

*PwC's Global Data and Analytics  
Survey 2016:  
Big Decisions™ 2.0*

*German and international findings*

July 2016

# ***Contents***

1. Big Decisions™ 2.0 survey background
2. Executive summary
3. German and international findings
4. Conclusion

# ***1. Survey background***

# ***Big Decisions™ strives to understand how decision-making is evolving, particularly at the boundaries of automation and human judgment***

## ***Why?***

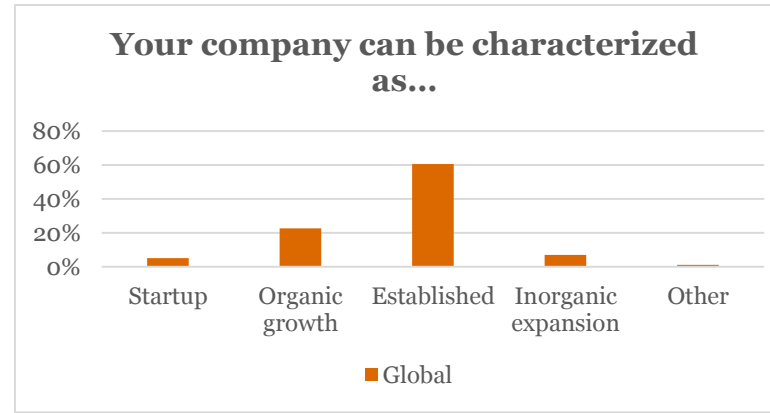
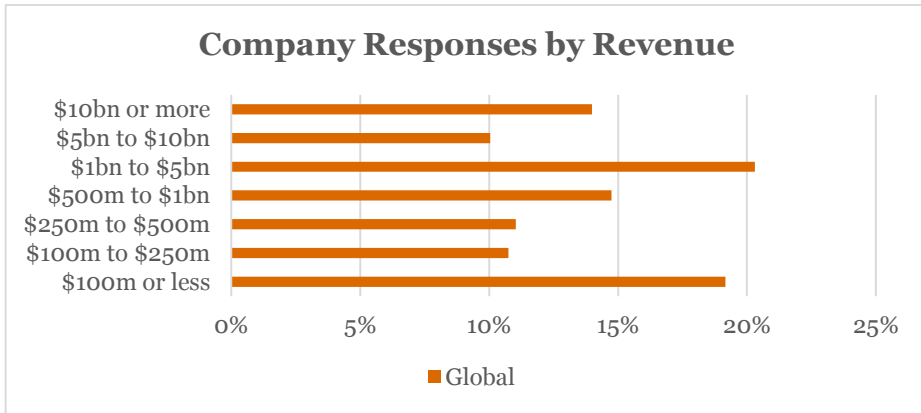
- Strategic decisions create value for an organisation.
- Decision-makers are now face-to-face with an opportunity to learn from massive amounts of data.
- How can we apply data analytics to create greater value?

## ***What?***

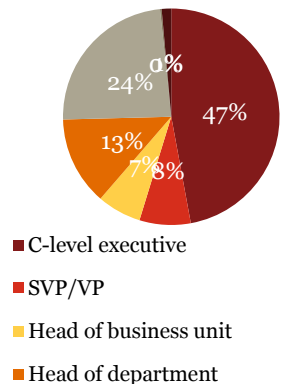
- What types of decisions will you need to make between now and 2020?
- What types of data and analytics do these decisions require?
- What is the role of machines in decision making?
- What's your ambition for improving your company's decision speed and sophistication to make these decisions?

# The 2016 global survey had 2100+ participants across industries and regions

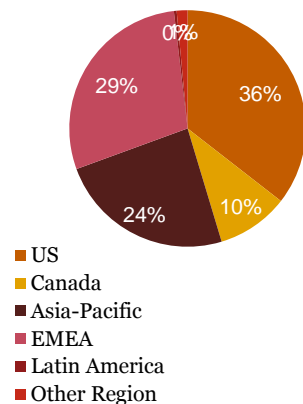
## Global respondent's profile



### Responses by Role



### Regional Demographics



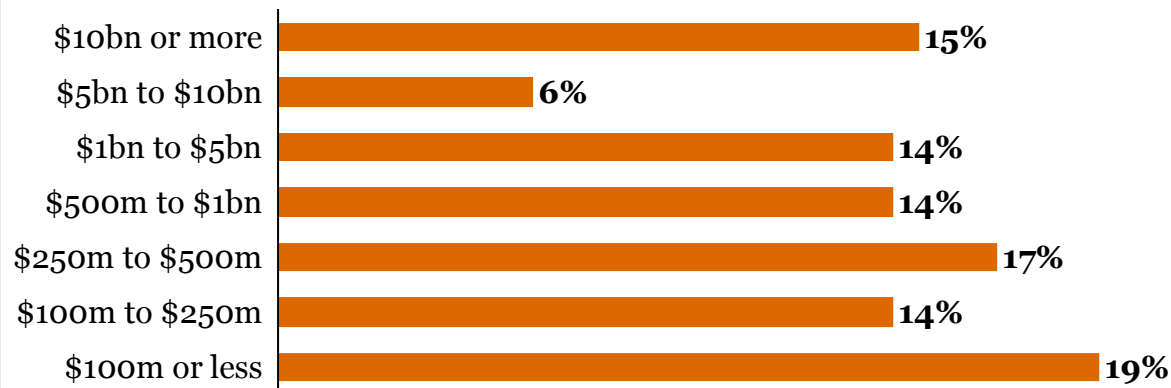
**2106** Global respondents from **50+** countries with large presence in the **US, EMEA & APAC**

**44%** of total Global based respondents had **revenues over \$1 billion** last year

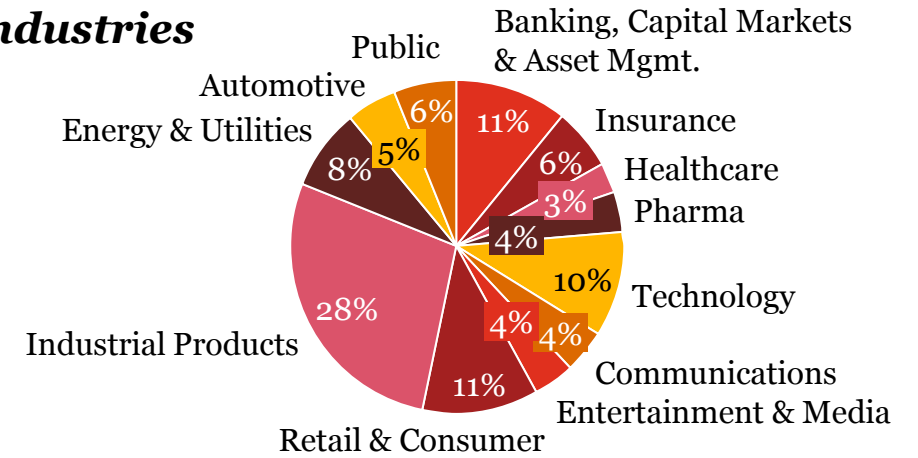
# The German survey had 168 respondents from different industries and functions

## German Respondent's Profile

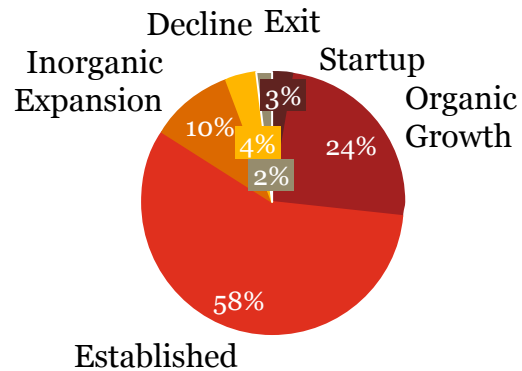
**Company Response by Revenue**



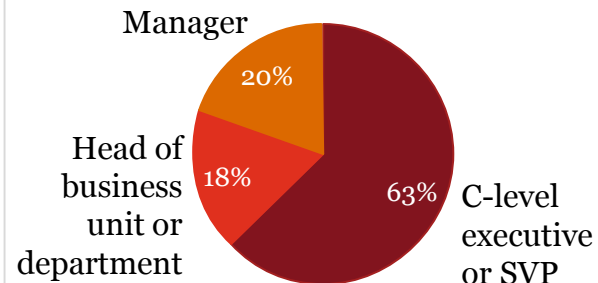
**Industries**



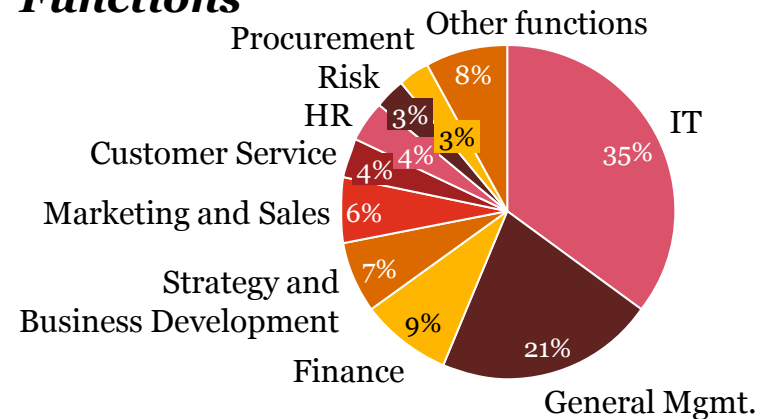
**Company characteristics**



**Responses by Role**



**Functions**



## ***2. Executive summary***

## Executive summary

### **1** *Big Decisions: are they the right ones for right reasons?*

- Developing or launching new products to achieve market leadership and 5-50% shareholder value growth is the top selected decision.
- Most decisions are motivated by market leadership in an industry context of evolving core assets as opposed to disruption or survival.

### **2** *Factors impacting: despite the hype, data & analytics can play bigger*

- Companies are evolving D&A capabilities; struggle with gut-based model; hampered by decision structure.
- German companies data-driven and rely on a considerable share of advanced analytics.
- Multiple influences and trade-offs impact how companies use D&A to improve decision-making.

### **3** *New mind/machine order: increasing decision speed and sophistication to create value*

- A new order is changing the balance of algorithms and human judgment that can be used across decision types, and to make “unknown” risks “known”.
- Companies and industries differ in maturity using decision-making speed and sophistication to create value. All want to improve by 2020.

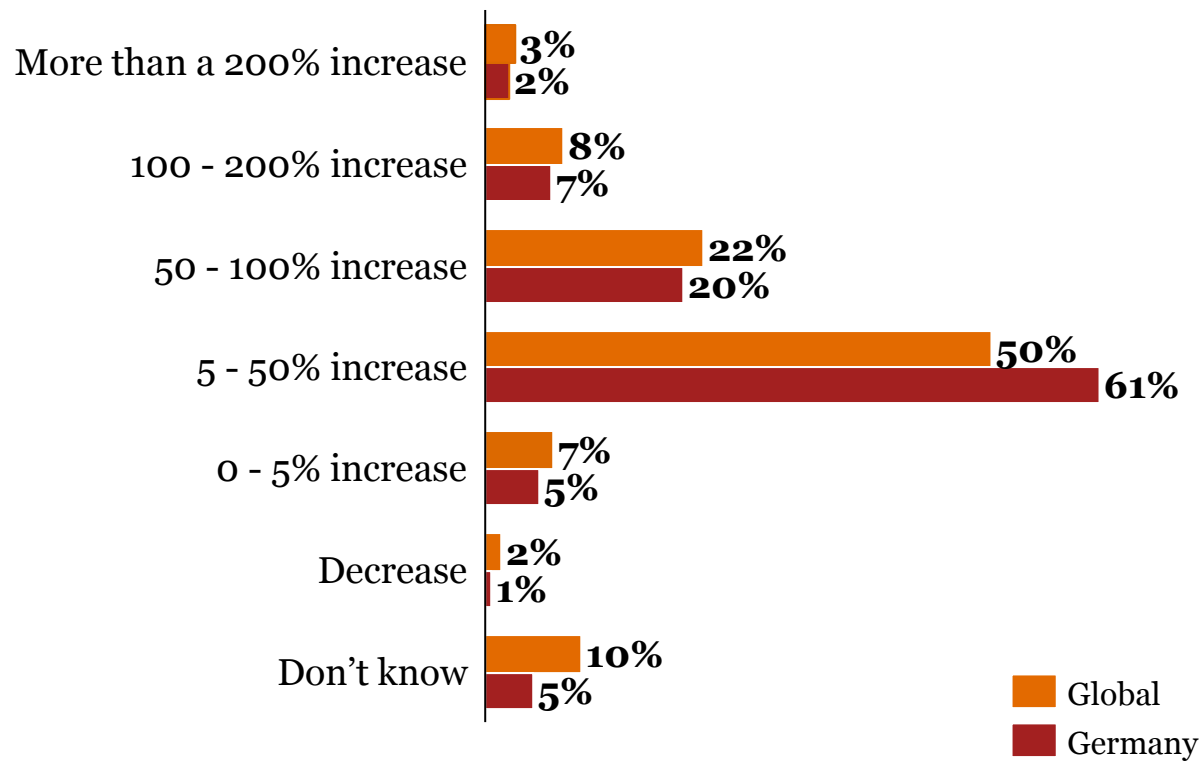


## ***3. German and international findings***

## What is a big decision?

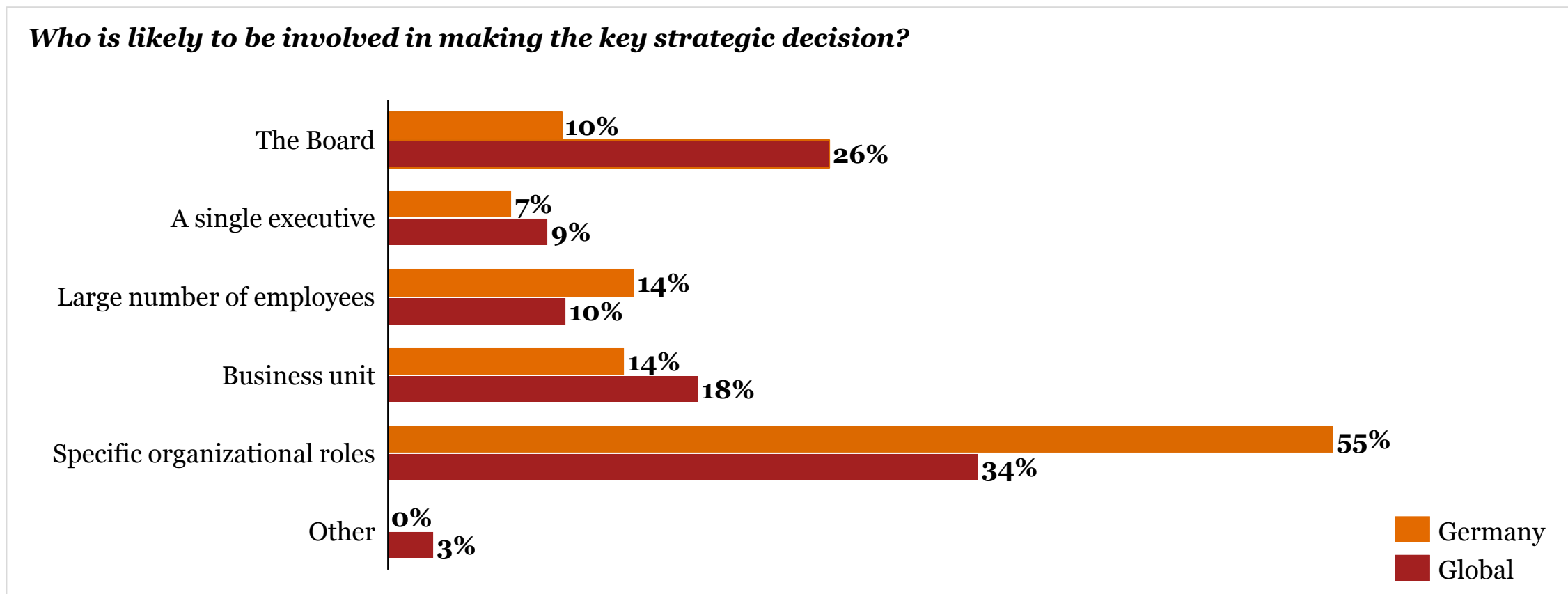
**90% of global respondents think their next strategic decision will increase shareholder value, ranging up to a 200% increase.**

**Instinctively, what impact would this decision have on current shareholder value over the next 5 years?**



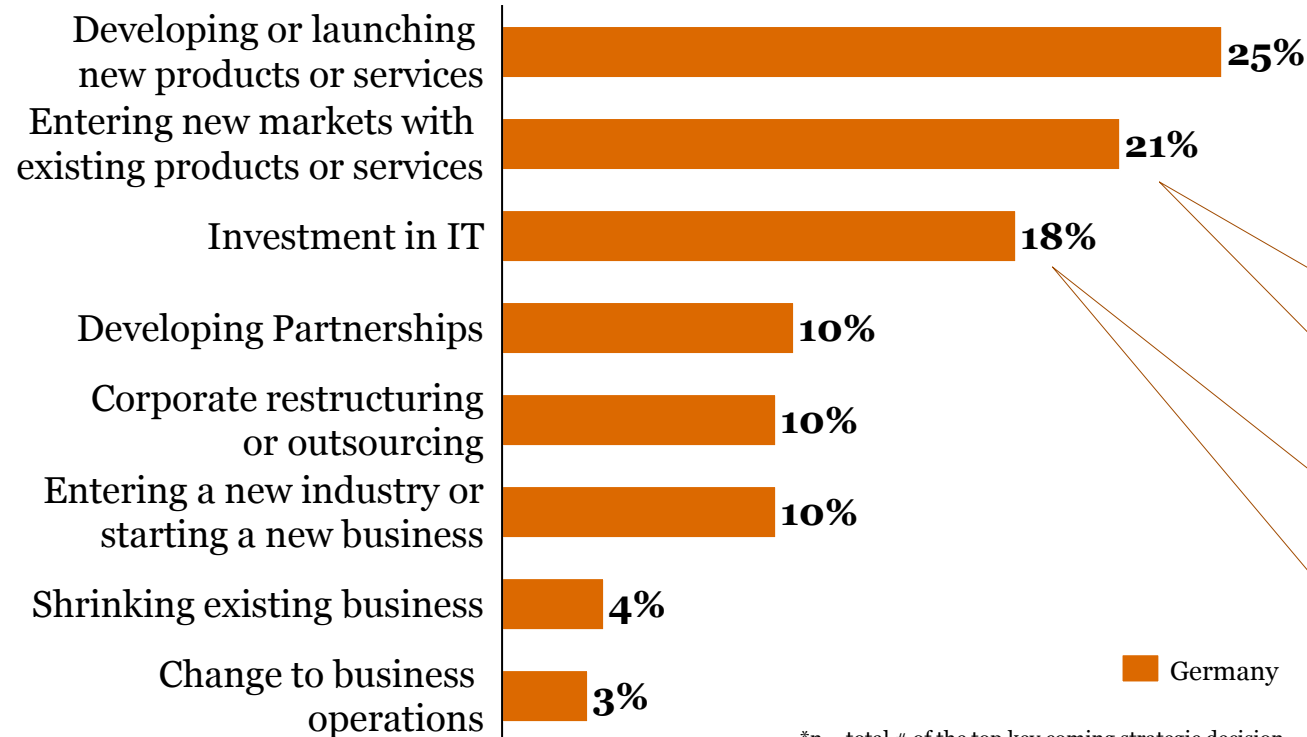
\*n = total # of the top key coming strategic decision

## ***Compared to global findings, German respondents' key strategic decisions are less likely to be made by the board, but rather by specific organizational roles***



# The leading big decisions in Germany as well as across global markets are focused on new products and services, new markets and IT investments

Which of the following best describes your key strategic decision?



\*n = total # of the top key coming strategic decision

Exemplary comments from respondents:

“We need new products for a digital world.”

“Challenge to find new business fields and products to assure our company’s survival.”

“Will our current core business remain successful or do we need to diversify or even refocus our business?”

“Continuous expansion of our core business”

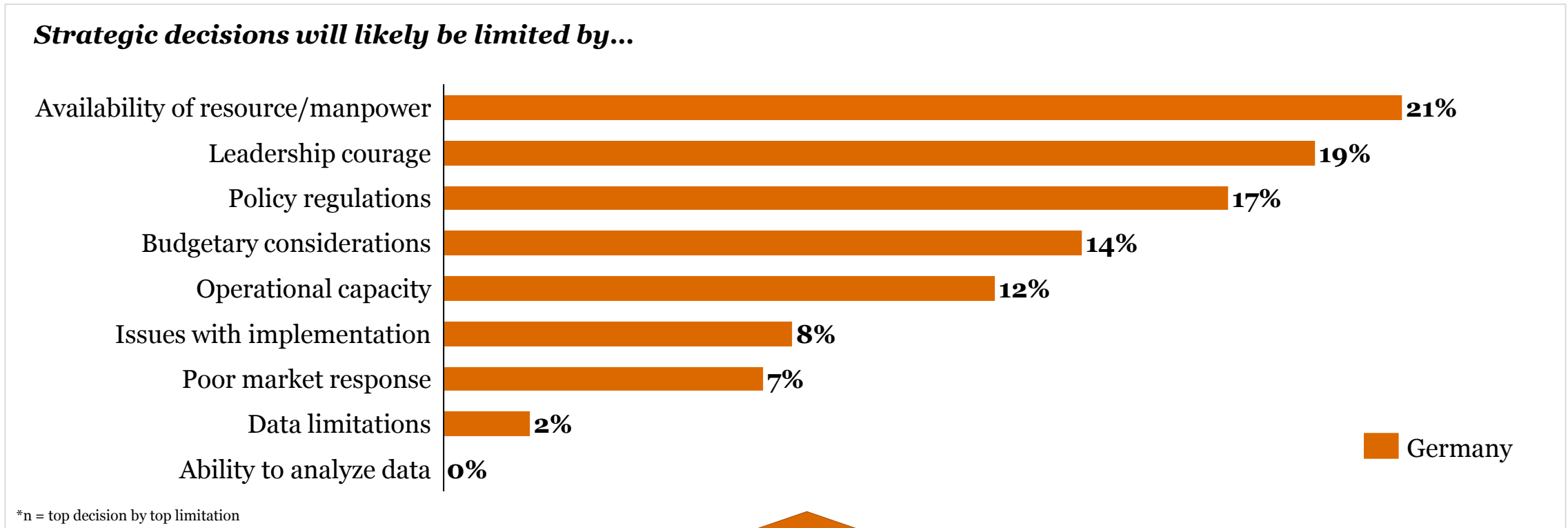
“Managing growth in China.”

“International integration of the IT landscape.”

“Move to Cloud Applications (Software as a Service).”

“Investments into Big Data and Industry 4.0 systems.”

# *The most anticipated limitations of strategic decisions are availability of resources, leadership courage and policy regulations, but not data limitations or analytics*



*What are the constraints in your organization that impede decision making? How much is data & analytics related?*

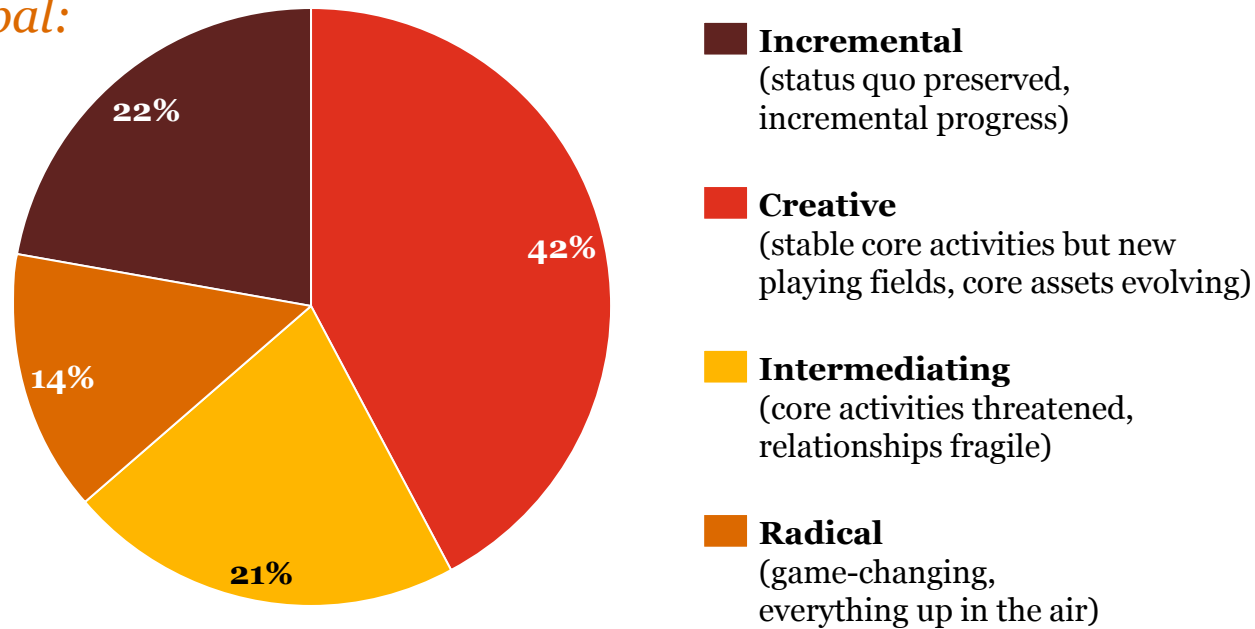
# Belief about industry change sets the context for the strategic decisions and key motivations

## Industry change dynamics set context...

## ...for key motivation

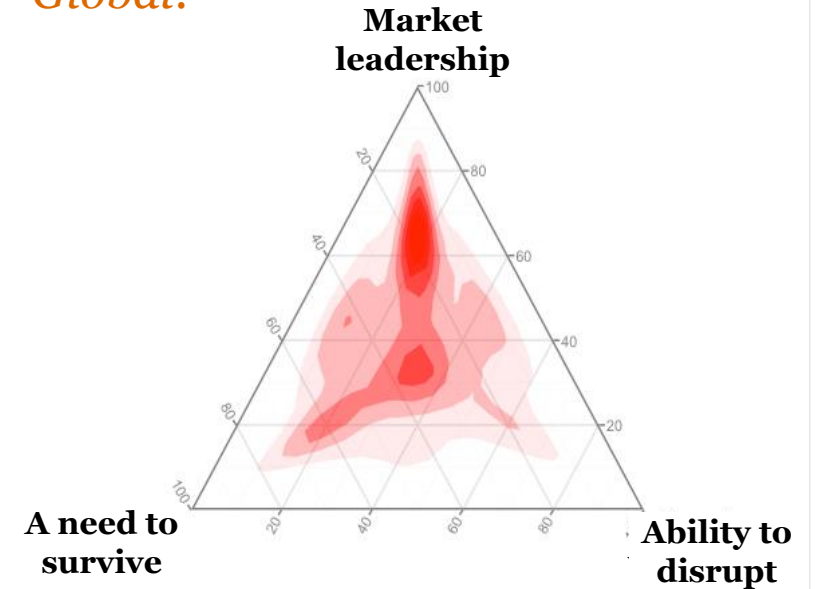
Between 2015 and 2020, change in my industry will likely be...

Global:



The key strategic decision will be motivated by...

Global:



\*n = # of anticipated industry change factor

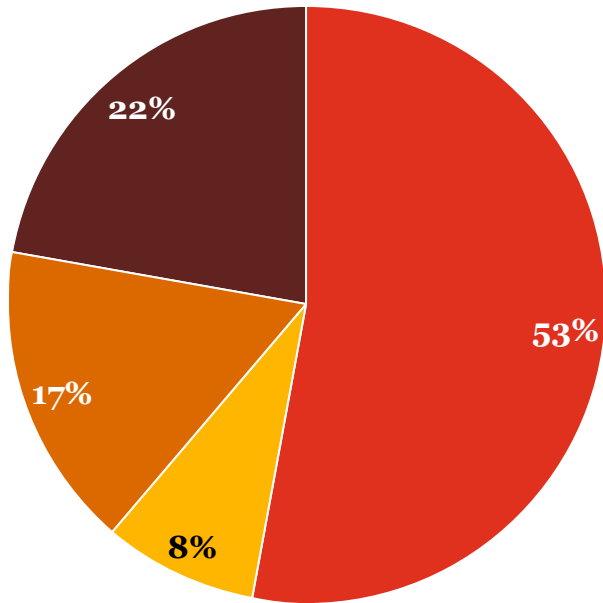
\*n = proximity to motivation

\* “Incremental” and „creative“ changes refer to a rather stable business, whereas threats and disruptive changes are defined by „intermediating“ and „radical“ changes

## Compared to global findings, German respondents anticipate a more stable core business\* (75% vs. 65%) and less threats and disruptive changes (25% vs. 35%)\* over the next 5 years

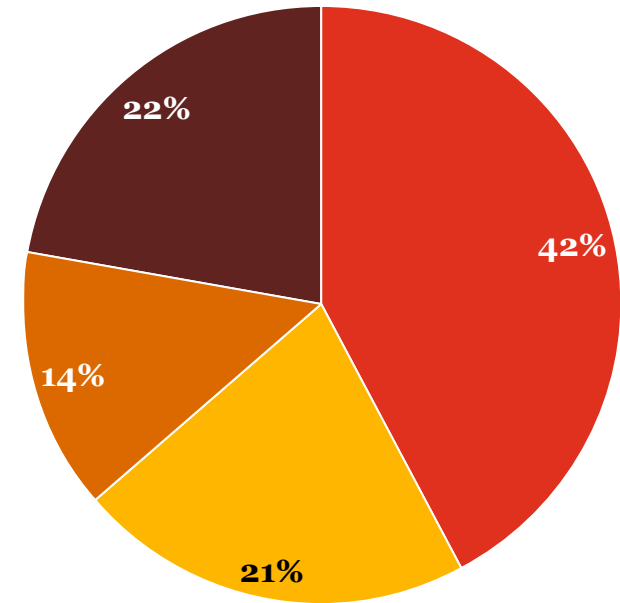
Between 2015 and 2020, change in my industry will likely be...

### Germany:



- Incremental**  
(status quo preserved, incremental progress)
- Creative**  
(stable core activities but new playing fields, core assets evolving)
- Intermediating**  
(core activities threatened, relationships fragile)
- Radical**  
(game-changing, everything up in the air)

### Global:



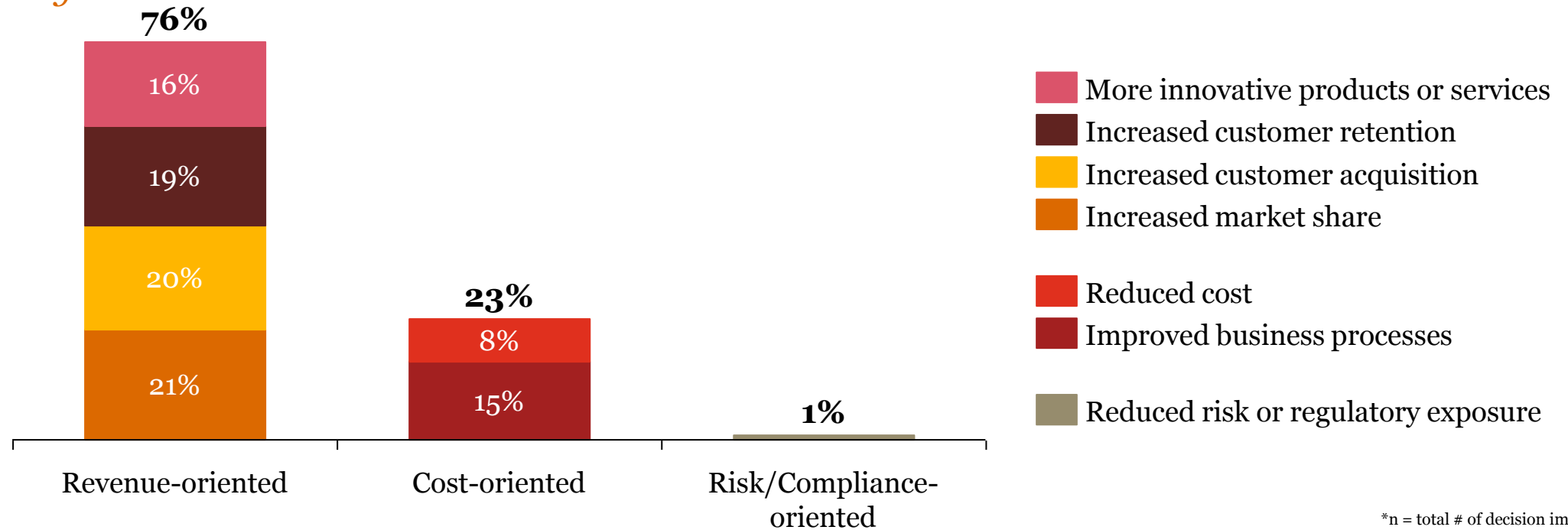
\*n = # of anticipated industry change factor

\* "Incremental" and „creative“ changes refer to a rather stable business, whereas threats and disruptive changes are defined by „intermediating“ and „radical“ changes

# The majority of key strategic decisions likely drives revenue/market share, while only 24% focus on costs/efficiency and risks

Anticipated impacts of key strategic decisions:

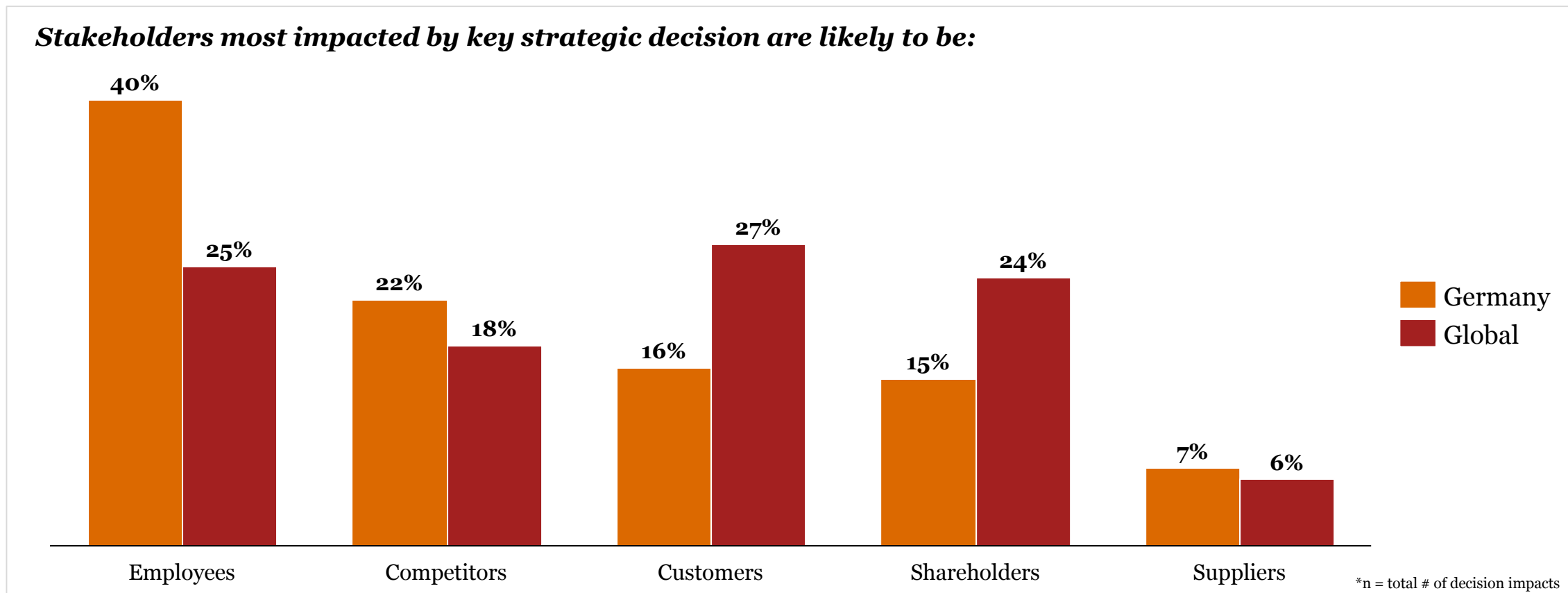
Germany:



\*n = total # of decision impacts

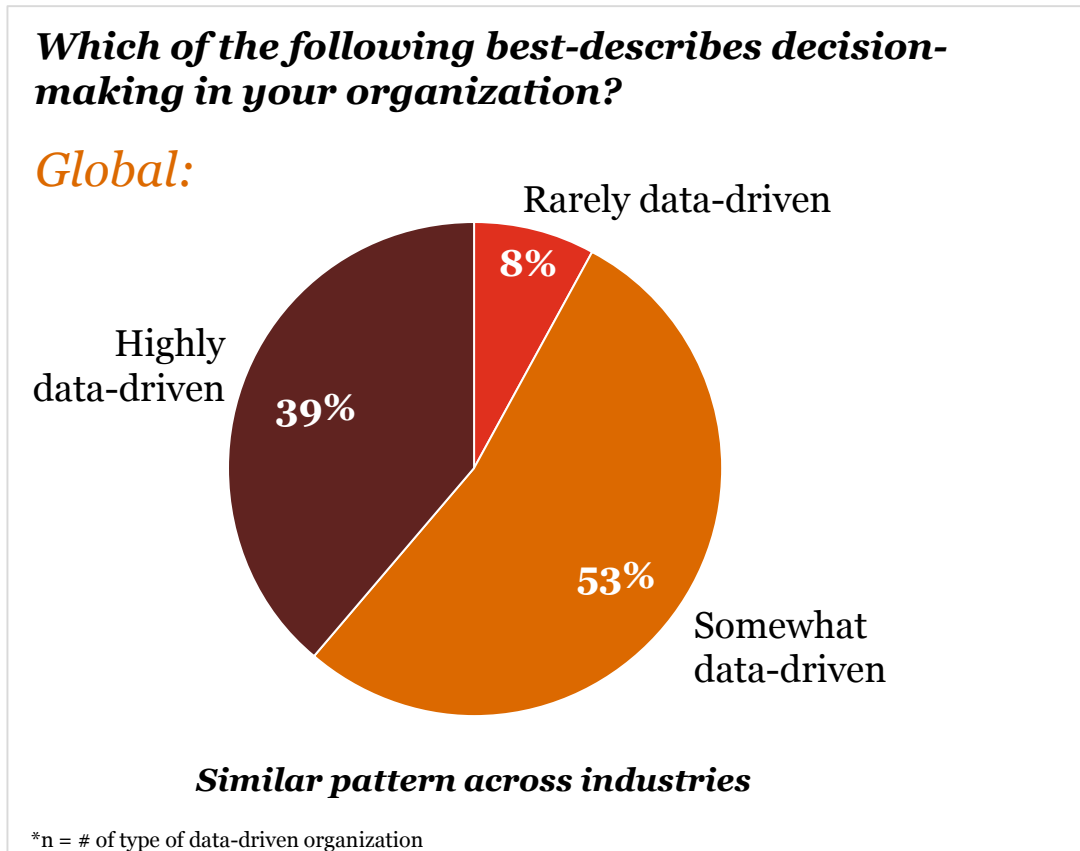


## ***Compared to the global findings, strategic decisions in Germany have a higher expected impact on employees and less on customers***

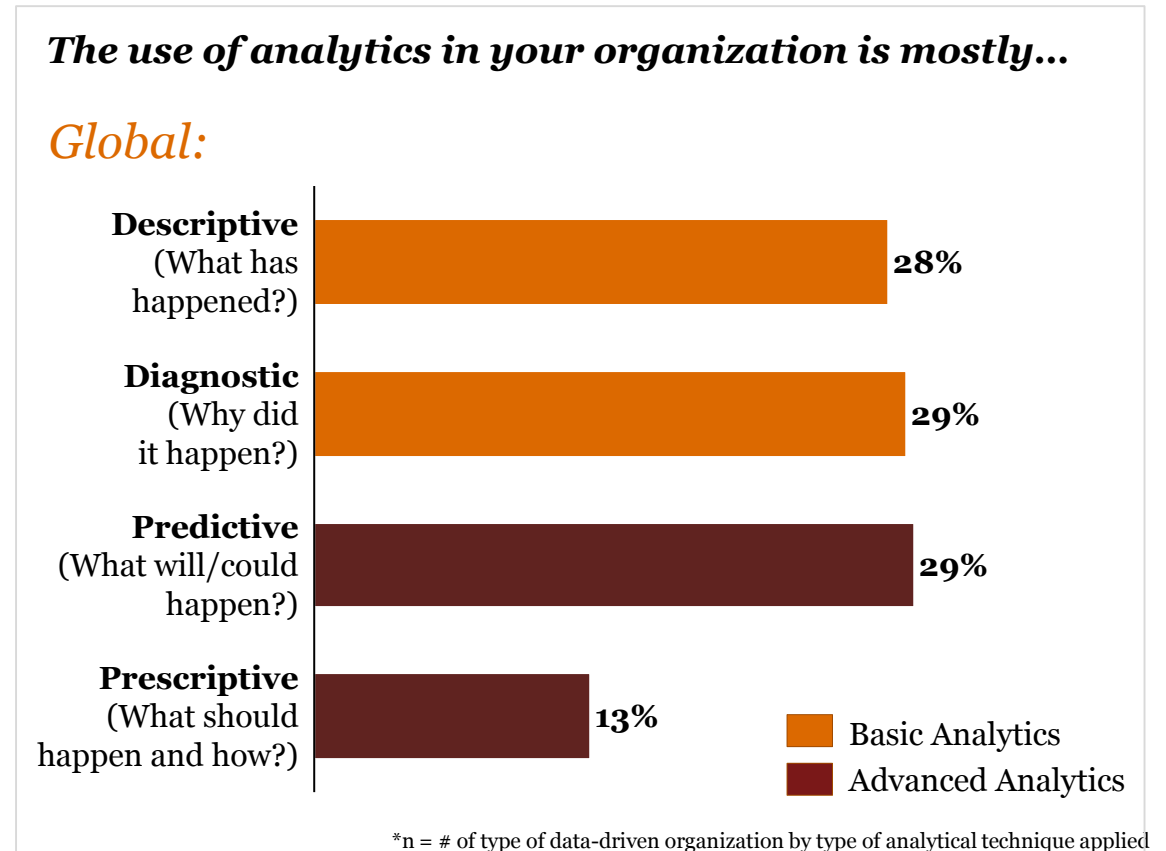


# Most of global respondents' companies are not highly data-driven and rely on descriptive and diagnostic analytics

## Majority are "somewhat" data-driven...



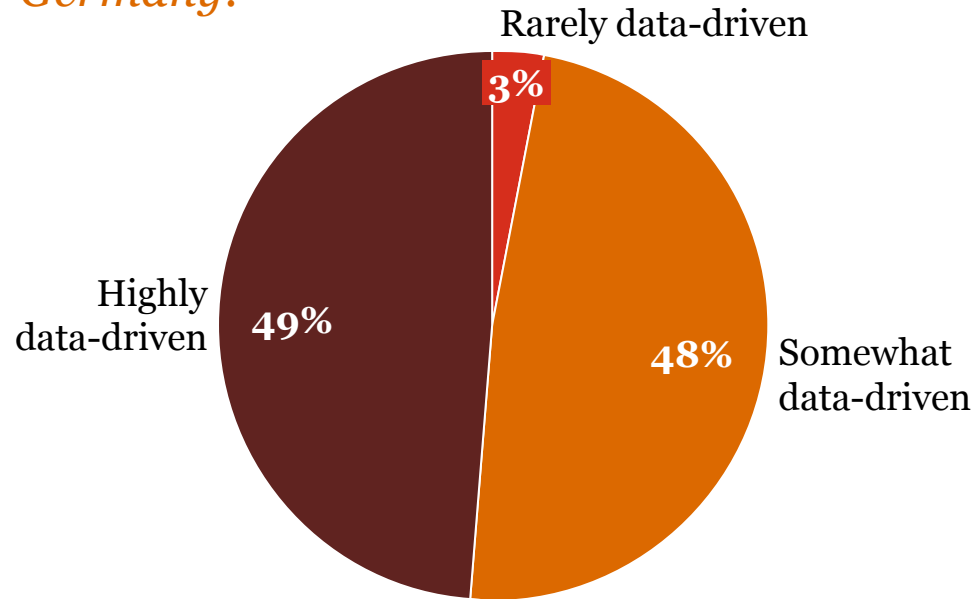
## ...and use basic analytics



# Compared with global findings, data-driven decision-making is more widely-used among German respondents, with a higher share of advanced analytics

Which of the following best-describes decision-making in your organization?

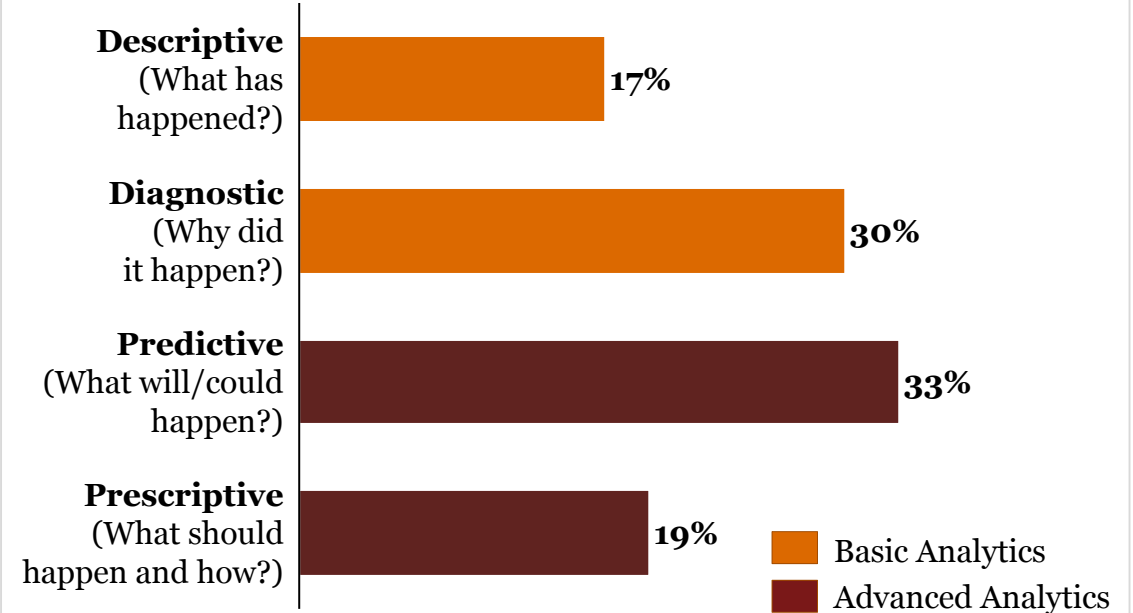
Germany:



\*n = # of type of data-driven organization

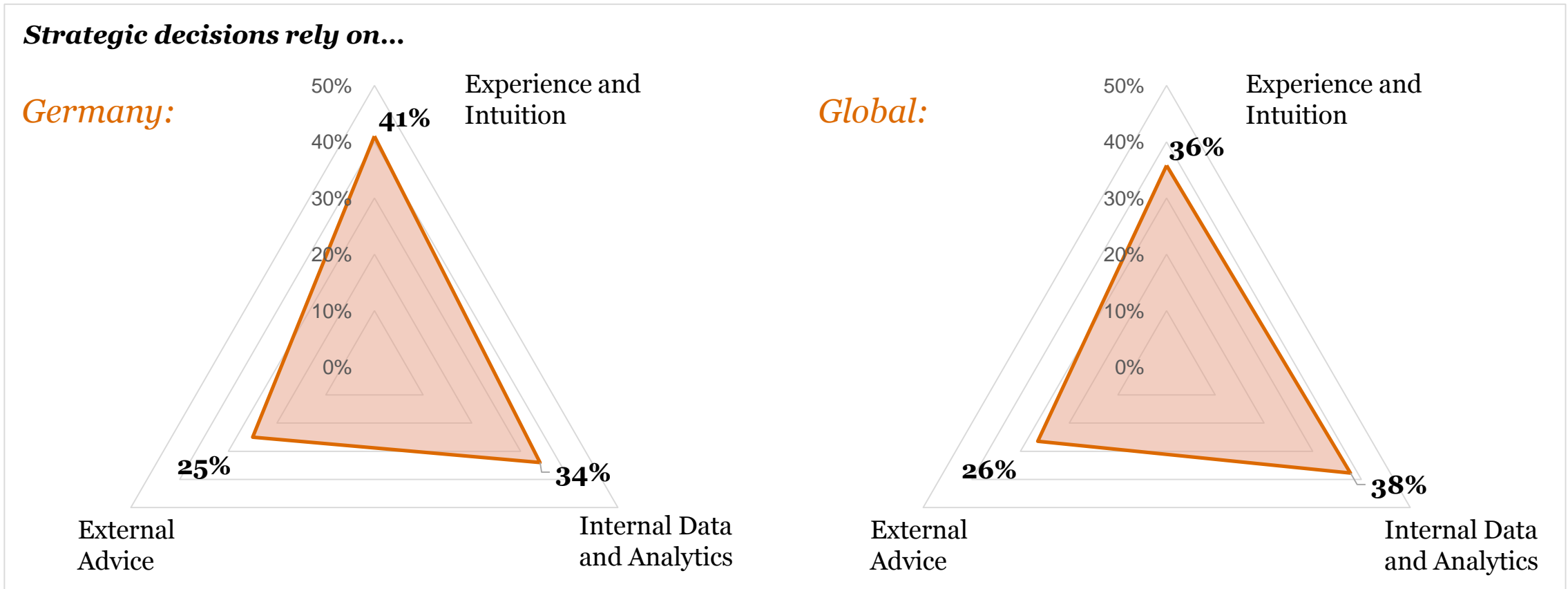
The use of analytics in your organization is mostly...

Germany:



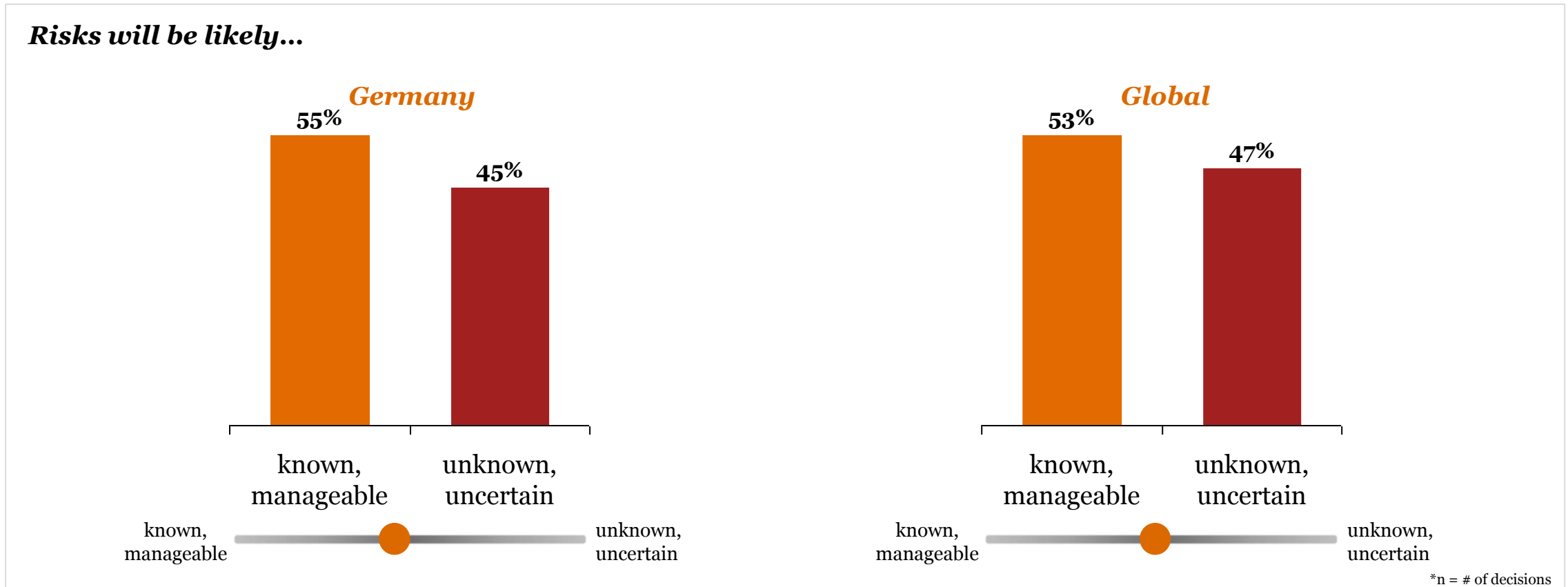
\*n = # of type of analytical technique applied

# Compared to global decision-makers, German respondents rely slightly more on experience and intuition than on data & analytics for strategic decisions



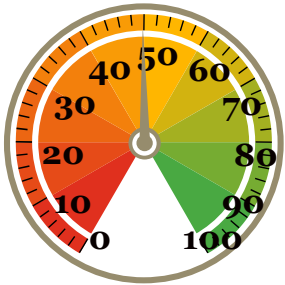
\*n = proximity to motivation

# For both global and German decision-makers, a significant share of risks is still unknown or uncertain



# Conclusion

# Creating a data driven organization requires focus on eleven dimensions that are underpinned by a data-driven decision process



**Dimension Maturity**

## Dimensions

### Business Value

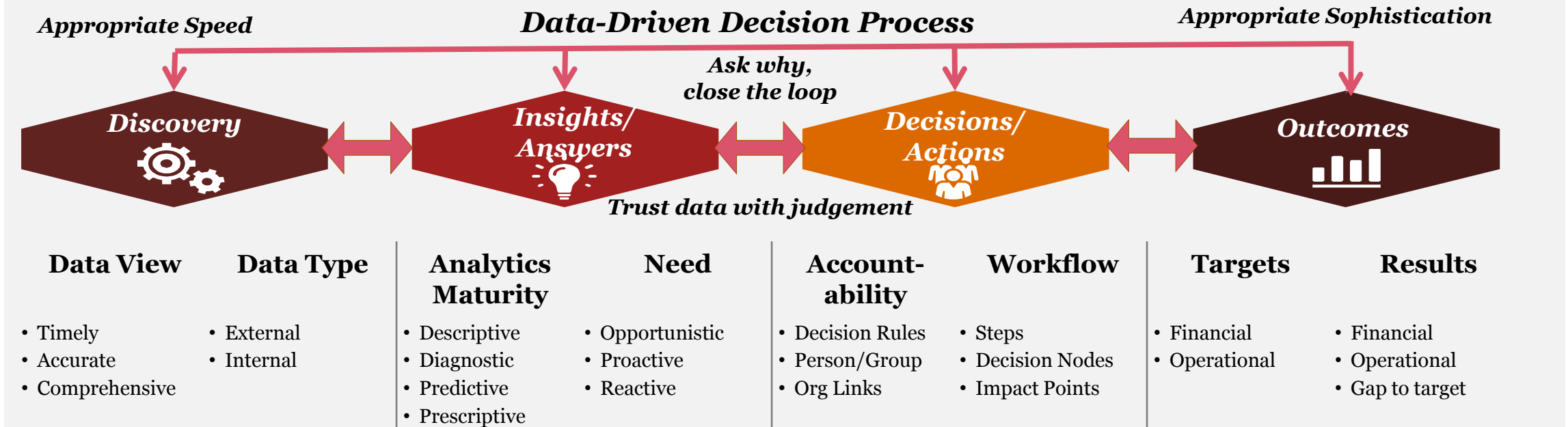
- Strategy Connection
- Use Case Value Potential
- Speed & Sophistication Needs

### Operating Model

- Engagement Model
- Talent Model
- Metrics / Incentives
- Repeatable Solutions

### Culture

- Group vs. Individual
- Decision Style: Intuition, Analytics, External
- Experimentation Acceptance
- Visible Symbols
- Machine / Mind Mix



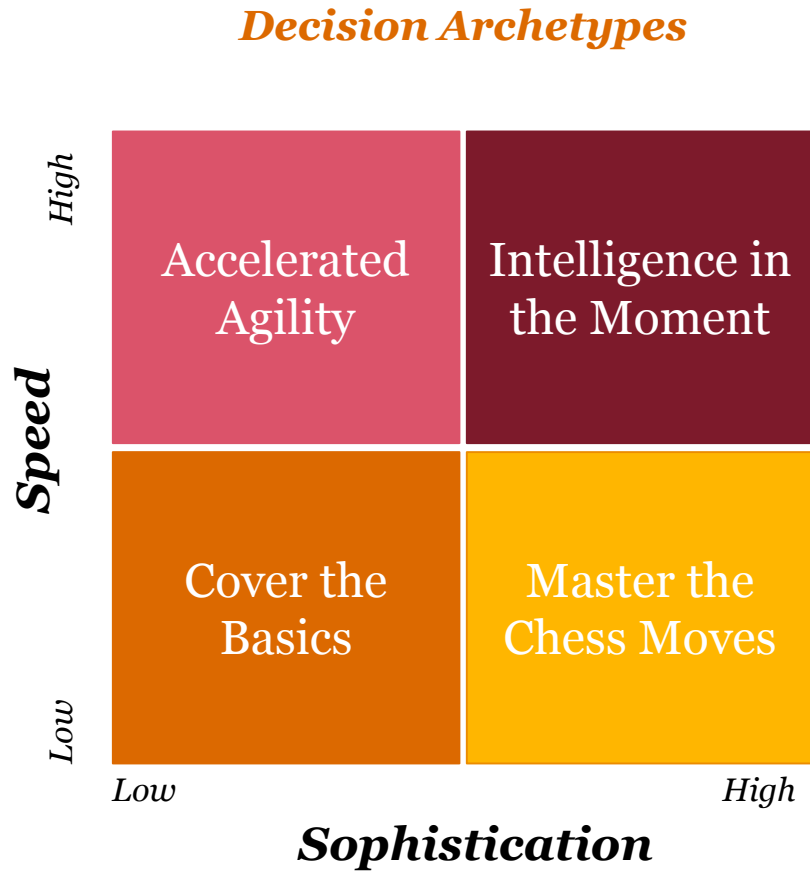
## *What we have learned from the survey*

- More and more organizations are taking a ***data-driven approach*** to making strategic decisions. ***Are you?***
- Executives have great ambition to increase ***decision speed and sophistication***.
- Organizations face ***many limitations*** in their decision making, however data and the ability to analyze data are the least of their concerns.
- A large portion of German companies already uses ***advanced analytics***, but still relies slightly more on ***human judgement*** for making strategic decisions.
- Machines don't replace human judgment, but the ***right mix of mind and machine*** can reduce the impact of human bias, yield more accurate answers and ***de-risk the decision*** - even for complex problems.



# A way to think about applying analytics for your big decisions

For each type of decision, what do you need?



**Accelerated Agility**

- Speedy decisions trump analysis / consensus
- Descriptive reporting with internal data
- Rapid analyse-decide-act feedback loop

**Intelligence in the Moment**

- Data & intuition drive decisions
- Hindsight & foresight with all available data
- Advanced analytics with feedback loop

**Master the Chess Moves**

- Data-driven decisions trump intuition
- Hindsight & foresight with all available data
- Slow consensus driven & analytic decisions

**Cover the Basics**

- Intuition based decisions – little analysis
- Descriptive reporting with internal data
- Low frequency data and model refresh

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***Thank you.***

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