

# RETHINK, REINVENT, REALIZE.

How to successfully scale digital  
innovation to drive growth

CHEMICALS



# THE IDEA: FIND INDUSTRY X.0 BEST PRACTICES!

## OUR PREMISE AND RESEARCH QUESTION

When it comes to digital transformation, scaling innovation pilots is critical.

Yet many clients tell us that they are struggling with this very step – and feel that they might get stuck with “piecemeal projects” that don’t deliver significant value.

**Can we find key best practices that could help them overcome their challenges, and drive real change, for real new growth?**



## SURVEY AT-A-GLANCE

**n=1,350**  
companies with  
1bn+ in revenue

**60%**  
C-suite  
respondents

**13** industries  
and  
**17** countries



## CHEMICALS AT-A-GLANCE

**n=121**  
companies with  
1bn+ in revenue

**48%**  
C-suite  
respondents

**13**  
countries

# THE RESULT: IT'S ALL A MATTER OF MANAGEMENT!

## OUR KEY FINDINGS

**Companies are scaling over 60 percent of all digital POCs**, but only about four out of ten companies are doing it successfully.

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### **A SURPRISE!**

(we didn't expect to find that many companies trying to scale!)

What's the difference?  
**The leading 26 percent manage their scaling efforts differently.**

Following the **four best practices** of these "Champions" is a recipe to **succeed at innovating for digital transformation.**

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### **THE REASON TO READ!**

(these best practices are what readers will come for)

**Q:**

**WHAT'S THE CURRENT STATUS  
IN SCALING DIGITAL  
INNOVATION?**

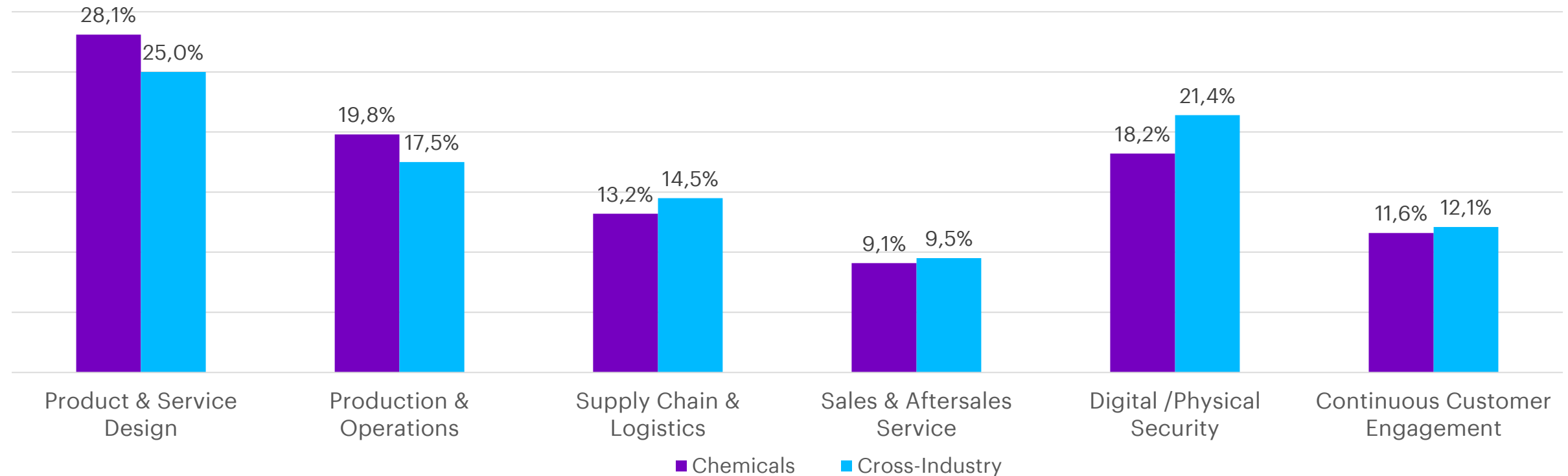
**A:**

**THINGS ARE SPEEDING UP – IN  
SURPRISING WAYS.**

# PRODUCT & SERVICE DESIGN IS THE INNOVATION PRIORITY FOR CHEMICALS INDUSTRY

Product and Service Design is a top innovation priority for Chemicals companies by a long margin

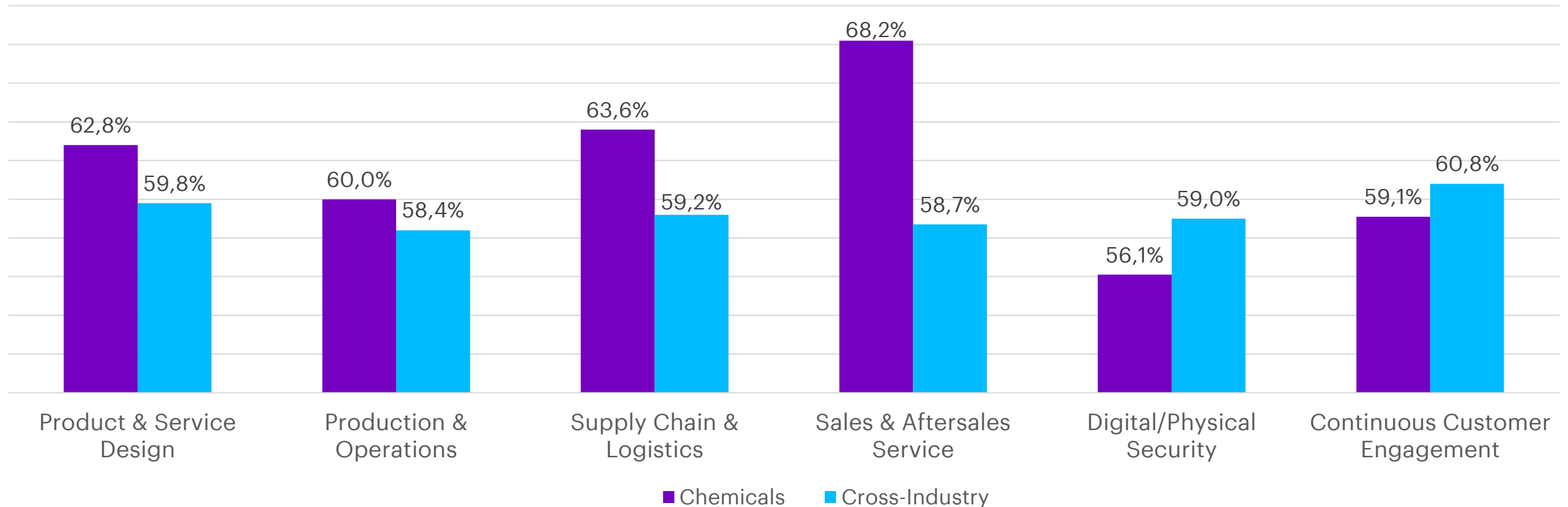
## INNOVATION PRIORITY\*



\* "innovation priority" = percentage of respondents who are prioritizing digital innovation in these business areas

# CHEMICALS COMPANIES ARE SCALING DIGITAL POCs ACROSS BUSINESS FUNCTIONS

## SCALING INTENSITY\*



\* "scaling intensity" = ratio of avg. number of proof of concepts scaled to avg. number initiated in each business function, across discrete and process industries.

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Source: Accenture 2019 Industry X.0 Survey 7

# CHEMICALS COMPANIES RECOGNIZE THE NEED FOR INNOVATING AT SCALE TO BUILD PRODUCTS AND SERVICES CAPABLE OF:

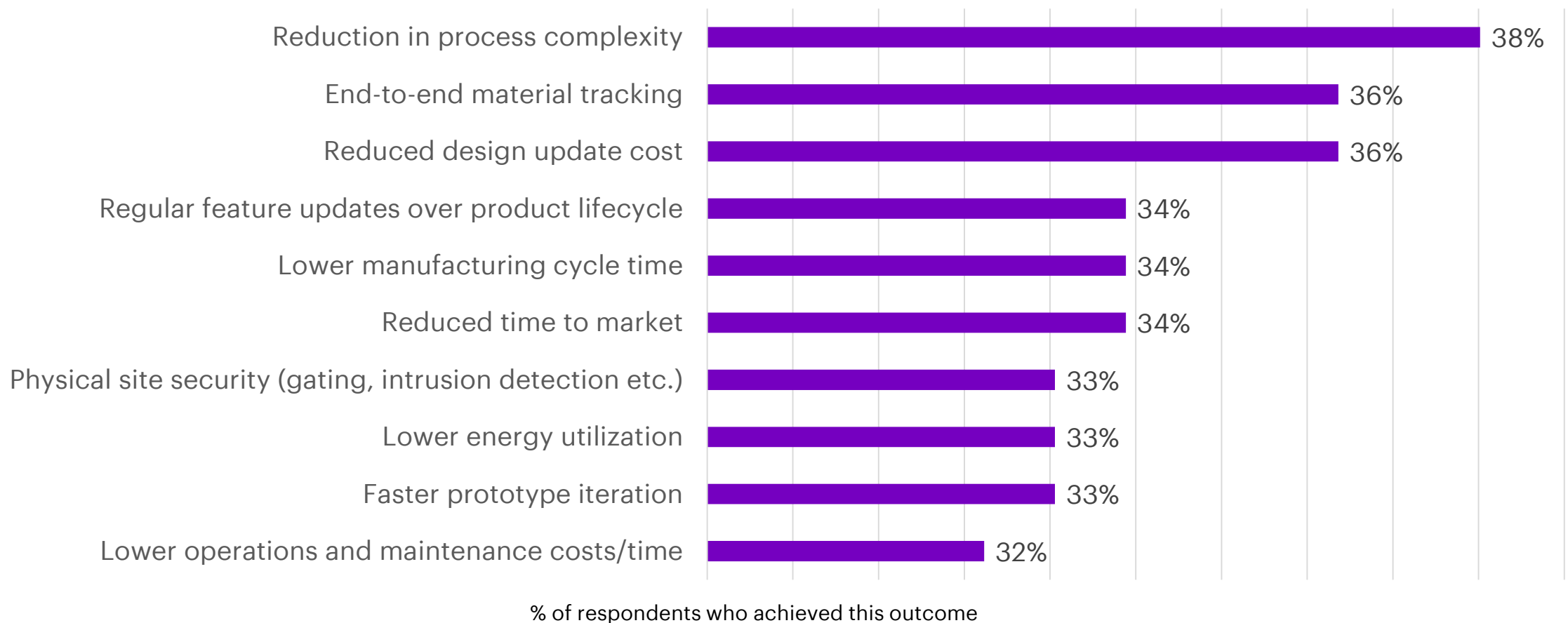
Delivering effective and personalized services through **better product lifecycle management**

Delivering profitable customer experiences with **efficient supply chain and operations**



# SIMPLIFIED PROCESSES AND IMPROVED SUPPLY CHAIN VISIBILITY ARE KEY OUTCOMES FOR CHEMICALS COMPANIES...

## Top 10 outcomes targeted by Chemicals companies through scaling of digital POCs



# ...AND THEY ARE CHOOSING BIG DATA, AR/VR AND CLOUD TO DRIVE THESE OUTCOMES

## Top 3 technologies leveraged to facilitate scaling, by function

	PRODUCT & SERVICE DESIGN	PRODUCTION & OPERATIONS	SUPPLY CHAIN & LOGISTICS	SALES & AFTERSALES SERVICE	DIGITAL/PHYSICAL SECURITY	CONTINUOUS CUSTOMER ENGAGEMENT
AI/ML-powered Automation		<b>RANK 1</b>				
AI Assistants						
3D printing						
Mobility						<b>RANK 3</b>
IIOT Sensors & Transmitters						
Immersive Experience	<b>RANK 3</b>		<b>RANK 3</b>			<b>RANK 1</b>
Industrial Robotics						
Big Data Analytics		<b>RANK 3</b>		<b>RANK 1</b>	<b>RANK 2</b>	<b>RANK 2</b>
Digital Twin						
Cloud	<b>RANK 1</b>					
Blockchain				<b>RANK 2</b>	<b>RANK 3</b>	
Autonomous Vehicles			<b>RANK 1</b>			
Machine Learning/Deep Learning	<b>RANK 2</b>		<b>RANK 2</b>			
Quantum Computing				<b>RANK 3</b>		
Cyber Security Protocols		<b>RANK 2</b>			<b>RANK 1</b>	

**Q:**

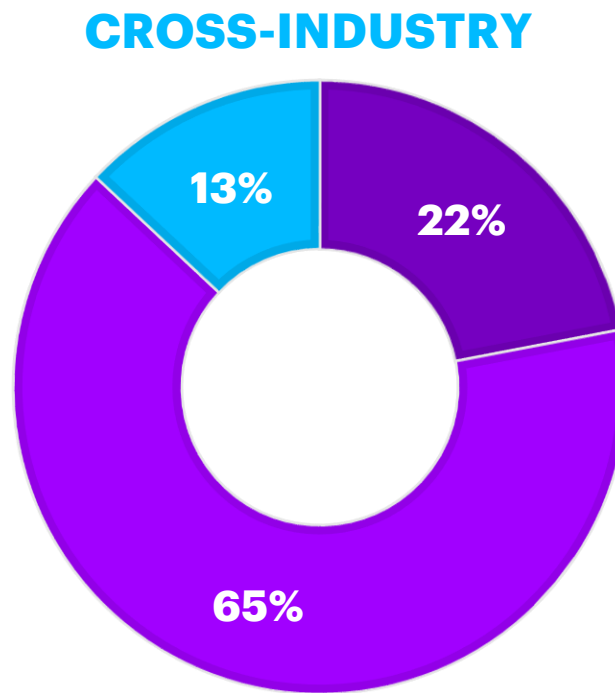
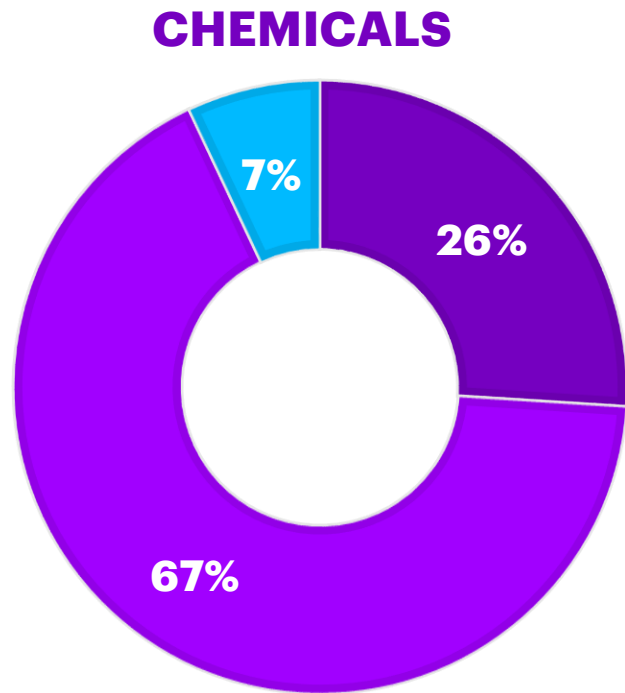
**WHAT ABOUT SCALING  
SUCCESS – DOES EVERYONE  
SEE IT?**

**A:**

**NO. SOME COMPANIES RACE  
AHEAD, OTHERS STRUGGLE.**

# SO, WHO'S SCALING THE BEST?

The Chemicals industry boasts a higher proportion of Champions compared to the global, cross-industry average



#### CHAMPIONS

Earn RODI higher than industry ROIC and industry RODI; scale more than 50% of their digital Proof-of-Concepts

#### CONTENDERS

Earn RODI lower than industry ROIC and lower than industry RODI; scale more than 50% of their POCs

#### CAETS

Earn RODI lower than industry ROIC and lower than industry RODI; scale less than 50% of their POCs

\*Percentage of champions in each geography =  $100 \times (\text{The number of champions in a particular geography}) / (\text{Total number of companies surveyed in that particular geography})$

\*\*Percentage of champions in each industry =  $100 \times (\text{The number of champions in a particular industry}) / (\text{Total number of companies surveyed in that particular industry})$

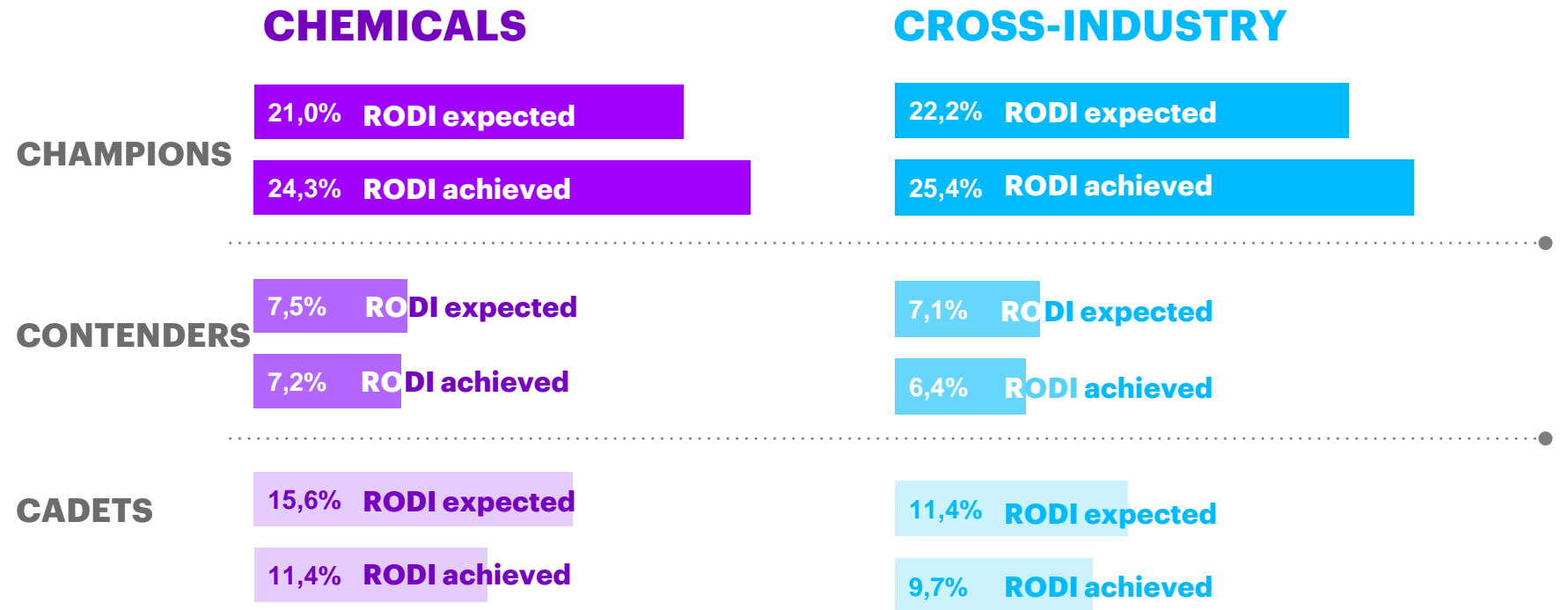
# CHAMPIONS SET THEMSELVES HIGHER “RODI” TARGETS AND ACHIEVE THEM TOO.

**Chemicals Champions achieved more than 3 times the RODI clocked by Contenders; proving that its not how much you scale, but how you scale that matters**

## Returns on Digital Investment (RODI)

RODI = Returns on Investment (Net Gain/Total Investment) from scaled digital POCs across all the key business functions.

We asked executives about the average RODI they expected before scaling digital POCs, and the RODI they finally achieved.



**Q:**

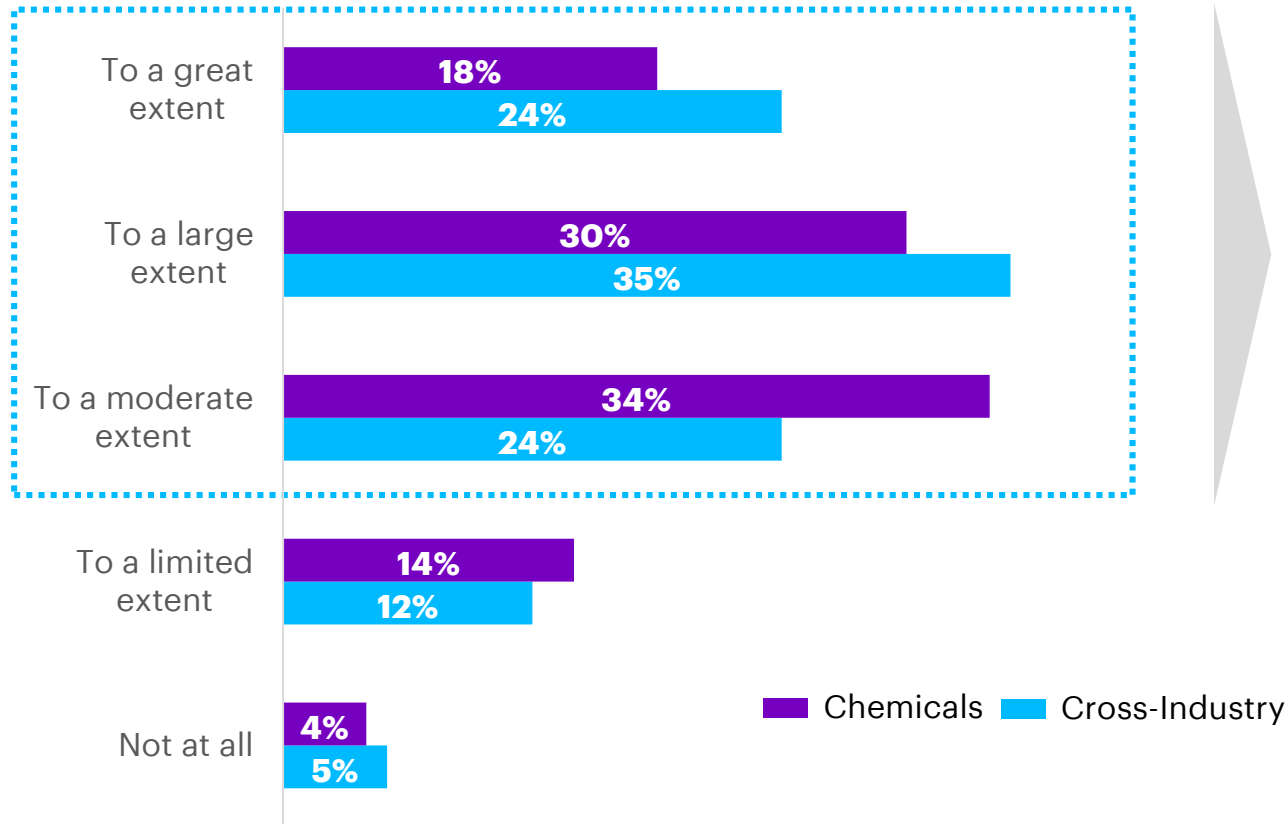
**WHAT'S STOPPING CONTENDERS AND CADETS FROM BECOMING CHAMPIONS?**

**A:**

**LIKE CHAMPIONS, CONTENDERS AND CADETS TOO FACE ALIGNMENT AND TALENT DEFICITS. WHILE CHAMPIONS OVERCOME THESE, OTHERS CONTINUE TO GRAPPLE WITH THEM.**

# SECURING FUNDING FOR DIGITAL REINVENTION PROJECTS FROM THE BOARD IS STILL NOT EASY

## Extent to which securing funding from the board for digital reinvention is a challenge



## RANK KEY REASONS WHY BOARDS OF CHEMICALS COMPANIES REFUSE TO FUND DIGITAL REINVENTION

1. Failure to scale digital proofs of concept (PoCs) in the past
2. Inadequate ROI from digital investments
3. Lack of a clear digital roadmap;  
Shortage of and difficult access to digital skills;  
Lack of a digital-native mindset among Board members
4. Poor understanding of digital reinvention within Top Management; Shortage of budget for capital investments
5. Foreseen immaturity of technology

# ALIGNMENT CHALLENGES AND LACK OF CULTURE ARE OF PRIMARY CONCERN

## Chemicals executives' top picks\* for "biggest challenges to scaling digital POCs"

Biggest challenge  
 Second biggest

	PRODUCT & SERVICE DESIGN			PRODUCTION & OPERATIONS			SUPPLY CHAIN & LOGISTICS			SALES, AFTER SALES SERVICE			DIGITAL / PHYSICAL SECURITY			CONTINUOUS CUSTOMER ENGAGEMENT		
	CH	CT	CA	CH	CT	CA	CH	CT	CA	CH	CT	CA	CH	CT	CA	CH	CT	CA
<b>Inability to align</b> top and middle management to innovate customer value																		
<b>Inability to align</b> top management view on 'digital value'																		
<b>Inability to align</b> talent pools and IT assets across key business functions																		
<b>Absence of culture</b> to identify and realize digital technology quick-wins																		
<b>Inadequate infrastructure</b> to combine multiple digital technologies																		
<b>Lack of partnerships</b> to bridge digital talent shortfalls																		

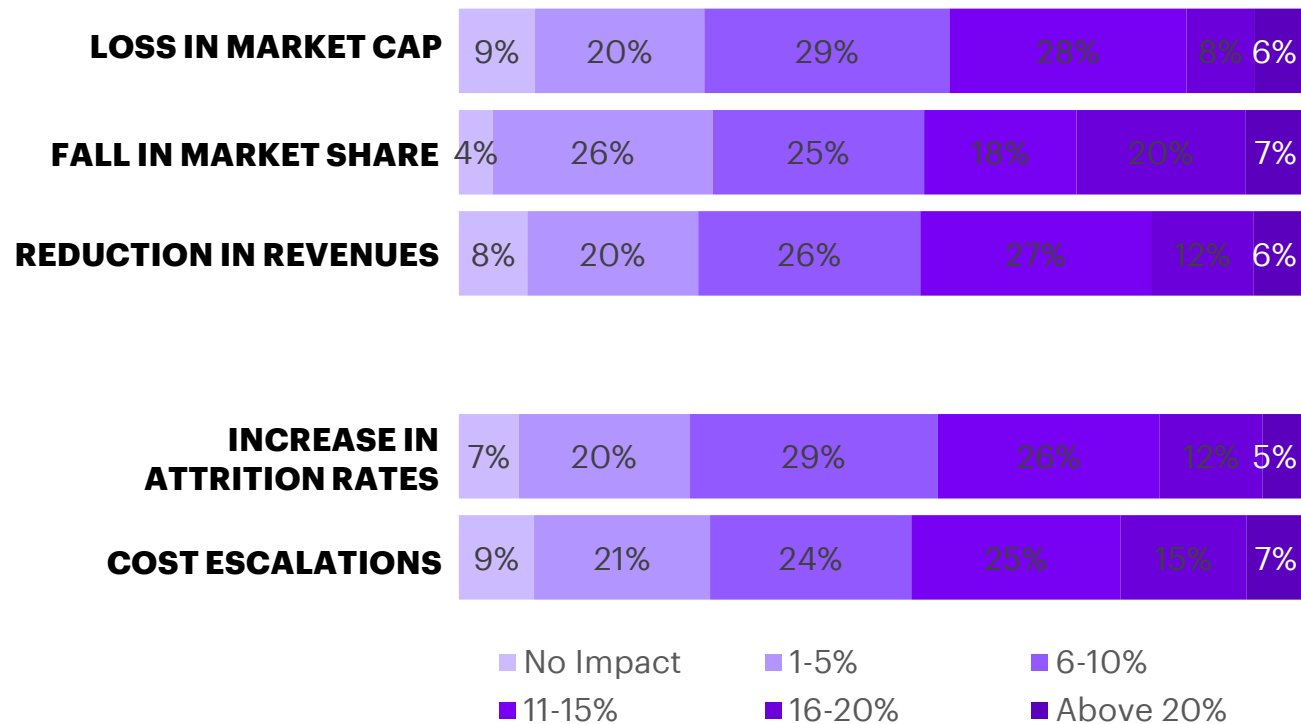
\* other options which weren't picked s often included: "Inability to align in-house innovation with agile digital ecosystems", "Inadequate infrastructure to innovate with digital technologies and platforms", "Inadequate infrastructure to manage complex integration of services channels and products to drive experiences in the 'new'", "Lack of adequate skills to translate digital proofs of concept into scaled-up action plans", "Lack of skills to understand value chain disruption", "Insufficient processes and metrics to systematically track digital technology investments," "Inadequate metrics to assess the ROI on digital technology investments".



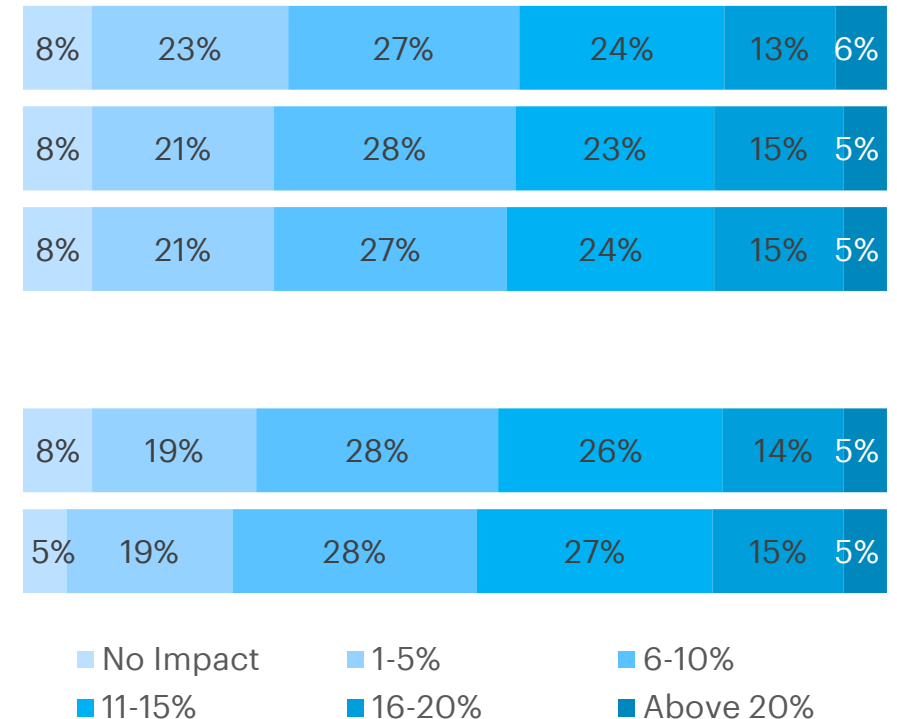
# WHAT DO COMPANIES STAND TO LOSE IF THEY FAIL TO ORGANIZE FOR DIGITAL REINVENTION?

Over 70% of Chemicals leaders fear significant reduction in revenues (>5%) alongside losing significant talent (>5%), if they fail to overcome organizational challenges

## CHEMICALS

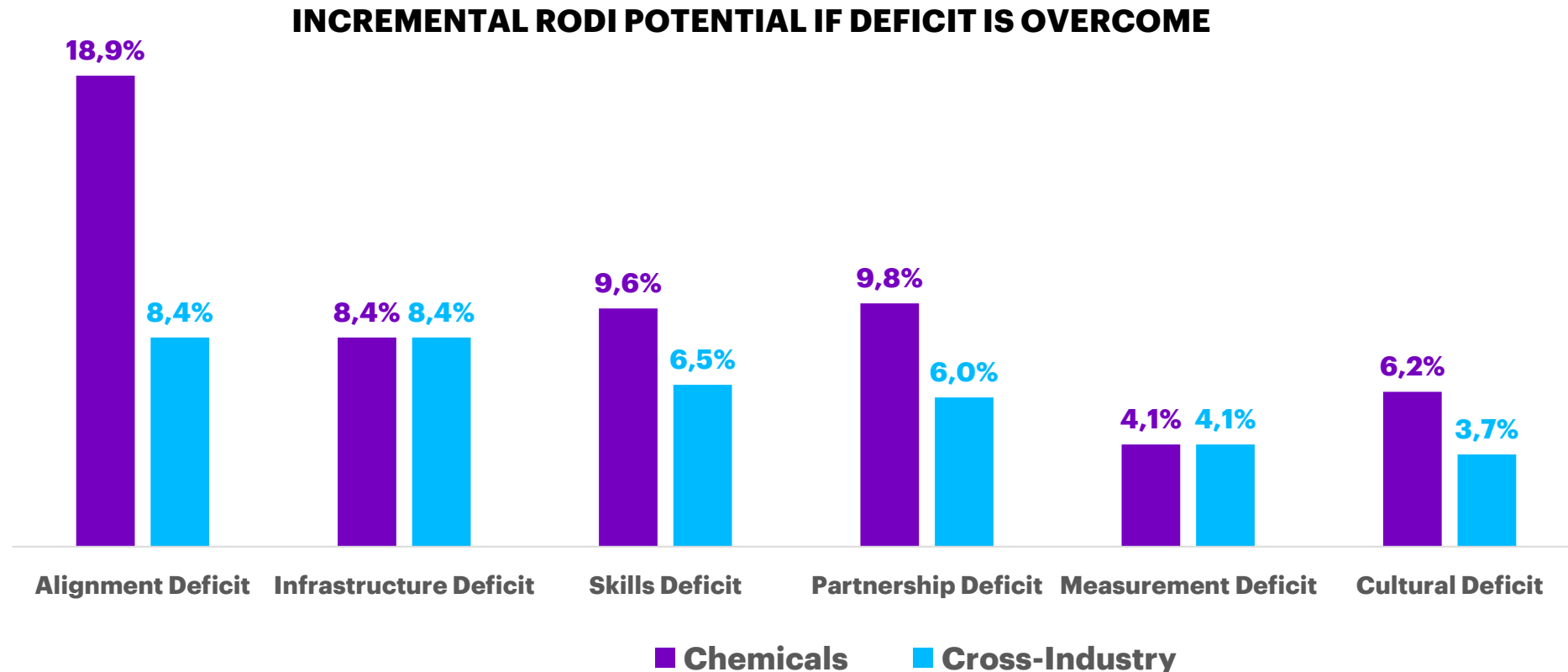


## CROSS-INDUSTRY



# HOW MUCH CAN COMPANIES GAIN IF THEY OVERCOME THESE DEFICITS?

Chemicals companies have the opportunity to achieve sizeable increase in RODI, if they focus on solving alignment and partnership deficits



**Q:**

**HOW DO CHAMPIONS OVERCOME THESE CHALLENGES AND SCALE THEIR DIGITAL INNOVATIONS?**

**A:**

**WITH 4 SPECIFIC BEST PRACTICES.**

# 1.

## **DEFINING THE VALUE THAT GUIDES INNOVATION EFFORTS**

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Champions assess the opportunities before them, and narrow in on the market opportunities they want to pursue. They then use that clarity to communicate with middle management and direct their innovation efforts to secure expected returns.

# 2.

## **FOCUS ON INTERNAL CHANGE AND EXTERNAL VALUE**

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Champions prefer a measured approach to blend organizational change with digital transformation initiatives, creating what we call an ambidextrous organization. With a clear view of the customer value, managers and employees are less likely to feel blindsided by a digital learning curve that is too steep.

# 3.

## **BUILD IN-HOUSE INNOVATION FACTORIES WITH TARGETED INFLUENCE**

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Champions recognize the enormity of integrating rapidly advancing technologies, along with talent and assets, back into their organization. In line with their ambidextrous approach, they take the vital step to re-rig the core of their organizations, seeding and growing new digital innovations organically within organizational boundaries.

# 4.

## **MAP KEY INNOVATION ENABLERS TO APPROPRIATE BUSINESS FUNCTIONS**

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Most manufacturers use the same enablers to drive innovation, such as software applications to support operations, or analytics platforms to generate better insights. However, Champions alone are masters at matching the support to the function that needs it most and will use it best.

**Q:**

**IS THERE A **ROADMAP** TO MATURE  
AS AN ORGANIZATION TOWARDS  
SUCCESSFULLY SCALING DIGITAL  
INNOVATION?**

**A:**

**YES THERE IS...**

# ... WE HAVE BUILT ONE LEVERAGING FIVE KEY ORGANIZATIONAL LEVERS



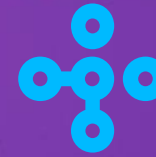
LEADERSHIP &  
CULTURE



ECOSYSTEM  
PARTNERSHIPS



SKILLSETS



TECHNOLOGY



PLATFORM

CHAMPIONS

CONTENDERS

CADETS

# Maturity curve of organizational levers in the Chemicals sector

Reorganized to Reinvent

Traditional Organization

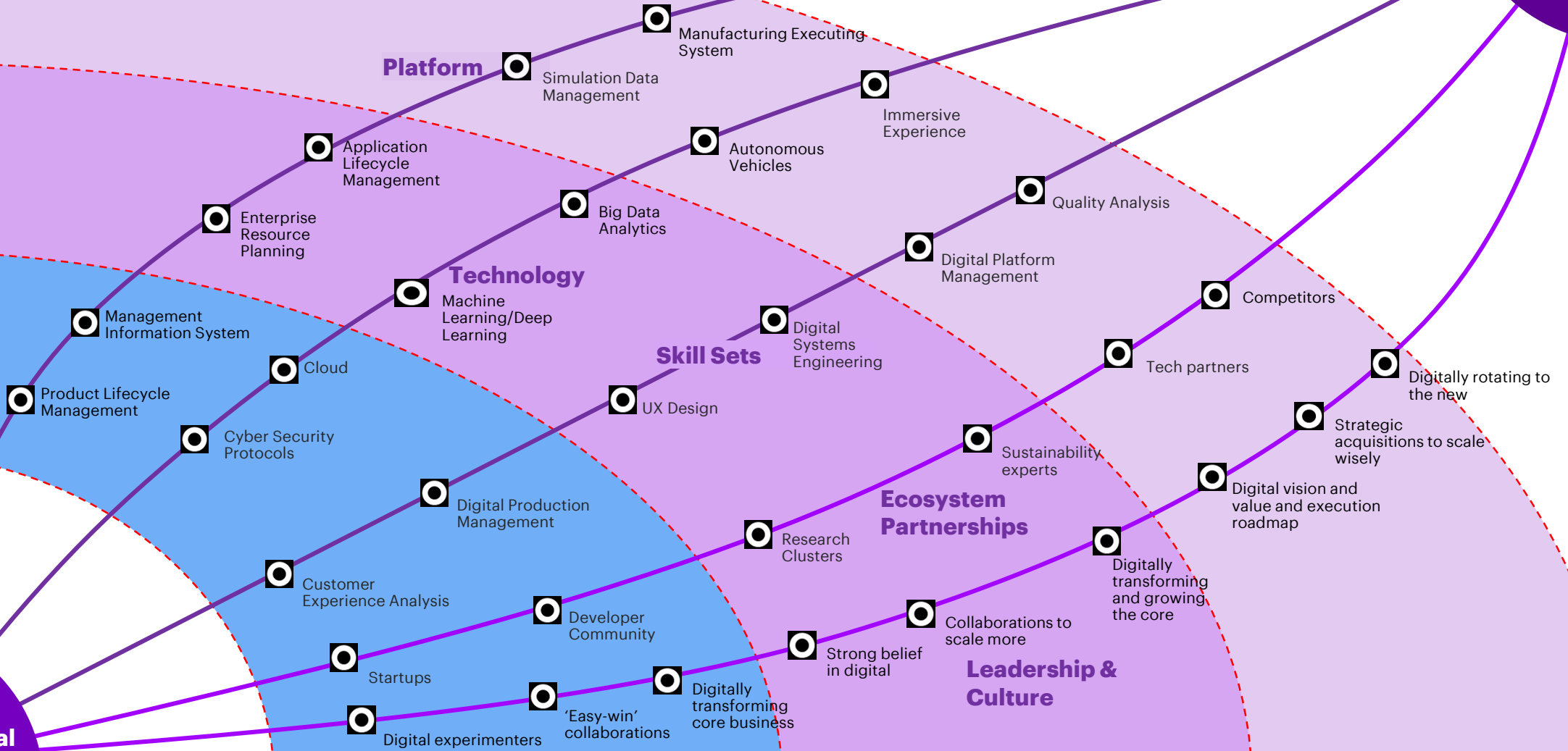
Platform

Technology

Skill Sets

Ecosystem Partnerships

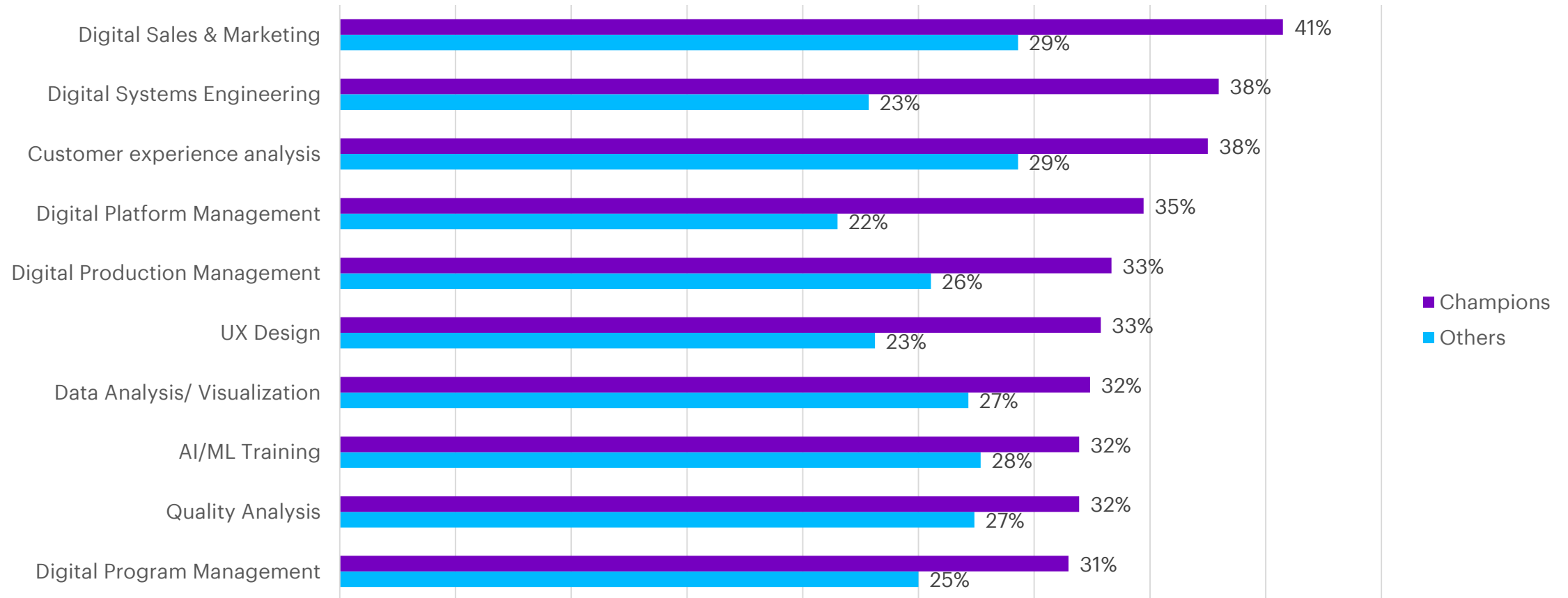
Leadership & Culture





# TOP 10 SKILL SETS FOR CHEMICALS CHAMPIONS

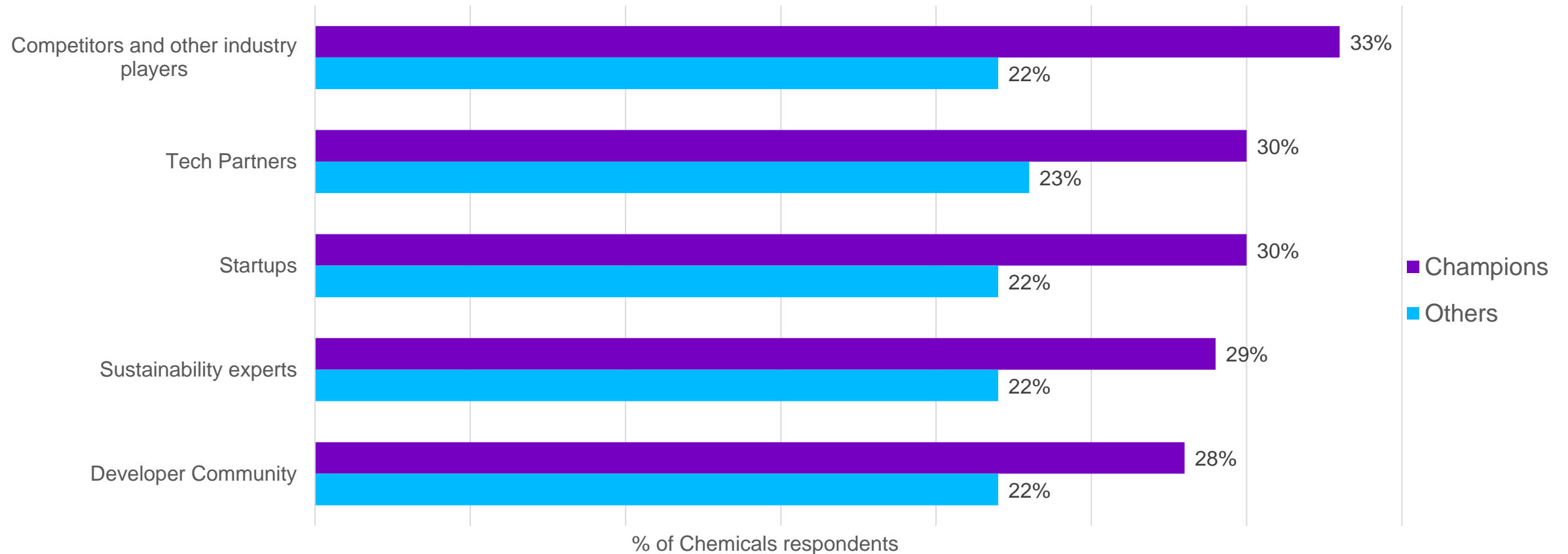
**Sales & Marketing along with Systems Engineering and Customer Experience analysis are critical skills to build and scale digital POCs**



% of Chemicals respondents saying "Very Important"

# TOP 5 PARTNERSHIPS FOR CHEMICALS CHAMPIONS

**Competitors and Technology partners are critical partners to build and scale digital POCs**



**Q:**

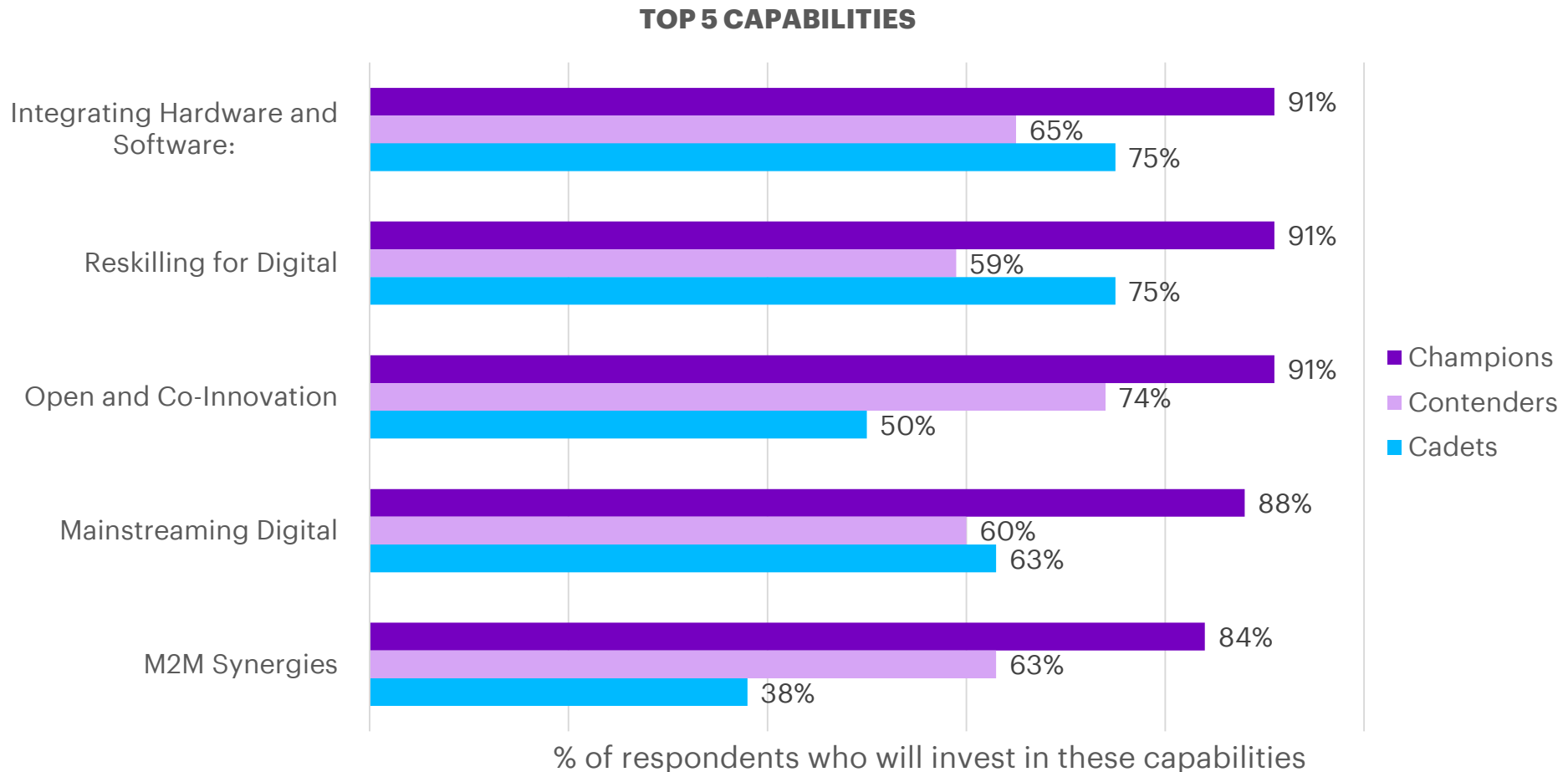
**WHAT CAPABILITIES DO CHEMICALS COMPANIES NEED TO BUILD AS THEY NAVIGATE ALONG THIS ROADMAP?**

**A:**

**CHAMPIONS PRIORITIZE CERTAIN CAPABILITIES, AND INVEST HEAVILY IN THEM**

# CHAMPIONS WANT TO INVEST IN INTEGRATING HARDWARE & SOFTWARE

This mirrors their prioritization of skills such as Digital Platform Management and Digital Systems Engineering



# Striving to scale your own innovations?

## Get in touch!

Whether you are seeking to start new initiatives the right way, help with scaling those you already have—we are ready to help you improve your outcomes by putting our knowledge to work! Please reach out to [raghav.narsalay@accenture.com](mailto:raghav.narsalay@accenture.com) or [aarohi.sen@accenture.com](mailto:aarohi.sen@accenture.com) at Accenture Research, or visit [accenture.com/scaling-innovation](https://www.accenture.com/scaling-innovation)

## References:

David Abood, Aidan Quilligan, Raghav Narsalay, and Aarohi Sen (2019), Rethink, Reinvent, Realize, downloadable from [here](#).

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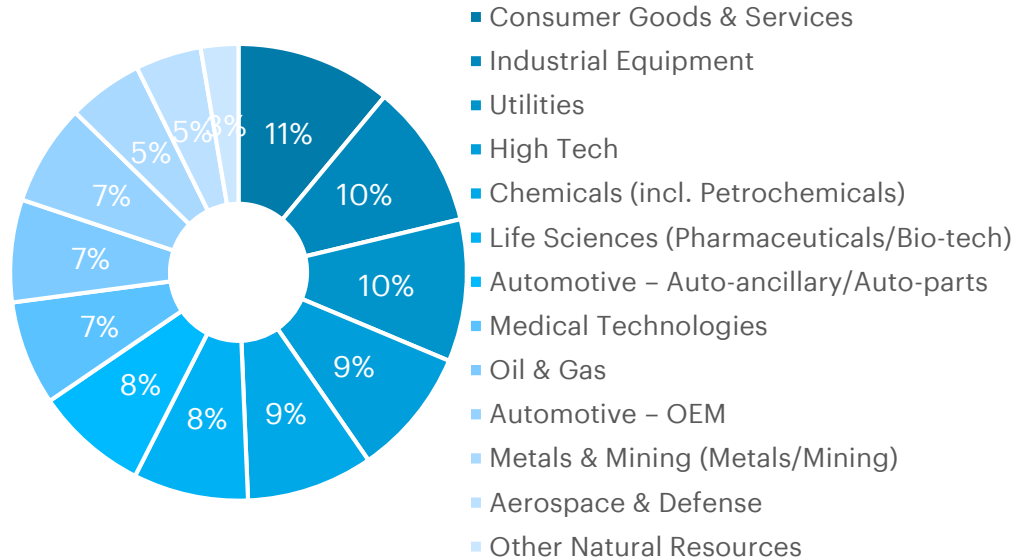
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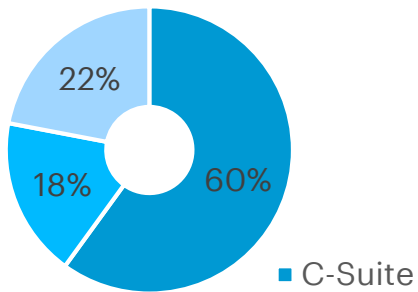
# APPENDIX

# SURVEY DEMOGRAPHICS – OVERALL (N=1350)

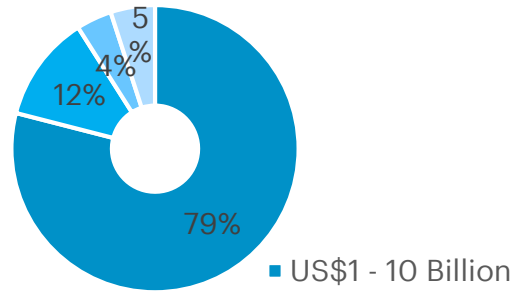
## INDUSTRY



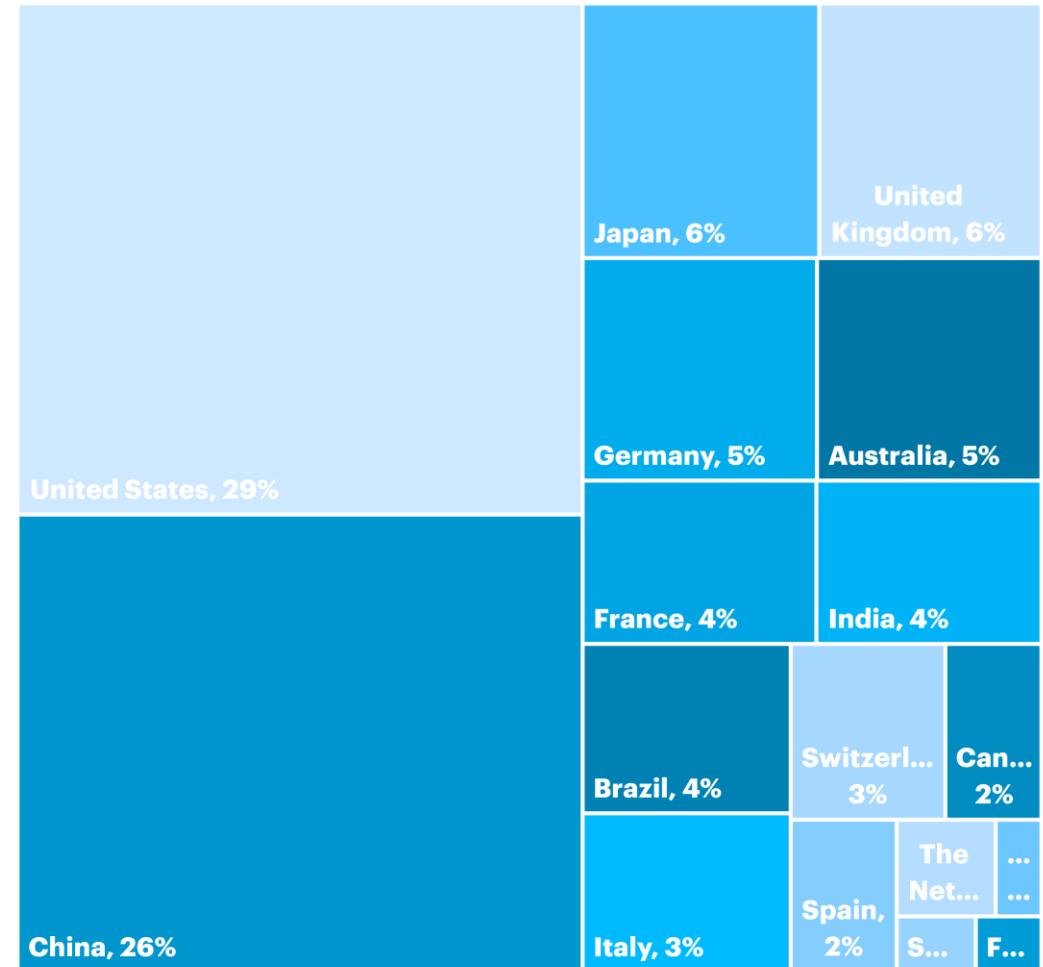
## EXEC PROFILE



## ANNUAL REVENUE



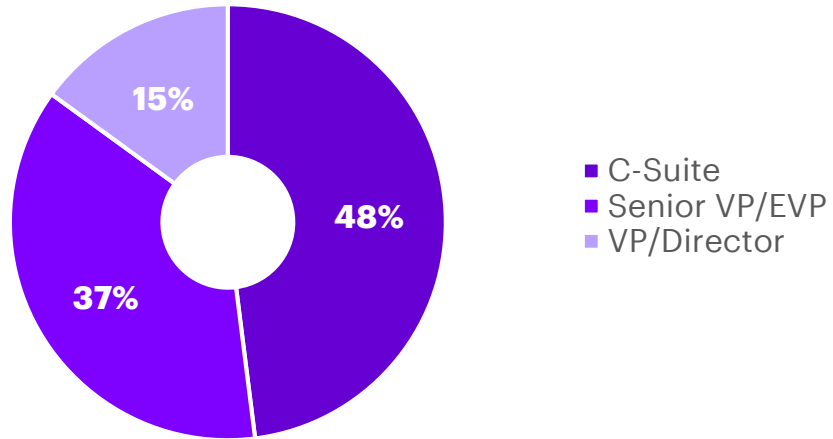
## GEO-SPREAD



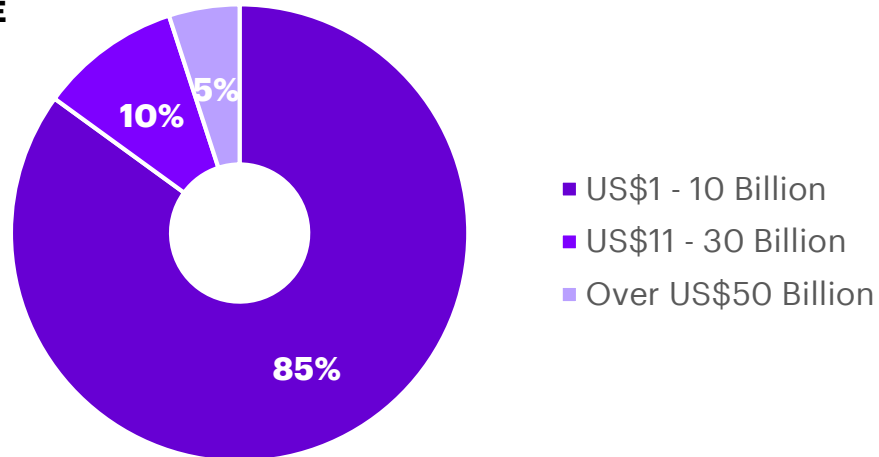


# SURVEY DEMOGRAPHICS – CHEMICALS (n=121)

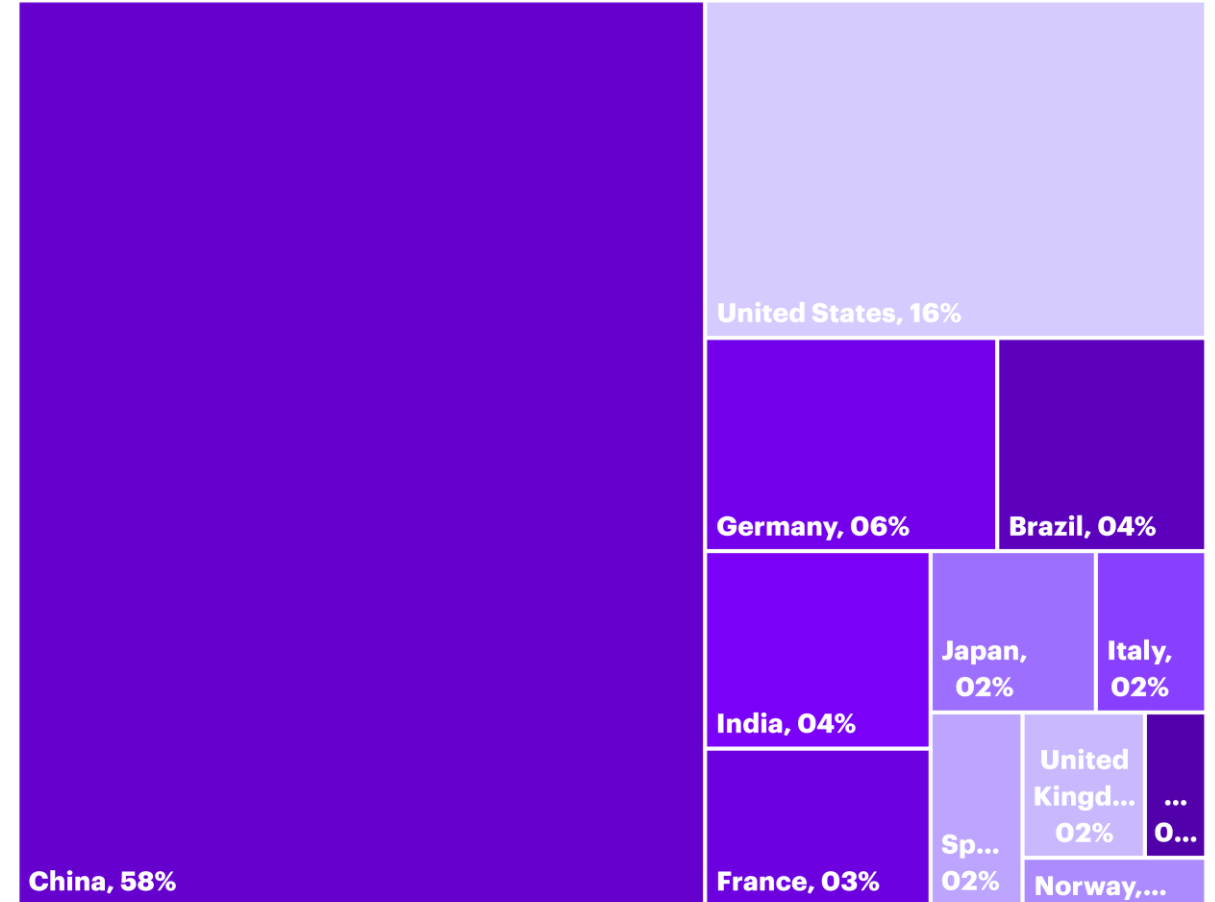
## EXEC PROFILE



## ANNUAL REVENUE



## GEO-SPREAD



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