



Chemistry Shapes the *Future*



Responsible Care®  
OUR COMMITMENT TO SUSTAINABILITY

# 2019 AICM Sustainable Development Report



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# About AICM

## Introduction of AICM

AICM was founded in 1988, to jointly promote the harmonious and sustainable development of China's chemical industry, Today AICM represents nearly 70 major multinational companies in the chemical industry of China. Among the AICM members, 5 companies are among the World Top 10 Companies and 28 members stand among the World Top 50 Chemical Companies. Their businesses cover manufacturing, sales, transportation, distribution, and disposal of chemicals.

## Our Vision

To contribute to the development of a harmonious society and the sustainable growth of China's chemical industry, as the representation of the leading international chemical players in China, AICM is committed to:



1. Promoting Responsible Care® and other globally recognized chemical management principles among all stakeholders

2. Advocating cost-effective, science and risk-based policies to policies makers

3. Building up the contributive role of the chemical industry to the economy

# Content

## **2 About AICM**

Introduction of AICM

Our Vision

---

## **3 About this Report**

---

## **4 AICM Management Statement**

---

## **6 1. Materiality Issues Identification and Analysis**

6 1.1 Potential Materiality Issues Identification

9 1.2 Potential Materiality Issues Prioritization

10 1.3 Materiality Matrix

---

## **14 2. Deep Insight**

14 2.1 Industry Development

18 2.2 Technological Innovation

20 2.3 Environmental Protection and Production Safety

26 2.4 Move into Park

27 2.5 Communication with Government,  
Community and People

---

## **30 Conclusion**

---

## **31 Acknowledgment**

## About this Report

This report is the second sustainability report released by AICM to identify the key issues of sustainable development related to chemical industrial parks and foreign chemical companies. This report addresses issues such as environmental protection, production safety, move into park, technological innovation, etc. and analyzes the difficulties and challenges encountered by chemical companies.

Through this report, AICM will (i) summarize the feasible and effective countermeasures suggested by the chemical companies and their stakeholders, (ii) promote Responsible Care® and other internationally recognized management principles, and (iii) advocate cost-effective and science-based policies to build up the contributive role of the chemical industry to China's economy.

This report will illustrate the main views and suggestions of AICM members and their external stakeholders for improvement on the key issues.

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## Reporting Method

The report consists of three sections:

1. Identification and analysis of materiality issues: mainly based on questionnaire survey of 34 stakeholders to identify the high importance issues for the chemical industry and summarize in a materiality matrix.
  2. Interviews with the representatives of all stakeholders: including 13 foreign chemical companies and four external stakeholders to understand their opinions and recommendations of each materiality issue.
  3. In-depth analysis of the interview results and the conclusions: summarize the current status of sustainable development in foreign chemical companies and the opportunities and challenges encountered, as well as provide recommendations.
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## Availability of the Report

This report will be presented in simplified Chinese and English. The electronic version of the report is available on the AICM official website. Meanwhile, AICM will send a hardcopy to each AICM member.

# AICM Management Statement

AICM has always been committed to contributing to harmonious society and sustainable development of the chemical industry in China. In the process of continuously promoting international best practices to the stakeholders, AICM keeps advocating the science-based concept of cost control and risk control to policy makers, and exploring the effective way to create a positive image of the chemical industry in the development of the national economy. Meanwhile, as a representative of the foreign chemical companies in China, AICM also strive to express the concerns from international perspective to all stakeholders in the chemical industry of China.

AICM's second sustainability report for foreign chemical companies in China is based on the in-depth communication with senior management of AICM members, and focuses on the current status of industry development, technological innovation, environmental protection, "move into park" policy as well as communication with the government, the community and the public; it identifies feasible strategies to better coordinate with the government and promote sustainable development of economy, environment and society.

In the chemical industry chain of China, foreign chemical companies are basically in the midstream which undertake the manufacturing of basic chemicals and specialty chemicals, while state-owned companies in the upstream controlling oil and mineral resources; private companies play a more active role in the downstream manufacturing industry and rely on the excellent chemical materials provided by the midstream to further derive various industry applications. The chemical industry has played a significant role in driving the development of China's national economy, affecting all aspects of the industry, especially high-tech industries such as automobiles and semiconductors. AICM

believes that foreign chemical companies are playing an indispensable role in the development of the entire industry chain.

We understand that foreign chemical companies are facing a huge potential market in China, and have a highly consistent view on future investment and innovation in China. Under the current conditions of policy and market, foreign companies remain willing to invest in facilities as well as research and innovation work, to prioritize the needs of local market, while paying high attention to China's efforts on intellectual property protection in the future.

Environmental protection has been an important area for China's policy formulation in recent years. Since the chemical industry has historically been defined as a heavy industry or a heavily polluting industry, establishing a positive image in the development of the national economy is one of the main challenges facing AICM. We are committed to promoting international best practices of the foreign chemical companies, advocating science-based policy implementation approach to avoid "one size fits all" method, adhering to the effective implementation of "move into park" policies and ensuring the orderly and healthy development of chemical companies.

Excellent communication among the government, companies and community are crucial to the promotion of national economic development and enterprise development. Like other organizations that are willing to improve the development of chemical industry and assist foreign chemical companies to build communication between government, companies and community, AICM anticipates that through its own efforts, it can effectively pass the voices of all parties and support foreign chemical companies to effectively promote the management experience of its members in sustainable development and reshape the image of chemical industry.

Based on the interviews with the CEOs of AICM member companies, this report has summarized their constructive ideas and suggestions on the materiality issues, and presented the details in the following paragraphs for readers who are concerned about the development status and challenges of foreign chemical companies in China.

The identification of potential materiality issues in the sustainable development of chemical industry parks and foreign chemical companies is helpful to further study the difficulties and challenges encountered by foreign chemical companies. Based on the characteristics of chemical industry and its impacts on society, economy, and environment, we divided the identification process into three steps: identification of potential materiality issues, prioritization of potential materiality issues, and consultation with AICM member companies.

# Materiality Issues Identification and Analysis

# 01

## 1.1 Potential Materiality Issues Identification

First of all, through industry and media analysis, as well as interpretation of relevant policies, we have identified six major categories of issues that have significant impacts on the chemical industry chain:

- Industry development
- Technological innovation
- Environmental protection
- Production safety
- Move into park and Other
- Communication with government, community and people

### Materiality Issues List

Category	Issues
Industry Development	1. The impacts of the development of chemical industry chain to the whole economic development of China
	2. The importance of chemical industry to drive the development of other industries
	3. Difficulties in the recycling of resources in the chemical industry
	4. Impact of industrial layout on business development and supply chain in upper, middle and lower reaches of chemical companies
	5. The difficulties faced by foreign-funded chemical companies in enterprise integration when they merge and recombine domestic companies
	6. When enjoying the local industrial support or financial encouragement policies, the differences between foreign-funded chemical companies and local companies (state-owned companies, private companies) will affect the foreign-funded chemical companies



Technological Innovation	7. The opportunities and challenges of digital transformation for enterprise management
	8. The influence of digital revolution on the traditional business model of chemical industry
	9. The importance of visualization, artificial intelligence and automation in the configuration of production processes
	10. The scale economy brought by the entry of chemical companies and the improvement of industrial chain bring new opportunities for companies in the application of innovative technologies
	11. Companies focus on the study of sustainable performance in product life cycle
	12. Importance of cross-industry integration for innovation in chemical industry
	13. Difficulties in retaining R&D talents and exploring R&D talents in the chemical industry
	14. Recent willingness of chemical companies to further invest in Chinese R&D institutions
	15. Difficulties in R&D investment of chemical companies, such as site selection, land cost, and government approval
Environmental Protection	16. Difficulties in maintaining intellectual property rights of chemical companies
	17. Setting up the functions of key environmental protection positions and the participation of the company's management in environmental protection work
	18. Meet the impact of environmental protection policies and regulations on the cost of chemical companies
	19. The existing internal environmental protection system of chemical companies has been formulated, updated and effectively implemented in accordance with the requirements of the state and local regulatory authorities according to the companies' own conditions
	20. Impacts of relocation of chemical companies on emissions and environmental management of chemical companies, for example, inconsistency between relocation of local environmental protection policies and original policies will affect the operation of companies
	21. Difficulties in the approval of new, rebuilt and expanded projects for chemical companies under environmental supervision
	22. Impact on chemical companies of the difficulties in dealing with solid and chemical hazardous wastes in local communities and the rising cost burden
	23. Difficulties in establishing effective dialogue mechanisms between chemical companies and environmental regulatory authorities
	24. The impact of environmental regulation to industrial development includes the rationality of regulatory intensity, the clarity of regulatory policy, and the degree of impact of the plan and frequency of implementation of supervision and inspection on companies
Production Safety	25. The impact of environmental supervision on suppliers by environmental protection regulators on chemical companies, such as the impact of environmental violation punishment on chemical companies by suppliers
	26. Establishment of functions of key occupational health and safety positions and participation of company management in occupational health and safety work
	27. The impact of occupational health and safety policies and regulations on the cost of chemical companies
	28. The influence of the chemical industrial park on the safety production of chemical companies, such as strengthening the awareness and supervision of the safety production of companies
	29. Formulate, update and implement effective safety management system according to the requirements of national and local regulators and their own situations
	30. Chemical companies pay attention to the safety management level of contractors and suppliers
	31. Chemical companies' concern for customers' management level of hazardous chemicals
	32. Difficulties of chemical companies in the safe storage, transportation of hazardous chemicals and increased compliance costs
	33. The importance of occupational health and safety supervision to the development of the industry includes the rationality of the supervision intensity, the clarity of the supervision policy and the degree of impact of the plan and frequency of supervision and inspection on companies

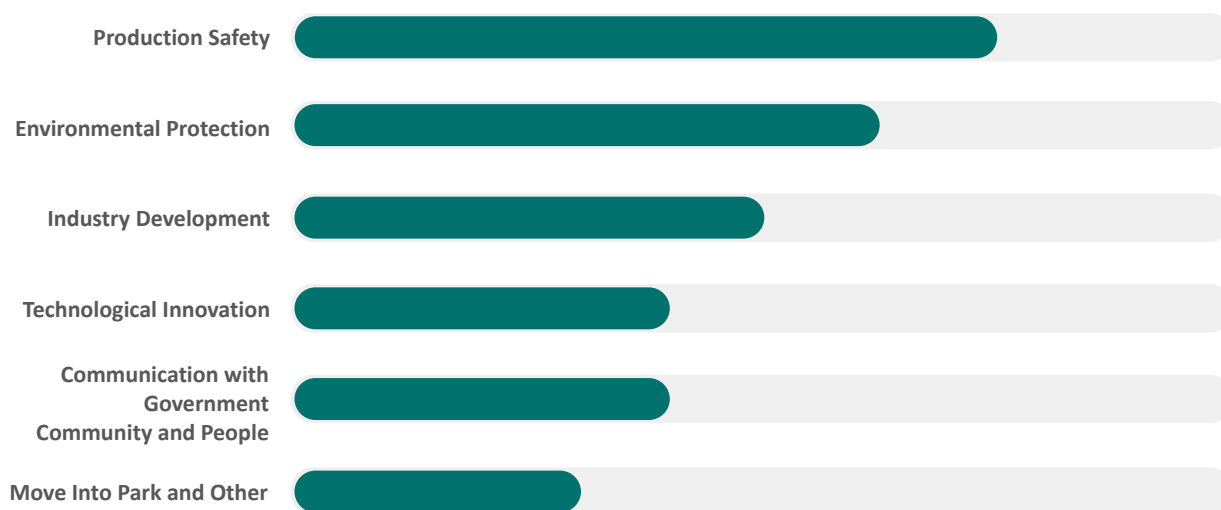
<b>Move into Park and Other</b>	34. Difficulties faced by chemical companies in the operation development due to relocation
	35. Difficulties in production cost caused by relocation of chemical companies
	36. Attention of chemical companies to supporting facilities in the target park, such as talents, infrastructure and customer industry chain
	37. The decision of the enterprise to move into the park leads to the possibility of directly closing the enterprise (shifting production to other existing bases)
	38. Importance of industrial adjustment or upgrading after relocation of companies or rectification of the park
	39. The impact of enterprise relocation on the allocation of resources (such as the supply mechanism of raw materials and auxiliary materials) and energy
	40. The impact of enterprise relocation on the allocation of resources (such as the supply mechanism of raw materials and auxiliary materials) and energy
	41. Adjustment of the third-party management mechanism of the relocation enterprise, such as the change of the cooperation mechanism of third-party service providers such as transportation, warehouse and garbage disposal
	42. Impact of relocation on employee turnover
	43. Fairness and transparency of the government's relocation policy and the impact of its planning on foreign-funded companies
	44. Response to the policies issued by the national and regional governments on "relocation to the park" and "rectification of chemical industrial parks", and adjustment of company policies (such as the response to important policies on relocation to the chemical industrial park, cleaning up the chemical industrial park, and winning the three-year action plan of the blue sky defense war)
	45. Influence of enterprise relocation on difficulty of application and acquisition of various government permits (such as completion acceptance, pollutant discharge permit, production safety certificate, etc.)
	46. Difficulties in interaction between chemical companies and management committees and residents of surrounding communities
	47. Difficulties for foreign-funded chemical companies to participate in the Chinese government support program and government bidding
	48. The efforts of joining the international organization for sustainable development
	49. Support for the United Nations sustainable development goals
50. Difficulties for foreign-funded chemical companies take the responsible to educate the local companies in terms of sustainable development	
<b>Communication with Government, Community and People</b>	51. Difficulties in communicating with communities involved and coordinating emergency response in case of emergencies
	52. The importance of companies' contribution to society to the development of companies (such as donation, infrastructure construction, charity activities, local economic development and education development, etc.)
	53. Effectively establish a communication mechanism with the government to coordinate local sustainable development and respond to government regulatory requirements in a timely manner
	54. Impact of chemical companies that the local government, community and residents will improve the objective scientific cognition in environmental protection, safety and health
	55. Uncertainties in the world economic environment, such as the Sino-US trade war, pose challenges to the import and export of foreign chemical companies, as well as operational difficulties



## 1.2 Potential Materiality Issues Prioritization

Secondly, to understand the concerns and priority of various stakeholders in the chemical industry, we have developed a questionnaire survey based on six categories of potential materiality issues. 34 chemical companies have participated, including 27 AICM members and 7 non-AICM members. After sorting and scoring each question, we summarized the results and prioritized the issues under each category.

### Priority of Issues



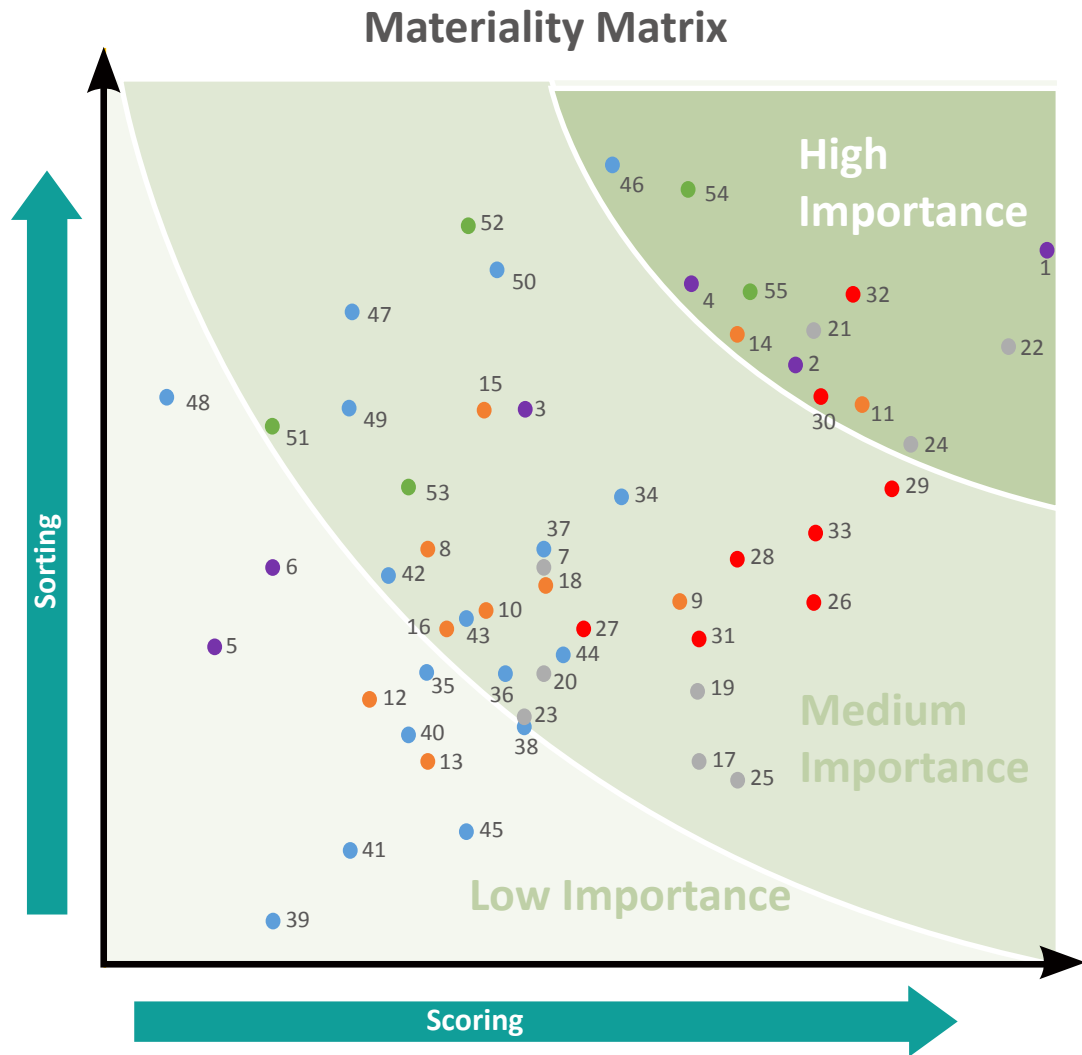
### Issues Prioritization

Category	Top Priority
Production Safety	· Formulate, update and implement effective safety management system according to the requirements of national and local regulators and the companies' situations
Environmental Protection	· Impact on chemical companies of the difficulties in dealing with solid and chemical hazardous wastes in local communities and the rising cost burden
Industry Development	· The impacts of the development of chemical industry chain to the whole economic development of China
Technological Innovation	· Companies focus on the study of sustainable performance in product life cycle
Communication with Government, Community and People	· Effectively establish a communication mechanism with the government to coordinate local sustainable development and respond to government regulatory requirements in a timely manner
Move into Park and Other	· Difficulties faced by chemical companies in the operation development due to relocation · Uncertainties in the world economic environment, such as the Sino-US trade war, pose challenges to the import and export of foreign chemical companies, as well as operational difficulties

Score High to Low

# 1.3 Materiality Matrix

Finally, we discussed with the AICM management about the disclosure issues and improvement suggestions mentioned in the materiality matrix and questionnaires. We have also developed communication plans with stakeholders by referring to AICM’s management experience and professional knowledge of chemical industry. Since local chemical companies were particularly concerned about the issue of "move into park" in the questionnaire, after communication with AICM, we decided to include this issue in the follow-up interview with the representatives of stakeholders.



- Technological Innovation
- Production Safety
- Communication with Government, Community and People
- Environmental Protection
- Move Into Park and Other
- Industry Development

\*Note: 1. "Sorting" is the ranking of priority of the issues under each category;  
 2. "Scoring" is the grade of issues under each category.

## List of Materiality Issue with High Importance

Topic	Issue
Industry Development	1. The impacts of the development of chemical industry chain to the whole economic development of China
	2. The importance of chemical industry to drive the development of other industries
	4. Impact of industrial layout on business development and supply chain in upper, middle and lower reaches of chemical companies
Technological Innovation	11. Companies focus on the study of sustainable performance in product life cycle
	14. Recent willingness of chemical companies to further invest in Chinese R&D institutions
Environmental Protection	21. Difficulties in the approval of new, rebuilt and expanded projects for chemical companies under environmental supervision
	22. Impact on chemical companies of the difficulties in dealing with solid and chemical hazardous wastes in local communities and the rising cost burden
	24. The impact of environmental regulation to industrial development includes the rationality of regulatory intensity, the clarity of regulatory policy, and the degree of impact of the plan and frequency of implementation of supervision and inspection on companies
Production Safety	30. Chemical companies pay attention to the safety management level of contractors and suppliers
	32. Difficulties of chemical companies in the safe storage, transportation of hazardous chemicals and increased compliance costs
Move Into Park and Other	46. Difficulties in interaction between chemical companies and management committees and residents of surrounding communities
Communication with Government, Community and People	54. Impact of chemical companies that the local government, community and residents will improve the objective scientific cognition in environmental protection, safety and health
	55. Uncertainties in the world economic environment, such as the Sino-US trade war, pose challenges to the import and export of foreign chemical companies, as well as operational difficulties

## List of Materiality Issue with Medium Importance

Topic	Issue
Industry Development	3. Difficulties in the recycling of resources in the chemical industry
Technological Innovation	7. The opportunities and challenges of digital transformation for enterprise management
	8. The influence of digital revolution on the traditional business model of chemical industry
	9. The importance of visualization, artificial intelligence and automation in the configuration of production processes
	10. The scale economy brought by the entry of chemical companies and the improvement of industrial chain bring new opportunities for companies in the application of innovative technologies
	15. Difficulties in R&D investment of chemical companies, such as site selection, land cost, and government approval
	16. Difficulties in maintaining intellectual property rights of chemical companies

Environmental Protection	17. Setting up the functions of key environmental protection positions and the participation of the company's management in environmental protection work
	18. Meet the impact of environmental protection policies and regulations on the cost of chemical companies
	19. The existing internal environmental protection system of chemical companies has been formulated, updated and effectively implemented in accordance with the requirements of the state and local regulatory authorities according to the companies' own conditions
	20. Impacts of relocation of chemical companies on emissions and environmental management of chemical companies, for example, inconsistency between relocation of local environmental protection policies and original policies will affect the operation of companies
	23. Difficulties in establishing effective dialogue mechanisms between chemical companies and environmental regulatory authorities
	25. The impact of environmental supervision on suppliers by environmental protection regulators on chemical companies, such as the impact of environmental violation punishment on chemical companies by suppliers
Production Safety	26. Establishment of functions of key occupational health and safety positions and participation of company management in occupational health and safety work
	27. The impact of occupational health and safety policies and regulations on the cost of chemical companies
	28. The influence of the chemical industrial park on the safety production of chemical companies, such as strengthening the awareness and supervision of the safety production of companies
	29. Formulate, update and implement effective safety management system according to the requirements of national and local regulators and their own situations
	31. Chemical companies' concern for customers' management level of hazardous chemicals
Move Into Park and Other	33. The importance of occupational health and safety supervision to the development of the industry includes the rationality of the supervision intensity, the clarity of the supervision policy and the degree of impact of the plan and frequency of supervision and inspection on companies
	34. Difficulties faced by chemical companies in the operation development due to relocation
	36. Attention of chemical companies to supporting facilities in the target park, such as talents, infrastructure and customer industry chain
	37. The decision of the enterprise to move into the park leads to the possibility of directly closing the enterprise (shifting production to other existing bases)
	38. Importance of industrial adjustment or upgrading after relocation of companies or rectification of the park
	42. Impact of relocation on employee turnover
	43. Fairness and transparency of the government's relocation policy and the impact of its planning on foreign-funded companies
	44. Response to the policies issued by the national and regional governments on "relocation to the park" and "rectification of chemical industrial parks", and adjustment of company policies (such as the response to important policies on relocation to the chemical industrial park, cleaning up the chemical industrial park, and winning the three-year action plan of the blue sky defense war)
	47. Difficulties for foreign-funded chemical companies to participate in the Chinese government support program and government bidding
Communication with Government, Community and People	49. Support for the United Nations sustainable development goals
	50. Difficulties for foreign-funded chemical companies take the responsible to educate the local companies in terms of sustainable development
	51. Difficulties in communicating with communities involved and coordinating emergency response in case of emergencies
	52. The importance of companies' contribution to society to the development of companies (such as donation, infrastructure construction, charity activities, local economic development and education development, etc.)
	53. Effectively establish a communication mechanism with the government to coordinate local sustainable development and respond to government regulatory requirements in a timely manner

## List of Materiality Issue with Low Importance

Topic	Issue
Industry Development	5. The difficulties faced by foreign-funded chemical companies in enterprise integration when they merge and recombine domestic companies
	6. When enjoying the local industrial support or financial encouragement policies, the differences between foreign-funded chemical companies and local companies (state-owned companies, private companies) will affect the foreign-funded chemical companies
Technological Innovation	12. Importance of cross-industry integration for innovation in chemical industry
	13. Difficulties in retaining R&D talents and exploring R&D talents in the chemical industry
Move Into Park and Other	35. Difficulties in production cost caused by relocation of chemical companies
	39. The impact of enterprise relocation on the allocation of resources (such as the supply mechanism of raw materials and auxiliary materials) and energy
	40. The impact of enterprise relocation on the allocation of resources (such as the supply mechanism of raw materials and auxiliary materials) and energy
	41. Adjustment of the third-party management mechanism of the relocation enterprise, such as the change of the cooperation mechanism of third-party service providers such as transportation, warehouse and garbage disposal
	45. Influence of enterprise relocation on difficulty of application and acquisition of various government permits (such as completion acceptance, pollutant discharge permit, production safety certificate, etc.)
	48. The efforts of joining the international organization for sustainable development

Since China's reform and opening up, foreign chemical companies have achieved remarkable development in China. China's accession to the WTO has also established the confidence in the industrial layout of foreign chemical companies in China. Since China's economic development has become stable, the pain of upgrading industry chain starts to be evident, and the situation of environmental pollution control is becoming more and more strict. Like most developed countries, China followed their path of "development first, treatment later". At present, great emphasis has been paid on the sustainable innovation of product life cycle. The national governance policy for chemical companies is escalating, and the planning of chemical industry parks in various provinces and cities has been launched. Therefore, it is important to understand the pressures and tests faced by foreign chemical companies under these circumstances.

## Deep Insight

02



### 2.1 Industry Development

From the perspective of industry development, chemical companies have played a vital role in the development of China's economy, either in the past or at present. According to the "Economic Report of China's Petroleum and Chemical Industry in 2018" written by the China Petroleum and Chemical Industry Federation, by the end of 2018, the main business income of the petroleum and chemical industry has reached RMB 12.4 trillion with a total profit of RMB 839 billion, accounting for 12.1% of the total national industrial income and 12.7% of the total national profits, respectively. The total assets have also reached RMB 12.8 trillion, accounting for 11.3% of the total national industrial assets.

Foreign chemical companies have played an important role in supporting the national production. Combined with the previous questionnaire survey, this chapter discusses the contribution of the chemical industry chain to China's economic development, the strategic layout of foreign chemical companies' industrial chains, and the impact of Sino-US trade wars on the development of foreign chemical companies.



## Contribution of the Chemical Industry Chain on China's Economy

The chemical industry chain plays an important role in the economy of China. From a macro perspective, the chemical industry and its products have been applied to all aspects of production and people's life. The chemical industry is very dependent on the integration of the industrial chain layout, due to its long industrial chain and wide range. The healthy development of the chemical industry chain will not only contribute profits to the society but also bring new solutions to the industry chain and consumers. Therefore, the chemical industry has significant correlation and driving effects on other industries. According to the interviewed members, the chemical industry has a significant role in the following industries:



- Automobiles
- Semi-conductor



- Aviation
- Medical



- Construction materials
- New energy

- Coating
- Agriculture

- Electronic
- Logistics

- Display industry
- ...

The chemical companies in China are typically classified into three categories: state-owned companies, foreign companies, and private companies. According to the interviews, AICM found that the current chemical industry chain in China is mainly comprised of three parties: the extraction and processing of related natural resources are dominated by state-owned companies in the upstream; foreign chemical companies are mainly engaged in the midstream, because of their advantages of global advanced technology and cost efficiency; private companies play more active role in the downstream manufacturing industry and rely on the excellent chemical materials provided by the midstream to further derive various industry applications.

As domestic owned (state-owned and private) and foreign chemical companies have different positions in the national chemical industry chain, their respective roles in China's economic development also have their own advantages. According to the summarized opinions of the interviewed members, the advantages of foreign chemical companies are mainly reflected in the following aspects:

- Foreign chemical companies have more advanced technology and management experience, and could bring more values to the whole supply chain through innovation and technology.
- Foreign companies are self-disciplined, on the establishment of internal management system and the compliance level of policy requirements;
- Foreign companies have higher levels of specific investment, higher requirements and thus lower risks in production safety.
- As in the middle of the industry chain, foreign companies can better be positioned as a bridge connecting the upstream and downstream.

Similarly, private chemical companies also have their own advantages of industrial development, mainly reflected in:

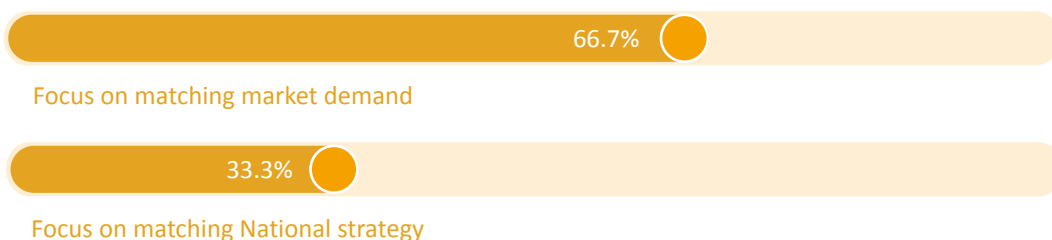
- Rapid response and accurate interpretation of national policies;
- Motivation to innovate due to the simple organization structure, higher risk taking including speed of decision-making and agility;
- A deeper understanding of local customers and their needs.

Manufacturing is the foundation industry of national development. As for the requirements of "reducing the overcapacity" and the guidelines of developing new manufacturing industry, AICM believes that the key way to shape China's new manufacturing industry chain is to understand how to formulate effective development standards and strictly implement. Companies should more actively take their social and economic responsibilities, and AICM is willing to build bridges between chemical industry and other industries, as well as between domestic and foreign owned chemical companies to promote the exchanges and economic collaboration.

## Foreign Chemical Companies' Strategy in China

China's opening-up policy has provided a variety of favorable opportunities for the development of foreign owned chemical companies. We summarized the interviews of members on the topics of the main driving force for the development of foreign chemical companies in China, as well as the strategic decisions that are mainly focused and relied on China's development. The results showed that, 66.7% of the interviewed members said that the company's strategic development is mainly directed by the government policies, which continue to promote the optimization of the production setup. In recent year, the "move into park" policy is an example to encourage the chemical companies to reconfigure its industrial chain and formulate strategic development directions. AICM understand that it has become the concerns of foreign chemical companies about how the national and local government would establish high-standard parks and implement different requirements based on different standards.

### Strategy in China



In addition, some interviewed members think that the premise of their development in China is to understand and deeply interpret China's policies. Companies need to understand China government's priorities in national economic development and develop their own strategic layout. Meanwhile, 33.3% of the interviewed members believed that their investment in China is mainly oriented to the Chinese market, which is also an important guarantee for the companies under the market economy. Some interviewed members also said that there is a ternary relationship among policies, markets and companies. Companies are trying to keep the pace with the market, but the policy has not followed up with the market in time, which can be reflected by the frequency and intensity of policy adjustment of the economy. It is recognized that the national policy has been significantly improved in recent years, and the consistency with the market is getting better as well as the improvements in environmental management and potential market development. It is also the initial focus of AICM that the market can be further consistent with the policy which expected by the interviewed members, and the win-win situation can be eventually achieved between the country and the companies.

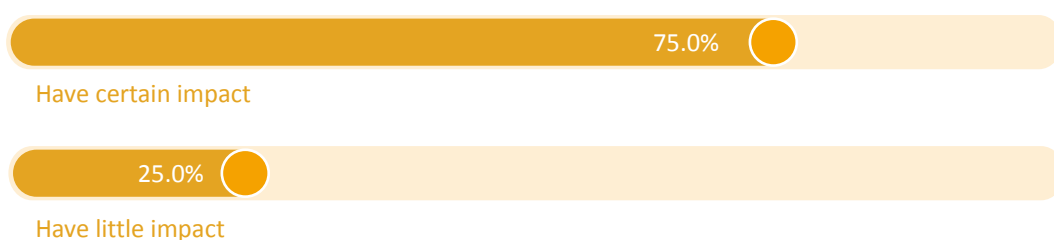
Based on the interviews, AICM has summarized the proposed solutions, including:

- Additional support for emerging and high-tech industries could attract more investment from foreign chemical companies;
- If the policies were more science-based and the implementation more localized, it could effectively help the companies to operate in compliance;
- Foreign owned chemical companies hope to be treated equally with local companies in terms of policy requirements;
- Foreign owned chemical companies are willing to see the simplified administrative procedures and tax incentives;
- It is expected that the opinions of foreign owned chemical companies can be included when formulating policies and strategies that may have a significant impact on the company's business and interest, such as the National Industry Strategy.

## Impact of Sino-US Trade War on Foreign Chemical Companies

Foreign owned chemical companies in China must face the situations brought by the Sino-US trade war, and different companies have their own experiences and assessment. Like most of the members interviewed, AICM is optimistic about the resolution of the trade war and believes that the Chinese government could properly handle and end the trade war soon. Overall, the trade war has little impact on the foreign owned chemical companies, and no interviewed members considered it as a major impact on their businesses. 75.0% of the interviewed members believed that trade war had some impact on their business, while 25.0% believed that the trade war had almost no impact. The impact factors of Sino-US trade war are mainly focused on:

### Impact of Sino-US Trade War



- Sino-US trade war represents the uncertainty of global economic development. Like other economic uncertainties, it will disrupt investment decisions and drive the companies to become more conservative in their investment, thus limiting the development;
- Sino-US trade war has an indirect impact on many companies, because their products may be used as raw materials in different industries, or their source of raw materials are affected by the trade war, which inevitably leads to the indirect impact on companies;
- For companies that procure from the US as a single source of raw materials, their costs will continue to increase when the trade war breaks out;
- According to the new US tax law, it will affect the US companies continuing their investment in China.
- The interviewed members who believe that the Sino-US trade has barely affected their business development are because: The company's main raw materials are locally sourced and the products are consumed locally, with less cross-border trade and thus minimal impact;
- The companies pay more attention to long-term investment prospects in the coming decades, not limited to short-term problems within six months, which means companies are optimistic about the trade war ending in a short term. The development in China will be a long-term process: it is still very promising in the future and will not be affected by the Sino-US trade war.

Based on the views of the interviewed members, it can be concluded that the trade war is not a major direct impact for most companies and they are very confident about the Chinese government to minimize the impact on the business. As the world's second largest economy, China's volume and power are strong enough. China has paid more attention to the protection of technology and intellectual property rights, AICM is eager to see more improvement in the policies of patent review and protection, so that all companies have a level playing field in China, which is also one of the important principles of the WTO organization. On the other hand, companies could adjust their industrial chain structure and supply chain structure to minimize the impact of any trade disturbances.



## 2.2 Technological Innovation

The chemical industry has always been a technology-intensive industry. All foreign chemical companies are highly recognized for their technological innovation. China is the world's largest producer of industrial products, but local transplantation and even localization of R&D and innovation is not easy to be achieved in a short term. AICM has interviewed its members about their plans for R&D and innovation in China. They all have the confidence, but also have some different views and opinions. This chapter will discuss this issue from both the innovation of the product life cycle and the willingness of foreign chemical companies to invest in research and development in China.

### Innovation throughout the Product Life Cycle

For the sustainable development of companies, the innovation throughout the product life cycle is crucial to the company operations. This is different from the general product life cycle, which focuses on the market life of the product. The whole life cycle discussed in this report is the entire life process includes the procurement of raw materials, product design, production and optimization, sales and use, and product recycling. In the interviews with members, AICM found that the following consensus of innovation has been reached:

- Only by achieving sustainable performance, including sustainable procurement, design optimization, energy consumption reduction, low-carbon orientation and product recycling throughout the product life cycle could the company be fully prepared at all times and win in the future competition;
- At present, foreign owned chemical companies are more prospective about the product life cycle, and have also placed more attention, while domestic chemical companies are gradually improving their awareness.

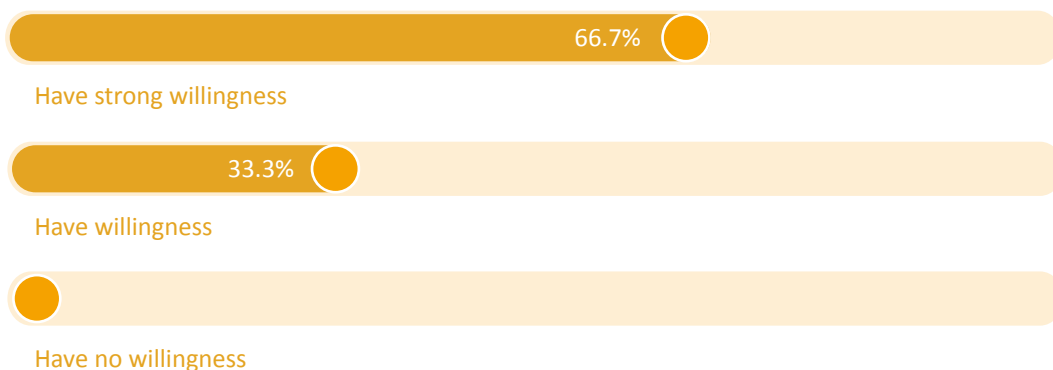
In fact, the interviewed members have defined the innovation throughout the product life cycle as a global issue. For global multinational companies, it is a global linkage to focus on the sustainable innovation throughout the product life cycle, and it will also bring the global impact. At present, ever increasing companies grow aware that the concept of sustainability is critical, including the environmental footprint of their production activities, circular economy, supply chain management and employee training. Some foreign owned companies must comply with product whole life cycle regulations of their own countries, so they also bring these requirements to China, and take the lead in adopting in their business before the relevant laws in China have been formulated. This also benefits from the global system and standards used by foreign companies, which will not be compromised although the regional differences exist.

Employees in domestic owned companies are also consumers. With the increase of their income and living standards, the acceptance of sustainable development has been gradually improved, and since the sustainable development model becomes mature, the public will consciously abandon the old primary production model and focus more on current sustainable development. AICM believed that China may be the best place for the innovation throughout the product life cycle in the future.

## Willingness of Foreign Chemical Companies to Invest in R&D in China

Considering the domestic environment in China, foreign owned chemical companies have the same opinions on whether to invest in R&D in China. 100% of the interviewed members are willing to invest in R&D in China, and 66.7% has expressed a strong willingness. They believed that it is an inevitable choice in the future to transfer the innovative R&D work to China, and another 33.3% said they may also establish a R&D center in China in the future.

### Willingness to Invest R&D in China



Investment in R&D in China can be further refined. Most interviewed members clearly distinguished between "research" and "development". The so-called "research", is the preliminary research in the early stage. It is an innovation investment based on the company strategy, not driven by the short-term economic interests. The so-called "development", is to create products based on the market needs and use the advantages and knowledge to meet the requirements. Some members said that China's economic development has its specific needs, which can be met and matched by promoting the development of local products. Therefore, the focus of R&D investment in China is "development", that is, to meet the needs of new markets and new customers, rather than some basic or technical theoretical research and innovation to obtain intellectual property rights. The investment of foreign chemical companies in China is mainly reflected in:

- Technical R&D support
- Assist in formulating industry standards to reduce the risks of safety issues
- Advance process innovation, and optimize production process system
- Introduce world best practices and develop innovative solutions based on existing Chinese technologies.

Foreign chemical companies advocate an "open innovation" environment, and believe that Chinese society and industry will achieve digital transformation. AICM will drive foreign owned chemical companies to strengthen cooperation with more outstanding domestic owned companies and jointly develop, as well as assist China to master its own R&D capabilities. Based on China's current status of R&D and innovation, AICM hopes that the government will work with the companies to improve the legislation of intellectual property while companies will actively explore how to effectively invest in R&D in accordance with the market and their own conditions.

## 2.3 Environmental Protection and Production Safety

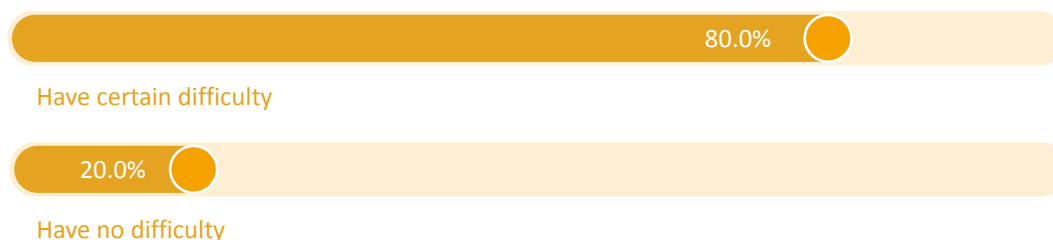
Environmental protection and production safety have always been two important issues faced by all chemical companies. In recent years, China has advocated green, eco-friendly and sustainable development, and considered green development as its important strategy to promote economic restructuring. Investigations and remediations have been conducted for the chemical companies with heavy pollution. Meanwhile, the government has carried out the supervision of environmental protection to evaluate and control the environmental performance of chemical industry. In addition, production safety is also the top priority for the government. The chemical industry has been regarded as an accident-prone industry by the government and the public. The government has continued to strengthen the supervision over production safety of the chemical industry, which has undoubtedly affected the chemical companies. In the preliminary questionnaire stage, production safety and environmental protection were ranked Top 1 and Top 2 topics that concerned most the survey participants. In the follow-up in-depth interviews, the interviewed members have expressed five specific opinions and suggestions on the environmental administrative approval, regulatory supervision, solid waste disposal, compliance cost and supplier safety management.

### Environmental Administrative Approval

According to the interviews, China is currently moving in the right direction to improve the standards and requirements of safety and environmental protection. To achieve these goals, the government has introduced new policies and reorganized the regulatory agencies, which is helpful to the accurate management of environmental approval procedures. In this process, it may cause a little challenge for the chemical companies. But it is understandable that all these measures are trying to make changes in the right direction. The interviewed members mentioned that China is promoting the approval and supervision procedures of safety and environmental protection for the chemical industry including domestic and foreign companies, which results more in transparency and efficiency.

It was found that, 80% of the interviewed members indicated that the new construction, reconstruction and expansion projects of chemical companies are facing difficulties in obtaining approvals under the environmental protection supervision, mainly in the areas of slow approval time and stricter standards.

#### Obtaining Environmental Approval



The interviewed members think that there are four main reasons:

- The introduction of new policies is often accompanied by the reorganization of regulatory agencies, which may cause a lack of consistency in approval process;
- Some policies are not scientific enough and the characteristics of the industry are not fully understood;
- Different regions have different approval process, and regional economic factors may increase the difficulties of the obtaining approval for companies in economically developed regions;
- Some local governments may misinterpret the policies, which could confuse some companies during implementation.

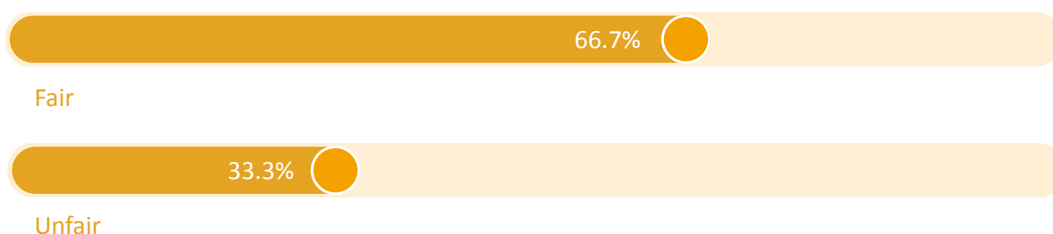
Some interviewed members indicated that although the approval is difficult, the companies should make efforts to ensure that the policies are interpreted at the same level. Meanwhile, the government could provide professional trainings for relevant law enforcement officials, improve the transparency of approval, and establish an effective feedback mechanism for companies. The following five suggestions are:



- The companies need to apply more resources to communicate with the government and local communities to ensure the consistency of policy interpretation;
- Besides legislation, the government could further strengthen the scientific enforcement of law. For companies with large investment in compliance, the government may consider providing appropriate incentives or exemptions;
- It is recommended that the government improve the unification and transparency of legal operations to increase the efficiency and reduce the time of approval;
- It is recommended that the government organize trainings for relevant law enforcement officials;
- It is recommended that the government establish an effective feedback mechanism for the companies.

66.7% of the interviewed members believed that local owned chemical companies are facing the same challenges as foreign owned chemical companies in the environmental administrative approval. They are advantaged in policy interpretation, while foreign owned companies have gained a lot of global operational experience and had their own standards in terms of compliance and supervision.

### Policy Fairness



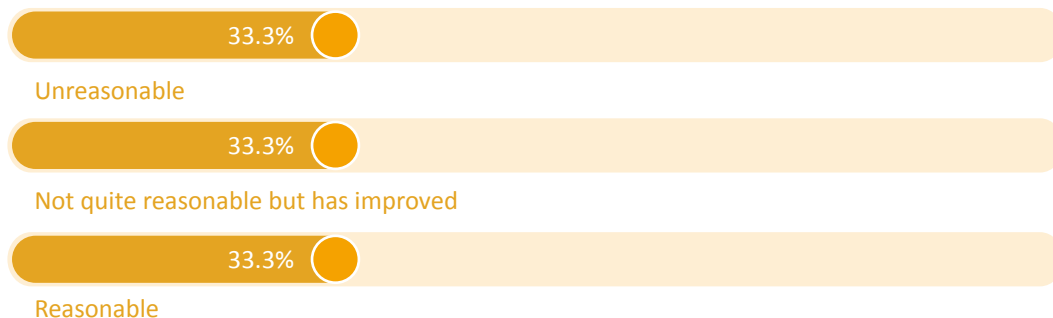
AICM believes that the improvement of the standards and regulations for safety and environmental protection could help China build a more sustainable and healthier chemical industry in the long term. With the efforts of Chinese government, the fair rewarding and recognition policy will continue improving, and the approval process will be more transparent and efficient.

### Regulatory Supervision

To achieve the goals of green, pollution-free and sustainable development, China has continuously strengthened its supervision, and raised the attention of chemical companies of the need for environmental protection while demonstrating China’s determination of pollution control. 33% of the interviewed members have expressed their understanding of the current supervision level. They believed that increasingly strict supervision is the development trend of the world, and it is the right direction to gradually level-up the requirements of environmental protection and production safety. They are full of confidence in the policies and measures.

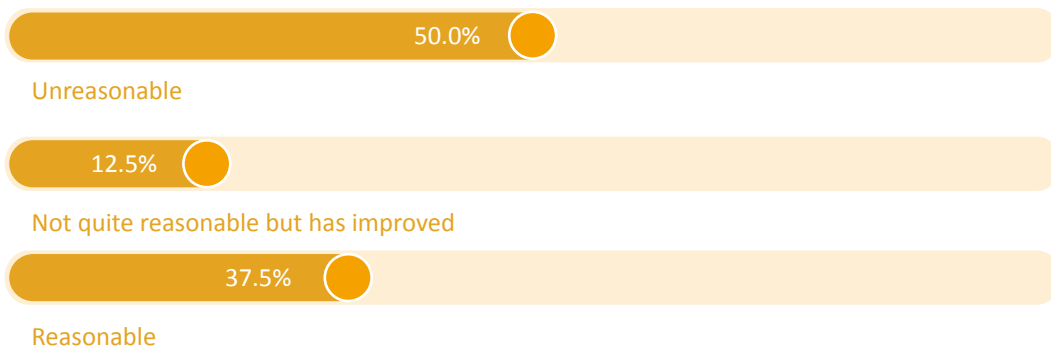
However, 67% of the interviewed members thought that the current supervision is not quite reasonable. Half of them believed the supervision approach and intensity have been gradually improved in recent years and the situation of "one size fits all" has been mitigated, but it still needs more efforts from the regulators. Different indicators are developed for different companies, and companies that fail to meet the legal discharge limits are required to reduce more emissions. Companies with strict control over emissions will be given below-average requirements for their emission reduction.

### Supervision Intensity



For the supervision frequency, 37.5% of the interviewed members believed that the supervision frequency is reasonable, and is an effective way to ensure the compliance of company operations. In addition, 62.5% of the interviewed members indicated that the frequency of supervision has kept increasing in recent years, leading to greater pressure on business operations. For the whole industry, it is not reasonable to adopt the same frequency for different companies. Therefore, it is recommended that regulators could focus more on monitoring the effectiveness of supervision.

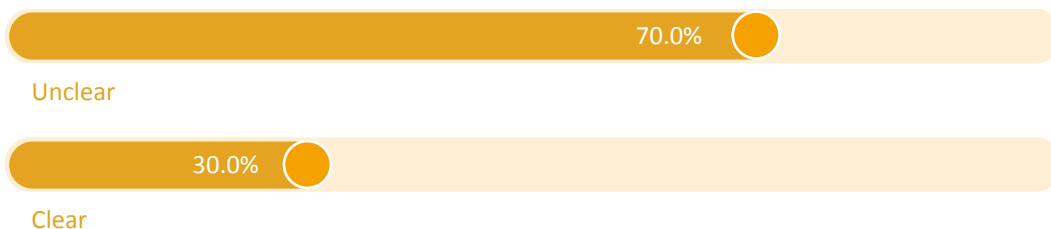
## Supervision Frequency



For the policy clarity, 70% of the interviewed members indicated that the policy is not always clear to the companies and the misinterpretation of the policy has caused foreign owned chemical companies to spend much resources during the implementation. Some companies also raised the problems of policy coverage. Some specialty chemical companies, such as industrial gas and other chemical products and services, may be neglected by local policies, resulting in some confusion of the regulatory process and standards.

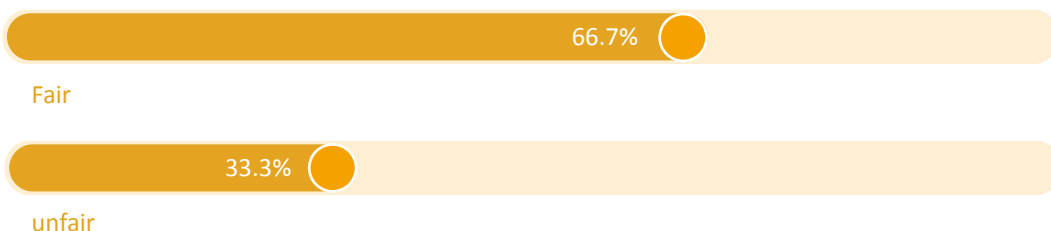
Interviewed members also believed that adequate communication is necessary to ensure the transparency of policies, and establishing a good communication channel is an effective way to solve the misinterpretation.

## Policy Clarity



For the fairness of incentive policies, 66.7% of the interviewed members were quite positive and very convinced that foreign owned chemical companies were treated consistently with local owned chemical companies by the government. Some interviewed members thought that the actual operating conditions need to be fully considered by the regulators to develop more practical implementation standards. It is quite unfair to use "one size fits all" approach and the interviewed members suggested that the government could utilize the expertise of chemical industry associations and companies to assist the government formulate a fair reward and punishment system.

## Incentive Policy Fairness



Overall, regulatory pressures and challenges are mainly from the following five aspects:

- The revision of some laws and regulation has not considered the actual operating conditions and standards of each company, and using "one size fits all" approach is quite unfair to some companies;
- When the central government issues a new policy, the interpretation of the local government is relatively slow, and some misunderstandings may cause the company's failure to respond promptly and clearly;
- Different regulators issue inconsistent policies or misunderstanding the same policy, leading to unclear interpretation and loopholes in enforcement;
- Frequent legislation revisions increase the cost of investment and the time of facility construction;
- Due to the large political system, the responsible levels of policies are often different, including park level, district level, city level and provincial level, which may confuse the companies when implementing policies or applying for approval.

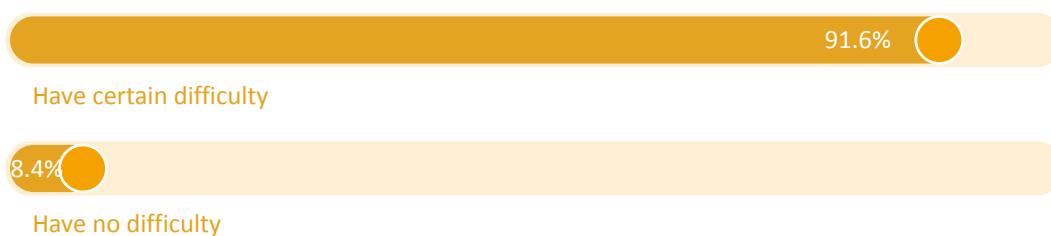
Companies and the government could make mutual efforts to enhance the supervision approach:

- Different companies have obtained years of experience in their respective fields and already established different but effective operating systems. Therefore, it is recommended to adopt flexible supervision approaches in accordance with actual conditions of different companies;
- The expertise of associations and companies can provide good technical support to local governments to establish a fair system of rewards and punishments;
- Companies shall establish a system to monitor regulatory updates and evaluate the impact on their business, and develop a regular audit plan to ensure all operations comply with the latest regulatory requirements.

## Solid Waste Disposal

Solid waste disposal is an inevitable problem in the daily operation of chemical companies. In the preliminary questionnaire survey, solid waste disposal was selected as the most concerned issue in environmental protection by foreign companies. In recent years, thanks to the promotion and development of sustainable concepts, many chemical companies have started to optimize the recycling and treatment processes and reduce the amount of waste generated. However, 91.6% of the interviewed members believed that foreign chemical companies have encountered challenges in solid waste disposal. The interviewed members mentioned that the transportation industry standard "Road Transportation Rules for Dangerous Goods (JT/T 617)", effective on December 1, 2018, has further improved the requirements for transportation of vehicles and dangerous goods. As a result, some companies could not continue to use the vehicles they purchased, and further affect their businesses. The interviewed members also provided some suggestions for the current situation.

### Solid Waste Disposal



At present, foreign chemical companies are mainly faced with the following difficulties:

- On the one hand, the government has restricted the storage and transportation facilities of hazardous waste; On the other hand, only a limited number of companies are qualified for hazardous waste disposal. Chemical companies are therefore faced with a dilemma;
- Hazardous chemicals are supervised by multiple departments. Sometimes, different policies are applied for the same chemicals at different stages, resulting in low management efficiency and even conflicting supervision standards between departments;
- The qualified waste disposal suppliers located close have limited processing capacity, so chemical companies have to transport the waste to the qualified suppliers in a longer distance, which cause additional costs and risks;
- Due to the limited number of qualified waste disposal suppliers, they keep raising the price by comparison, which increase the waste disposal cost for chemical companies;
- Such policy as the legal transport distance of solid waste keeps changing, which means if the new policy releases, companies don't have enough time to establish a new supply chain and start cooperation immediately;

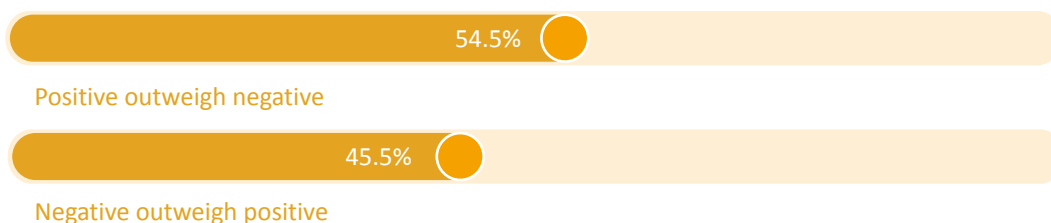
In addition to the challenges, the interviewed members also provided many suggestions and solutions:

- It is expected that the government could support companies to minimize waste generation by circular economy projects and the optimization of disposal process;
- The government is suggested to open the waste disposal market to enhance waste disposal capacity;
- It is expected that the government could consider the amount of solid waste in particular areas to ensure the sufficient qualified waste disposal facilities in the area;
- It is expected that the government could provide some support for chemical companies in financial incentives to reduce the cost of solid waste disposal;
- In the process of law enforcement, the government might consider developing different implementation standards of each company rather than "one-size-fits-all".

## Compliance Cost

All the interviewed members believed that the compliance cost is gradually increasing. As the regulatory requirements become more stringent, it is essential for companies to continue increasing the investment. Most of the interviewed members mentioned that the positive impact of higher compliance costs is greater than the negative impact. These investments are focus on personnel trainings, environmental protection facilities, better technologies and new solutions, which can avoid larger losses in the future. To meet the compliance requirements, companies has increased the efficiency and improved the processes, but still need plenty of time for adjustment.

### Compliance Cost Impact



54.5% of the interviewed members believed that the positive impact of increasing compliance cost outweighed the negative impact, mainly for the following two reasons:

- The increase in compliance costs is primarily caused by the personnel development and training, strengthening of supervision, and the search for better technologies and new solutions. It is positive for the companies from the perspective of sustainable development;
- In the long term, it is important for environmental protection to invest in optimized transportation, compliance storage and solid waste recycling.

The interviewed members who thought the negative impact of increasing compliance cost outweighed the positive impact are mainly due to the following three considerations:

- After some accidents, many logistics companies began to avoid transporting dangerous chemicals or raising prices, which caused the increasing operating costs;
- From the perspective of company competition, if some companies avoid compliance costs by other means, it will cause bad competition in some markets for foreign chemical companies;
- If the transparency in the procurement process cannot be guaranteed, it may cause corruption.

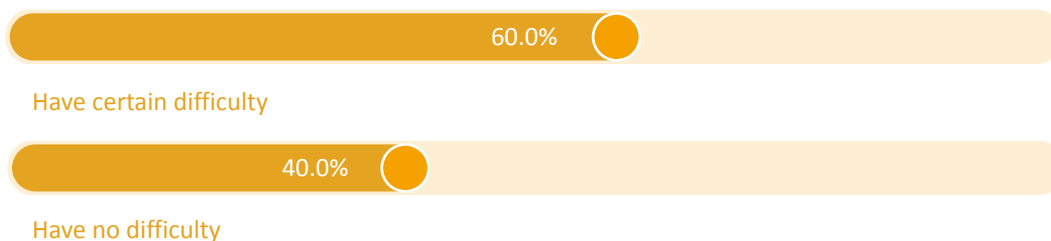
AICM believes that it is positive to reasonably increase the compliance costs. Most foreign owned chemical companies are willing to invest in environmental protection to reduce the operational risks and support the government to continue increasing control over environmental protection. The input in sustainable development is not only a cost, but also an investment. It is also expected that the government could provide some honors or rewards, such as linkage with premiums, to further encourage the companies to increase their investment in environmental protection.

## Supplier Safety Management

Suppliers and contractors play an important role in the chemical industry chain. The safety performance of suppliers and contractors is often regarded as a part of the safety performance of chemical companies. It is an effective way to reduce the safety risks by strictly controlling and managing the safety of suppliers. However, 60% of the interviewed members mentioned that they had great difficulties in the safety management of suppliers and contractors, mainly in the following two points:

- Some contractors and suppliers have weak safety awareness. It is difficult to find qualified contractors with good training and appropriate knowledge and skills to provide services to the chemical industry;
- Some contractors and suppliers can only maintain an awareness level of the importance of safety management, but will not integrate safety management into their corporate strategic culture.

### Supplier Safety Management



The interviewed members suggested that foreign chemical companies can support suppliers and contractors to improve safety management level in the following three aspects:

- Supplier training: improve the safety awareness of suppliers and contractors through continuous training, and integrate safety awareness into their cultural values;
- Supplier communication: help suppliers and contractors understand that the sustainable development inputs are not costs but investments, which will bring long-term benefits to the business;
- Supplier screening: strengthen supplier control to ensure the compliance with sustainability-related provisions and conduct social responsibility audits of suppliers.

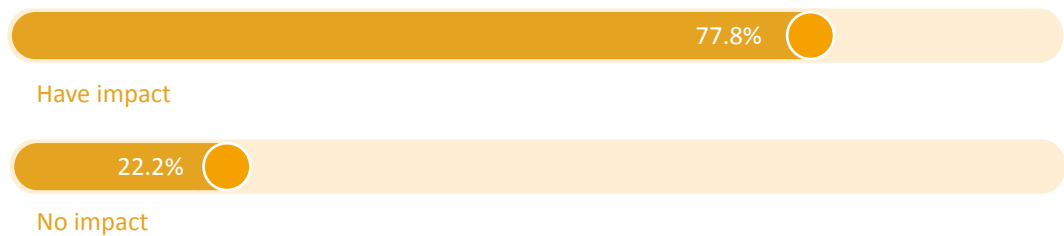
## 2.4 Move into Park

Since the Ministry of Industry and Information Technology of the People's Republic of China issued the Guideline on Promoting the Standardized Development of Chemical Industrial Parks on December 10, 2015, the government has vigorously promoted the policy of chemical companies' relocation into the park. This policy has undoubtedly brought positive influence to the management of the chemical industry, and has effectively laid out and planned for the whole chemical companies in China.

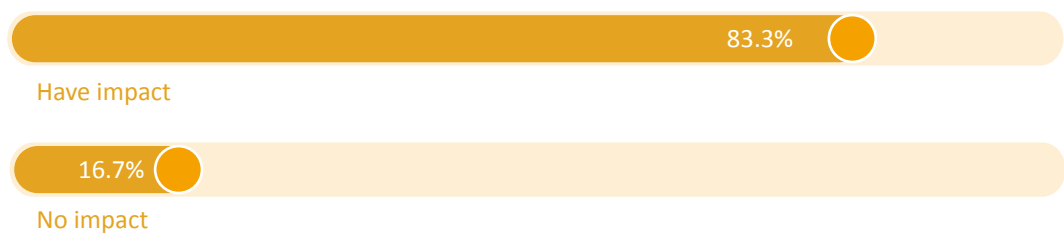
In the preliminary questionnaire survey, moving into the park is the most concerned issue for external stakeholders. Therefore, the interviewed members carried out a detailed discussion on the influence of relevant policy contents, policy stability and the park stability during the in-depth interview.

Most of the interviewed members agreed that chemical companies were seriously affected by the content and stability of the relocation policy. The introduction of the policy has caused many chemical companies to face the choice of relocation and closure. Developing chemical industrial parks requires time, resources and capital investment. The government requires most industrial companies to shut down existing production and rebuild new production lines in the parks, which is very difficult for chemical companies. In most cases, there is a wide gap between investment and government compensation.

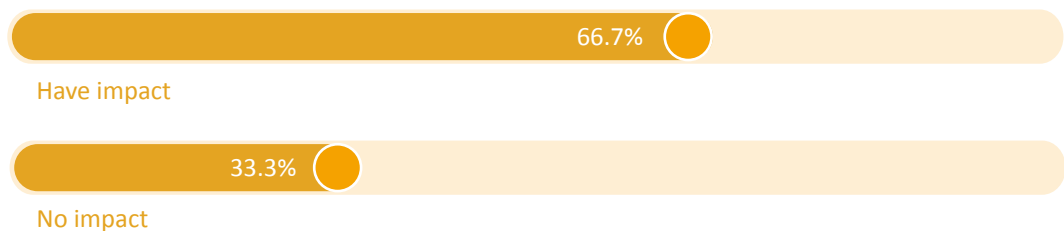
### Policy Content



### Policy Stability



### Chemical Park Stability





According to the interviewed members, moving into park is a unique Chinese policy, which rarely encountered in other regions in the long history of multinational chemical companies. The chemical industry park is an effective management method with positive and synergistic effect. However, in the process of implementing the policy, the stability of the park is a problem. There are two main considerations:

- The policy is unclear on key issues such as whether the park is stable, when the relocation will be completed, and relocation compensation. Government decision-making departments also have deficiencies in policy interpretation and communication.
- So far, China has too many "chemical industry parks" but the quality varies, particularly in terms of value chain integration and utility supply. Some companies have been asked to relocate to specified parks, but were asked to move again a few years later, causing the government losing its credibility.

In addition, some interviewed members said that although the company itself was not affected, its suppliers and other partners were faced with the problem of moving into the park, which affected the whole industrial chain to some extent. For this problem, the interviewed members put forward a variety of views in terms of solutions and suggestions.

- Compensation policy: the government could conduct research and formulate more targeted compensation policy such as referring to the corporate profits in the past few years to make the policy fairer, more reasonable and more applicable.
- Clarity of policy: Government departments are expected to strengthen communication with companies and make policies more transparent and clear. Simultaneously, the coordination between national policies and local policies could also be improved.
- Technological upgrading: interviewed members said that success cases have shown that companies can meet government requirements through environmental technology innovation and other ways to avoid relocation.
- Preliminary preparation: for the investment of new projects, chemical companies could fully consider the relevant factors in the early planning stage, and locate into the chemical park with high stability;
- Paying attention to the suppliers: to avoid the influence of related policies on the operation of companies, chemical companies could require suppliers to inform the relocation or shutdown information in advance, so as to timely adjust and reduce the risk of companies.

AICM believes that a smooth communication channel should be established to ensure that the government and companies can positively communicate and cooperate on such issues, so that policies can be smoothly and effectively implemented. As a related association, AICM also anticipates providing more proactive and targeted advices to the government and build a bridge between enterprises and the government.

## 2.5 Communication with Government, Community and People

The development of foreign owned chemical companies in China is inevitably affected by the national policies. How to communicate with the government is a problem that foreign chemical companies have to face. The communication between foreign owned chemical companies and the government is mainly focused on the interpretation and implementation of policies. In recent years, the government has taken active measures to promote communication with companies. This chapter will discuss relevant issues from the current situation of the communication between foreign chemical companies and the government as well as the reasonable understanding of the government, community and the public on chemical companies.

### Communication between Government and Foreign Chemical Companies

According to the interviews, 83.3% of the interviewed members have set up a special department to communicate with the government, and will attend the meetings held by the government regularly, in order to establish a stable communication channel with the government. However, it is quite difficult to build a comprehensive channel to coordinate with multiple functional departments within the government. 16.7% of the interviewed members indicated that they have not set up relevant departments. The communication problems from the interviews are focused on:

- The newly issued policies are unclear for the companies to some extent. The interpretation of the same policy varies in different provinces and different departments. Moreover, the standards required in practice are different as well.

## Communication Department



Have specific communication department



No specific communication department

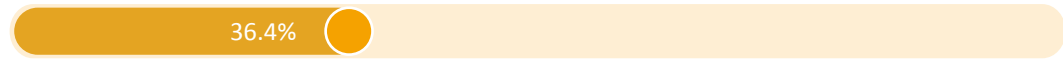
63.6% of the interviewed members mentioned that there is not much difficulty in communicating with the government after they have made some investment in communication, while 36.4% believed that the challenges they encountered are mainly: sometimes difficult to communicate directly with the government, and few communicating opportunities for companies.

- The current approach for companies to understand the newly issued policy is to participate in policy interpretation forums organized by organizations that cooperate with government or industry associations to obtain announcements and new policies. Only a few companies could participate in seminars organized by the government to provide advices on the formulation of policies and regulations.

## Communication with Government



No difficulty



Have difficulty

This is a major obstacle for foreign owned chemical companies to communicate with the government, and foreign companies have not been involved in the formulation of many national strategies. If foreign companies could obtain the same opportunity to express their thoughts and suggestions in policy formulation as domestic companies, they will be greatly encouraged and promote the sound development of the whole industry.

AICM has summarized the opinions of the interviewed members, and provided some solutions for the communication problems between foreign companies and the government.

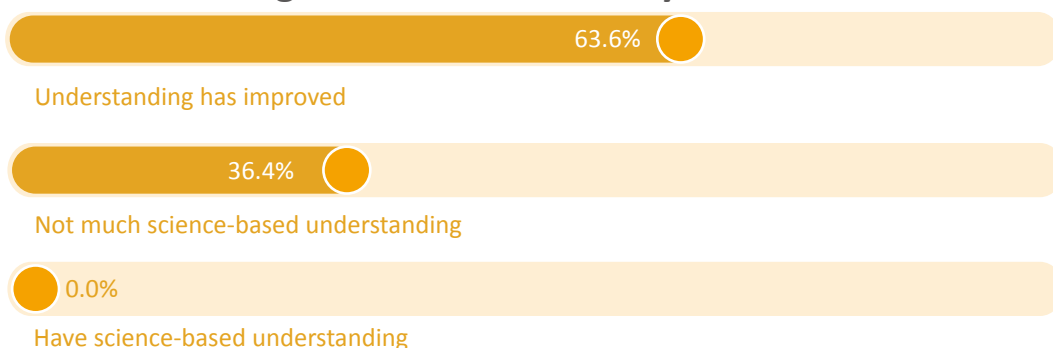
- The government is expected to establish the coordination function across departments, and learn from the good practices of other countries, so as to achieve unified coordination among departments.
- At present, foreign owned chemical companies have spent a lot of resources to understand the government, and are anticipated that the government could provide more communication opportunity to the foreign chemical companies.
- Before issuing the policy, if the government could negotiate more with relevant companies and combine the opinions of multi-parties, the relevance and applicability of the policy might be more reasonable.
- After the policy is issued, it is expected that the government could simultaneously interpret and explain the policy for relevant companies to help them implement better and reduce the misunderstanding.
- The companies could communicate with the government about common problems and difficulties through third-party organizations, including government cooperation agencies and industry associations (such as AICM), and play the coordinating and organizing role of the associations.

## Understanding of Chemical Companies by Government, Community and People

Although foreign owned chemical companies have a long development history in China and the government also recognizes the management measures taken by the foreign chemical companies, Responsible Care, science-based understanding of chemical industry, has not yet been well promoted. But it is worthy to recognize that the government has made efforts on this topic.

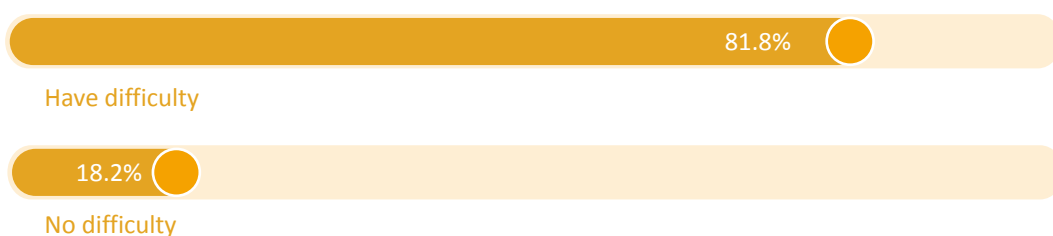
Among the interviewed members, 36.4% believed that the public has not much science-based understanding of chemical companies, and 63.6% mentioned that this situation has started to improve. Therefore, although 81.8% of the interviewed members believed that it is difficult to promote Responsible Care, AICM still has enough confidence in the establishment of Responsible Care system in China.

### Understanding of Chemical Industry



In fact, the one-side understanding is caused by the big gap of different companies in terms of management. The management of foreign owned companies is relatively better while safety accidents often occur in some chemical companies with poor safety management, which makes the government, the society and the public believes that the entire chemical industry is unsafe and polluted. Moreover, the news reported on the accidents also accelerated the spread of negative perceptions. If the media could report more on the achievements in sustainable development made by the chemical companies in the future, and the government could set up more good practice models of sustainable development for chemical companies, it will be a huge promotion for the establishment of Responsible Care system.

### Implementation of Responsible Care



To solve the current problems, AICM proposes that companies need to establish an effective communication mechanism with the public and regularly communicate with the government, society and public about their social responsibilities. AICM is willing to serve as an effective bridge:

- Companies could cooperate with the government, such as carrying out some clean production projects, providing chemical technology training, assisting in the formulation of standards, etc., so as to improve the technical skills of the government and raise the public's understanding of chemical companies.
- Companies can participate in the social responsibility activities carried out by industrial organizations through themselves or in association with the whole industry, such as organizing public open days and Responsible Care days, so as to enhance public confidence in chemical companies.

In addition, chemical companies should disclose information openly and transparently, and adopt an expression form that is easier for the public to understand. Foreign chemical companies are willing to share the experience to support all chemical companies to establish the basic principle and concept of "Responsible Care".



## Conclusion

Despite the influence of policies and public concerns AICM will continue to support foreign owned chemical companies to establish an effective communication channel with the government and the community. The CEOs of foreign owned chemical companies, while making efforts to improve the business environment of the industry, have also expressed deep willingness for sustainable development and investment in China and full confidence in China's future economic development and market environment.

Sustainable development is one of the most important global strategies and one of the policy orientations that China has emphasized in recent years. AICM believes that with the further improvement of China's policy formulation and implementation, the governance of the chemical industry will be more standardized and the awareness of a sustainable development-oriented strategy will be more broadly accepted.

As one of the most important platforms for companies to communicate with the government, communities and people, AICM will continue striving to create a market environment of orderly development and fair treatment for foreign companies in China in the future. By advocating education and promotion, strengthening media cooperation, encouraging and organizing communication within the industry, and interpreting government policies, foreign owned chemical companies can truly present their high standards of performance in management, share their operational experience and raise reasonable suggestions. We also wish hearing the opinions from the government, the community and the public on the sustainable development of chemical industry and jointly promote the healthy development of industry and economy.

The concerns expressed in this report regarding the development of foreign owned chemical companies in China require the joint efforts from the government and companies. We sincerely hope that the recommendations mentioned in this report can provide valuable references for challenges of other industries, based on the experience of the chemical industry.

# Acknowledgment

We would like to thank all those who have contributed to the AICM Sustainable Development Report 2019 and the AICM Government and Industry Affairs Committee (GIAC) members.

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