

Base Oils 2021 **Community Report**



At the beginning of 2020 we released the first Base Oils Community Report, which sought to provide a platform for discussion, debate and analysis of the key challenges facing the industry. Since then, the market and the challenges it is facing have changed dramatically, driven principally by the unprecedented disruption resulting from the COVID-19 virus.

To find out where industry leaders are focussing their efforts in 2021 and beyond, ICIS again decided to see what you, the community, see as the most pressing issues in the industry. We surveyed over 200 decision makers from across the globe to see what the biggest market disruptors will be in 2021. These responses were collated and analysed by our experts here at ICIS, as well as the leading editors for Lubes'n'Greases Magazine to give you unprecedented insight into what you can expect in 2021.

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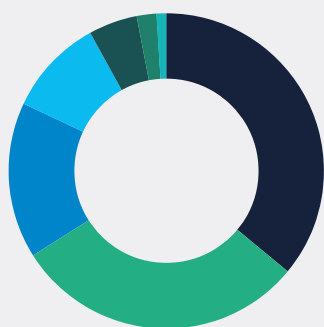
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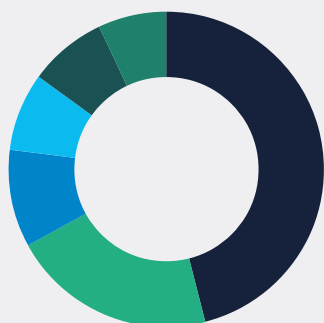


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Responses by Region

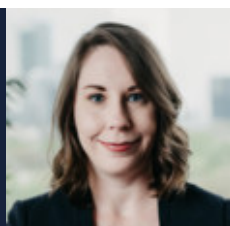
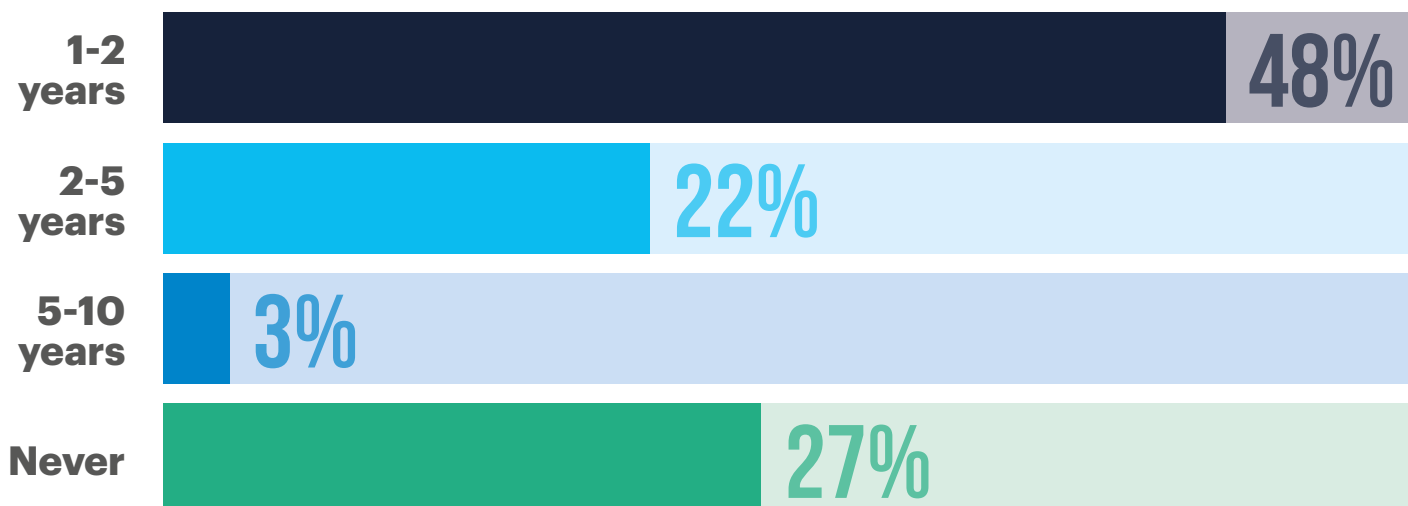
North America.....	35%
Europe	30%
Asia	16%
South America	10%
Africa.....	5%
Middle East.....	2%
Australasia	1%



Respondent Job Level

Manager.....	40%
Director.....	18%
CEO	7%
Vice President	5%
President.....	5%
Owner.....	4%

When will demand for Group I return to pre COVID-19 levels?



“It remains true that Group I will decline in use for personal transportation applications, which is likely the reason that 27% of respondents think Group I demand will never return.”

COVID-19 had a massive impact on lubricant demand that most market players agree will take years to recover from. It is not surprising that nearly half of respondents said it would take one to two years, while another 22% said it would take up to five years.

There is no doubt that lubricant demand dropped amid global economic uncertainty caused by the pandemic. Ongoing virus spread continues to hit many countries hard in early 2021, limiting manpower for manufacturers, impeding travel, and generally disrupting the economy. While a vaccine has been approved, the virus is likely to prevent a return to normalcy until spread is controlled.

Interestingly though, global supply shortages have masked the drop in demand. This has been a striking development considering the oversupply that existed before the pandemic amid relatively flat demand growth.

Before the pandemic, there were concerns about overcapacity and potential rationalisation, which would most likely affect Group I refiners as passenger car motor oil demand trends move toward Group II and III and their improved performance characteristics.

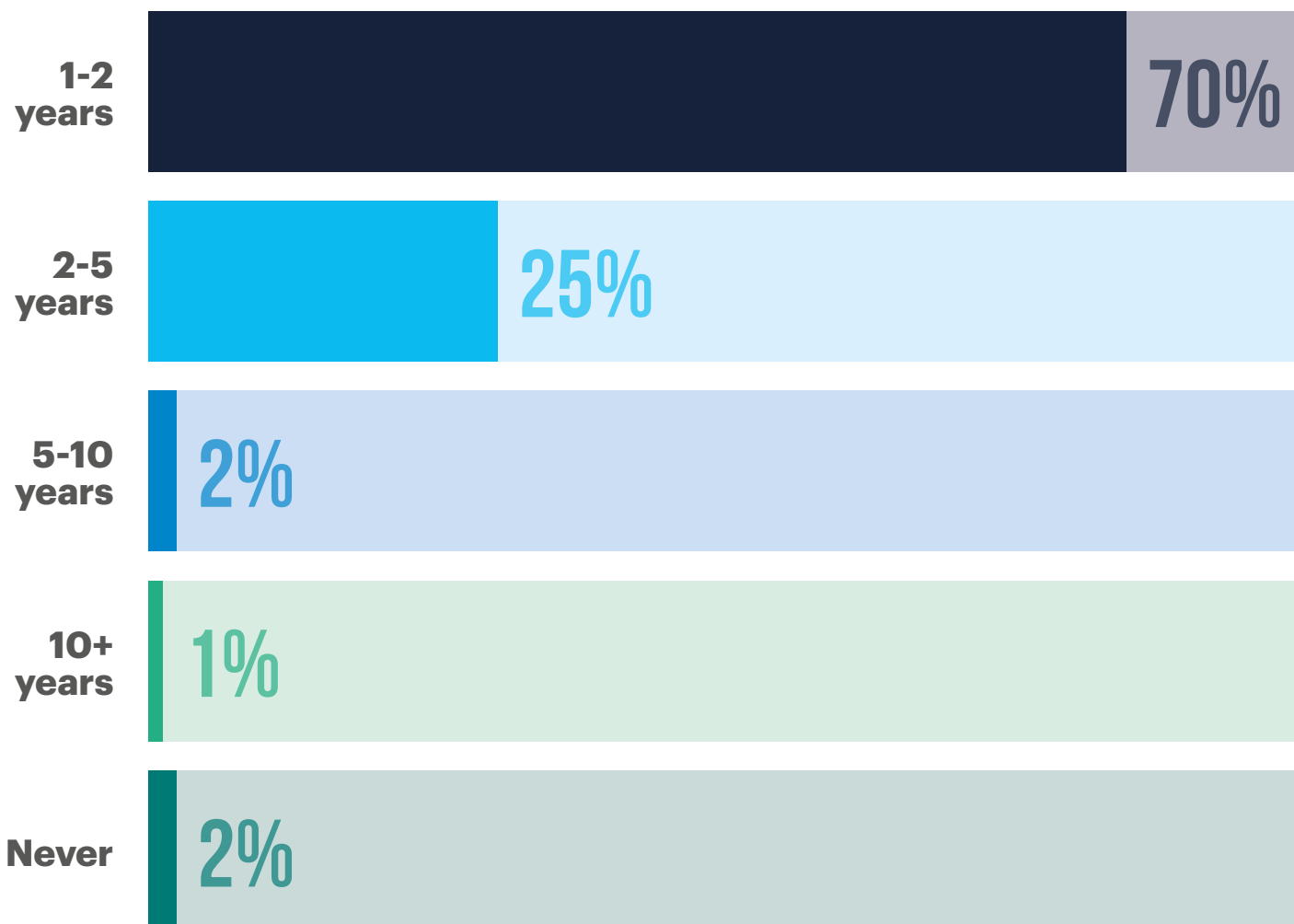
It remains true that Group I will decline in use for personal transportation applications, which is likely the reason that 27% of respondents think Group I demand will never return.

However, Group I will still be preferred for specific industrial, marine and rail applications and for some metalworking, grease and process oil applications. This is likely why the majority see a recovery over time.

At the moment though, Group I (along with Groups II and III) is globally short, especially heavy grades and brightstock. Group II buyers are turning back toward Group I in a temporary demand uptick as they search for material. Tight supply is due to weak fuels demand, which has caused refiners to cut crude runs, limiting feedstock for base oil units. This will continue for as long as the pandemic dampens fuels demand.

Group I will still face the threat of rationalisation—which is even greater now given how hard the pandemic has hit the refining industry. The refiners with the best chance of survival are those with proximity to demand centers and those with a strong wax business.

When will demand for Groups II and III return to pre COVID-19 levels?



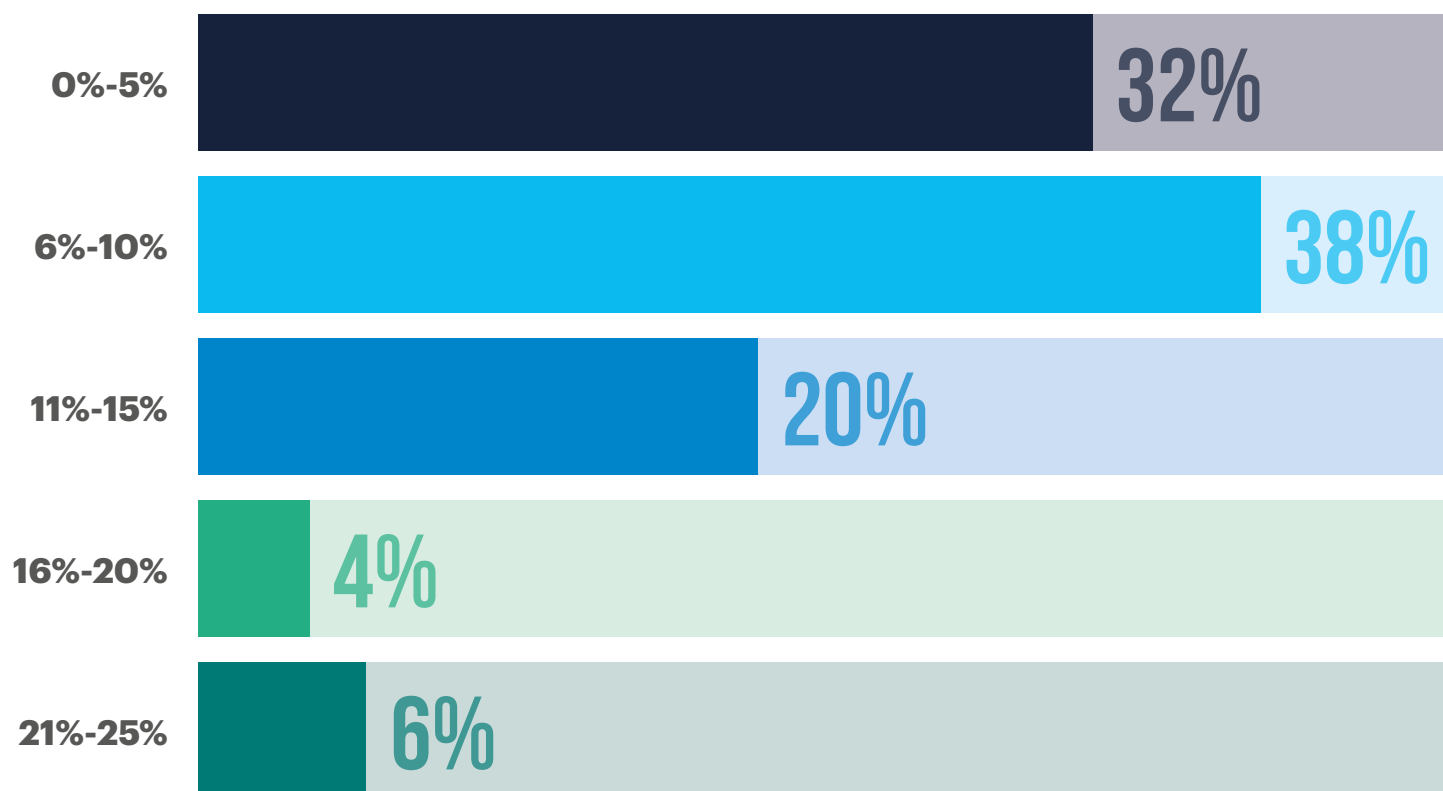
“Rapid expansion in Group II and III capacities in recent years is also likely to result in supply-led substitution whereby Group I users may switch to using more Group II and III”

Respondents are clearly optimistic that demand will recover in 1-2 years, with 96% of combined responses confident for demand to recover within 5 years.

The results come as no surprise as market players are hopeful that overall demand for the key downstream lubricants sector will pick up in H2 2021, along with the roll-out of the coronavirus vaccine globally, as automobile usage and sales are expected to gradually return to normalcy.

Group II and III base oils find key applications in automobile engine oil. Rapid expansion in Group II and III capacities in recent years is also likely to result in supply-led substitution, whereby Group I users may switch to using more Group II and III.

What growth in market share do you foresee for Groups IV and V in the next five years?



“What these survey results confirm is an industry-wide confidence in Group IV and V growth, not just in these markets, but globally.”

Without exception, all respondents surveyed see growth on the cards. This fits with the rise of higher specification lubricants and the changing vehicle fleet in the automotive market.

While there was a high range in the size of this growth, with respondents varying from 1% up to 25%. The vast majority, 70% of respondents, saw the growth as between 0-10%, with 38% of the total suggesting between 6-10% growth was expected. The average works out to a little over 9% growth in the next five years.

Given the growth of Group IV capacity on the cards in the US and existing plants in Texas, US and Belgium, and Europe's drive towards higher specifications for lubricants, we might expect US and European markets to be focused on this growth. What these survey results confirm is an industry-wide confidence in Group IV and V growth, not just in these markets, but globally.

It is interesting the bullishness of these figures, when one factors in the current challenges for the naphthenic section of Group V (which makes up most of the volume in Group V), due to the decline and sanctions against Venezuela and its links to a host of naphthenic base oil refineries, some of which have seen closures, idling or very low utilisation in recent years. However, perhaps in the mind of respondents the desire for PAOs will be very strong, with the improved growth rates for electric vehicles, driven out of the response to the world to the COVID-19 pandemic and the desire for the recovery to be a “green” recovery.

Will COVID-19 delay the growth of EVs, or bring it forward?



“Far from being a dampener, lockdowns and giveaway crude prices couldn’t stop the EV wave.”

The COVID-19 pandemic swung an economic axe through every sector the world over. None was spared, and certainly not the automotive industry.

When asked about the future of electric vehicle sales, respondents to this question of the Base Oils 2021 Community Report survey made a three-way tie between the pandemic delaying the transition to e-mobility, it having no effect and bringing it forward. All three positions are understandable.

The naysayers who thought it would delay sensibly surmised that everything else was in the weeds, so why not EV sales, too? Indeed, in the first half of 2020, the figures looked bad for carmakers. Purchasing power weakened, economies fell into recession, deliveries couldn’t be made.

Those who saw no effect perhaps reserved judgment until more data becomes available. They likely thought the gentle upward trend of 2019, when registrations of plug-in cars rose to 2.2 million from almost 2.1 million in 2018, would continue into 2020 and beyond.

The third group of optimists thought the transition would come quicker and that the pandemic could even be a positive. Not only did price parity get closer and battery range extend further, but also incentives were prolonged and the market in the West was buzzing with talk of new models. Established automakers pushed on with electrification plans, governments announced bans for internal combustion engine vehicles and charging infrastructure coverage spread wider.

2020 ended up being a record year for global EV registrations. Tesla, for one, delivered almost half a million units, up 37% from 2019, and announced a \$25,000 car was on the cards.

After an abysmal start, sales were solid by June. September saw things heat up, and global monthly registrations pushed past 300,000 for the first time. October was even better, up 127% year-on-year. Year-end estimates put sales cruising toward 3 million.

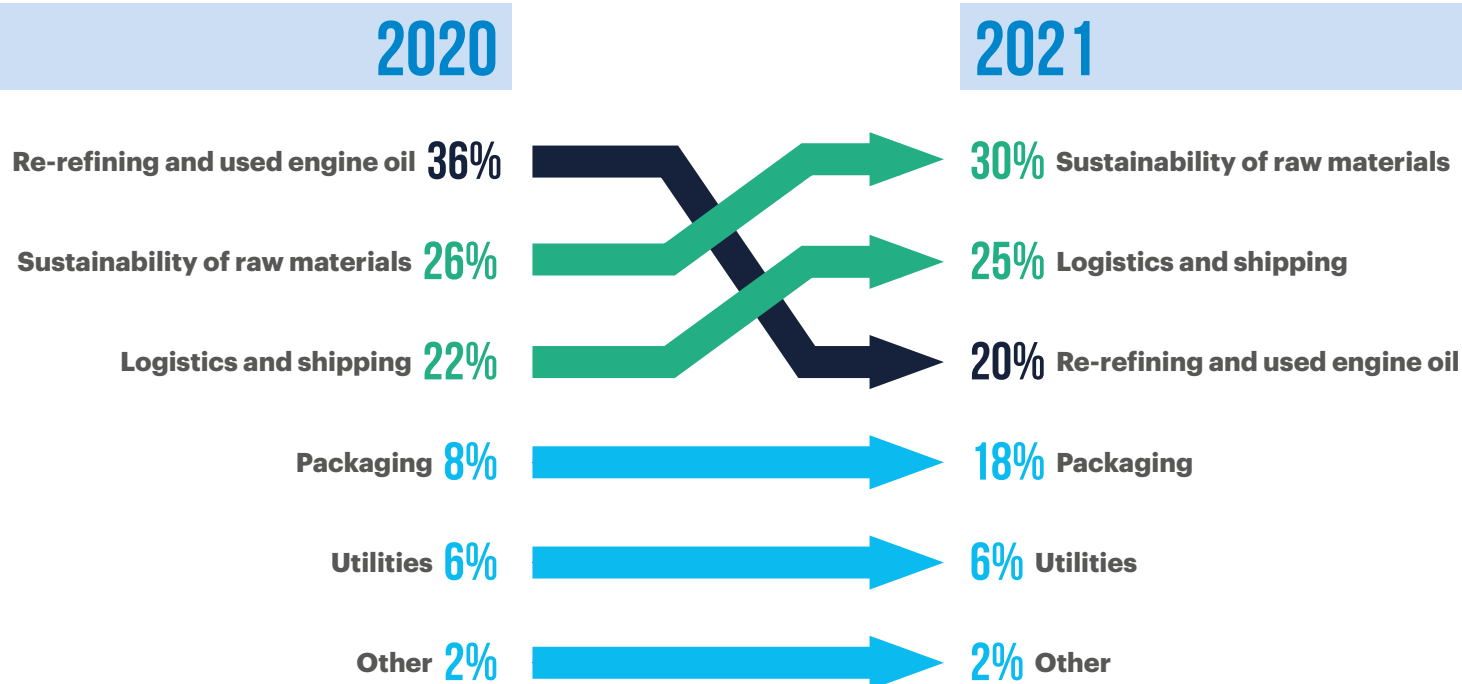
In Europe, plug-ins and hybrids outsold diesel cars for the first time ever. In the United States, new vehicle sales fell by almost 15%, but battery EVs rose by nearly 10%.

China also experienced a slump in new vehicle sales at the end of 2019, but EV registrations climbed in 2020 as people bought them to avoid public transport.

ICE vehicle sales around the world fell by double digits and stayed low throughout the year. Although in absolute numbers ICE vehicles outsold EVs, their electric counterparts gained more and more market share around the world. In Norway, 54% of new registrations were BEVs in 2020. Some put that figure at 100% in as little as five years.

Far from being a dampener, lockdowns and giveaway crude prices couldn’t stop the EV wave.

Over the next 18 months, what will sustainability initiatives focus on across the base oils and finished lubricants value chain?



“A number of respondents also raised the economic impact of these sustainability changes, including the burning question, how will the value of this enhanced sustainability be reflected in the price?”

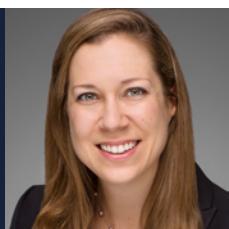
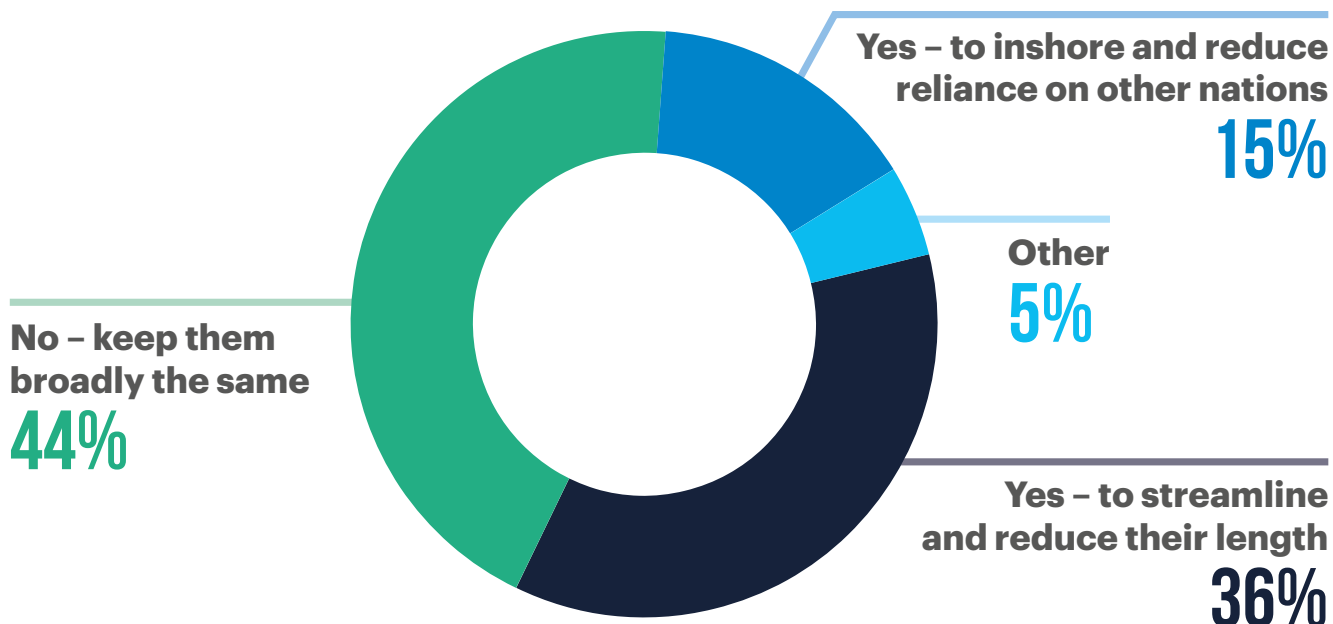
Last years clear focus point of sustainability, re-refining and used engine oils, has dropped back to third place this year, with both sustainability of raw materials and logistics and shipping leapfrogging into 1st and 2nd place, respectively. Has this change in mindset been bought about by COVID-19 and the focus on a green recovery, or a broadening of the understanding of what sustainability means?

While re-refining re uses the finite materials available globally and minimises the requirement of virgin hydrocarbon sourced material, it ignores the elephant in the room that the original material was still hydrocarbon sourced. However, in combination with sourcing of sustainable feeds (as we are seeing growing in the fuels markets) we start to obtain a more holistic approach to the overall minimisation of the environmental footprint from the industry.

In addition to this, there is greater recognition of supply chains, and while still in fourth place, Packaging, which has seen the largest growth as an area of focus by respondents, that every step in the process must be sustainable. Is this demonstrating a new level of maturity in the industry, or does it reflect not only the desire, but demand from consumers around sustainability of the products they buy and use. I would suggest both.

A number of respondents also raised the economic impact of these sustainability changes, including the burning question, how will the value of this enhanced sustainability be reflected in the price?

Will you adjust your supply chains in response to the disruption caused by COVID-19?



“What is surprising is that nearly 44% will keep their supply chains broadly the same. One factor may be that cutting out foreign suppliers could mean limiting the number of potential sources or eliminating a preferred supplier.”

This has been a big topic of discussion since COVID-19 was declared a pandemic in early spring. The global lubricants industry suddenly found its supply chains tangled or completely cut off by lockdowns, health & safety precautions, export restrictions and border closings.

For example, a government-mandated manufacturing halt in India cut off 95% of United States grease producers' supply of an essential castor oil derivative. While shipments resumed about a month later, the incident flagged a major weak point in the supply chain.

More than half of survey respondents indicated that they plan to make some changes to their supply chains. The greatest number said they will streamline or shorten their supply chains, which could bring benefits through reduced complexity.

Others will focus on bringing in more domestic supply, reducing the impact of circumstances in nations beyond their influence. On the other hand, several respondents specifically mentioned diversifying their suppliers, allowing easier access to alternatives if a link in the supply chain is broken.

One respondent will seek greater flexibility, and another intends to re-examine the balance of contract and spot purchases, with contract supply generally being more secure.

What is surprising is that nearly 44% will keep their supply chains broadly the same. One factor may be that cutting out foreign suppliers could mean limiting the number of potential sources or eliminating a preferred supplier, especially where choices are slim. While one respondent pointed to incentives for keeping that company's existing supply chain in place, many businesses may have judged the difficulty or cost of changing suppliers to be greater than the risk posed by future disruptions.

The bottom line is that procurement can be challenging, even without new parameters.

To what extent has IMO 2020 impacted your organisation?

**Significant disruption
and/or increase in cost**

14%

**Limited disruption
and/or increase in cost**

41%

**No significant
disruption and/or
increase in cost**

43%

Other

2%



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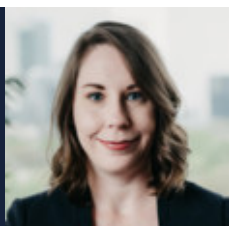
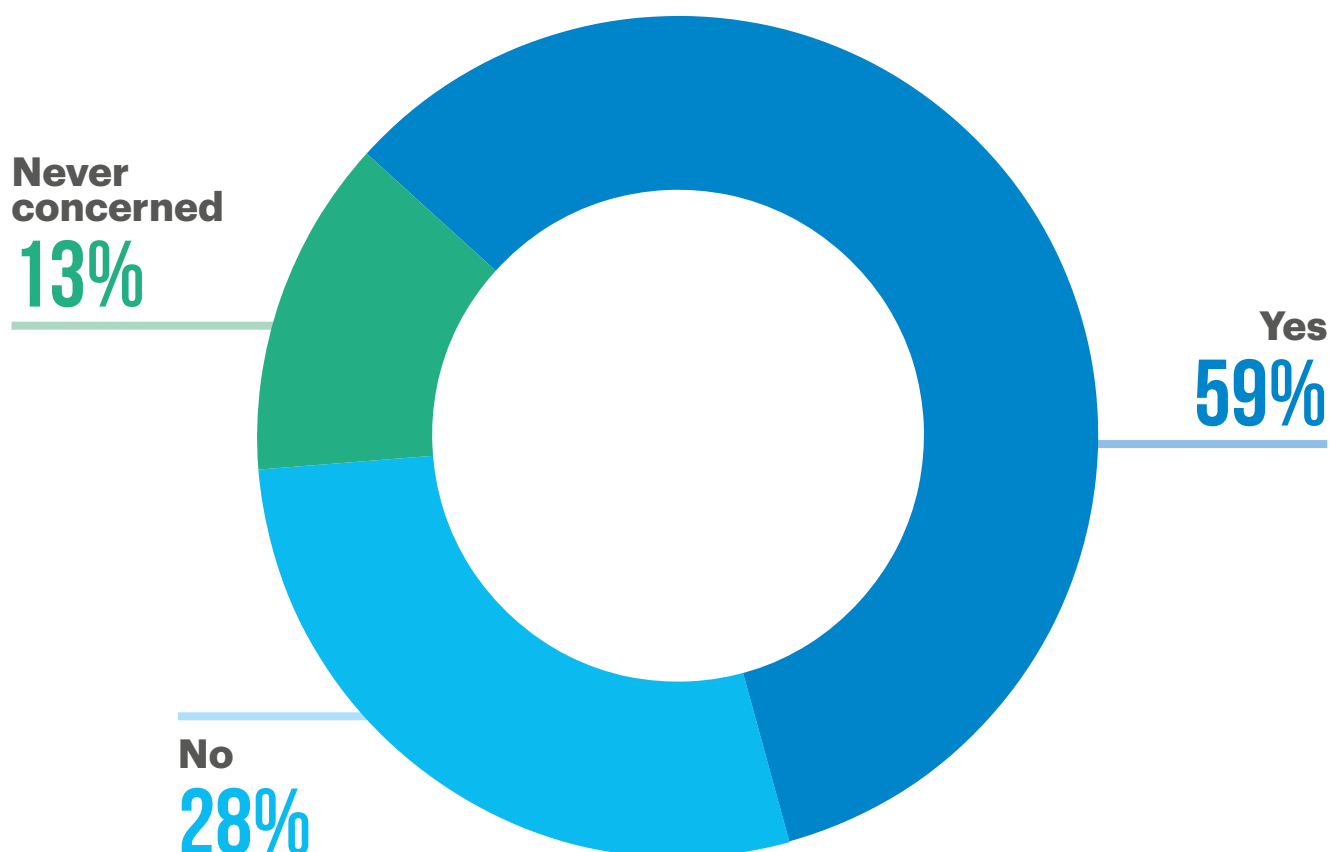
IMO 2020 was the hot topic of 2019 before its implementation on 1 January 2020. However, talks of IMO 2020 took a back seat with the unexpected onset of COVID-19 which created havoc in the industry.

Only 14% of respondents felt that there has been a significant disruption and/or increase in cost, while a combined 84% of respondents replied limited to no disruption and/or increase in cost. The results are far from what one would expect from the concerns expressed by market players in 2019.

Freight rates were expected to spike when IMO 2020 came into effect as ships are not allowed to use fuel oil with sulphur content above 0.5%. However, strict lockdown restrictions in H1 2020 has curbed demand for vessels and thereby marine fuel.

Although general shipping freights showed a resurgence in Q4 2020, it was more to do with the vessel supply-demand imbalance rather than IMO 2020.

Are you still concerned about the impact of the US-China trade war?



“Some respondents felt that even if trade tensions ease, contentious sentiment between the countries may linger—especially as China’s economy grows and the country becomes increasingly competitive.”

Nearly 60% of survey respondents remain concerned about the US-China trade war despite a new US administration taking office, but for various reasons.

The US has tariffs on \$370bn worth of Chinese imports, while China has tariffs on \$110bn worth of US imports. Business groups have encouraged President Joe Biden to ease tariffs and work toward negotiation with China, but Biden is expected to analyse current policies’ impact on the American economy before acting.

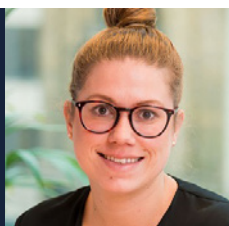
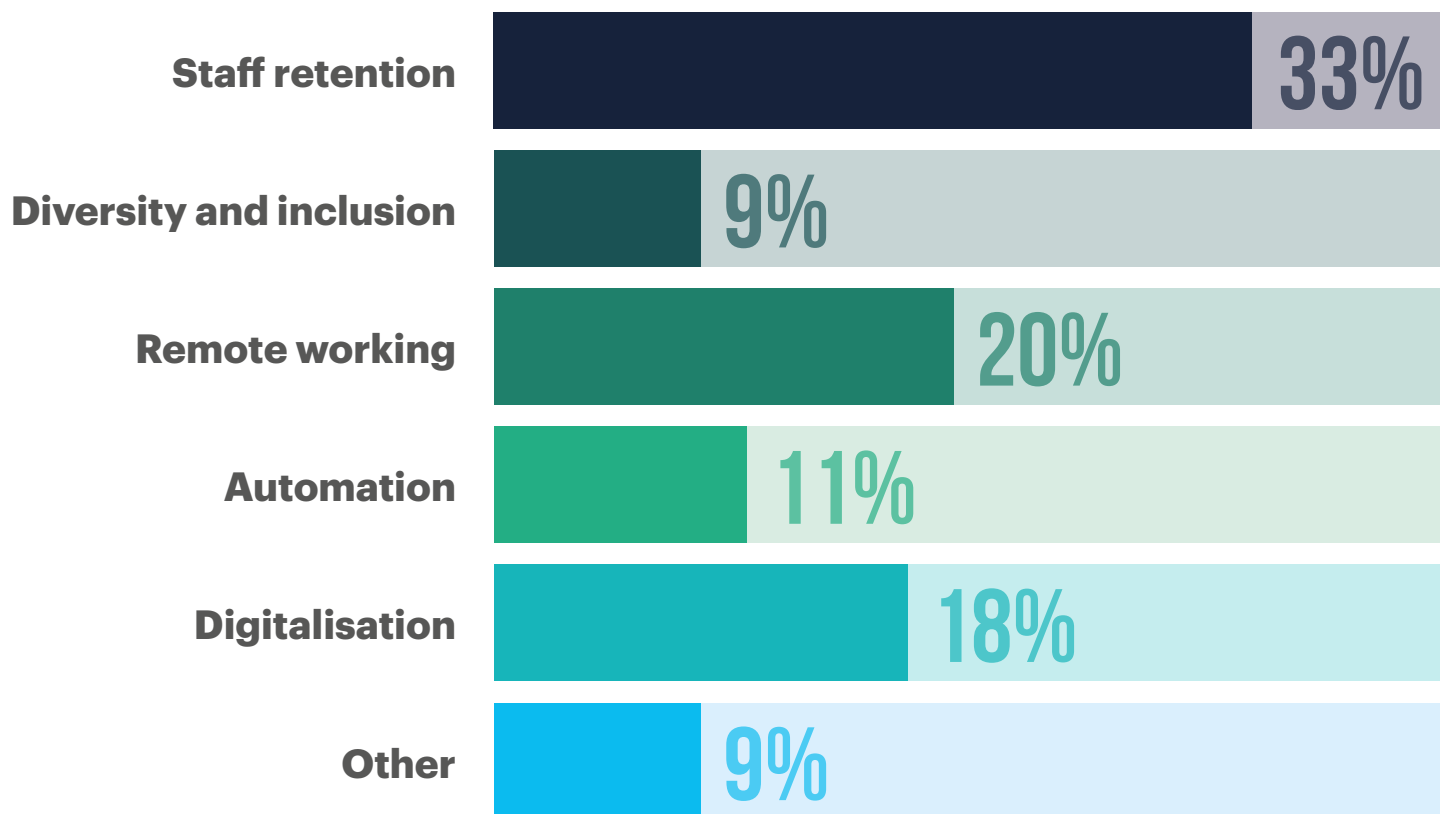
There is general sentiment toward US mending relations. China has appeared to be in favour of renegotiating the trade deal.

Some respondents felt that even if trade tensions ease, contentious sentiment between the countries may linger—especially as China’s economy grows and the country becomes increasingly competitive.

US and China trade policies have a ripple effect through the global supply chain, and market players are concerned about what comes next.

We await details of Biden’s stimulus plan, as previous aspects involved ensuring that China engages in fair trade practices.

What is your biggest concern for the future of your workforce?



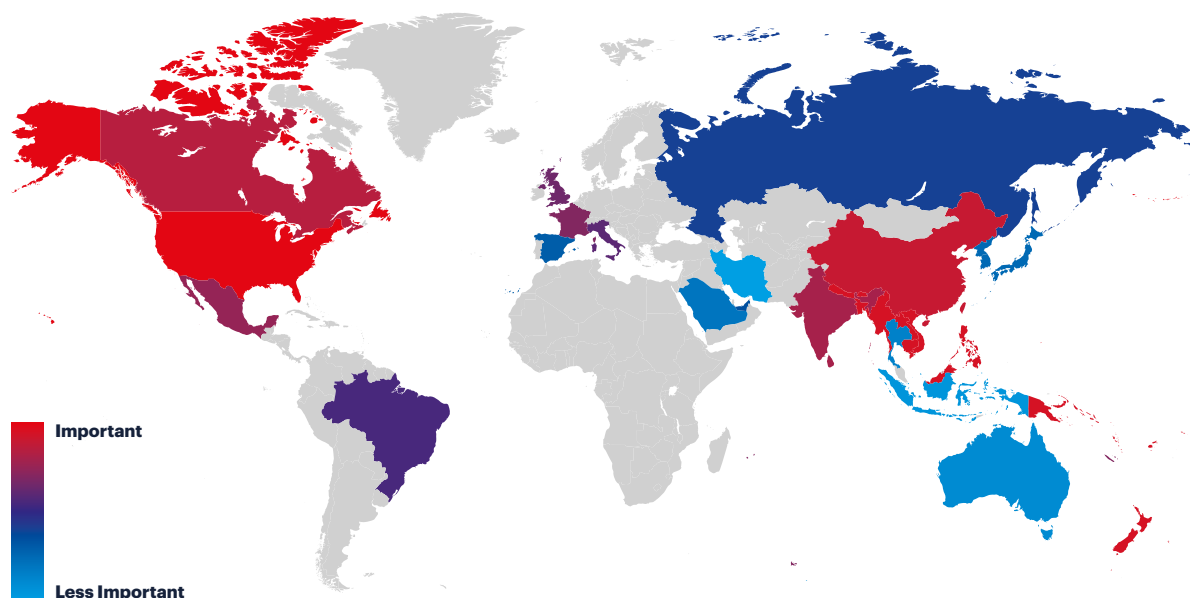
“As for the most popular response, staff retention was seen as the biggest concern for the future of the workforce, though it is tough to pinpoint one origin for this”

Globally, the business landscape has seen a real shift in 2020, largely due to the COVID-19 pandemic, so it is only natural that not only are concerns rising with regards to the work environment, but also for the future of the workforce within it.

Whilst not the largest single response, when asked what their biggest concern for the future of their workforce was, nearly half of those surveyed (48%) did cite remote working, automation or digitalisation as their primary concern. The spread of coronavirus throughout 2020 will have accelerated many a business towards automation and digitalisation, and forced employees (where possible) to work from home. As we move into 2021, it is unclear what aspects of these developments will continue to progress into a 'new normal' and what will cease to exist – one to watch moving forward for all businesses internationally.

As for the most popular response, staff retention was seen as the biggest concern for the future of the workforce, though it is tough to pinpoint one origin for this. For some time now talent retention, new talent and the skills gap have been topics of discussion, and concern, within the base oils and lubricants industry. The pandemic will not have helped settle these concerns over the last 12 months, but it is hoped that this crisis may have offered employers, and employees alike, a period of reflection and offered clarity as to where their resources, both in terms of time and financially, will be best placed for the years ahead. It is hoped that the direction chosen will bring back some prosperity to an industry hard hit by this global crisis.

Geographically, please select the three most important regions and nations for you and your organisation throughout 2021?



“The North American market will continue to be a dominant figure in the base oils and lubricants market due to its sheer size, but also due to the complexity of the market”

Following on from the 2020 Community Report results, USA continues to lead, as a major focus with over half of those polled (59%) stating that it will be an important region for their organisation throughout 2021. This gives us reason to assume that although 2020 did not happen as expected, company priorities have not shifted greatly when it comes to geographical considerations. Similar, as well, to 2020, we see that these results are not just due to location of the survey takers (35% North America) but to the importance companies are giving to the US market and its opportunities. The North American market will continue to be a dominant figure in the base oils and lubricants market due to its sheer size, but also due to the complexity of the market. Few other geographical regions offer the industry not only the extensive resources in lubricant research and development that the USA does, but also such a vast and varied domestic market to consume the industry's offerings.

Alongside this, it is unsurprising to see Asia take the remaining two spots left to round up the top three most focused upon regions/nations: Asia Pacific (35%) and China (32%). Like the USA they offer the whole package in terms of R&D but also consumption. It is vital that companies continue to compete in this market (and we have seen a number of M&As over the past few years) so to operate in a market where you can produce and distribute your products is an attractive proposition.

Additionally with sustainability rising on the agendas of many an organisation, local production and consumption is gaining in importance, and it should come as no surprise to anyone as to why the USA, APAC and China took the top three spots in this year's poll.

That said, a number of regions/nations, outside of the top three, performed very well and should be ones to watch in the future, notably India, Mexico, Brazil, Canada, the UK and France. As 2021 develops, how will the pandemic, politics, and profits affect how these geographies perform moving forward?

**Free to
attend**

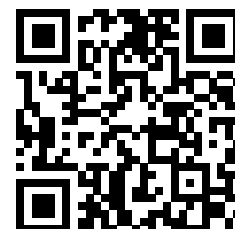
25th Anniversary

ICIS **World** Base Oils & Lubricants Live

16 – 18 February 2021

This online edition of our flagship conference will combine the senior-level thought-leadership and networking you have come to expect from the leading event series for base oils and lubricants professionals globally, with the convenience, personalisation, and breadth of content, available via a virtual portal.

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Over the past four decades, we have cultivated deep expertise in downstream petrochemicals supported by our ever-expanding reach in the energy and fertilizer markets. Today we are one of the world's largest and trusted chemicals market intelligence provider.

We exist to help businesses make strategic decisions, mitigate risk, improve productivity and capitalise on new opportunities. At ICIS, we make some of the world's most important markets more trusted and predictable by providing data services, thought leadership and decision tools. As result of our unmatched global presence, we deliver targeted connected intelligence to influence thousands of decisions across supply chains every single day. Drawing upon our legacy, we are also in a unique position to leverage big data and analytics as part of RELX, a FTSE15 data and analytics company with over 30,000 experts across 40 countries.

With our intelligence, we shape the world by connecting markets to optimise the world's valuable resources.



Contact Information:

We want to keep you up-to-date with what's happening at ICIS* and tell you about our latest products and other services. We may email you about information we think you'll be interested in, including selected articles and reminders about forthcoming events.

If you would like to receive more information about any of the ICIS Base Oils events, please get in touch with Arun Mandalia at **arun.mandalia@icis.com**.

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