

APAC Semiconductor Industry Trends

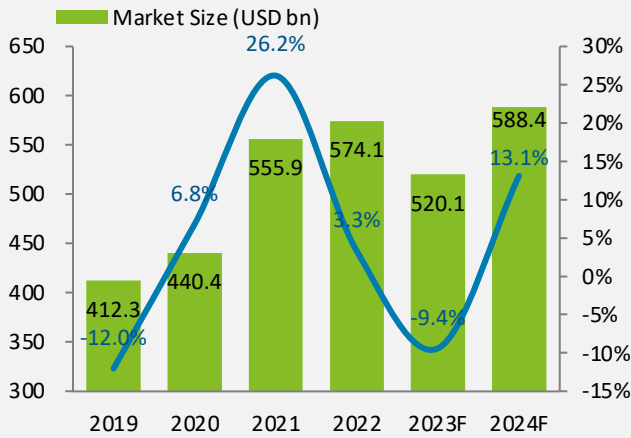
Executive Summary

Development of semiconductor companies

- In 2023, the global semiconductor market faced significant challenges, **but we expect the market will rebound in 2024 due to the recovery of downstream demand.**
- **Nearly half of semiconductor companies remain optimistic on future growth**, believing that the Asia-Pacific market will accelerate growth in the next 3-5 years, and it is expected that corporate revenue will increase by more than 10%.
- **More than 75% of semiconductor enterprises have begun digital transformation or have transformation plans in place.** However, changes in operating models, upgrading of existing systems and lack of talent are the main challenges faced by enterprises in their digital transformation journey.
- Considering market condition, **companies are relatively conservative about potential mergers and acquisitions.** The main purpose of M&A is to obtain the technology to enter new markets. In addition, companies also face supply disruptions.
- In the future, semiconductor companies will **focus on investment in R&D, supply chain stability, and talent training.**
 - Geopolitics and costs are the main challenges to supply chain stability. **Most semiconductor companies have adjusted their supply chains to analyze and reduce risks.** 50% of companies have adopted automation/intelligent solutions to improve supply chain visibility.
 - Companies are concerned about supply chain stability and talent capacity; **big data, machine learning and cloud computing technologies** are utilized to manage these risks.
 - Companies choose to focus on **employee career path planning and skill development to retain talent** to cope with the impact of lack of talent on project progress and increased costs.

Due to the inflation and weak demand from end-markets, the global semiconductor market is expected to decline in 2023, but strong rebound is expected in 2024

Global Semiconductor Market



Challenging 2023

- The growth of global semiconductor industry has been relatively weak, due to the increasing inflation and weakening demand in end markets, particularly those relying on consumer spending.
- While discrete devices are expected to maintain single-digit growth in 2023, other categories such as optoelectronics, sensors, and actuators are expected to experience negative growth.

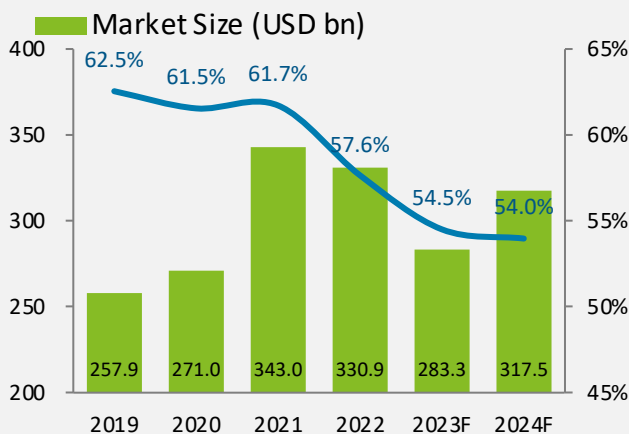
Strong market rebound expected in 2024

- The global semiconductor market is forecasted to surge by 13.1% in 2024, due to the demand recovery from downstream demand and continued growth in demand for generative AI products and power discrete devices.
- In addition, the overall demand for electronic devices is expected to increase due to the growing expectation of economic recovery.

Sources: WSTS, Deloitte Analysis

APAC region contributes to >50% of global semiconductor industry revenue

APAC Semiconductor Market Size



APAC's leading position in global semiconductor industry

- In 2022, APAC region accounted for 57.6% of global semiconductor industry.
- Among the top 15 global semiconductor companies, four companies come from APAC

China is the world's largest semiconductor equipment market

- In 2022, Chinese mainland's semiconductor equipment sales accounted for 26% of global semiconductor equipment sales, and Taiwan (China) accounted for 25% of global semiconductor equipment sales.

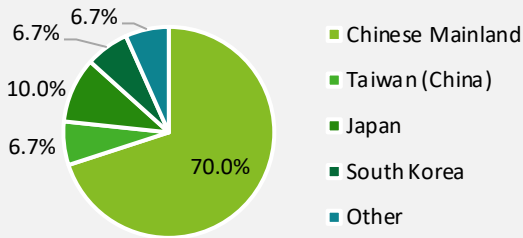
Challenging market environment in the region

- Rising geopolitical tensions, slow post-pandemic recovery, high inflationary pressures, and demand fluctuations resulted in a slowdown in the growth of the semiconductor market in APAC
- As a result, the region's share in global market has been continuously declining since 2021.

Sources: WSTS, Government public information, Deloitte Analysis

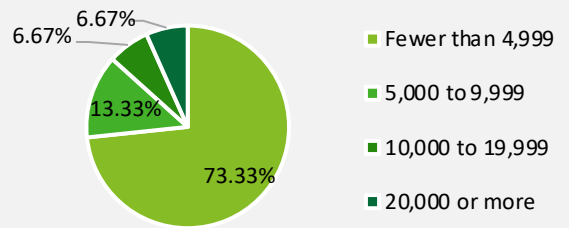
Deloitte's joint survey with GSA covered enterprises from the semiconductor value chain in Asia

Geographical Location



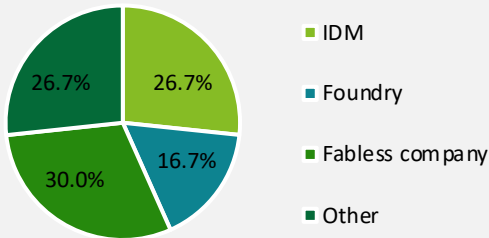
Q1: What region is your office located at?

Size of Organization (By employee number)



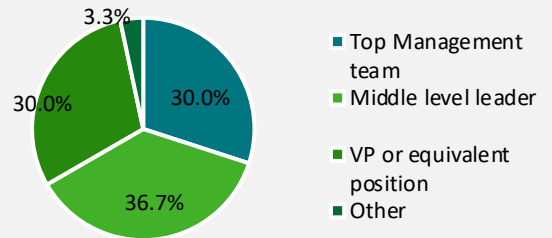
Q2: How many employees work for your organization?

Industry Distribution



Q3: How would you best classify your organization?

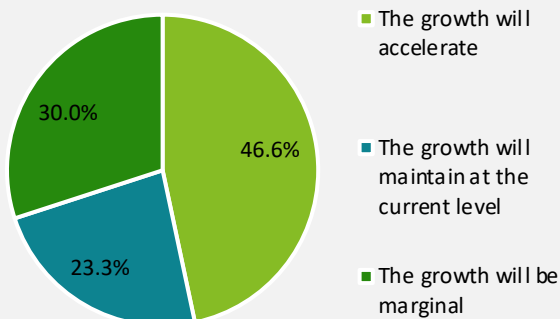
Respondent Job Title



Q4: How would you best classify your job position?

Despite the market challenges, semiconductor players are optimistic about future growth – close to 50% of the respondents believe the Asian market growth will accelerate in the next 3-5 years

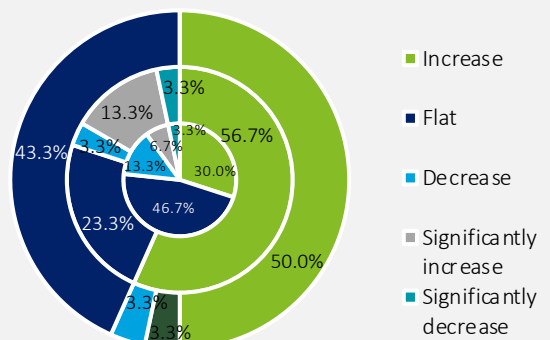
Respondent's prediction about the semiconductor industry in Asia Pacific in the next 3-5 years



Q5: Do you think the semiconductor industry in Asia Pacific will maintain its growth in the next 3-5 years?

Respondent's prediction about the demand in APAC

Outer Circle: Electronic Products (Excl. smartphone). Middle Circle: Automobile. Inner Circle: Smartphone

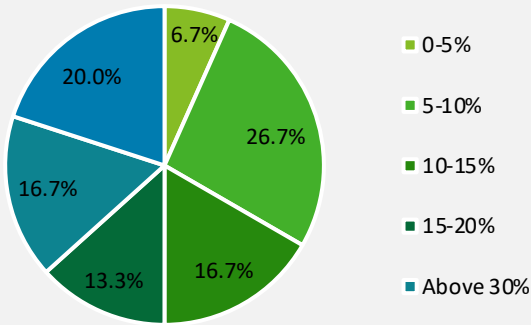


Q6: How do you expect the demand will change in APAC?

~50% of the companies expect annual revenue growth above 10%, while new product and solution development is the key measure to achieve the growth target

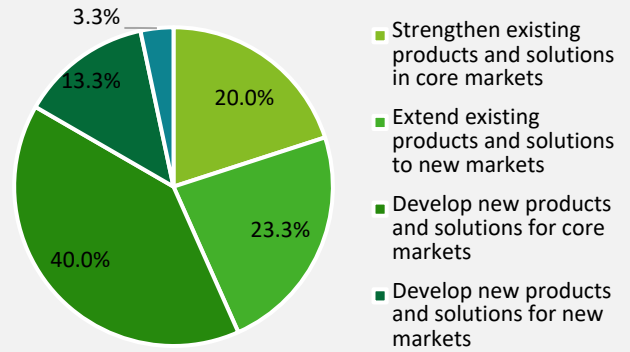
Respondent's foresight about the future business of their organization

in terms of the average annual revenue growth in the next 3-5 years



Q7:How do you foresee the future business of your organization, in terms of the average annual revenue growth in the next 3-5 years?

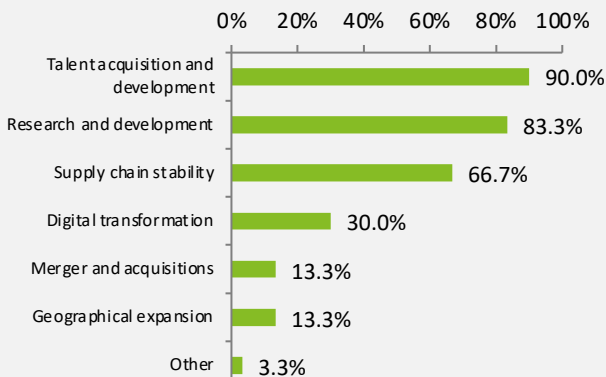
Organization's future business growth approach



Q8:Which approach best describes how your organization will grow the business in future?

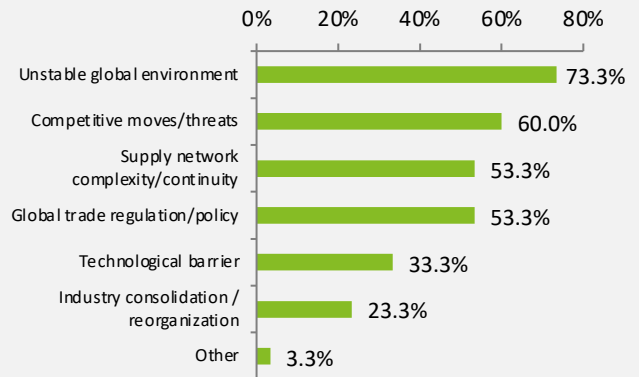
Talent development and R&D and supply chain stability are the top investment priorities; but companies still have significant concerns about the uncertainty of global environment and competitive threats

Top investment priority for Respondent's organization



Q9:What is top investment priority for your organization in order to sustain the growth and the competitiveness in the industry?

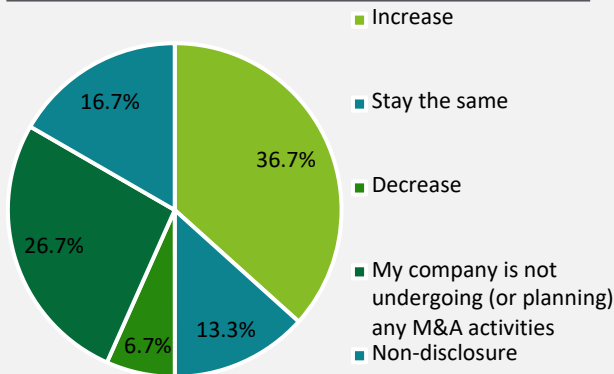
The key challenges and risks for organization's business growth



Q10:What are the key challenges and risks for your business growth?

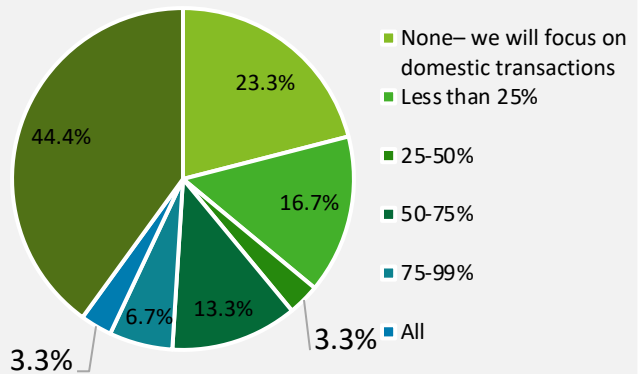
With due consideration to the market environment, companies are relatively conservative about potential M&A activities

The prediction of the average number of deals that respondent's organization closes over the next 3 years



Q11: Do you expect the average number of deals that your organization closes, to increase or decrease over the next 3 years?

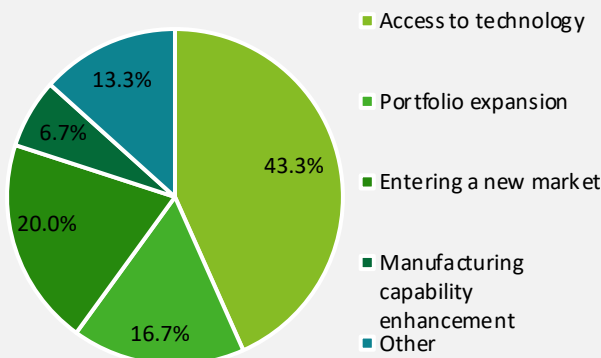
The proportion of organization's deal-making involves acquiring targets operating primarily in foreign markets



Q12: In the current economic environment, what proportion of your organization's deal-making involves acquiring targets operating primarily in foreign markets?

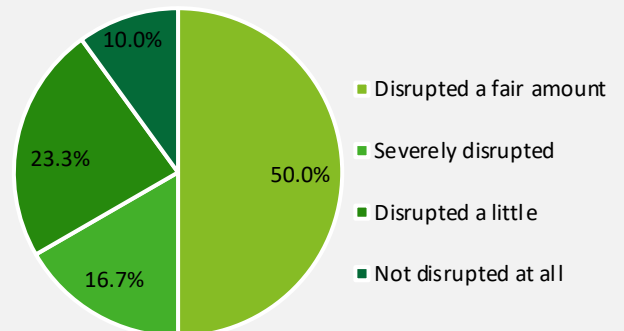
The key M&A purposes are to acquire desired technologies and portfolio, and to enter a new market; companies are also experiencing supply disruptions

The key reasons and expected outcome from the M&A deals



Q13: What are the key reasons and expected outcome from the M&A deals?

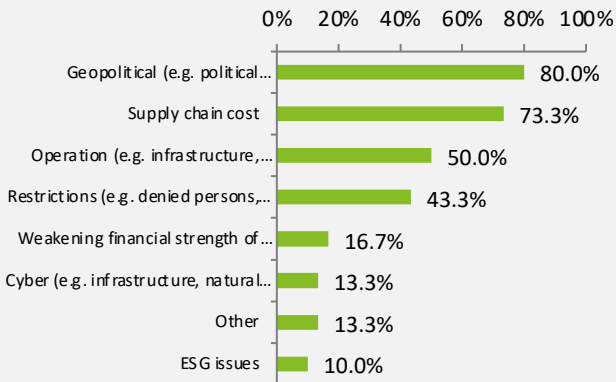
The degree of organization currently experiencing a supply chain disruption



Q14: Is your organization currently experiencing a supply chain disruption?

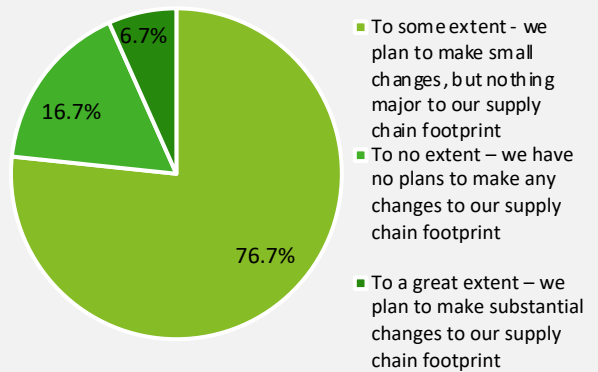
Geopolitics and cost are the key supply chain challenges, and most companies will adopt small and cautious adjustments to their supply chain footprint

The major reason of supply chain disruptions



Q15: What are the major supply chain disruptions you have observed?

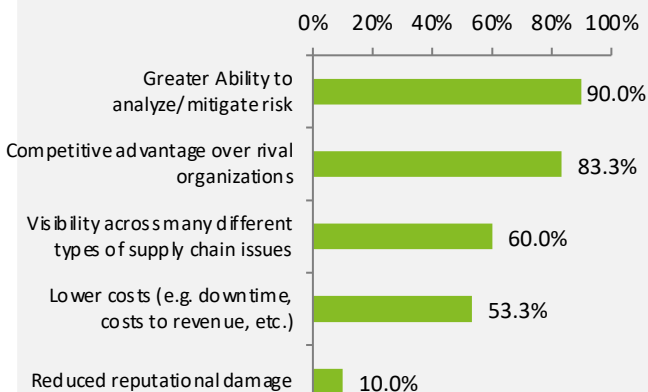
The extent of plans to redesign the supply chain footprint



Q16: To what extent does your organization have plans to redesign your supply chain footprint?

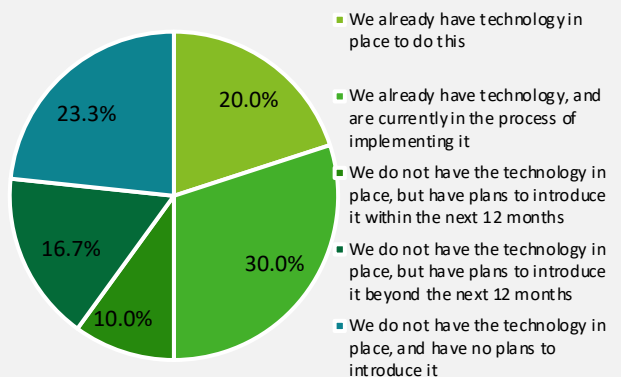
Companies are investing in supply chain solutions primarily to analyze and mitigate risks; 50% of the companies already adopted solutions

The greatest benefits to organization investing in a supply chain solution to mitigate the risks



Q17: In your opinion, what are the greatest benefits to your organization investing in a supply chain solution to mitigate the risks?

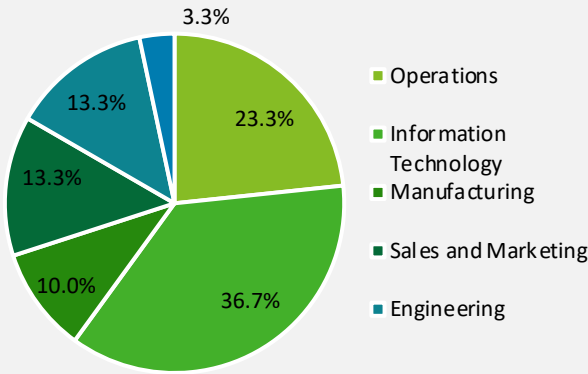
The extent of leveraging automated/intelligent solutions to gain visibility into the supply chain



Q18: Does your organization plan on leveraging automated/intelligent solutions to gain visibility into your supply chain?

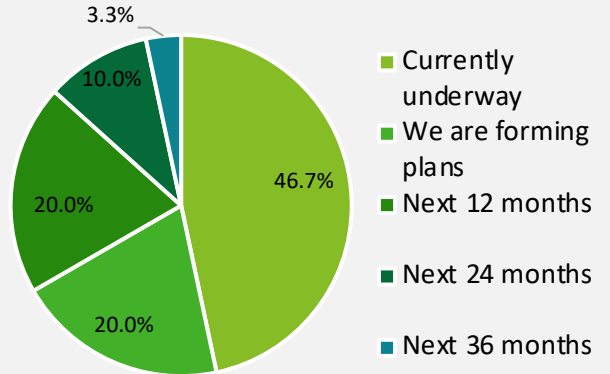
IT and operations are the key owners of digital transformation; >75% of the companies have either started digital transformation or made their redesign plans

The role/function that organization is expected to lead a digital transformation



Q19:What role/function in your organization is expected to lead a digital transformation?

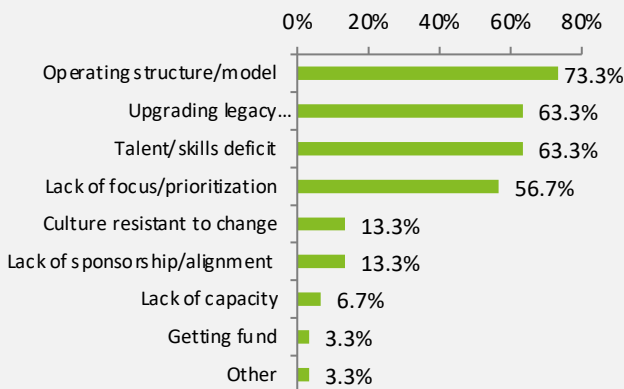
The extent of plans to redesign your supply chain footprint



Q20:When do you plan to undergo your digital transformation?

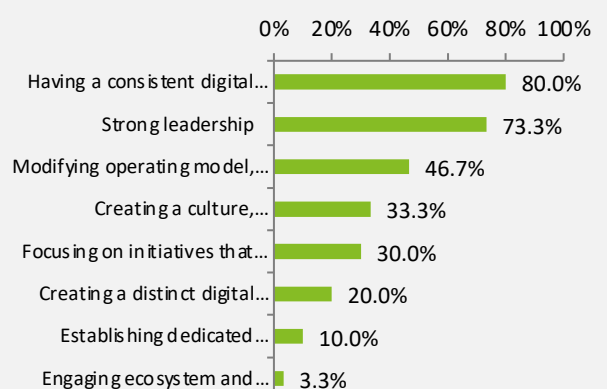
Companies are facing challenges of operating model, upgrading current system/process and lack of talent, while a consistent digitalization vision and top-down leadership intervention are crucial to be successful

The key challenges that facing to digital transformation



Q21:What are the key challenges your organization is facing to digital transformation?

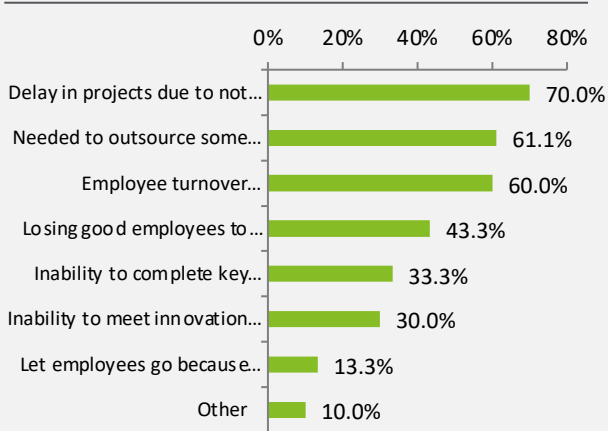
The key factors which influence a successful digital transformation



Q22:In your opinion, what are the key factors which influence a successful digital transformation?

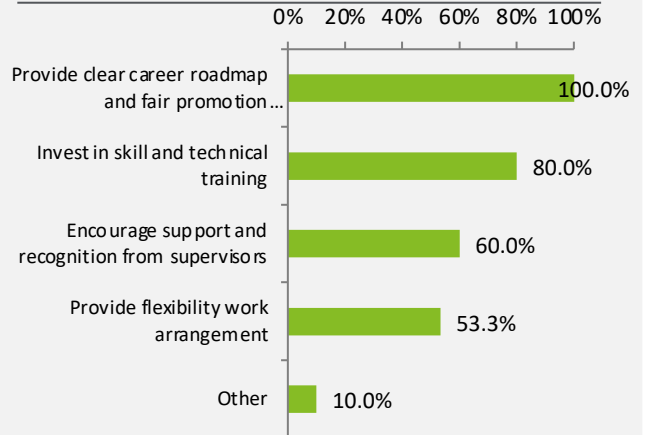
Due to the lack of qualified talent, companies have to delay project and outsource jobs which impact the achievement of goal and increases costs; to retain talent, companies are focusing on providing clear career roadmap and investing in skill development.

The key talent management challenges that is facing



Q23:What are the key talent management challenges your organization is facing?

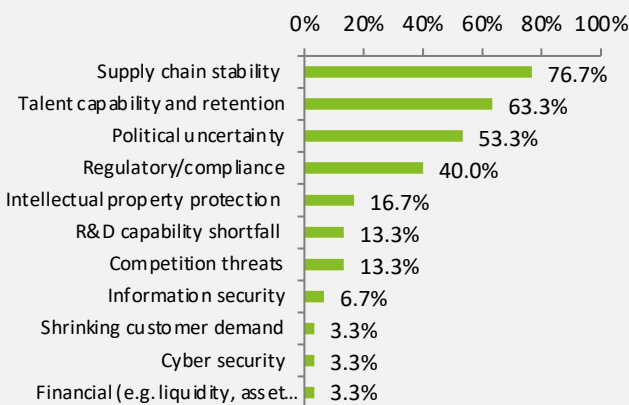
The key talent retention and development direction



Q24:What are the key talent retention and development direction of your organization?

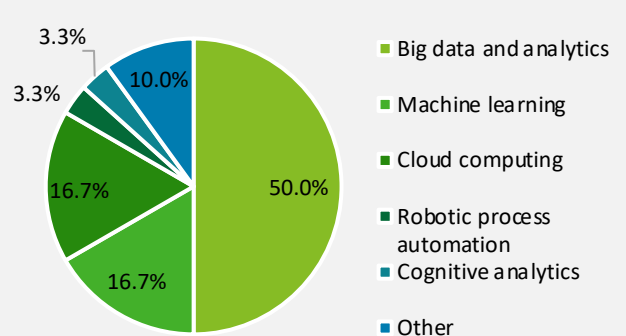
Companies have concerns supply chain stability and talent capacity; big data analytics, machine learning and cloud computing technologies are considered to be helpful in managing these risks

The major risks impacting the semiconductor industry and the business of the organization



Q25:In your opinion, which are the major risks impacting the semiconductor industry and the business of your organization?

Use or plan to use emerging technologies in the risk management function



Q26:Does your organization use or plan to use any of the following emerging technologies in the risk management function?

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