Sustainable impact, made real. Chemicals

From compliance to value creation

Industry perspective
2021
Sustainability is a highly relevant topic with a substantial impact on businesses and their stakeholders ...

Increasing awareness, expectations and requirements of stakeholders with different priorities

Companies are urged to integrate sustainability into strategy, operations and evaluation
... and can become an issue if not addressed adequately

Siemens’ involvement with Adani coalmine
12 January 2020: Due to a supply contract for the new Adani coalmine in Australia Siemens CEO Joe Kaeser issued a statement justifying its commitments. Climate activists had urged Siemens to review its role in the controversial project given its commitment to sustainability – in 2015, Siemens has committed carbon neutrality by 2030.

Climate lawsuit against large carbon emitting countries
23 September 2019: Five of the countries with the highest carbon emissions in the world – Argentina, Brazil, France, Germany and Turkey – get sued by the Greta Thunberg Association for allegedly violating their children rights by failing to adequately reduce emissions. Angela Merkel and Emanuel Macron distance themselves from Thunberg.

BlackRock includes climate change as integral part of investment thesis
14 January 2020: BlackRock, the world's largest asset manager, says that it will now make climate change central to its investment considerations. And not just for environmental reasons but because it believes that climate change is reshaping the world's financial system.

“While I do have a lot of empathy for environmental matters, I do need to balance different interests of different stakeholders, as long as they have lawful legitimation for what they do!”
(Financial Times)

“The evidence on climate risk is compelling investors to reassess core assumptions about modern finance. In the near future – and sooner than most anticipate – there will be a significant reallocation of capital.”
(Annual Letter to CEOs)
Sustainability can create value in four ways for Chemicals – and thus is high on the C-level agenda

58% of Chemicals CEOs are prioritizing investments in sustainability in the upcoming year

- **More trust**: Societal expectation to be aware of impact and to openly report
  - Employee rights
  - Employee well-being
  - Big data and privacy

- **More growth**: Capture emerging opportunities and re-position in new ecosystems
  - Enabling sustainable solutions
  - Circular economy plays
  - Technology innovation

- **Lower risk**: Keep license to operate and control investment risk
  - Compliance
  - Responsible supply chains
  - Integrity

- **Lower cost**: Sustainable companies outperform their market
  - Favorable access to capital
  - GHG emission reductions
  - Talent acquisition

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1) Source: PwC, 23rd Annual Global CEO Survey © 2019 PricewaterhouseCoopers LLP, All rights reserved; Q: Which of the following opportunities in the Chemicals industry will you be prioritizing and/or investing in over the next 12 months?
While sustainability per se is not a new topic to the industry, the future lies in its integration into daily business.

Evolution of Chemicals sustainability focus

Motivation

Regulatory compliance

Cost

Revenue

Value to Society

Selected milestones

1960s: UN Conference on the Human Environment, Stockholm
1970s: UN WCED
1980s: Bruntland Report defines sustainability
1990s: Kyoto protocol
2000s: COP 15 Copenhagen
2010s: COP 16 Cancun
2020s: UN SDGs, EU Green Deal

Sustainability scope

- Safety
- Pollutants
- CO₂
- Social
- Climate

“Business success tomorrow means creating value for the environment, society and business.”

Saori Dubourg
Board member BASF
The Chemicals industry has been accelerating its commitments to invest in a sustainable future for an ever growing population.

Examples of commitments in the Chemical industry:

**Sustainable management**
- **Responsible Care®**
  - Fourth decade of “Responsible Care” – advanced by the industry
- **Value Balancing Alliance**
  - Global impact measurement and valuation standard for monetizing and disclosing impacts of corporate activity
- **Together for Sustainability**
  - A joint initiative and global network of 25 Chemical companies, delivers the de facto global standard for environmental, social and governance performance of Chemical supply chains

**Achieving ‘net zero’ by 2050**
- **BASF**
  - Grow CO₂-neutrally until 2030
- **Covestro**
  - Specific GHG emissions -50% by 2025
- **DSM**
  - -30% emission reduction by 2030
- **Bayer**
  - Carbon-neutral operations by 2030
- **SABIC**
  - Energy, water usage, GHG -25% by 2025
- **Lyondellbasell**
  - 15% reduction by 2030

**Enabling circular economy**
1. Plastic waste supply to recyclers
2. Conversion into Feedstock
3. Reutilization for polymer creation
4. (Plastic) product creation
5. Product disposal
6. Waste collection and sorting

- **Alliance to End Plastic Waste**
  - 40+ global Chemicals and CPG companies partnering with finance community, government, and NGOs, tackling entire plastic value chain
- **ChemCycling**
  - Plastic waste broken down to oil and gaseous products
- **CreaSolv®**
  - Recovering plastics from sachets in Malaysia
- **PureCycle Technologies**
  - Polypyrrole restorage in collaboration with Nestlé and Milliken for products-to-market
- **QCP**
  - Increasing alliances across the value chain, e.g. Chemical companies and recyclers
- **Unilever**
  - Nestlé
  - Lyondellbasell
  - Suez
- **BASF**
  - Covestro
- **Covestro**
  - BASF
- **DSM**
- **Bayer**
- **SABIC**
- **Lyondellbasell**
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- **Nestlé**
- **PureCycle Technologies**

Sustainable impact, made real.
Chemicals Strategy&

Source: Company publications
Unlike other industries, Chemicals has a unique position for value creation and positive impact.
**Investors’ increasing reflection of non-financial performance is raising the bar for measuring and reporting value contribution**

**Sustainability-driven dynamics in capital markets**

### Market dynamics and ESG reporting drivers

<table>
<thead>
<tr>
<th><strong>Increased awareness of benefits of responsible investment</strong></th>
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<tr>
<td>• Portfolio protection / risk management</td>
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<td>• Portfolio enhancement</td>
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<tr>
<th><strong>Change in values of investor groups</strong></th>
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<td>• Institutional investors</td>
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<tr>
<td>• Millennials</td>
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<tr>
<td>• Women</td>
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<th><strong>Better opportunities to assess ESG performance</strong></th>
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<td>• New reporting standards</td>
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<td>• Ratings and Rankings</td>
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<td>• PRI / SDGs</td>
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*High pressure on companies to provide transparency on their ESG performance by …*

- … defining meaningful KPIs and measures, incl. impact data and data in supply chain and customer industries
- … embedding impact data into management and accounting systems
- … demonstrating the connectivity of non-financial to financial performance
- … reporting results according to new standards that will evolve*
Now is the time to act – to address the unprecedented changes sustainability measures are to bring to the Chemical ecosystem

**External changes**

**Technology**

- High speed of the development of new technologies, e.g., chemolysis, bio-technology in recycling and bio-based raw material production

**Market players**

- New players entered the market, e.g., recyclers, re-processors

**Regulation**

- New and stricter regulations, e.g., ban on single-use plastics to come into force by 2021 in the EU
- Further regulation defines that plastic bottles should be made of 90% recycled content by 2029

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**How does your company currently respond to the sustainability discussion?**

*Reactive*  
License to operate

*Active*  
Capture opportunities

Chemicals companies which are at the forefront of the sustainability discussion can benefit from growth opportunities rather than reacting to purely keep their license to operate.
Achieving leadership in sustainability will imply a significant transformation effort for Chemical players

**Implications for Chemical players**

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<th>Call for a step change</th>
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<td>Change in industry value chains will significantly <strong>impact Chemicals contribution</strong> and footprint / portfolio</td>
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<td><strong>Sustainability is not an option</strong> – yet taking a leadership role implies transformational effort in major decision making processes and steering of the organization</td>
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<td>An integrated approach is needed to embrace the <strong>level of disruptiveness</strong> and the way it will change culture, operating model, and customer interaction</td>
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<th>Enhance capabilities</th>
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<td>Part of Chemicals shift from a volume to a value business (accelerated by digital) requiring <strong>new commercial capabilities</strong> – while other parts will need <strong>concepts to secure business</strong> endangered by substitution</td>
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<td>Regulatory and consumer decisions are not necessarily rationally comprehensible, which needs to be dealt with in portfolio steering and investment decisions – moving closer to end consumers to <strong>anticipate dynamics</strong></td>
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<td>Stakeholder <strong>communication</strong> and <strong>reporting standards</strong> become more important – requiring players to create transparency and credibility</td>
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<th>New way of operating</th>
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<td>The industry does not seem to be fully prepared yet for <strong>tough trade-off decisions</strong> that interfere with business goals</td>
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<td>Sustainability and digital might jeopardize current business models – <strong>if you don't disrupt, others will</strong></td>
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<td><strong>Integrated P&amp;L</strong> will form the foundation for transparency and drive investors’ view on the company</td>
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<td><strong>Collaboration in the ecosystem</strong> will become a necessity to realize Chemicals potential sustainability impact</td>
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There is a multitude of opportunities – What’s the contribution of your company?

- What is your long-term sustainability ambition – and is it integrated with your strategy?
- In which steps of the sustainable value chain are you already active?
- Do you have full transparency on what your competitors are doing?
- How are your activities currently impacting your growth and profitability?
- Do you have a clear roadmap to achieving your sustainability goals in each step of the value chain?
We are the right advisor for you to turn your sustainability ambition into reality

Trusted partner of the Chemical industry; Deep functional expertise and scale

Global strategy model, leading foresight and capabilities positioning

End-to-end

Holistic

Experienced

True value

We offer full coverage of all transformation aspects from strategy to implementation, tools, legal, and reporting.

We are well connected with diverse industry stakeholders, e.g. regulators, legal bodies, NPO, CE alliances, and global / regional forums. And we are able to detect directional changes fast.

We are experienced in the high complexity in energy industry incl. regulations, etc.

We create sustainable value on triple bottom-lines: financial performance, social welfare, and environmental benefits.
Contacts

Iris Herrmann
Partner at Strategy&
Germany
iris.herrmann
@strategyand.de.pwc.com

Frederic Ozeir
Partner at Strategy&
Middle East
frederic.ozeir
@strategyand.ae.pwc.com

Ruirui Zong-Rühe
Director at Strategy&
Germany
ruirui.zong-ruehe
@strategyand.de.pwc.com