

RETHINK, REINVENT, REALIZE.

How to successfully scale digital
innovation to drive growth

Oil & Gas



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?



CROSS-INDUSTRY AT-A-GLANCE

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

60%
C-suite respondents

13 industries
and **17** countries



OIL & GAS AT-A-GLANCE

n=98
companies with
1bn+ in revenue

65%
C-suite respondents

13
countries

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

OUR KEY FINDINGS

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

A SURPRISE!

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

What's the difference?
The leading 37 percent manage their scaling efforts differently.

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

THE REASON TO READ!

(these best practices are what readers will come for)

Q:

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

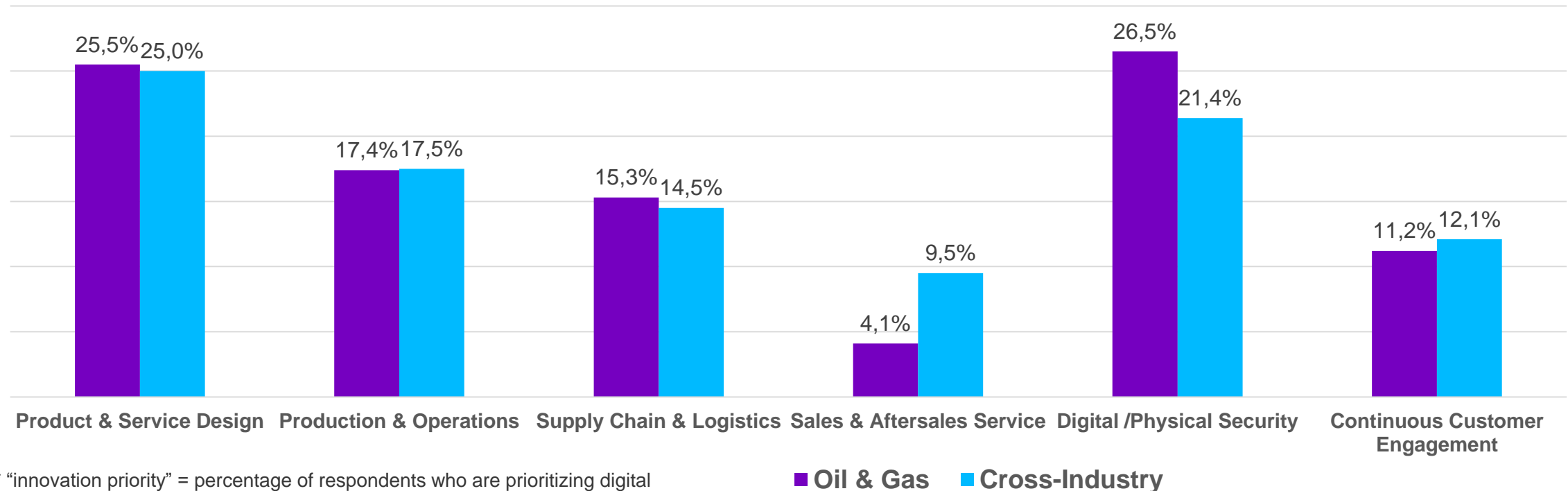
A:

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

WORKPLACE SECURITY AND PRODUCT/SERVICE DESIGN ARE TOP INNOVATION PRIORITIES FOR OIL & GAS COMPANIES

Oil & Gas companies are investing significantly in improving feedstock quality and selection, which is reflective of Product Design being an innovation priority

INNOVATION PRIORITY*

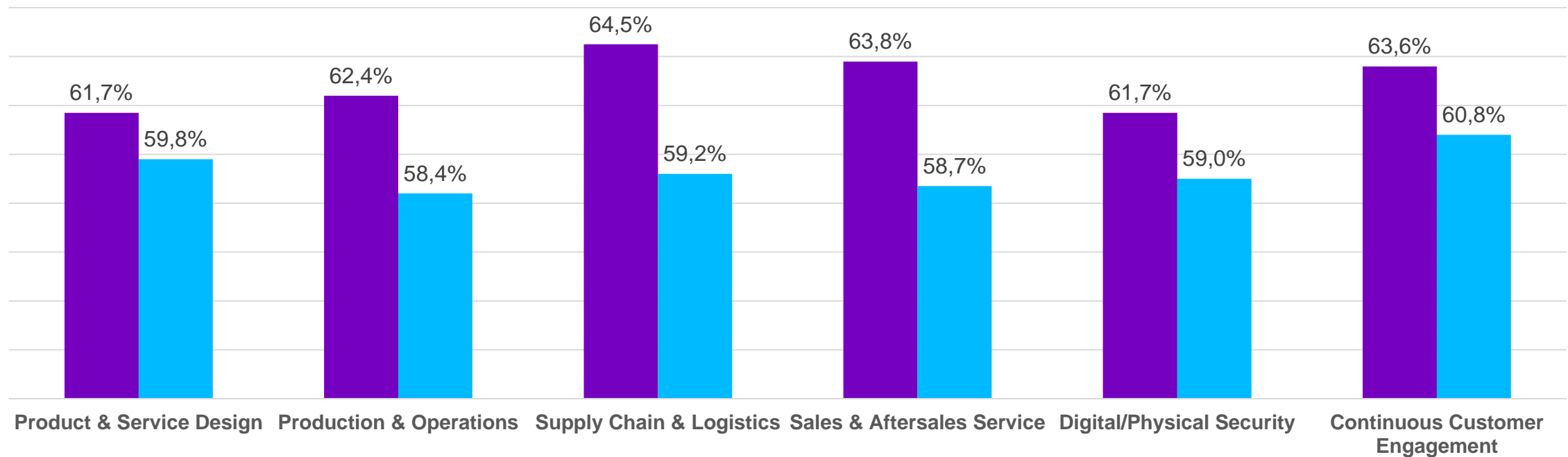


* "innovation priority" = percentage of respondents who are prioritizing digital innovation in these business areas

THAT SAID, OIL & GAS COMPANIES ARE SCALING DIGITAL POCs ACROSS ALL BUSINESS FUNCTIONS

Investments in digital platforms for improved data integration with trading partners, is indicative of the high scaling intensity towards customer engagement

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.

■ Oil & Gas ■ Cross-Industry

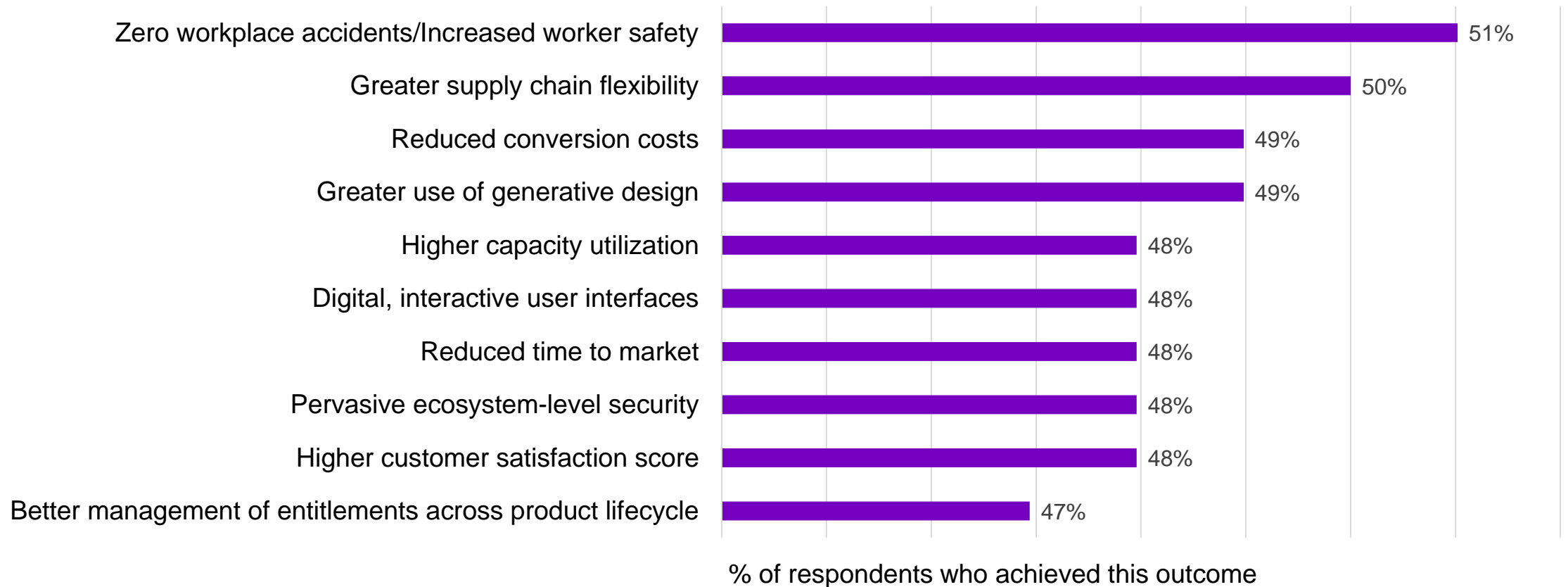
OIL & GAS COMPANIES RECOGNIZE THE NEED FOR INNOVATING AT SCALE TO:

Enhance **workplace safety** and unlock **new operational efficiencies**

Achieve continuous **customer engagement** by designing **hyper-personalized experiences**

WORKPLACE SAFETY AND SUPPLY CHAIN FLEXIBILITY ARE KEY OUTCOMES FOR OIL & GAS COMPANIES...

Top 10 outcomes targeted by Oil & Gas companies through scaling of digital POCs



...AND THEY ARE CHOOSING AR/VR, CYBER-SECURITY & BIG DATA TO DRIVE THESE OUTCOMES

Top 3 technologies leveraged to facilitate scaling of digital POCs, by function

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

Q:

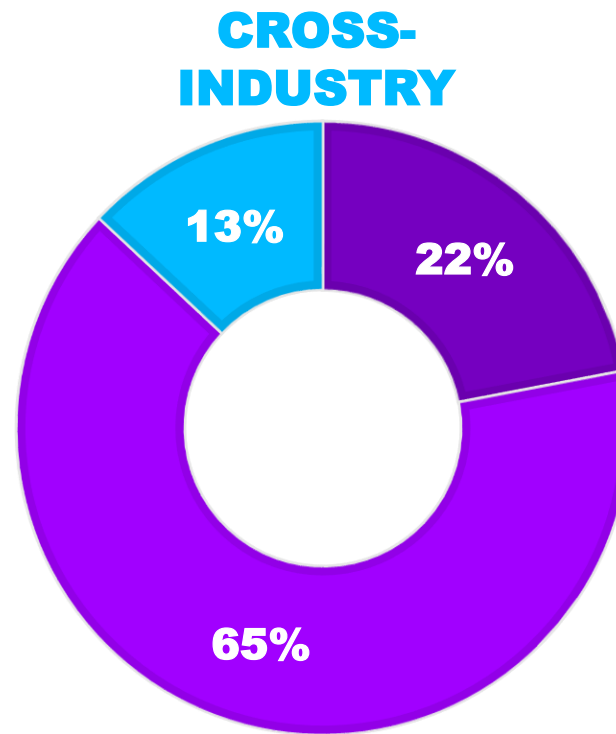
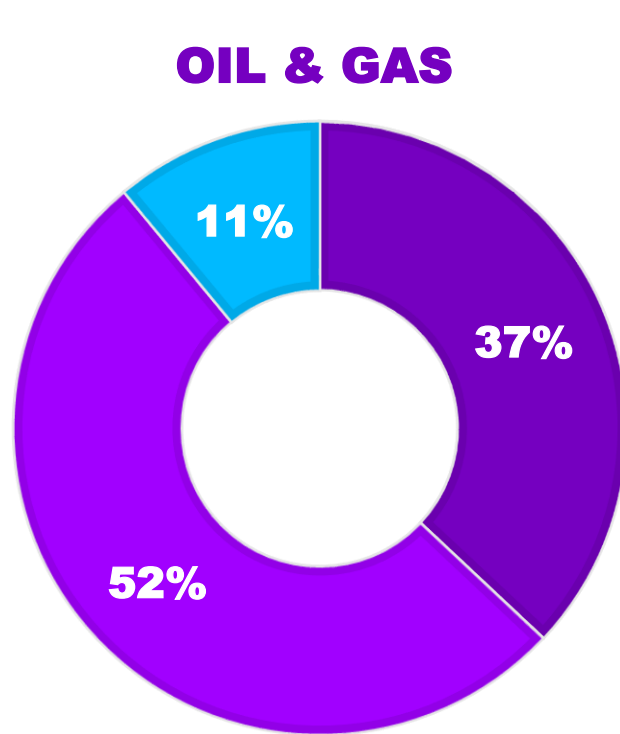
**WHAT ABOUT SCALING
SUCCESS – DOES EVERYONE
SEE IT?**

A:

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

SO, WHO'S SCALING THE BEST?

The Oil & Gas industry boasts a higher proportion of Champions compared to the global average—as it continues to prioritize easier-to-achieve, bottom-line outcomes with digital.



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

CADETS

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

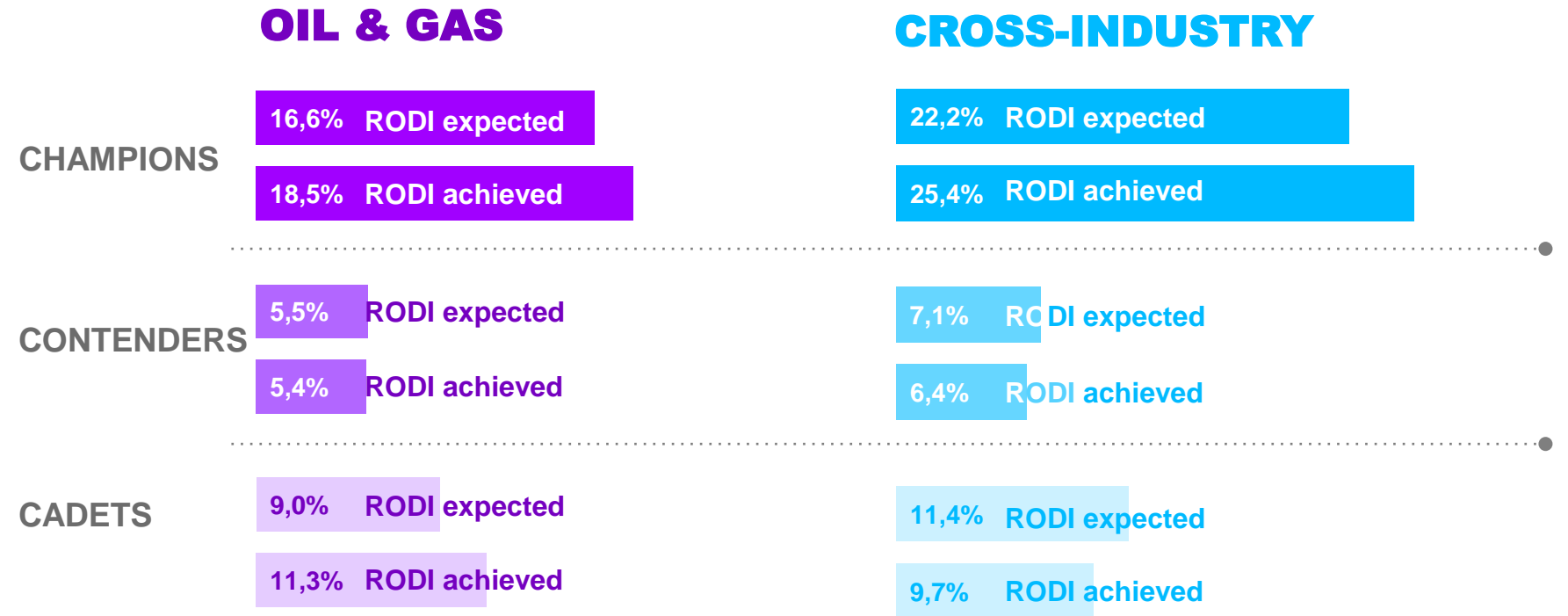
CHAMPIONS SET THEMSELVES HIGHER “RODI” TARGETS AND ACHIEVE THEM TOO.

Oil & Gas Champions achieved 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:

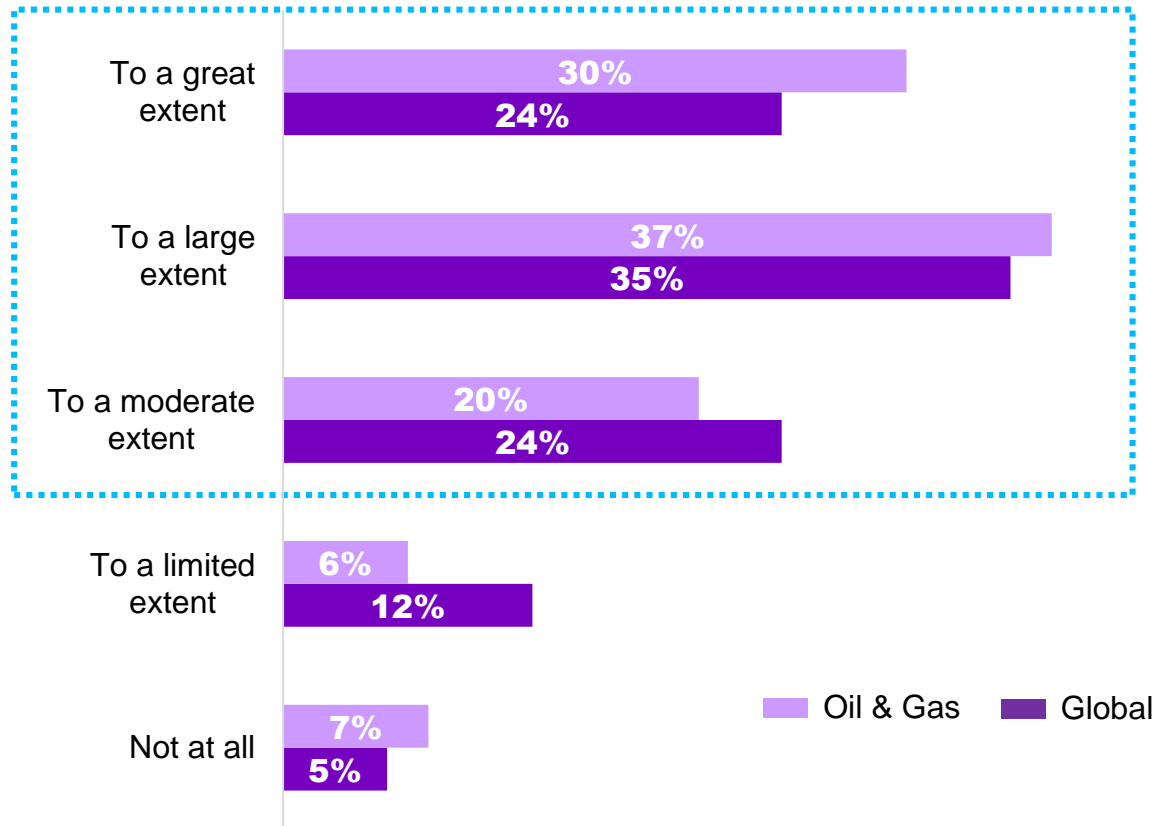
**WHAT'S STOPPING
CONTENDERS AND CADETS
FROM BECOMING CHAMPIONS?**

A:

**ALIGNMENT CHALLENGES AND
INADEQUACIES IN TECHNOLOGY
ARCHITECTURE ARE COMMON
CHALLENGES. BUT ONLY
CHAMPIONS OVERCOME THEM
SUCCESSFULLY.**

SECURING FUNDING FOR DIGITAL REINVENTION PROJECTS FROM THE BOARD IS FAR FROM EASY

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



RANK	KEY REASONS WHY BOARDS OF OIL & GAS COMPANIES REFUSE TO FUND DIGITAL REINVENTION
1.	Shortage of budget for capital investments in digital
2.	Lack of a digital-native mindset among Board members
3.	Lack of a clear digital roadmap; Inadequate ROI from digital investments; Foreseen immaturity of digital technology
4.	Shortage of and difficulty in accessing digital skills
5.	Poor understanding of digital reinvention within the top management
6.	Failure to scale digital proofs of concept (POCs) in the past

ALIGNMENT CHALLENGES AND INADEQUACIES IN TECHNOLOGY ARCHITECTURE ARE CORE CONCERNS

Oil & Gas executives' top picks* for "biggest challenges to scaling digital POCs"

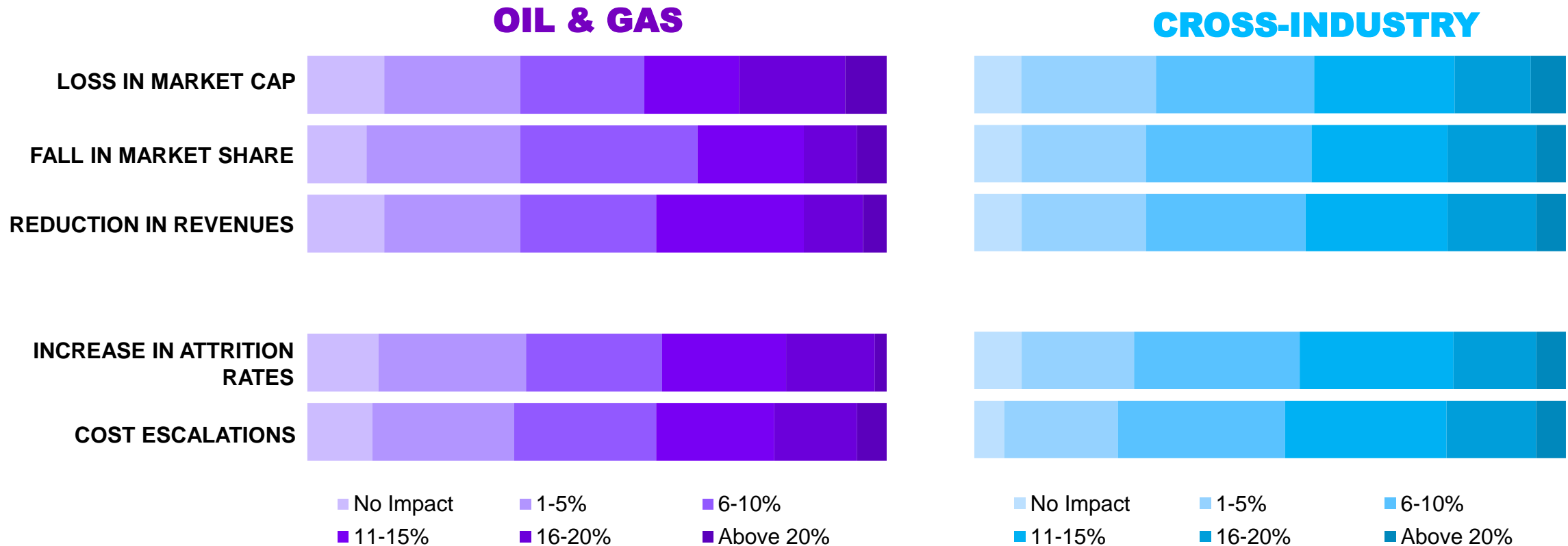
Biggest challenge
 Second biggest

	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
CHAMPIONS (CH), CONTENDERS (CT), CADETS (CA)																		
Inability to align top management view on 'digital value'																		
Inability to align talent pools and IT assets across key business functions																		
Inability to align in-house innovation with agile digital ecosystems																		
Inability to align top and middle management to innovate customer value																		
Inadequate infrastructure to innovate with digital technologies and platforms																		
Lack of skills to identify and articulate business case for digital																		

* other options which weren't picked s often included: "Lack of skills to understand value chain disruption," "Lack of skills to identify and articulate business case for digital," "Absence of culture to design, develop and deliver digital business models," "Absence of culture to stimulate cross-functional innovation with digital," "Absence of culture to drive on-time innovation of monetizable customer experiences", "Lack of partnerships to bridge digital gaps across processes," "Inadequate metrics to systematically track digital investments"

WHAT DO COMPANIES STAND TO LOSE IF THEY FAIL TO ADDRESS THESE CHALLENGES?

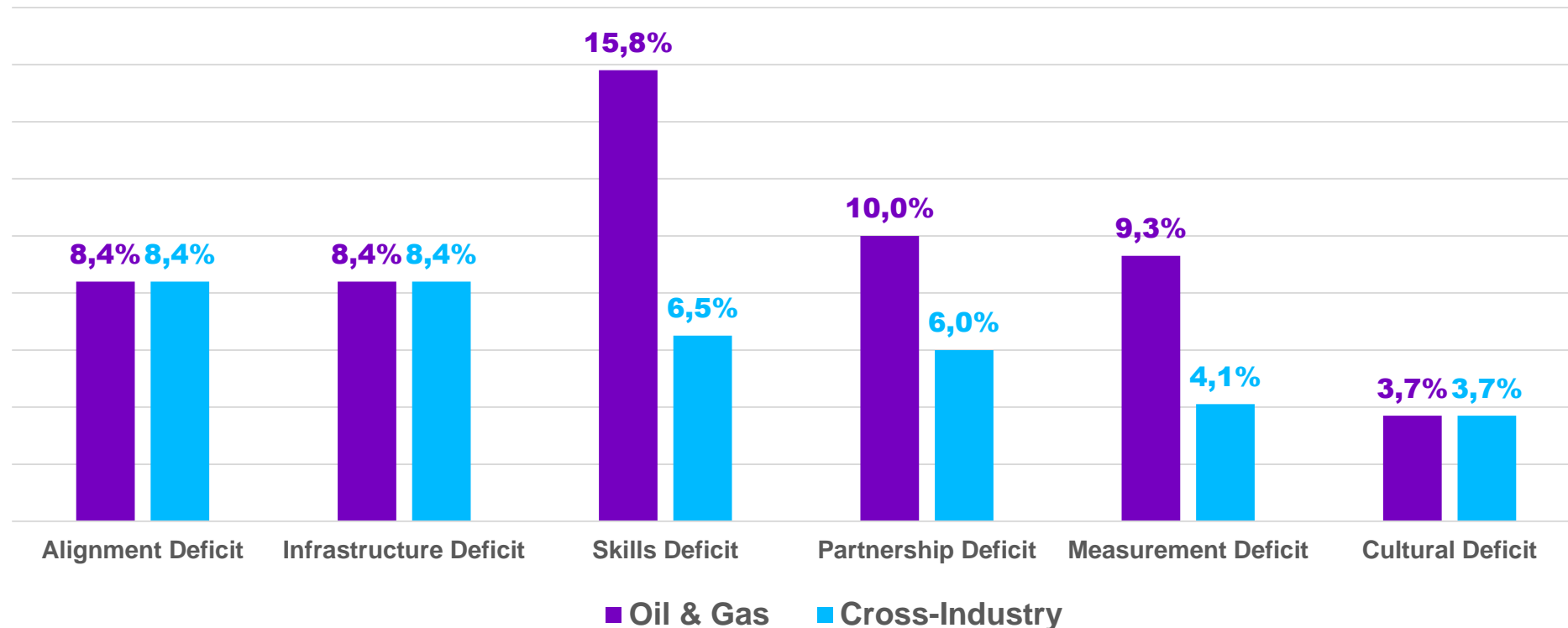
Over 70% of Oil & Gas leaders fear sizeable escalations in cost (>5%) alongside shrinking revenues (>5%), if they fail to address organizational challenges



HOW MUCH CAN COMPANIES GAIN IF THEY OVERCOME THESE DEFICITS?

Oil & Gas companies have the opportunity to achieve sizeable increase in RODI, if they focus on solving skills and partnership deficits

INCREMENTAL RODI POTENTIAL IF DEFICIT IS OVERCOME



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

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

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

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

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



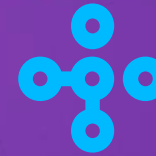
**LEADERSHIP &
CULTURE**



**ECOSYSTEM
PARTNERSHIPS**



SKILLSETS



TECHNOLOGY



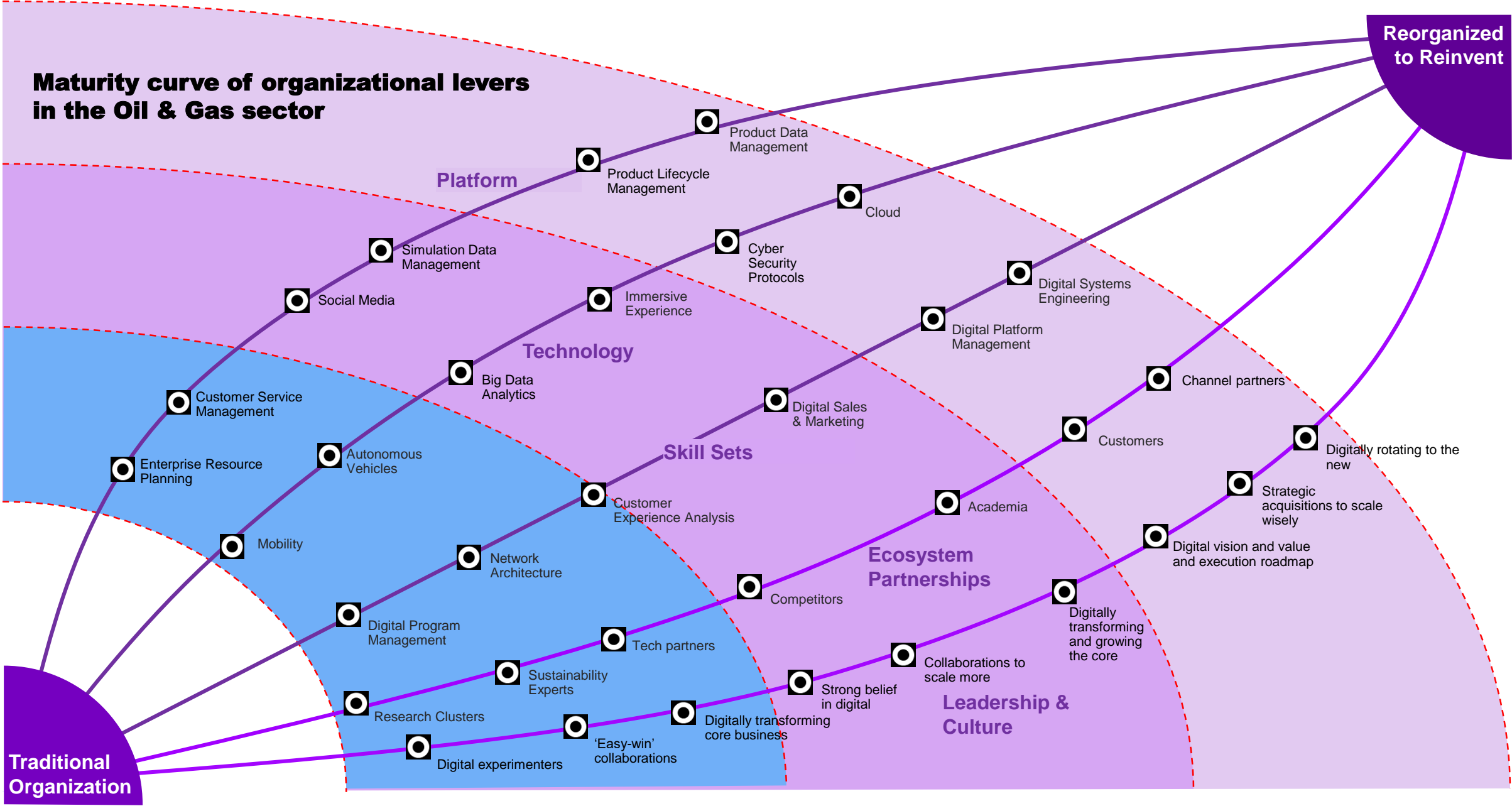
PLATFORM

CHAMPIONS

CONTENDERS

CADETS

Maturity curve of organizational levers in the Oil & Gas sector

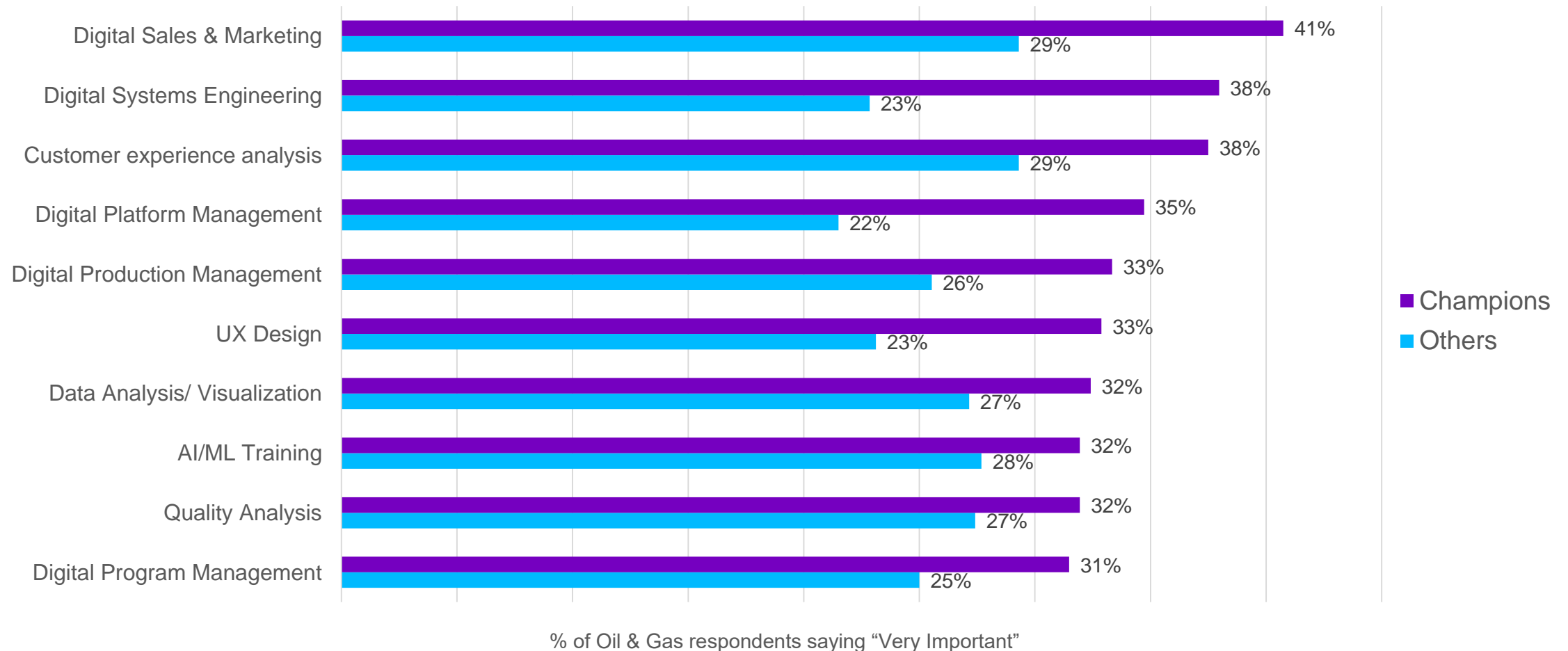


Traditional Organization

Reorganized to Reinvent

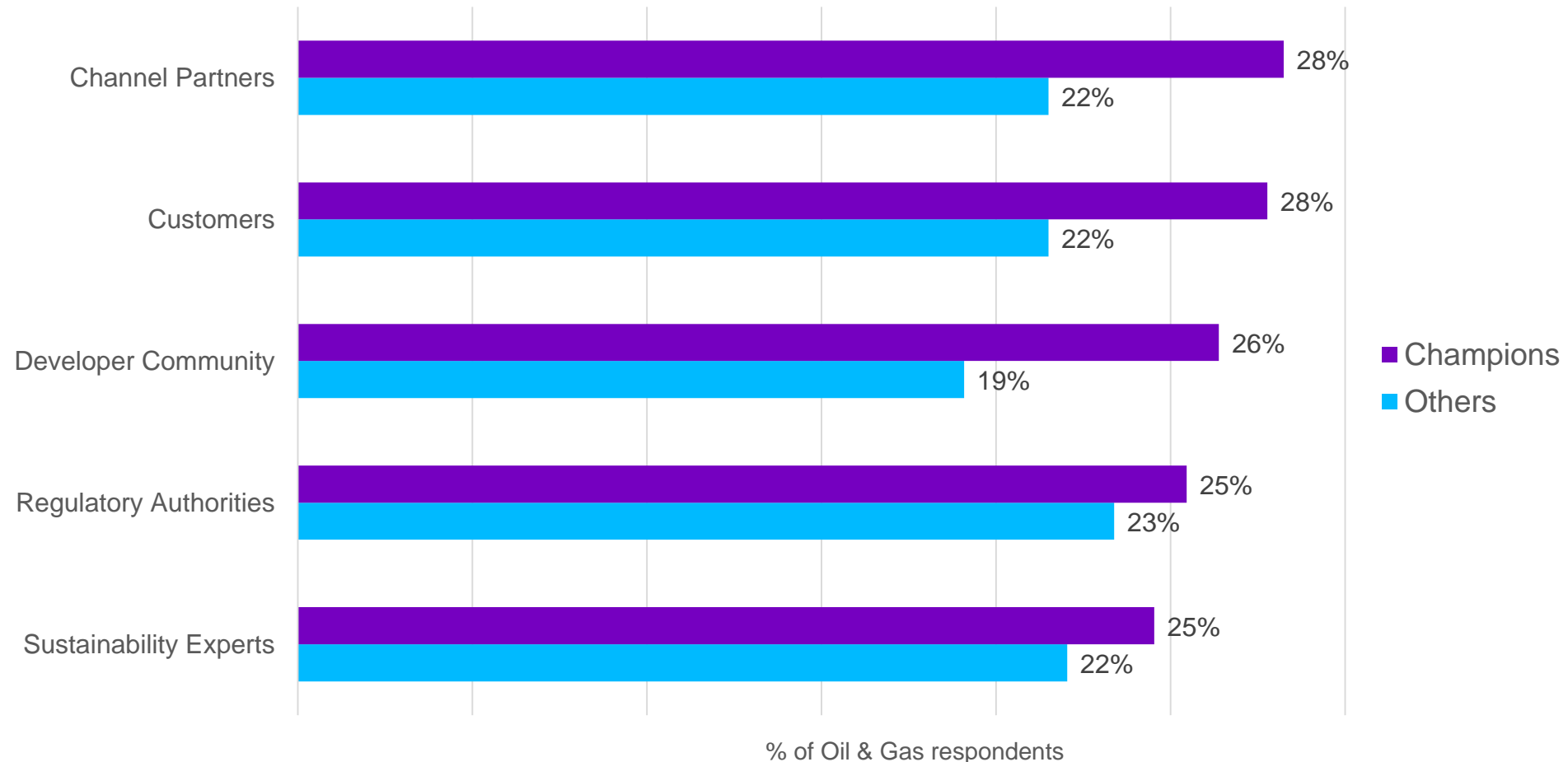
TOP 10 SKILL SETS FOR OIL & GAS CHAMPIONS

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



TOP 5 PARTNERSHIPS FOR OIL & GAS CHAMPIONS

Channel Partners and Customers are critical partnerships to build and scale digital POCs



Q:

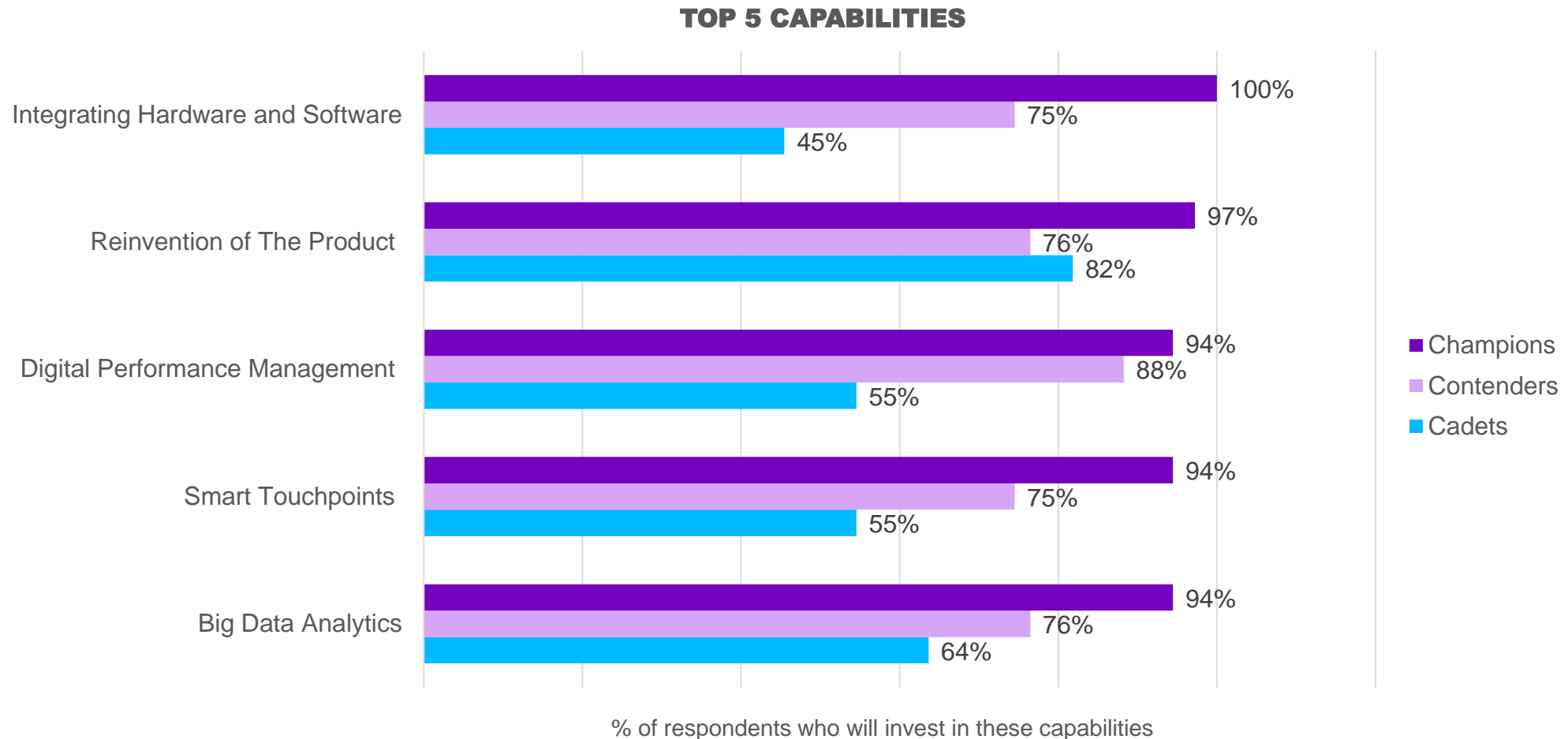
WHAT CAPABILITIES DO OIL & GAS COMPANIES NEED TO BUILD AS THEY NAVIGATE ALONG THIS ROADMAP?

A:

CHAMPIONS PRIORITIZE CERTAIN CAPABILITIES, AND INVEST HEAVILY IN THEM

EVERY CHAMPION WANTS TO INVEST IN INTEGRATING HARDWARE & SOFTWARE

No wonder Digital Systems Engineering is such a key skill set for them



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 or 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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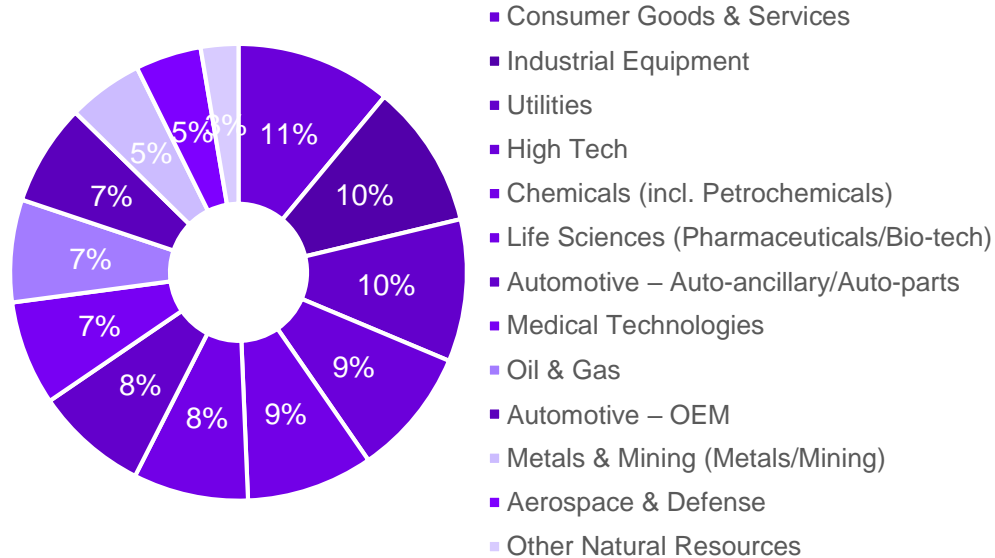
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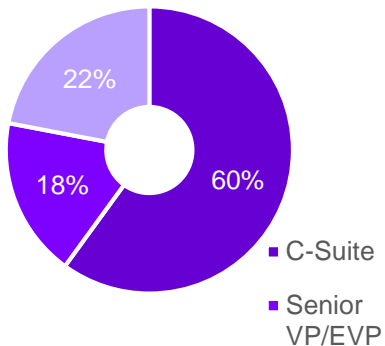
APPENDIX

SURVEY DEMOGRAPHICS – OVERALL (N=1350)

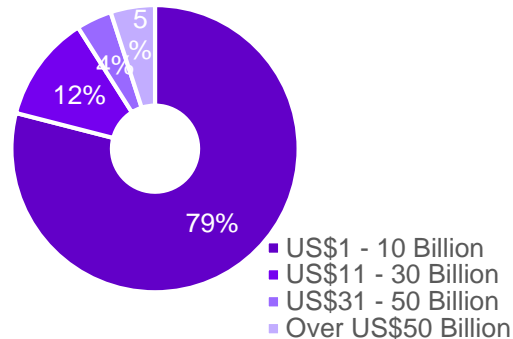
INDUSTRY



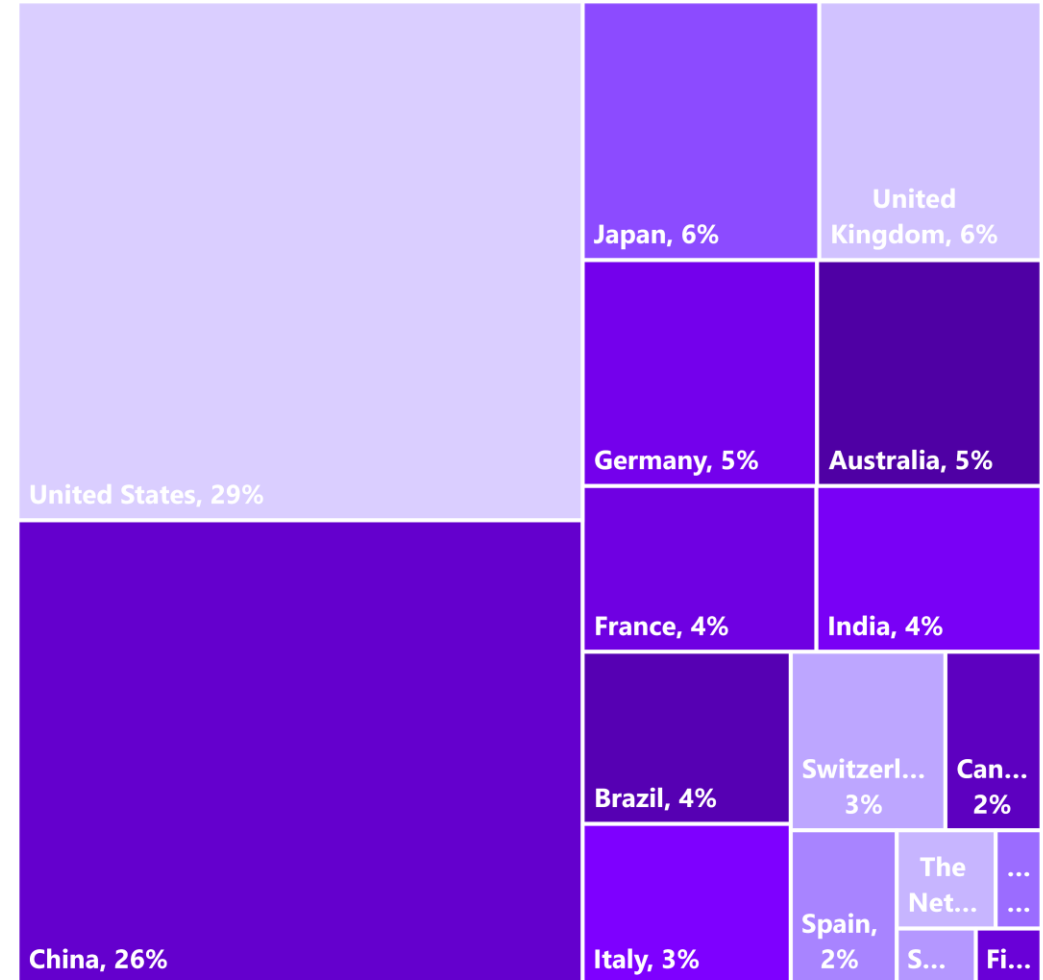
EXEC PROFILE



ANNUAL REVENUE

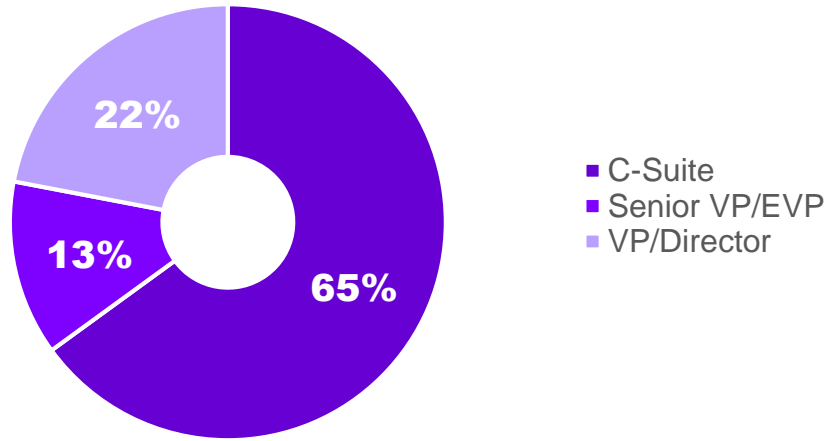


GEO-SPREAD

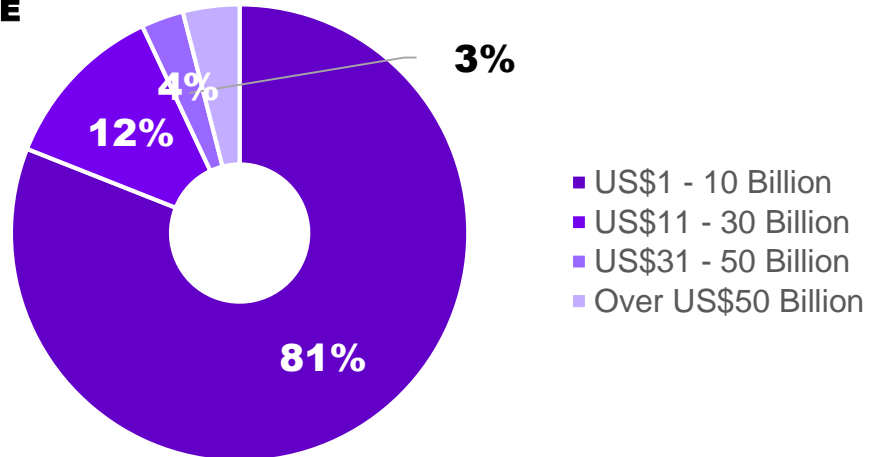


SURVEY DEMOGRAPHICS – OIL & GAS (N=98)

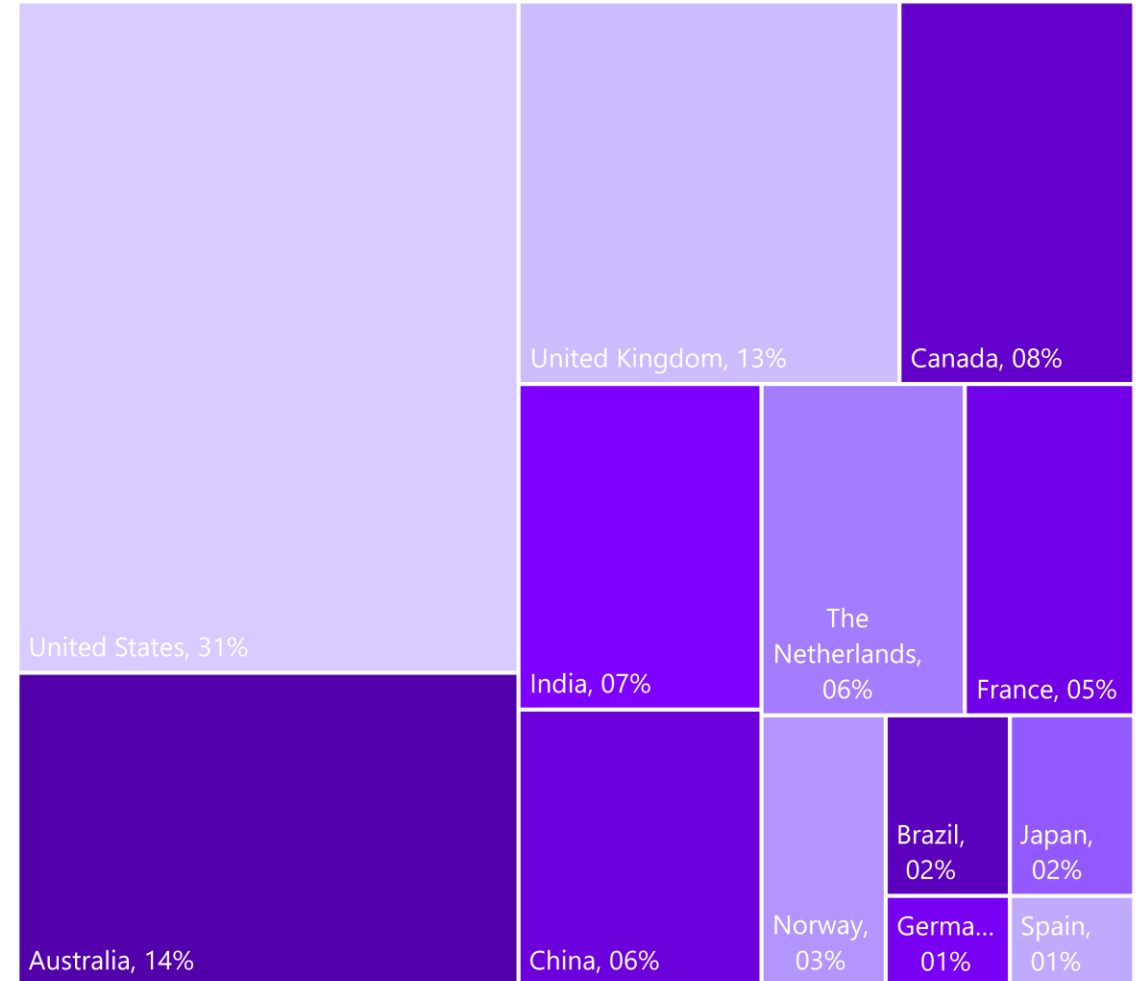
EXEC PROFILE



ANNUAL REVENUE



GEO-SPREAD



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