Look for winners and losers in 2021

Chemicals industry leaders must wake up to transformative trends which will shape their markets in 2021 and beyond, as the post-pandemic recovery builds

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"There are decades where nothing happens; and there are weeks where decades happen". Lenin's famous insight was highly relevant to 2020. It was full of such weeks as the coronavirus pandemic became a catalyst for major paradigm shifts in the economy. Of course, some sceptics still expect a quick V-shaped return to 'business as usual', but they have been wrong so far. And their analysis ignores the fact that change is not only inevitable in life – but also creates exciting new opportunities.

Last year clearly brought major changes to our personal and work lives. And not all of these were negative. Few of us have really missed the work commute, for example. And we have all enjoyed the novel experience of breathing fresh air in our cities, free of traffic fumes, and seeing a clear sky. We have also chosen to support local suppliers whenever we can. And the mounting piles of plastic bags from our online shopping have increased our enthusiasm for recycling whenever we can.

Of course, some of these changes may continue to evolve. It is certainly true that cooking has become the new commute for many people, and that lifestyle changes have led to a greater focus on home-life and personal relationships. But while this change suited those well-established in their work and family life, it was not so easy for those just starting out, or thinking of changing direction. Similarly, the job losses in the retail, travel, leisure and other industries have been brutal in their impact, highlighting the need for an inclusive response to the crisis.

Chemicals can drive change

This is where the chemicals industry has a great opportunity, and an enormous responsibility. We touch most people's lives in a multitude of ways every day of the week. And our products have been a great force for good – in 1999, for example, Time magazine chose chlorine and water treatment as one of the most important developments of the last millennium. Plastics have had a similar impact in the decades since my old company, ICI,



Sustainability is becoming the key driver for the chemicals industry globally

sparked their growth with the invention of polyethylene (PE) in 1933.

The key issue is the need to adapt our offerings to the needs of today's new normal. Plastics have proved a fantastic invention, but the value proposition for single-use plastics clearly needs urgent review. Does it really make economic sense to spend \$50/bbl on buying oil, and more dollars on refining the oil and processing it into plastic packaging – only for this packaging to then be thrown away as soon as we get home? A similar question arises when we consider the environmental impact of waste plastic and the marine pollution that it can cause.

Green issues top political agenda

Doing nothing is also not an option. Legislators in the European Union have already adopted an aggressive €750bn Green Recovery plan. And US president-elect Biden has

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"Does it really make economic sense to spend \$50/bbl on oil, process it into plastic packaging – only for this packaging to be thrown away?" announced that green issues and climate change will be top of his agenda, along with the pandemic, once he takes office later this month. So while sceptics may continue to hope for a return to 'business as usual', future Winners in the industry will instead recognise that these challenges have created major new opportunities. Essentially, there are five key questions that we need to address:

■ WHY do we need to do this?

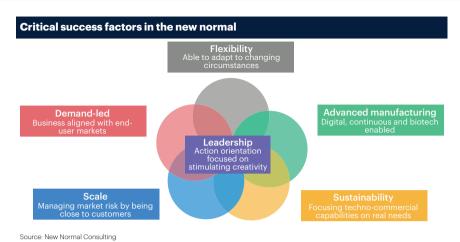
In the case of plastics, the challenge is obvious and championed not only by an increasing number of governments, but also by the brand owners who actually deliver our products to consumers. So there is little doubt that change is on the horizon.

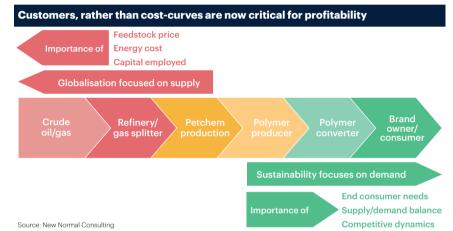
■ WHAT do we need to do?

Innovation is clearly the key focus in areas such as the circular economy and recycling. We need to work in partnership with startups and governments to develop the technical solutions that are required - as highlighted recently by the World Economic Forum's chemicals Industry Action Group, where I acted as an adviser on the "building back better" initiative.

■ WHEN does this have to be done?

Time is not on our side, and we need to turbo-charge our development processes. The fast-track development of the coronavirus vaccines by our pharma industry col-





leagues provides an important role model for reducing time-to-market. The need is to operate key processes in parallel wherever possible, rather than in sequence, to avoid missing the boat.

■ HOW are we going to do this?

Paradigm shifts call for new ways of working. And today's need is to develop more service-based business models, that will enable us to generate future revenue and profits from the solutions we provide. This requires a change in perspective from our current product focus, as the value chain chart describes.

■ WHO is going to be involved?

The new normal is a transformational rather than an evolutionary project. And time is short

Five main paradigm shifts transforming chemicals

- Changing demand patterns
- Reshoring of supply chains
- Energy abundance
- Circular economy
- Advanced manufacturing

if we are going to reposition our businesses to access the opportunities it creates. So the critical first step lies with our industry leaders. They need to build on the work of the WEF Action Group, and spell out who needs to do what, by when, to employees, supply chain partners - and, of course, ensure key investors understand the new direction.

The chart also emphasises the shift in focus that is required for success in the new normal, given that sustainability rather than globalisation is becoming the key driver for our business. It takes us back to the customer focus of the industry's early days in the 1960s, which created the base for its remarkable growth. Our transformation to focus on feedstock supply was absolutely right during the Baby Boomer-led Super Cycle, but we now have to return to our original focus on customer needs.

Dialogue with our current feedstock suppliers will also be mission-critical, as discussed here in October (ICB 9-15 October 2020). They are going through a similar transformation as the world comes to the end of the Oil Age. Refinery closures are now accelerating around the world, as the International Energy Agency has reported, with many companies now pivoting to renewables. Shell plans to op-

erate only six major sites in the future, compared with 19 today and 54 in 2005.

The timing of these closures will clearly impact the availability of naphtha and other chemical feedstocks, emphasising the need for speed in the transition to recycled feedstocks. They also remind us that the shift from internal combustion engines (ICEs) to electric vehicles (EVs) has major implications for our own sales to the auto industry – currently our largest single customer segment. It creates a major opportunity in fields such as batteries and light-weighting. But the need for many of our current products will disappear, as EVs have just 20 moving parts compared to 2000 in ICEs.

Five main paradigm shifts

The five main paradigm shifts of changing demand patterns, the reshoring of supply chains, energy abundance, the circular economy and advanced manufacturing naturally also lead to a major change in the Critical Success Factors for our industry, as the chart shows. Today's focus on world-scale plants will likely be replaced by a switch to local supply. It makes little sense from either an economic or sustainability perspective to be transporting waste plastics for hundreds of kilometres for processing. Similarly, advanced manufacturing will become critical to success in downstream industries, based on modern digital, continuous and bio-enabled technology.

The problem with change on the scale created by these paradigm shifts that it risks creating winners and losers. Understandably, many people and companies hate the idea of having to leave the comfort zone of 'business as usual', where tomorrow is likely to be much the same as yesterday. And the idea of embarking on a journey where the end point is unknown fills them with horror. As a result, leadership skills will be essential at all levels of the organisation in order to stimulate the creativity and action orientation required for success.

Our industry now has a game-changing opportunity as the world moves into the new normal. Importantly, we come to it from a position of strength created by our incredible growth since the 1960s. And as a result, we already employ thousands of the skilled technical and commercial experts who will be needed to develop our business portfolios for the new normal market. Innovation is hard to achieve, but our past experience gives every reason to believe that the 2020s will see us achieve a second highly successful transformation.



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