RETHINK, REINVENT, REALIZE.

How to successfully scale digital innovation to drive growth

INDUSTRIAL EQUIPMENT

accenture

INTO
THE NEW

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

INDUSTRIAL EQUIPMENT AT-A-GLANCE

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

60%
C-suite respondents

13 industries
and **17** countries

n=138
responses from
companies with
1bn+ in revenue

68%
C-suite respondents

13
countries

Source: Accenture 2019 Industry X.0 Survey

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

OUR KEY FINDINGS

Companies are scaling over 60 percent of all digital PoCs, but less than three 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 28 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)

Source: Accenture 2019 Industry X.0 Survey

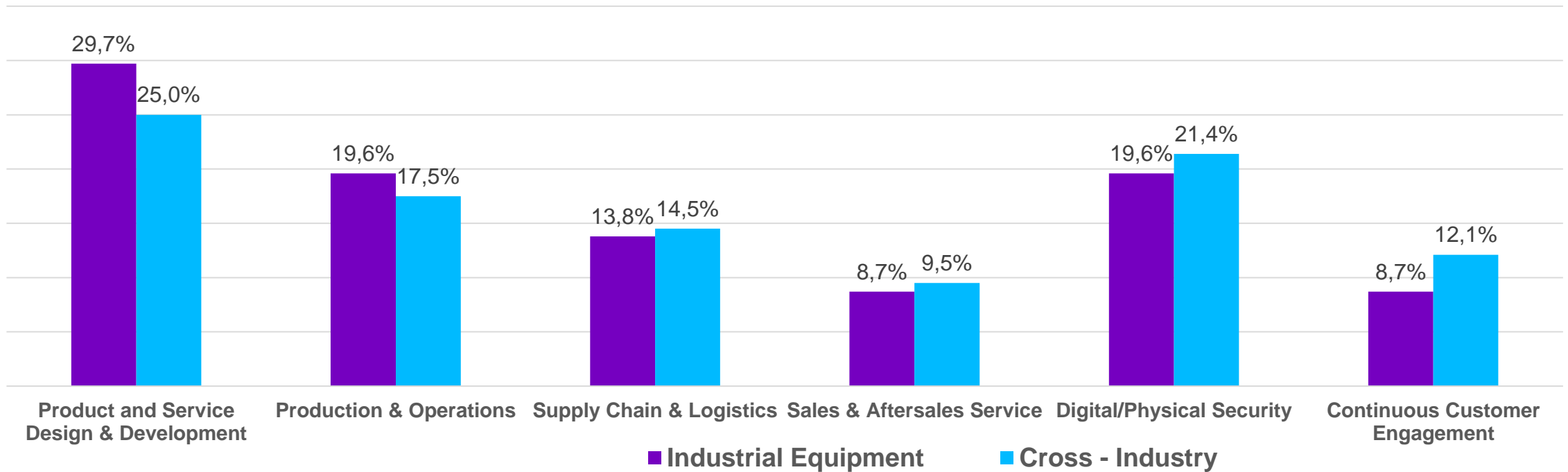# Q: WHAT'S THE CURRENT STATUS IN SCALING DIGITAL INNOVATION?

A: THINGS ARE SPEEDING UP – IN SURPRISING WAYS.

PRODUCT & SERVICE DESIGN IS A TOP INNOVATION PRIORITY FOR INDUSTRIAL EQUIPMENT COMPANIES

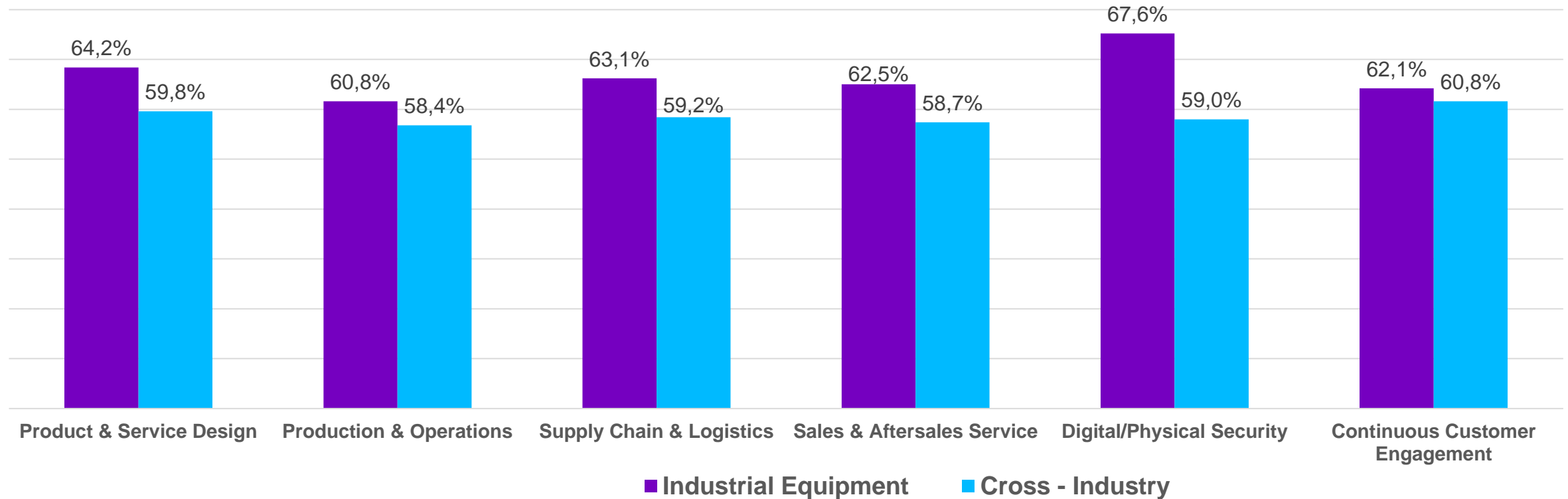**Product & Service Design is an innovation priority Industrial Equipment companies by a long margin**

INNOVATION PRIORITY*

	Industrial Equipment	Cross - Industry
Product and Service Design & Development	29,7%	25,0%
Production & Operations	19,6%	17,5%
Supply Chain & Logistics	13,8%	14,5%
Sales & Aftersales Service	8,7%	9,5%
Digital/Physical Security	19,6%	21,4%
Continuous Customer Engagement	8,7%	12,1%

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

Source: Accenture 2019 Industry X.0 Survey

INDUSTRIAL EQUIPMENT COMPANIES ARE SCALING DIGITAL POCS ACROSS ALL BUSINESS FUNCTIONS

SCALING INTENSITY*

Chart: Scaling Intensity by business function

Business Function	Industrial Equipment	Cross - Industry
Product & Service Design	64,2%	59,8%
Production & Operations	60,8%	58,4%
Supply Chain & Logistics	63,1%	59,2%
Sales & Aftersales Service	62,5%	58,7%
Digital/Physical Security	67,6%	59,0%
Continuous Customer Engagement	62,1%	60,8%

■ Industrial Equipment   ■ Cross - Industry

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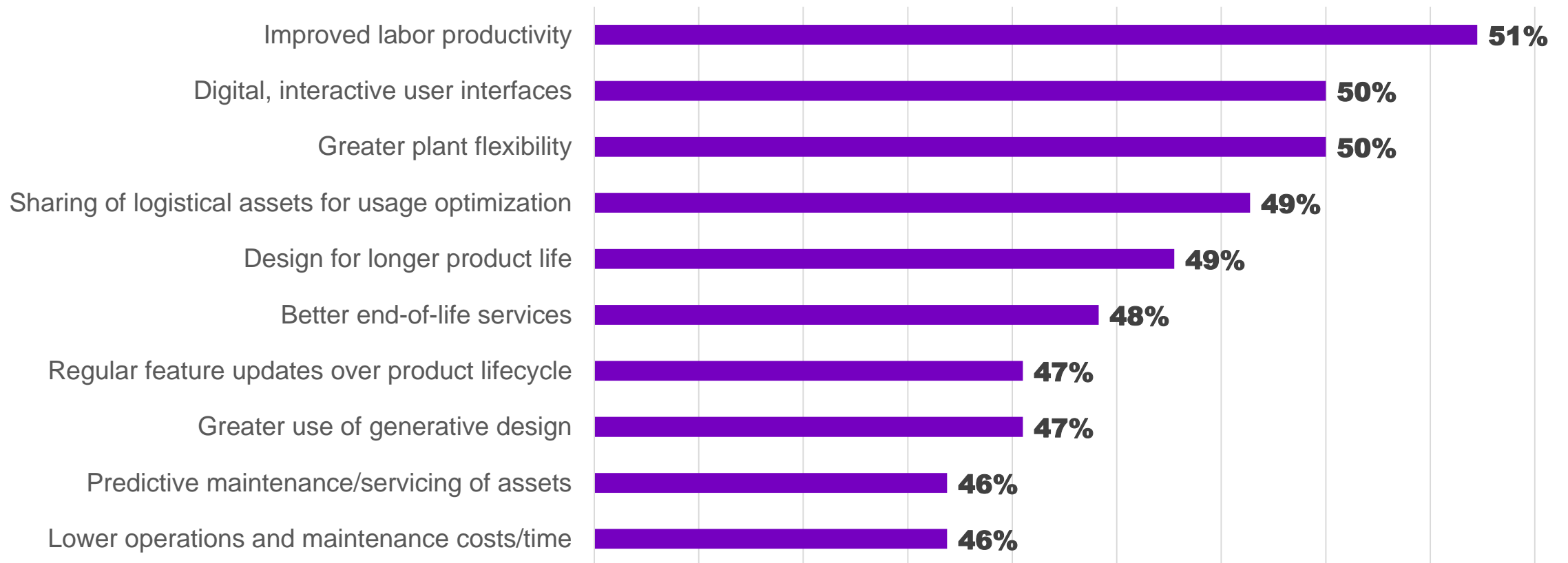number initiated in each business function, across discrete and process industries.

Source: Accenture 2019 Industry X.0 Survey

INDUSTRIAL EQUIPMENT COMPANIES RECOGNIZE THE NEED FOR INNOVATING AT SCALE TO:

Deliver **secure and personalized experiences** for customers and workforce, and

Unlock **new operational efficiencies**

IMPROVED LABOR PRODUCTIVITY AND INTERACTIVE USER INTERFACES ARE KEY OUTCOMES...

Top 10 outcomes for Industrial Equipment companies through scaling of digital PoCs

Outcome	%
Improved labor productivity	51%
Digital, interactive user interfaces	50%
Greater plant flexibility	50%
Sharing of logistical assets for usage optimization	49%
Design for longer product life	49%
Better end-of-life services	48%
Regular feature updates over product lifecycle	47%
Greater use of generative design	47%
Predictive maintenance/servicing of assets	46%
Lower operations and maintenance costs/time	46%

% of respondents who achieved this outcome

Source: Accenture 2019 Industry X.0 Survey

...AND THEY ARE CHOOSING CLOUD AND BIG DATA ANALYTICS 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/AI-powered Automation		RANK 1				
AI Assistants				RANK 3		RANK 3
3D printing						
Mobility						
IIOT Sensors & Transmitters						
Immersive Experience	RANK 2			RANK 2		
Industrial Robotics						
Big Data Analytics	RANK 1	RANK 3	RANK 2			RANK 2
Digital Twin						
Cloud				RANK 1	RANK 2	RANK 1
Blockchain			RANK 3			
Autonomous Vehicles					RANK 3	
Machine Learning/Deep Learning	RANK 3	RANK 2				
Quantum Computing						
Cyber Security Protocols			RANK 1		RANK 1	

Source: Accenture 2019 Industry X.0 Survey

Q: WHAT ABOUT SCALING SUCCESS – DOES EVERYONE SEE IT?
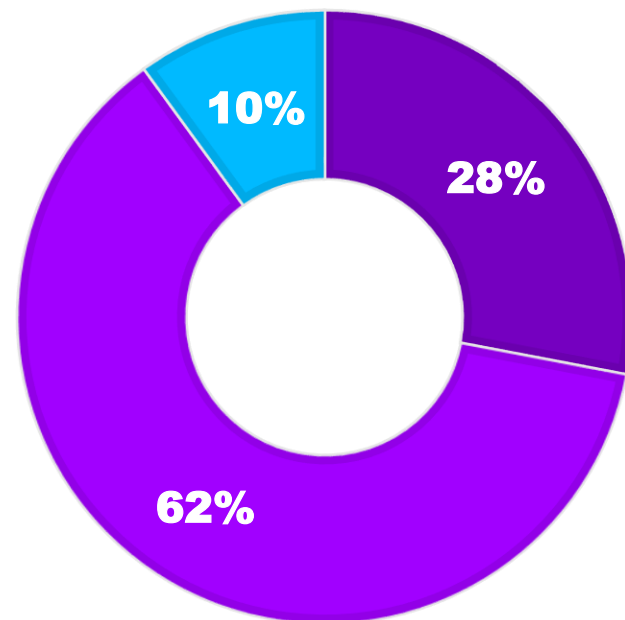
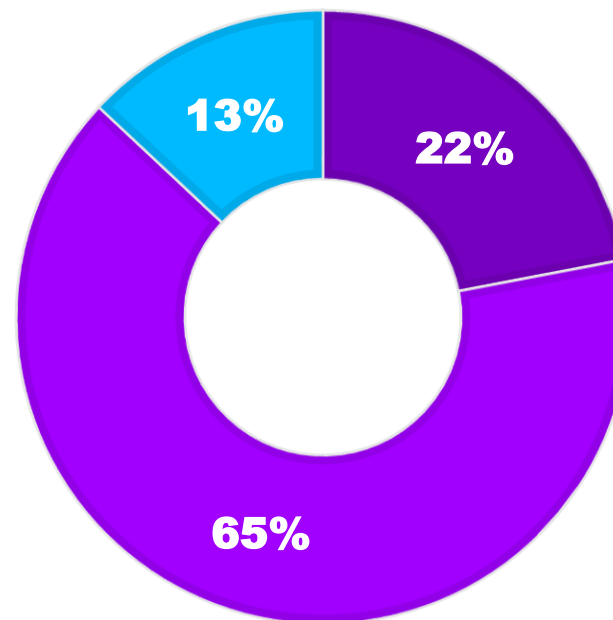**A:** NO. SOME COMPANIES RACE AHEAD, OTHERS STRUGGLE.

SO, WHO'S SCALING THE BEST?

Industrial Equipment boasts a higher share of Champions compared to the global, cross-industry average

INDUSTRIAL EQUIPMENT

10%
28%
62%

CROSS-INDUSTRY

13%
22%
65%

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 x (The number of champions in a particular geography)/(Total number of companies surveyed in that particular geography)

**Percentage of champions in each industry = 100 x (The number of champions in a particular industry)/(Total number of companies surveyed in that particular industry)
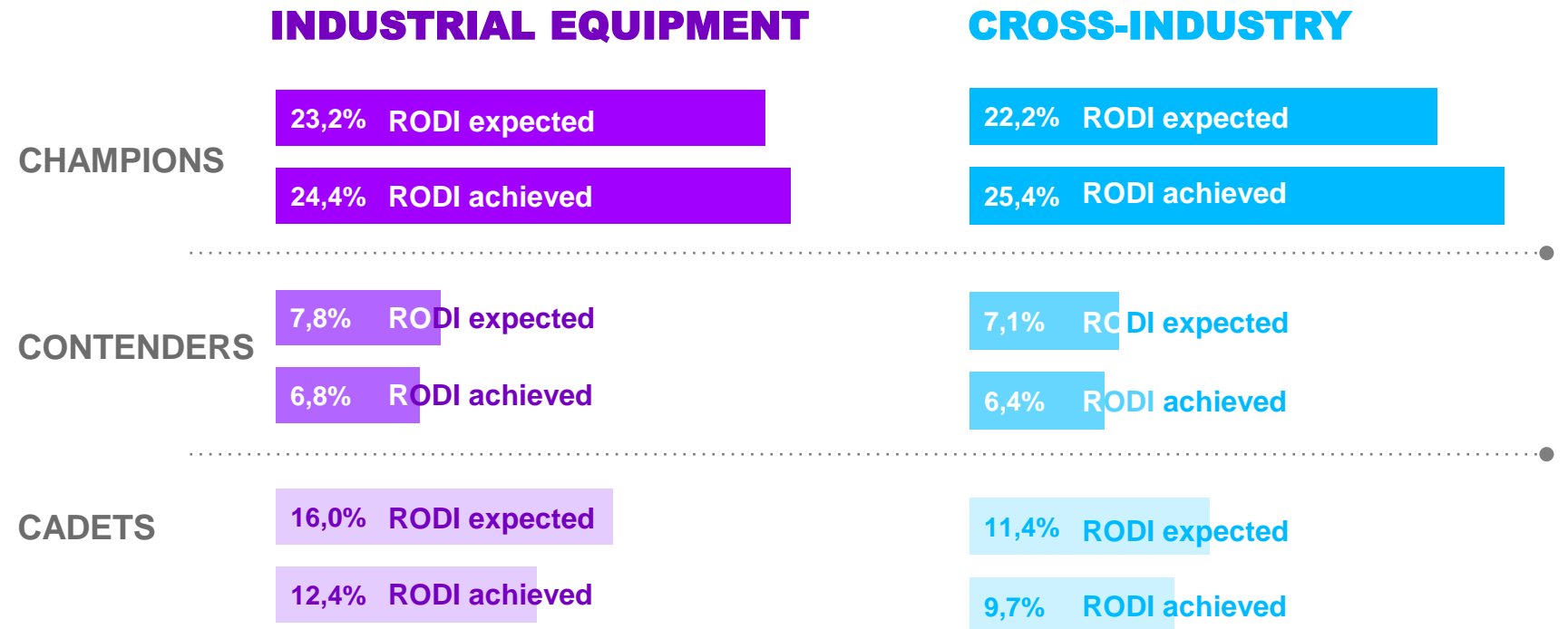
CHAMPIONS SET THEMSELVES HIGHER "RODI" TARGETS AND ACHIEVE THEM TOO.

Industrial Equipment 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.

INDUSTRIAL EQUIPMENT

CROSS-INDUSTRY

CHAMPIONS

23,2%   RODI expected
24,4%   RODI achieved

22,2%   RODI expected
25,4%   RODI achieved

CONTENDERS

7,8%   RODI expected
6,8%   RODI achieved

7,1%   RODI expected
6,4%   RODI achieved

CADETS

16,0%   RODI expected
12,4%   RODI achieved

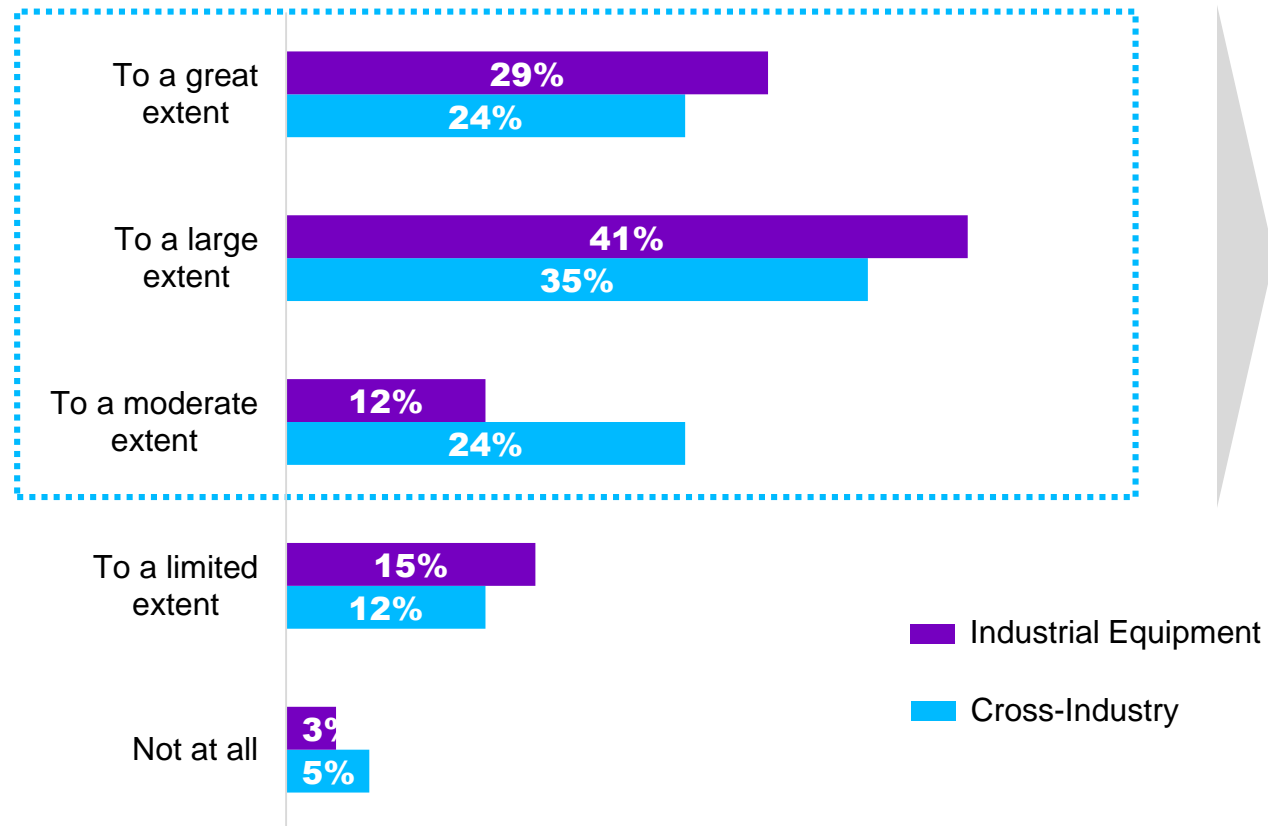11,4%   RODI expected
9,7%   RODI achieved

Q: WHAT'S STOPPING CONTENDERS AND CADETS FROM BECOMING CHAMPIONS?

A: LIKE CHAMPIONS, CONTENDERS AND CADETS TOO FACE ALIGNMENT AND INFRASTRUCTURE DEFICITS. WHILE CHAMPIONS OVERCOME THESE, OTHERS CONTINUE TO GRAPPLE.

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

Extent	Industrial Equipment	Cross-Industry
To a great extent	29%	24%
To a large extent	41%	35%
To a moderate extent	12%	24%
To a limited extent	15%	12%
Not at all	3%	5%

- Industrial Equipment
- Cross-Industry

RANK	KEY REASONS WHY BOARDS OF INDUSTRIAL EQUIPMENT 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; Lack of a digital-native mindset among Board members
4.	Foreseen immaturity of technology
5.	Shortage of budget for capital investments
6.	Shortage of and difficult access to digital skills
7.	Poor understanding of digital reinvention within Top Management

Source: Accenture 2019 Industry X.0 Survey

ALIGNMENT CHALLENGES AND LACK OF PARTNERSHIPS ARE OF PRIMARY CONCERN

Industrial Equipment executives' top picks* for "biggest challenges to scaling digital PoCs"
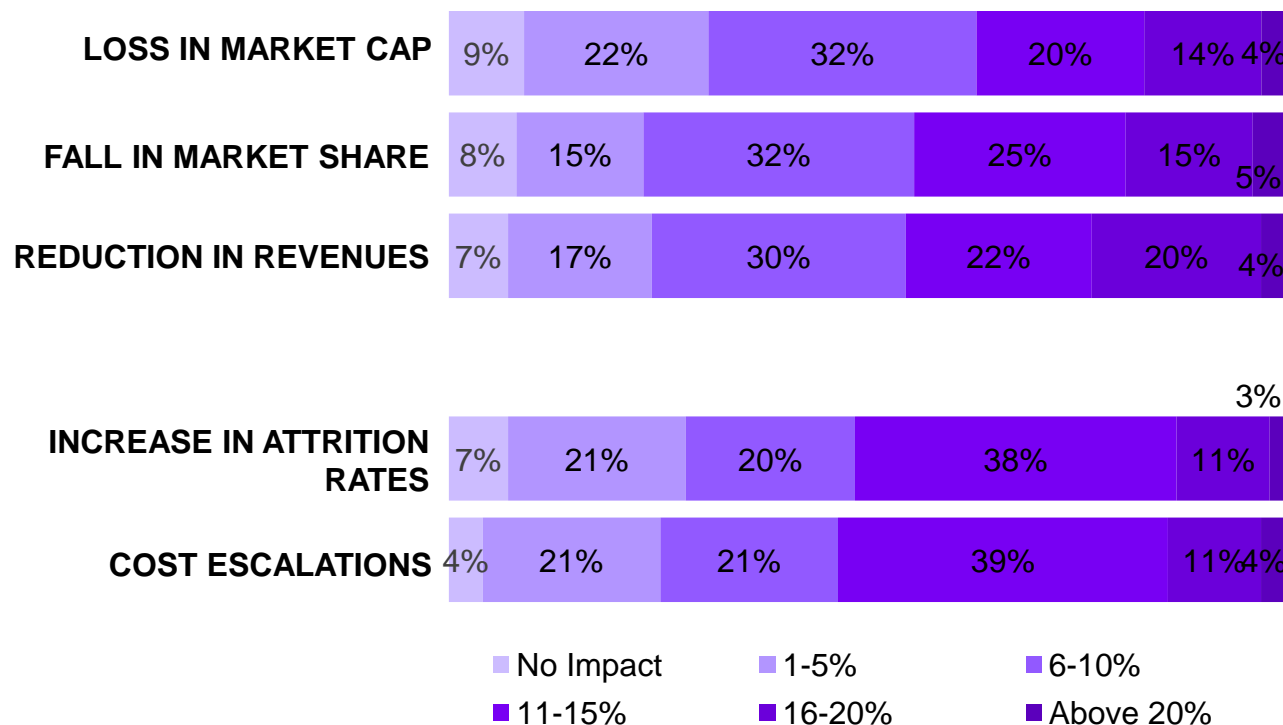
Legend: ■ Biggest challenge ■ Second biggest

CHAMPIONS (CH), CONTENDERS (CT), CADETS (CA)	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
Inability to align top management view on 'digital value'		■				▦	■	▦							■			
Inability to align legacy IT to digital talent and asset pools		▦	■	▦		■				▦						▦		
Inability to align top and middle management to innovate customer value				■				▦						■	▦			■
Inability to align in-house innovation with agile digital ecosystems							■						■	▦				
Inadequate infrastructure to innovate with digital technologies and platforms	▦									■	■				▦			
Lack of skills to understand value chain disruption					■						▦							■

Legend for marks: ■ = Biggest challenge (dark), ▦ = Second biggest (light)

- other options which weren't picked and often included: "Inadequate infrastructure to promote collaborative innovation between the business and the enterprise", "Inadequate infrastructure to manage complex integration of services channels and products to drive experiences in the 'new', "Inadequate infrastructure to innovate relevant digital value with speed", "Lack of partnerships to co-innovate offerings impacting the top line with agility", "Lack of skills to identify and articulate business case for digital", "Absence of culture to drive on-time innovation of monetizable customer-relevant experiences".

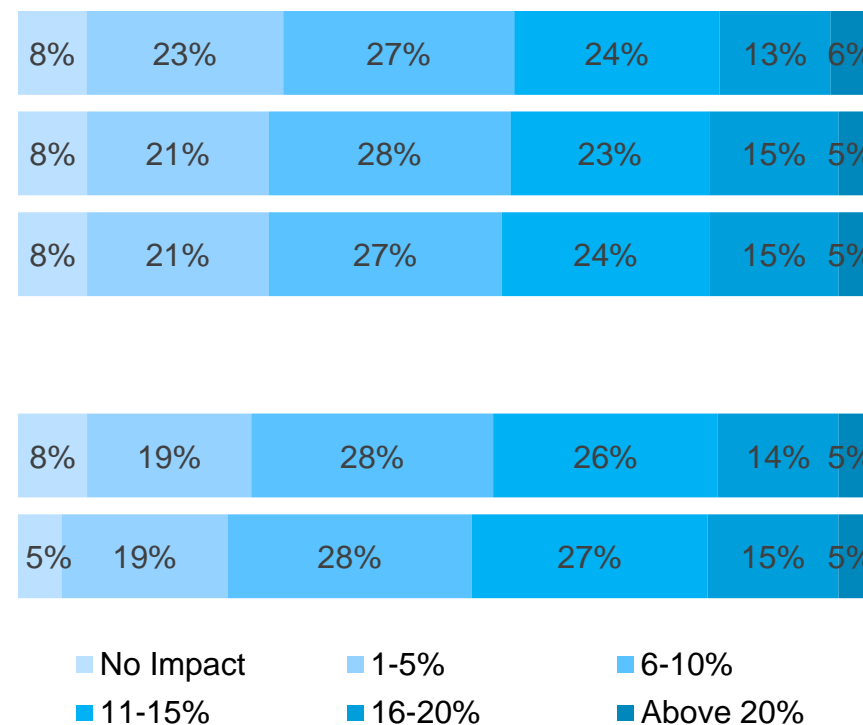Source: Accenture 2019 Industry X.0 Survey

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

Over 75% of Industrial Equipment leaders fear substantial escalations in cost (>5%) alongside losing significant market share (>5%), if they fail to overcome organizational challenges
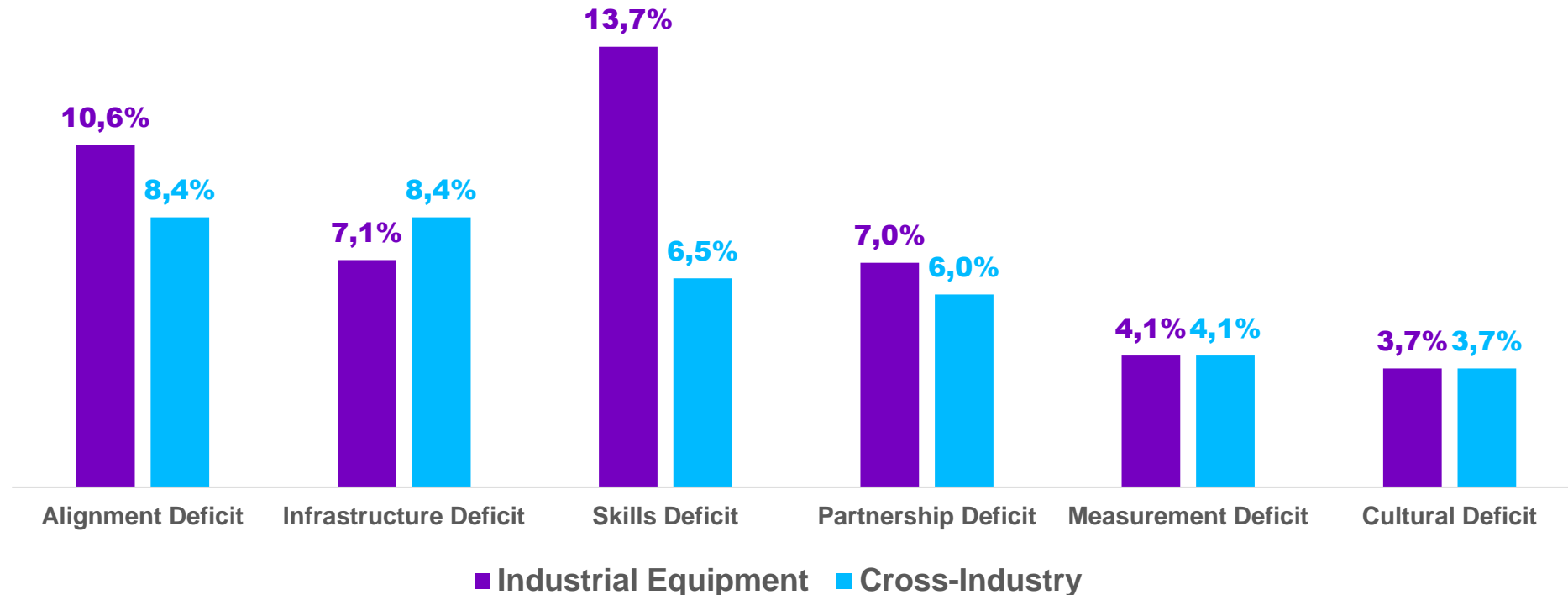
INDUSTRIAL EQUIPMENT

	No Impact	1-5%	6-10%	11-15%	16-20%	Above 20%
LOSS IN MARKET CAP	9%	22%	32%	20%	14%	4%
FALL IN MARKET SHARE	8%	15%	32%	25%	15%	5%
REDUCTION IN REVENUES	7%	17%	30%	22%	20%	4%
INCREASE IN ATTRITION RATES	7%	21%	20%	38%	11%	3%
COST ESCALATIONS	4%	21%	21%	39%	11%	4%

CROSS-INDUSTRY

	No Impact	1-5%	6-10%	11-15%	16-20%	Above 20%
LOSS IN MARKET CAP	8%	23%	27%	24%	13%	6%
FALL IN MARKET SHARE	8%	21%	28%	23%	15%	5%
REDUCTION IN REVENUES	8%	21%	27%	24%	15%	5%
INCREASE IN ATTRITION RATES	8%	19%	28%	26%	14%	5%
COST ESCALATIONS	5%	19%	28%	27%	15%	5%

Legend: No Impact, 1-5%, 6-10%, 11-15%, 16-20%, Above 20%

Source: Accenture 2019 Industry X.0 Survey

HOW MUCH CAN COMPANIES GAIN IF THEY OVERCOME THESE DEFICITS?

Industrial Equipment companies have the opportunity to achieve sizeable increase in RODI, if they focus on solving skill deficits

INCREMENTAL RODI POTENTIAL IF DEFICIT IS OVERCOME

Deficit	Industrial Equipment	Cross-Industry
Alignment Deficit	10,6%	8,4%
Infrastructure Deficit	7,1%	8,4%
Skills Deficit	13,7%	6,5%
Partnership Deficit	7,0%	6,0%
Measurement Deficit	4,1%	4,1%
Cultural Deficit	3,7%	3,7%

■ Industrial Equipment ■ Cross-Industry

Source: Accenture 2019 Industry X.0 Survey

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.

4.

BUILD IN-HOUSE INNOVATION FACTORIES WITH TARGETED INFLUENCE

MAP KEY INNOVATION ENABLERS TO APPROPRIATE BUSINESS FUNCTIONS

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.

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...

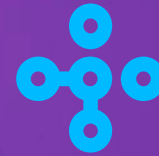# ... WE HAVE BUILT ONE LEVERAGING FIVE KEY ORGANIZATIONAL LEVERS

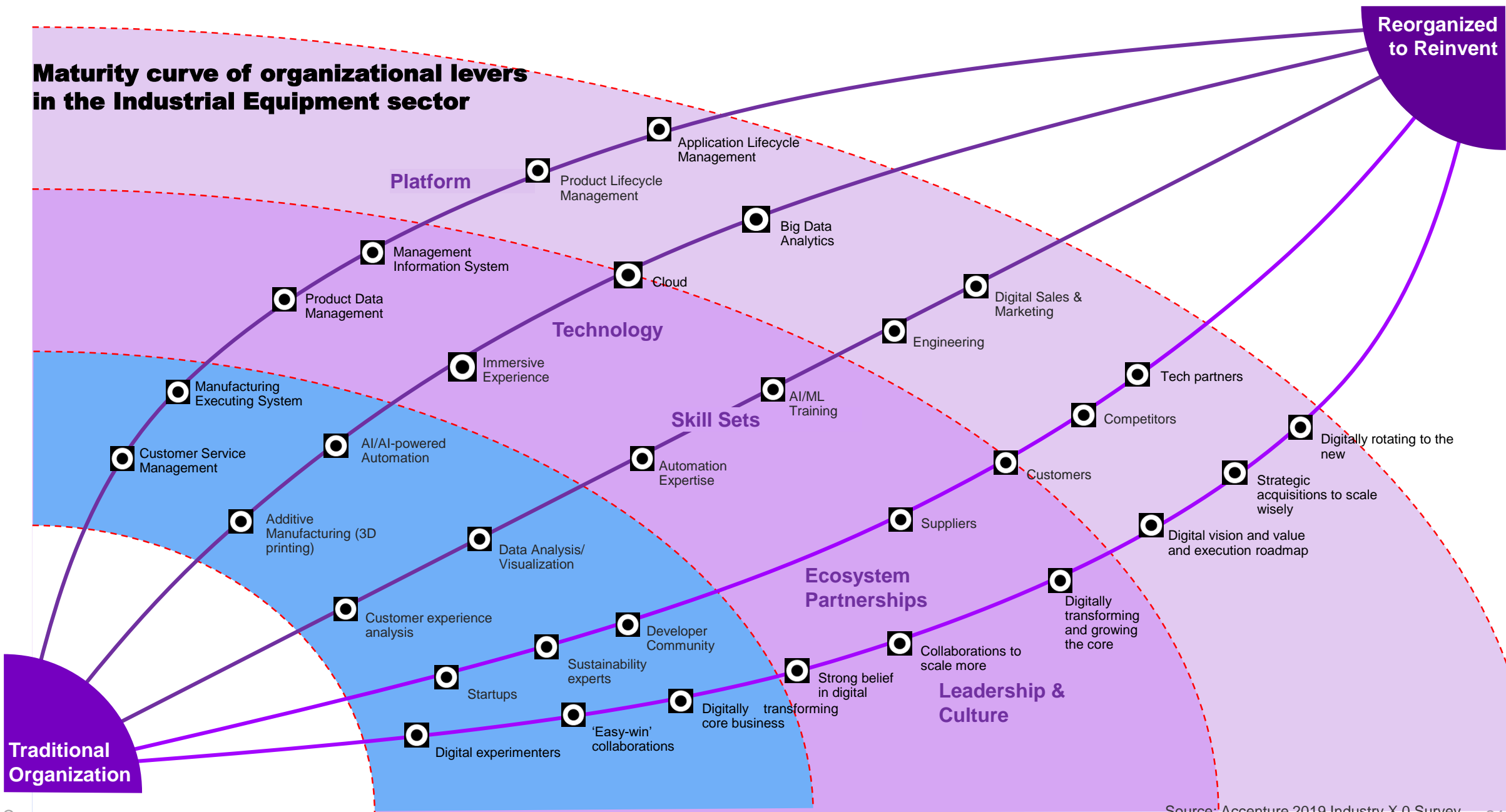**LEADERSHIP & CULTURE**

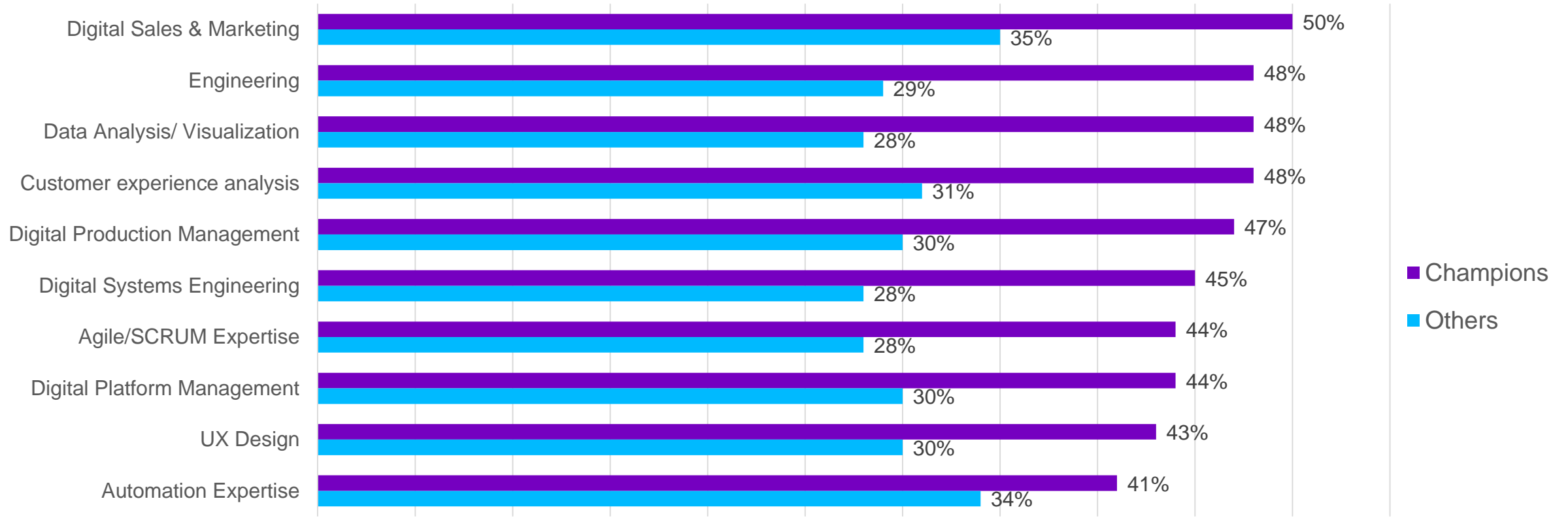**ECOSYSTEM PARTNERSHIPS**

SKILLSETS

TECHNOLOGY

PLATFORM

Maturity curve of organizational levers in the Industrial Equipment sector

CHAMPIONS

CONTENDERS

CADETS

Reorganized to Reinvent

Traditional Organization

Platform
- Application Lifecycle Management
- Product Lifecycle Management
- Big Data Analytics
- Management Information System
- Cloud
- Product Data Management
- Digital Sales & Marketing
- Engineering

Technology

Skill Sets
- Immersive Experience
- AI/ML Training
- Manufacturing Executing System
- Tech partners
- Customer Service Management
- AI/AI-powered Automation
- Automation Expertise
- Competitors
- Digitally rotating to the new
- Additive Manufacturing (3D printing)
- Data Analysis/ Visualization
- Suppliers
- Customers
- Strategic acquisitions to scale wisely

Ecosystem Partnerships
- Customer experience analysis
- Developer Community
- Digital vision and value and execution roadmap
- Startups
- Sustainability experts
- Collaborations to scale more
- Digitally transforming and growing the core

Leadership & Culture
- Digital experimenters
- 'Easy-win' collaborations
- Digitally transforming core business
- Strong belief in digital

Source: Accenture 2019 Industry X.0 Survey
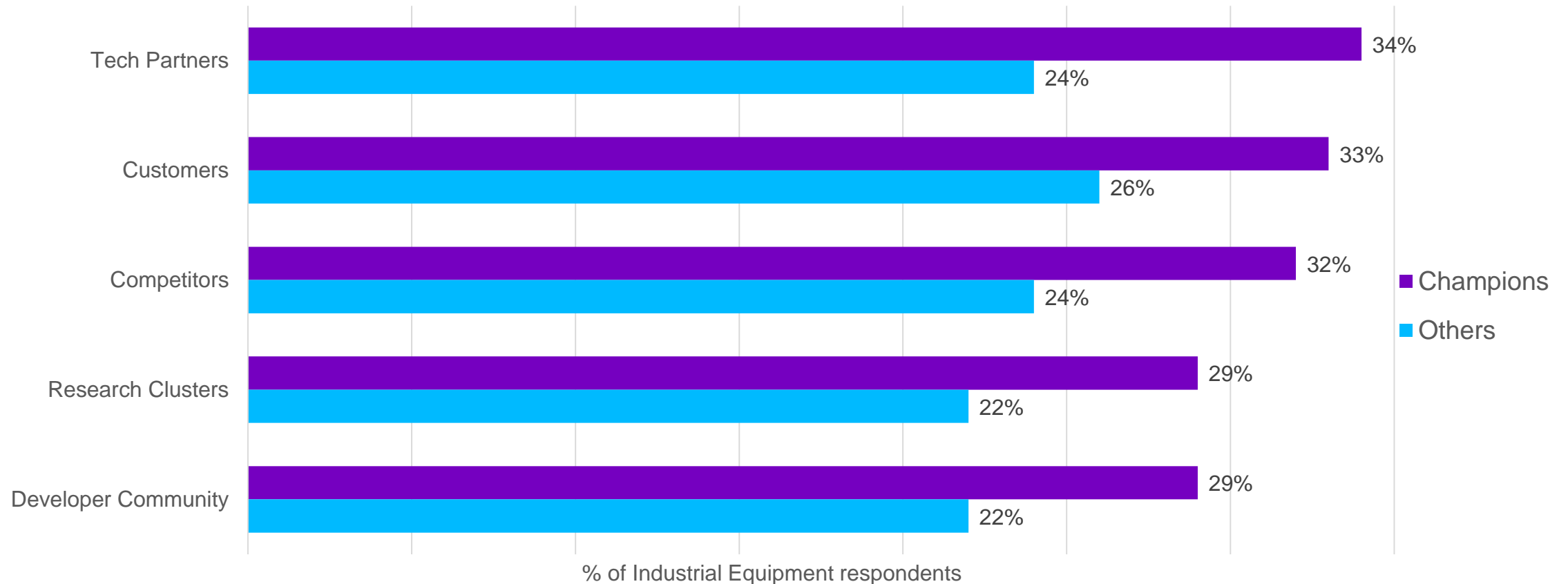
24

TOP 10 SKILL SETS FOR INDUSTRIAL EQUIPMENT CHAMPIONS

Digital Sales & Marketing, along with Engineering and Data Analysis, are critical skills to build and scale digital PoCs

Skill	Champions	Others
Digital Sales & Marketing	50%	35%
Engineering	48%	29%
Data Analysis/ Visualization	48%	28%
Customer experience analysis	48%	31%
Digital Production Management	47%	30%
Digital Systems Engineering	45%	28%
Agile/SCRUM Expertise	44%	28%
Digital Platform Management	44%	30%
UX Design	43%	30%
Automation Expertise	41%	34%

■ Champions
■ Others

% of Industrial Equipment respondents saying "Very Important"

Source: Accenture 2019 Industry X.0 Survey   25

TOP 5 PARTNERSHIPS FOR INDUSTRIAL EQUIPMENT CHAMPIONS

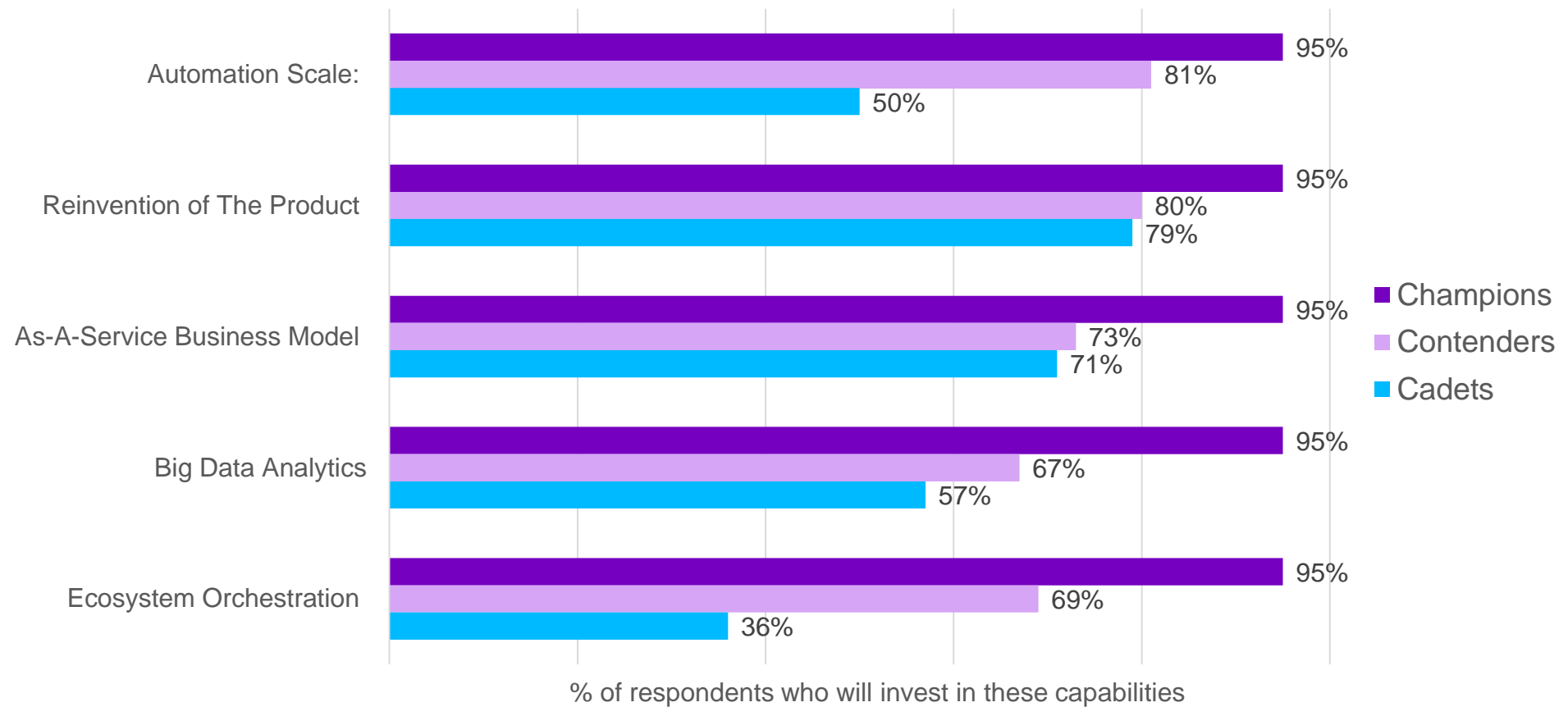## Tech Partners and Customers are critical partnerships to build and scale digital PoCs

Tech Partners
- Champions: 34%
- Others: 24%

Customers
- Champions: 33%
- Others: 26%

Competitors
- Champions: 32%
- Others: 24%

Research Clusters
- Champions: 29%
- Others: 22%

Developer Community
- Champions: 29%
- Others: 22%

■ Champions
■ Others

% of Industrial Equipment respondents

Q: WHAT CAPABILITIES DO INDUSTRIAL EQUIPMENT 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 AUTOMATION, AND REINVENTION OF THE PRODUCT

Top 5 capabilities for scaling digital PoCs

Capability	Champions	Contenders	Cadets
Automation Scale:	95%	81%	50%
Reinvention of The Product	95%	80%	79%
As-A-Service Business Model	95%	73%	71%
Big Data Analytics	95%	67%	57%
Ecosystem Orchestration	95%	69%	36%

■ Champions
■ Contenders
■ Cadets

% of respondents who will invest in these capabilities

Source: Accenture 2019 Industry X.0 Survey

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**

References:

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

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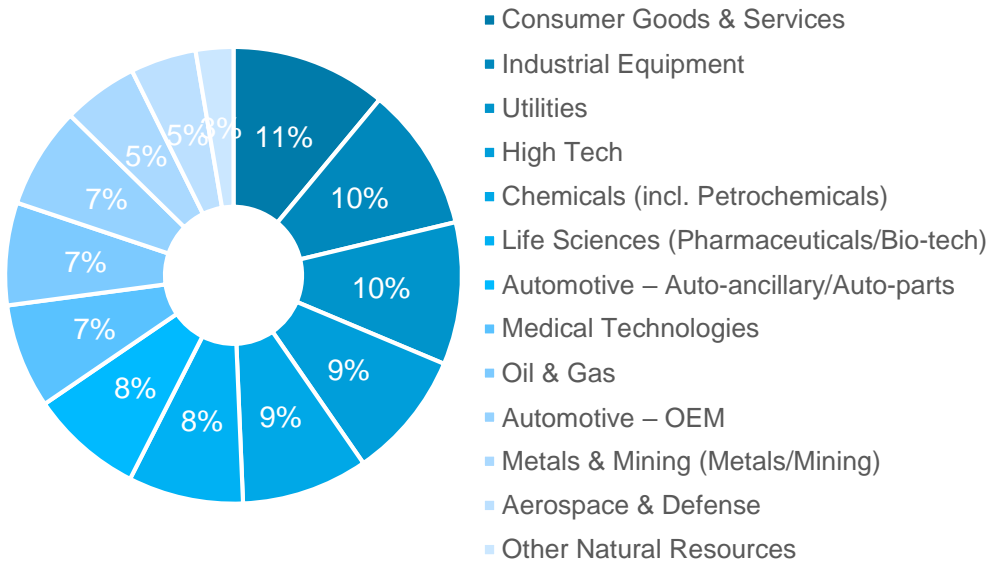raghav.narsalay@accenture.com

Aarohi Sen

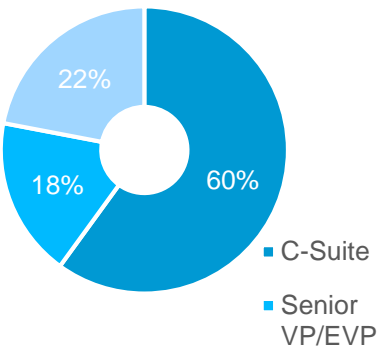**Principal, Thought Leadership, Industry X.O**
aarohi.sen@accenture.com

APPENDIX
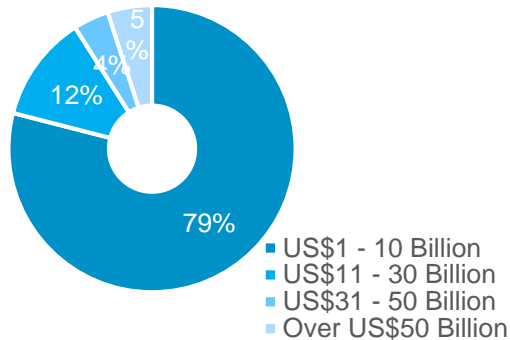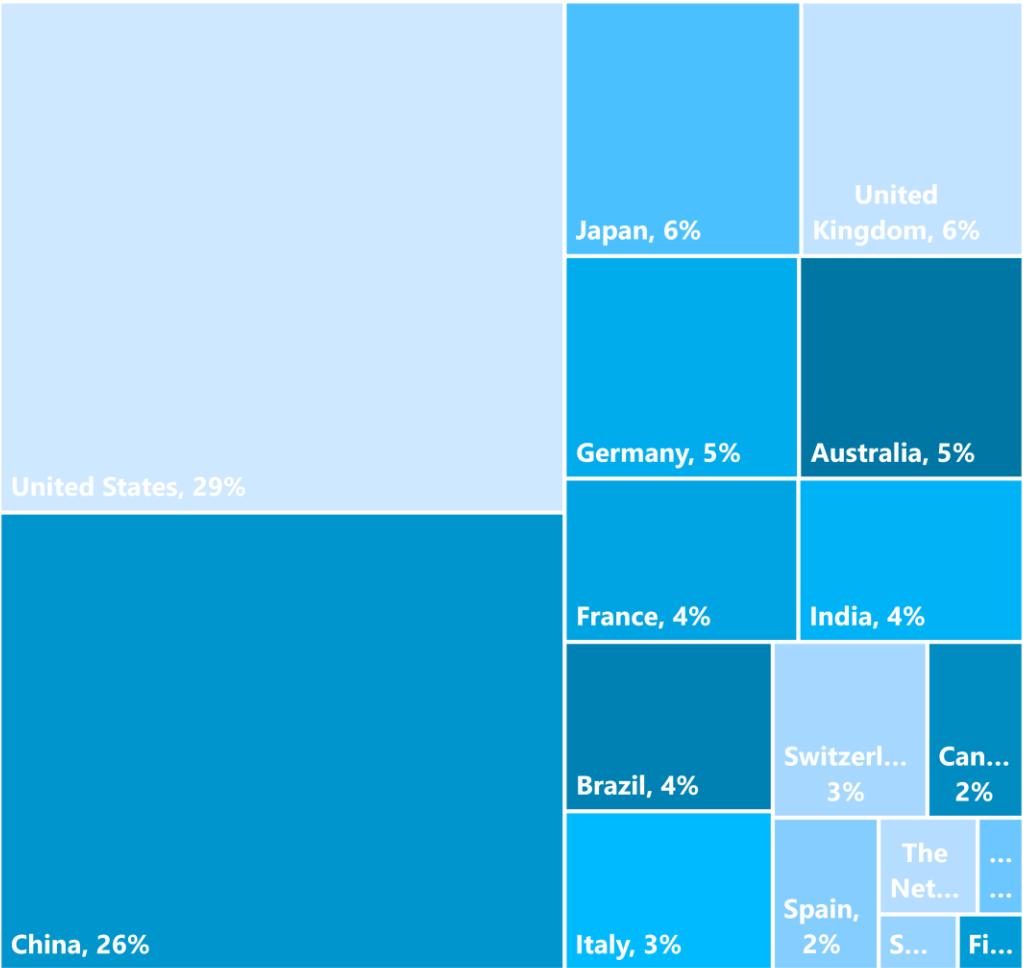
SURVEY DEMOGRAPHICS – OVERALL (n=1350)

INDUSTRY

- Consumer Goods & Services
- Industrial Equipment
- Utilities
- High Tech
- Chemicals (incl. Petrochemicals)
- Life Sciences (Pharmaceuticals/Bio-tech)
- Automotive – Auto-ancillary/Auto-parts
- Medical Technologies
- Oil & Gas
- Automotive – OEM
- Metals & Mining (Metals/Mining)
- Aerospace & Defense
- Other Natural Resources

EXEC PROFILE

- C-Suite
- Senior VP/EVP

ANNUAL REVENUE

- US$1 - 10 Billion
- US$11 - 30 Billion
- US$31 - 50 Billion
- Over US$50 Billion

GEO-SPREAD

United States, 29%
Japan, 6%
United Kingdom, 6%
Germany, 5%
Australia, 5%
France, 4%
India, 4%
Brazil, 4%
Switzerl... 3%
Can... 2%
China, 26%
Italy, 3%
Spain, 2%
The Net...
S...
Fi...

SURVEY DEMOGRAPHICS – INDUSTRIAL EQUIPMENT (n=138)

GEO-SPREAD

EXEC PROFILE

- C-Suite
- Senior VP/EVP
- VP/Director

14%
17%
68%

ANNUAL REVENUE

- US$1 - 10 Billion
- US$11 - 30 Billion
- US$31 - 50 Billion
- Over US$50 Billion

3%
5%
9%
83%

China, 30%
United States, 27%
Japan, 10%
Switzerland, 9%
Germany, 5%
Australia, 4%
Finland, 3%
Italy, 2%
Sweden, 2%
India, 3%
United Kingdom, 2%
B...1...
T...N...1...
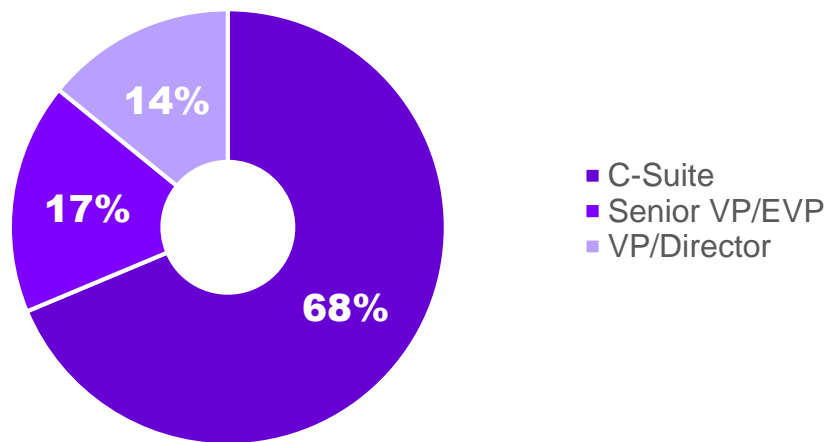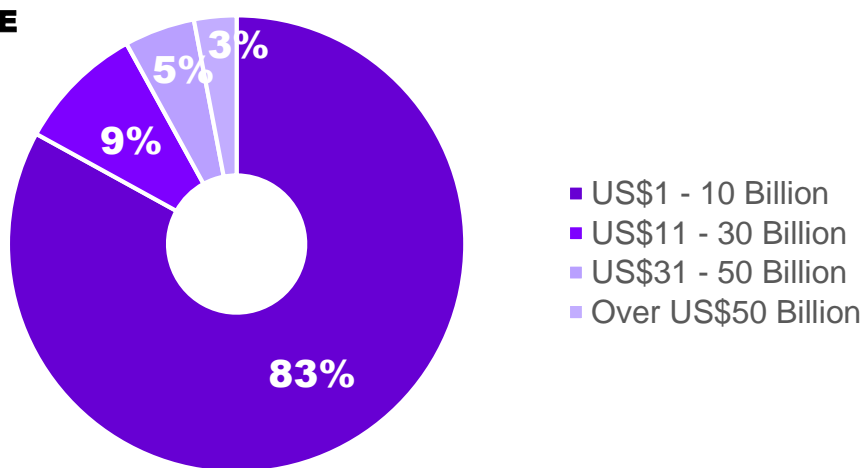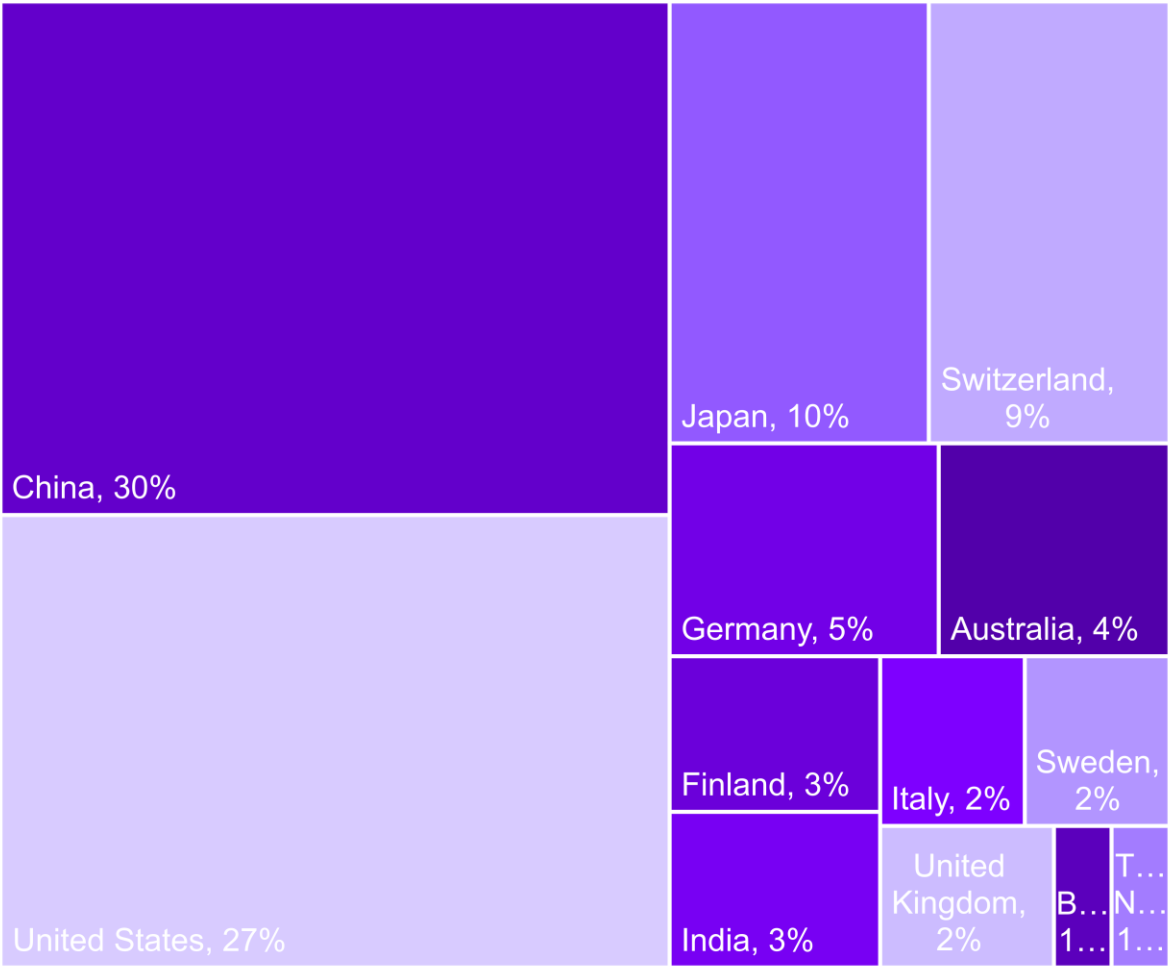
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