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IRI Quarterly Trends Analyzer

INNOVATION RESEARCH
INTERCHANGE

Accelerating Value Creation

The IRI Quarterly Trends Analyzer examines the strategic environment in which innovation and R&D take place and flags up potential trends that you should factor into your current strategic planning. At the end of each quarter, potential trends are examined by the IRI Foresights Advisory Board (FAB) through the lens of 'What should Chief Technology Officers be thinking about over the next year?'. The FAB selects the potential trends that it feels will have the greatest impact and then pinpoints the questions that you should ask yourself to ensure you are adequately preparing for these trends. In this report, you will find a description of those key potential trends, links to learn more about them, and the list of questions that the FAB thinks will be most helpful to you. In addition, we include some interesting possibilities ('weak signals') at the end of the report that we will keep an eye on to see if they will rise to the level of an impactful trend.

Innovation Research Interchange (formerly the Industrial Research Institute) is an inclusive membership organization with hundreds of global members in private-sector companies and federally funded laboratories. Founded in 1938, we lead and advance the field of innovation management by creating contemporary practices. Some of the world's most widely adopted models – such as "open innovation", "front end of innovation", and "stage-gate" – were born from the work of our members. We value strength in cooperation and partner with other organizations at the forefront of developments in innovation management, creating a hub for all to convene and contribute in an experimental, noncompetitive, and noncommercial environment. The IRI is a division of the National Association of Manufacturers.
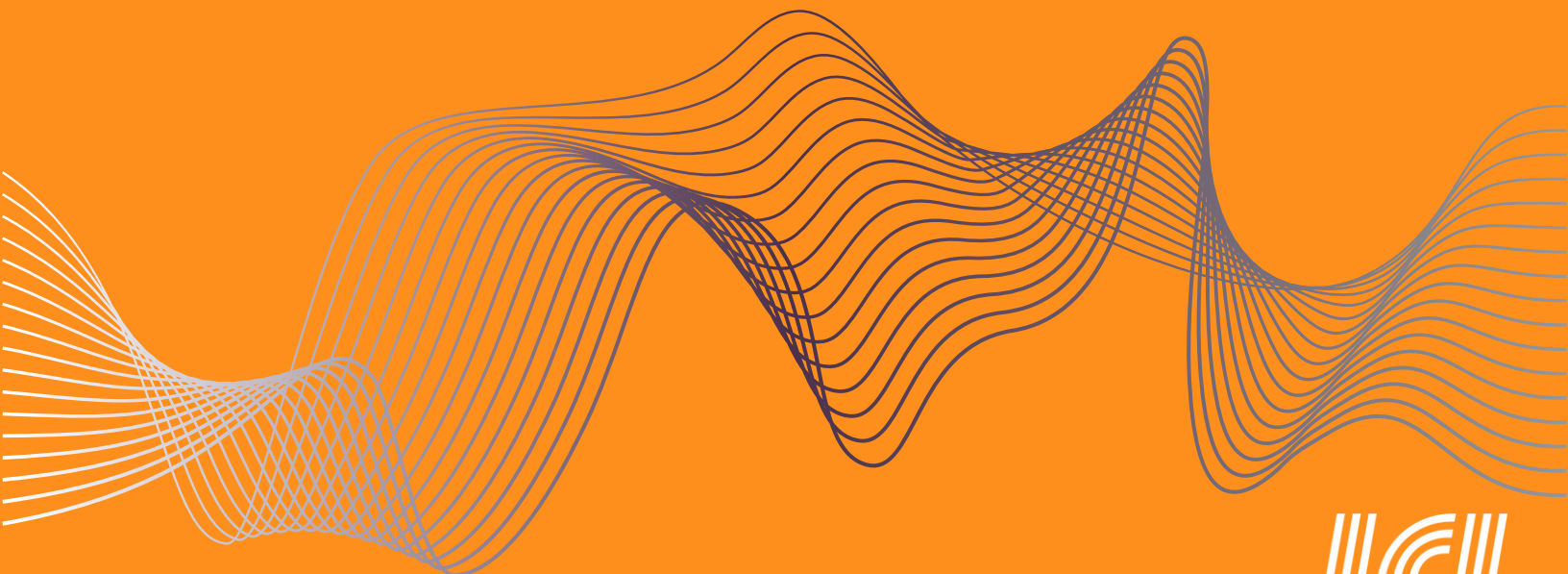
2023 First Quarter Trends

Governments and industry at (even more) loggerheads over sustainability

AI reworking the way we work

Diversity, equity, and inclusion (DE&I) accountability spike

Innovation ecosystems remapped

Trend: Governments and industry at (even more) loggerheads over sustainability

01. Description

Industry and government (in the U.S. and globally) have long been at odds over regulations. As governments (particularly the European Union and individual U.S. States) become more aggressive in their sustainability legislation, industry will need to put increasing efforts into tracking and attempting to shape policy globally and at multiple levels of government. Environmental, social, and governance (ESG) efforts will also be framed by some as a political choice, confusing the development of companies' strategies. However, government regulations may prove to be moot as consumer demand for safe and sustainable products grows.

Companies will need to make the decision to adapt, withdraw from certain markets, or not comply. As increasing numbers of companies adapt, we will see a flourishing of innovation in materials and supply chains with innovators looking at alternatives as a risk mitigation strategy.

02. Learn more

- Fed's reluctance to go green will cost the Earth (Reuters)
- 'Forever Chemicals' Maker Defends Their Use, Says It Will Keep Producing Them (*The Wall Street Journal*)
- EU proposal would ban 10,000 PFAS (*Chemical and Engineering News*)
- Milliken's Blueprint for Removing PFAS from Operations (*EHS Today*)
- World's First Carbon Import Tax Approved by EU Lawmakers (*The Wall Street Journal*)
- What is ESG investing and why do some hate it so much? (AP News)

Trend: Governments and industry at (even more) loggerheads over sustainability, continued

❓ 03. Ask yourself these questions

- Do we have effective processes in place to track regulations and other legislation – in the US and globally?
    - Do we have effective processes in place for communicating the impacts of regulations and legislation internally?
- How will we handle different markets with differing regulations?
- How can we innovate fast enough to keep up with changing regulations and consumer demands for sustainability?
- Are we actively seeking public-private partnerships to ensure our sustainability efforts are effective and equitable?
- Are we willing to invest in new technologies and make the necessary changes to deploy sustainable practices?
- How can we incorporate sustainability into our decision-making?
- How can we address sustainability concerns with our suppliers and reduce our supplier footprint?
- How can we leverage the impact of the younger generation and their concerns about sustainability?

Trend: AI reworking the way we work

01. Description

A rapidly evolving artificial intelligence landscape is surging ahead as Microsoft and Google each unveiled new AI powered features. From coding to creating presentations, these new tools have the potential to provide a big assist to the ways that work is currently done and open up possibilities for new ways of working.

The adoption of AI may lead to benefits for early adopters in the workplace, like shorter working hours or more time to work on pet projects. The impact on those slower to adopt or those performing manual labor remains to be seen. The same goes on a macro scale for companies as early adopters explore ways to power ahead of their competition.

However, government regulation, internal company restrictions, public backlash, and the limitations of computing/processing/electricity demands may slow progress significantly, providing breathing room for companies to adapt. The diffusion of AI into every aspect of business raises questions about who gains control, as well as the need for an ethical organizational culture that fosters a safe environment for addressing concerns over bias and discrimination in AI systems and data.

Trend: AI reworking the way we work, continued

02. Learn more

- [A New Area of A.I. Booms, Even Amid the Tech Gloom](#) (*The New York Times*)
- [Thanks to ChatGPT, prompt writing is now a highly valued skill.](#) (Twitter)
- [ChatGPT Is About to Dump More Work on Everyone](#) (*The Atlantic*)
- [These robots might build your house](#) (*The Washington Post*)
- [For tech giants, AI like Bing and Bard poses billion-dollar search problem](#) (Reuters)

03. Ask yourself these questions:

- How do we want AI to impact our productivity?
- Will AI provide more time for strategic thinking? If so, how can we channel that into innovation?
- How can we recognize and address the bias baked into AI systems?
- How will ownership and original thought be impacted by AI?
  - How will AI impact our IP?
- How will the shift towards AI impact the types of roles within my organization?
- How can AI be used to work across languages?
- What are the legal and ethical implications of using AI for human resources tasks?

Trend: DE&I accountability spike

01. Description

Following the 2020 murder of George Floyd and ongoing racial reckoning, companies went out of their way to show their commitment to diversity. As those diversity and inclusion efforts begin to bear fruit (or lose momentum), the next phase of these initiatives is dawning: accountability. As a result, companies will be expected to back up their diversity statements with metrics. Therefore, clear metrics will need to be established.

At the same time, we are seeing corporate diversity officer roles disappear and little will to legislate change. Companies may be losing momentum and lack the will to take their DE&I efforts to the next level. The increased use of technology to support hiring is also likely to result in data and algorithmic bias, which companies will need to address.

02. Learn more

- Apple Hires Its First People Officer in Executive Reshuffle (Bloomberg)
- Google's civil rights audit lacked teeth, advocates say (*The Washington Post*)
- What do race and ethnicity mean? The US government is asking (Associated Press)
- Hamstrung by 'golden handcuffs': Diversity roles disappear 3 years after George Floyd's murder inspired them (NBC News)
- Can bots discriminate? It's a big question as companies use AI for hiring (NPR)

Trend: DE&I accountability spike, continued

03. Ask yourself these questions

- How are DE&I metrics advancing? Are we prepared to track data beyond headcounts?
- How can we change the way people come up through the organization to promote diversity and inclusion in executive ranks?
- How can we adapt to the disappearance of certain roles and the emergence of new ones as technologies evolve? How will that impact diversity in our organization?
- What are the challenges and opportunities of the increase in the gig economy for promoting diversity and inclusion?
- How can we advance DE&I globally, across the organization? Across our innovation ecosystem?
- Are there processes and procedures that we can shorten to account for increased staff turnover and bring new staff into more impactful work faster? Can this help us to increase inclusion?

Trend: Innovation ecosystems remapped

01. Description

With entrepreneurs fleeing uncertainty in previous entrepreneurial hubs China and Israel, new legislation in the US influencing the types of technology that gets funded, and tensions between UK universities and entrepreneurs, companies will need to remap and rethink how and where they develop their innovation ecosystems. Recent events have shone a light on the need for a more holistic approach to relationship-building, including geopolitical, economic, and global health factors.

Specifically in the US, economic growth could be driven less by Silicon Valley values and more by the values of the administration setting the terms for new funding. Political tensions and economic uncertainty in China are causing many organizations to look elsewhere for partners. As companies think about their regional and global operations and the staff, infrastructure, and partners to support them, they will need to consider a new terrain, shaped by new factors.

02. Learn more

- Entrepreneurs Flee China's Heavy Hand: 'You Don't Have to Stay There' (*The New York Times*)
- Tech Leaders in Israel Wonder if It's Time to Leave (*The New York Times*)
- Israel risks turning into a shut-down nation (*Financial Times*)
- The growing tensions around spinouts at British universities (*Financial Times*)
- Uncle Sam Is Disrupting the Venture Capital World (Bloomberg)
- The start of America's infrastructure decade: How macroeconomic factors may shape local strategies (Brookings)

Trend: Innovation ecosystems remapped, continued

? 03. Ask yourself these questions

- Where are the emerging regional hubs and ecosystems and how are they evolving?
- How can we engage or set up shop in ecosystems to gain value from them?
- How can we leverage the investments governments are making in technology, education, and infrastructure?
- How can we stay informed about dynamic and shifting trends in global innovation ecosystems?
- How can we prepare for economic changes and competition driven by regional innovation ecosystems?

Additional potential trends to watch

We'll keep an eye on these weak signals as they develop and let you know how they may impact innovation.

- Have the Anticapitalists Reached Harvard Business School? (*The New York Times*)
- Ex-Tesla worker testifies that race bias made him 'feel less than a man' (Reuters)
- Should we tax robots? (*IndustryWeek*)

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Contact