

# Q

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**Ten years ago INEOS Chairman and Founder Sir Jim Ratcliffe warned the then President of the European Commission, José Manuel Barroso, that Europe's chemical industry could one day face extinction.**

In this edition of INCH, those stark warnings are spelled out once again. If Europe doesn't wake up and listen to industry's concerns, high quality jobs, industry and investment will all disappear.

INEOS is investing €4 billion in its Project ONE in Europe. But it is facing an almighty struggle to do so. Europe's loss will be the Middle East's, America's or China's gain.

INEOS is now a big player in China with significant deals with state-owned SINOPEC.

And despite difficult global economic conditions, INEOS continues to invest and grow around the world.

It has bought four businesses – two in America, one in France and the other in Norway.

It has unveiled its all-electric 4x4 and is expanding its range of eco-friendly products.

INEOS is making sure that, as it comes out of the downturn, it is in a strong position, as the recent acquisition of TotalEnergies' petrochemicals assets in Southern France, at Lavéra, shows.

The INEOS brand principles of Grit, Rigour and Humour are certainly helping to drive the company forward through challenging times.



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LURE OF THE EAST  
INEOS employees are discovering Shanghai is full of surprises as they take up jobs in China

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# China deals

INEOS puts its faith and its trust in building relationships with China to give both a brighter future

# 40%

About 40% of the global chemical industry is now based in China

NINGBO



## Acrylonitrile Butadiene Styrene (ABS) world-scale plant

INEOS Styrolution, the global leader in styrenics, has built a world-scale ABS plant in Ningbo. China is the biggest ABS market in the world and INEOS' new plant will produce 600,000 tonnes of ABS a year.

TIANJIN



## 1.2 million tonne ethane cracker

INEOS has acquired a 50% stake in SINOPEC's existing Tianjin Nangang Ethylene Project to build a 1.2 million tonne ethane cracker.

## Acrylonitrile Butadiene Styrene (ABS) plant

The two companies have also signed a joint venture to build a new acrylonitrile butadiene styrene plant on the site. The new ABS plant will be able to produce 300,000 kilotonnes every year.

## High-Density Polyethylene (HDPE) plant

They plan to establish a third 50:50 joint venture to build a new 500ktpa HDPE (high-density polyethylene) plant in Tianjin.

SHANGHAI



## SECCO Petrochemical Company Limited

INEOS has acquired 50% of Shanghai SECCO Petrochemical Company Limited. SECCO has a capacity of 4.2 million tonnes of petrochemicals, including ethylene, propylene, polyethylene, polypropylene, styrene, polystyrene, acrylonitrile, butadiene, benzene and toluene.

INEOS MANUFACTURING BUSINESSES IN CHINA  
INEOS O&P Asia  
INEOS Styrolution  
INEOS Acetyls  
INEOS Aromatics  
INEOS Composites

INEOS NON-MANUFACTURING BUSINESSES IN CHINA  
INEOS Electrochemical Solutions  
INEOS Oxide  
INEOS Polyolefin Catalyst  
INEOS Trading and Shipping  
INEOS Inovyn  
INEOS Automotive



**OVER the past 40 years China has changed faster than any other country in the world. This once poor and isolated nation, which is home to more than 1.3 billion people, is now the second largest economy in the world. In 1980 it produced just 2% of the world's economic goods; today the figure stands at almost 30%. And although China's economy is slowing down, it is still growing.**

"It is all relative," said Tom Crotty, Director of INEOS' communications. "It might be down to 3 or 4% growth, but we, in the West, would kill for that."

Many in the West, though, continue to view China with suspicion and see it as a threat due to its ambitions to become a technological and economic global superpower.

It is a view that frustrates David Thompson, who moved to China after he was appointed CEO of INEOS Olefins & Polymers Asia.

"Life here is so different to what is reported in the media in the West," he said. "Even though it is a communist regime and things are controlled, they are controlled with the people's support because they see the benefits that come with it."

And there are opportunities for all.

"If you are a young engineer looking to get the best experience quickly, then there is nowhere better than INEOS in China," said David. "Anyone joining us has the opportunity to build some of the most technologically advanced engineering plants in the world."

About 40% of the global chemical industry is now based in China.

INEOS is there, so too are Dow and BASF.

"If you want to be big players in the global market you have to invest in China or you won't have a future," said Tom. "Some companies do hold back and I'm sure that some will see us as naïve, but we take a different approach."

And that approach boils down to trust.

"It takes time to build trust," said Tom. "But, as in any relationship, you have to have trust or you may as well just walk away."

In 2014 that trust was tested when INEOS sued state-owned Chinese oil and petrochemical company SINOPEC and some of its associated businesses for allegedly violating patents.

INEOS Chairman Sir Jim Ratcliffe said in a statement at the time: "We want to take our best technology to China but we need to know that it will be protected."

INEOS, which had enjoyed otherwise excellent relationships with SINOPEC and with China, won the case – and, says Tom, SINOPEC's respect.

Since then, the two companies have further strengthened their ties.

In 2021, INEOS bought into joint ventures with China's largest petrochemical company after it acquired BP's global acetyls and aromatics business for \$5 billion.

The following year, INEOS signed three back-to-back deals, worth a combined \$7 billion, with SINOPEC.

INEOS now owns 50% of two huge petrochemical complexes – one in Shanghai; the other Tianjin – and has a vested interest in two R&D institutes.

The latest joint ventures with SINOPEC will lead to increased production of high-density polyethylene (HDPE) and acrylonitrile butadiene styrene (ABS) to meet the needs of China's rapidly growing domestic market.

"We have not just entered the market," said David.

"We have entered the market in a big way. And it is a big investment for both of us."

In all, the two companies will jointly operate three ABS units, which will produce more than one million kilotonnes of acrylonitrile butadiene styrene every year.

One of the ABS plants has already been built by INEOS Styrolution in Ningbo, and this now forms another of the joint ventures with SINOPEC.

A second is now being built in Tianjin, using the latest technology, and it will be one of the most efficient plants in the world.

The location for the third ABS plant, which will also rely on INEOS' world-leading technology, has not yet been agreed.

INEOS and SINOPEC will also be building a new plant in Tianjin to manufacture high-density polyethylene, with a further two in the pipeline.

"China is a country that is really growing and growing," said Andrea Vittone, Vice President HDPE, at INEOS SINOPEC Tianjin Petrochemicals Ltd.

"They are building new cities and new infrastructure and they are replacing old pipes with new, made from HDPE."

INEOS has been operating in China – in some capacity – for years.

In 2011 it began to forge closer ties when it agreed to sell 50% of its refining business in Grangemouth, Scotland, and Lavéra in France to PetroChina.

"The interest in China for INEOS has really been there since the beginning," said David.

In 2005 when INEOS bought BP's chemical assets for \$9 billion – a deal which transformed INEOS' business overnight – it had hoped BP would also sell its 50% stake in SECCO.

But although INEOS acquired a sales office in Shanghai as part of that deal, BP kept hold of its 50% share.

"We were disappointed not to get that, but BP would not sell it to us," said Tom.

Twelve years later BP did sell it – to SINOPEC – for \$1.7 billion.

INEOS says it will continue to seek opportunities in China.

"The business as a whole is constantly looking at opportunities," said David.



## INEOS Styrolution and SINOPEC inaugurate new ABS facility in Ningbo

We talk to INEOS employees about what life's like living in China

SHANGHAI SKYLINE AND HANGPOU RIVER

# The lure of the East

## INEOS employees discover Shanghai is full of surprises as they take up jobs in China

**SHANGHAI is China's biggest city. It is home to more than 26 million people, the tallest building in China, the world's fastest train, the longest metro system and the largest indoor ski resort. And it's also increasingly becoming home to INEOS employees who are relocating to China following INEOS' investment and joint venture agreements with state-owned SINOPEC. David Thompson is among them. He is now CEO of INEOS Olefins & Polymers Asia.**

He moved to Shanghai in the summer of 2023 with his wife and hopes others will follow.

Mel Smythe, John Archer, Dirk Heilman and Ghislain Decadt are also among those to have taken up new jobs in China.

"Living here very quickly feels very normal," said John, supply chain general manager for Shanghai SECCO Petrochemical Company Ltd. "It's not a difficult place to live; it's just different."

Mel, who has worked for INEOS for more than 20 years, recently moved to Tianjin after being appointed business director HDPE at INEOS SINOPEC Tianjin Petrochemicals Ltd.

She has been tasked with setting up the business. "It's very rare in this industry to find an opportunity to be involved in the set-up of an entire organisation and business from the ground upwards, so it is very exciting," she said. "It's a once-in-a-career opportunity."

As a keen traveller, who is fascinated by different cultures, she said she couldn't resist the opportunity to experience life in China.

"I did have some preconceptions about what it would be like, but I have been pleasantly surprised," she said. "Things are different, but that's not always a negative. You just need to come with an open mind."

Ghislain, 67, came out of retirement to move to China after he was asked to share his considerable experience as an Operations Director with INEOS to help improve the safety, performance and reliability of the operations at SECCO.

But David hopes young graduates or other young managers will also seize the opportunity to come to China and help develop the business.

"If you want to come here, we are very keen to hear from you because we have a lot of opportunities," he said.

"Shanghai is a wonderful place to be. It is prosperous, it's vibrant and it's a very safe city because there isn't any crime. People work hard, but they also play hard."

John, who had regularly travelled to China when he was working for INEOS Trading & Shipping, finally moved to Shanghai with his wife Alexandra and their dog Wilma after accepting a new role within the company.

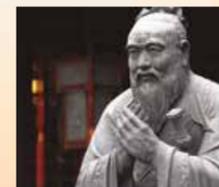
"The support from INEOS has been really good because it is a big change," he said.

He said the language could sometimes be a barrier, but interpreters were on site.

"It is different," he said. "How people communicate and how they manage are different and that's something we have to adapt to, but you cannot question the work ethic of my Chinese colleagues. They are very, very dedicated."

He too would encourage others to seize opportunities in China.

"Come and talk to people who have worked here," he said. "I did and nobody described it as a negative experience. All of them said it was some of the most fun they had had being in a different place."



**'Shanghai is a wonderful place to be. It is prosperous, it's vibrant and it's a very safe city because there isn't any crime. People work hard, but they also play hard.'**

- David Thompson, CEO INEOS O&P Asia



**'Come and talk to people who have worked in China. I did and nobody described it as a negative experience. All of them said it was some of the most fun they had had being in a different place.'**

- John Archer, Supply Chain & Procurement



**'I did have some preconceptions about what it would be like, but I have been pleasantly surprised.'**

- Mel Smythe, Business Director HDPE

EUROPEAN INDUSTRY SUMMIT 2024



The summit was held at the chemicals plant that INEOS shares with BASF in Antwerp

# Europe sleepwalking into a nightmare

**URGENT action is needed to stop Europe sleepwalking into off-shoring its chemical industry, jobs and investment. INEOS Chairman Sir Jim Ratcliffe warned that unless the European Commission tackled soaring energy costs, burdensome carbon taxes and encouraged investment in new chemical plants, there would be little left of an industry that was strategically important to Europe's security.**

"European petrochemicals has long been left behind by the USA, China and the Middle East because it struggles to compete," he told industry leaders gathered at a European industry summit in Antwerp.

The European chemical industry was once the biggest in the world.

Although, over the years, it has lost ground to China, the US and the Middle East, it is still one of Europe's most important sectors with revenues of one trillion Euros and supporting 20 million jobs.

But Sir Jim fears that could change so easily if the European Commission fails to understand what's at stake.

"The chemical industry produces a lot of extremely important raw materials for all manufacturing businesses across Europe," he said. "It provides a security of supply that has a strategic importance for Europe well beyond purely the size of the chemicals sector."

At the recent summit, he highlighted the problems facing the industry and spoke from first-hand experience of the difficulties of getting the green light to invest €4 billion in a superior chemical plant using the very best technology.

Project One, as it is known, is the largest investment in the European chemical sector for a generation.

But one year after work started, with 10,000 workers employed worldwide on the project, the permit was withdrawn due to the plant's nitrogen levels. "The levels were the equivalent of one family barbecue in a nature reserve once a

year," he said.

Sir Jim said high energy costs and carbon taxes were also killing the industry – and driving investment away from Europe. Neither make sense, he said.

"The carbon taxes don't apply to 95% of imports," he said. "So we're not doing the world any favours if we're substituting relatively high quality production here in Europe, in terms of emissions, with poorer quality, less regulated production from other parts of the world."

INEOS currently pays about €150 million in carbon taxes. The bill, though, is expected to rise to €2 billion by 2030.

"It is just not sustainable," he said.

The cost of energy, though – due to Europe's rejection of on-shore oil and gas and nuclear power – is undoubtedly the biggest headache facing the chemical industry.

"The cost of gas in Europe is five times more expensive than it is in America," said Sir Jim. "America has

cheap energy; we have expensive energy. The US are self-reliant today in energy. We are not."

It is not the first time Sir Jim has expressed concern about the future of the European chemical industry.

In May 2014, he wrote an open letter to José Manuel Barroso, the then President of the European Union.

"Sadly, many of my fears have subsequently been proved correct as the industry now finds itself in the current situation," he said.

The summit, which was held at the chemicals plant that INEOS shares with BASF in Antwerp, ended with a cry for help from industries seeking lower energy costs and less red tape to help revitalise Europe's industrial landscape.

All went on to sign the EU Industrial Deal which they want Ursula von der Leyen, President of the European Commission, who was at the summit, to include in Europe's Strategic Agenda 2024 - 2029.



**Sir Jim Ratcliffe warned the delegation that unless urgent action was taken by the European Commission to tackle soaring energy costs and burdensome carbon taxes, there would be little left of an industry that was strategically important to Europe's security**



**Would you and/or your company, organisation, association or union like to support the Antwerp Declaration?**

**SIGN UP HERE: ANTWERP-DECLARATION.EU**

INEOS USA INVESTMENTS

## \$700 million LyondellBasell acquisition

**BAYPORT, TEXAS, USA**



**ACCESS to competitively-priced energy and raw materials continues to drive investment in the US. A business, once owned by LyondellBasell, will soon be under INEOS' management and allow INEOS to expand into the US, the world's largest market.**

INEOS Oxide is already the leading producer of ethylene oxide and derivatives in Europe.

"The first-ever site acquired by INEOS in 1998 was the ethylene oxide facility at Zwiindrecht Belgium," said INEOS Oxide CEO Tobias Hannemann.

"As a key raw material, this ethylene oxide facility became the foundation from which INEOS has grown its chemicals business."

The \$700 million deal with LyondellBasell – to buy its ethylene oxide and derivatives business – has been described as a major step for INEOS.

"It is an ideal location and will allow us to develop our third-party business by supporting customers to co-locate," said Tobias. "It also complements our existing ethanolamines production facility in Plaquemine, Louisiana."

Ethylene oxide is a critical raw material that is used globally to make pharmaceuticals, cosmetics, polyester, food packaging, antifreeze, brake fluids, solvents, paints, soap and detergents.

The deal with LyondellBasell, which is expected to go through in May, includes a production facility in Bayport, Texas, where there is room for expansion.

## \$500 million Eastman Chemical Company acquisition

**TEXAS CITY, USA**

**INEOS Acetyls – no stranger to trading from Texas City – has bought Eastman Chemical Company's neighbouring acetic acid plant for about \$500 million so it can further invest in and grow the site. "We are delighted to have completed this strategic acquisition, which will help drive our global ambition for our acetyls business," said David Brooks, CEO INEOS Acetyls.**

"Our focus now will be on the integration of the site, business and employees into INEOS Acetyls."

He said the site was ideally placed to take advantage of competitively-priced raw materials which would help support the growth of the business and safeguard the future of the site.

*INEOS continues to invest in Europe's chemical sector despite its problems*

# INEOS European investments



The deal includes one of Europe's largest steam crackers with an annual capacity of 720,000 tonnes of ethylene

**'This investment, despite the current difficulties across the European chemical sector, will also mean we are in a stronger position when we emerge from this latest crisis'**

– Xavi Cros, CEO of INEOS O&P South



As part of the deal, Grande Côte Opérations has agreed to supply INEOS with ilmenite from its mine in Senegal



The world-scale 750,000 ktpa plant reduces CO<sub>2</sub> emissions by 50% per tonne

LAVÉRA. FRANCE

## 50% stake in TotalEnergies' petrochemical complex

**INEOS has bought TotalEnergies' 50% stake in France's Lavéra petrochemical complex despite the downturn in demand for chemicals in Europe. It means INEOS has now acquired the French energy company's 50% share of Naphtachimie (720 ktpa steam cracker), Appryl (300 ktpa polypropylene business), Gexaro (270 ktpa aromatics business) and 3TC (naphtha storage).**

"All these businesses had been joint ventures between the two companies ever since INEOS acquired the Lavéra site in 2005," said Xavi Cros, CEO of INEOS O&P South.

The deal also included a number of other infrastructure assets, including part of TotalEnergies' ethylene pipeline network in France which runs from Lavéra to INEOS' Sarralbe site on the banks of the River Sarre near Germany.

INEOS O&P South now has sole responsibility for running the naphtha steam cracker at Lavéra – and an opportunity to

improve its competitiveness and safeguard its future by ensuring it is environmentally fit for the 21st century.

"We believe this is in the best interests of our customers, our employees and INEOS because it allows us to make the improvements that are needed," said Xavi.



"This investment, despite the current difficulties across the European chemical sector, will also mean we are in a stronger position when we emerge from this latest crisis."

He described the acquisition of TotalEnergies' polypropylene and aromatics

businesses as valuable strategic assets.

"These businesses will further enhance our portfolio," said Xavi. "An extra one million tonnes of capacity means an extra one million tonnes of customer demand."

Xavi said INEOS' decision to buy out its JV partner represented a major step forward for INEOS' businesses in France and southern Europe.

"It makes sense," he said. "INEOS now can fully optimise the potential of these units and has a lot more assets in the south, whereas TotalEnergies' interest lies heavily in the north of France."

The cracker is one of the largest in Europe and is capable of producing 720,000 tonnes of ethylene every year. In addition it produces propylene, butadiene, and other olefins products.

"The acquisition will allow us to fully integrate these assets," he said. "But we also plan to continue to invest in them, including CO<sub>2</sub> reduction to meet INEOS' net zero 2050 commitment." ➤



50:50 SHARE

Naphtachimie – 720 ktpa steam cracker

Appryl – 300 ktpa polypropylene business

Gexaro – 270 ktpa aromatics business and 3TC naphtha storage

TYSSÉDAL. NORWAY

## \$245 million Eramet Titanium & Iron (ETI) slag plant acquisition

**INEOS Enterprises has bought a French mining company's plant in Norway for \$245 million. The plant in Tyssedal produces titanium slag, a raw material used in the pigment industry, and high-purity pig iron for European foundries. "It is a good quality asset," said Ashley Reed, Chairman of INEOS Enterprises. "And it is complemented by an experienced operations team with high safety, health and environmental standards."**

The plant has used a state-of-the-art process to smelt ilmenite ever since it opened in 1986.

It is the only plant in Europe that uses this method to produce titanium slag and high purity pig iron, and only one of eight plants – outside China – worldwide.

As part of the deal, Grande Côte Opérations has agreed to supply INEOS with ilmenite from its mineral sands mine in Senegal.

Ilmenite is the main source of titanium dioxide, which is used in paints, printing inks, fabrics, plastics and cosmetics.

In Norway, almost all electricity is generated by renewable hydropower.

And the Eramet plant, which INEOS now owns, is located in an area of substantial production of hydroelectric energy. ➤



TITANIUM SLAG IS A RAW MATERIAL USED IN THE PIGMENT INDUSTRY

MARL. GERMANY

## Production starts at Europe's largest cumene facility

**INEOS has started production at its new world-scale, state-of-the-art cumene plant in Germany. And, thanks to new technology and reusing heat, the plant will be producing those 750,000 tonnes of cumene every year with 50% fewer CO<sub>2</sub> emissions. "To be able to produce phenol with cumene that has a dramatically reduced carbon footprint is a game changer," said Hans-Juergen Bister, Operations Director for INEOS Phenol.**

The cumene plant, the largest in Europe, was built at the Marl Chemical Park in association with CAC Engineering.

"Not only does this project go down in our company history as our largest-ever engineering assignment, but it also represents the outstanding collaborative partnership with INEOS Phenol," said Mike Niederstadt, Managing Director of CAC. Cumene is essential for the

production of two of the world's most important key raw materials – phenol and acetone.

INEOS Phenol is already the world's largest producer of phenol and acetone and the largest consumer of cumene.

Both phenol and acetone are needed to make polycarbonate, which is used throughout the automotive industry.

Most headlamps, tail lights, windows, sunroofs and various other car parts, including bullet-proof glass, contain INEOS' molecules.

Products made from phenol and acetone are in everything from flat screen TVs to iPhones, and are used in bath, hair and skin care products to kill micro-organisms, reduce body odour and cleanse the skin.

Phenol is also the key raw material for nylon intermediates used in engineered thermoplastics and carpeting, and acetone is used in nail polishes, as well as nail polish removers. ●

# INEOS Inovyn sustainability initiatives

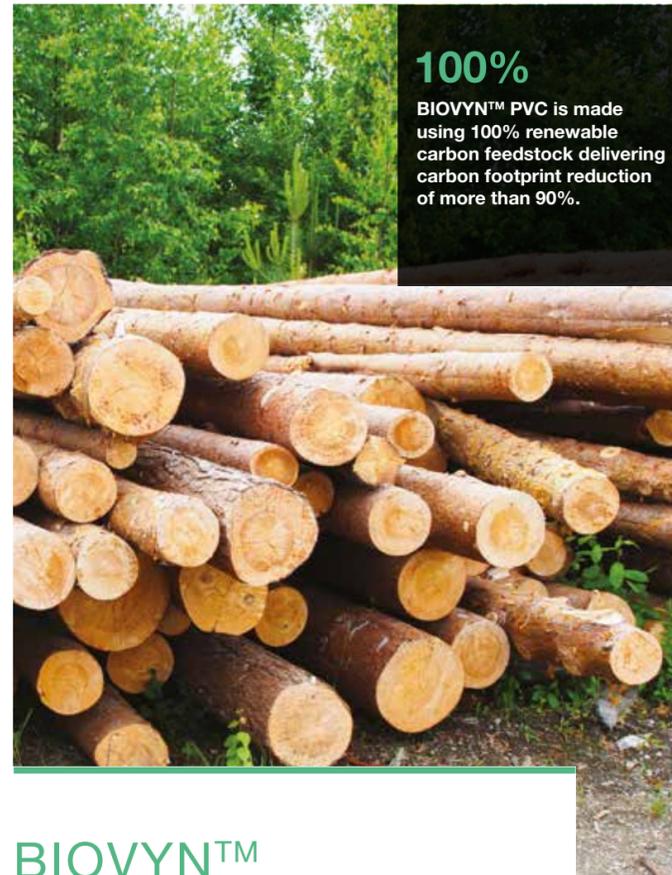
Inovyn responds to customers' calls for a cut in greenhouse gas emissions and step change in the recycling of plastic waste

INEOS | Inovyn

# 33%

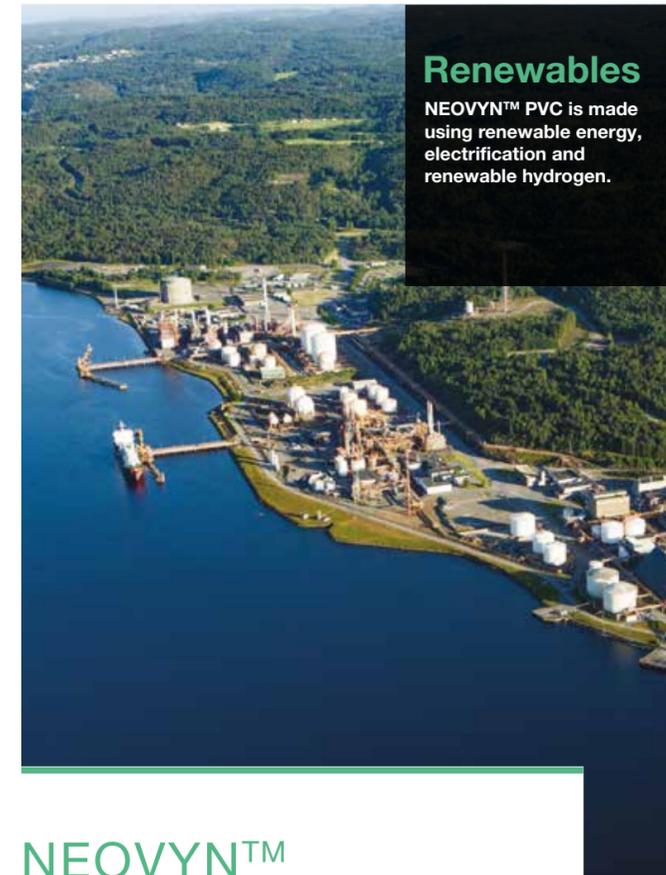
INEOS' target is to reach 33% CO<sub>2</sub> reduction in 2030 and carbon neutrality by 2050, whilst remaining profitable and ahead of regulation

ALL INEOS SUSTAINABILITY REPORTS CAN BE FOUND AT: [INEOS.COM](https://www.ineos.com)

**100%**  
BIOVYN™ PVC is made using 100% renewable carbon feedstock delivering carbon footprint reduction of more than 90%.

**BIOVYN™**



**Renewables**  
NEOVYN™ PVC is made using renewable energy, electrification and renewable hydrogen.

**NEOVYN™**



**NewLife**  
RECOVYN™ PVC is made from recycled plastic waste that currently cannot be recycled anywhere else.

**RECOVYN™**

## INEOS Inovyn expands its sustainable PVC range

**SUSTAINABILITY GUARANTEED**  
All three products have been certified by RSB (Roundtable on Sustainable Biomaterials) and ISCC (International Sustainability & Carbon Certification) PLUS



**AN INEOS business, which made history when it started selling PVC made from wood pulp instead of purely fossil fuels, has made further strides. Inovyn has now introduced two more – equally sustainable – PVC products following the success of BIOVYN™.**

"The products of the future really are available today," said Audrey Debande, Sustainability Business Development Manager, who is based in Belgium. BIOVYN™ along with NEOVYN™ and RECOVYN™ are now being successfully marketed to customers who either want to cut greenhouse gas emissions or reduce plastic waste. "We know our customers want and expect this," said Audrey. When Inovyn launched BIOVYN™ in 2019, it wasn't sure how the market would react to a product that, although cuts CO<sub>2</sub> emissions by more than 90%, was significantly more expensive than conventionally-produced PVC. But the demand was there, and it meant Inovyn could continue to do what it does best: innovate. "It really did set the scene for the development of our future sustainable products," said Audrey. Since its launch, BIOVYN™ has been used across a

wide range of applications including cars, clothing, rugs and flooring, buildings and construction and in prosthetic limbs – and, long-term, it will be Inovyn's net zero option. To meet evolving customer needs, Inovyn has introduced NEOVYN™, an innovative, less expensive product for customers who want to reduce their carbon footprint in the short term and offer themselves low carbon footprint products on their market. NEOVYN™ brings a step change in carbon footprint with a reduction of 37% below the European industry average for suspension PVC. "NEOVYN™ was more challenging because we needed to find the most economical way to reduce our carbon footprint without damaging our credibility standards," said Audrey. That meant investing in the use of renewable hydrogen and other forms of green energy during the production process – both key to helping Inovyn decarbonise. Their third product is RECOVYN™ which is made purely from plastic waste that currently cannot be recycled anywhere else. "It is designed for customers who want to increase their recycled content and meet high technical, quality and regulatory requirements," said Arnaud Valencuc, Business Director of INEOS Inovyn.

And provided Inovyn can continue to access recycled plastic waste, which is effectively its new raw material, the company is confident it can continue to provide society with what it needs. All three products have also been certified by the most stringent global requirements in the field, including RSB (Roundtable on Sustainable Biomaterials) and ISCC (International Sustainability & Carbon Certification) PLUS. Geir Tuft, CEO of INEOS Inovyn, said sustainability was one of the most important and pressing challenges for modern society and Inovyn, as an influential, industry leader and world-class producer of PVC, had a vital role to play in helping develop new solutions and support the green transition. "Our world is continuously evolving, and so are we," he said. "And the target is clear. The UN has set our generation's greatest challenge, to achieve carbon neutrality by 2050."

INEOS Inovyn continues to invest in sustainability initiatives

## Eco-power

ULTRA-LOW carbon chlor-alkali products are now being made available from Inovyn's sites in Rafnes, Norway, and Antwerp, Belgium, using renewable power generated by water and wind. "This is a critical step in helping our customers reduce their carbon footprint and accelerate the transition towards a net zero economy," said Arnaud Valenduc, Business Director of INEOS Inovyn.

Chlor-alkali chemicals are a critical raw material for the manufacture of everything from water purification and fertilizers to soaps, detergents and pharmaceuticals.

Inovyn's standard chlor-alkali products, which are used to manufacture caustic soda, caustic potash, and chlorine, already offer 30% lower CO<sub>2</sub> emissions than the European industry average.

The launch of its new range, which is certified under the International Sustainability & Carbon Certification PLUS scheme, cuts CO<sub>2</sub> emissions by 70% for caustic soda.

The Norwegian site is using local hydroelectric power to run its production plant.

Wind turbines in the North Sea power the site in Belgium. ➤

# 70%

Our new ultra-low carbon chlor-alkali product will cut CO<sub>2</sub> emissions by 70% for caustic soda



### SEAMADE WIND FARM

The biggest offshore wind farm in Belgium is supplying INEOS with renewable electricity



## Project Circle

INEOS Inovyn is investing to ensure all PVC can be recycled. PVC is one of the most widely used plastics in the world which can be found in window frames, pipes, flooring, cables, sports gear and life-saving medical equipment.

It is also one of the most recycled polymers in Europe using mechanical recycling. Thanks to the VinylPlus® initiative, which has spanned the past 20 years, almost one third of European PVC waste was mechanically recycled in 2022, but reaching full circularity remains a complex challenge for the industry.

This is because when PVC is mixed with other plastics and substances, mechanical recycling has its limits.

INEOS Inovyn, though, is pioneering advanced new technologies to recycle complex waste so that the hard-to-recycle PVC can be turned back into its original raw material: which is the objective of project Circle.

"This is an ambitious venture," said Paul Daniels, Operations Director. "But we are already making significant strides towards a more sustainable and truly circular plastics industry."

Its Project Circle team are now exploring three possible advanced recycling technologies using dissolution, pyrolysis and gasification, which would also remove harmful legacy additives that have been used in the past, such as lead, cadmium and certain phthalates.

**'It is an ambitious venture, but we are already making significant strides towards a more sustainable and truly circular plastics industry.'**

– Paul Daniels, Operations Director

But Inovyn cannot – and doesn't want to – work in isolation.

"The entire supply chain must be integrated into the industrial setup," said Paul. "That's why we have been forming consortiums with customers, waste collectors and sorters."

"It will ensure a well-rounded approach to recycling PVC waste that allows for synergies with third parties and the widespread adoption of the technology for a sustainable PVC industry."

Inovyn is taking an important step on this journey by commissioning two new pilot plants at their R&D centre in Jemeppe-sur-Sambre site in Belgium

It is hoped the first industrial PVC waste recycling unit, capable of processing up to 40,000 tonnes of PVC waste each year, will be operational by 2030.

"This effort symbolises a paradigm shift in the PVC industry and a remarkable stride towards a more sustainable future," said Paul. ➤

## Power of the sun

IT'S not just water and the wind that INEOS Inovyn will be relying on to power its plants. In July this year, the sun will be playing a vital role when 90,000 solar panels start generating renewable electricity exclusively to INEOS' Jemeppe site, one of the largest PVC production plants in Europe.

"For the PVC industry to grow, it is critical we have support and access to competitive renewable energy," said CEO Geir Tuft.

The solar farm is one of Belgium's biggest, covering an area the size of 56 football pitches, and will be capable of generating 60MW of competitive, renewable electricity.

It will cut CO<sub>2</sub> emissions by 14,000 tonnes every year.

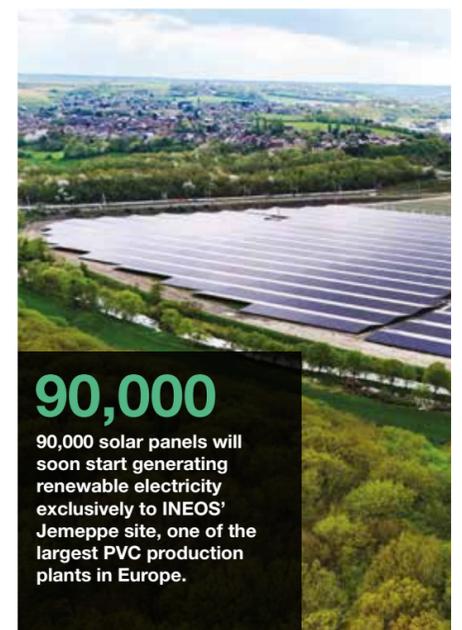
Under an agreement with its partners Perpetum Energy and Green4Power, Inovyn will buy all the green electricity produced from Jemeppe-sur-Sambre over the next 15 years.

"We are proud to contribute to INEOS Inovyn's environmental objectives," said Luc Leenknecht, CEO and founder of Perpetum Energy.

European plastics face a competitiveness gap with the US and China, due to high energy costs, less access to raw materials and a challenging regulatory landscape.

"Measures are needed to safeguard the competitiveness of our industry and avoid Europe becoming dependent on imports from abroad," said Geir.

"Support schemes that provide access to renewable energy are critical to a sustainable future." ●



# 90,000

90,000 solar panels will soon start generating renewable electricity exclusively to INEOS' Jemeppe site, one of the largest PVC production plants in Europe.

# FUSILIER



INEOS has chalked up yet another milestone in its drive to produce the best 4x4s on the road. The latest model is the company's fully-electric INEOS Fusilier

*Full story overleaf* >

# FUSILIER



## INEOS Fusilier – one vehicle, two powertrains

### RANGE EXTENDER

The low emission range extender electric is in development to ensure the INEOS Fusilier meets the broadest range of global consumer needs whilst pushing towards decarbonisation. The range extender option consists of a small petrol engine that powers a generator to maintain the charge level of the battery for when external charging isn't available.

### FULLY ELECTRIC

The fully electric INEOS Fusilier is smaller than INEOS' first, no-nonsense 4x4, The Grenadier.



### HYDROGEN: FUEL OF THE FUTURE

INEOS' hydrogen-powered Grenadier is capable of doing everything a conventionally-powered Grenadier can do, but with zero emissions. But a shortage of hydrogen refuelling stations means it is currently not commercially viable.

INEOS has chalked up yet another milestone in its drive to produce the best 4x4s on the road. Proof of that, it hoped, was parked outside The Grenadier pub in London, as journalists squeezed inside the tiny, former officers' mess to question INEOS founder Sir Jim Ratcliffe and group head of design Toby Ecuyer about the company's battery electric vehicle, the INEOS Fusilier.

To mark the occasion, which was streamed live, The Grenadier pub had been temporarily renamed The Fusilier.

As Sir Jim and Toby fielded questions from former Top Gear presenter Richard Hammond, it emerged that INEOS had, once again, chosen the road less travelled by opting for a range extender alongside a fully-electric 4x4.

When asked why, when so many others in the UK and Europe had shunned the technology, Sir Jim said: "One of the things we do in our business world is question things, rather than just follow the sheep."

He described the car industry as being in flux – aware of the need to reduce CO<sub>2</sub> emissions, but unsure how best to achieve that.

"If you're a car producer in Europe, you have to have a green offering because you can't survive without that because of the regulations," he said. "We have to have this offering whether we like it or not. We do like it, because it's a good thing for the world. But we got a long way down that road developing it until a few months ago and then paused for a bit."

During that pause, INEOS decided to build two versions of its new electric 4x4. One with a range extender for those who want to get from A to B without worrying where the nearest electric charging station is – and one without.

A small petrol engine will be fitted inside The Fusilier, which boasts the range extender. And that engine will charge the electric battery when needed.

"The engine runs as a generator," said Sir Jim.

The INEOS Fusilier was developed with the help of Magna Steyr, a company which has plenty of experience with off-roaders and manufactures the Mercedes G-Class and Toyota GR Supra at its plant in Graz, Austria – where the Fusilier will also be built.

It is smaller than INEOS' first, no-nonsense 4x4, the INEOS Grenadier, which was recently chosen by Nith Inshore Rescue as its new search and rescue vehicle.

Peter Bryden, secretary of the Scottish-based rescue team, said the Grenadier 'ticked all the boxes' in a vehicle needed to deal with life-and-death situations, very harsh weather and challenging terrain.

"We expect it to serve our team for the next 40 years," he said.

And most recently, it has also been taken on as operational command vehicles by Grenoble Fire Department.

INEOS had announced its intention to build a fully-electric 4x4 in May 2022.

That same year, it began developing a hydrogen-powered Grenadier, which it unveiled at the Goodwood Festival of Speed in July 2023 to prove that hydrogen was also a key fuel of the future.

Lynn Calder, CEO INEOS Automotive, described it as an extraordinary vehicle.

"It's capable of doing everything a conventionally-powered Grenadier can do, but with zero emissions," she said.

INEOS Automotive firmly believes that there needs to be a mix of powertrains – electric, hydrogen, hybrids, and range extenders – with different technologies suited to different uses.

Electric batteries are ideal for city centres and short journeys, but unsuitable for haulage and public transport because of their weight, charging times and range.

Filling a car or truck with hydrogen, on the other hand, is quick and easy.

The problem? There just aren't enough hydrogen refuelling stations, especially in the UK.

"Our demonstrator proves that the technology for a hydrogen-powered 4x4 is capable," said Lynn. "But the refuelling infrastructure needs to be in place before it is commercially viable."

She said the launch of the INEOS Fusilier, which will undergo rigorous tests on Austria's Schöckl mountain before it goes on sale in 2027, was a sign of INEOS' long-term commitment to car manufacturing.

"It shows that we are here for the long-haul," she said. ●

Register your interest for the INEOS Fusilier on the website:

[INEOSGRENADIER.COM](https://www.ineosgrenadier.com)



### THE INTERVIEW

Sir Jim Ratcliffe and Toby Ecuyer fielded questions from former Top Gear presenter Richard Hammond

**Q:** Why have you developed the range extender when so many other car manufacturers have shunned the technology?

**A:** One of the things we do in our business world is question things, rather than just follow the sheep. The car industry is in a state of flux. They are aware of the need to reduce CO<sub>2</sub> emissions, but unsure how best to achieve that.

# Theatre of dreams

**INEOS Chairman becomes co-owner of Manchester football club he has supported all his life**

**SIR JIM Ratcliffe now co-owns Manchester United, the most popular football team in the world. For Sir Jim, it's a boyhood dream, having grown up in the shadow of Old Trafford and been a passionate supporter of the club all his life. "To become co-owner of Manchester United is a great honour and comes with great responsibility," he said.**

"This marks the completion of the transaction, but just the beginning of our journey to take Manchester United back to the top of English, European and world football. I want to see Manchester United be successful again and at the top of their game."

Following completion of the £1.25 billion deal with the American Glazer family, INEOS' Chairman and Founder spoke to Manchester United TV's Helen Evans about his plans on and off the pitch.

He said INEOS had always been keen to add a Premier League club to its successful sports portfolio, which includes some of the best teams in cycling, F1, sailing, rugby and running.

On the pitch, his only goal now, he said, was to see the Red Devils return to their glory days.

"That is what Manchester United is all about," he said. "It should always be competing for the league title and the champions league title. Always."

Off the pitch, the focus will be on the values that should unite this once great football club.

"We need to create the right organisational structure, populate it with the right people at the top of their game and then create the right atmosphere," he said.

Sir Jim, who is now responsible for football operations, said there were two pressing key issues – performance on the pitch and the state of the stadium, which hosted its inaugural game in 1910.

"It is not quite of the standard you would expect of Manchester United, so we need to look at the redevelopment of the stadium," he said. "One option could be to refurbish the existing stadium or build a new one."

INEOS' director of sport, Sir Dave Brailsford, who masterminded seven Tour de France wins, is currently immersed at the club to understand the performance challenge.

One person, who Sir Jim has been speaking to is

Sir Alex Ferguson. The Scot retired in 2013 after 27 years as manager. During Sir Alex's reign, United won 13 English league titles and 25 other domestic and international trophies.

"He is the world's iconic coach and is an essential part of Manchester United's history," said Sir Jim.

The two men have met a few times since the INEOS deal was announced on Christmas Eve.

Sir Jim also plans to have lunch with Eric Cantona, who found fame on the turf where George Best – another of Sir Jim's favourite players – had strutted his stuff so brilliantly 20 years before.

"There are certain players, who you get excited about when they get the ball because you are not sure what they are going to do with it," he said.

Working alongside Sir Dave will be Frenchman Jean-Claude Blanc, who has been appointed to the board and will help to oversee the development of the club.

"United is the greatest club in the world so it should be playing the greatest football in the world," said Sir Jim.

"But the fans must realise that it will take time. It's not a light switch. They cannot be playing at the level of Real Madrid because they haven't been for the past 11 years."

Sir Jim said INEOS' core values of grit, rigour and humour, which had made INEOS one of the biggest chemical companies in the world, applied equally to football.

"Manners and loyalty are also important," he said. ●



**'To become co-owner of Manchester United is a great honour and comes with great responsibility'**

– Sir Jim Ratcliffe, INEOS Chairman and Founder



# How Norway embraced shift in thinking

**36%**  
Of the shift operators are now women



CHARLOTTE AAS PETERSEN, PROCESS OPERATOR AND MAIN SAFETY DELEGATE

**'One thing that improved the industry for women is attitudes towards women. And the appreciation of a woman working in an environment like this.'**



MAREN JAKOBSEN, PROCESS OPERATOR,

**'When I came back from parental leave, it was just like it had always been. It was no different.'**



EIRIK GUSFRE, OPERATIONS MANAGER

**'It's hard to explain how it benefits the business, but it does.'**



KIRSTI FALCK, PLANT MANAGER

**'We have different thoughts and a different way of looking at a problem. And that can lead to the best solution.'**



HEIDI FAUKALD, LOGISTICS MANAGER

**'It has not only led to a more diverse working environment, but a more dynamic one too.'**

**49**  
Both parents are entitled to 49 weeks of parental leave

The Norwegian government has introduced equal parental leave for both sexes. Both are entitled to 49 weeks of parental leave. The result is that companies are less likely to discriminate against women, because there is little difference between hiring a man or a woman if either chooses to have a family.



SCAN THE QR CODE TO SEE THE FULL INTERVIEW

**'It has not only led to a more diverse working environment, but a more dynamic one too.'**



**INDUSTRY in Norway is benefiting from a society that has long believed in the importance of women working in traditionally male-dominated environments. While other nations may have steered women away from technical jobs, Norway's schools were actively encouraging them to study engineering and science at university because it wanted that diversity of thought in the workplace.**

INEOS' plant in Rafnes, where 36% of the shift operators are now women, is testament to the benefits of men working alongside women in the same role. "It's hard to explain how it benefits the business, but it does," said Eirik Gusfre, Operations Manager at Rafnes in Norway.

"You cannot differentiate between men and women on the technical side, but you feel the difference in the working environment. You see how well our teams work together."

Heidi Faulkald, who has worked at INEOS' Bamble AS site in Rafnes for the past 33 years, and her colleague Kirsti Falck feel it too.

Both believe women have changed the working environment in INEOS for the better.

"It is difficult to say that women don't have as sharp elbows as men," said Heidi, Logistics Manager. "I'm almost afraid to say that. But maybe some women are a bit easier to approach. Maybe there's a bit more softness and a kind of human touch."

Whatever it is, it has not only led to a more diverse working environment, but a more dynamic one too.

"Women come at things from a different perspective," said Kirsti, Plant Manager. "We have different thoughts and a different way of looking at a problem. And that can lead to the best solution."

What has also helped women in Norway is its government's parental leave for both sexes.

"Parents are entitled to 49 weeks of parental leave, of which 15 weeks are reserved for each parent," said Wenche Jansen, who started as an operator at Rafnes 30 years ago and is now an HR consultant. "The remainder can be divided according to their wishes."

The result is that companies are less likely to discriminate against women, because there is little difference between hiring a man or a woman if either chooses to have a family.

"When we recruit new operators, we don't look at gender," said Eirik. "We just want the best operators and women are just as good as men."

Norway's approach is not only paving the way for INEOS' own sites, but the entire petrochemical industry.

"There has been a strong will in Norway to make things equal, so that we get the same opportunities," said Kirsti.

And women in INEOS are seizing those opportunities.

Maren Jakobsen, a 31-year-old mother of two, works at the Rafnes site as a process operator.

When she became pregnant she was not allowed to work at night or outside on the plant, due to possible dangers such as noise and vibration, but she simply ran the plant from the control room.

"It is possible to have a family and a successful career," said Kirsti. "And Heidi and I are examples of that."

The two women, who studied engineering at the Norwegian University of Science and Technology in Trondheim, are on the management team.

"It is a challenge when you are working a shift with a new baby," said Kirsti. "But we try to make it easier for the woman to come back to work by, for example, altering her shift pattern."

It can, though, also be a challenge for the team to manage the shift when a man takes his mandatory 15-weeks' paternity leave.

"It can be difficult but it makes things much more equal," said Heidi. "And it is the price we have to pay if we want people to have children because the country needs children."

**Norway is reaping the benefits of actively encouraging women to study engineering and science at university.**



# OUR FIRST 100 YEARS

1924

2024



1924



FOUNDED IN 1924 IN STOKE-ON-TRENT, STAFFORDSHIRE, BY JEWISH IMMIGRANTS ELI BELOVITCH (PICTURED) AND HIS SON-IN-LAW HARRY GROSBERG

1948



THE TRIALMASTER WAS CREATED AT THE REQUEST OF PROFESSIONAL TRIALS BIKER AND IRISHMAN, SAMMY MILLER

1956



AN EARLY BELSTAFF ADVERTISEMENT. EVEN THEN THE BRAND APPEALED TO THOSE WITH AN ADVENTUROUS SPIRIT

1977



SIR CHRIS BONINGTON WAS WEARING PROTECTIVE BELSTAFF GEAR WHEN HE AND DOUG SCOTT BECAME THE FIRST CLIMBERS TO REACH THE 23,901FT SUMMIT OF THE OGRE IN PAKISTAN

2017



INEOS BUYS THE STRUGGLING BUSINESS FROM ITALIAN JAB LUXURY GMBH, DESPITE IT LOSING £25 MILLION A YEAR

2020



INEOS APPOINTS FRAN MILLAR AS CEO. NOT A WOMAN WITH A BACKGROUND IN FASHION, BUT A FOUNDING MEMBER OF ONE OF THE MOST SUCCESSFUL CYCLING TEAMS IN HISTORY

2024



TO CELEBRATE OUR 100-YEAR ANNIVERSARY BELSTAFF HAS LAUNCHED A CENTENARY COLLECTION

**BELSTAFF – one of the greatest British heritage brands – turns 100 this year. To mark its centenary, it has produced a book exploring, for the very first time, its history and appeal – pieced together from documents, advertisements, and personal testimony. “There have been lots of twists and turns in Belstaff’s 100-year history, but to make it to 100 is pretty impressive,” said Doug Gunn, who jointly owns The Vintage Showroom near London’s Portobello Road. “It’s a real landmark.”**

INEOS, which bought the unwanted and struggling business in 2017, had always viewed Belstaff as a cool, iconic consumer brand because it was synonymous with challenge and adventure. Made for those who wanted to push the limits of what was humanely possible.

It bought the brand from Italian JAB Luxury GmbH, at a time when it was losing £25 million a year.

As time passed, it became increasingly clear that if INEOS was to turn the business around, as it has with so many others, it needed someone who, too, was cool – in a crisis.

That someone was Fran Millar. Not a woman with a background in fashion, but a founding member of one of the most successful professional cycling teams in history.

“Other than I buy clothes, I didn’t know anything about the fashion industry,” she said. “But I believed – and still believe – in Belstaff as a brand. It’s an incredible brand with an incredible history and the product is amazing.”

Since being appointed CEO of INEOS Belstaff in 2020 in the midst of the COVID pandemic, she has turned around the business, giving a bright future to a British company which prides itself on its prestigious past.

“We have completely changed the infrastructure, the operating model, the people, the cost base, the strategic direction and the brand position,” she said.

Today, it is almost breaking even thanks to her new strategy and company culture. One that stands for independence, being brave and standing out from the crowd.

“We now know who our competitors are, our customers are, and we are just going after it as though we are trying to win a bike race,” said Fran.

She, too, has changed the way she dresses.

“I used to be happy in leggings, a sweatshirt and trainers,” she said. “But today, I try to represent the quintessential Belstaff woman: classic, chic but with an edge.”

Belstaff was founded in 1924 in Stoke-on-Trent, Staffordshire, by Jewish immigrants Eli Belovitch and his son-in-law Harry Grosberg.

For the first four years, they sold waterproof capes, rucksacks, and Army shirts. Their aim was simply to keep their customers dry.

Britain had to wait for The Trialmaster – Belstaff’s most iconic product – a military-looking, four-pocket, waxed cotton jacket that has retained its appeal.

“It wasn’t a jacket,” said Peter Howarth from Boat International. “It was a classic piece of engineering.”

One who can vouch for that is Sammy Miller, the legendary motorcycle trials rider who played a pivotal role in its evolution during the 1950s.

He wore a Belstaff jacket at his inaugural Scottish Six Days Trial in 1954.

“I rode better because I was dry,” he said. “The rest of the competitors were like drowned rats. I used to pray for rain because it softened them up and made it easier to beat them.”

Sir Chris Bonington was wearing protective Belstaff gear when he and Doug Scott became the first climbers

to reach the 23,901ft summit of The Ogre in Pakistan in July 1977.

Although over the years Belstaff’s motorcycling heritage remains the most well-known part of its story, its clothes have been worn by some of the most daring souls the world has ever seen.

But it is perhaps the late Hollywood actor Steve McQueen who really should be credited with broadening Belstaff’s appeal in 1963, when he wore a Belstaff jacket in The Great Escape’s most famous scene where he attempts to jump a barbed wire fence on a motorbike.

McQueen was a fan of Belstaff both on and off screen, and rumour has it that he cancelled a date with his then girlfriend Ali MacGraw so he could stay at home and wax his Belstaff jacket.

Over the years, Belstaff may have repeatedly changed owners, but its customers have remained loyal.

“I don’t want to see it change,” said Fran. “I don’t want Belstaff to not have a classic and beautiful quality full wax cotton jacket because that is who we are.”

“But fundamentally, when I took on the job, I did not believe that what got Belstaff to where it was, would get it into the future.”

Since she took control – with a very clear brief from INEOS founder Sir Jim Ratcliffe – the business has not only survived, but thrived.

“It is quite a rebellious brand with a rebellious spirit,” she said. “When people choose Belstaff over Barbour, it says something about them.”

Today, the business has been completely overhauled. The stores have been refreshed and the brand has been repositioned without alienating its very passionate, loyal and existing customers.

“We have reinvented it by stripping back all the noise and getting to the heart of what the brand is and what it stands for,” said Fran.

Gore-Tex has been brought back into the range and Belstaff’s clothing now comes in a whole host of colours, not just navy, brown or black.

The company has also released a range to celebrate Belstaff’s 100th birthday.

“They are all brand stalwarts, reimagined,” said Fran, who manages a team of 180.

Looking to the future, she believes more is to come.

“We can create an experience and a story and a narrative that maybe other brands cannot,” she said. “I am convinced Belstaff can be a global superbrand with triple digit revenue and double digit EBITDA in a couple of years.”

## BELSTAFF



IN CELEBRATION OF ITS 100TH ANNIVERSARY, BELSTAFF HAS LAUNCHED A NEW TALENT PROGRAMME, IN PARTNERSHIP WITH HYPEBEAST AND MANCHESTER FASHION INSTITUTE. SIX STUDENTS HAVE BEEN TASKED WITH RE-IMAGINING WHAT BELSTAFF’S FASHIONS COULD LOOK LIKE IN THE FUTURE. SINCE THEY WERE CHOSEN, THE BELSTAFF CLOUDBMASTER FINALISTS HAVE BEEN WORKING ON THEIR CONCEPTS AT MANCHESTER METROPOLITAN UNIVERSITY.

2024

# Chase Zero

Free school resources will focus on the work to design and build INEOS Britannia's hydrogen-powered, foiling chase boat for this summer's America's Cup

INEOS BRITANNIA AC75

INEOS CHASE ZERO  
HYDROGEN-POWERED  
FOILING CHASE BOAT



With the support of partners INEOS Britannia, we create learning experiences that show science in action and bring STEM subjects to life. Our award-winning, free digital education platform uses professional sport to inspire young people about STEM subjects and career opportunities. All resources can be found on the website.

[STEMCREW.ORG/RESOURCES](https://STEMCREW.ORG/RESOURCES)



**ON the water, INEOS Britannia, the team representing Great Britain, hope to make history this year by winning the America's Cup for the first time. Off the water, an educational charity, founded by team skipper Sir Ben Ainslie, hopes to show secondary schoolchildren in the UK what goes on behind the scenes to try to win this race.**

The 1851 Trust charity plans to use a £25,000 grant from the INEOS Community Fund to create more STEM materials that teachers can use in the classroom to inspire a love of science and technology – and help to educate pupils about the importance of hydrogen in achieving net zero.

“One of the biggest risks of meeting our global climate goals is having enough STEM-educated future innovators,” said Jo Grindley, Acting CEO of the 1851 Trust.

STEM Crew is one of the trust's flagship education programmes and uses sport to bring STEM subjects to life in an effort to create a generation capable of solving the very real challenges facing the planet.

“The UK Government has identified a structural shift in the economy, with a predicted 440,000 green jobs in

2030,” said Jo. “The 1851 Trust believes that by bringing sport, education, and business together, we can work to solve the STEM learning gap and inspire the innovators of the future.”

The latest resources, available to all schools from April, focus on the work that is being done by the INEOS Britannia team to design and build their hydrogen-powered, foiling chase boat.

All teams competing in this year's race have been told they must build two hydrogen-powered foiling chase boats as part of their campaign to win the America's Cup.

“With so much investment in hydrogen across the world, shifting to foiling chase boats, powered by hydrogen, could well prove to be a sustainable and practical solution for the future of the maritime industry,” said Sir Ben.

Each boat must be at least 10 metres long, reach a maximum speed of 50 knots so they can keep up with the AC75s, and have a range of 180 miles.

The defending champions, Emirates Team New Zealand, launched their boat in March 2022 to prove it was possible. A week later, their 10-metre prototype,

Chase Zero, could be seen foiling around the Waitematā harbour in Auckland.

INEOS Britannia intends to launch its chase boat, which is currently being built in China, this spring.

The school materials, now being developed by the team thanks to INEOS' Community Fund, will tie in nicely with UK schools' physics curriculum.

INEOS believes hydrogen could play a major role in decarbonising the maritime industry, which is responsible for about 3% of global CO<sub>2</sub> emissions.

To highlight the importance of hydrogen, which emits zero carbon emissions, INEOS also plans to host a Fuels of the Future event when the boat is launched in Barcelona.

The Spanish city, which is home to about 1.6 million, is expected to welcome thousands more when it stages the 37th America's Cup later this year.

The first race will be on August 29.

Five teams will be competing for yachting's most coveted trophy, including The Defenders, Emirates Team New Zealand, and The Challenger of Record, INEOS Britannia.

## 37th America's Cup

The America's Cup is as much a technology race as it is a sailing regatta. Over the years, it has pushed the boundaries of innovation in science, technology, engineering and maths. The role of the chase boat is to follow the racing yachts. Onboard the chase boat are team members, who collect data and ensure the safety of the crew onboard the racing yacht. In the past, chase boats have been powered by fossil fuels. This year, the rules state that it must be a hydrogen-powered foiling chase boat. Chase Zero is INEOS Britannia's boat.



## Community Funding

INEOS' £1 million Community Fund was set up in March 2020 to initially help those struggling with the effects of the COVID-19 pandemic. That year alone, 159 organisations were sent money. The fund still operates and throughout the year INEOS receives countless requests for financial help.



## 5 million miles every day

**TEACHERS** are running out of ways to describe how The Daily Mile has helped to improve their children's happiness, fitness, behaviour and ability to concentrate in class. Many say the 15-minute break from lessons is now a crucial part of the school day.

"I believe in establishing habits for life," said Marianne Wheeler, a Mental Health Lead at Crabtree Junior School in Hertfordshire. "The Daily Mile is a simple routine for our children at school, but it might be the foundation for a lifetime of staying active."

As INCH went to press, it emerged that almost five million children from 96 countries now regularly run, wheel, or walk The Daily Mile.

England is top of the league with 8,357 schools signed up, representing 47% of primary schools. Scotland, where it all started, has 1,348 schools on board, representing 53% of primary schools.

Gordon Banks, Global Director of The Daily Mile Foundation, recently visited two UK schools during Children's Mental Health Week.

"We know that children, who are physically active on a regular basis, have better mental health," he said.

"But with one in five children and young people having a probable mental health condition, which many will take into their adult lives, it is essential that we act now to ensure that every child can enjoy the benefits of regular physical activity."



### INCH APP

Get the INEOS INCH APP on your mobile or tablet for all the latest news.

