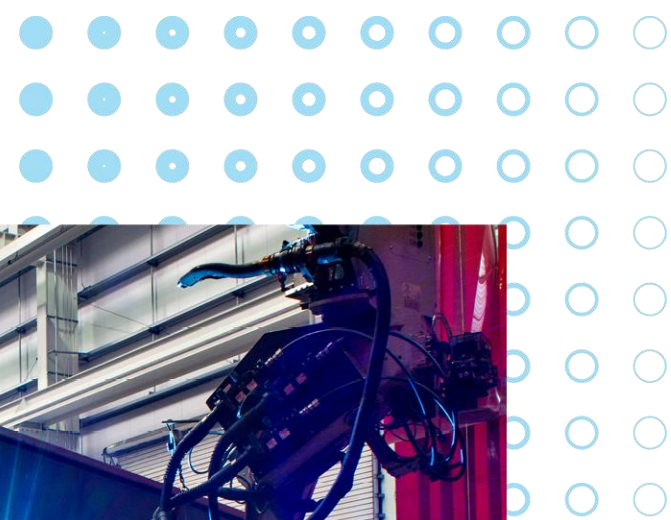
The latest quarterly economic outlook reveals that the Irish economy is going through a period of exceptional growth despite the backdrop of Covid.

Rapid economic growth has been accompanied by ongoing cost and competitiveness pressures. These pressures derive from global trends in rising energy costs, ongoing supply chain disruption, increasing regulation and a tight labour market across economies.

Global supply chains

Despite the ongoing challenges across Europe, we expect this pattern of strong demand and supply issues to continue into the 2022. Initial supply bottlenecks in 'lean' supply chains as the global economy re-opened have been exacerbated by companies building buffer inventories of key materials. Worldwide events and political strains, including tariffs and COVID-19, have exposed the precarious vulnerability of the global supply chain. As is also the case in other industries, mechanical engineering is directly dependent on the availability of parts. The lack of electronic components, for example, can result in significant delays or shortages of machine controls and a machine without a control cannot be delivered.

Gas price futures are running above €80 per megawatt-hour out to the March 2022. Temporary increases in commodity or energy costs, such as these, will act as a sort of time limited tax on households and businesses.



Growth with innovation

Orgalim, the European representative body for technology industries, states that most of the growth in Europe's technology industries is stemming from the innovative products, processes and systems developed by companies in the EU and commercialised worldwide. R&D and innovation in the sectors takes many forms: companies can carry out research in-house or through contracted projects, or they can participate in collaborative projects with universities, research institutes or other companies and start-ups.

Engineering Industries Ireland promotes these connections across domains and sectors, as it is the diversity of R&D and innovation strategies that makes for such a rich innovation ecosystem within Ireland and the EU. Ireland also provides a tax credit of 25% of capital and revenue spend on qualifying R&D which is critical to support innovation in the engineering sector.

We are living in an age of unparalleled technological disruption and accelerated business transformation. Expected growth is in engineering and industrial technologies with opportunities among companies in industrial automation, packaging and engineering design and among companies that support digitisation across the wider economy. The renewable energy space will present growth opportunities, as will activities linked to electrification and connected and autonomous vehicles. The very real threat of climate change around the globe requires flexibility and agility from the Government and the engineering sector, collaborating to reduce the dependency on carbon and manage industry activities in a more sustainable way.



People

Ireland has an excellent skills base, a first-class education system, a thriving R&D sector, and a track record of bringing innovative products and services to market quickly. However, in the skilled labour market, an overheating of the market can be observed; the lack of specialised or niche skills is holding back the upswing of the engineering industries in Ireland. There is also an underrepresentation of certain groups progressing into engineering, particularly females and those from socioeconomically disadvantaged backgrounds. Engineering is a varied, stimulating and rewarding career choice and we need to work harder than ever to ensure that it is accessible for the current and future generations of young people so that we have a diverse and insightful workforce that enables the engineering sector to thrive. We need to work together to foster the critical engineering and technology skills needed for Ireland to be a leader in innovation and improve societal and economic resilience and environmental sustainability.

As a small open island economy, our ability to withstand shocks into the future will depend on helping businesses improve productivity, adopt new technology, innovate and upskill. Strategic innovation places businesses ahead of the curve by boosting creativity, ideation and productivity and helps workers adapt to the new world of work by future proofing their skills. If we get this right, we can look forward with renewed confidence.

Industry Profile

Profile:

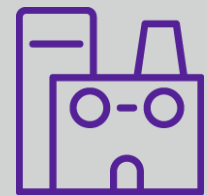
The Irish engineering industry is a strong vibrant sector within manufacturing and services across both Irish and foreign owned firms.

Engineering Industries Ireland represents a broad range of engineering companies in Ireland in terms of size, scale and product with exports at €8.8 billion or 3.6% of national exports. There are over 10,800 enterprises, employing 50,751 people and 65% are indigenous companies. The companies span a broad range of markets, including, automotive, energy and environment, construction and agriculture as well as core elements of the sub supply including machinery and equipment markets, paper and printing as well as basic and fabricated metals.

Many are involved in the design, development and manufacture of electronic and electrical components,

vehicle parts, machines and other mechanical devices and components for automation. Agricultural machinery, materials handling and niche precision engineering have significant businesses in Ireland. Sectorial growth over the last decade is seeing the expansion of operations to serve EMEA and US markets.

The uptake of disruptive industry 4.0 technology is being driven across the industry sectors eg automotive, industrial automation and engineering services. The engineering services industry is expected to be one of the most dynamic industry sectors in the coming years. Ireland is quickly developing into a hub for cutting edge research and development in areas such as internet of things (IoT), industry 4.0, connected autonomous vehicles and more.



Industrial automation

Eight of the top 10 global automation companies have operations in Ireland. Engineering is an essential element supporting this increasingly important sector. Automation is central to all manufacturing and process control.



Precision engineering

The sub-sector is largely made up of companies manufacturing a very broad range of precision sub-components for large multinational manufacturers. A number of niche product manufacturers have been highly successful; there is a strong innovative mindset in this sub-sector with a significant number of the companies in precision engineering also developing their own products and product ranges.



Agricultural machinery

Agricultural machinery has evolved into a very strong sub-sector within engineering sector. The sub-sector generates exports of over €100 million. Irish agricultural machinery tends to be more durable and built to a higher specification than machinery from some other countries due to the quality of Irish land; as a result the products tend to perform superiorly on land in other countries.



Materials handling

The sub-sector is dominated by a small number of highly capable companies producing world-leading products and represents exports of over €150 million. These companies service a wide range of sectors including manufacturing, transportation, retail, construction, and quarries.



Energy and environment

Ireland hosts a number of companies setting new standards in technological design, production, and maintenance of wind turbines. Engineering companies support the effective management of electrical, hydraulic, and mechanical power and others provide energy and automation digital solutions for efficiency and sustainability.



Process engineering

The sub-sector is made up of companies who manufacture process equipment including high value-added modular skid units used by many of the world's leading chemical and biopharma companies, and large bulk storage tanks for a broad range of applications including mining, food, pharmaceutical and medical technologies.



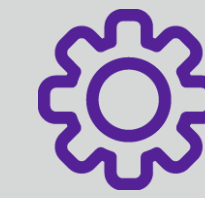
Automotive

Ireland plays host to many household automotive companies, as well as innovative tier 1 suppliers. The sub-sector has a small number of successful niche subcomponent manufacturers supplying both the automotive and aviation industries. Companies in precision engineering and metal fabrication are active in these sectors.



Metal fabrication/processing

There are a large number of companies fabricating a very broad range of metal products for the construction, agriculture, industrial, marine and transit industries. This sub-sector is also a source of highly innovative products.



Engineering services

Engineering services firms are critical enablers of digitalisation as organisations demand advanced IT solutions such as engineering analytics, internet of things (IoT), and artificial intelligence (AI) to gain an edge over their competitors and maintain the momentum of the company. The engineering and construction services industry is expected to be one of the most dynamic industry sectors in the coming years



Paper & Print

A traditional industry in Ireland, paper and print companies design, manufacturing and supply innovative sustainable print and packaging solutions to a broad range of sectors. With new technologies, innovative packaging is material efficient, produced sustainably and supports customers in delivering their sustainability objectives. Print and packaging companies in Ireland also develops smart and sustainable solutions for their customers global value chains and supply chains. Demand for paper packaging is continuing to grow since it cannot only substitute plastics but the expansion of e-commerce also accelerates its usage.

Engineering by numbers

8 / 10

8 out of top 10
Global Automation
companies based here



Top 5



Ireland is ranked in
the top five countries
(31 countries in EU)
for running a start-up.

**€8.8
billion**



(DBEI 2018, 3.6%
of national exports).

50,751

employing
50,751 people



In 2021, Ireland has one
of the most resilient supply
chains in the world ranks
11th of 130 companies

11th



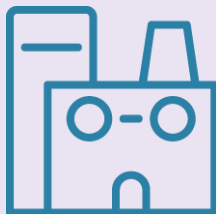
80%



Renewables to account
for 80% of Ireland's
electricity by 2030

10,800

enterprises

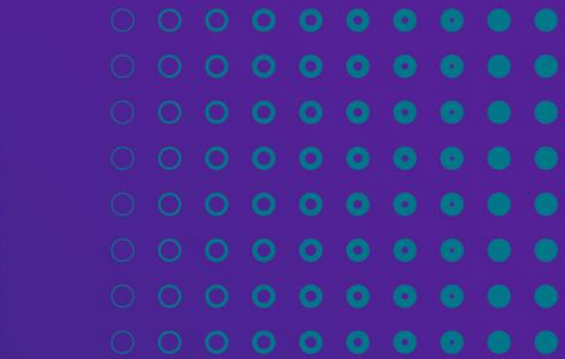
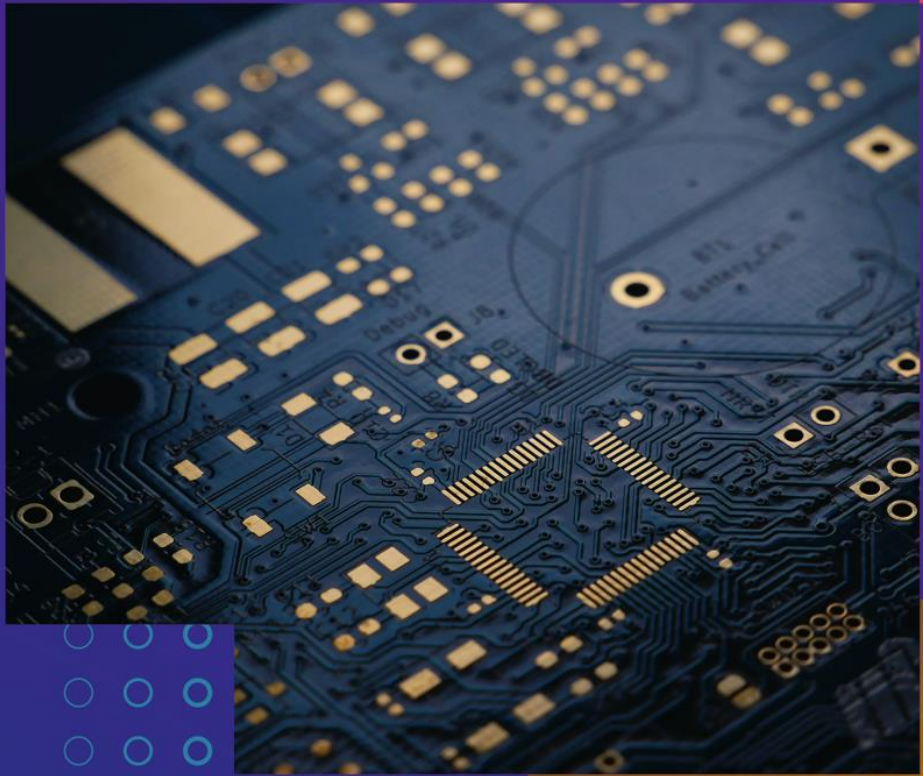


65%

65% are indigenous
companies



Drivers and opportunities for development



**Current drivers
of the Irish
engineering
sector include:**



**Proven resilient
business model**



**Worldclass
technical and
leadership talent**



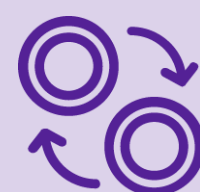
**Renowned
excellence in
manufacturing**



**Entrepreneurial
spirit**



**Supportive
environment for
innovation**



**Collaborative
culture and
embedded
clusters**

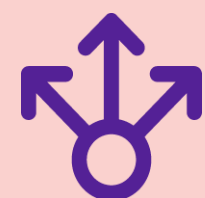


**Strong track
record in quality
and compliance**

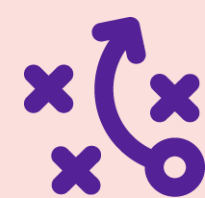


**Favourable
regulatory
environment**

**Opportunities
for development
include:**



Embracing the opportunities provided by the environmental sustainability revolution



Developing and implementing business innovation strategies



Leveraging digital and AI technologies to become data centric businesses



Developing and enhancing high level technical and engineering skills



Increasing industry participation in standard development and regulation

Our Vision, Mission & Values

Vision

“Our Vision is for Ireland to be a global engineering centre of excellence, where multinationals and home-grown companies collaborate strategically to help companies become more sustainable, innovate, prosper and drive economic growth.”

Mission

“Building a better, sustainable future for engineering companies by influencing, collaborating and supporting the delivery of a high-quality service to add value for the businesses of our members.”

Values

- Teamwork
- Respect
- Trust
- Commitment
- Ambition

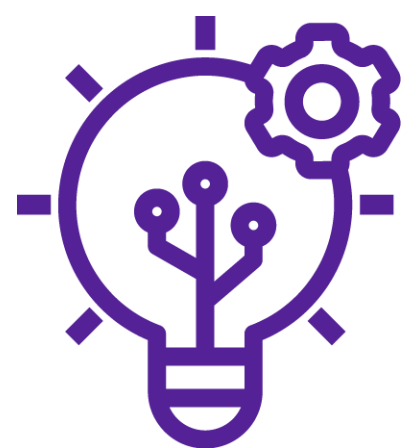


Strategic themes and key deliverables



Pillar 1 Innovation

Support the development of an innovation ecosystems for engineering industries and encourage companies to play a leading role in the development of new technologies and sustainable products, processes, and services.



Key Deliverables:

1. Develop the engineering sector as a global centre for engineering excellence and innovation.
2. Accelerate the pace of digital transformation and realise new business opportunities as we transition to a low carbon economy through funding supports.
3. Increase the number of engineering businesses engaging in innovative activities.

High level objectives

Develop the engineering sector as a global centre for engineering excellence and innovation.

- Encourage business leaders to create a vision for innovation and embrace new technologies and build management capabilities and niche areas of competencies within the site.
- Promote and showcase innovation across the engineering sector through best practice sharing of innovation among members.
- Drive competitiveness through enterprise excellence and use of advanced technologies.

Accelerate the pace of digital transformation and realise new business opportunities as we transition to a low carbon economy through funding supports.

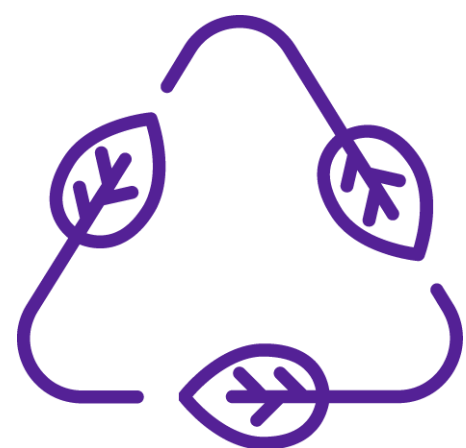
- Advocate for enhanced state support for enterprise research and development.
- Advocate for investment in 5G infrastructure and speed up the roll out of national broadband and remote working hubs.
- Assist companies to identify private investment partners and secure sources of funding for research and development.

Increase the number of engineering businesses engaging in innovative activities.

- Promote and strengthen research collaboration between engineering sectors businesses and both national and international academic research and technology centres.

Pillar 2 Sustainability

Support engineering industries to play a leading role in climate change to achieve Ireland's 2030 emissions targets of 51% (from 2018 levels) and in the development of new sustainable products and processes.



Key deliverables:

1. Encourage the engineering sector to lead in the circular economy and climate neutral manufacturing.
2. Support the engineering sector in targeting sustainable grants for investment and innovation activities using the EU's taxonomy for sustainable activities.
3. Support sustainable and resilient supply chains.

High level objectives

Encourage the engineering sector to lead in the circular economy and climate neutral manufacturing.

- Educate on new legislation at Irish and EU level and share best practice across engineering sectors.
- Engage with external stakeholders to help companies to understand their environmental impact and reduce their carbon footprint.
- Promote implementation of standards such as Environment & Energy standards to drive sustainable continuous improvement activities.

Support the engineering sector in targeting sustainable grants for investment and innovation activities using the EU's taxonomy for sustainable activities.

- Lobby the Government for environmental sustainability related incentives and supports for business.
- Examine potential for sources of EU funding in advancing environmental sustainability.

Support sustainable and resilient supply chains.

- Provide opportunities for local and global sustainable sourcing.
- Create national and international B2B linkages between small and large engineering businesses.

Pillar 3 People

To develop and attract talent to the sector and to foster engagement and promote lifelong learning.



Key deliverables:

1. Develop and attract engineering talent for the future.
2. Create deeper linkages between the engineering sector and further and higher education and technology centres.
3. Foster engagement and life learning to ensure a sustainable workforce.

High level objectives

Develop and attract engineering talent for the future.

- Engage industry in programs targeting primary education eg, Junior Achievement Ireland, and Smart Futures.
- Engage with Department of Education on curriculum reform and advocate for technical subjects to be more widely available in second level schools.
- Promote the engineering sector to attract national and international talent.

Create deeper linkages between the engineering sector and further and higher education and technology centres.

- Create a pipeline for current and future talent through engagement of business with

undergraduate and graduate placements programmes and technical apprenticeship programmes.

- Provide in company project opportunities to engage masters and PhD students to drive new skills and innovation in the workplace.
- Develop and deliver upskilling programmes for technicians and engineers to bridge skills gaps in engineering welding, robotics, creative thinking, etc.

Foster engagement and life learning to ensure a sustainable workforce.

- Encourage and support lifelong learning of employees.
- Encourage companies to foster talent through graduate programmes, international placements, mentoring, and career progression pathways.
- Develop in company shared learning platforms and forums to develop ideas and skills in new technologies.
- Enhance the skills and competencies of engineering talent in areas of digitalisation and sustainability capabilities.

Pillar 4 Regulation

To encourage and embrace a progressive and value-driven regulatory ecosystem that sustains the evolution of the engineering industries in Ireland.



Key deliverables

1. Develop a reputation as the go to place for insight and expert opinion on sector specific regulation.
2. Improve the performance of Irish business and protect consumers through the development and roll out of compatible industry-led standards in the quality and safety of goods and services.

High level objectives

Develop a reputation as the go to place for insight and expert opinion on sector specific regulation?

- Engage with government, regulators and industry bodies on the review of the National Legislative Framework and the development of European and national directives, regulations and standards.
- Lobby for national consultation on all sector or product-based regulation.
- Engage with the consultation process on new or changes to regulations.
- Uphold and strengthen what is known as the 'New Approach' to technical harmonization and

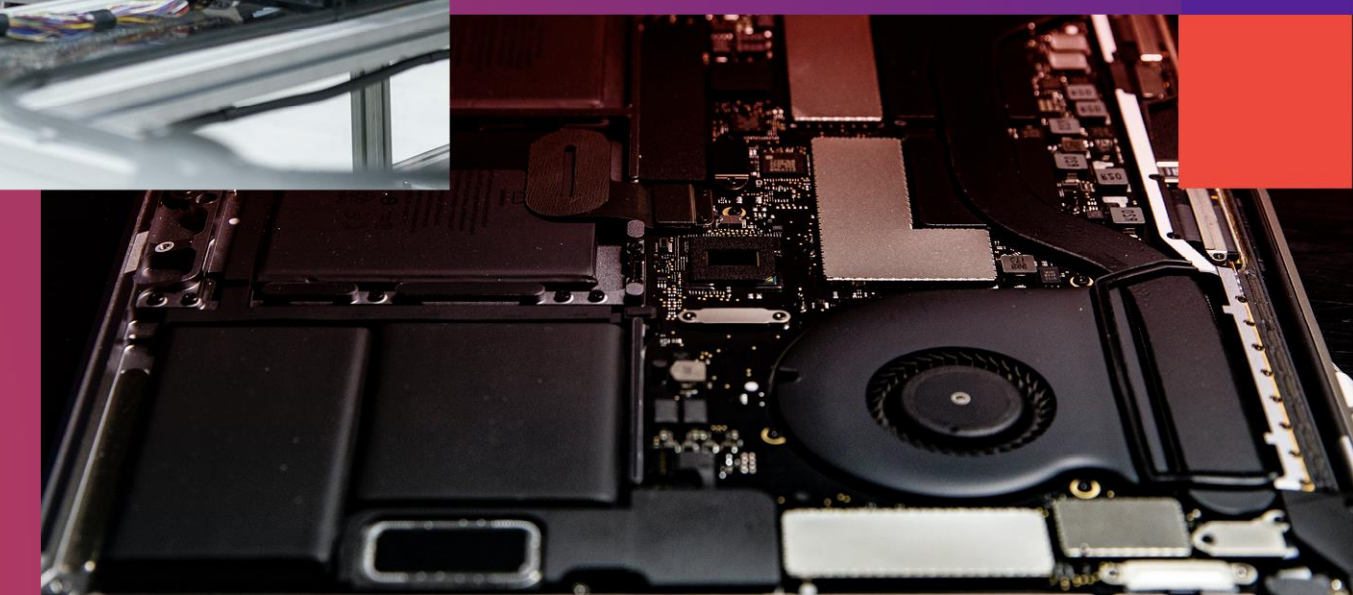
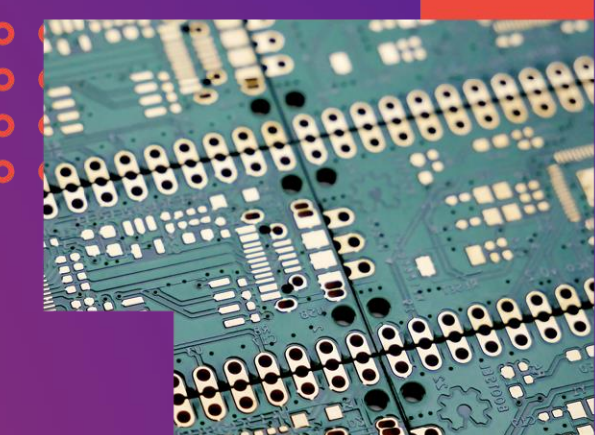
standards, which recognises that standards are a voluntary, end-user-driven and private compliance tool, an approach that gives flexibility to producers while reducing administrative burden.

Improve the performance of Irish business and protect consumers through the development and roll out of compatible industry-led standards in the quality and safety of goods and services.

- Engage with industry on the creation, development and consultation of industry standards, directives, and regulations.
- Work with relevant parties at national or international level to create and develop the appropriate standards in innovation, and new digital technologies such as AI and sustainability.
- Work with businesses to help them apply standards and regulations.

Performance indicators

Broad performance indicators have been identified for each of the strategic pillars that Engineering Industries Ireland have adopted following consultation with our members.





Pillar 1 Innovation

Support the development of an innovation ecosystems for engineering industries and encourage member companies to play a leading role in the development of new technologies, and sustainable products, processes, and services.

- Higher proportion of engineering business engaged in technological innovation
- Increased R&D activity in engineering businesses
- Increased number of companies engaging with academic research centres and technology centres.
- Greater provision of sector-based education and training



Pillar 2 Sustainability

Support engineering industries to play a leading role in climate change to achieve Ireland's 2030 emissions targets of 51% (from 2018 levels) and in the development of new sustainable products and processes.

- Greater number of businesses with a sustainability business strategy
- Increased number of high-quality training and education programmes on sustainability for business leaders and their employees.
- Access to government support for business in reduction of their carbon footprint



Pillar 3 People

To develop and attract talent to the sector and to foster engagement and promote lifelong learning

- More pathways to careers in the engineering sector
- More diverse talent in engineering sector
- More people engaged in relevant formal training and upskilling in the workplace



Pillar 4 Regulation

To encourage and embrace a progressive and value-driven regulatory ecosystem that sustains the evolution of the engineering industries in Ireland.

- Facilitate regulatory best practice sharing to keep the sector abreast of current and new legislation
- Built an effective relationship with sector regulators
- More active participation in design and implementation of sector regulation and technical standards

About Engineering Industries Ireland

Engineering Industries Ireland, Ibec's 40th Trade Association represents engineering businesses, both homegrown and multinationals, big and small, to advocate for a supportive business environment, as well as provide expert employer relations, industry insight and incomparable networking opportunities for our members.

Engineered products and sub-supply includes a broad range of manufacturing, engineering and supply chain activities which span a range of markets, including: automotive, aerospace, ICT, medtech, polymer technology, energy and environmental, as well as construction and agriculture machinery and equipment. Engineering, as a discipline, is crucial to all manufacturing sectors. International growth in these markets drives growth in the engineering firms serving those markets. Sub-supply also includes paper and printing as well as basic and fabricated metals.

About Engineering Skillnet

Enterprise-led people development

As working environments become more complex and greater agility is needed, developing people is an essential priority for the engineering sector to achieve business goals. People development activities help businesses to improve through talent development and enables workers to learn and to grow. It results in better business outcomes, improved staff engagement and greater career opportunities for workers. The Engineering Skillnet, an enterprise-led training network contracted to Engineering Industries Ireland, an Ibec Trade Association, was set up in 2021 to help prepare engineering firms and workers for the future of work.

In its first year of operation, the Engineering Skillnet exceeded its targets and successfully secured double the government funding for year two. The Engineering Skillnet and its member-led Steering Committee will support Engineering Industries Ireland to deliver on the people pillar of its strategy to 2025 with an expected budget in excess of €1 million.

About Ibec

Ibec is Ireland's largest lobby and business representative group. Our purpose is to help build a better, sustainable future by influencing, supporting and delivering for business success.

As well as lobbying, Ibec provides a wide range of professional services and management training to members on all aspects of human resource management, occupational health and safety, employee relations and employment law.

With over 250 employees, Ibec engages with key stakeholders in Ireland and internationally through our six regional offices and our Brussels office, along with an extensive international network in the UK and US.

Ibec positions are shaped by our diverse membership, which range from small to large, domestic to multinational and our 40 trade associations cover a wide range of industry sectors. Ibec members employ over 70% of the private sector workforce in Ireland.



Board of Engineering Industries Ireland



Ed Byrne
Galco Steel
Group Managing Director
Chairman



Claudia Binder
Liebherr
Managing Director
& Vice Chair



Niall Fay
Grant Engineering Ltd.
Chairman



Noranne Stack
Enercon Windfarm
Services Irl.
Managing Director



Mary Ann Fleming
Penn Engineering
President



Chris Collins
Schneider Electric
Country President, Ireland,
European Operations



Ger Tarpey
Lisk Ireland
Managing Director



Sam Payne
BOC Gases
Managing Director



Cormac Mac Donncha
VP Operations, Supply Chain
THERMO KING



Brian Cooney
Managing Director
KUKA Robotics Ireland



John Kelly
Suir Engineering
Chief Executive Officer

