Chemical Industry 2022
Global perceptions of the sector and key companies

March 2022

About Caliber

Caliber aims to make business more trusted and trustworthy.

Through Real-Time Tracker, our continuous people listening platform, we radically change the brand & reputation monitoring field with a unique combination of real-time stakeholder tracking and corporate brand & reputation expertise. We help data-driven communicators and marketers capture stakeholder sentiment through daily online surveys and convert it into actionable insights that improve stakeholder preference and advocacy.

Our platform is fully customizable, globally scalable and more cost-effective than traditional research methods. It brings accurate and representative reputation data to its users, and allows them to share it across the business, and integrate it with media monitoring. As a result, the business becomes more agile and capable of both mitigating risks and optimizing activities across multiple arenas: from customer loyalty and employer attractiveness, to CSR position and investor appeal.

Contact us

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Brand and Reputation

There is ample proof that stakeholder behavior is linked to the degree to which people trust and like a company. Therefore, the Trust & Like Score is the central element used by Caliber in measuring the strength of a company's brand and reputation.

To better explain the meaning of the Trust & Like Score we explore several attributes related to Brand, Reputation and Behavior – as well as information around demographics, professional background and the touchpoints through which stakeholders interact with companies.

You can find more about this approach on our website at groupcaliber.com

To better understand whether a certain score is positive or negative, we use a normative scale that shows how the particular result compares with Caliber's database consisting of similar studies:

80-100	Very high
70-79	High
60-69	Average
40-59	Low
0-39	Very low

About this report

Caliber monitors perceptions of thousands of companies around the world on a daily basis through automated online interviews with real people across various stakeholder groups.

This report is based on the insights gathered throughout 2021 from interviews conducted in Brazil, China, France, Germany, Japan, UK and USA. The data is based on approximately 12,500 evaluations from interviews with more than 4,600 people.

The companies included in this report were selected as market leaders in the chemical industry within their respective geographies and are therefore seen as representative of the industry.

In each country, the respondents are randomly selected, and the sample is representative of the national population in terms of gender, region and age within the age span of 18 to 75.

The representative nature of the sample in this study is achieved solely by setting demographic quotas. There is no weighting of raw data or final results.

Chemical industry perceptions

A vital industry - largely unknown and misunderstood

It is hard to think of a manufactured product or manufacturing process that does not involve chemicals. Still, companies in the industry are largely unknown to the public, often only mentioned in the media in a negative context. Moreover, even those who claim to know the industry well question its importance: almost one third of those familiar with the industry worldwide say that chemicals are not essential to their everyday lives – 40% say so in Europe. The public's perceived irrelevance of chemicals is a key reputational challenge for the industry.

A focus on change amidst concern for environmental impact

The significant environmental footprint of the chemical industry is a key global issue. Across all markets, the industry is expected, more than anything else, to take an active role in solving issues related to reducing the environmental impact of chemical extraction, reducing production emissions and developing less harmful materials. However, even those most concerned about climate change – and certainly those less concerned about it – also expect the industry to balance this with other priorities, like securing reliable supply, providing jobs and keeping their products affordable.

A groundswell of changing consumer behavior

More than one third of those included in the survey have recently reduced their use of plastics, and 80% have changed at least one personal habit to limit their use of chemicals. This is especially true among younger people, who are also more socially and politically active in this arena. The industry may increasingly face a groundswell of consumer activity and criticism – it must engage with audiences to tackle these challenges as a shared responsibility.

Key findings

- The Chemical Industry has a global Trust & Like Score of 67, on par with Automotive and Pharmaceuticals.
- The top-3 best perceived chemicals companies are PetroChina, Braskem and LyondellBasell Industries.
- The most impactful events for the industry's reputation in 2021 relate to cases of PFAS pollution and the LCET industry initiative – having opposite effects on public perceptions.
- The industry suffers from low levels of familiarity and stakeholder engagement – directly impacting its reputation.
- The top-3 issues that the public expects the industry to focus on all relate to reducing its environmental impact, though many are also concerned with non-environmental issues.
- Young demographics are more inclined to reduce their own use of chemicals, as well as to be socially and politically active around environmental causes.
- Only 22% of people worldwide find chemicals to be essential in their everyday lives – even fewer in Europe – posing a great educational challenge for the sector.

Sector Overview

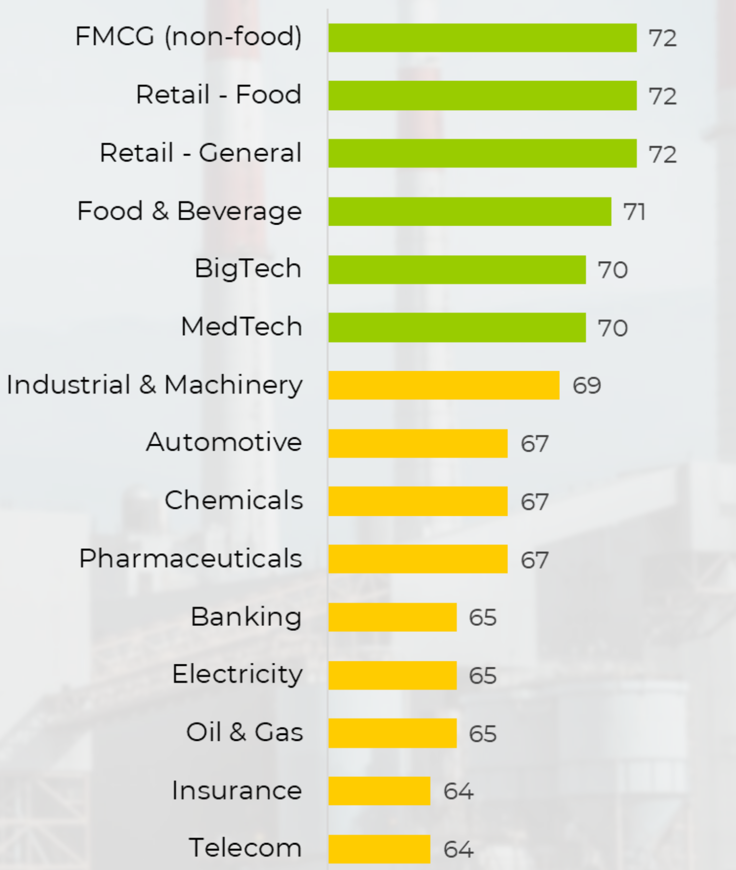
The average familiarity rate for companies in the chemical industry is the lowest of all the industries that Caliber measures.

The low familiarity rate is likely attributable to the B2B nature of the industry - an ingredients supplier to other businesses using the products as components in their own production processes.

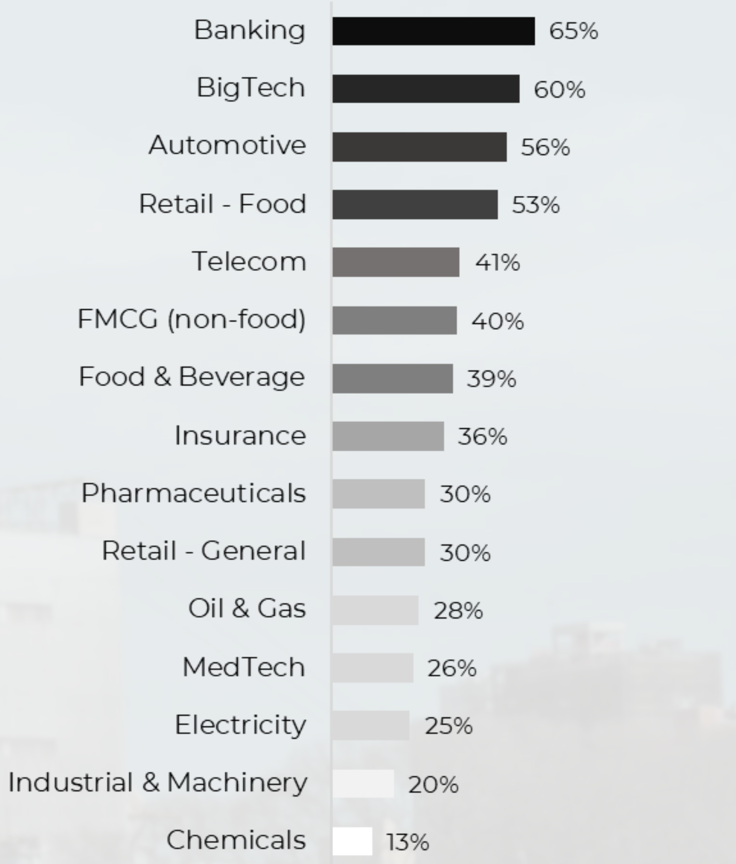
Those who are familiar with companies in the chemical industry on a global average rate them an average Trust & Like Score.

Globally, levels of trust and affinity towards the chemical industry are on par with the automotive and pharmaceutical industries, and higher than the levels experienced by more scrutinized sectors like energy, financial services and telecom.

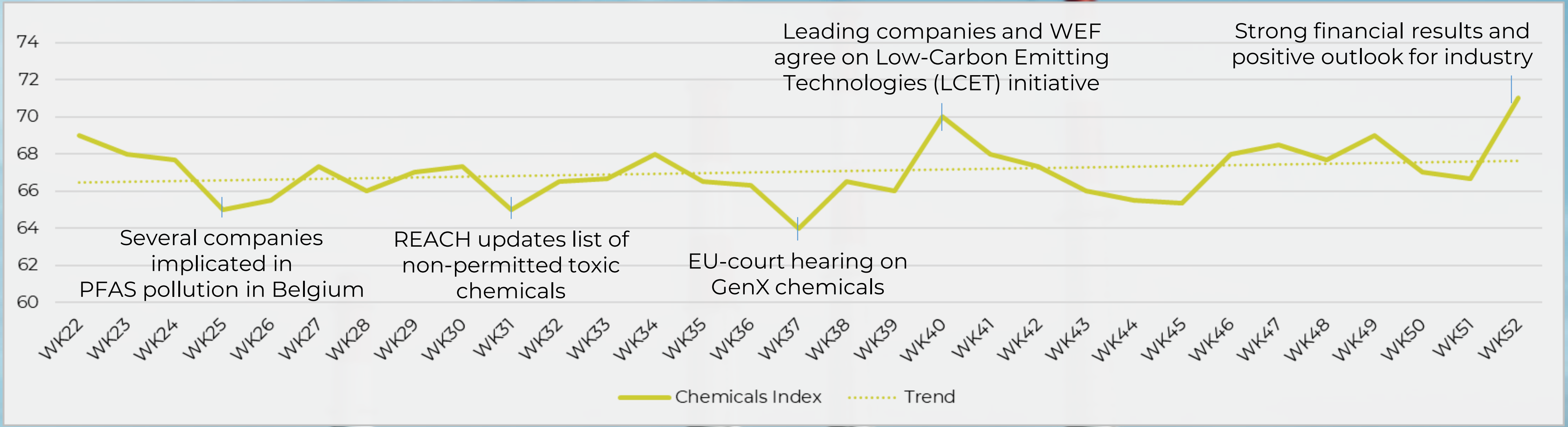
Average Global Trust & Like Score, 2021



Average Global Familiarity Rates, 2021



Global Development in Trust & Like Score in 2021



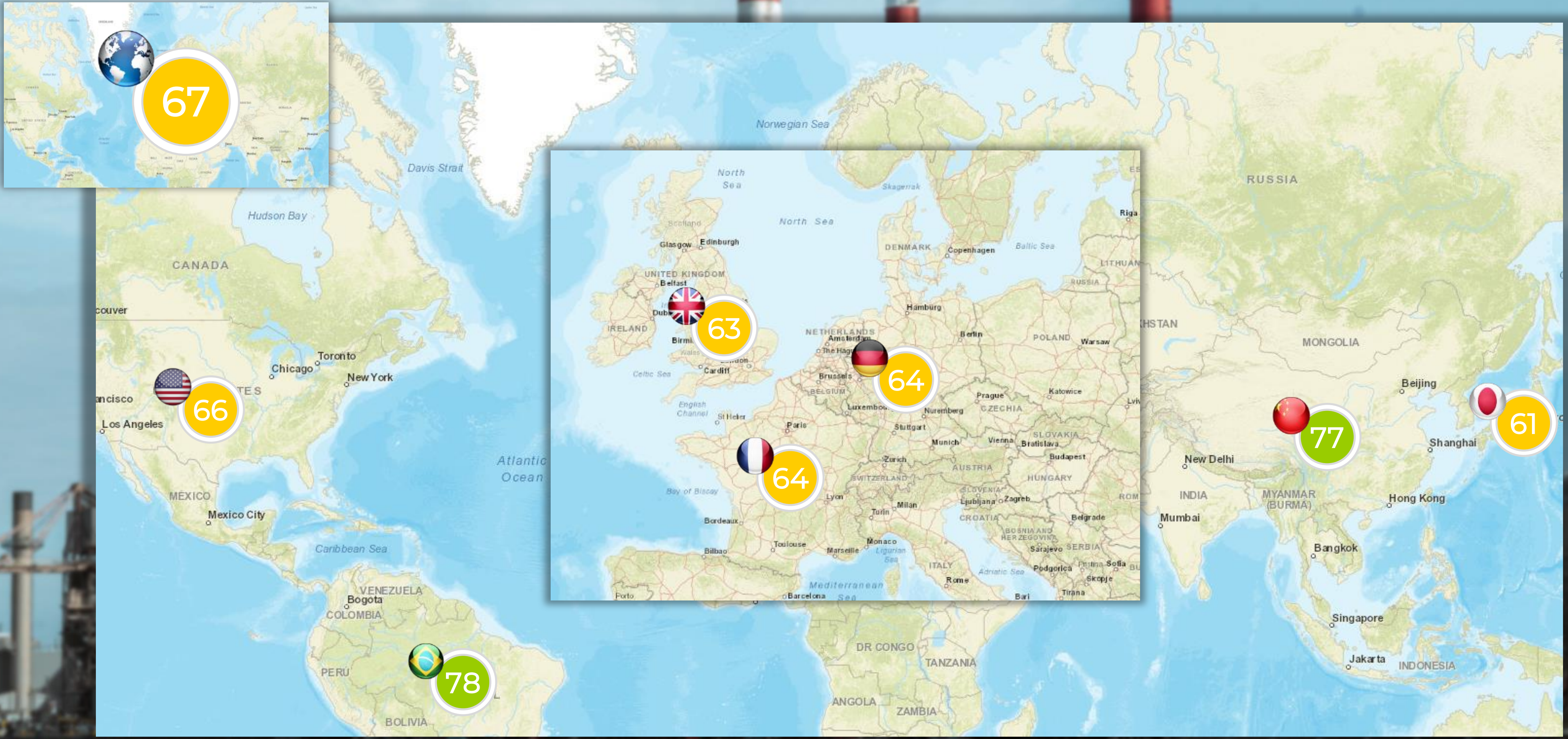
Caliber started daily tracking of companies in the global chemical index in June 2021, providing weekly validity of the index. **In Q3, the perception of the industry seems to be mostly affected by negatively impacting events**, especially related to media coverage of several larger companies involved in pollution of waterways with PFAS (per- and polyfluoroalkyl substances), a tightening of EU REACH regulation on disallowed chemical substances, and an EU-court hearing on the future of PFOS substitutes. These events probably contributed to the below-average industry perception levels, resulting in a negative industry reputation trend towards mid-year.

Perceptions then reversed course in Q4 when a group of leading chemical companies partnered with the World Economic Forum to drive a new initiative for reducing the carbon emission of chemical production. The initiative is a signal of an industry trying to adapt to stricter regulation and is also trying to curtail greenhouse gas output related to production, which currently is on a path to quadruple by 2050. The reputational impact of the positive news about the initiative was not sustained for the remainder of the year, but strong financial results announced at the end of 2021 meant that the industry finished the year on a reputational high.

CHEMICALS INDEX consists of Air Liquide, BASF, Braskem, Covestro, Dow, DuPont, INEOS, Mitsubishi Chemical Corporation, Sinopec

Trust & Like Score by Country

As seen across other industries, the Trust & Like Score of chemical companies varies significantly across markets – with people in Brazil and China seeming to be more favorable than in European markets. This variance is typically attributed to cultural differences, lower stakeholder expectations in emerging markets, and a pattern of growing skepticism towards big business in Europe. In the case of the chemical industry, however, the TLS in the US market is almost as low as it is in Europe, which is unusual.

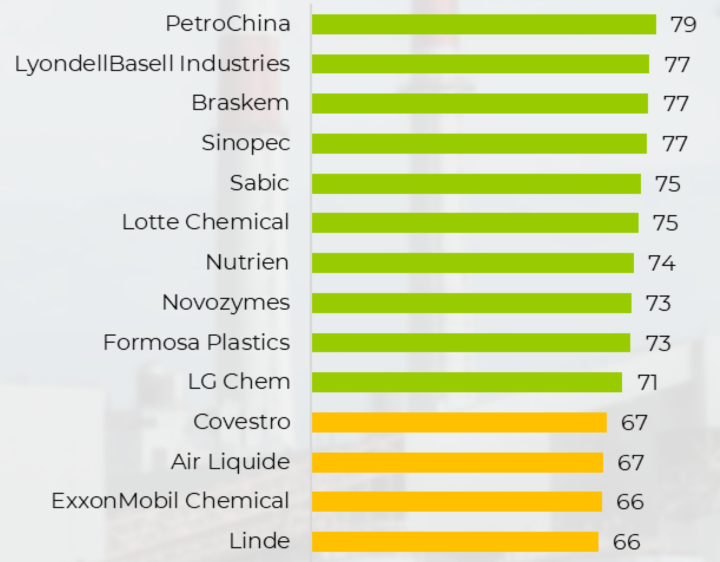


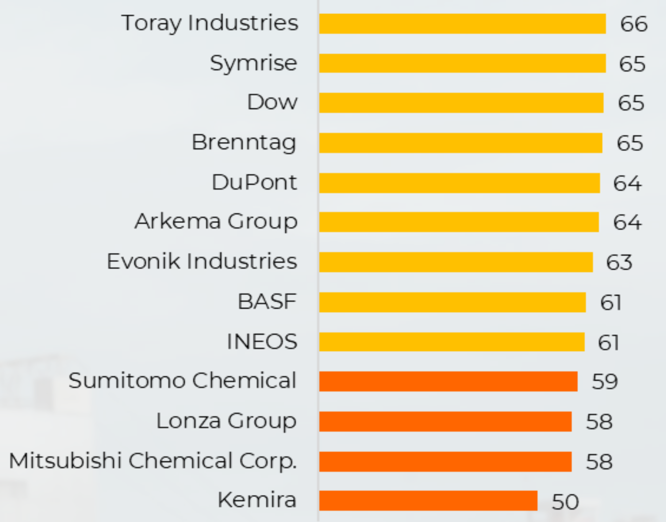
Trust & Like Score by Selected Chemicals Companies

Petrochemical companies in China (PetroChina, Sinopec) and Brazil (Braskem) enjoy very positive perceptions in their home markets.

European petrochemicals, except for LyondellBasell in the Netherlands, rank considerably lower in terms of trust and affinity from stakeholders.

Nutrien and Novozymes are the only non-petrochemical companies in the top-10.





Results are based on scores in the companies' home markets.
For SABIC, Lotte, Formosa and LG. the scores are based on interviews in China, Germany, UK and US.

Global Industry Perceptions

The global industry overall has a low level of awareness and familiarity, however the opinions of **those who are familiar with companies in the industry seem to be neutral**, producing average-tier scores.

The industry is perceived best when it comes to products, innovation and leadership, and sees its lowest scores on proving its relevance to people and being an inspiration.

The intended behavior expressed towards the industry is strong considering the average-tier perception profile – **around 2 in 5 people are very likely to support companies in the industry.**

Awareness	Familiarity
17%	13%

REPUTATION

Offering	69
Innovation	70
Integrity	68
Leadership	69

TRUST & LIKE

67

BRAND

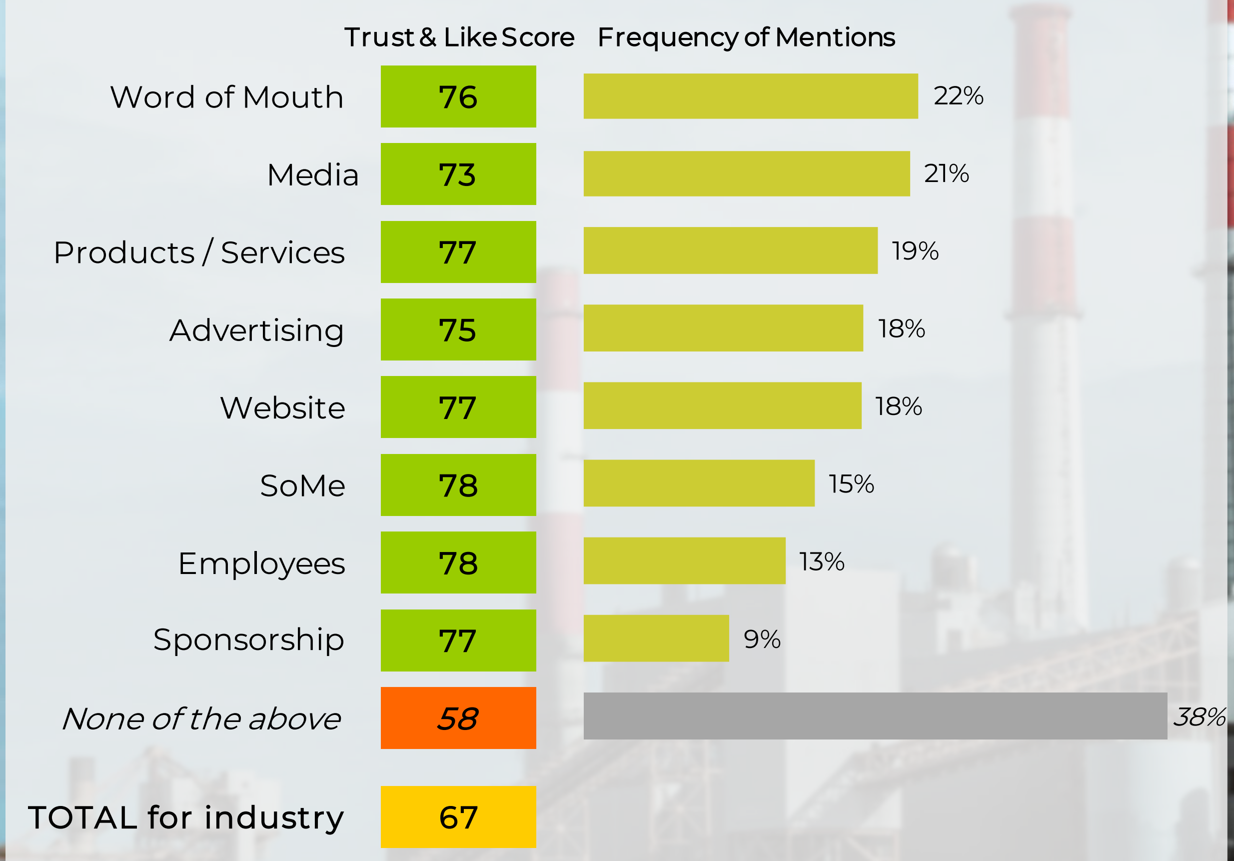
Authenticity	68
Differentiation	68
Relevance	66
Inspiration	67

BEHAVIOR

Advocacy	Consideration	Recommendation	Employment
38%	39%	39%	40%

For explanation of attributes please refer to Appendix 1

Touchpoints



The communication from or about companies in the industry has a significant positive effect on the Trust & Like Score.

While this is the case in most sectors, the chemical industry stands out as having a very wide gap in perceptions between those who are engaged with companies in the sector through one or more channels, and those who are not.

It is also interesting to note that perceptions of the sector are mostly shaped through word-of-mouth and media coverage, both channels that are not controlled by the companies themselves, but which are nevertheless associated with positive perceptions.

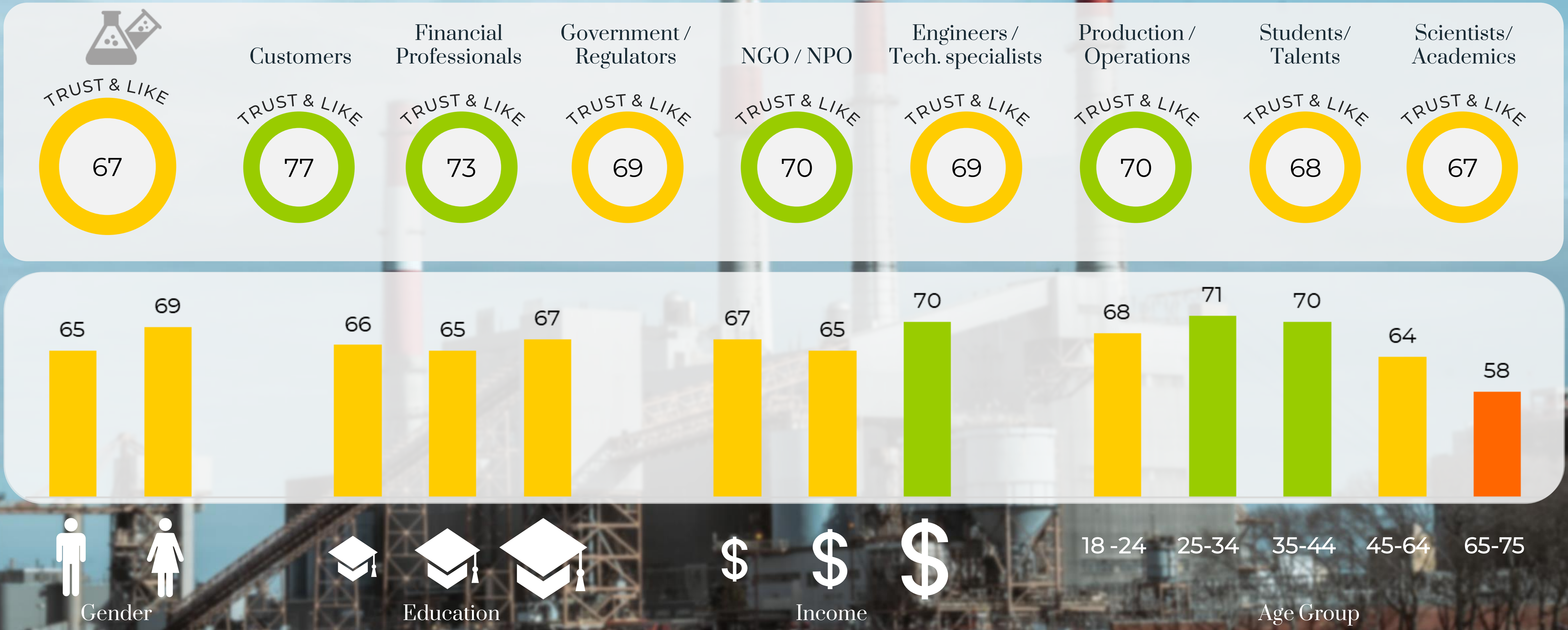
This indicates that the industry can significantly improve its reputation by becoming more visible to the general public and to a broader range of stakeholders. **Given that nearly 4 out of 10 people who are familiar with a chemical company have not been exposed to it through any channels, the opportunity is substantial.**

For full statement formulations please refer to Appendix 1

Trust & Like Score by Segments

The perception of the chemical industry is strongest with its customers and financial professionals – showing a belief in the strength of products and the financial performance of the companies in the industry. The trust and affinity towards the industry is somewhat lower among talent segments like students and engineers, as well as among scientists and academics.

Looking at age demographics, **TLS is strongest with 25–44-year-olds and considerably lower with the older age segments**.

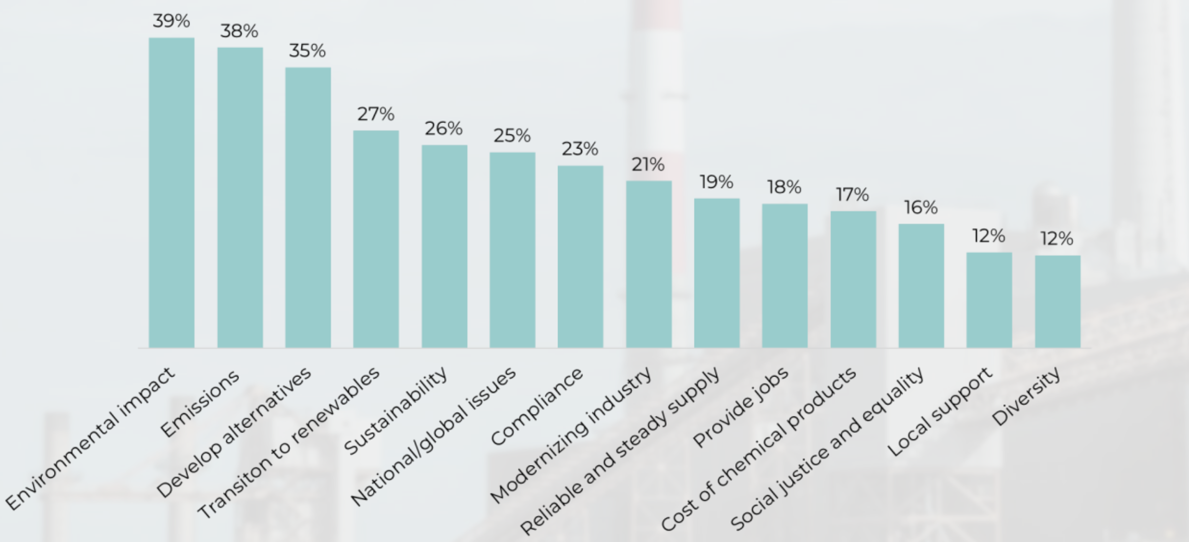


Above scores represent data-cuts based on demographic and professional segmentation of responses

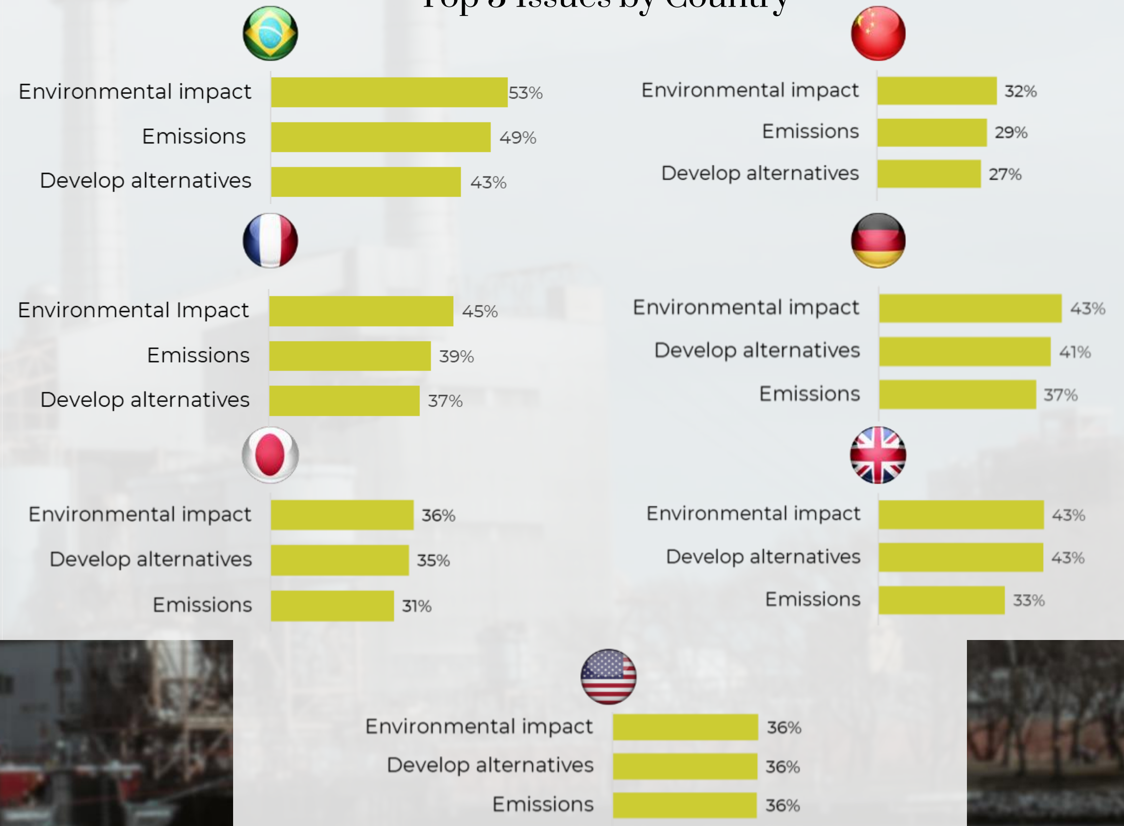
Industry Issues

The chemical industry is facing many multifaceted issues, which companies in the sector must address now and in the long term. Uniquely for this sector, however, there appears to be global consistency on which topic takes top priority: the environment: the top three issues named in all countries as the most important ones for the industry to focus on are reducing the environmental impact of the chemical extraction process, reducing emissions and taking other actions to fight climate change, and developing alternative chemical components to reduce impact on the environment.

What are the most important issues for chemical companies to address?



Top 3 Issues by Country



For full statement formulations please refer to Appendix 1

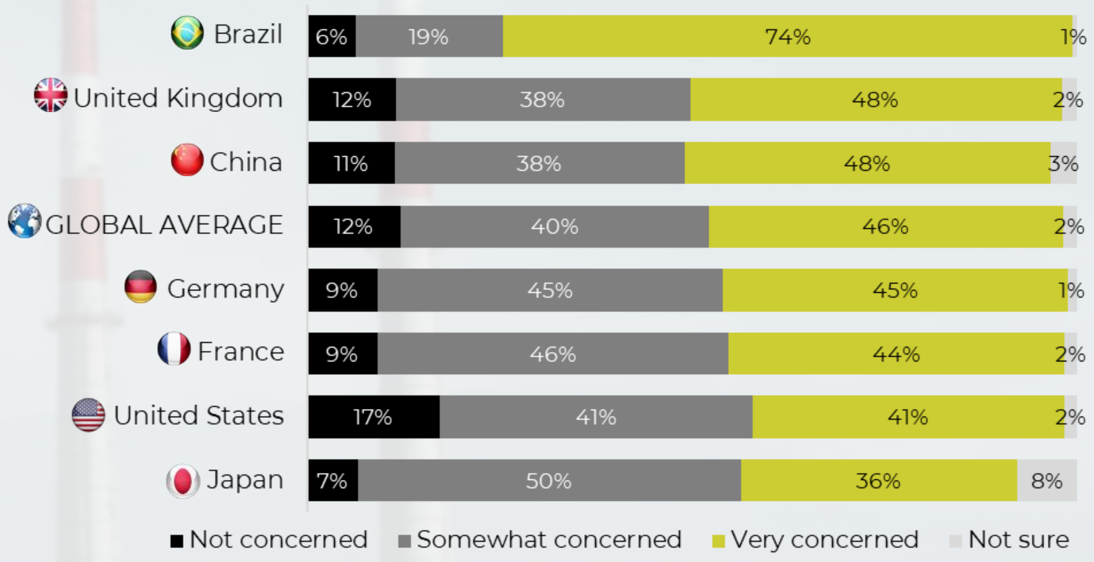
Environmental concerns

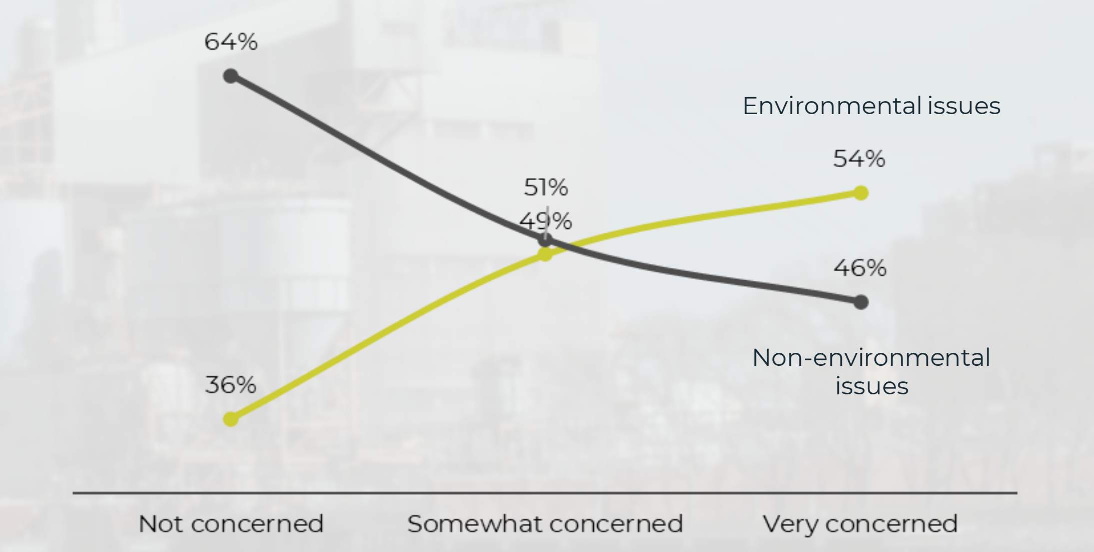
The environmental priority in the list of industry issues is shown to be tightly connected to people's general attitude towards climate change.

Globally, around 50% of the population are very concerned about the negative impact of climate change in the next five years. The proportion is highest in Brazil with almost 75% being very concerned. These people, as expected, are also the ones prioritizing environmental issues as the main focus areas for the chemical industry.

Importantly, those who are less concerned about climate change tend to prioritize other issues as well – such as modernizing the industry or securing reliable supply. This serves as a reminder that the industry must consider and deliver on a large array of concerns in order to win stakeholder trust.

How concerned are you about the negative impact of climate change in the next 5 years?





Personal efforts to reduce use

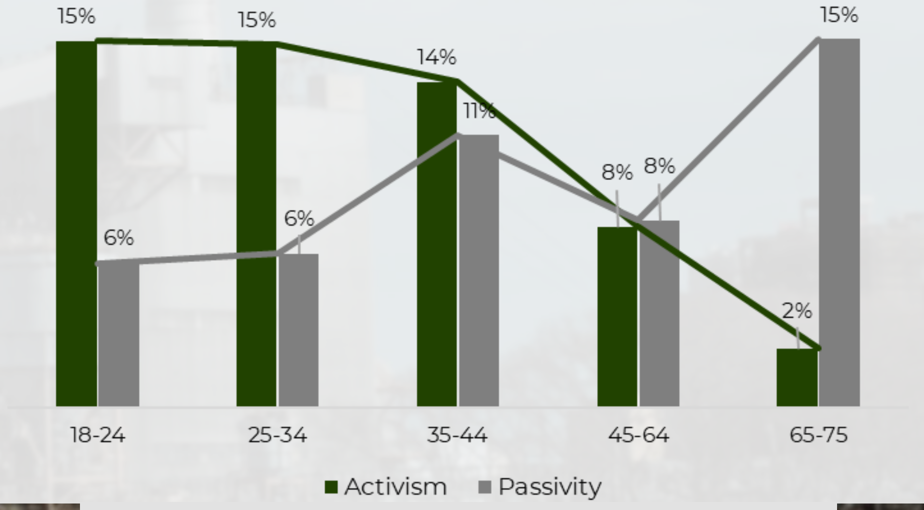
Have you or your household taken any of the following actions recently to change your personal habits regarding using products containing chemicals?

Stopped/reduced use of plastic	36%
Switched to alternative products with less/no chemicals	30%
Read product ingredient lists	28%
Reduced overall use of chemicals	28%
Stopped/reduced use of cleaning chemicals	25%
Stopped/reduced use of gardening chemicals	21%
Stopped/reduced use of dry cleaning	19%
Engaged in social and/or policital activism	15%
Donated/volunteered to reduce chemical use	12%
Other activities limiting chemicals use	11%
None of these	16%

80% of global respondents indicate that they have started to change their habits when it comes to consuming products containing chemicals. Reducing use of plastics is the most frequently mentioned action followed by switching to alternatives or being more aware of product ingredients.

15% of respondents say that they have gotten engaged in social or political activism and 12% have donated to or volunteered for related causes. Millennials and Gen Z are decidedly more active than older generations, indicating rising expectations and social pressure for change from these groups.

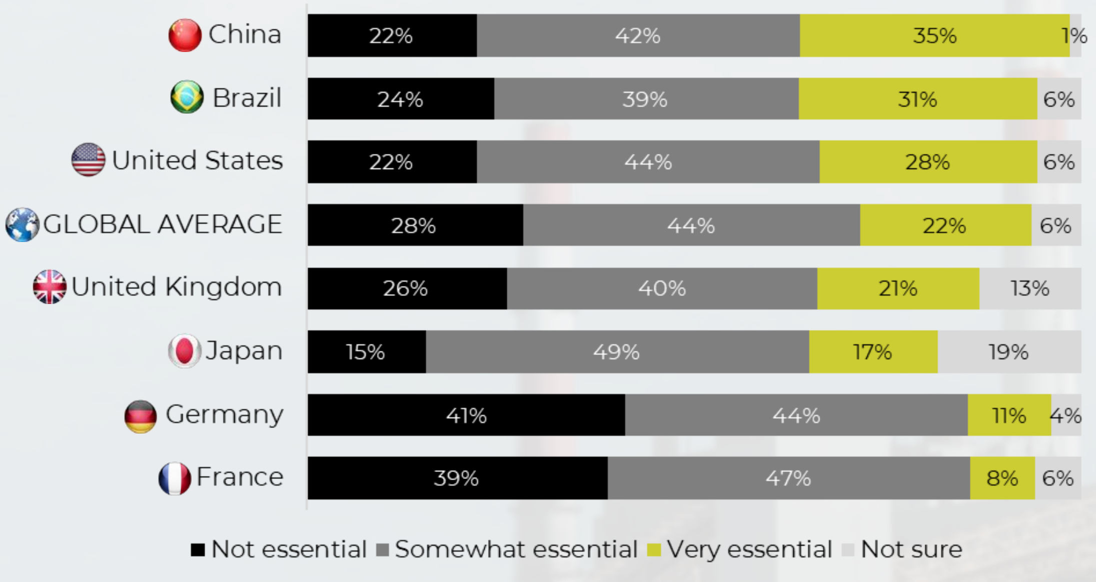
Selected personal efforts across age groups



Activism = social and/or political activism + donating/volunteering.
Passivity = none of the mentioned efforts

The perceived role of chemicals

How essential are chemicals to your every-day life?



On a global average, most people do not consider chemicals to play an essential part in their everyday lives, which is surprising given how widely they are used and how essential they in fact are.

Looking at the national split of results, **chemicals are perceived to be more important for everyday life in China, Brazil and the US**. In these markets, one-third of respondents say chemicals are very essential, while the number is considerably lower in Japan and European markets – especially France and Germany where only around 10% of people consider chemicals essential and **around 40% state that chemicals are not essential**.

In these markets, TLS is also relatively low, while the opposite is the case in China and Brazil, where chemicals are perceived as being more essential. The relationship between the industry's reputation and its perceived importance is a **clear indication of the opportunity the industry has in educating audiences about the essential nature of its products** – and the benefits they provide to people's lives every day.

Appendix 1 – Statements Explained

STANDARD MODEL STATEMENTS

Awareness	Percentage of respondents who are able to recall a company by name / logo (aided awareness)
Trust & Like	The extent to which the company is trusted & liked
Offering	Perceptions of products and services
Innovation	Perceptions of innovation
Integrity	Perceptions of responsible behavior
Leadership	Perceptions of overall leadership
Authenticity	Perceptions of honesty
Differentiation	Perceptions of standing apart from competition
Relevance	Perceptions of having a relevant purpose
Inspiration	Perceptions of being interesting
Recommendation	Likelihood of recommending
Advocacy	Likelihood of speaking positively
Consideration	Likelihood of purchasing products
Employment	Likelihood of considering as a place to work

TOUCHPOINTS

Advertising	Have been exposed to advertising or direct mail (online or offline)
Employees	Spoke with an employee or representative (sales, customer support, staff)
Media	Read about company in a newspaper, journal or magazine (online or offline)
Products / Services	Have purchased or used products and/or services
SoMe	Visited the social media channel, forum or blog
Sponsorship	Participated in a sponsored program or event
Website	Visited the website
Word of Mouth	Heard about company from someone not representing it, whose opinion I value such as a friend, family, acquaintance, expert or opinion leader

INDUSTRY ISSUES

Environmental Issues

Develop alternatives	Developing alternative chemical components to reduce environmental impact
Emissions	Reducing emissions and taking other business actions to help fight climate change
Environmental impact	Reducing environmental impact of chemical extraction
Sustainability	Increasing access to sustainable chemical alternatives for all people around the world
Transition to renewables	Transitioning from fossil energy to biomass and renewable materials

Non-environmental Issues

Compliance	Complying with laws and regulations around taxes, fair competition and general operations
Cost of chemical products	Keeping chemical prices low to ensure wide affordability
Diversity	Securing gender balance, diversity, and inclusion as an employer
Local support	Supporting communities by donating money and local support
Modernizing industry	Investing in innovation and new technologies to modernize the sector
National/global issues	Proactively helping to solve national and global issues e.g., environmental crisis and ensuring proper working condition
Provide jobs	Stimulating local economies through good jobs with benefits
Reliable and steady supply	Ensuring reliable and steady supply of chemicals to deliver on global demands
Social justice and equality	Promoting social justice and ensuring equality for all people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