

IRI QUARTERLY TRENDS ANALYZER



2025

APRIL 2025

About The Trends Analyzer

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 strategic planning. At the end of each quarter, potential trends are examined by the IRI Foresights Advisory Board and assessed for their potential impact on innovation. In this report, key potential trends are described and vital questions you should ask yourself as you conduct your strategic planning are listed. 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 a bigger, 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.

April 2025 Trends

1

Evolving the Role of
Federal Agencies

2

Reimagining
Innovation in the
Public Sector

3

Changing Funding
Landscape for
Doctoral Students



EVOLVING THE ROLE OF FEDERAL AGENCIES

As federal responsibilities evolve and government agencies undergo restructuring, industries must prepare for a landscape where regulatory oversight, funding priorities, and policy direction may become more variable. The recent organizational changes made by the Department of Government Efficiency (DOGE) reflect this transition. With these changes, businesses that once depended on federal agencies for regulatory oversight and services related to compliance and certification may now need to adapt to a more diverse array of state-level requirements and changing enforcement approaches.

Another implication of federal restructuring is the possibility that government scientists and regulatory professionals may transition out of public service and seek roles in the private sector. While this could create opportunities for industry to access experienced talent, supporting these professionals in shifting from government to private sector roles may require additional onboarding and coaching.



LEARN MORE

- [Nearly 10,000 Fired As Trump and Musk Step-Up Government Purge](#) (Reuters)
- [Government Watchdog Ends Fight To Keep His Job After Trump Firing](#) (*The New York Times*)
- [Nearly 6000 USDA Workers Fired By Trump Ordered Back to Work for Now](#) (NPR)
- [Layoffs Begin at US Health Agencies Responsible for Research, Tracking Disease, and Regulatory Food](#) (AP News)



ASK YOURSELF THESE QUESTIONS:

1

Are we prepared to manage regulatory compliance across multiple states?

2

What functions previously provided by federal agencies are now at risk or in flux?

3

What risks do we face from abrupt deregulation or fragmented enforcement mechanisms?

4

Are there opportunities to strategically acquire public sector talent with high-value expertise (e.g., AI, compliance, research)?

5

What coaching can we provide to this talent to ease the shift to the private sector?

6

Could our company play a role in filling gaps left by federal downsizing?



REIMAGINING INNOVATION IN THE PUBLIC SECTOR

Recent changes to federal research funding, including adjustments to budgets at institutions such as the National Institutes of Health (NIH), may have implications for innovation ecosystems across sectors. Reductions in support for certain programs could influence the pace of public-sector research and its historical contributions to private-sector advancements. As public investment in research and development shifts, businesses may need to consider how to adapt to potential changes in the innovation pipeline.

These shifts may also affect collaborations between private companies and federally funded research institutions. This moment presents an opportunity for organizations to explore new models of partnership—with universities, nonprofits, and other stakeholders—to help sustain progress in scientific discovery. How might industry fill emerging gaps, and what strategies could position it to play a greater role in advancing long-term innovation?

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LEARN MORE

- [Scientists Warn of Long-Term Damage as Trump Orders Slow Research](#) (*The Washington Post*)
- [Jobs Lost in Every State and Life-Saving Cures Not Discovered](#) (AP News)
- [Judge Extends Temporary Blocks to Huge Cuts in NIH Research Funding](#) (AP News)
- [President Trump's Cuts to Medical Research](#) (*The New York Times*)
- [Trump Science Policies Pose Long-Term Risk-Economists Warn](#) (*The New York Times*)



ASK YOURSELF THESE QUESTIONS:

1

Should we step into the funding or leadership gaps left by federal agencies to drive targeted innovation ourselves?

2

How will disruptions in long-term studies impact our strategic planning and R&D timelines?

3

How should we adapt our internal R&D functions to compensate for the potential loss of upstream basic research?

4

What mechanisms can we create to support riskier, breakthrough science that may no longer get federal funding?

5

Do we need to shift our workforce planning to prioritize different skill sets, such as regulatory navigation or fundamental research?

6

What long-term risks do we face if the U.S. scientific ecosystem loses its global leadership — and how can we mitigate them?

8



THE CHANGING FUNDING LANDSCAPE FOR DOCTORAL STUDENTS

Recent changes to federal research funding have affected a range of academic fields. These changes may limit opportunities for advanced research and reduce the availability of financial support for PhD students, potentially narrowing the future pipeline of highly skilled talent entering the workforce. As the cost of doctoral education becomes a greater barrier for some students, industries that depend on deep technical expertise may face longer-term talent shortages.

This evolving landscape raises important considerations around sustaining a strong R&D workforce, addressing knowledge continuity, and exploring alternative strategies such as industry-led training or expanded collaboration with universities. Companies may find value in reassessing their talent development approaches, including strengthening internal upskilling programs or diversifying hiring models to include a broader range of expertise beyond traditional PhD pathways. What are the implications of reduced PhD funding on research output? How might it influence your organization's approach to innovation, academic partnerships, and future technical capabilities?



LEARN MORE

- [Universities are Slashing, Rescinding Graduate Admissions Amid Federal Funding Cuts](#) (*Huffington Post*)
- [How US Colleges Are Navigating Cuts to Grants for Research After Trump Restricts Federal Funding](#) (PBS)
- [Are PhDs Losing Their Luster? Why Fewer Students Are Enrolling in Doctoral Degrees](#) (*Nature Magazine*)
- [UMass Disbands Its Entering BioMed Graduate Class over Trump Funding Chaos](#) (*Ars Technica*)
- [Funding for R&D Isn't A Gift to Academia](#) (*The Washington Post*)



ASK YOURSELF THESE QUESTIONS:

1

How will reductions in PhD funding affect the long-term availability of high-level technical talent in our industry?

2

Should we pursue or deepen academic partnerships to secure access to research talent and infrastructure?

3

Can internal upskilling, apprenticeships, or alternative credentialing programs fill the emerging expertise gap?

4

Will a shrinking pipeline of U.S.-trained researchers reduce our global competitiveness in advanced fields?

5

How do we evaluate the efficiency and ROI of PhD-level contributions to our company's innovation?



ADDITIONAL TRENDS TO WATCH:

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

- Billionaire Isaacman Takes a Big Step Towards Leading NASA (BBC News)
- US Economy Shrinks As Tariffs Spark Recession Fears (NPR)
- Americans worry AI is coming for these jobs (*The Washington Post*)
- Could AI Help Kids Learn This Much Faster? (*Psychology Today*)



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