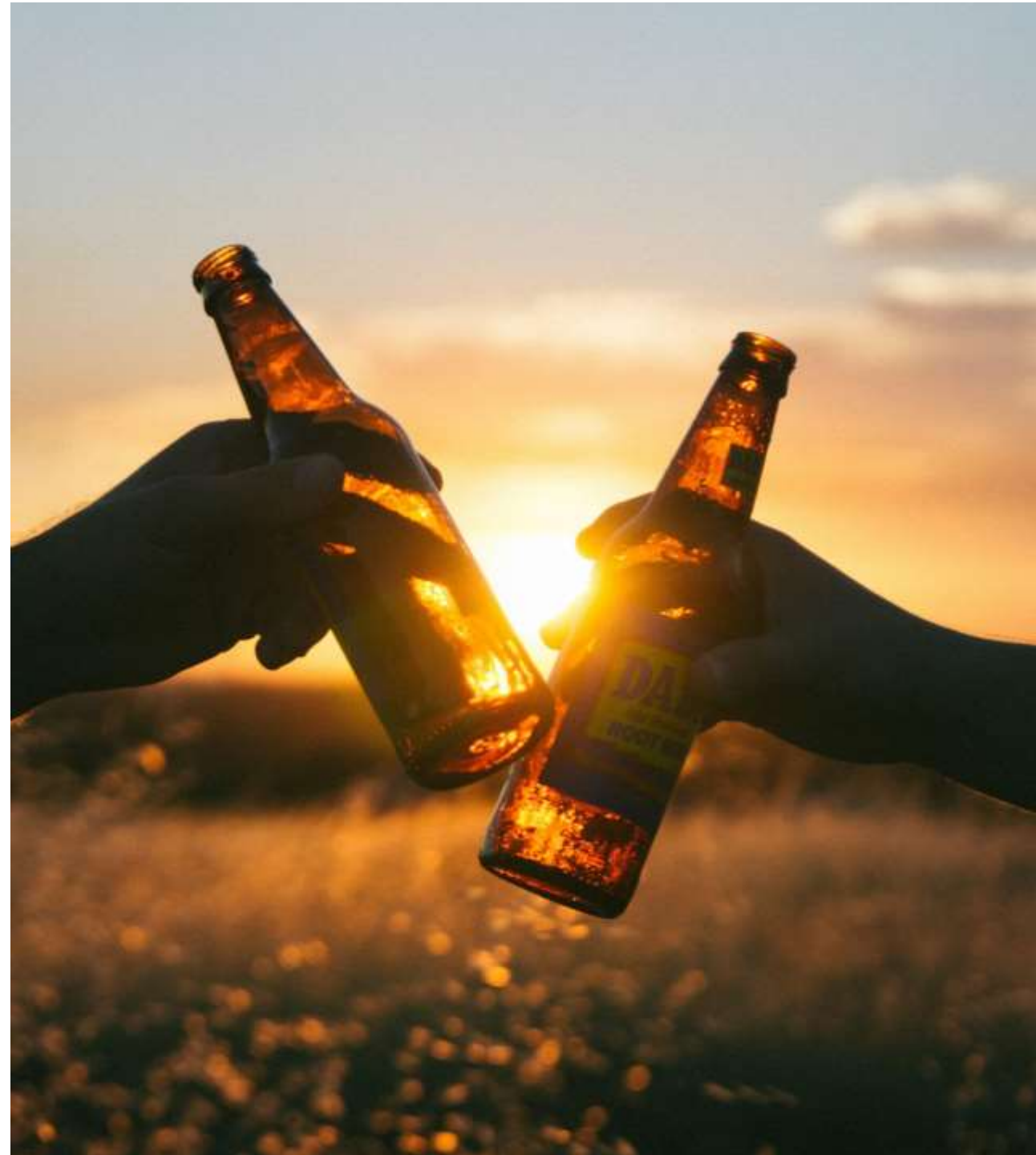


굴뚝 산업 디지털 트랜스 포메이션 프로젝트: 현실, 도전 그리고 AI의 역할

ABInBev

AI Summit 2021 Seoul
9th Dec. 2021



SPEAKER



임재현 Jae Hyoun Im

Head of Data | 이사
AB InBev Korea



유주홍 Joo Hong Yoo

Principal I 상무
Kearney Korea



SKKU, Adjunct Professor

- Natural Language Processing, Text Mining
- Machine Learning, Data Mining



POSCO Research Institute, Principal Researcher

- AI/ML driven Process Innovation
- NLP, Text Mining



Cyworld, Data Scientist

- Social Network Data Analysis
- Data-driven Corporate & Marketing Strategy



Rimac(리막), Chief Business Officer 부사장

- 자율주행 모빌리티 사업부문 총괄
- 사업전략, 서비스, IR 등 업무 총괄



현대차, 상품본부 이노베이션 매니지먼트 팀장

- EV, 자율주행, 모빌리티 관련 신사업 개발 주도
- 신규 브랜드 고객경험 및 브랜드 전략 총괄



제일기획, Corporate Development 담당

- 글로벌 성장전략, M&A 등 업무 담당
- IT사, 자동차사, 소비재사 대상 DT 업무 담당

AGENDA

a. ABI Korea: Analytics in Digital Transformation

I. Assessment & Requirements

b. Generalization

I. Purpose - Case : Consumer Centricity

II. People&Org – Readiness Assessment

III. Key Issues & Priorities

Why are we talking about this?

ABI has been doing Digital Transformation and especially Analytics (incl. AI) globally for many years.

To solve similar problems, with lots of duplicated solutions.

8yrs



**What I
have seen**



Solutions are abundant

**Even in a Beer Company
DT and AI is creating value**



Promotions Optimization

Methodology

Main Objective
Maximize the Net Revenue per customer by providing the right discount in the right SKU for the right POC

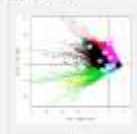
DATA

Historical Net Revenue
Historical Volume
Historical Discounts
Surveys
Demographic Info

Sources
Vertica
SAP
Revenue Team

CLUSTERING

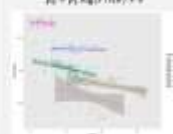
With significant variables all POCs are divided in different groups with similar characteristics



ELASTICITY MODEL

A Log-Log model is used to estimate elasticity of each segment of SKUs

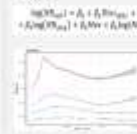
Model:
 $\log(Risk) = \beta_0 + \beta_1 \log(Price) + \epsilon$



NET REVENUE OPTIMIZATION

A model is used to find the discounts that maximizes NP based on the historical sales info

Model:
 $\log(M_{t+1}) = \beta_0 + \beta_1 \log(M_t) + \beta_2 \log(Price_t) + \beta_3 \log(Price_{t-1}) + \epsilon$



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Promotion Before & After Launch

Before Launch

70%

Average Accuracy of Innovation Propensity

Brand Assumptions

Geographical Strategy

Mirror

Returnable

Buyer

Mainstream

Advocate

Premium

Young People

Size



After Launch

90%

Average Accuracy of Innovation Propensity

Variables available

Propensity Model



Define Targets
Create Task



42

Uplift is calculated based on experimental design theory or A/B testing (Test vs Control groups)

BASELINE	PROMO
1.15 300	1.15 300
1.15 300	1.15 300
TERMS	
g_1 = Test group	g_2 = Control group
$NR_{baseline}$ = Monthly avg business days in baseline	NR_{promo} = First business days
NR_{promo} = Monthly avg net revenue in baseline	NR_{promo} = Sales of net revenue in promo
FORMULAS	
$NR_{baseline} = \frac{NR_{baseline}}{NR_{baseline}}$	$NR_{promo} = (NR_{baseline} - NR_{baseline}) + NR_{baseline}$
$Uplift_{promo} = NR_{promo} - NR_{baseline}$	$Uplift_{promo} = \frac{NR_{promo} - NR_{baseline}}{NR_{baseline}} \times 100$

$$ROI = \frac{Uplift_{promo}}{Cost}$$

$$Benefits = (ROI_{baseline} - ROI_{promo}) \times Budget\ spent\ on\ promos$$

Example: PC 430 - May/21

	TEST	CONTROL
$NR_{baseline}$	420	400
NR_{promo}	776	580
$Diff$		-12
NR_{promo}	408	
$Uplift_{promo}$	176	Budget 6,286 USD
$\%Uplift_{promo}$	28%	ROI 11.4 USD

$$ROI_{RM} = 1.6\ USD$$

$$Benefits_{PC430} = \$1,530\ USD$$

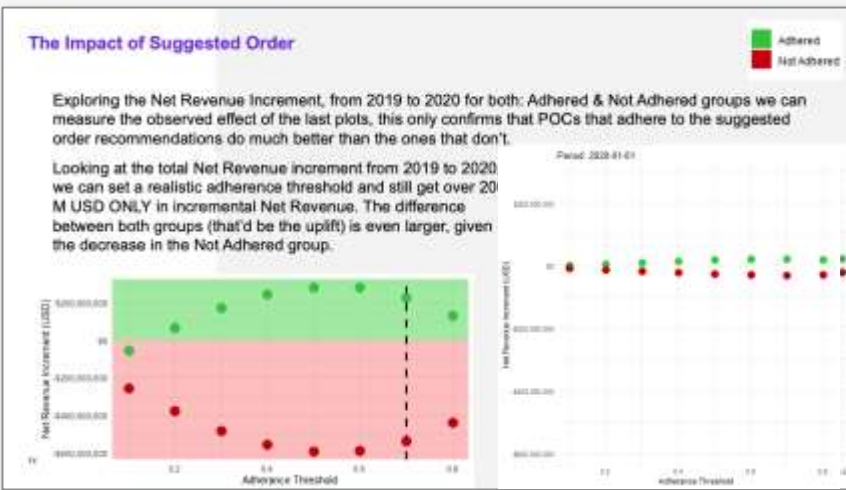
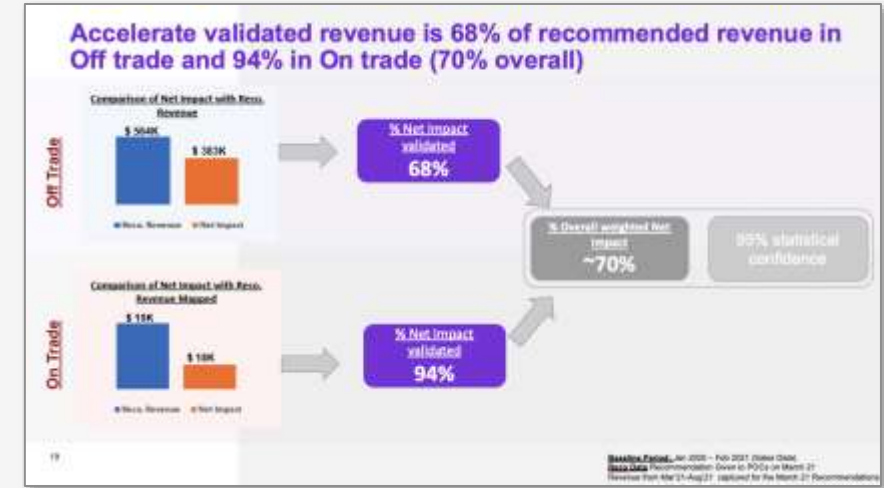
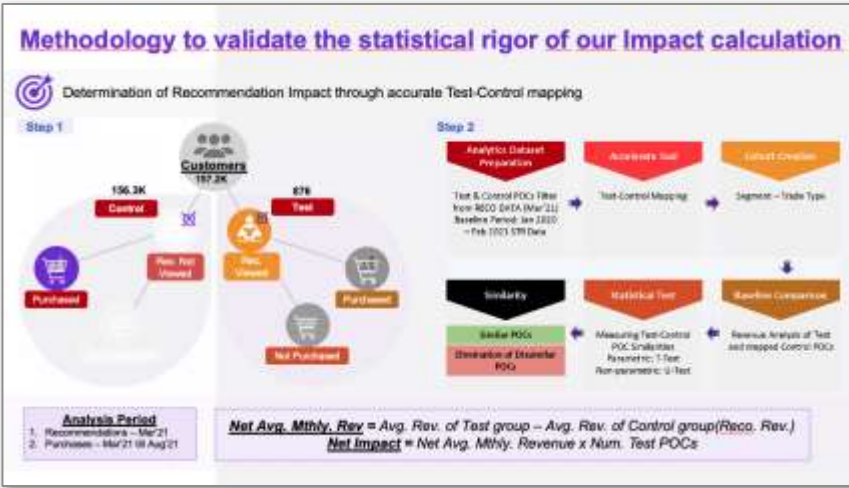
21

Calculate Incremental MACO and Promo discounts



22

Recommendation Engine

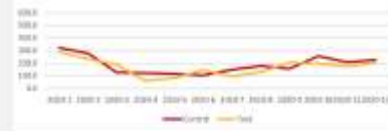


POC Intelligence

Test and Control POC Distribution

Average order size per customer per month

Average Volume per Customer per Month (ML)



Region



Customer Category/Class



Clustering and Benchmarking

Cluster POCs based on Similar Attributes

Segmentation Rules

Geographic Region
Channel
Segment
Sub-Segment



Benchmark POC ROI vs Cluster Performance

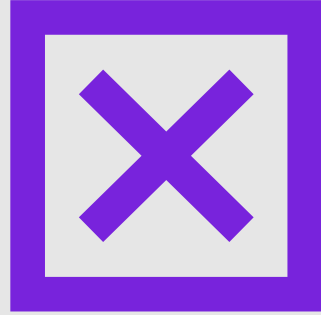
POC ROI Distribution



Analytics Solution at hand

Domains and Use Cases for Analytics						
DOMAINS	Consumer insights and Product Dev.	Forecasting	Supply Chain of the Future	Commercial Excellence & Rev Mgmt.	Digital Route to Market	Digital Commerce
USE CASES	<ol style="list-style-type: none"> 1. Smart Innovation Engine 2. Research (tech, commodity, product, etc) 	<ol style="list-style-type: none"> 1. Demand Planning 2. Order Management 3. Business Cycle Initiatives 	<ol style="list-style-type: none"> 1. Network Optimization 2. Line Scheduling 3. Process Efficiency 4. Predictive maintenance & service 	<ol style="list-style-type: none"> 1. Promo Optimization 2. Resource Allocation 3. Segmentation 4. Optimal Assortment 5. Price, pack and channel mix 6. Trade Merchandising 	<ol style="list-style-type: none"> 1. Portfolio Optimization 2. Loyalty program 3. Optimal Distribution 4. Optimal Execution 5. POC Insights 6. Top Line Protection 	<ol style="list-style-type: none"> 1. Consumer Profiling 2. Segmentation 3. Portfolio Optimization
DOMAINS	Finance	Procurement	Operations	People	Technology Platform	Digital Consumer
USE CASES	<ol style="list-style-type: none"> 1. Credit 2. Risk Management 3. Intelligent budgeting 4. Asset management 5. Revenue assurance 	<ol style="list-style-type: none"> 1. Performance driven sourcing 2. Commodity Cost Forecasting (sourcing) 3. Supplier and contract optimization 4. E-Auction 	<ol style="list-style-type: none"> 1. Smart Collections 2. Payment Leakages 3. Tax Optimizer 4. Payables: 5. Cashflow Initiatives 	<ol style="list-style-type: none"> 1. Recruitment & Workplace analytics 2. Performance 3. Succession Planning 4. Merit 5. Turnover prediction 	<ol style="list-style-type: none"> 1. Data Orchestration 2. Test Ops (A/B testing platform) 3. Hardware 4. Infrastructure 5. App. Licenses 6. Cybersecurity 	<ol style="list-style-type: none"> 1. Marketing Mix ROI 2. Brand Health Analysis 3. Media allocation 4. Consumer Strategy Optimization 5. Digital Campaigns Optimization 6. Sponsorship ROI
13						

**What I
have seen**



Is it working for us?

For prioritization purposes, the capabilities to optimize through D&A were assessed in two dimensions – Value & Feasibility

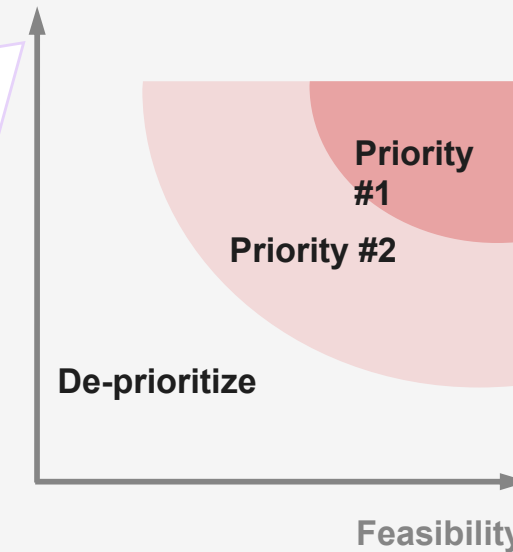
Desirability and Viability assessment

- ① **Size of the Prize:** Incremental EBITDA at run rate, considering material cost (if relevant to capability optimization)
- ② **Strategic (multiplier):** Qualitative assessment of strategic importance of key dimensions:
 - Alignment to company strategic pillars**
Scale (1-10) showing capability optimization contribution to increase market share and portfolio expansion
 - Regional scalability**
Scale (1-10) showing how transferable is the capability optimization to rest of country and other regions

Once a score is given for both dimensions, the “strategic multiplier” is obtained using the following formula: $\text{sum} / \text{average of sums of all capability optimizations}$
- ③ **Score** is the product of the “size of the prize” and “strategic multiplier”

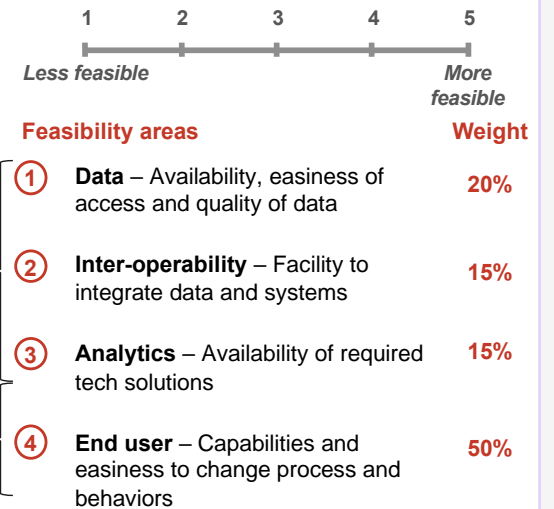
$$\text{①} \otimes \text{②} = \text{③}$$

Desirability and Viability

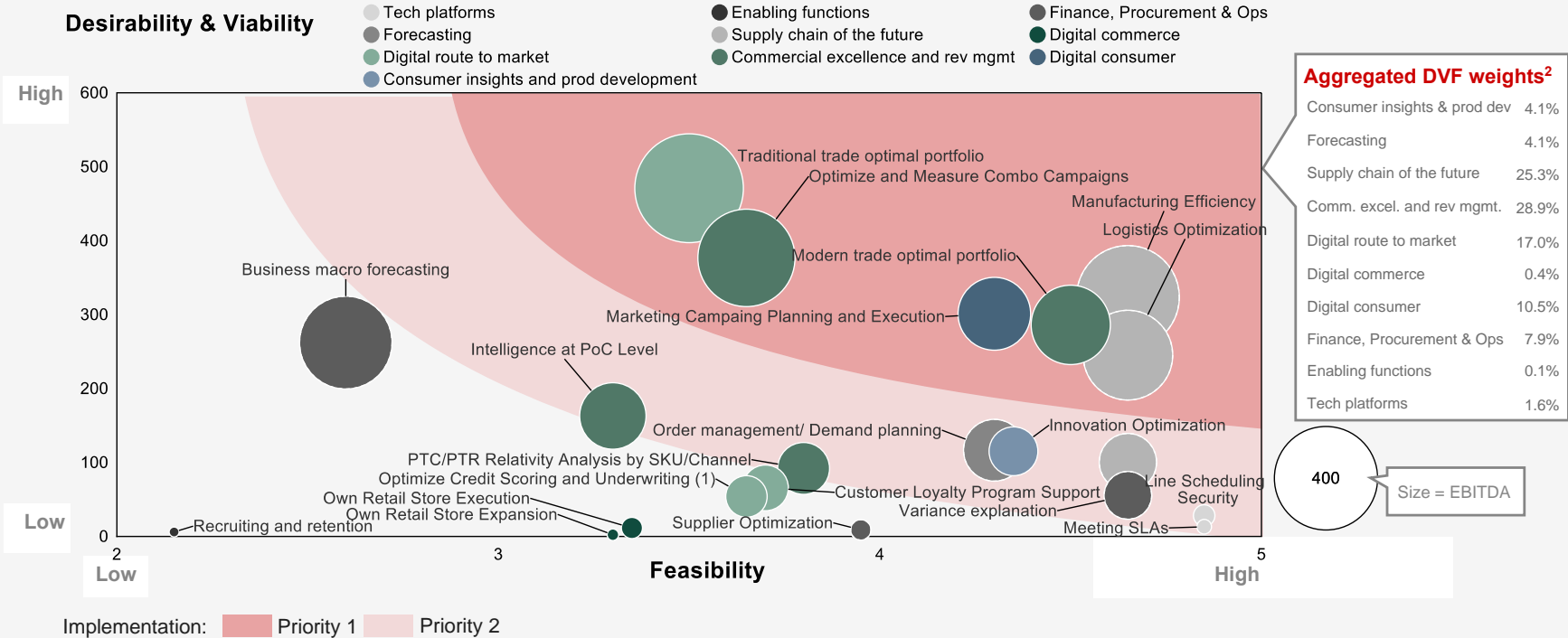


Feasibility assessment

Weighted mean of a 1-5 point scale qualitative assessment made for the following four technical and implementation areas.



Prioritization
Example - How it
should be



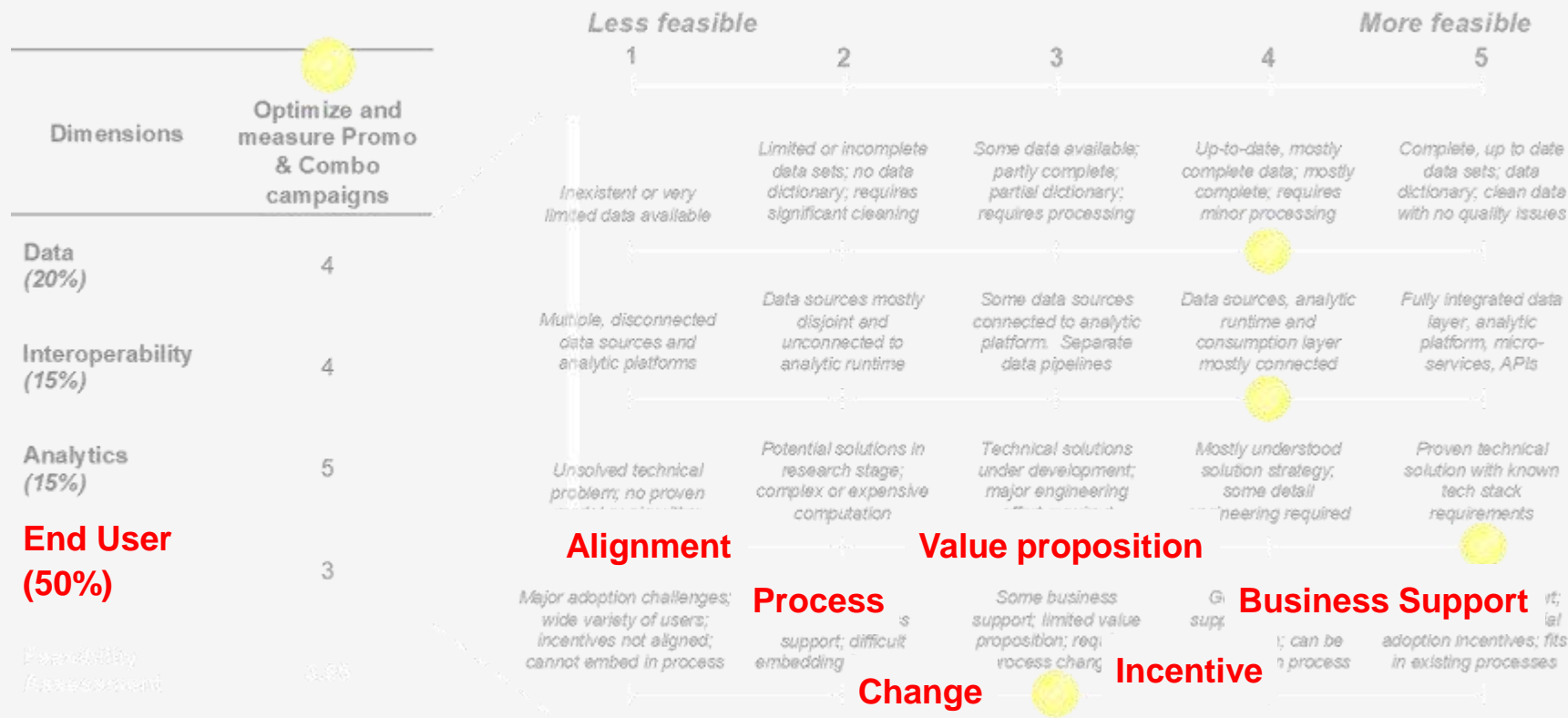
Feasibility Assessment

Most important are the END USER

		Less feasible					More feasible	
		1	2	3	4		5	
Dimensions	Optimize and measure Promo & Combo campaigns							
Data (20%)	4	Inexistent or very limited data available	Limited or incomplete data sets; no data dictionary; requires significant cleaning	Some data available; partly complete; partial dictionary; requires processing	Up-to-date, mostly complete data; mostly complete; requires minor processing		Complete, up to date data sets; data dictionary; clean data with no quality issues	
Interoperability (15%)	4	Multiple, disconnected data sources and analytic platforms	Data sources mostly disjoint and unconnected to analytic runtime	Some data sources connected to analytic platform. Separate data pipelines	Data sources, analytic runtime and consumption layer mostly connected		Fully integrated data layer, analytic platform, micro-services, APIs	
Analytics (15%)	5	Unsolved technical problem; no proven model or algorithm	Potential solutions in research stage; complex or expensive computation	Technical solutions under development; major engineering effort required	Mostly understood solution strategy; some detail engineering required		Proven technical solution with known tech stack requirements	
End User (50%)	3							
Feasibility Assessment	3.65	Major adoption challenges; wide variety of users; incentives not aligned; cannot embed in process	Limited business support; difficult embedding in process	Some business support; limited value proposition; requires process changes	Good business support; clear value proposition; can be integrated in process		Full business support; few users; substantial adoption incentives; fits in existing processes	

Feasibility Assessment

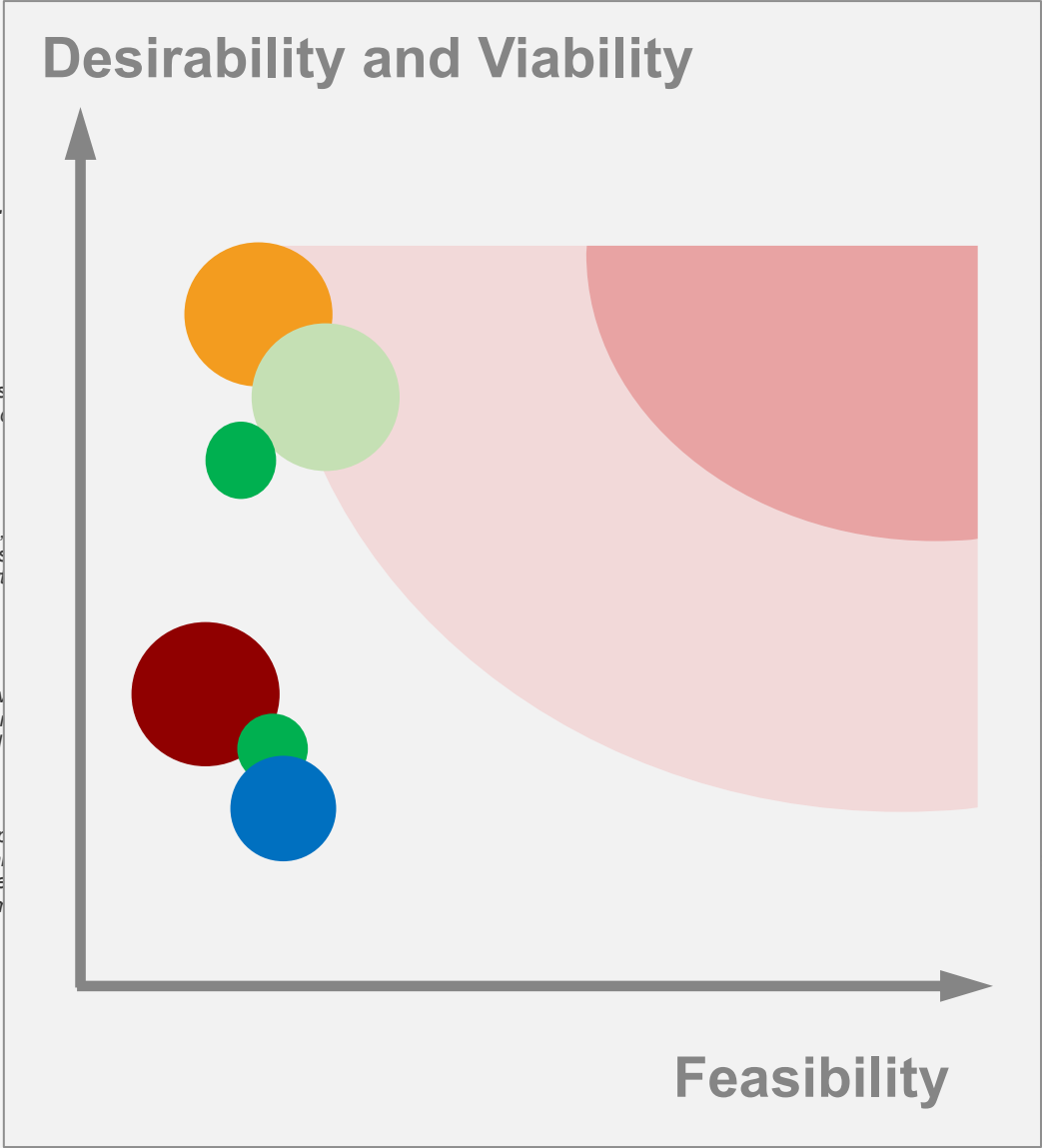
Most important are the END USER



Feasibility
Assessment

THE REALITY

Dimensions	Optimize and measure Promo & Combo campaigns
Data (20%)	4
Interoperability (15%)	4
Analytics (15%)	5
End User (50%)	0
Feasibility Assessment	1.72



Digital Transformation과 AI 과제의 성공을 위해 필요한 것은? 진단!

그렇다면, 무엇을 진단해야 할가?



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III. Key Issues & Priorities

While most companies in the past were mainly product-oriented, successful organizations nowadays are increasingly consumer-centric.

Product-centric Companies

Governance per product category/brand divisions

Pure product and **competition-based KPIs**

Resource allocation only focused on **product-centric programs**

Selected industry quotes:



*"We **didn't do anything wrong**, but somehow, we lost."*

Stephen Elop, former CEO of Nokia



*"I've been frankly confused by this fascination that everybody has with Netflix ...**Netflix doesn't really have or do anything that we can't or don't already do ourselves.**"*

Jim Keyes, former CEO of Blockbuster

Consumer-centric Companies

Consumer profiles based on **demographics**

Continuous **analyses of consumer journeys** and experiences

Tracking of **consumer metrics**, e.g. conversion funnel metrics

Selected industry quotes:



*"We see our customers as invited guests to a party, and we are the hosts. It's our job every day to make **every important aspect of the customer experience** a little bit better."*

Jeff Bezos, CEO of Amazon



*"We used to think that everything started in the lab. Now we realize that **everything spins off the consumer.**"*

Phil Knight, Founder of Nike

Nike has reshaped its operating model to better service consumers personally, at scale

Case study →



- High-level consumer centric definition was created **top-down** by **4 leaders** (CEO, CSO, CRO & Head Nike Europe)
- **40/60 top-down & bottom-up** approach:
 - top-down set guard rails on triple double laid out in OKR
 - Bottom-up developed detailed strategic plan which supported the triple double mandate (per functional area)
- Build **decentralized** insights organization supporting the entire organization to understand the consumer
- Cross-functional **steering committee** to drive consumer centricity, including strategy directors for brand, sales, R&D and SI
- Set-up consumer database starting at **nike.com** and develop digital capabilities to analyze (in-house or through M&A)

How to get there:



Develop clear mandate including targets, guidelines and expectations from the top, as input for bottom up yearly strategic planning process



Build personalization database, with DTC data as a starting point, complemented with retail data



Expect each function to contribute; unified through a data & analytics steering committee



Embed the strategic insights function within the organization, to live & breathe consumer insights

Consumer centricity leaders exhibit common success patterns – and their efforts pay-off.

Success Factors



Define a long-term **vision & strategy** that is consumer-centric, tangible & aspirational



Guide journey to consumer-centricity **centrally**, involving **all functions** to attain **seamlessly integrated** functions & channels



Build **ongoing relationships** throughout the **entire consumer journey**



Be **data-driven** but just as keen to understand **human emotions**



Embrace an **innovation & decision-making** process that delivers fast & frequent consumer relevant innovation



Implement **data technology** to become the **single source of truth** for business, consumer & market data



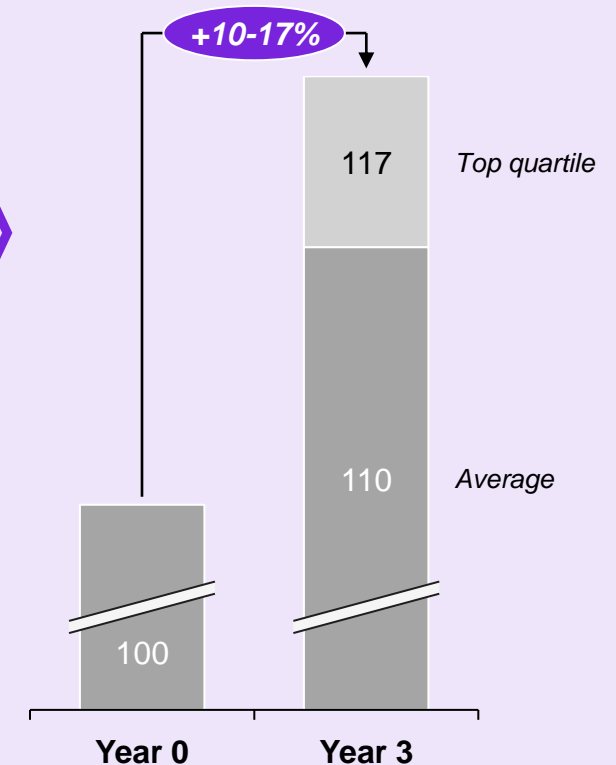
Allocate investment & resources with **improving the consumer experience as sole criterion**



Build a culture characterized by **trust, collaboration & passion** to deliver **superior consumer value**

Financial performance of consumer-centric companies

EBIT development indexed to first year of consumer-centricity journey¹



However, many organizations struggle with consumer centricity.

Common challenges

1

Lack of **shared definition** for consumer centricity



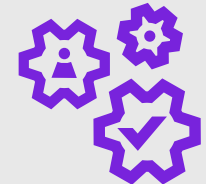
2

Governance and operating model **not suitable for consumer centricity**



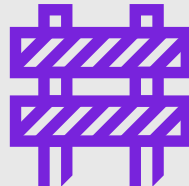
3

No consumer centricity across **functions**



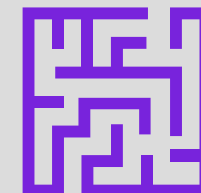
4

Lack of **leadership commitment** to the topic



5

No ability to **systematically measure** and track KPIs and progress



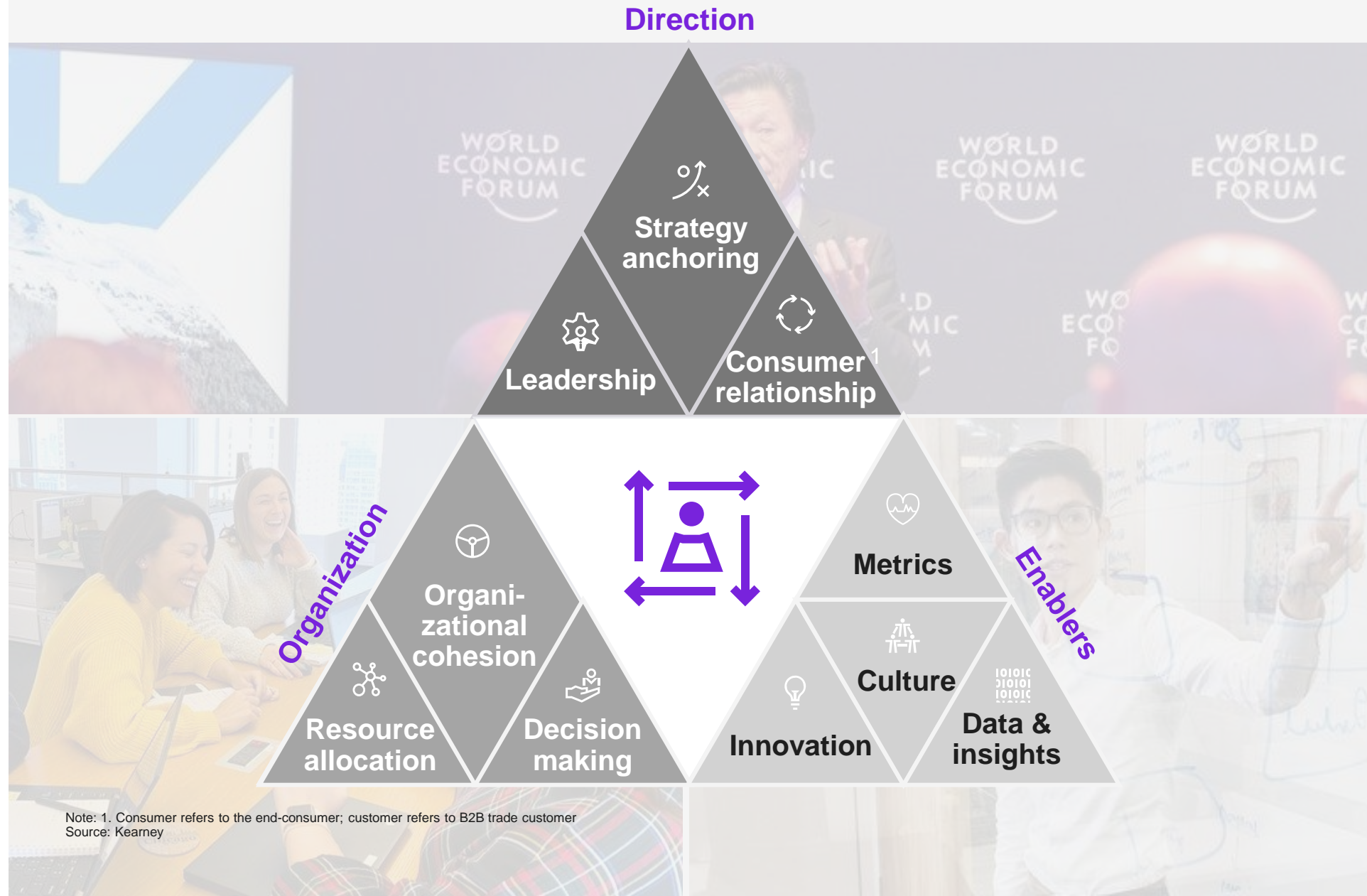
6

Too slow in capturing consumer insights and translation into actions











Note: KPI = Key performance index
Source: Kearney

Our Consumer Centricity Index allows companies to understand their consumer-centric maturity level.

Kearney Consumer Centricity Index

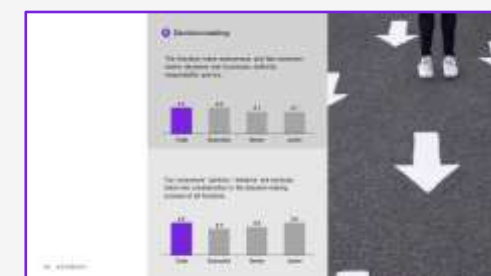
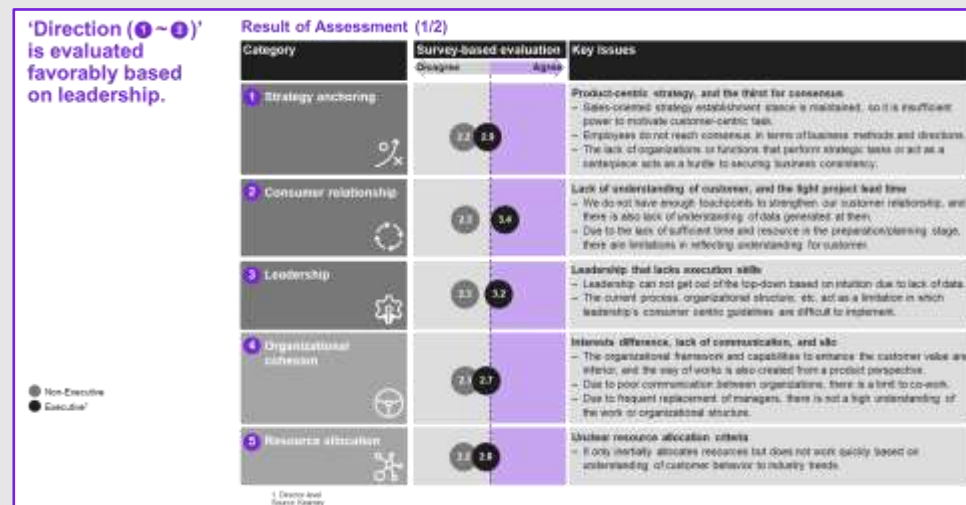


By combining surveys & context interviews, we generate a 360° view on consumer centricity maturity for the organization.

			Level 1 Product/competition-centric	Level 2 Consumer centricity starter	Level 3 Consumer centricity expert	Level 4 Consumer centricity champion
Direction	Strategy anchoring		– Product-focused strategy	– Consumer part of some functions' work plan	– Consumer centricity is part of corporate strategy	– Consumer-focused strategy
	Consumer relationship		– Lack of clear consumer touchpoint concept, resulting in mass interaction	– Consumer touchpoints managed separately	– Consumer experience management integrated across touchpoints	– Communities & connected products / services leveraged for ongoing relationships
	Leadership		– Market-share gain as key incentivization	– Market-share oriented, recognizing brand/marketing performance	– Consumer experience in majority of leadership behavior considered	– Consumer centric metrics focus as incentivization
Organization	Organizational cohesion		– Limited flow of consumer view from functions to the others	– Consumer impact included in cooperation with functions	– Consumer included in decisions in all consumer facing functions	– Primary aspect in collaboration across all functions is the consumer
	Resource allocation		– Based on internal heuristics & product-oriented resource allocation	– Based on short-term business priorities relevant to CX	– Based on long-term priorities in CX impact considered	– Improving CX as major criterion with lifetime-focus across functions
	Decision making		– Focused on historic trends with hierarchical structures	– Unstructured, characterized by debate and limited follow-through	– Structured, multi-phase process with clear R&R	– Fast & action-driven, high ownership of ideas from empowered teams
Enablers	Metrics		– Solely product / business focused KPIs	– Consumer centric metrics included in scorecards for some functions	– Consumer centric metrics included in scorecards for all functions	– Consumer centric metrics are key on the scorecard for all functions
	Innovation		– Competitive & product centric innovation pipeline	– Consumer needs is foundation of the innovation pipeline	– Extend the scope of innovation to consumer-centric contents and services	– Consumer centricity driven innovation pipeline
	Data & insights		– Functions independently collect data in scattered data landscape	– Limited integration of consumer, business and market data	– Single source of truth on consumer, business and market data	– Integrated data landscape with a single real-time interface
	Culture		– Functional expertise and process-driven culture	– Consumer values exist mainly on paper	– Company and employees communicate consumer values	– Company drives consumer-centric vision and leadership carries it out

People & Organization – Readiness Assessment

Client Example: Consumer Centricity Assessment



Key Issues & Priorities

P&G Case: Change Management Towards Digital Transformation

