



# The nexus of innovation and safety

Where a changing environment is reshaping business

RESEARCH STUDY



INNOVATION  
SAFETY





## The nexus of innovation and safety

### Exploring the potential for better business results

Innovation and safety are often seen as opposing sides of a coin, with dueling objectives. Innovation calls for speed, risk-taking and is designed to drive revenue growth. Safety has traditionally been considered the reactive side of the business, meeting regulatory requirements, testing and retesting, and mitigating risk. However, technology and a global economy are revolutionizing both activities and have prompted savvy companies to consider the intersection of innovation and safety, exploring how these two paths can converge for improved business results.

Business today is evolving at a breakneck pace. In a digitized, global world, technologies are changing everything: the way we do business, supply chain management, the way customers purchase, the types of labor needed and how goods and services are delivered. These technologies are pressing companies to pioneer new approaches and processes to manage innovation and safety in more effective and expedient ways.

To better understand how companies are handling changes in innovation and safety, UL conducted two different surveys, both among company executives in a variety of industries. The goal was to reveal

businesses' challenges, concerns, current approach to and hopes for both innovation and safety. The results highlighted the complexities and tactical challenges companies face in their attempts to balance innovation and safety.

Seemingly at odds, the pace of innovation presses safety to the limits while the pursuit of safety can feel like an inhibitor to speed demanded by innovation. However, emerging technologies are revolutionizing both activities and have prompted savvy companies to consider how innovation and safety can converge for improved business results. We invite you to explore the possibilities with us.

## Revealing responses

The results were astounding. Companies dedicate a great deal of attention to both innovation and safety. However, our survey highlighted inconsistencies between awareness and in-place operational solutions.

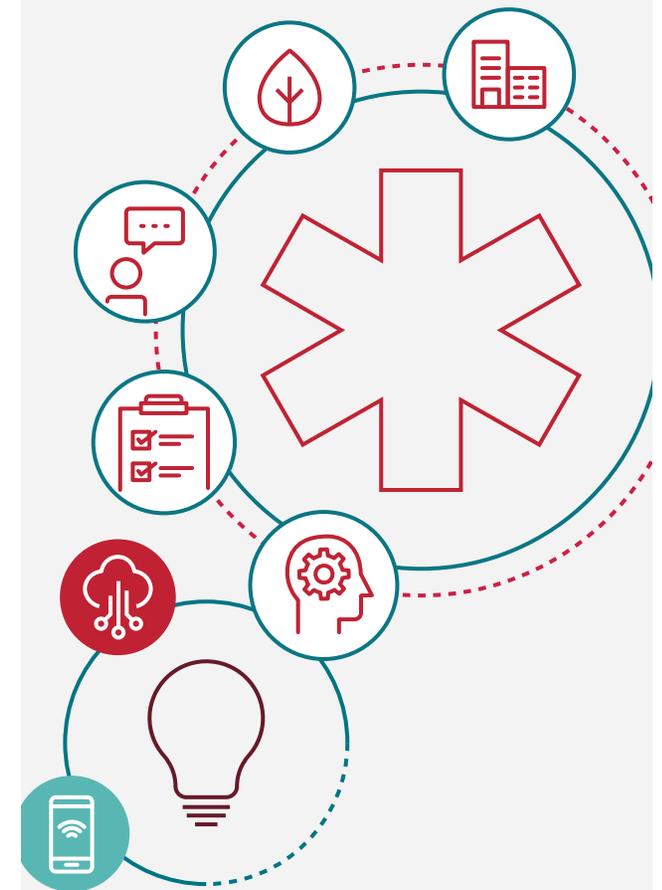
Even more interestingly, the majority of respondents were executives, as opposed to innovation or safety professionals who would be dedicated exclusively to their cause. When responding to the innovation survey, safety was de-emphasized in importance and vice versa for the safety survey.

Survey results highlighted the discrepancies even more, as executives seemingly approached each topic with a distinct mindset, perhaps accurately reflecting gaps in their own organizations. The complexity of simultaneously considering both innovation and safety and all of their associated attributes and requirements is clearly daunting.

## Top trends

Survey responses revealed key trends in both innovation and safety. The top five trends in innovation reflect immense pressure for speed and change. They also reflect the realization that innovation extends far beyond new products and features. Increasingly complex, innovation involves more parties, requires more speed, and is essential to long-term viability.

Safety is also facing tremendous changes. The definition of safety has exploded over the past 50 years, incorporating more aspects than ever, from flammability to chemical exposure to cybersecurity and privacy issues. The speed and scope of these changes has left industries unsure of their ability to comprehensively and thoroughly ensure safety and all of the possible aspects it encompasses. The pace of consumer expectations and regulatory changes is overwhelming and will force companies to leverage technology to overhaul their approach to safety.



Explore the "Top 5 Trends in Innovation" and the "Top 5 Trends in Safety;" download the infographics at [UL.com/Perspectives](http://UL.com/Perspectives).



## A changing environment is reshaping business

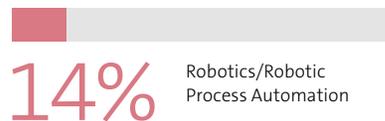
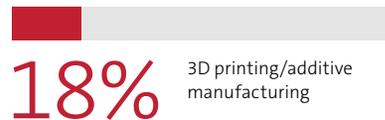
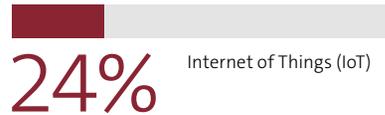
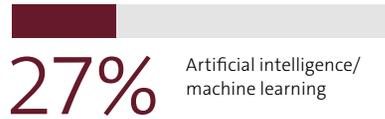
Both innovation and safety have existed since business itself. So why is the pressure suddenly mounting on both sides? The answer requires an evaluation of some critical features of the modern landscape that are reshaping nearly every aspect of business.

### 1. Technology: ushering in unprecedented speed and change

The Fourth Industrial Revolution is bringing an unprecedented number of technologies into play in a short time. While respondents understand the disruptive nature of technology, the vast majority don't yet understand how it will fully impact their businesses.

In the "Innovation Survey," the percent of respondents who indicated that they have fully explored and evaluated these technologies in their products and processes was low.

*Understanding of new technologies is low.*



### 2. Consumer influence and information: leading product development

Thanks to the rise of personal technology, the internet, and the widespread use of mobile devices, the consumer has shifted from the role of recipient of information and goods to a party that has a voice in product development. By providing instant feedback, sharing needs and desires, and connecting with companies in personal ways, consumers now have a voice in product development and also in safety.



*Impactful drivers of innovation*



*Impactful drivers of safety*



### 3. Complex world: increasing the number of parties involved

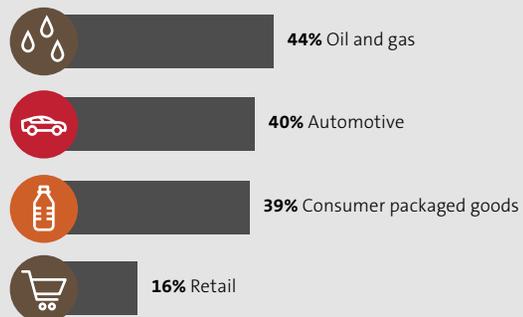
The rise of technology and transportation continues to shrink the globe. There are more players involved: customers, regulatory bodies, suppliers, partners, channel partners, etc. There are issues that come into play with regard to safety, ethics and trust that have never before been so pivotal to business. Internally, technologies deliver valuable information to players across the board, involving more titles, more people and more perspectives.

This complexity gives companies more to investigate, more to understand, and more aspects to manage, particularly where safety is concerned.

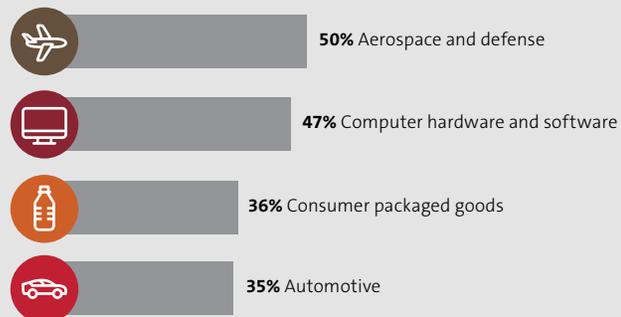


Results indicated that these industries regularly collaborate with at least one of the following groups as a source of innovation:

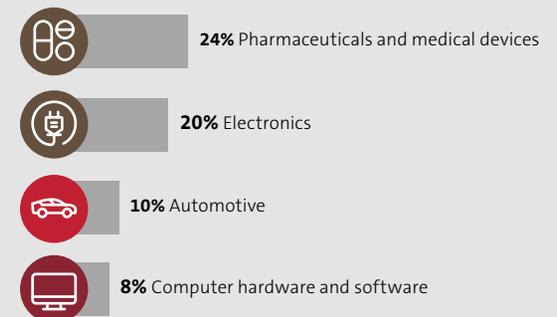
#### Suppliers



#### Customers



#### Research organizations



## Insights from the C-suite

The Fourth Industrial Revolution is bringing about change at an exceptional pace and unimaginable scope. The full number of technologies and resulting impacts are still unknown.



**C-suite executive**  
Pharmaceutical/life sciences company

*“Regulatory changes are our largest and most important concern in our industry. The government has taken a much larger role in the industry regarding how we conduct our business, how we price products, how we dispense and handle confidential data and privacy issues, and how we package and provide a service. There is virtually no aspect to the business that has not been impacted or will eventually be impacted.”*



**C-suite executive**  
Retail

*“Societal changes will force companies to not only innovate more often, but also require companies to innovate with speed.”*



**Legal executive**  
Computer hardware/software company

*“Today, technology is necessary to both monitor product safety as well as enable processes to scale. Without good alerting technology, for example, it’s difficult for organizations to keep on top of product safety issues because the volume of information is overwhelming.”*



**C-suite executive**  
Consumer packaged goods company

*“Greater customer expectations and an increasingly litigious commercial environment demand more focus on product safety.”*



# Gaps between innovation and safety

Our surveys revealed some discrepancies between the perceived importance of certain elements on innovation versus safety. In reality, elements that impact one will be critical to the other. However, companies are still evaluating optimal ways to take these elements into consideration when it comes to innovation as well as safety.

## Uncertainty about the role of regulatory compliance



More than **three-quarters** of executives indicated that regulatory compliance would have a major impact on their approach to safety.

VS



**Less than 20 percent** believed regulatory compliance would impact their approach to innovation.

## Challenges keeping safety in mind



An overwhelming **90 percent** of respondents indicated that product safety concerns are taken seriously within their organization.

VS



A paltry **11 percent** of companies dedicate half or more of their innovation resources to product safety.

## Speed is a goal as well as a challenge



Rapid prototyping is considered **one of the top three** challenges to improving product safety.

VS



**Nearly all respondents** are striving to truncate product development cycles for increased innovation and speed to market.

## Access to customer mindshare critical but not monitored



A large majority of respondents, **90 percent**, indicated that customer expectations were seen as a highly impactful driver of safety.

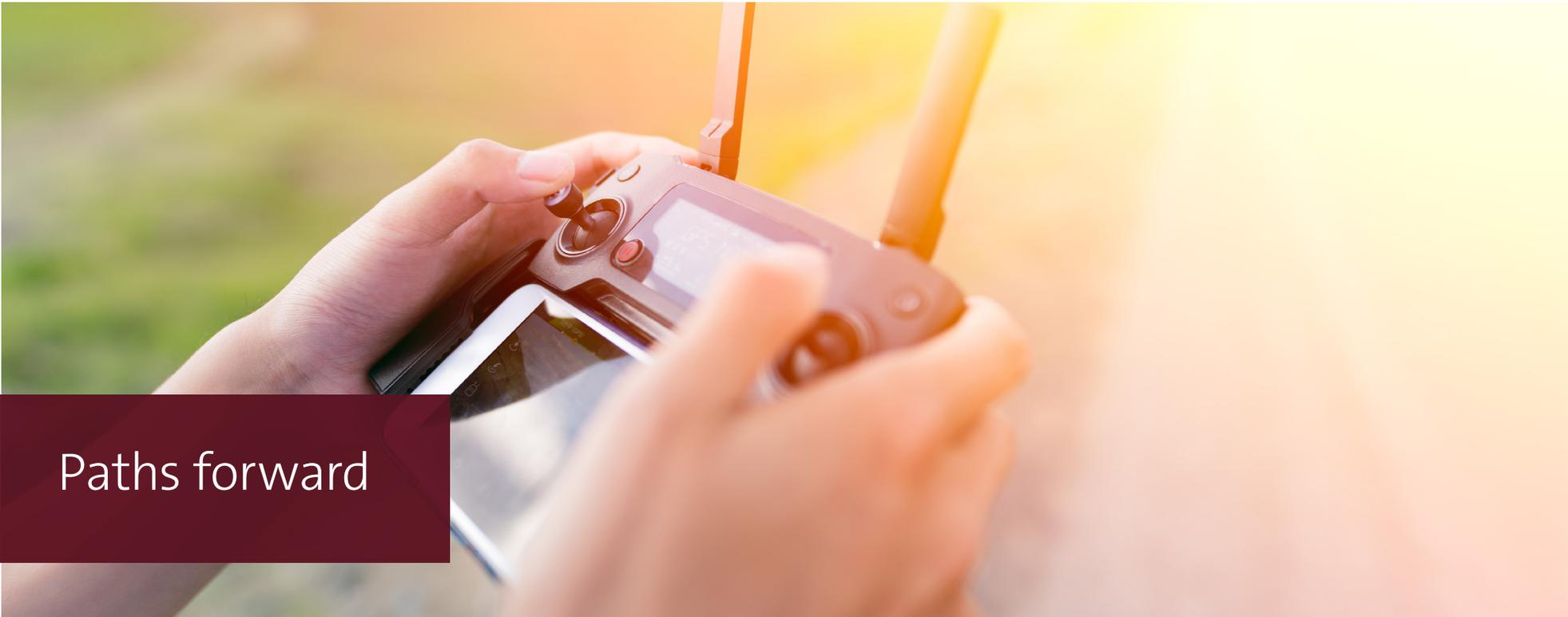
VS



Only **11 percent** of companies reported social listening capabilities that enable them to monitor customer feedback.



Explore more perspectives on innovation and safety.  
Visit [UL.com/Perspectives](https://www.ul.com/Perspectives).



## Paths forward

### Start the discussion

In light of the scope and pace of technological and societal changes, visibility into the future is limited, and there are no proven best practices for successfully aligning innovation and safety. What is possible is to initiate a discussion. By understanding the gaps that exist, we can better point the way to possible solutions and begin to monitor progress. Our survey also hints at some potential solutions for aligning innovation and safety and successfully collaborating between the two.

### Move toward digitization

Digitization of the organization helps consolidate data across all business units, operations, geographies and functions of the business. The resulting visibility can help flag potential safety problems before they arise, point to trends that will lead innovation, and streamline operational processes required for safe innovation.



## Top 10

One of the top 10 challenges cited for not being able to achieve higher safety standards was “variability in the digital maturity of first-, second- and third-tier suppliers.”



## Leverage new technologies

Just as new technologies are urging accelerated product prototyping, they can also be instrumental in streamlining operational processes to ensure product quality, test and verify safety, and gain efficiencies in the production process. Resilience engineering products to anticipate changes in safety and functionality requires advanced technologies like artificial intelligence (AI), but positions products for greater success and relevance over a longer period of time.



67%

say that AI will have a major impact or require complete redesign of safety.



62%

say that IoT will have a major impact or require complete redesign of safety.

## Partner to extend capabilities

Keeping up with regulations worldwide can be a daunting task. By partnering with external resources, companies can rely on the expertise and tactical capabilities of their partners, extending their internal resources, and allowing them to leverage information for better decision-making.



51%

of survey respondents seek a third-party partner to verify or certify product safety features and claims.

## Transcend physical safety

In an increasingly complex world, safety has come to incorporate much more than the fire, shock and casualty trifecta of physical safety. From cybersecurity concerns to chemical content transparency to privacy and sustainability concerns, safety now considers a product's impact on consumers, the environment and all players involved with its creation and distribution.



79%

said the most important safety considerations are that products are safe for consumer use.



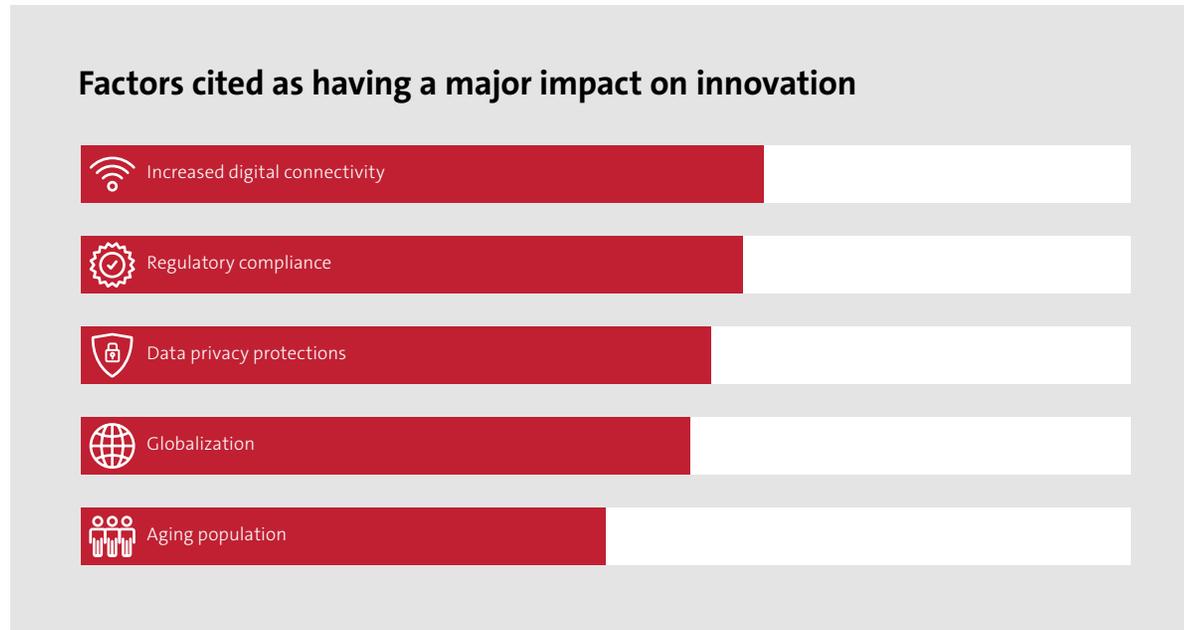
76%

said that it is very important that products comply with federal/internal regulations.

## Redefine innovation

Just as safety is being redefined, so is innovation. Innovation has traditionally been focused on the development of new products and/or new product features and functionality. The drive for innovation was to create goods and services that would meet consumers' needs. However, innovation today is the process of ensuring that a product incorporates a multitude of performance as well as safety and sustainability criteria from the outset of design.

Respondents listed the following as having a major impact or requiring a complete redesign of their approach to innovation:



## Pursue new business models

In an era of unprecedented change and new technologies, companies are completely reinventing their businesses. Innovative business models are changing the way products and services are delivered, the value propositions they offer, the ways they generate revenue, and shifting toward circular business models that are inherently sustainable. New business models will be critical to resolving certain innovation and safety issues. Some companies will change the game by completely turning industries on their heads, much like Uber has done with the transportation industry.

Industries stand at the crossroads of innovation and safety, many feeling the necessity to choose one path at the expense of the other. However, the truth is, with some thought and collaboration, the two paths can converge for greater ease, efficiency and success.

## About UL

Around the globe, UL works to help customers, purchasers and policymakers navigate market risk and complexity. UL builds trust in the safety, security and sustainability of products, organizations and supply chains – enabling smarter choices and better lives. In all we do, we apply science and expertise to enable the responsible design, production, marketing and purchase of the goods, solutions and innovations of today and tomorrow.

UL is prepared to deliver services, solutions and education to help enterprises strengthen their brands. We invite you to take advantage of our leading-edge insights and domain experts to position your brand for long-term, sustainable success.

**For more information, visit  
[UL.com/Perspectives](https://www.ul.com/Perspectives).**

# About the study

This report is based on results from both surveys, each collecting feedback from approximately 300 respondents from the Americas, Europe and Asia Pacific. The majority of respondents in both surveys were C-suite executives, along with product research and development, operations and manufacturing professionals, supply chain and logistics, product quality and integrity, legal and compliance for a balanced perspective on issues concerning innovation and safety.

## Industry segments

- 

Pharmaceuticals and medical devices
- 

Retail
- 

Manufacturing
- 

Automotive
- 

Consumer packaged goods
- 

Electronics
- 

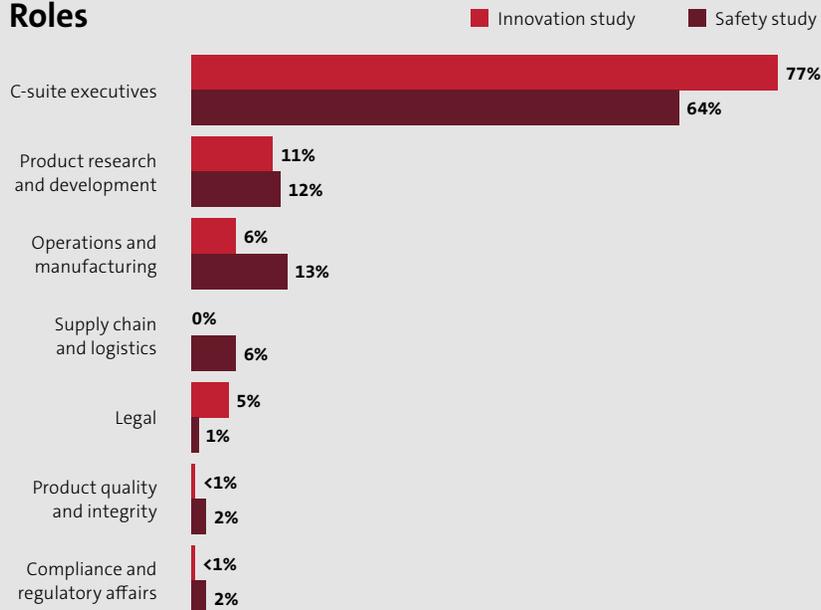
Computer hardware and software
- 

Telecommunications
- 

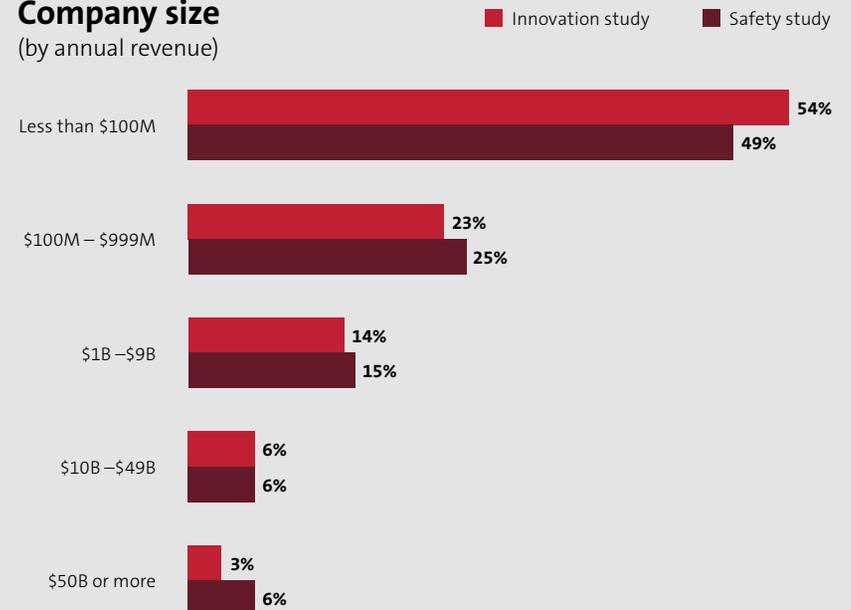
Aerospace and defense
- 

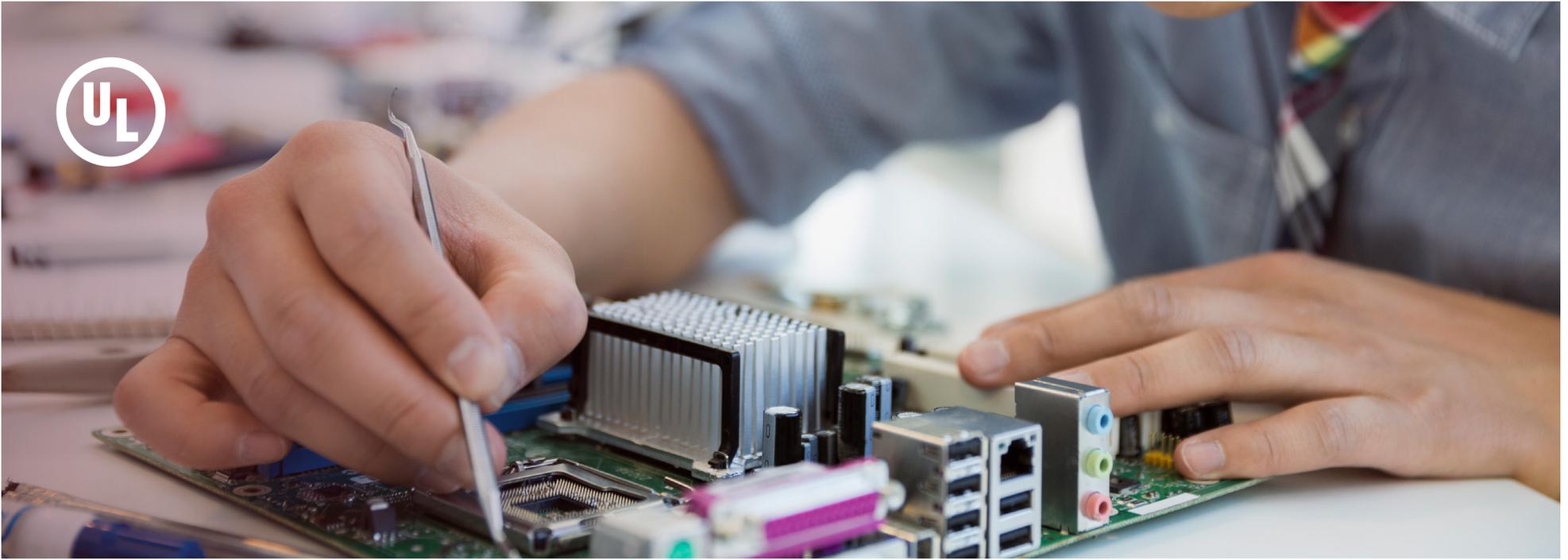
Oil and gas

## Roles



## Company size





## Sources

1. GLG Strategic Projects, "Product Safety Advancement Flagship Survey," February 2018
2. GLG Strategic Projects, "Innovation Flagship Survey Results," March 2018





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