



# SHIELD Bank – Avenger Initiative

Are you ready for the disruption?

EY Case Competition 2019



The better the question. The better the answer.  
The better the world works.

# Meet the Team:

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Data & Financial analysis models



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Digital Innovation

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EY Consultant

Operations Analyst

Operation management & Risk  
Analyst

# Agenda

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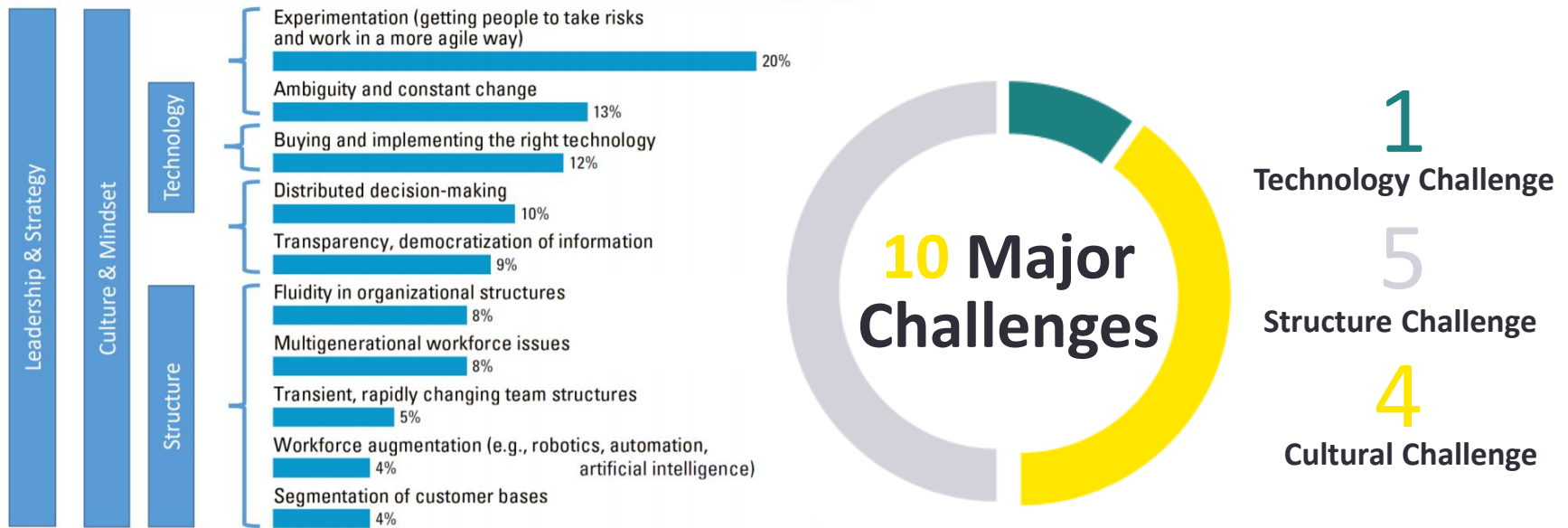
- 1 Context
- 2 Recommended Strategy
- 3 Timeline
- 4 Finance
- 5 Risk Mitigation & Analysis
- 6 Conclusion

# Digitalization is inevitable across all industries, but it needs the right strategy, tools, timing and the digital mindset

## 1 Context



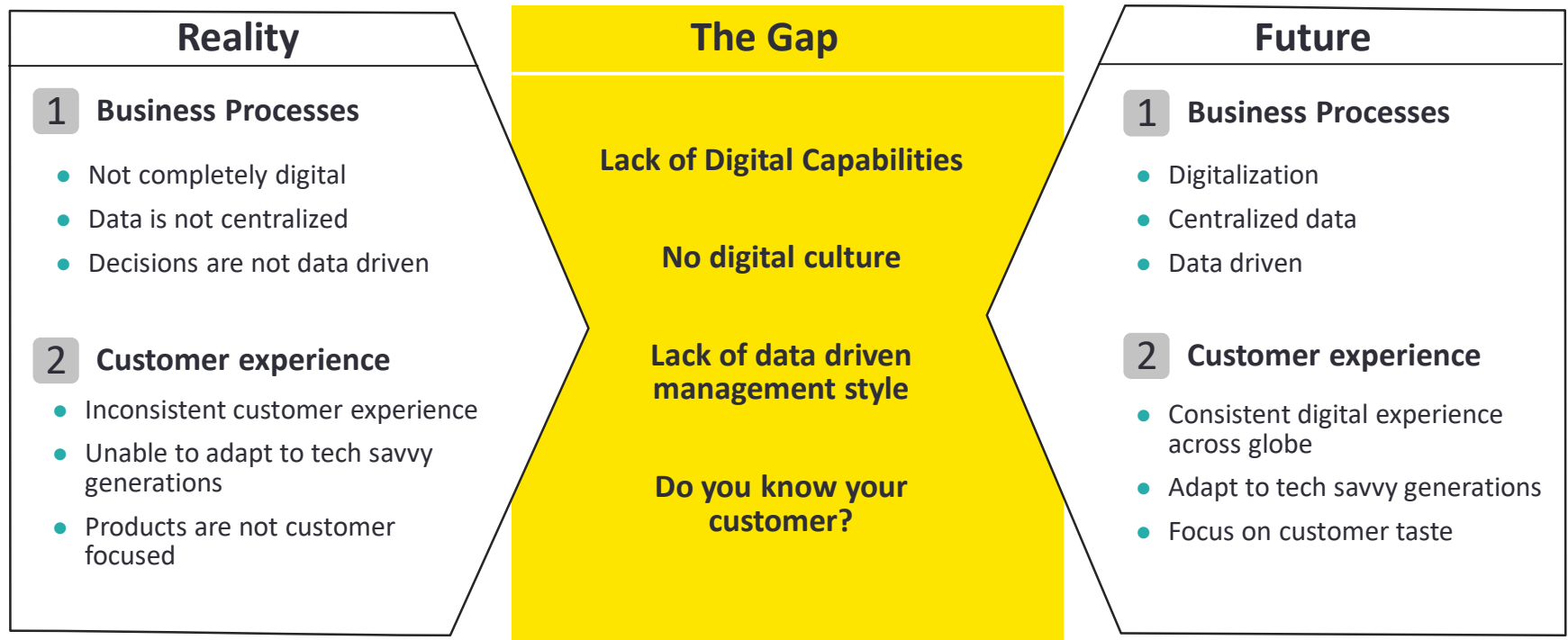
## What are the challenges?



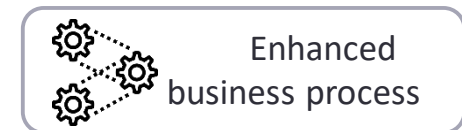
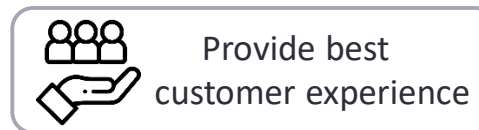
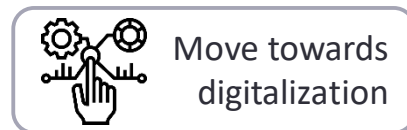
Source: Kelley School of Business

# The traditional business model is threatened by disruptive dynamics – Systematic diagnosis of SHIELD

## 1 Context



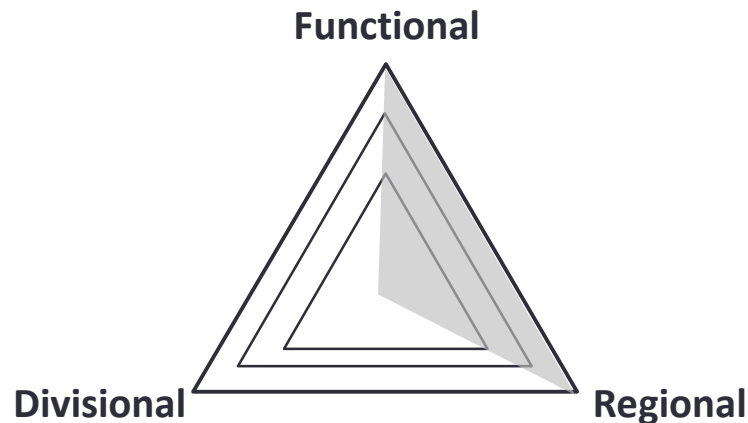
## Where do you want to be?



# We suggest a two-step approach to successfully implement the Avenger's Initiative

## 2 Recommended Strategy

### Step 1: Define your leadership capabilities



**Regional:** Arrangement of team by geographical divisions

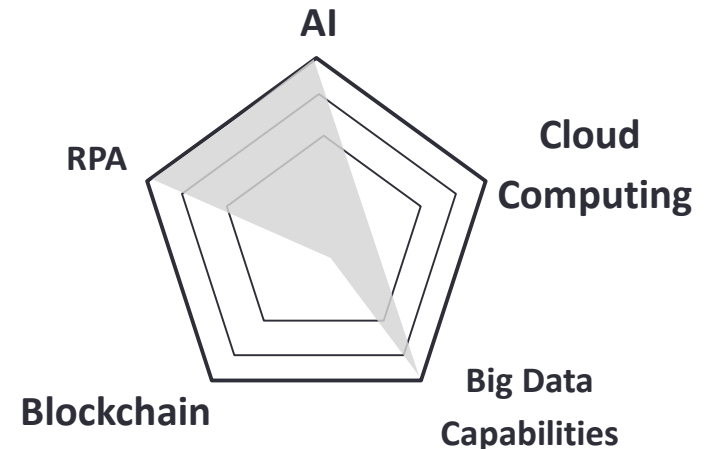
**Divisional:** Arrangement of team by products or projects

**Functional:** Arrangement of team by similar tasks

#### Hybrid of Regional and Functional

In this strategy, the core business functions (HR, Marketing, Legal, Finance, Risk Management) are centralized, and the Avengers are decentralized by its regions. This allows operational consistency across the organization and variation to be customer centric regionally.

### Step 2: Select digital capabilities



**AI:** Intelligence demonstrated by machines for cognitive functions

**Cloud Computing:** Data computing powers on cloud server

**Big Data Capabilities:** Data processing with advanced analytics

**Blockchain:** Decentralized digital database containing information

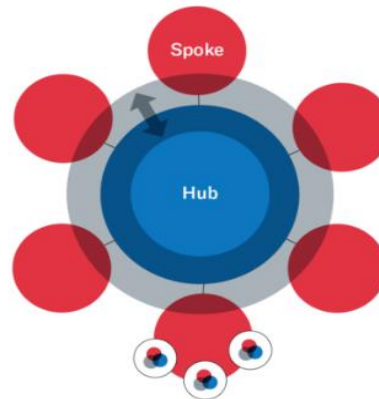
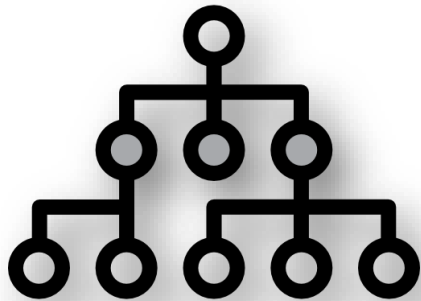
**RPA:** Process automation based on metaphorical software robots

#### IA (Intelligent Automation)

This strategy helps improve customer insights using predictive analytics, automate repetitive processes using RPA, utilize AI to leverage data collected over 83 countries.

# The Hybrid structure – Combination of Divisional and Functional

## 3 Organization Structure Change



From: "Building the AI-Powered Organization,"  
by Tim Fountaine, Brian McCarthy, and Tamim Saleh,  
July–August 2019  
HBR

### GOVERNING COALITION

A team of business, IT, and analytics leaders that share accountability for the AI transformation

#### Hub

A central group headed by a C-level analytics executive who aligns strategy

#### Responsibilities

- Talent recruitment and training strategy
- Performance management
- Partnerships with providers of data and AI services and software
- AI standards, processes, policies

#### Gray area

Work that could be owned by the hub or spokes or shared with IT

#### Responsibilities

- Project direction, delivery, change management
- Data architecture, data strategy, code development
- User experience
- IT infrastructure
- Organizational capability assessment, strategy, funding

#### Spoke

A business unit, function, or geography, which assigns a manager to be the AI product owner and a business analyst to assist him or her

#### Responsibilities

- Oversight of execution teams
- Solution adoption
- Performance tracking

#### Execution teams

Assembled from the hub, spoke, and gray area for the duration of the project

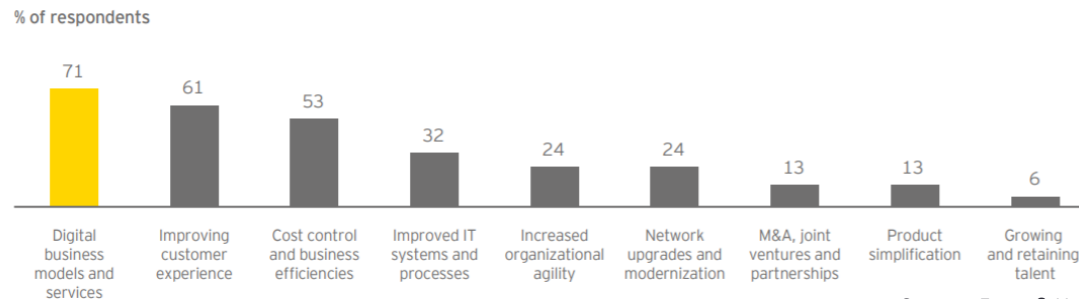
#### Key roles

- Product owner
- Analytics translator
- Data scientist
- Data engineer
- Data architect
- UI designer
- Visualization specialist
- Business analyst

Source: Harvard Business Review

Figure 11: Operator strategic priorities over the next three years

What are your most important strategic priorities over the next three years? (top three responses)



Source: Ernst & Young

>50%

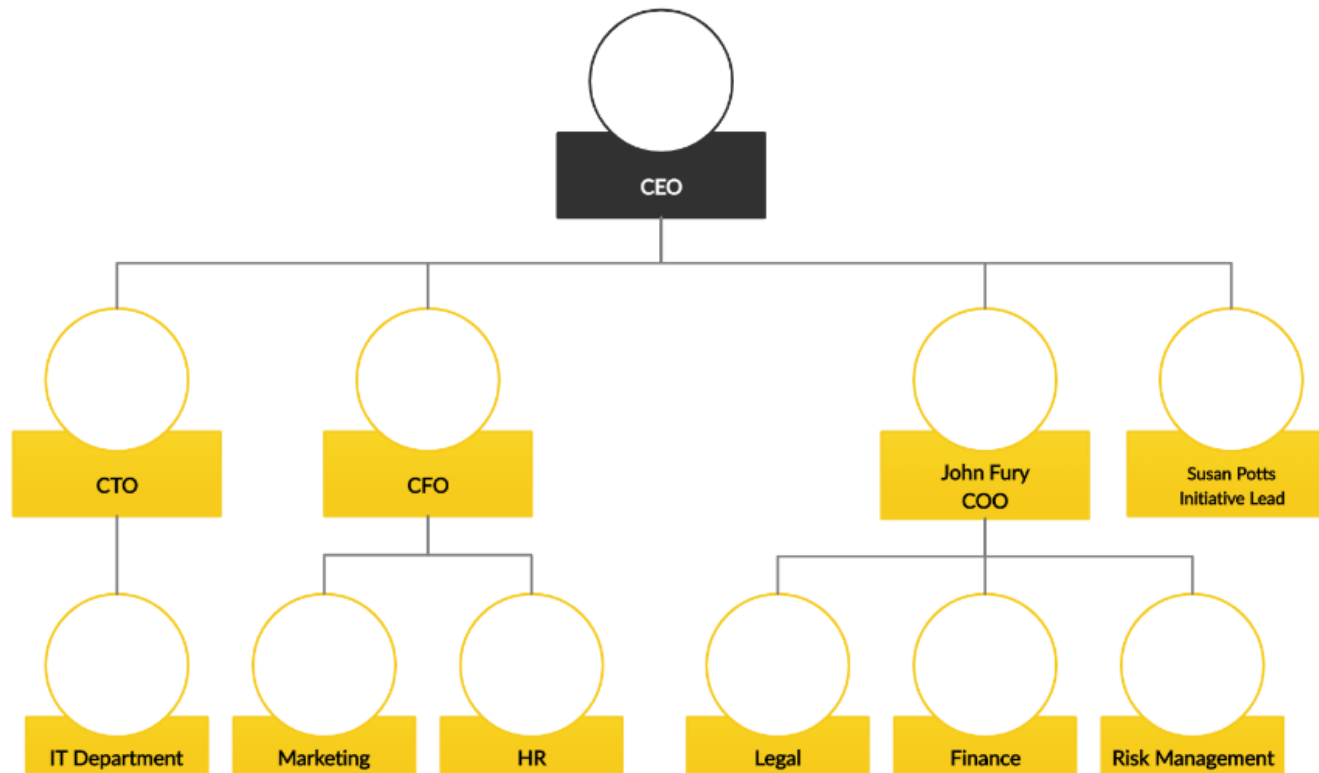
respondents answered:

- 1) Digital business model and Services
- 2) Improving customer experience
- 3) Cost control and business efficiencies

# We see 2 major changes to the organizational structure of Shield – Hybrid structure of functional and regional business lines

## 3 Organization Structure Change

### Centralize core functions

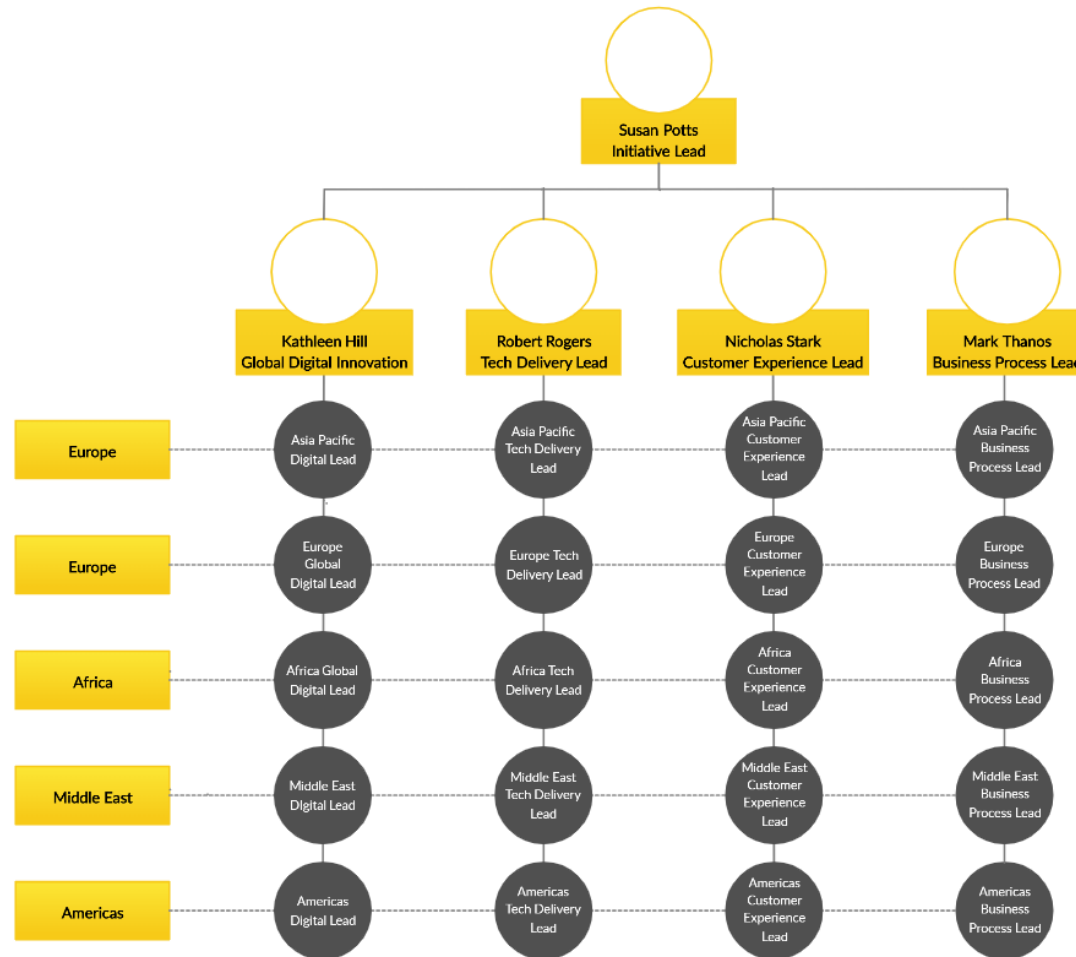




# We see 2 major changes to the organizational structure of Shield – Hybrid structure of functional and regional business lines

## 3 Organization Structure Change

### Make services customized to the customers



# Using *Intelligent Automation* as a digital enabler, SHIELD can impact “People + Process” in its journey towards digital transformation

## 4 Digitalization

### Customer Experience

*“Your customers are trying to text you something.  
Are you listening?”*

#### Use case: Chat Bot Erica

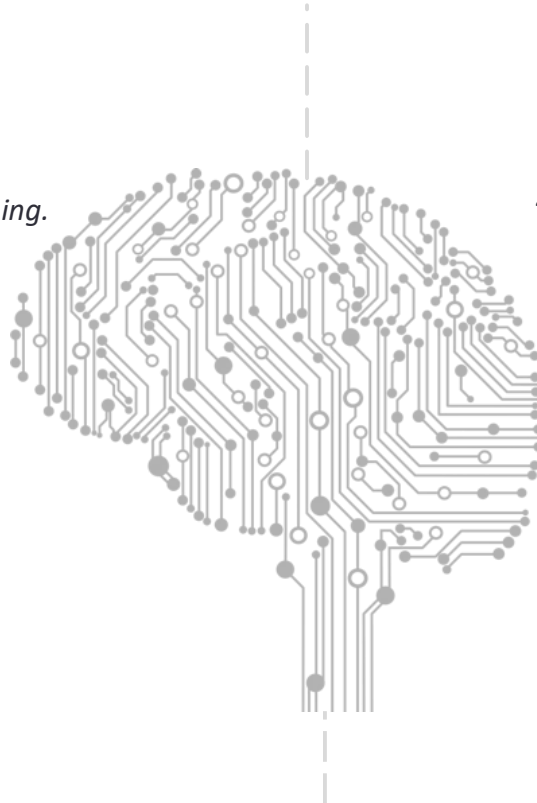
- Bank of America could target 1 million users in 3 months
- Mimics conversations with human users
- Integrates with web and mobile banking
- Gives people personalized banking experience
- Connects with customer service agents’ consoles in call centers

### Business Process

*“Combining the power of human and machine”*

#### Use case: Automated reports

- Automated reports for multiple countries and collating into a single summary
- Automate highly repetitive processes that a person would typically perform
- Reduces time spent in generating reports manually across 83 countries
- Makes reporting consistent across regions



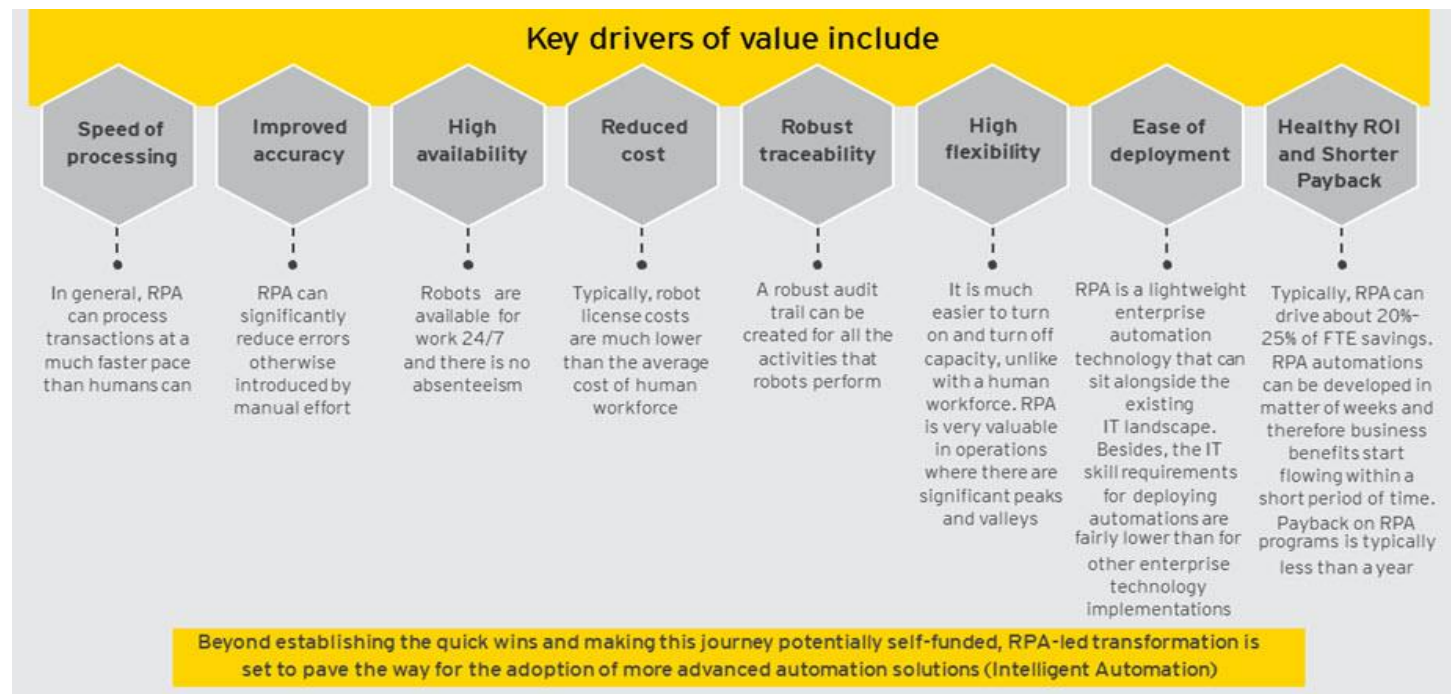
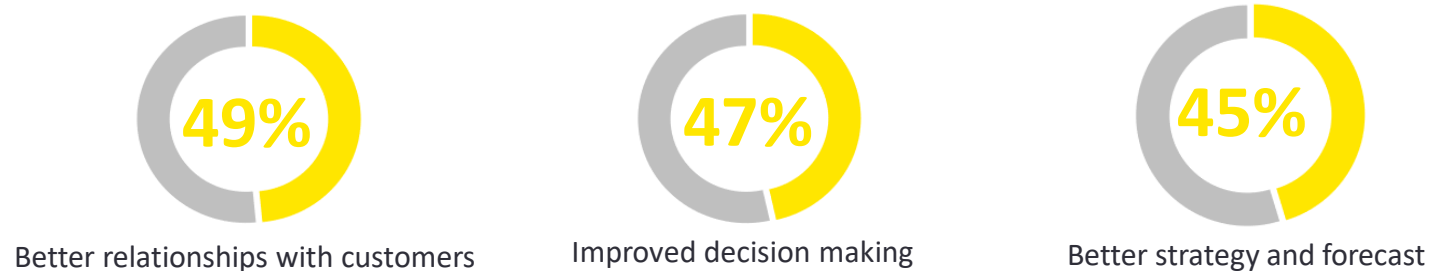
### Digital Compliance

- Supervision (for instance, TRIM and SREP)
- Systemic risk (such as stress tests and Basel III)
- Data protection (like GDPR)
- Customer protection (for instance, PSD II)

# Key business values that SHIELD can derive from this strategy

## 4 Digitalization

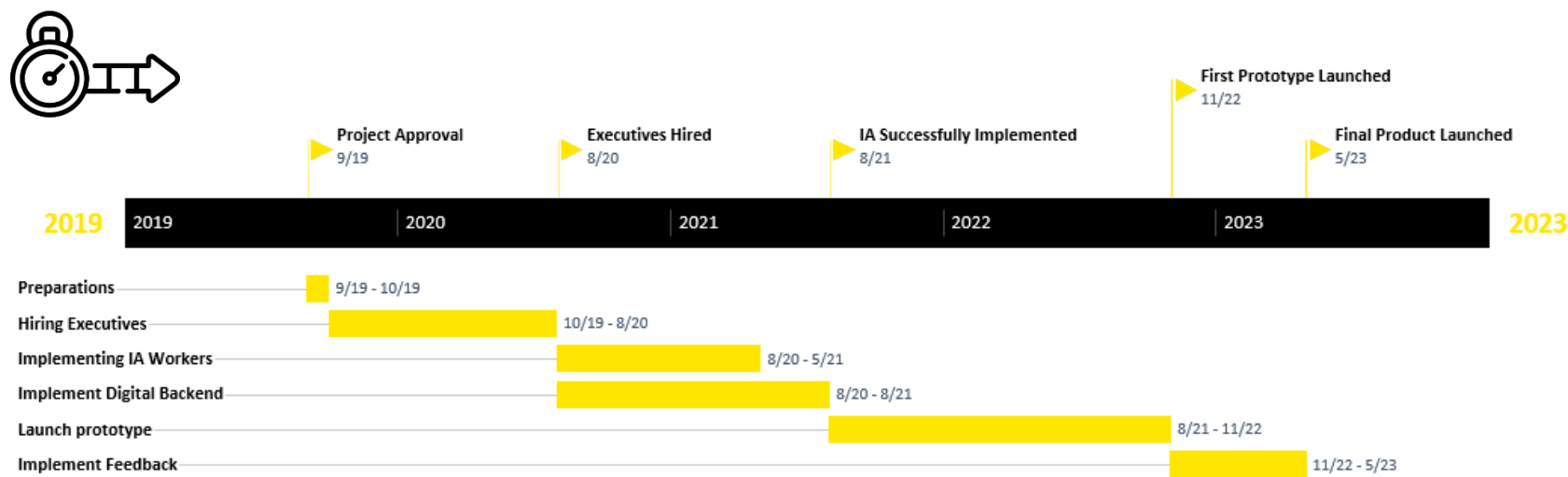
According to surveys conducted by EY on the impact of digital banking:



Source: Ernst & Young

# 5 year implementation plan for the Avenger Initiative

## 5 Timeline



# Cost Analysis of the digitalization strategy

## 6 Budgeting



**Information Technology Expenses**

**\$1.35 Billion**

**Base EY Consulting Fee**

**\$50 Million**

**Director Salaries**

**\$47.5 Million**

**Digital Workers Cost & Implementation**

**\$30 Million**

**Agile/Scrum Training Costs**

**\$26 Million**

**Director Search Firm**

**\$2 Million**

**EY Consultant Salaries**

**\$964,000**

**Grand Total**

**\$1.5 Billion**

# Identified risks and strategies to mitigate them

## 7 Risk & Mitigation

	CONSEQUENCE			
	MINOR  LITTLE TO NO EFFECT ON EVENT	MODERATE  EFFECTS ARE FELT, BUT NOT CRITICAL TO OUTCOME	MAJOR  SERIOUS IMPACT TO THE COURSE OF ACTION AND OUTCOME	EXTREME  COULD RESULT IN DISASTER
LIKELIHOOD				
IMPROBABLE  RISK IS UNLIKELY TO OCCUR	LOW  --	MEDIUM  --	MEDIUM  --	HIGH  --
POSSIBLE  RISK WILL LIKELY OCCUR	LOW  -- GLOBAL ECONOMIC UNCERTAINTY --	MEDIUM  --	HIGH  -- DATA CHALLENGES --	EXTREME  -- PRIVACY --
PROBABLE  RISK WILL OCCUR	MEDIUM  --	HIGH  -- MAKING CUSTOMER JOURNEY DIGITAL --	EXTREME  -- CYBER --	EXTREME  -- DATA LEAKAGE --

## Risk Mitigation Strategies

### Data Leakage:

- Periodically monitor, review and update the digital risk framework

### Cyber:

- Leveraging of RPA for Cybersecurity & Risk management

### Privacy:

- Having an effective authentication & authorization mechanism

### Data challenges:

- Adopting data models that make data consistent across all digital platforms

### Making the customer journey completely digital:

- Better User interfaces/front end
- Consistent digital experience empowered by the IA backend.
- Predictive analysis to get a 360-degree insight of the customers to personalize each customer's loyalty mechanisms.

### Global economy uncertainty

- Decentralizing services according to regions
- For instance, the financial unrest in Hong Kong will not affect the order of operations in other regions where SHIELD operates.

# SHIELD's journey to a successful digital transformation...

## 8 Conclusion

### ► Change management

Articulate the change required, activate leadership characteristics and engage employees

### ► Road to digital

Build digital capabilities

### ► Align to digital culture

Align the organization to embed the new culture



# Appendix

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**SCQ**

**Technology  
Analysis**

**Use Case**

**Proof of  
Concept**

**Change  
Management  
Analysis**

**Financials  
breakdown**



# The situation, complication and the question

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## ► Situation

Headquartered in Hong Kong, SHIELD Bank is one of the largest banking and financial services organizations in the world. Their international network comprises over 10,000 offices in 83 countries and territories in Europe, the Asia-Pacific region, the Americas, the Middle East and Africa.

SHEILD has started Avengers initiative to bring about a digital transformation.

## ► Complication

Considering the diversity of its businesses across different geographies, the leadership team for the Avengers initiative wants to have the same experience, processes and technology across the globe.

## ► Question

How can SHEILD produce an execution approach to deliver a transformation of this magnitude successfully?

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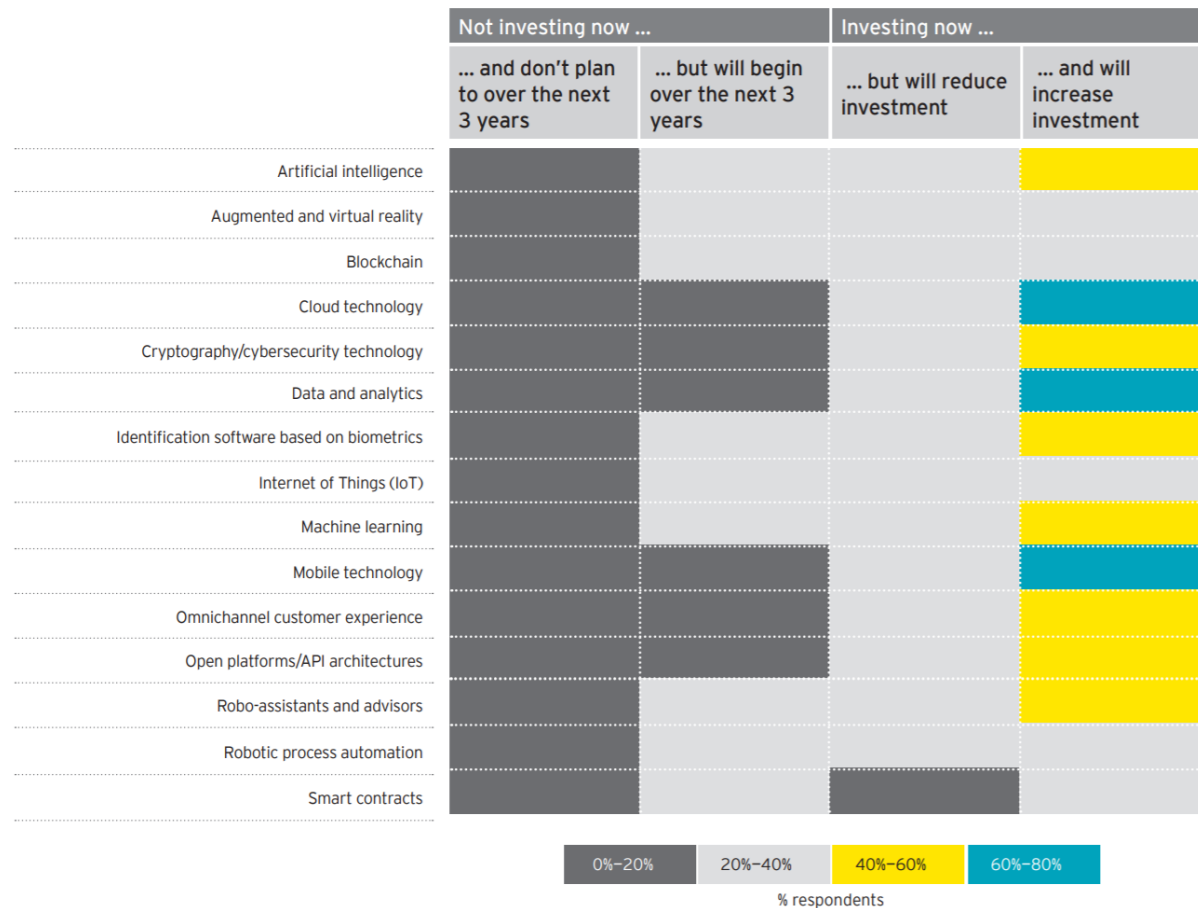
# Technology Strategies accessed

Artificial intelligence (AI)		Robotic Process Automation (RPA)		Cloud Technology		Blockchain	
Pros:	Cons:	Pros:	Cons:	Pros:	Cons:	Pros:	Cons:
Predictive & cognitive analysis helps to focus marketing and sales efforts based on geographies	Causes unemployment due to the reduction of human input in the business process (mass layoffs)	Proof of concepts exist on making processes efficient and improving customer experience	Not very smart and must be told what to do	Vendor availability	Lack of information security and possibilities of data leakage	High security	Security is not at the level for financial institutions to trust
Executes mundane human tasks and also makes faster actions and decisions than a human can	Longer time to implement (3-5 years)	A low cost technology that rests on all of the current business applications (No new coding)	Cannot adapt and learn to various conflicts in different locations	Reduction of the risk of IT as well as an improvement in the agility of IT	Lack of technical standards	Faster process	Lack of enterprise features in their identity management system
Can process big data fast which provides better insights and understanding of the customer		Is very efficient by saving both cost and time. Does so because these robots do not need breaks (24/7, 365)	Causes unemployment due to the reduction of human input in the business process (mass layoffs)	Enhancement of data processing capability		Record keeping of transactions	Hard to push for upgrades to the system
Eliminates human error when conducting an analysis		Fast implementation and is easy to update		Easier to update		International transfers	Not standardized

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# An EY survey on various digital enablers that can be used for digital transformation in the banking sector

**Q:** In which of the following technologies are you investing now and in which do you plan to begin, reduce, or increase investment in over the next three years?

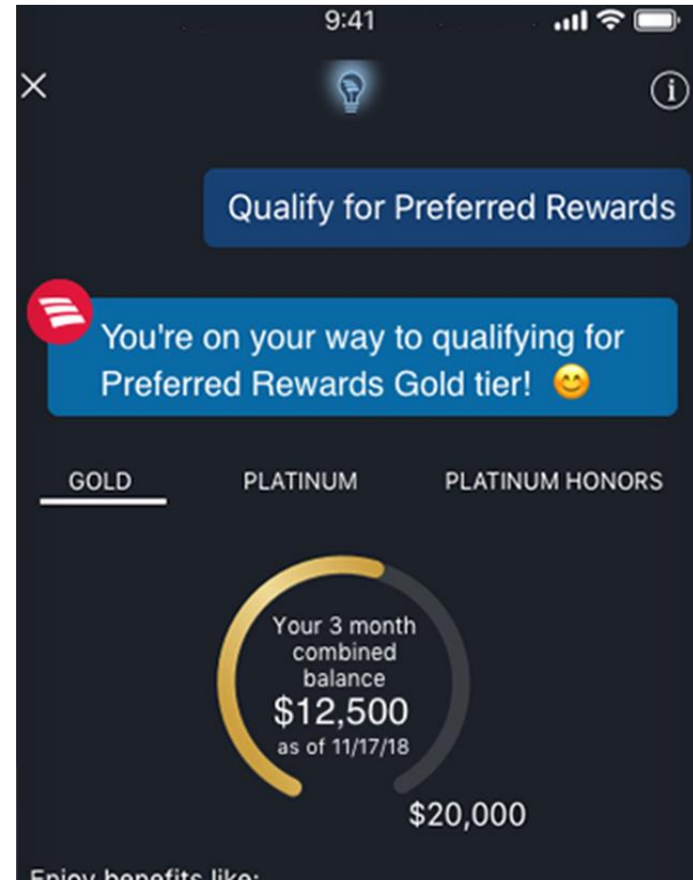


Source: Global banking outlook survey 2018

Source: Ernst & Young

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# Use case: Chatbot Erica (Bank of America)



Source: Bank of America

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# Proof of Concept: Streamlining anti-money laundering processes through automation with AI

## Challenges faced by banks



Large number of data alerts



Significant ageing and backlog for alert management



Delays in regulatory reporting



Lack of standardization and streamlined workflows



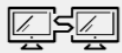
Legacy rule-based platforms resulting in false alerts



Cost implications due to regulatory violations

## Regulatory compliant and efficient AML processes

Improved risk coverage



Increase in accurate suspicious alerts detection



Risk and operational management reporting

Reduced operational expenses



Reduction in false alerts

Increased operational efficiencies



AI-driven prioritization

## Case study

### Context:

A multinational bank was looking to automate their anti-money laundering (AML) capabilities in order to reduce operational costs, decrease false positives, and reduce the amount of time taken per alert.

### Recommended configuration:

- Artificial intelligence and machine learning platform supported by a seamless integration with the existing systems
- Self-learning and unsupervised anomaly detection abilities
- Ability to segregate existing alerts into pre-defined bands, hence, rendering alert disposition process to be more scientific and efficient

### Client impact:

- Reduction of false positives and users are able to focus on high-priority areas owing to the accurate segregation of alerts
- Identification of true actionable alerts w.r.t anti-money laundering and KYC fraud
- Improved regulatory compliance and consequentially, a reduction in penalties
- 360 degree view of customer behavior and historical alert history
- Reduced disruptions to existing AML processes

Source: Ernst & Young

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# Proof of Concept: Speech analytics for increased customer satisfaction and sales

## Customer interaction challenges

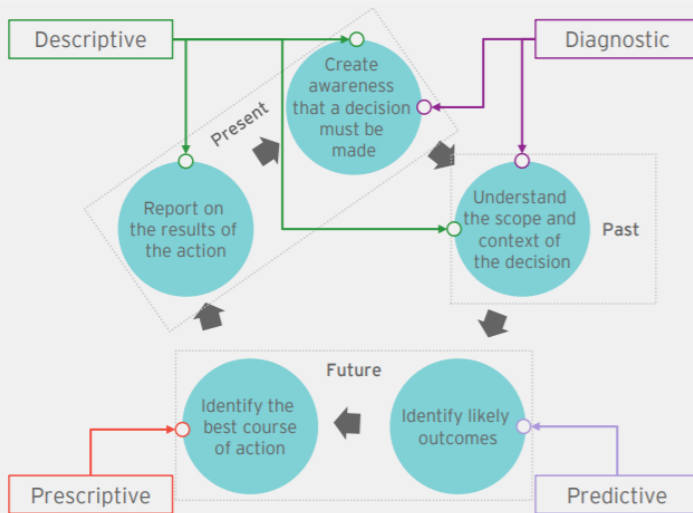
Minimizing customers' waiting time between calls

Ensuring compliance to regulations

Creating more upsell and cross-sell opportunities

Creating personalized customer experiences

## Business challenges solution methodology



## Benefits of speech analytics

Train call agents

Improve compliance

Increase Up-Sell and Cross-Sell

Cut monitoring costs

## Case study

### Context:

A large Insurance provider experiences large volume of calls daily in its call center. Large volume of calls make data analysis through manual sampling and listening virtually impossible.

The client wanted to monitor key parameters such as sales conversion, agent compliance and customer satisfaction in this context.

### Proposed solution:

- ▶ A trusted speech analytics product was proposed to gain insights in three main areas: sales conversion, agent compliance and customer satisfaction.
- ▶ Analysis was performed on 100% of the calls to identify key trends.
- ▶ Real-time notifications were provided to those agents who missed reading out the disclaimer statements.
- ▶ Recommendations in terms of ideal sales pitch was also provided to the agents to increase sales conversion.

### Client impact:

- ▶ Eighty-two percent increase in customer satisfaction (CSAT) score level
- ▶ Twenty-six percent increase in agent compliance
- ▶ Fourteen percent increase in sales conversion
- ▶ Twelve percent first call resolution (FCR)

Source: Ernst & Young

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# Proof of Concept: Virtual and intelligent customer assistant in a box

Challenges faced from providing virtual assistance		
Expensive care costs for the virtual assistant	Unable to provide the service around the clock	
Limited number of languages available	Inaccurate speech recognition	
Extended call handling duration	Poor call volume management	
Improve services through software services		
Artificial Intelligence (AI) trained and programmed to recommend predictions	Natural language understanding (NLU) to comprehend up to more than 80 languages	Automated speech recognition (ASR) manages the call and function similar to a real agent
Solution benefits		
1 Provide efficient and fast outcomes	2 Ensure first call resolution	
3 Reduce customer care costs	4 Manage call volumes	

Case study
<p><b>Context:</b></p> <p>An airline company wanted to extend their customer services online by providing virtual assistance to customers online so as to increase customer engagement that could predict and answer any customer queries.</p> <p><b>Recommended configuration:</b></p> <ul style="list-style-type: none"><li>▶ An online virtual assistant capable of answering customer queries swiftly was. Services for the customer can be improved through the use of AI, which is used to predict and analyze customer queries that are raised, thus answering them as accurately as possible.</li><li>▶ Additionally, the virtual assistant can provide automated customer assistance through the use of NLU and ASR to function as a "real agent." The virtual assistant is able to answer any customer who speaks different languages.</li></ul>
<p><b>Client impact:</b></p> <ul style="list-style-type: none"><li>▶ Reduced cost on customer care with the help of automated virtual assistance.</li><li>▶ Efficiently resolves a customer queries.</li><li>▶ Cater to a wider range of customers who speak different languages.</li><li>▶ Provides a better customer experience.</li></ul>

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Source: Ernst & Young

# Centralized vs Decentralized

Centralization		Decentralization		Hybrid Plan	
Pros:	Cons:	Pros:	Cons:	Centralize:	Decentralize:
1) More control of the Business since the commands come from one set of leaders	1) Infelxability because it cannot be specific to demographic needs	1) Market specific pricing and products	1) Inconsistency	Organizational, Finance, IT, Legal, HR and Branding departments	Services, Decision Making, and Regional Heads
2) Consistent customer experiences	2) Longer time to implement due to training the same standards	2) Freedom to the customers because it offers products that are market specific	2) Expensive to change product in order to relect different markets	Lower risk becuae it reduces complexity	Better customer service due to the operational functions
3) Higher net profit due to lower expenses (operational)	3) Difficult to collect information from specific markets which leads to harder decsion making worldwide	3) Give authority to "experts" who understand their regional area's busniess and can make faster decsions which would be unique for each region		Lowers cost because of the strategic financial functions	
	4) Worse customer service (not demographic specific)	4) Promotes innovation that can be shared compay-wide		<b>Centralized:</b> Failed with Rainbow Project	
		5) Less risk because if one region fails, their model will not affect the other regions		<b>Decentralized:</b> Failed when customer moved from Japan to Canada	

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# Financials breakdown

Team Member	Quantity (#):	Compensation (\$):	Weekly Time (%)	Cost (\$):
<b>Partner:</b> Person who sold the case and brought the project together	1	\$700,000	33%	\$231,000
<b>Principal:</b> The day-to-day leads who make sure the project runs smoothly	2	\$400,000	100%	\$400,000
<b>Associates:</b> The main workers on the case who are responsible for leading the work streams for the case	4	\$225,000	100%	\$225,000
<b>Analyst:</b> Helps the associates by collecting and analyzing data	4	\$100,000	100%	\$100,000
<b>Support Staff:</b> Responsible for research tasks, pulling insights from previous case work, and slide making	4	\$80,000	10%	\$8,000
<b>Personnel Salaries:</b>				<b>\$964,000</b>

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# Financials breakdown

Region:	Position:				
		Digital Innovation Lead:	Technology Delivery Lead:	Customer Experience Lead:	Business Process Lead:
	Asia Pacific:	\$450,000	\$550,000	\$400,000	\$500,000
	Europe:	\$450,000	\$550,000	\$400,000	\$500,000
	Africa:	\$450,000	\$550,000	\$400,000	\$500,000
	Middle-East:	\$450,000	\$550,000	\$400,000	\$500,000
	Americas:	\$450,000	\$550,000	\$400,000	\$500,000
	Total Salaries Per Year:				\$9,500,000

Item:	Quantity (\$):	Cost (\$):	Total (\$):
Director Search Firm	20	100,000	\$2,000,000
Grand Total:			\$2,000,000

Certification Type:	Cost (\$ per person):	Quantity (#):	Total (\$):
Scrum/Agile Overview Course	\$1,000	10,000	\$10,000,000
Certified Scrum Master (CSM)	\$1,600	5,000	\$8,000,000
Certified Scrum Product Owner (CSPO)	\$1,600	5,000	\$8,000,000
Grand Total:			\$26,000,000

EY Consulting Fee:	\$50,000,000
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Cost per Worker (\$):	Quantity (#):	Years (#):	Total (\$):
\$15,000	400	5	\$30,000,000
Grand Total:			\$30,000,000

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