Rethinking Innovation Leadership in the Chemical and Process Industries

Russell Reynolds ASSOCIATES

Executive summary

Innovation has always been at the heart of the chemical and process industries (CPI), creating competitive advantage and building new revenue streams. It has played a vital role in transforming CPI companies and, in turn, has allowed these companies to transform the range of their clients' businesses.

Yet CPI is changing: Products are becoming increasingly commoditized, putting downward pressure on pricing, in a general context of accelerating digitalization of the value chain. In response, leading CPI companies have started to renew their focus on innovation and rethink their strategies. To learn more, we interviewed executives across Europe and the United States to talk about innovation challenges and requirements from a talent and company-culture perspective. Our survey revealed the following key points:

1. Innovation is a growing strategic priority; however, this innovation is still primarily product and process related, as opposed to a focus on new solutions, services or business models.
2. CPI companies have made significant changes in innovation leadership over the past five years, primarily to upgrade their innovation skills and to fill specific gaps.
3. Innovation accountability in CPI still lies mainly with functional executives, in particular the chief technology officer (CTO) and the chief innovation officer (CINO) rather than the chief executive officer (CEO). In fact, CEOs only rarely assume direct responsibility and accountability for driving innovation.
4. Risk aversion among C-level executives is the single most important hurdle for successful innovation, with unsupportive corporate culture and a lack of leadership skills not far behind.
5. Innovation teams perceive themselves as overwhelmingly weak in some of the competencies they see as critical for the future, such as challenging the status quo. Innovation leaders still mostly come from within internal company ranks, and the vast majority are from within the CPI industry. Yet the industry today also seems to be opening up to the idea of hiring talent from outside.
6. CPI companies in Europe believe their innovation teams are more effective at generating innovation than at implementing it, while North American companies believe they are stronger at implementing.

> *CPI companies need to create a more holistic cultural, leadership and competency framework for grooming future innovation leaders.*

Based on these and other findings, we recommend that CPI companies quickly take action in order to:

- Create a cultural, leadership and competency framework for grooming future innovation leaders, building a supportive corporate culture that fosters risk taking and rewards challenging the status quo.
- Anchor ownership and accountability at the top, looking to the CEO to embody the company's innovation mindset, lead by example and nurture new innovation paradigms.
- Further develop critical innovation competencies (leading change, challenging the status quo, making decisions and developing talent) within the new, supportive corporate culture, bringing in talent from the broader CPI ecosystem to challenge existing paradigms.

A growing talent shift

Chemical and process industry companies have historically transformed both their own and their clients' businesses through innovation. Yet increasing commoditization and resulting competitive pressure on the industry on the one hand and the accelerating adoption of digital technologies on the other are mandating a renewed and revised focus on this well-known topic.

Some chemical and process companies have responded to the industry's increasing commoditization by becoming pure-play commodity businesses, focusing on cost cutting to keep margins healthy. Yet many have worked to maintain margins and build market share by innovating to add new specialty products to their portfolios. They have taken steps to increase the research and development (R&D) budget, change their innovation strategy and, in particular, bring in new innovation talent.

As the paradigms of innovation are changing, we are witnessing a growing talent shift, with CPI companies hiring both internally and externally to fill their innovation leadership roles. As this trend continues, senior industry leaders need to increasingly reflect on the type of talent they should be looking for, where to find it, and how to recruit and retain it. More broadly, they should determine how to establish the appropriate cultural, leadership and competency frameworks to nurture this future innovation talent.

A NEW PERSPECTIVE ON A WELL-KNOWN ISSUE

To better understand the changing dynamics of innovation and the corresponding leadership implications in this space, Russell Reynolds Associates surveyed more than 50 senior executives in Europe and the United States. This survey was one of the first to analyze innovation in CPI from a talent and company-culture perspective, looking at a well-known issue through an unconventional lens. We asked our survey participants about the innovation challenges they see today and the talent requirements they anticipate over the next few years.

Predictably, the vast majority of our survey respondents state that innovation is a clear strategic focus, with nearly 60 percent of those surveyed saying that innovation is one of their key priorities; another third say it is the core focus of their strategy (Exhibit 1).

Innovation is a strategic priority but remains primarily product and process related.

Within this focus, the primary target is typically product-and process-related innovation, while less attention is paid to other areas of innovation, such as new business models and services (Exhibit 2). In fact, innovation is still typically measured in a very product-centered way using new product sales and the net present value of estimated future cash flows as their metrics for success.

EXHIBIT 1 – LEADERSHIP COMMITMENT TO INNOVATION
% of respondents

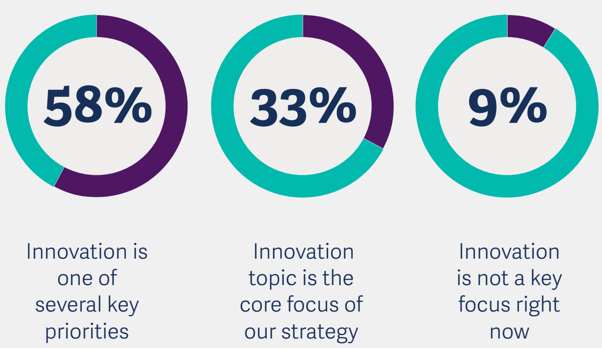
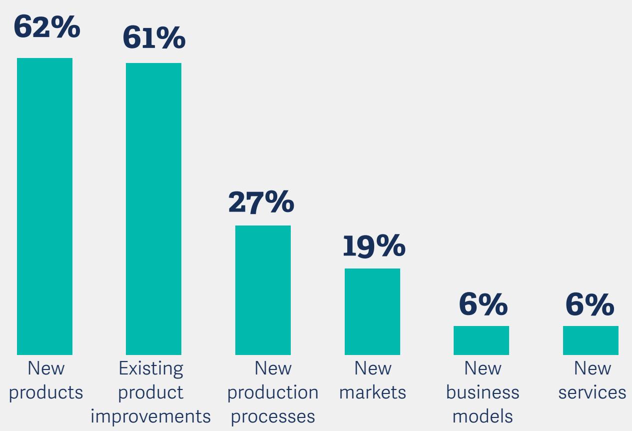


EXHIBIT 2 – HOW MUCH FOCUS DOES YOUR COMPANY PUT INTO INNOVATION IN THE FOLLOWING AREAS?
% of respondents



Changing innovation leadership

Respondents also tell us their companies have renewed and revised their focus on innovation over the past five years, most often making significant changes in innovation leadership and strategy, followed by innovating with third parties and increasing the R&D budget and resources (Exhibit 3). While these changes are similar in both Europe and North America, we note that many more European companies have seen an increase in their R&D budget (51 percent) than North American companies (35 percent), while more North American companies have increased the involvement of their marketing teams in the innovation process.

Despite these differences, the biggest changes in both regions have been in innovation leadership, with 69 percent of European respondents and 60 percent of North American respondents saying their company's innovation leadership has changed. The key reasons for these changes include upgrading the company's innovation skills (55 percent of all respondents) and filling specific gaps in innovation skills (49 percent) (Exhibit 4).

Innovation leadership has significantly changed over the past five years.

EXHIBIT 3 – MAJOR CHANGES IN INNOVATION OVER THE PAST 5 YEARS

% of respondents

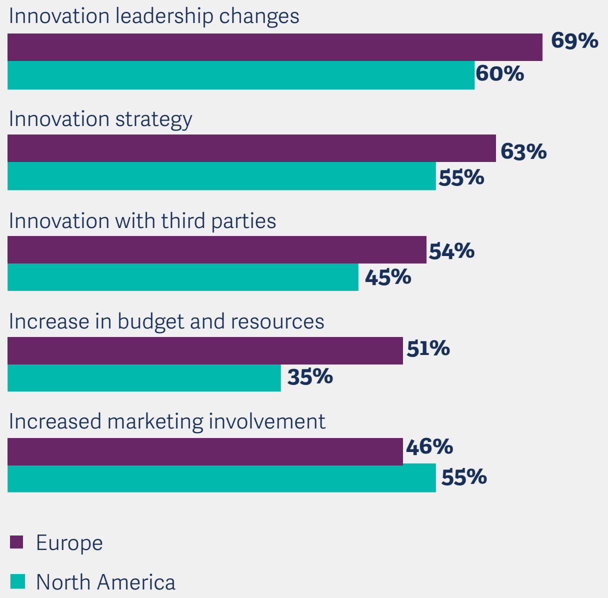
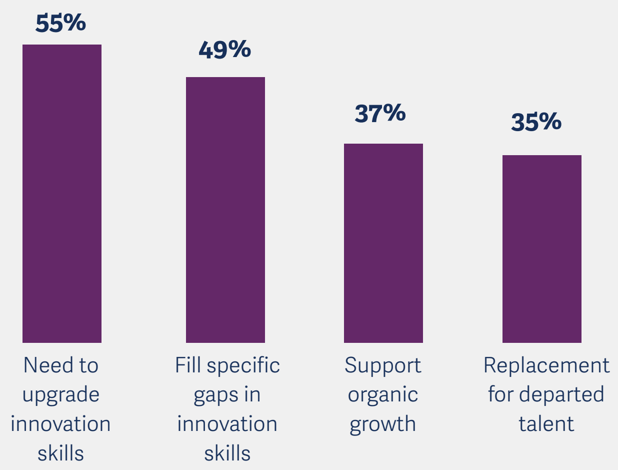


EXHIBIT 4 – KEY REASONS FOR HIRING SENIOR INNOVATION TALENT

% of respondents



Who is reponsible for innovation?

Given that different executives within a company may be responsible for innovation, and at different levels, what does it mean that innovation leadership is changing? Who is ultimately responsible for innovation decisions?

At the corporate level, we find, remarkably, that CEOs only rarely assume direct responsibility and accountability for driving innovation; instead, that responsibility is typically attributed to functional leaders—particularly to the CTO or the CINO—in both Europe and North America.

At the business unit (BU) level, the BU head of innovation (head of R&D, CTO or CINO) is primarily responsible in both regions, followed by the BU head or the head of marketing. Interestingly, marketing heads have a bigger influence in Europe at the BU level than in North America (Exhibits 5 and 6).

Innovation accountability lies with functional executives rather than with CEOs.

EXHIBIT 5 – PRIMARILY RESPONSIBLE FOR DRIVING INNOVATION AT THE CORPORATE LEVEL

% of respondents

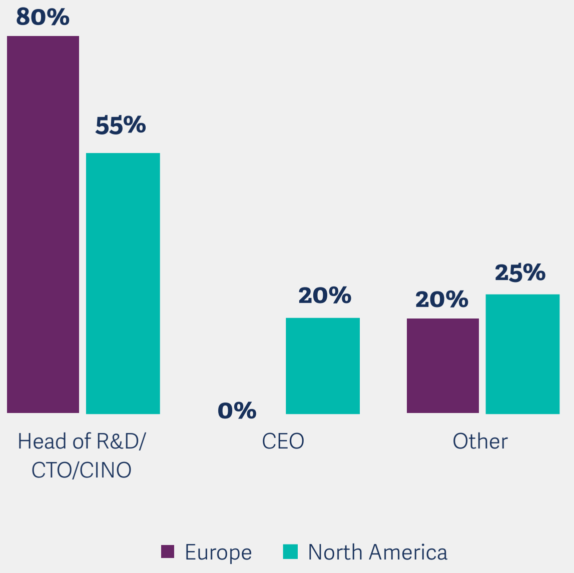
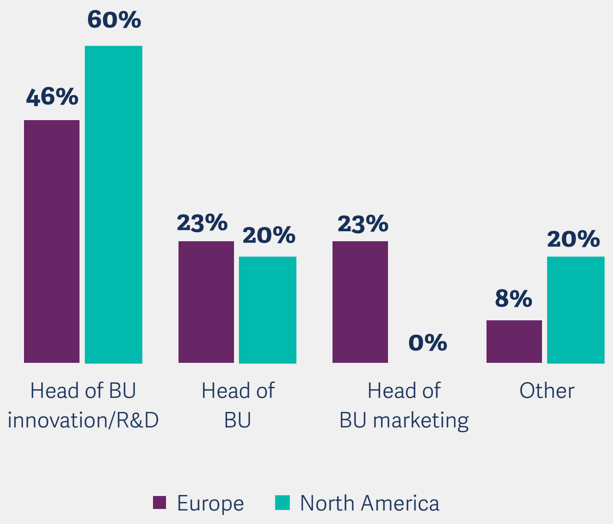


EXHIBIT 6 – PRIMARILY RESPONSIBLE FOR DRIVING INNOVATION AT THE BUSINESS UNIT LEVEL

% of respondents



Perceptions of effectiveness

We also asked our respondents about their perception of their company's effectiveness in terms of generating and implementing innovation. We found that CPI companies in Europe tend to rate themselves more effective at generating innovation than at implementing it, while CPI companies in North America tend to rate themselves stronger at implementing (Exhibit 7).

We believe differences in corporate culture may account for this disparity rather than an intrinsic divergence in capability. To that end, we asked the same respondents to rank the relative strength of their corporate culture in five different areas: performance orientation, strategic growth, discipline, openness and relationship focused. In terms of the relative perceived strength of their company culture, European executives rate themselves weak in discipline, while North American executives give themselves strong marks for discipline and performance orientation (Exhibit 8).

Whether these perceptions are accurate and reflect true corporate attributes or simply reveal cultural biases is still open to debate.

EXHIBIT 7 – EFFECTIVENESS IN GENERATING AND IMPLEMENTING INNOVATION

% of respondents responding "very effective"

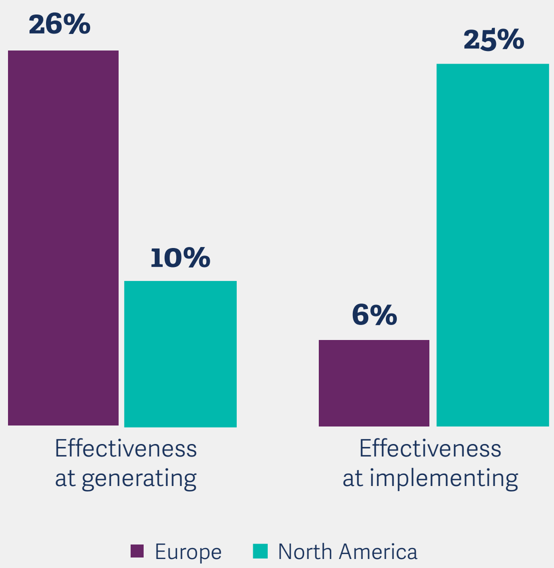
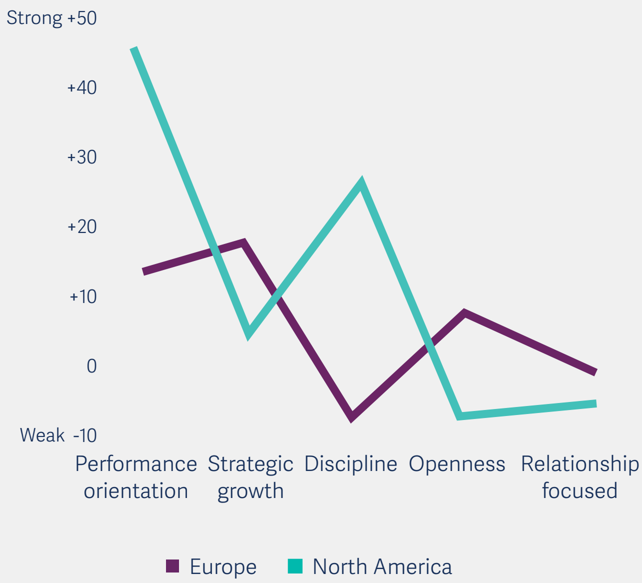


EXHIBIT 8 – RELATIVE PERCEIVED STRENGTH OF THE COMPANY CULTURE

% net difference in responses rated "very strong" and "weak"



The greatest challenge: risk aversion

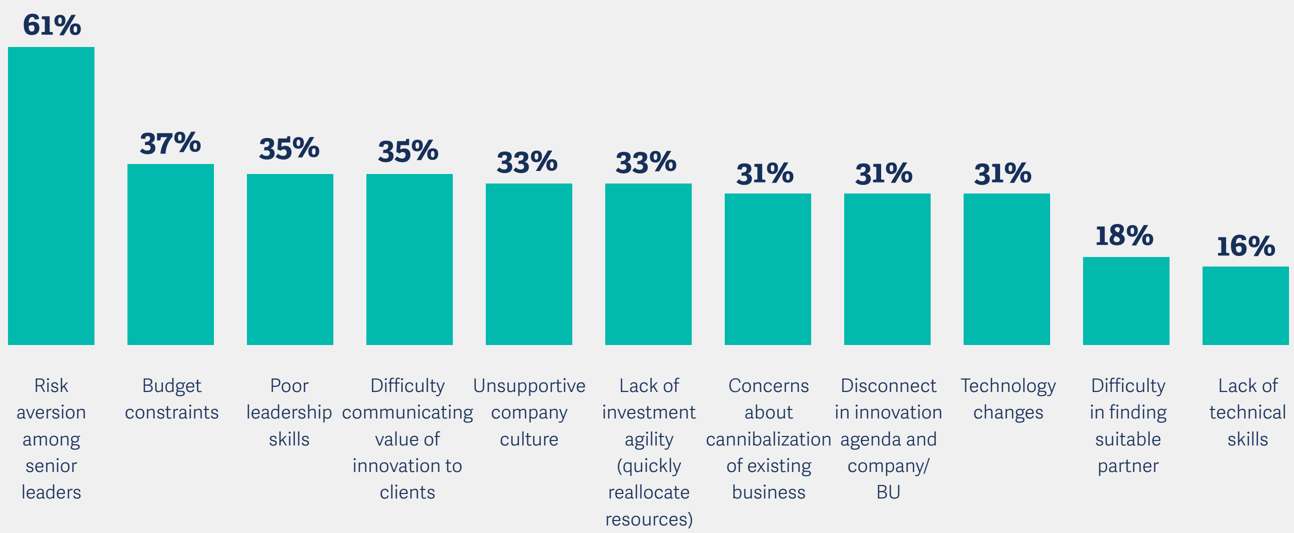
Risk aversion, by far, is perceived as the greatest barrier to innovation among senior leaders; 61 percent of our respondents call it a significant or very significant challenge to successful innovation (Exhibit 9). The senior leaders under discussion here are not innovation leaders themselves but are the C-level executives with ultimate decision-making power. We believe successful innovation always entails acknowledging, accepting and actively managing risk, including the potential tradeoff of short-term results for the pursuit of a brighter future. Yet such a strategy has become a less attractive value proposition for CEOs in today's increasingly volatile macroeconomic environment, given intense quarter-to-quarter scrutiny by the stock markets.

Corporate culture is also an important factor, with our respondents ranking it among the most significant challenges. A company's culture is highly dependent on its degree of risk aversion. If the company has a culture of punishing failure, for example, then leaders will always bet on the safe side. A risk-averse culture leads to an incremental innovation posture in which the company does what it has always done, generally maintaining the status quo and focusing on marginal improvements.

Risk aversion is a strong inhibitor to innovation: Successful innovation always entails acknowledging, accepting and actively managing risk.

At the far right of Exhibit 9, we note that a lack of technical skills is not perceived as a very significant issue. Innovation leaders seem to believe their company has the right technical skills but lacks the ability to take risks and lead—with 35 percent of respondents also noting poor leadership skills as a significant challenge.

EXHIBIT 9 – BIGGEST CHALLENGES IN ACHIEVING INNOVATION GOALS
% of respondents who rated "very significant" or "significant" challenge



Key innovation competencies

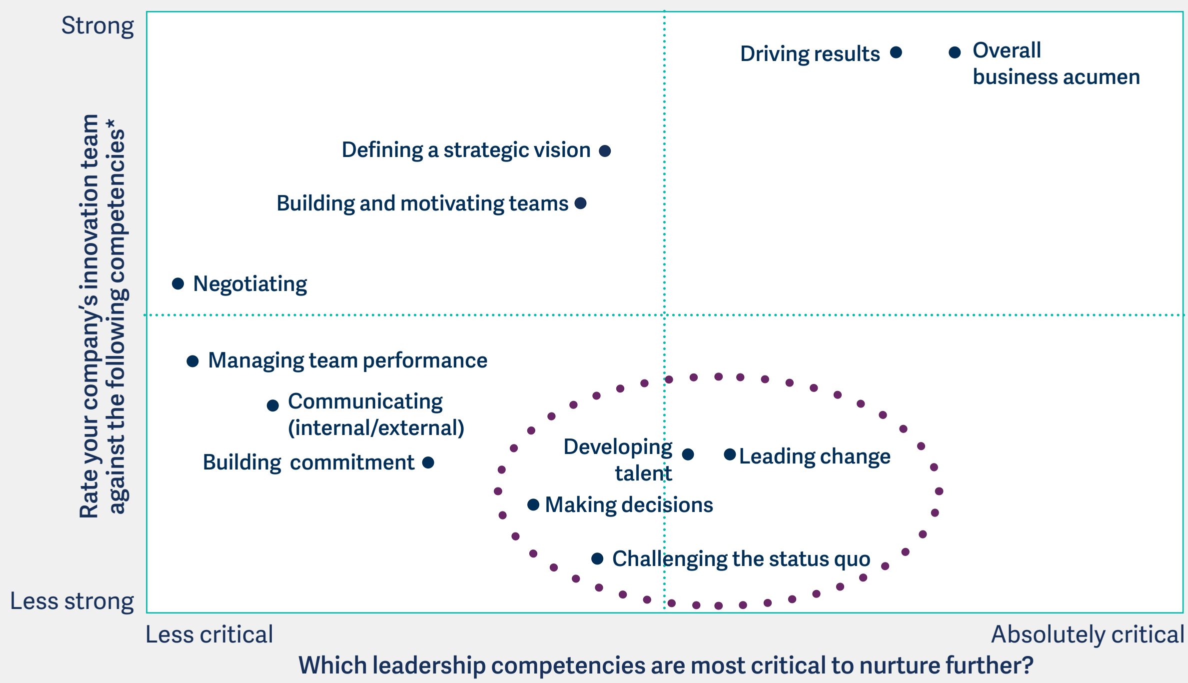
Taking a different tack, we asked executives to rate the competencies they believe will be most critical to successful innovation going forward and to rate their company's innovation teams against those competencies. Exhibit 10 is a matrix of their responses, with the most critical competencies at right and the strongest team ratings at the top.

We have circled in purple the competency areas that appear to be issues for many innovation teams by our metrics: leading change, challenging the status quo, making decisions and developing talent. Importantly, challenging the status quo—ranked below every other competency in terms of team strength—may be the only way to uncover disruptive innovation. Without it, teams tend to make small, incremental changes, staying with what is known and safe. In contrast, challenging the status quo can lead to the discovery of new ways of doing business, new services and new business models. It can have an impact on risk aversion as well, as those who challenge the status quo are more likely to take risks than those who do not.

Internal and external communication is ranked as relatively weak as well, just as in Exhibit 9, in which 35 percent of respondents list difficulty in communicating the value of innovation to clients as a significant challenge. The closer innovation leaders are to the customer and the better they understand their customer needs, the more likely they are to think broadly about ways to innovate and capture the corresponding value.

Challenging the status quo can lead to the discovery of new ways of doing business, new services and new business models.

EXHIBIT 10 – PERCEIVED RELATIVE STRENGTH AND CRITICALITY OF INNOVATION LEADERSHIP COMPETENCIES



* Relative strength of the competency.

Innovation leaders of the future

As CPI companies look to address their corporate culture-related competency challenges, where will they find their future innovation leaders? According to an analysis we performed in 2015, CPI innovation leaders in large organizations have most often been promoted from within, and the majority have worked only in the chemical and process industries (Exhibit 11).

Going forward, 80 percent of our respondents indicate that innovation leaders will continue to come from internal posts in R&D; however, 74 percent say they will come from outside the CPI industries as well (Exhibit 12). These responses seem to suggest that companies are warming to the idea of hiring innovation talent with broader industry experience.

Which industries may provide this external talent? According to Russell Reynolds Associates' analysis of executives' psychometric data across a number of industries, consumer-facing, financial services and technology industry executives seem, on average, more likely to think outside the box, be more persuasive and inquisitive, and be open to new ideas than typical executives in the industrial and natural resources sectors.

> *CPI companies are warming to the idea of hiring innovation talent with broader industry experience.*

We also asked survey respondents to name companies they most admire for their innovation skills. The top five companies mentioned were Apple, 3M, Google, DuPont and BASF.

EXHIBIT 11 – INNOVATION LEADERS' SOURCE OF APPOINTMENT AND INDUSTRY EXPERTISE[1]

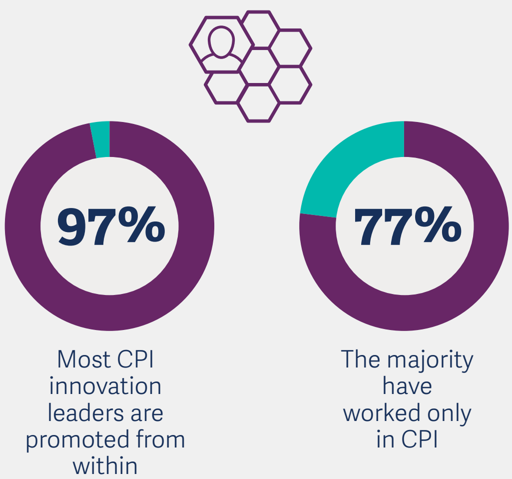
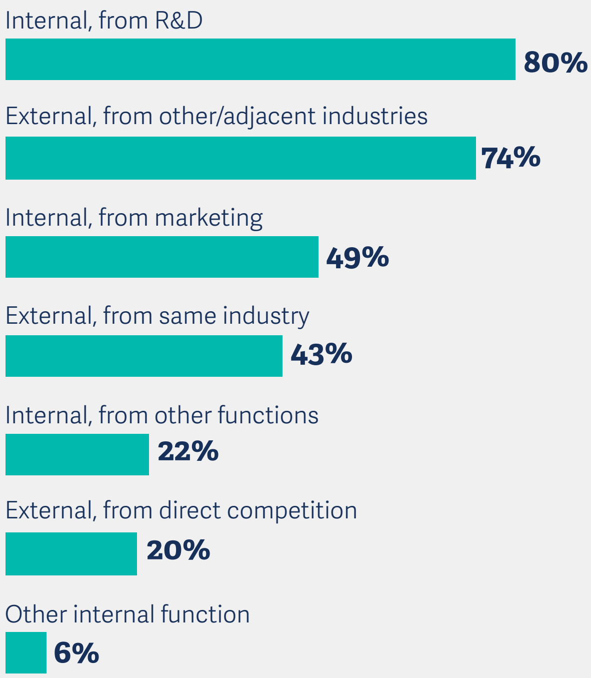


EXHIBIT 12 – WHERE WILL FUTURE INNOVATION LEADERS COME FROM?

% of respondents



[1]Russell Reynolds Associates' proprietary analysis of 35 CPI companies with revenues of more than $5 billion, 2015.

The path forward: a new approach

We recommend CPI companies take the following steps to address their innovation challenges:

Create a more holistic, cultural, leadership and competency framework for grooming future innovation leaders

Companies should begin by consciously working to establish a supportive innovation culture. Some might claim that hiring new talent comes first; however, hiring in the same way, and doing things the way they have always been done, will not bring about change. To innovate in today's rapidly commoditizing CPI market, companies will need to take a more disruptive approach that looks at alternative markets, business models and services. This new focus should be driven by market demands and an effort by innovation teams to open up much more to outside influences and collaboration with third parties.

Some specific suggestions include:

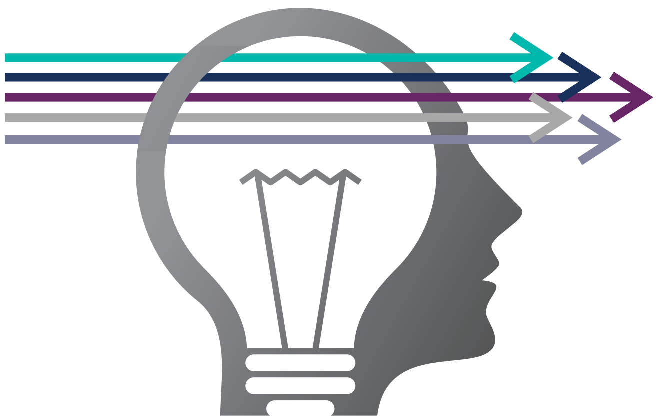
- Establish a dedicated career path for future innovation leaders, recrafting talent development programs to groom critical competencies from the start.
- Nurture curious, inquisitive and creative people who challenge the status quo and are willing to ask the difficult questions.
- Support leaders who have a multifunctional, creative mindset and a willingness to have an open-door policy.
- Encourage innovation and marketing leaders to collaborate on developing and implementing winning innovation strategies. R&D leaders should be conscious of markets and market demands, while marketing leaders should be aware of technical feasibility. The two together can create a realistic view of ways in which a company can ideate, innovate and bring ideas to commercialization.

Anchor ownership and accountability at the top

To support this new approach, companies will need to boldly anchor innovation ownership and accountability at the very top of their organization: with the CEO. CEOs should exude passion for, belief in and full engagement toward their company's strategic commitment to innovation. Yet CEOs today still too often delegate innovation responsibility to their functional leaders.

It is extremely difficult for functional leaders such as the CTO and the CINO to drive innovation efforts to completion, as they lack ultimate authority over the P&L, capital expenditures, business strategy and other supporting functions.

Of course, we do not expect (or encourage) CEOs to work in the lab or to directly lead projects. They should, however, embody the company's innovation mindset, lead by example, nurture new innovation paradigms and take steps to alter any unsupportive elements of the corporate culture by making clear, bold decisions, as well as taking full ownership and accountability.



Although a number of innovation leadership changes have already taken place, there is more work to do for CPI companies.

Further develop critical competencies within the new, supportive corporate culture

To supplement their existing innovation leadership and competencies, CPI companies should look to hire externally. The industry has historically focused on hiring talent straight out of academia into its R&D and marketing teams, then promoting up through the ranks. Yet to renew and broaden their approach to innovation, companies will need to increase their openness toward more diverse profiles. This diversity is not necessarily cultural, gender based or even geographic. Rather, the essence will be cross functional and cross industry and will span the entire value chain.

CPI companies should also encourage increased collaboration with third parties. Companies typically interact only along the value chain, with suppliers on one end and customers on the other. However, there are other players in the ecosystem, from co-suppliers to competitors to players in adjacent industries serving the same clients. For example, players in the fast-moving consumer goods sectors might have some interesting ideas about product and marketing innovation. Bringing in talent from the ecosystem can stimulate new ideas and approaches not sufficiently considered in the past.

We note some companies may already have the right executives in place at the functional level. Nonetheless, there will be competency gaps that can be directly addressed. These are likely not technical skill gaps, as we discovered in our survey. Rather, they are gaps in competencies such as change leadership and decision making, as well as the ability to challenge the status quo.

> *Companies will need to undergo an enormous transformation to move from where they are today to true innovation success outside the product and process focus.*

To fill these gaps, companies should:

1 Redefine their hiring criteria to weigh less on direct industry experience and more on critical competencies.

2 Ensure new hires are fully supported and directly sponsored by top executives in order to facilitate their integration into the industry's highly technical environment.

3 Be ready to accept that outsiders may be at the forefront of change initiatives.

4 Companies will need to undergo an enormous transformation to move from where they are today to true innovation success outside the product and process focus. Creating a new, holistic innovation framework encompassing aspects of culture, leadership and competencies to support this transformation will be a pivotal step on the path to rejuvenating innovation in the CPI industries.

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