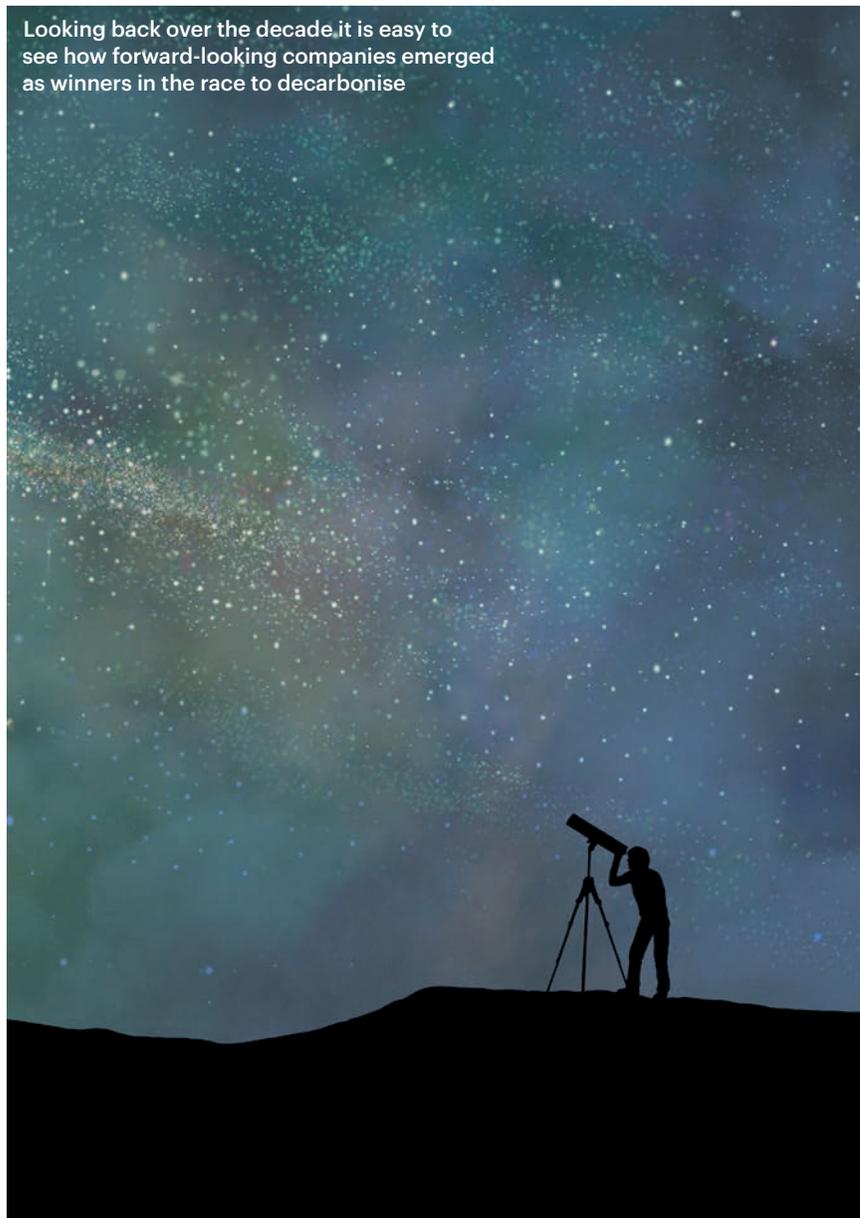


Looking back over the decade it is easy to see how forward-looking companies emerged as winners in the race to decarbonise



A look back from 2030

As it tenaciously pursued a low carbon agenda, by 2030 the chemical industry had acted to grasp transformational opportunities which tackled the climate emergency

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“If we are going to hold the rise in the Earth’s temperature to 1.5 degrees, we must reduce emissions significantly between 2020 and 2030. This is the decade of decision.” That was [John Kerry’s](#) clarion call back in September 2021. So let’s look back from the vantage point of 2030 to see how the chemicals industry responded to his challenge.

The first thing we note is that business models have since been transformed. Inevitably, therefore, Winners and Losers have emerged over the decade. Some companies, sadly, stuck their heads in the sand, refusing to believe that ‘business as usual’ was no longer a viable strategy. But more encouragingly, most companies are still with us today – and are doing better than ever in terms of revenue and profit growth.

The key to the transformation was the need for boards to set, and meet, Net Zero targets. Helpfully, the International Energy Agency, the world’s energy watchdog, had provided a detailed transformation path in [May 2021](#), as the chart shows. It highlighted two critical points for the chemicals industry:

- The Net Zero Emissions (NZE) targets – limiting the rise in global temperature to 1.5°C, and reducing net CO2 emissions to net zero by 2050 – were achievable
- But there was no time to lose, so companies and governments needed to move quickly to frontload their activity

And when they read the detail of the IEA’s Report, they realised that it also contained a ‘sting in the tail’ as far as the chemical industry was concerned. One of the IEA’s key conclusions was that there was no need for any new oil and gas fields to be developed. In other words, the industry’s traditional oil and gas feedstock sources were under major threat. And without feedstocks, there would be no industry.

This realisation created the dividing line between today’s Winners, and the Losers who disappeared along the way. The Winners talked to key customers in the auto sector, and realised adoption of electric vehicles (EVs) was set to accelerate. [VW](#) told them that it was planning for 70% of its 2030 European sales to be EVs. And on the feedstock side, [Shell](#) told them it was planning to “transform its refinery footprint from 13 sites today to six” by 2025, and also aiming to “process 1m tonnes/year of plastic waste”.

Critically, the Winners also heard the [Stellantis CEO](#) (the world’s fourth largest car company), argue in July 2021 that “The transformation period is a wonderful opportunity to reset the clock and start a new race”. And so they started to introduce Challenge Workshops for their key staff, to develop the new business

models and strategies that would be required for success.

This exercise was the foundation for today's successful reinvention of the industry. It effectively repeated the visionary switch that was made in the 1960s from coal to oil and gas feedstocks. This had created the basis for 60 years of major growth. The 2020s have seen a similar switch to use recycled feedstocks as the basis for future growth. This move had three major benefits as it:

- Provided security of supply at a time when the availability of traditional feedstocks was reducing due to the growth of EVs and refinery closures
- Responded in a very positive way to environmental concerns over waste plastic, by ensuring this could now be seen instead as a valuable resource
- Enabled the industry to play its part in the move towards net zero, by ensuring that the carbon contained in its products didn't end up as CO2 emissions

A key move was made by [PlasticsEurope](#) in September 2021, when it called for a mandatory 30% recycling target by 2030 in line with the European Union's 55% target for recycled plastic packaging. Other regions quickly followed suit. This move proved vital in securing plastics' continuing role as a major packaging material, particularly as the industry was able to point to its important role as renewable carbon. As the [Nova Institute](#) had earlier pointed out in a widely-read report for Unilever:

When we look back to 2021, we can therefore feel a sense of justifiable pride in our achievements – not only for ourselves but for society

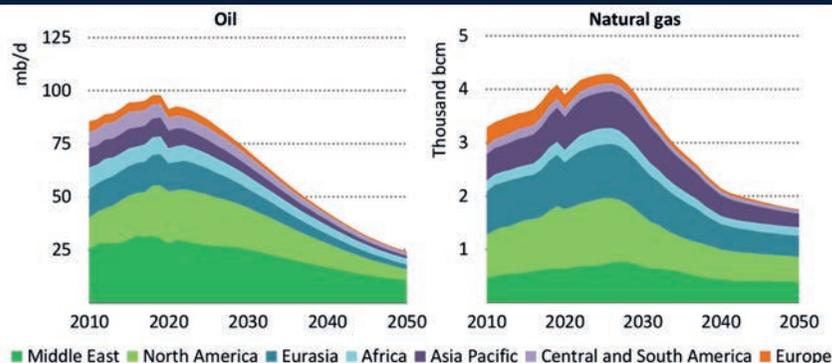
“Contrary to energy, it is not possible to decarbonise chemicals and products. The renewable carbon family is the only pathway to a sustainable future for commonly used materials such as plastics, fibres, surfactants and other materials based on organic chemistry, and the industries that produce them.”

This provided the direction that today's Winners needed. And they turned to the difficult issue of how to move forward in terms of implementation. This led them to the guidance provided in September 2020's [‘Building Back Better’](#) report produced by the World Economic Forum's CEO task force. This had argued that:

“By engaging with value chain partners, governments and start-ups, the chemical industry can build an ecosystem that drives the next wave of innovation.”

In effect, companies began to follow the route taken by the auto industry. It had already realised that the real objective for 2030 was

Oil and natural gas production in the NZE



Source: IEA

not just EV development, as VW [highlighted](#): “The real gamechanger is digitalisation. Electrification, software-defined products, new business models and autonomous driving – these four major forces are driving the future development of vehicles.”

For the chemical industry, the new ecosystem not only included recycling and advanced manufacturing. It involved a whole range of digital, continuous and biotech-enabled technologies that were safer, greener, faster and cheaper than those they replaced. This approach enabled companies to develop viable recycling solutions for the world's major towns and cities, as well as for the poorest and most isolated communities.

We all owe a great debt to the strategy teams who developed these powerful new business models. In recycling, for example, they realised that the business was likely to operate on a distributed manufacturing basis. The combination of the COVID-19 pandemic, and the ensuing supply chain chaos, meant that global supply chains were no longer fit for purpose.

As a result, the world-scale sites of the past were already becoming stranded assets. It also, of course, made no sense in net zero terms to be moving millions of tonnes of waste plastic across countries and regions – and then moving it all back again as finished product.

Instead, the industry had to move beyond its traditional links with converters, OEMs and brand owners. It needed to develop new partnerships with waste and city managers, alongside domestic and industrial consumers, retailers and wholesalers. This collaboration enabled the establishment of today's truly circular economy, where waste plastic is transformed into a valuable resource, and recycled back into the plastic products needed by the local community.

Looking back, it is clear that at this point, the chemical industry's depth of knowledge

and capabilities came into their own. No other industry had the functional expertise necessary to develop the pilot schemes that were required to take the concept forward, and to then ensure that they met their objectives. Investors, both public and private, were delighted that they were taking the lead and were happy to support them with the cash required.

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As we now know, this new expertise also provided an ideal pathway for developing the more service-oriented portfolio that we have today. It enabled companies to move away from simply providing products – valuable though these were – and provide solutions to many of the pressing problems created by the need to move to net zero. Just as in the 1960s, a whole new portfolio was born. And we can now look forward to decades of profitable growth, based on the provision of sustainable, affordable, products and services.

When we look back to 2021, we can therefore feel a sense of justifiable pride in our achievements – not only for ourselves but for society. The world would never have been in a position to meet the net zero targets by 2050 without our involvement.

Our only sadness is that not every company chose to embark on the journey. There was room for all in the new markets we were creating, and we could have moved even faster with their involvement. ■



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