



# A WAVE OF OPPORTUNITY

INEOS snaps up assets in the North Sea as operators sell up

ISSUE 9. 2015

## FLYING START

Students smash UK land speed record in £150,000 bicycle

## THE \$9 BILLION DEAL

Anniversary of the deal that transformed INEOS into a global player in petrochemical industry

## VISIONARY APPROACH

GO Run For Fun teams up with inspirational teacher to go that extra mile

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THE WORD FOR CHEMICALS



# FACTS + FIGURES



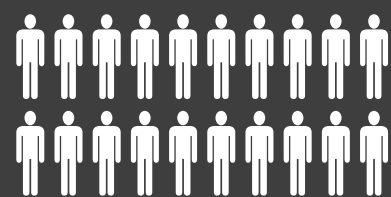
INEOS supplies 8% of the UK's gas, enough to heat 10% of British homes

## £14.4bn

The cost of oil extraction is more 5x higher today as it was 2002. £14.4 billion was invested in the industry on new projects last year

## 10

INEOS is currently the 10th largest producer of gas from the UK Continental Shelf



It is estimated that 450,000 people across the UK are employed in the UK oil and gas industry. 45% of jobs are based in Scotland



There are 300 oil and gas platforms

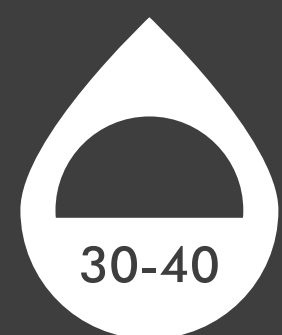


1.4m/95m

The UK Continental Shelf produces 1.4 million barrels a day in a 95 million barrel a day market



42 billion barrels extracted; 24 billion barrels could remain



30-40 years of production remaining



£2.2 billion in taxes revenue paid to the UK Treasury in 2014. Fell to £130 million in 2015



Production of 4.5 million barrels a day in 1999 has fallen to 1.4 million barrels a day today

## INTRODUCTION

EVEN by INEOS' standards, 2015 has been quite a year.

It will go down in history as the year the first three of its fleet of state-of-the-art ships were built to transport tons of liquefied ethane from America to Europe.

It is also the year it became the UK's biggest player in the shale gas industry.

The year it raised the roof on Europe's biggest ethane storage tank at Grangemouth in Scotland.

The year it began acquiring gas and oil assets in the North Sea.

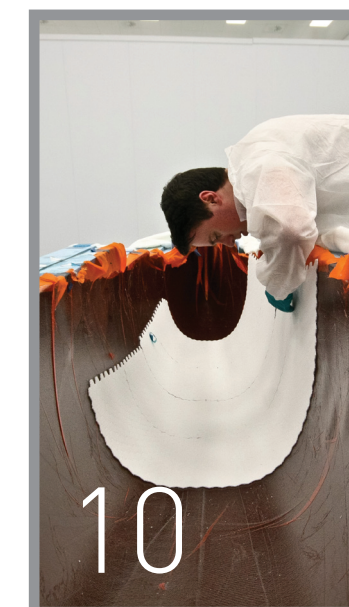
The year it launched its own television programme – INTV.

But it will also be remembered for its work outside the company. Its drive to encourage a healthier generation of youngsters through its GO Run For Fun Foundation, the world's biggest running event for children.

Most of these amazing achievements are – and have been – well documented in INCH.

What all of these show, though, is that INEOS is not a company that likes to stand still and wait for its ship to come in. It rows out to meet it. Every time. It seeks out opportunities. It grasps them. And it acts. Quickly.

It has been an incredibly successful at taking inefficient unreliable businesses, turning them around to make them successful once more. On the tenth anniversary of its \$9bn acquisition of INNOVENE, BP's chemicals businesses, 2016 could be equally transformational



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# A WAVE OF OPPORTUNITY

## INEOS SEES OPPORTUNITY WHERE OTHERS SEE DESPAIR

**As oil and gas companies desert the North Sea amid rising costs and plummeting profits, INEOS is moving in. Here INEOS Chairman Jim Ratcliffe explains why**

INEOS has found a new platform for doing business.

This time, though, it is offshore – in the depths of the North Sea.

So far it has invested several hundred million dollars in acquiring gas fields from the DEA Group – and it has set up a new subsidiary to hunt for even more opportunities.

***“It is taking us in a new direction but only time will tell whether it becomes as transformational as the decision to buy INNOVENE from BP in 2005 did,”*** said Chairman Jim Ratcliffe.

Oil and gas companies are frantically selling up amid rising costs and plummeting profits. Three years ago oil was selling at \$110 a barrel; today it is below \$40. And it is forecast to sink even lower.

The problems in the North Sea, Jim believes, are twofold.

The rigs are not operating as efficiently as they could and the costs are too high.

***“We tend to operate at 98%. Our machines always run and they are always producing products,”*** he said. ***“But if you look at the North Sea we are seeing examples of 60 to 65%. It is just something that we would not accept in chemicals.”***

Those inefficiencies are made worse by rising costs.

***“The UK has not been as rigorous with its costs so things tend to be more expensive in the North Sea than in the Gulf of Mexico where it is a highly competitive environment,”*** he said. ***“And it’s not just a little bit more expensive. It’s a lot more expensive whereas that great competition you find in the US has driven costs down.”***

INEOS has yet to fully understand why the rigs in the North Sea do not always operate, but Jim is confident that INEOS is the company to increase production and improve efficiency.

***“We are yet to find out whether we can make an impact there,”*** he said. ***“But we do have a proven track record in chemicals. And these are basically chemical facilities. It is in a difficult environment because it’s sitting there in the North Sea but it is still pumps, pipes, vessels and filters and it deals with liquids and gases, which are our bread and butter.”***

Over the past 15 years INEOS has grown through a series of successful acquisitions.

***“When we compare ourselves today with how each asset was run on the day we acquired it, it is run more efficiently, run more safely and it is run cost effectively,”***

he said. ***“So in our mind we are thinking ‘why oughtn’t we be able to do that in the oil and gas arena?’”***

INEOS began looking out to sea for opportunities about 12 months ago.

***“Obviously the collapse in the oil price helped to galvanise our enthusiasm but we have been thinking about it before that because we have quite a lot of tentacles that go upstream in one way or another,”*** said Jim.

INEOS’ decision to then buy has been welcomed by the UK Government.

***“What the UK Government recognises – and we recognise – is that if you are inefficient and expensive, then you lock hydrocarbons in the ground,”*** said Jim. ***“Because as soon as a platform becomes break even you***

***have to shut it down, irrespective of what hydrocarbons are left in the ground. If you can run that platform more efficiently and more cost effectively, then you can run it for longer, so you are able to extract more hydrocarbons.”***

He said the UK Government was desperate to maximise economic recovery.

***“Maybe INEOS, with a slightly different approach, can produce more hydrocarbons for the UK Government,”*** he said.

Jim has not ruled out investing further in North Sea assets but cannot say how much INEOS is willing to spend.

***“We are not going to spend beyond our means,”*** he said. ***“But when you are in the world of making acquisitions it is impossible to predict where you will finish up.”***

Meanwhile, its biggest challenge will be unearthing new hydrocarbons to continually feed the pipeline.

***“Unless you are finding new stuff then you ultimately have a business that will decline to nothing,”*** he said. ***“We have a phenol plant that today is producing 500,000 tons and will still be producing 500,000 tons in 20 years. But oil and gas is always in decline.”***

To help grow the business, INEOS will be relying on a team of geologists, geophysicists and sub-surface experts, who are now working for INEOS Breagh at its offices in London.

***“My impression of the team is very good,”*** said Geir Tuft, newly-appointed CEO of INEOS Breagh. ***“And it is one of the reasons why this was such an attractive acquisition.”***

***“We are yet to find out whether we can make an impact but we do have a proven track record in chemicals”***

INEOS Chairman Jim Ratcliffe



SCAN HERE TO  
VIEW FILM:  
JIM RATCLIFFE  
INTERVIEW



# UNCHARTERED WATERS

## INEOS ACQUIRES ITS VERY FIRST OIL AND GAS FIELDS AS IT NAVIGATES ITS WAY INTO THE NORTH SEA

**It's exciting times at INEOS – both onshore and offshore – as INCH discovered during a conversation with Geir Tuft, CEO of the company's new oil and gas business INEOS Breagh**

MANY people wonder why INEOS is getting involved in oil & gas exploration. Questions are being asked as it steers its business out into the North Sea at a time when others are leaving.

But it is confident it can be the change the oil and gas industry needs to turn around ageing assets deemed unprofitable and unfit for the job.

So too is Geir Tuft, the man head-hunted to lead INEOS' new offshore gas business INEOS Breagh which operates four platforms in the North Sea and owns interest in 16 exploration licences.

INCH caught up with Geir shortly after he moved into his new office in London as CEO of INEOS' new gas subsidiary.

**"I do not know where this journey will ultimately take me or INEOS but we are capable of making a big difference in the North Sea,"** he said. **"We are not in this for the short-term."**

In October INEOS bought all 12 UK North Sea gas fields owned by German firm DEA, which is part of the LetterOne Group. All the gas fields are close to INEOS' assets in the North East and Scotland and provide about 8% of the UK's gas, enough to warm one in 10 homes.

**"That's not insignificant and I think about that when I go home each day, knowing that I have got control over this,"** said Geir.

Russian billionaire Mikhail Fridman had been required to sell them by the British Government amid fears of sanctions against Moscow over Russia's role in the Ukraine.

A few days after INEOS had agreed to buy DEA (UK), which included Clipper South platform, Fairfield Energy Holdings Ltd sold its 25% interest in the Clipper South, bringing 75% of it under INEOS' control. Fairfield said it wanted to concentrate on decommissioning.

But INEOS' interest in acquiring more North Sea gas fields is unlikely to end here.

**"Virtually everything in the North Sea is for sale,"** said Geir. **"And we are the only buyers in a sea of sellers."**

In many ways these are uncharted waters for INEOS, but it classes itself as a 'relative'.

**"Although INEOS is a new entrant to the North Sea, the company has extensive experience in operating chemical plants of similar or greater complexity to these offshore platforms,"** said Geir. **"Our core focus on Safety Health and Environmental performance, reliability, high utilisation and competitive cash fixed costs, are attributes the mature North Sea needs to**

**extend the life of assets and extract as much hydrocarbons as possible. We believe we can take these assets and improve their reliability and invest where the money is needed."**

The problems facing the UK oil and gas industry, which has been drilling for oil and gas in the North Sea since 1964, have been well documented.

In 2014 Pricewaterhouse Coopers was warning that a new vision and new ways of working were urgently needed to cement its position as a global oil and gas hub.

**"It's vital that we take a more strategic and integrated view to help extend the life of the North Sea for everyone involved and for future generations,"** said Kevin Reynard, PwC's senior partner in Aberdeen. **"If we choose not to change, then we risk sleep-walking into an early sunset."**

Those views were echoed in June 2015 when it again urged oil and gas firms to heed lessons from other UK industries which had been forced to change or die.

**"There is no escaping the fact that exploration and production is down on previous years" said Kevin. "The stark reality is that even if all the planned wells go ahead, the rate of drilling is still too low to recover even a fraction of the potential resources."**

PwC called for a step change in strategy. "Businesses need to innovate and collaborate as well as improve cost control and performance," he said.

The UK Government has also been urging the industry since early 2014 to reduce operating costs, improve efficiency, exploit untapped reserves and spend more money on exploration.

**"Our experience will be invaluable in this environment,"** said Geir. **"In fact we have extensive experience in acquiring, improving and managing assets deemed unprofitable. If any company on this planet can do it, it is INEOS."**

It is estimated that there are between 30 to 40 years of production – and an estimated 24 billion barrels of oil – remaining but the Office for Budget Responsibility predicts a 38% fall in oil revenue by 2017-2018.

To help boost 'flagging' North Sea production by 15% by the end of the decade, UK Chancellor George Osborne recently unveiled measures worth £1.3 billion over five years and also plans to partially fund new exploration work to help increase the region's reserves.

The oil and gas industry knows it needs to reduce

operating costs by billions and increase production efficiency if it is to remain competitive.

The high cost of running these assets was brutally exposed when oil prices suddenly dropped from \$110 a barrel to \$60 then again to below \$40 at the end of the year (2015).

Geir, who has spent the past three years at INEOS' Grangemouth site, is excited by what 2016 will bring.

**"First we need to fully understand the business,"** he said. **"At the moment I feel as if I have one foot on firm ground because of what INEOS has already achieved and one foot in a dingy, where we have to be careful and learn because there is an element of this which is all new to us with exploration and sub-surface, geology and seismology."**

But by late January (2016), he will have a robust plan for growing the business to present to INEOS Capital.

The staff, who came with the sale of the LetterOne Group, are also optimistic about the future.

**"After all the uncertainty there is a real sense of relief,"** he said. **"There is a very positive anticipation because they know we want to operate and develop the asset. We are in it for the long-term."**

One who agrees with that is Adrian Coker, Head of Exploration and New Business at INEOS Breagh.

**"We have effectively been through a two-year sale process,"** he said. **"First to LetterOne and then a forced onward sale to INEOS so we are quite pleased that we can finally move on and get back to business as normal."**

INEOS Chairman Jim Ratcliffe has already met the team.

**"He is going against the current to a lot of people who are leaving the North Sea, but there are some good wins here to be had by someone with an entrepreneurial take on things,"** said Adrian.

The existing, highly-experienced management team at DEA's UK business will stay in place and run the business in a similar way to all INEOS' other businesses.

**"There won't be a great deal of interference from head office,"** said Jim. **"It will be in its own independent box and the management will be charged with running that business."**

For INEOS, this is a very bold step into a new world but depending upon how this venture develops, it has the potential to transform the business in the way that INEOS' acquisition of INNOVENE did in 2005.

**"Virtually everything in the North Sea is for sale. And we are the only buyers in a sea of sellers"**

Geir Tuft, CEO, INEOS Breagh



SCAN HERE TO  
VIEW FILM:  
INEOS BREAGH



# THE \$9 BILLION DEAL

HOW INEOS CHANGED THE COURSE OF THE COMPANY IN ONE COOL MOVE

**“This was the guppy swallowing the whale”**

David Anderson, President of the Chemical Market Resources Inc, a Houston-based consulting firm

**The acquisition of gas fields in the North Sea marks a significant moment in INEOS’ history. But it is not the first time INEOS has seemingly achieved the impossible. Ten years ago it raised a cool \$9 billion to buy BP’s massive chemicals business INNOVENE. It was a transformational deal that changed the face of INEOS overnight**

THE year was 2005.

The world feared it was on the verge of a bird flu pandemic as cases spread from Asia to Europe, millions mourned the death of Pope John Paul II and Saddam Hussein went on trial.

INEOS was doing well. It was turning over \$8 billion a year and employed 7,500 people at 20 sites around the world.

But INEOS Capital had bigger ambitions, it was looking to invest.

BP was planning to float its massive chemicals business, INNOVENE, on the New York Stock Market. But INEOS convinced the management team to sell the olefins and derivatives and refining subsidiary to it instead for \$9 billion.

It was a colossal bet and a deal was agreed without even visiting many of the sites.

But that bold step propelled INEOS into the big league of global petrochemical companies.

INNOVENE had 8,000 staff and 26 manufacturing sites in America, Canada, the UK, France, Belgium, Germany and Italy.

**“The deal vaulted INEOS, which then had an exceptionally low profile, into the top tier of global chemical companies,”** said Patricia Short, a journalist at Chemical & Engineering News.

Following the acquisition the combined businesses had a turnover of more than \$30 billion, making INEOS the world’s fourth largest petrochemicals company.

Jim Ratcliffe described the deal – BP’s biggest-ever divestment – as a ‘transformational acquisition.’

Overnight his company had more than doubled in size.

The acquisition, which included the Lavéra and Grangemouth refineries, filled out INEOS’ ethylene and propylene derivative portfolio.

David Anderson, President of the Chemical Market Resources Inc, a Houston-based consulting firm, remembers the deal well.

**“This was a little company taking on the big guys,”** he said. **“It was the guppy swallowing the whale. No one thought it might not work out. But it was whether or not the INEOS team could assimilate all the parts into a cohesive operating entity.”**

It could have gone horribly wrong. But it didn’t.

INEOS after all had become accustomed to snapping up unwanted commodity businesses from the likes of ICI, BASF as well as BP, as these chemical giants restructured their own businesses. If any company on the planet could do it, it was INEOS. All INEOS asked itself was whether it could double the earnings (EBITDA) of the businesses it acquired over five years.

That wasn’t quite the view from those working for

INNOVENE at the time.

Bob Sokol, now Chief Financial Officer of C2 Derivatives, had heard about INEOS but viewed it as a small European-focused chemical company.

**“I never thought of it as a company which could pull off a \$9 billion INNOVENE acquisition,”** he said.

He said staff at INNOVENE were aware that changes were coming.

**“Employees were operating in a cloud of uncertainty but that uncertainty shifted from going public to being acquired by a largely unknown chemical company on the back of 100% debt finance”** he said.

Dennis Seith, now Chief Executive Officer of INEOS O&P USA, had been part of the management team selected by BP to establish INNOVENE.

**“I had never heard of INEOS and it definitely was not a household name to most in the US and INNOVENE,”** he said.

But he said the enormous pace of change following the acquisition left little time for employees to worry that a little company had just acquired a giant in the chemical world.

**“The fear of the unknown is always a bit unsettling, but we had a job to do and the work was so intense there was not a lot of time to stress about what was happening,”** he said. **“I just remember it being both exhilarating and unnerving. We had a chance to remove bureaucracy, try out ideas, be entrepreneurial and take on accountability for the success or failure in the business.”**

With the deal, INEOS inherited an executive team of 12. Within a year only one of them was left.

**“That was me,”** said Dennis. **“There were very few layers left in the business and responsibility was thrust upon those willing to take it. Many were not comfortable with the downsizing and reduction of overheads or approach to entrepreneurial accountability in a private sector company.”**

BP had grown into a very slow-moving, bureaucratic organisation obsessed with multiple peer reviews it became plagued by indecisiveness.

Under INEOS, delegations were tightened and decisions taken at all levels. Corporate spending was reined back. Capital spending was much more tightly controlled. Staff were asked to cut costs by at least 25%. Management began to instil a new culture where employees were asked to ‘act like owners’ in the business where costs and decisions mattered to its future.

**“We became truly focused and developed the vision that we still have for the business today,”** said Dennis.

He believed – and still believes – that the takeover

was the best thing that ever happened.

**“BP chemicals was a good business but it had clearly had lost its way with a heavily-matrixed operation,”** he said. **“INEOS gave us the opportunity to truly lead a business and work with very talented people towards common goals. Every employee’s effort matters and makes a difference. We have only been limited by our own creativity and how we choose to prioritise our resources.”**

Joe Walton, now Business Director of INEOS Oligomers, also worked at BP INNOVENE.

**“A number of my BP colleagues were very worried about leaving the perceived stability of a major company like BP for a leveraged company like INEOS,”** he said. **“However, if you look back 10 years at the history of INEOS versus BP that was a misguided view.”**

At BP, Joe had been responsible for the global business optimisation of the LAO and PAO business only.

After the takeover, his remit increased and he was given global responsibility for the Oligomers business management, sales and technology.

**“A lot of my customers wanted to know what it was like to work for INEOS instead of BP,”** he said. **“I used to tell them that as a business manager in BP, I spent 60% of my time managing my business and 40% answering questions from central functioning groups that did not add value. In INEOS I spend more than 90% of my time actively managing the business.”**

Just weeks after the takeover, INEOS created seven new businesses covering refining, olefins, polyolefins, olefins and polymers in the US, nitriles, technologies and oligomers.

INNOVENE no longer existed. It was now INEOS Nitriles, INEOS Olefins and INEOS Polyolefins in Europe, INEOS Olefins & Polymers USA, INEOS Oligomers, INEOS Refining and INEOS Technologies each with their own focused team.

That same year Jim was named Britain’s top entrepreneur by Management Today, ahead of Carphone Warehouse’s Charles Dunstone and Simon Nixon, founder of Moneysupermarket.com.

The business publication described Ratcliffe as ‘the chemical industry’s answer to steel magnate Lakshmi Mittal’.

In the first 10 years, INEOS made more than 20 acquisitions.

But the INNOVENE deal will always be the one that changed the face of INEOS forever.

Looking to the future, though, you cannot help but feel that the acquisition of gas fields in the North Sea could very well have a very similar effect.



# FLYING START

STUDENTS SMASH UK LAND SPEED RECORD ON FIRST ATTEMPT



SCAN HERE TO  
VIEW FILM:  
ARION 1



SCAN HERE  
TO READ THE  
TEAM BLOG

## INEOS admires spirited souls, especially those prepared to take on the world

It was a chance to help students on the University of Liverpool Velocipede Team to build the fastest bicycle in the world – and INEOS wasn't about to let an opportunity like that slip away.

As the engineering students from the University of Liverpool in the UK worked quietly on their speed bike ARION1, INEOS was ready to fly them and their incredible vehicle, to America for the World Human Powered Speed Challenge.

**"I knew it was something that INEOS would be interested in supporting because it combined sport, engineering, entrepreneurial spirit and a small team with limited experience prepared to take on the world,"** said Iain Hogan, CEO of INEOS O&P South. **"The students had enough sponsorship to get the bike designed and built but initially, they didn't want our help because they weren't sure they had a vehicle that could take on the record."**

But the more tests done at Bruntingthorpe Proving Ground, the more the 16 students, including team leader, Iain's son Ben, realised it might just be humanly possible to break the world record of 83.13 mph, and so to INEOS they turned.

What the students desperately needed was a company with the knowledge and experience to transport the bicycle and the whole team to the middle of the Nevada desert and back again.

**"Without the support of INEOS the team would not have made it to the competition,"** said Ben. **"INEOS took charge of arranging**

**the logistics of getting our enormous flight case, which looks more like a small caravan, all the way from our home in Liverpool to the middle of the desert – and back again safely. It was vital our flight case, which contained the bicycle and all our tools, arrived on time and intact. We really needed a company that knew what they were doing."**



David Thompson, Chief Operating Officer of INEOS Trading and Shipping, was the man called upon to help the team. His team imports and exports materials to and from the USA every day of the week.

**"It could have been a logistical nightmare,"** he said. **"But we knew how to handle US and European customs to make sure the bike, and all the spares and maintenance equipment, could enter the US without delay, and then reverse the process back into Europe."**

In tests, the ARION 1 land speed vehicle, which is encased in a carbon fibre shell to help it slice through the air, had topped speeds of more than 50mph.

**"Carbon fibre composite was the ideal material for fabricating the vehicle because you can mould it to almost any shape that you want,"** said Ben. **"So we did."**

The rider sees where they are going using a tiny video camera mounted on top of the capsule, which makes piloting it particularly difficult.

**"You'd have to imagine driving a motorcycle looking through your mobile phone,"** said Ben. **"And with nothing but that to show them the outside world and no ventilation, it can be claustrophobic. Thankfully the rider is only in there for about seven minutes so it is bearable."**

But despite the £150,000 cost of the bicycle, it's not a comfortable ride.

**"Inside it is extremely noisy and sounds a bit like a jet engine,"** said Ben. **"All the sounds from the chain and the wheels reverberate inside the shell. A lot of the time we had problems hearing our rider over the radio."**

The bike had six gears, similar to a normal bike, only much larger. **"The front chain ring had 104 teeth"** said Ben.

But the ARION1 rider changed gear only when the bike told him to.

The team had worked on perfecting their bicycle for almost two years.

**"It became an obsession,"** said Ben. **"The team didn't bother taking a summer break this year. We stayed at university and worked seven days a week to get it finished."**

The world human-powered vehicle challenge takes place every year on Route 305 – a five-mile stretch of road in the middle of the Nevada desert.

Teams from all over the world enter vehicles they have designed and built themselves.

Speeding up in an attempt to go the fastest is only one thing, though.

Slowing down is quite another.

**"It's not very easy to slow down after reaching speeds of 75mph,"** said Ben. **"At the end of the course is a one-mile stretch of track left to stop the bike. And as the rider is unable to stay upright once the bike stops, the team has to catch the bike while it is still moving. That, in itself, takes some skill."**

Although the British team did not break the world speed record, their two riders smashed the 13-year-old UK land speed record three times.

Ken Buckley was first to do it. He clocked 69.7mph, then fellow rider David Collins, a PhD student, notched up 70.6mph, only for Ken to hit 75.03mph – and, in the process, generate enough energy to boil

a kettle.

**"Breaking the British record by nearly 8mph is no mean feat,"** said Ben.

What was particularly impressive about Ken's record-breaking run is that he notched up 75mph just 15 hours after a nasty crash at 55mph when a sudden gust of wind and an unexpected bump in the road caused him to lose control of the bike.



**"Wind and weather are two big hazards,"** said Ben. **"With such a long course the wind can blow in totally different directions and that can catch the rider by surprise. If Ken had said he wanted to stop then, we would have understood it but he was determined to try again."**

And determination is one of the reasons he was selected from the many hopefuls.

The riders also needed an excellent sense of balance while lying down.

**"Essentially you have to learn to ride a bike again because it is so different,"** said Robert McKenzie, who has now taken over the project following Ben's graduation.

And the riders needed courage.

**"It is dark and claustrophobic in the bike and furthermore you are taped in and expected to pedal as fast as you can,"** he said.

Thankfully Ken was unhurt in the crash but the exterior shell and steering were damaged which meant the UK team had to work through the night to make it possible for their riders to attempt breaking records again.

Although the British team were unable to match the Canadian team, whose co-designer and rider Todd Reichert set a new world record of 85.71 mph, they have got their sights set on it next year.

ARION 2 will be smaller, lighter and more stable.

**"We have got the British record at our first-ever attempt and if one day we get to bring the world record back to Britain that would be incredible,"** said Ken.

And INEOS will be there again to support that second attempt.



# ELEMENTS OF DANGER

**STEVE WEATHERS ALL WEATHERS AS HE FLIES – AND HIKE – ACROSS THE ALPS**

**What drives someone to want to be the best in the world? INCH spoke to Steve Nash, a chartered electrical engineer who works at INEOS’ Runcorn site in the UK. He has been reaching for the stars for years**

IT was an experience like no other.

As Steve Nash paraglided over the 8,130ft (2,478m) Nufenen pass in Switzerland, he got caught up in turbulent glacial air.

***“I was losing height so fast that I thought I had been disconnected from the paraglider,” he said. “It was like flying in a raging waterfall.”***

As he hurtled towards the ground at eight metres per second, he battled to regain control of his collapsing paraglider and keep his cool.

***“Thankfully I had been trained to get out of a situation like that,” he said. “But I was still incredibly relieved to stand on solid ground again after that flight.”***

But that brush with near disaster didn’t stop him from waking at 5am the next day to continue his epic journey across the Alps. And that’s the point. That’s what separates life’s great achievers from the rest, or, in the words, of the man who conquered Everest, Sir Edmund Hillary: “It is not the mountain we conquer, but ourselves.”

Steve was competing in the one of the toughest races in the world, The Red Bull X-Alps.

Competitors – and every two years there are only about 32 international paragliders brave and fit enough to take it on – can face torrential rain, turbulence, storms, fierce headwinds, white-outs, and freezing temperatures as they hike, run and fly from Salzburg in Austria to Monaco via Germany, Italy, Switzerland and France.

There is no set route. Athletes must pass 10 ‘checkpoints’, mostly iconic mountains, but they can decide how to get there.

This year’s race was won by Swiss paragliding legend

Christian Maurer who landed in Monaco eight days four hours and 37 minutes after setting off from Mozartplatz in Salzburg. It was the fourth time he had won the competition.

Forty eight hours later, the race officially ended with Steve, the only Brit and at 52, the oldest in the competition, just 178km away.

***“For me it had been a unique opportunity to pitch myself against the very best pilots in the world,” he said.***

After being selected in October 2014, Steve had sought advice from fitness experts, nutritionists, and those who had already done it.

***“Anyone who competes, at whatever level, wants to perform at their very best,” he said.***

But it’s not just a head for heights that are needed.

***“The real dangers are all related to the weather,” said Steve. “Rough turbulence from thermals can collapse the fabric wings and massive cumulonimbus clouds are so dangerous that passenger plans avoid flying near them.”***

What sets competitors apart is the ability to fly in conditions that most paraglide pilots would never consider safe.

***“The real top pilots in the world are experts at using adverse weather and making the very best of it,” said Steve. “And that matters because almost all the race is won in the air.”***

Steve last competed in the race four years ago but was eliminated after he flew eight metres into forbidden air space around Locarno Airport.

***“I’d never flown into restricted airspace***

***before, but pushing yourself to physical and mental limits means the ability for clear thinking is impaired,” he said.***

This year he had no intention of making the same mistake twice. And he didn’t.

On a good day, he was literally flying, clocking more than 130kms in the air and 70km on foot.

On a bad one, he was forced to run or hike with a 9kg back pack.

***“The worst flying day was from Zermatt, where very difficult flying conditions from strong winds meant I actually went backwards on the course line to Monaco,” he said.***

The Red Bull X-Alps does take its toll on the body with lack of sleep leading to fatigue.

***“I remember being asked what I wanted to eat and I couldn’t process the question,” he said.***

He also lost about 5% of his body weight, despite consuming 4,500 calories a day.

Competitors are allowed to hike between 5am and 10.30pm and fly between 6am and 9pm.

***“Several times I launched from very high mountains at 6am on the dot,” he said.***

One of the unique aspects of the race is that spectators can track the athletes’ every move online.

That would have included Steve’s unexpected landing on someone’s garden lawn near the Swiss/French border.

***“The owner came out of his chalet to check I was okay and needed a drink,” he said.***

Steve began paragliding in North Wales in 1990 where the highest peak is just 3,560ft (1,085m).

***“For me, paragliding is about freedom,” he said. “You can travel more than 100km with no idea where you might land or how you are going to get back to your starting place.”***

He keeps fit by running and cycling from his home to work at INEOS’ Runcorn site most days.

As an employer INEOS understood what drove him and granted unpaid leave so he could train in Brazil, in the winter and spend two months in the Alps in the run-up to the race.

***“Not many employers would allow you that flexibility,” he said. “But INEOS believes that keeping fit benefits all because fit employees are less likely to fall ill.”***

So does he want to compete again in 2017?

***“Absolutely,” he says. “This race has captured the imagination of every pilot who has ever dreamed about crossing a range of mountains as stunning as the Alps. It is simply like no other endurance competition. And having tried twice and got very close this time, I can’t help thinking third time lucky.”***

***“The real dangers are all related to the weather. Massive cumulonimbus clouds are so dangerous that passenger planes avoid flying near them”***

**Steve Nash**



SCAN HERE TO  
VIEW FILM:  
STEVE NASH  
PROFILE



SCAN HERE TO  
VIEW FILM:  
TEAM WEBSITE



SCAN HERE TO  
VIEW FILM:  
RACE WEBSITE



**“To be awarded so many licences supports our belief that we are the right company to extract shale gas in the UK”**

Gary Haywood, CEO, INEOS Shale

# INEOS GETS A LICENCE TO EXPLORE THE UK FOR SHALE GAS

**TEAM WELCOMES GOVERNMENT’S FAITH IN INEOS TO  
DO THE RIGHT THING**

**INEOS is now the biggest player in the UK shale gas industry.  
Fast work for a company that only started exploring its options in 2014**

INEOS has been granted permission by the UK Government to explore huge swathes of England for shale gas.

The announcement by the Department of Energy and Climate Change means INEOS now has licences to explore one million acres of potential shale gas reserves.

**“We are now the biggest player in the UK shale gas industry and are clearly seen as a safe pair of hands,”** said Gary Haywood, CEO of INEOS Shale.

Britain is currently one of the most expensive places in the world to make petrochemicals.

But INEOS believes an indigenous shale gas industry has the power to revolutionise manufacturing in Britain, give the UK energy security for the first time in many years, and create thousands of jobs.

**“We have seen at first-hand what it has done for the US economy,”** said Gary. **“Shale gas is a once-in-a-lifetime opportunity that the UK cannot afford to miss. North Sea oil created great wealth for the UK and shale gas can do the same.”**

Most of the 21 licences – awarded to INEOS this month (December) – are in places with either a mining or industrial heritage. Areas include land close to its plants in Runcorn, Hull and Newton Aycliffe.

**“We are delighted that the UK Government is determined to move forward with this exciting new industry,”** said INEOS Chairman Jim Ratcliffe.

INEOS Shale is INEOS’ on shore oil and gas exploration and production business. The business made its first move into the shale exploration arena in August 2014 when it bought a share of a Petroleum Exploration and Development Licence from Dart Energy.

Since then it has grown rapidly. In March 2015 it struck a deal with IGas, which gave it access to almost a quarter of a million acres of potential shale gas reserves in Scotland. That was quickly followed by Government approval to explore parts of the East Midlands for shale.

But it’s the latest announcement – the awarding of a further 21 licences – which has delighted the INEOS team.

**“To be awarded so many licences supports our belief that we are the right company to extract shale gas in the UK,”** said Gary. **“Shale gas is not about short-term speculation for us. It is about securing our manufacturing base which provides thousands of jobs in regional economies many in the North of England and Scotland.”**

INEOS’ decision, though, to pursue shale gas exploration in the UK has, unsurprisingly, set it on a collision course with environmentalists and protest groups.

Opponents of fracking claim it is dangerous and disruptive, triggers earthquakes, contaminates drinking water and the air we breathe.

Supporters say – done properly – it is safe, provides countries with a valuable domestic resource, creates jobs, underpins manufacturing and will help to cut carbon emissions by displacing coal, which emits twice as much CO<sub>2</sub> compared to gas.

Earlier this year (2015) INEOS met local residents, as part of a concerted effort to explain the facts around shale gas development, and answer any questions posed by people in the Scottish local communities living or working in one of our licence areas.

**“There will always be a hard core of opponents who are philosophically opposed to fossil fuel development, despite shale gas having only half the carbon footprint**

**of coal,”** said Gary. **“However, many local residents fear shale development for more local reasons – and these are the people INEOS wants to address, to reassure them of the impacts of shale development. We believe that most people are open-minded about shale development, but want more information.”**

He added: **“Reassuring people that the industry can operate responsibly, without long-term damage to the environment or their way of life is critical. It is also vitally important to make the case for why shale gas development is beneficial for communities, and for the country.”**

INEOS has committed to fully consult all local communities and will share 6% of revenues with homeowners, landowners and communities close to its shale gas wells\*

**“We have the vision to realise that communities must share in the rewards for it to be successfully developed,”** said Jim.

Working exclusively with INEOS in Europe are the world-leading pioneers who led the development of the first commercial shale play in the US, the Barnett Shale.

Petroleum engineer Nick Steinsberger and geologists Kent Bowker and Dan Steward have more than 20 years of industry experience.

**“They have drilled thousands of shale wells without encountering any major issues and are advising INEOS on how best to safely access Britain’s vast reserves,”** said Gary.

And unlike many exploration companies, INEOS can use shale gas as both a feedstock and a power source. That means shale gas could also help to underpin the competitiveness of INEOS’ manufacturing sites across the UK for years to come.

\*4% to homeowners and landowners directly above wells and 2% to the wider communities.



# IRON WILL

## PROFESSIONAL ATHLETE OFFERS INSIGHT INTO WHAT IT TAKES TO BE THE BEST

**Abraham Lincoln said if you wanted to test a man's character, give him power. Sport is another equally important judge, as INCH discovered**

THE road to becoming a champion is paved with great sacrifices.

But that's very often the view of someone looking in from the outside.

American Bart Connor, one of the greatest gymnasts ever to compete in the Olympics, never saw any of it as a sacrifice.

***"It was just choices,"*** he said. ***"I never felt that I was missing something, only that I chose something else."***

And Olympian Josh Davis, who made history in 1996 by becoming the only man in any sport from any nation at the Atlanta Olympic Games to win three gold medals, said the only thing that he gave up was mediocrity.

Eleanor Haresign, daughter of INEOS' Cliff Haresign, understands that mindset. She won her first iron-distance event – a 1.9k swim, 90k bike ride and 21k run – at her second attempt when she was 35.

***"What is a sacrifice to some isn't a sacrifice to others,"*** she said. ***"There are plenty of early mornings, early nights, missed social events, worrying whether you might catch a cold, and feeling exhausted and unsociable. But the feeling of winning or doing well makes everything worthwhile, and it keeps you going back for more."***

In short, you have to want to be the best.

***"You have to ask yourself how badly you want it because even the professional athletes are hurting,"*** she said. ***"It often helps to remember that there are many people who don't have a choice in their lives about suffering pain. I am lucky that I can race hard and embrace the pain, and transcend the limits of what I thought was possible."***

But she said it took more than just desire.

***"There are certain characteristics that are needed to become the best and not everyone will be prepared to accept them. To win, you need to excel physically, but only being physically strong is not sufficient to be a winner. You must delve deep into your mental reserves to override the physiological 'symptoms' regarding fatigue or pain."***

To beat the best, you need to be more focused, fitter, organised and more prepared. You need willpower, determination, discipline, dedication and drive.

For those, like Eleanor, who also have to work part-time to make ends meet, you also need to be able to manage your time effectively.

***"People sometimes wonder how I juggle work, life and training, and complain that they don't have enough time to do any sport but I don't believe that,"*** said Eleanor, an environmental consultant. ***"You just have to find ways to incorporate it into your life. What separates a professional sports person from those at a recreational level, aside from talent, is the willingness to integrate it into every aspect of their lives. It's not just the training. It's the nutrition choices, looking after your immune system, sleeping enough, stretching enough. Everything you do outside of training is still evaluated in its impact or contribution to your sporting success."***

Eleanor's next goal is to qualify for the Ironman World Championships in Hawaii in 2016. To do that, she will need to complete three Ironman events and two half Ironman races over the next 10 months to accrue enough points to rank within the top 35 in the world.

Ironman is a challenge designed for the best of the best and has become triathlon's most iconic, endurance event. In all, about 3,000 athletes from all over the world will line up to swim 2.4 miles (3.86 k), cycle 112 miles (180k) and then run a 26.2-mile marathon (42k) without a break.

Eleanor's dad Cliff said he and his wife Carolyn would do as much as they could to support their daughter from the sidelines.

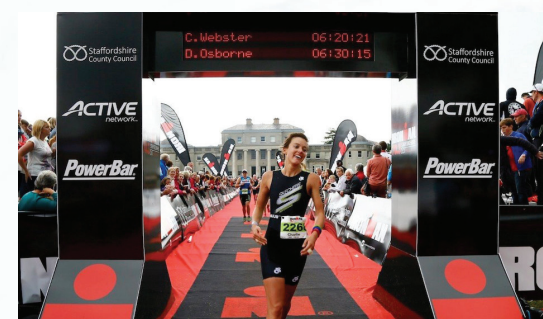
***"We started to realise this was turning into something more serious for Eleanor when she started to earn podium places,"*** he said. ***"No one undertakes these events lightly. Even completing these races demands great mental strength so it is hard for me even to imagine what it must take to win one."***

Eleanor, who completed her first triathlon on a mountain bike with a pannier rack near St Andrews in Scotland, knows. She now enters races as a professional.

***"Triathlon does demand as much mental stamina as it does physical strength but that is what keeps me going back to the start line,"*** she said. ***"But while Ironman events are rather demanding on the body, it also makes you supremely aware of what you can do to have a healthy lifestyle. You simply cannot ask your body to perform if you don't pay attention to your diet, sleep and immune system."***

Although fiercely competitive, there is much camaraderie amongst the athletes and a real appreciation and respect for one another.

***"You see a very special side of the human spirit out there on the race course,"*** said Eleanor.



### CHARLIE GOES THE DISTANCE

ONE person who knows how tough an Ironman event can be is INEOS GO Run For Fun ambassador Charlie Webster.

The British TV sports presenter completed her first-ever full Ironman triathlon – Ironman UK – in six hours, 20 minutes and 21 seconds.

***"Considering I couldn't swim two years ago and I only got my first bike last year, I was over the moon,"*** she said after the 2.4-mile swim, 112-mile bike ride and 26.2-mile run.

***"The weather was everything I didn't want,"*** she said. ***"We had strong winds, it was rainy and cold. But the support was amazing. I felt sorry for the incredible spectators who got soaking wet."***

***"People often complain that they don't have enough time to do any sport but I don't believe that. You just have to find ways to incorporate it into your life"***

Triathlete Eleanor Haresign







# GLOBAL CAMPAIGN SMASHES TARGET

GO Run For Fun has smashed its target six months ahead of schedule.

Organisers of the global running campaign had hoped the 100,000th runner would cross the finish line at a GO Run For Fun event in the UK by July 2016.

But Jack Ryan became the boy to make history when he joined almost 1,000 runners from 23 primary schools at the INEOS-inspired fun run at Wavertree Athletics Track in Liverpool.

And there to cheer him – and the others on – was world champion sprinter Richard Kilty.

*“I have been to six of these event across the country now and it’s been wonderful to witness the campaign grow in size and excitement,”* he said. *“This is a big day for GO Run for Fun.”*

## GO RUN FOR FUN IN NUMBERS

189	events hosted across the UK, mainland Europe and the USA
106,288	runners who have crossed the finish line
1,061	schools that have taken part in the campaign
74	sporting ambassadors inspired to take part, including Colin Jackson and Tanni Grey-Thompson
2,443	volunteers who have got involved to help encourage young children to run



**“Childhood is the time to instil the right messages about fitness and what to eat”**

Nutritionist Dr Paul Sacher

# VISIONARY APPROACH

**ROAD AHEAD IS PAVED WITH GOLDEN OPPORTUNITIES AS INEOS JOINS FORCES WITH INSPIRATIONAL TEACHER TO HELP ENCOURAGE A GENERATION OF HEALTHY CHILDREN**

**What do you do when you’ve reached the end of the road? Or in INEOS’ case, you have achieved what you set out to do six months early? You set new goals**

INEOS – buoyed by the success of its global running campaign GO Run for Fun – is now broadening its horizons to help raise a generation of healthy children.

It has added its weight to former headteacher Elaine Wylie’s vision to get every child in every school running daily to help in the fight against childhood obesity.

And it is planning to launch an educational programme around its award-winning Dart cartoons to teach children about the importance of a healthy diet and exercise.

Elaine pioneered what has become known as The Daily Mile at her primary school in Stirling in Scotland. For the past three years every child in the school has run or walked a mile every day – just for fun.

**“The running is the reward,”** she said.

Initially INEOS and Elaine’s focus will be on the UK where one in three children are now classed as overweight or obese. But ultimately, together they hope to have a global impact.

**“Elaine’s passion, drive and enthusiasm for this are contagious,”** said Ian Fyfe, HR Director of INEOS Group, who met her at the flagship GO Run For Fun event at Olympic Park in London in the summer.

The GO Run for Fun events – and so far almost 200 events have been held in the UK, mainland Europe and America – are grand occasions, run in a carnival atmosphere with celebrities to inspire the kids.

**“The Daily Mile is effectively a GO Run For Fun event at school every day,”** said Ian.

But the aim – and benefits to a child’s health and self-esteem – of both events are the same.

**“Both of us have planted a seed for children about how much fun it is to be active, out and about in the open air, taking exercise and getting fitter and more athletic,”** he said.

Elaine has now retired as head teacher of St Ninians

School where she launched the brilliantly simple scheme after hearing the pupils were exhausted by just the warm-up before their weekly PE lesson. But her work is far from done.

The GO Run For Fun team recently hosted a debate, at the Queen Elizabeth Olympic Park about what needs to be done in the UK to tackle its growing childhood obesity crisis.

Elaine was among the four panellists introduced to an audience of journalists and guests by Charlie Webster, a GO Run For Fun ambassador and TV sports presenter.

**“Childhood is the time to instil the right messages about fitness and what to eat,”** said Dr Paul Sacher, another panellist who helped INEOS to produce an educational video aimed at children. **“If we miss that opportunity we have not done our job as parents, teachers and as a society.”**

All four panellists, who also included INEOS GO Run For Fun Director Leen Heemskerk and ‘Marathon Man’ Rob Young, want the UK school curriculum to change so that physical exercise is deemed as important as maths and English, from primary school age.

**“We have a serious problem out there,”** said Paul. **“It is now more normal to be overweight.”**

That’s not the case at Elaine’s former school where not one of the 420 children is overweight.

**“They look lean and they are energised,”** she said **“And they are more alert in lessons.”**

But she told the panel that the school hadn’t always been a picture of health.

In 2012, after being told how unfit her children were, she took a class on to the school field and asked them to run around it. Most could only manage

one lap.

Four weeks later – after the introduction of The Daily Mile – all of them could run the mile

without stopping.

**“I knew it would improve their fitness,”** she said. **“But I saw more than that. The children were bright-eyed, less fractious, better behaved and seemed happier. It improved their mental and physical well-being so much so that our children now think it is normal to run.”**

At St Ninians no time is wasted changing into running kits. The children run for 15 minutes in the clothes they wear in the classroom and then get back to work.

**“It costs nothing and the children enjoy it,”** she said. **“You just need passion, not facilities.”**

The GO Run For Fun Foundation shares a similar ethos.

The campaign was launched by INEOS in September 2013 with a £1.5 million donation spread over three years to encourage children to run for fun.

Chairman Jim Ratcliffe, who is a keen runner, hoped 100,000 children would have taken part in one of 100 planned events in the UK by the end of July 2016.

To date, more than 188 events have been staged, not only in the UK, but in mainland Europe and Texas in the USA, and the 100,000th runner crossed the finish line at Wavertree Athletics Track in Liverpool last month (November) – six months ahead of schedule.

**“We have been amazed by the response from around the world,”** said campaign manager John Mayock, a three-time Olympic finalist and Commonwealth Games medallist. **“It’s fantastic to be making such progress.”**

And that progress is set to continue as INEOS and its new partners seek an antidote to today’s modern ills.





# A NEW HORIZON

## INEOS KEEPS EYES AND EARS OPEN AS EU SETS ASIDE MORE MONEY FOR RESEARCH AND INNOVATION

### Opportunities can come knocking at any time. The secret is to be ready, as INEOS knows only too well

INEOS could be sitting on another pot of gold.

First, though, it needs to convince the European Union that it should invest some of the €80 billion, which the EU recently set aside for world-class research and innovation, in its ideas.

***“This is a great opportunity for us because it coincides with so much of what we are already doing,”*** said Greet Van Eetvelde, who manages INEOS’ Carbon & Energy Network and energises its Research & Innovation issue team. ***“We just need to be more visible and get involved because there is so much public support out there. Today these organisations can provide 100% of the funding for a project in industry which is fantastic motivation for collaboration.”***

Greet was talking to INCH after the European Union announced the latest funding under its Horizon 2020 project, its biggest-ever programme to encourage research and innovation.

***“This investment is intended to help reinvigorate the chemical industry,”*** she said.

Manufacturing plays a central role in the European economy. It turns over €7 trillion a year and provides 30 million direct jobs. Over the past few years, though, Europe’s ability to compete on a world stage has been slowly eroded by spiralling energy costs and restrictive legislation. And as companies have struggled, many R&I budgets have suffered.

Carlos Moedas, Commissioner for Research, Science and Innovation, said the EU needed to do something to increase Europe’s competitiveness.

***“Research and innovation are the engines of Europe’s progress and vital to addressing today’s new pressing challenges like immigration, climate change, clean energy and healthy societies,”*** he said.

Horizon 2020 was launched on January 1st, 2014. Over seven years it has invested €77 billion to support Europe’s economic competitiveness and extend the frontiers of human knowledge. The EU research budget is

focused mainly on improving everyday life in areas like health, the environment, transport, food and energy. It also wants to make it easier for the public and private sectors to work together on innovative solutions.

INEOS is already working furiously behind the scenes on a raft of initiatives. And it is linked to Horizon 2020 through its membership of a host of organisations including SPIRE (Sustainable Process Industry through Resource and Energy Efficiency), SusChem and PlastEU, all of which have added value to INEOS and help to raise its profile.

***“All of these platforms share a similar ethos and are aimed at finding new ways of thinking and working to make the European industry more resource and energy efficient,”*** said Greet.

At INEOS she steers the company’s Carbon & Energy Network. It is made up of all businesses with over 100 representatives, all of whom have a genuine interest in improving efficiency in the most sustainable way.

Unlike other companies, INEOS does not have – nor does it want – a separate sustainability department. Instead it views it as a fundamental part of how it does business. It wants everyone to think about running the business in a way that safeguards it for generations to come.

The same applies to Greet’s network. All its members work elsewhere in the company.

But for Greet the focus is not just about saving energy.

***“It is about seizing the opportunities that are all around us and not let them pass by,”*** she said. ***“As ever you have got to fall before you fly. But nothing ventured, nothing gained. If we can develop a good track record, we can hopefully attract more investment for INEOS.”***

And that is the aim of creating a dedicated R&I team, within the Carbon & Energy Network, focusing initially on new opportunities.

In December Greet addressed the 7th European Innovation Summit at the European Parliament in Brussels.

***“It is so important that we challenge business scenarios and solutions,”*** she said. ***“Why not make roads out of plastic? It’s not the general thought but it is about thinking outside the box.”***

She said it was vital that all the key industries – chemical, steel, cement minerals, life sciences and engineering – found ways to make the most of their processes by sharing waste streams and resources.

Currently, poor understanding of each other’s processes is hindering that development, which she believes is critical if industry is to properly face the challenges ahead.

***“We need to move from linear value chains to industrial symbiosis,”*** she said. ***“All these industries have more in common than they realise and they can work more efficiently together. Let them cross over.”***

Greet said INEOS Technologies in France was currently starting a four-year European project to find ways for the six global process industries to work better together to save energy, money and resources.

The idea for the €5.1 million EPOS project, €3.7 million of which is being funded by the European Union and €1.4 million by the Swiss government, came about through SPIRE.

***“When the industries got together recently, they thought they had nothing in common, so the mediator asked them to treat it like a speed dating exercise”*** said Greet. ***“Within minutes they realised they could work together. It was like ‘oh, you have those. We need those.’”***

All these platforms, programmes and projects – SPIRE, Horizon 2020 and SusChem – are focused on creating a more sustainable world.

***“We only have so much in terms of resources,”*** said Greet. ***“So we need to challenge our thinking in ways we have never done before.”***

And that’s something that might just be possible, thanks to the latest boost from the European Union’s Horizon 2020 programme.

## INEOS SHARES IN THE WINDFALL

INEOS is no stranger to winning over the European Union.

Working in partnership with others, it has successfully secured millions of investment for projects that have helped to improve energy efficiency, stop resources being wasted and cut emissions.

INEOS O&P (Köln), INEOS Oxide in Belgium, INEOS Paraform (a part of INEOS Enterprises) in Germany, INEOS Chlor in the UK and recently INEOS Technologies in France have all been pro-active.

***“All of these projects have either been successfully completed or are ongoing,”*** said Greet Van Eetvelde, manager of Cleantech Initiatives.

INEOS Paraform won EU funding to implement a novel purification technique to treat waste air in the manufacturing process of paraformaldehyde.

The plant, which has been producing chemicals at its site in Mainz, Germany, since 1856, needed to dramatically improve its emissions.

***“At the time no feasible technology existed to improve the situation so the plant had been running with an exemption permit”*** said project manager Horst Schmolt.

INEOS carried out tests in a laboratory and a pilot plant showed that emission levels could be considerably reduced by setting up a plasma catalytic waste air treatment module on a large scale.

***“It was something no one in our type of industry had ever tried before,”*** said Horst. ***“But it worked.”***

Meanwhile, INEOS Chlor in the UK helped to secure investment towards developing a new computer system to help companies run their businesses more efficiently, and INEOS Oxide in Belgium worked with representatives from 17 companies from France, Germany, Spain, Norway, Denmark, Russia, Italy and the UK to secure investment to develop a new way of producing liquid fuels from natural gas.

Dr Stefan Krämer, site energy manager at INEOS O&P (Köln), is currently involved in two projects which have received a total of €5.5 million in funding from the EU.

One will be creating a system that allows the operators of large integrated chemical and petrochemical plants to manage resources and energy more efficiently without affecting production. That system is now being developed so that it can be used by other industries with similar production set-ups.

The other seeks to improve the reliability and efficiency of large interconnected systems, such as electric power systems, air traffic control towers, railway stations and large industrial production plants.

The latest to benefit is INEOS Technologies in France which is starting a four-year European project to find ways for the six global process industries to work better together to save energy, money and resources.

Greet said it was vital that all the key industries – chemical, steel, cement, minerals, life sciences and engineering – found ways to share waste streams and resources.

***“All these industries have more in common than they realise and they can work more efficiently together,”*** she said.



# SAFE AND SOUND

## INEOS' APPROACH TO SAFETY PROTECTS ITS EMPLOYEES, CUSTOMERS, SUPPLIERS AND THOSE WHO LIVE AND WORK CLOSE TO ITS FACILITIES – FROM HARM

**It's easy to get bogged down in statistics and procedures when companies talk about safety. But that's the last thing INEOS wants, as Simon Laker explains**

THOMAS Edison once famously said: Hell, there are no rules here, we are trying to accomplish something.

As a company, INEOS rather likes that concept. It thrives on being different and applauds its staff for taking calculated risks.

But when it comes to safety, the rules cannot be broken. They are there to protect people – both inside and outside the business – from harm.

***"No one should ever go home from INEOS with any injury, let alone a life-changing injury, or worse still, not go home at all,"*** said Simon Laker, INEOS Group Operations Director who is based at Lyndhurst in the UK.

Its rules about safety are there, not only to be understood, but championed by all.

***"Sometimes it is easy to lose sight of the spirit behind what we are trying to do,"*** said Simon. ***"We are not machines. Decisions have to be made by people and getting those decisions right every day is how we stop injuries and major process incidents."***

Although each business in INEOS is responsible for its own safety programmes, INEOS also adopts a group-wide approach to safety because similar incidents can happen at any one of its sites and the sharing of best practice is critical.

***"We don't rely on luck,"*** says Simon. ***"Safety is the conscious management of risk. Ensuring people do not get hurt relies on the assessment we make of risk and the decisions we take to eliminate or mitigate that risk. If we get those wrong, someone gets hurt."***

INEOS' most frequent and serious incidents have

led to a number of safety initiatives across the Group, which employs more than 17,000 people at 65 sites in 16 countries.

In 2012 it introduced the 20 Safety Principles after analysing eight years of incidents in INEOS alongside significant events outside the company, including the explosion at the Buncefield oil depot in the UK in December 2005 in which 43 people were injured when thousands of gallons of petrol overflowed a storage tank and caught fire.

INEOS' root causes – and solutions – to ensure an incident doesn't happen again are enshrined in those 20 principles, and every three years all sites are audited to ensure that what needs to be done, is done.

***"We have reviewed all the serious incidents since the 20 principles were introduced and have found that the incidents occurred***

***because one or more of the principles were compromised,"*** said Simon. ***"From that we believe that if everyone implemented and adhered to the 20 principles we would eliminate all people and process incidents at INEOS."***

Best practice is shared through its INEOS' group guidance notes. It currently produces 16 notes that cover everything from managing corrosion to identifying safety critical alarms, and it is in the process of producing three more.

***"All three have been driven by repeat incidents concerning these critical activities,"*** said Simon.

Together the guidance notes and safety principles act as a powerful tool to help keep staff focused on what needs to be done to keep everyone safe from harm. And it's a continual process of training, feedback and auditing.

But accidents do still happen.

***"We aren't yet perfect,"*** said Simon. ***"But we must strive to be."***

Specific holes – areas where INEOS noticed that accidents were still occurring – have now been plugged with seven life-saving rules which were introduced due to the potential for serious injury in these areas.

Anyone who flouts one of those rules, which cover everything from working at height to drinking alcohol at work, faces instant dismissal.

Over the past six years INEOS' safety record has improved threefold. But despite a reduction of OSHA injury frequency from 1.13 to 0.4, Simon says that lessons are always there to be learned.

Group SHE alerts – simple, one page descriptions of any accident and what actions have been taken to avoid it happening again – are widely circulated.

So too are HIPOs – high potential incident alerts – where something could have gone wrong, but didn't. They are equally as important and shared across the Group.

The chemical industry will always be, by its very nature, a potentially hazardous place to work but by following the rules, accidents can be avoided.

And Simon remains positive about the future.

So can INEOS stop all injuries?

***"Absolutely,"*** he says. ***"If a work activity is fully risk assessed by knowledgeable people, if those risks are mitigated and a conscious decision is made to accept any residual risk as tolerable, then nothing should ever go wrong."***

He said unfortunately staff did not have an infinite amount of time to risk assess, so a conscious decision had to be made to stop looking once an acceptable level of risk had been reached.

***"When this is an unconscious decision, it's just luck as to whether a significant risk is left or not,"*** he said. ***"If we have missed something then we rely on a robust 'near-miss' reporting system to find the problem before it results in an incident. This is why 'near-miss' reporting is so important to keeping people safe. We don't rely on luck."***

And can INEOS prevent all process incidents?

***"Absolutely,"*** says Simon, ***"if we have well-trained people running well-designed, inspected and maintained plants, within known operating envelopes. If any of these are not correct, either through lack of knowledge or a wrong decision, then at some point a process incident will occur which usually means a release and from then it's just luck how bad it gets. If we find we are outside our sphere of knowledge, then we have to stop, make the situation safe and involve people who do have the knowledge. We do not rely on luck."***



# CAN WE REALLY DECARBONISE THE ECONOMY?



## As world leaders met in Paris to discuss steps to reduce greenhouse gas emissions, INCH asked whether it is possible to decarbonise energy

LET us put aside the question of whether carbon emissions need to be reduced. If we assume that we do have to take action, there are cheap policies and expensive policies. Our (UK) government has chosen the expensive approach. By trying to pick technological winners and subsidising huge programmes, such as the proposed nuclear power station, the government is taking action that will lead to higher bills and lower reductions in emissions. Instead, we should have simple, straightforward measures aimed at pricing carbon emissions and then allow businesses, households and energy companies to decide how best to reduce emissions.

**Professor Philip Booth, Editorial and Programme Director at the Institute of Economic Affairs in London, UK**

If we are to bring about decarbonisation, then we need to reform global economic governance. To do this, we need three things. Firstly, we need a global carbon price. Setting higher prices for goods and services with a large carbon footprint provides a greater incentive to reduce emissions. Rules for international trade and investment should also take account of climate change. Despite having made little progress in recent years, the World Trade Organisation remains a forum in which global regulations are designed and implemented. Concluding the Doha Round would allow more green issues to be added to the agenda going forward. Finally, if long-term, low-carbon investments are to be encouraged, it is necessary to reform the international financial system in such a way that commercial banks invest more in low-carbon projects. Current regulations leave little to no scope for doing so. Setting our sights high with regard to the Paris agreement is only the first step. But this will not be enough, as it will take many more actors to step up to the plate if we are to reform global economic governance. We need to keep moving forward after Paris.

**The German Development Institute**

DYNAMIC change is happening in energy supply, but the change needs to happen faster. There are no major economic or technical barriers to moving towards 100% renewable energy by 2050. The renewable energy sector is delivering change, but political action is needed to ensure it happens in time. It is up to political and business leaders to steer industry, influence consumers and stimulate markets towards renewable energy and energy efficiency.

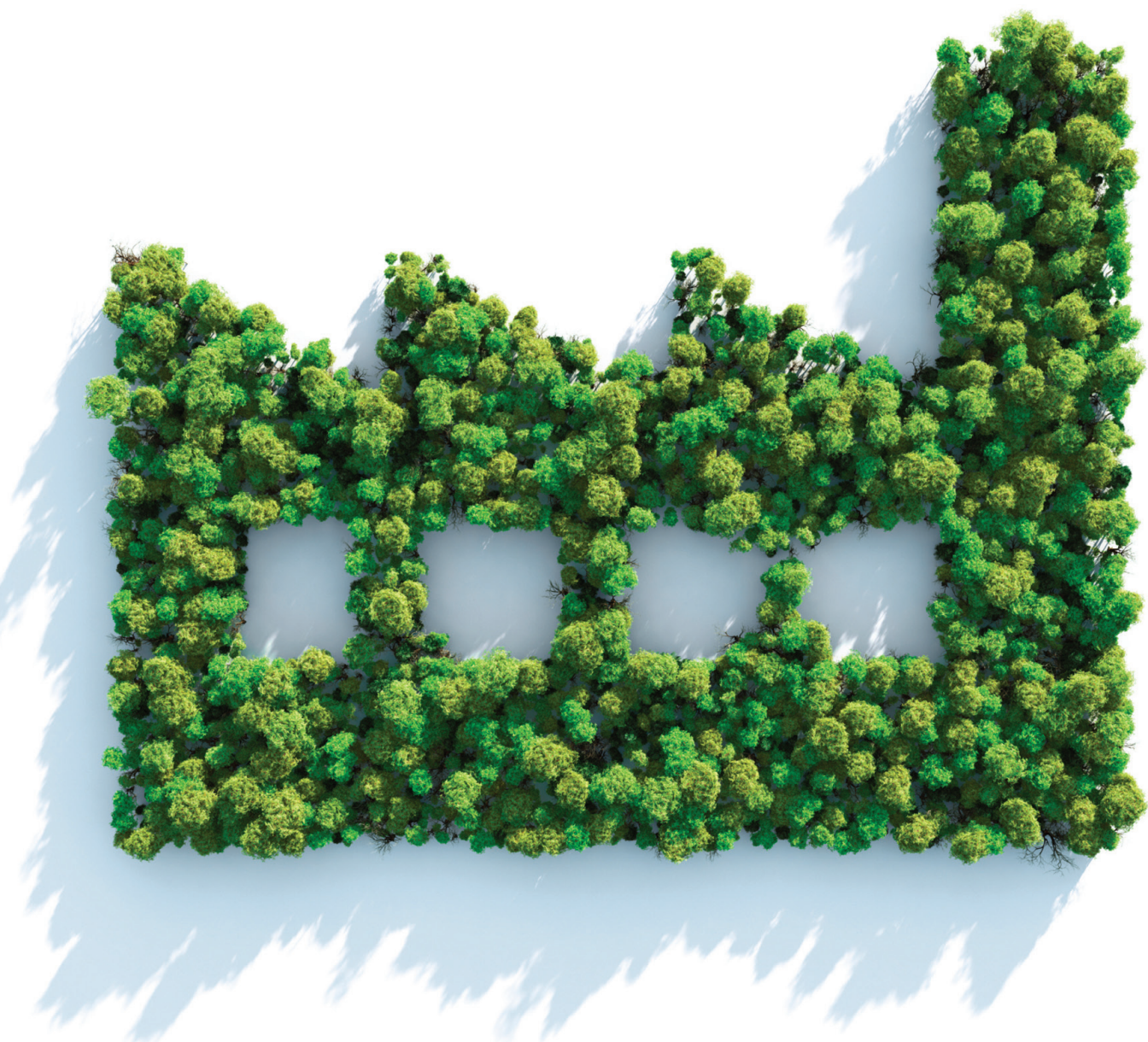
**Greenpeace**

CLIMATE change is a big problem, and it needs big technologies. New nuclear, new gas and, if costs, come down, new offshore wind will all help us meet the challenge of decarbonisation. But it is important to pause and answer this question: 'what are we decarbonising for?' Climate action is about our future economic security. But climate change is a global problem, not a local one. Action by one state will not solve the problem. It's what we do together that counts. But it will not be solved by a group of over-tired politicians and negotiators in a conference centre. It will take action by businesses, civil society, cities, regions and countries. Let's be honest with ourselves, though, we don't have all the answers to decarbonisation today. We must develop technologies that are both cheap and green. We need to work towards a market where success is driven by your ability to compete in a market. Not by your ability to lobby Government.

**Amber Rudd, the UK Government's Secretary of State for Energy and Climate Change**

THE need to reduce global GHG emissions is not news, but there is an increasing urgency of what we have known for decades: we must transition to a low-carbon, green and resource-efficient global economy to mitigate the risk of dangerous climate change. It is apparent, however, that a key player in this transition has been largely overlooked: the financial sector. It has a pivotal role to play in reducing global emissions of greenhouse gases at the required pace and scale, because first, and perhaps most obviously, that's where the money is. Large amounts of capital are needed for investment in the rapid development of low-carbon energy infrastructure, particularly in developing and emerging economies. The potential role that institutional investors can play in addressing climate change, however, goes far beyond the issue of infrastructure finance. Institutional investors are more than infrastructure financiers: they are owners and creditors of large segments of the global economy. And quite simply, if institutional investors do not systematically reallocate capital from high-carbon to low-carbon investments, particularly in corporate equity and debt, a transition to a low-carbon economy will be virtually impossible.

**Achim Steiner, executive director of UNEP and under-secretary general of the UN**



# IN THE HEADLINES

NEWS FROM  
AROUND INEOS

## Runaway winners

INEOS' GO Run For Fun charity found itself in the running for two Cannes film awards in October – and won both.

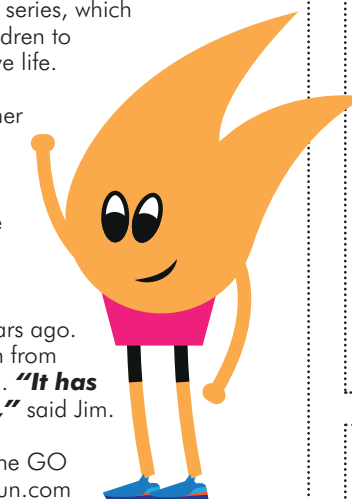
It was honoured at the Cannes Corporate Media & TV Awards, one of the world's most important festivals in the corporate audiovisual industry, for its Dart TV educational cartoon series.

GO Run For Fun commissioned the series, which is free to schools, to encourage children to embrace a healthier and more active life.

Chairman Jim Ratcliffe, a keen runner himself who founded the charity, joined the Dart TV production team from London-based Media Zoo in Palm Beach, Cannes, to pick up the awards for best CSR programme and best Webisode programme.

GO Run For Fun was set up two years ago. Since then almost 100,000 children from all over the world have got involved. **"It has exceeded all my expectations,"** said Jim.

All the Dart films can be found on the GO Run For Fun website [www.gorunforfun.com](http://www.gorunforfun.com)



## INEOS opens new UK office

INEOS is opening a new office in London to house its growing UK businesses.

The offices will provide a home for a number of INEOS UK businesses, including its oil and gas ventures, its shipping business and its trading business.

The building will also be home to the joint venture INOVYN, which controls 14 manufacturing sites across Europe including the massive Runcorn facility in Cheshire.

**"It makes perfect sense,"** said Jim Ratcliffe, INEOS chairman and founder. **"Although INEOS has business interests across the world, the UK oil and gas business is a key focus for us at the moment."**

Rolle in Switzerland will remain the headquarters for INEOS Group and a number of well-established INEOS businesses. INEOS will now formally refer to itself as an Anglo/Swiss company.

## INEOS to restart US reactor

INEOS is to restart a reactor which it temporarily shut down three years ago amid difficult market conditions.

Although conditions are still tough, INEOS Nitriles is buoyed by the growing global demand for acrylonitrile – the key ingredient in both acrylic fibre and carbon fibre – and its access to cheap US raw materials.

INEOS Nitriles is the world's largest producer of acrylonitrile and acetonitrile. Its plant in Green Lake, Texas, is one of the largest and most efficient in the world and will soon once again be capable of producing 545,000 tonnes of acrylonitrile every year.

Manufacturers use acrylonitrile to produce synthetic fibres, engineering plastics, carbon fibre, synthetic rubber and water soluble polymers. Those products are then used to make car parts, clothing, construction materials, household appliances, and sports equipment to name a few.



**"The chances are that acrylonitrile touches everyone in some way, every day,"** said Commercial Director Gordon Adams.

There was also some good news for INEOS Nitriles' Seal Sands asset with a promise to invest in the scheduled turnaround next year.

INEOS Nitriles operates four plants worldwide, two in North America, one in Germany and one in the UK. It had halved its production of acrylonitrile at its Green Lake facility in January 2014 due to 'unsustainable margins'.

## Sweet smell of success

INEOS has bought an aromatics business for almost \$63 million.

The deal will see INEOS Phenol take over Axiall Corporation's cumene factory in Pasadena in Texas, America, and transfer its phenol, acetone and alpha-methylstyrene (AMS) business to INEOS Phenol's plant at Mobile in Alabama.

About 43 people currently work at the Pasadena factory which began operating in 1979 and today manufactures 900,000 tons of cumene every year. Cumene is used to make phenol and acetone, both of which are used in a range of everyday products, including plywood, plastics, pharmaceuticals, paints, acrylics and varnishes.

CEO Casier said the acquisition of such good quality, well-placed assets presented INEOS Phenol with an excellent opportunity to further improve its competitiveness.

**"We are already a leading producer of phenol and acetone,"** he said. **"But through selective investments in new assets and new technology, we intend to further develop our business and grow with our customers."**

## INEOS SHARES GOOD NEWS

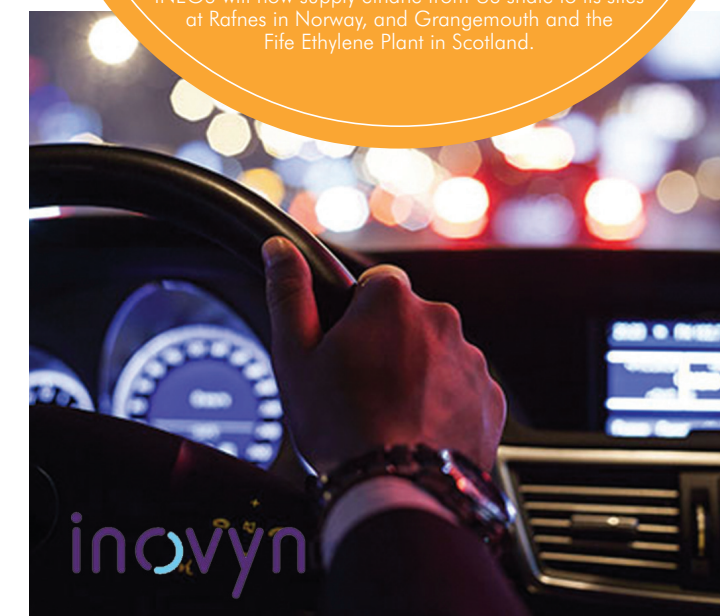
INEOS has agreed to supply a third gas cracker in Europe with the ethane it plans to import from America.

The deal with ExxonMobil Chemical Ltd and Shell Chemicals Europe BV was finalised last month (November).

From mid-2017 INEOS' US shale-derived ethane will be piped from the new import terminal at Grangemouth to the Fife Ethylene Plant at Mossburn.

**"This is a landmark agreement for everyone involved,"** said Gair Tully, Business Director at INEOS O&P UK. **"We know that ethane from US shale gas has transformed US manufacturing and we are now seeing this advantage being shared across Scotland."**

INEOS will now supply ethane from US shale to its sites at Rafnes in Norway, and Grangemouth and the Fife Ethylene Plant in Scotland.



## Merger creates winning combination

INEOS and Solvay have combined their chlorvinyls businesses to give customers a better deal – and keep them at the heart of Europe's chemical industry.

INOVYN is now one of the top three PVC producers in the world.

**"This is now truly a world-scale business, and well placed to respond rapidly to changing European markets,"** said Chris Tane, CEO of INOVYN.

News that the joint venture had received European Commission approval was quickly followed by further announcements in September, which included the suspension of the last remaining mercury cellroom at Runcorn in the UK to meet EU requirements, the planned permanent closure of its PVC production facility in Schkopau in Germany and the proposed major investment in a huge production facility at its Antwerp/Lillo site in Belgium.

Production at Schkopau had been suspended since

December 2014 because its VCM supply contract with DOW had expired, and sadly all attempts to agree a new competitive long-term contract had failed.

In Belgium, though, work had begun on a large-scale plant – using the latest technology – to underpin INOVYN's position as Europe's leading supplier of potassium hydroxide.

INOVYN, whose headquarters are in London, employs 4,300 people at 18 manufacturing sites in eight countries. The business has an annual turnover of more than 3.5 billion Euros.

Every year it manufactures 40 million tons of chemicals which find use in almost every aspect of modern society, keeping people housed, healthy and connected.


As part of the deal, Solvay, which has a strong heritage in the chlorvinyls industry, will exit the joint venture in 2018, leaving INEOS as the sole owner of the business.

## SPREAD THE WORD

If you would like to contribute an article to a future issue of INCH or have a topic that you would like covered, then contact us at [info@inchnews.com](mailto:info@inchnews.com)

All submissions are welcome!





***“Problems can become  
opportunities when the  
right people come together ”***

Robert South, an English churchman