BCG

Executive Perspectives

03

Unlocking Impact from AI

Customer Service Operations

August 2024

Introduction

We meet often with CEOs to discuss AI—a topic that is both captivating *and* rapidly changing. After working with over 1,000 clients in the past year, we are **sharing our most recent learnings in a new series designed to help CEOs navigate AI**. With AI at an inflection point, the focus in 2024 is on turning AI's potential into *real* profit.

In this edition, we discuss the future of customer service and the role AI will play in turbocharging growth. We address key questions on the minds of service leaders:

- How will the economics of customer service change with AI?
- How will the customer experience evolve?
- What will my future customer service team need to look like?
- How do I get started…and where should I focus?

This document is a guide for CEOs and customer service leaders to cut through the hype around AI in service operations and understand what unlocks value now and in the future.

In this BCG Executive Perspective, we articulate the vision and value of the future of customer service with AI

Executives must act on AI now

As customers spend 14B hours/year contacting customer service, leading players set long-term ambitions to **improve service productivity by up to 60% while enhancing customer experience** with positive impacts on retention and additional sales

While most companies focus on support response, **transforming upstream is imperative to maximize value** – including deflection, self-healing, and prevention to create a competitive edge

AI impacts all elements of customer service operations

Unlocking the full potential of AI in customer service requires an **end-to-end reshaping of the entire operation** from prevention and self-service to service delivery, with **focus dimensions** being:

- **Team skilling and structures:** Increase productivity, which will lead to fewer but multi-skilled frontline teams with redesigned agent journeys, focusing on data generation for upstream prevention
- **AI Ops capabilities:** Establish new roles and skills that build, shape, and govern AI
- **Tech ecosystem:** Build modular components on layered stack

Execute successfully

Develop a **value-focused AI strategy with clear and visionary roadmap** to realize impact that balances short-term benefits and unlocking of long-term value

Broad, **"at-scale" enablement of service agents and overall change management** (including customer-facing communication) is critical to drive adoption – starting with leader enablement

Leading players set ambitions to improve customer service productivity by up to 60%

The baseline

On average, customers spend

14B

Hours per year contacting customer service

The future

Leading companies set ambition of up to

60%

Productivity improvement for customer service

Value enabled by

~10% from AI models

~20% from tech/IT solutions

~70% from people and process transformation
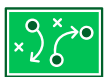
Global tech company

~60% reduction in resolution time
~50% in volume reduction by 2030

Global tech company with **contact centers** serving **120 countries**

Embedded AI agent assist tool into ways of working for support agents

New target operating model for AI-led support and interim states across three time horizons

Global high street bank

~30% productivity improvement over the next three years

Global bank operating in **~20 countries,** with **~15k FTE in customer service**

Designed **target model** for omni-channel customer service, with AI at the heart

First wave of sprints (tech, people, process changes) to realize early value and fund the journey

Global financial company

~50% cost savings over the next five years

Private label and co-brand credit card issuer with **over 100 brands** signed in the US

Diagnosed **current state,** designed a 5-year **AI vision and implementation** roadmap

Defined service vision and strategy with focus on the target customer and agent **AI experience**

Short-term customer service P&L impact ranges between ~10% and 20%

Productivity uplift on individual use cases today

~30-40%

Individual use cases proving uplift on productivity of ~30-40% already today

Short-term P&L value impact

~10-20%

Short-term, **realizable P&L impact** across the function of ~10-20%

Long-term P&L ambition

≥ 60%

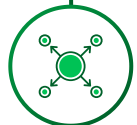Leading companies with **ambition** to realize up to 60% productivity increase long-term

Where did they start?

Large tech company with initial AI deployment for their support agents **focused on auto-case summarization and knowledge mgmt. for cases**
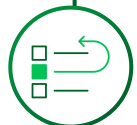
No unified vision for the desired outcomes of AI

Inconsistent user experience and siloed, uncoordinated efforts to implement AI use cases across teams

Limited enablement plan and change management efforts leading to poor adoption

Unclear use case prioritization approach for informing the engineering roadmap
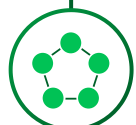
What are they doing?

Defined **North Star vision** to inform ambition and direction of the customer support organization

Stood up an **AI-focused program office** to ensure priority activities are executed against

Developed a detailed impact model to inform savings potential and help **prioritize use cases**

Launched a **change management program** to ensure feedback is received and key messages are disseminated

Designed and launched **continuous improvement process** of AI-assistant-deployed use cases

What impact do they already see today?

~80% Reduction in average time agents spend on case summaries

10-15% Decrease in need of expert help to solve cases

~10% Increase in volume of cases handled by agents

In addition to productivity, AI can radically enhance Customer experience…

Customer

"Why is my bill so high?"

As-is
Human agent

Fixed, linear processes, "one size fits all" response, high variance in quality depending on individual agent

| Solve the 1st order problem | Explain the bill |

| Commercial thinking | Make a cross-sell offer |

AI augmentation goes beyond just automating this process

Customer

"Why is my bill so high?"

To-be vision
AI-augmented agent

Dynamic process based on multiple parallel predictions improving average service quality

"Customer need" thinking	Is customer on the right plan?
End-to-end process thinking	Has customer called before?
Risk-based thinking	Has customer been scammed?
Personalization	How much detail is needed?
Situational thinking	What is customer's context?
Solve the 1st order problem	Explain the bill
Commercial thinking	Make a relevant offer
Root-cause thinking	Improve welcome communications

Optimized conversation based on real-time context

… with benefits on both customer satisfaction and commercial performance

Better customer experience

Pre-empt calls and foster self-help

- Prevent issues and requests from arising in the first place
- Generate proactive actions resolving issues before need for call
- Steer customers to self-service (voice/digital self-help)

Make interactions more seamless

- Use AI-powered assistants (chat, voice, or virtual [avatar]) to offer quick, accurate, round-the-clock support across service and sales processes
- Generate more personalized answers
- Enable more engaging conversational interactions (e.g., generative self-service IVR)

+10-20 NPS

+

Stronger commercial excellence

Foster sales excellence

- Identify real-time sales opportunities
- Offer successful selling arguments and provide personalized sales pitch to agents
- Use virtual avatar that proactively engages with customers in a sales funnel to close the sale

Increase cross-/upsell performance

- Identify most appropriate by-product and provide sale details
- Enrich recommendations with personalized sales arguments

Reduce churn

- Spot customers at risk with predictive analysis
- Identify root causes of customer dissatisfaction
- Guide agents with ladders and personalized scripts

+20-35% CLTV[1]

1. Customer Lifetime Value

8

To realize full potential, transformation of the entire customer service value chain required, with support response being the typical starting point

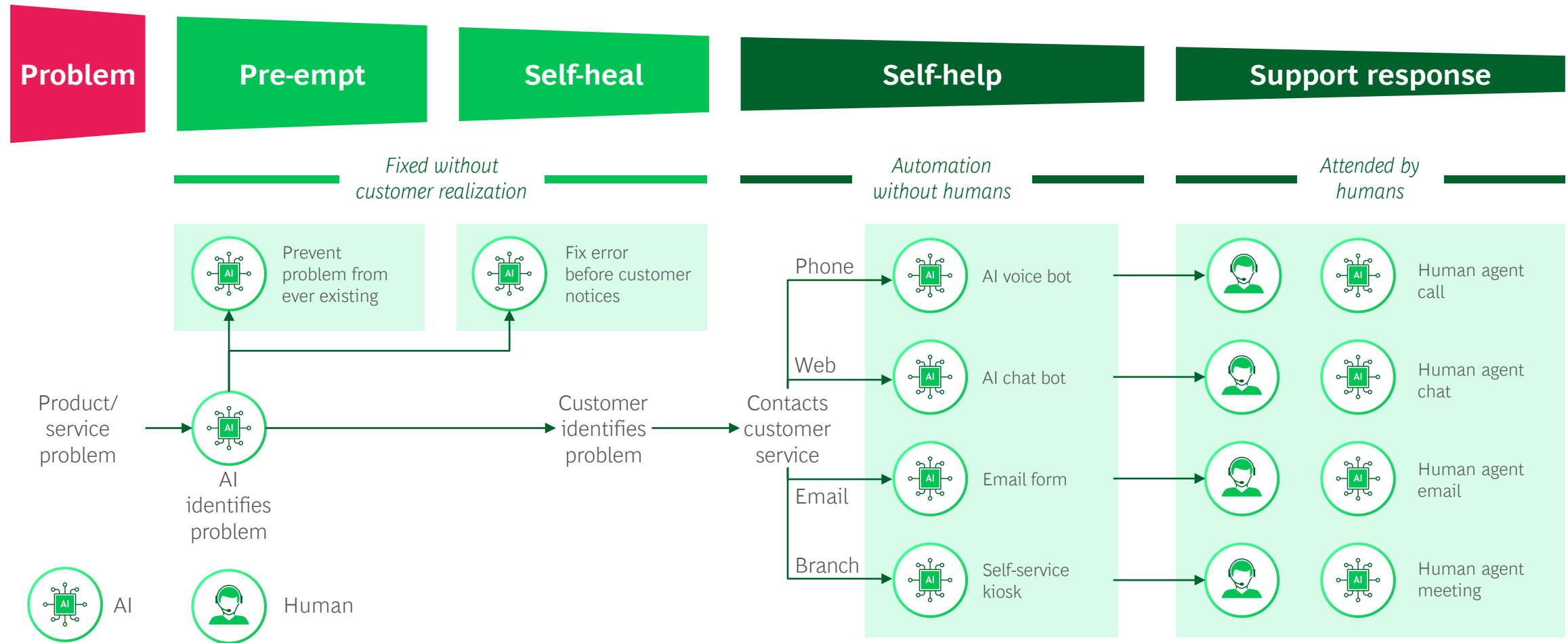| Pre-empt	Self-heal	Self-help	Support response
Leveraging AI to **prevent issues and requests** from arising in the first place	Using AI to **fix issues before the customer notices them** and without customer effort	Empowering customers with **AI-based tools and information** to self-solve their issues	Enabling support teams and agents to **resolve customer issues** in the most efficient manner

Typical starting point
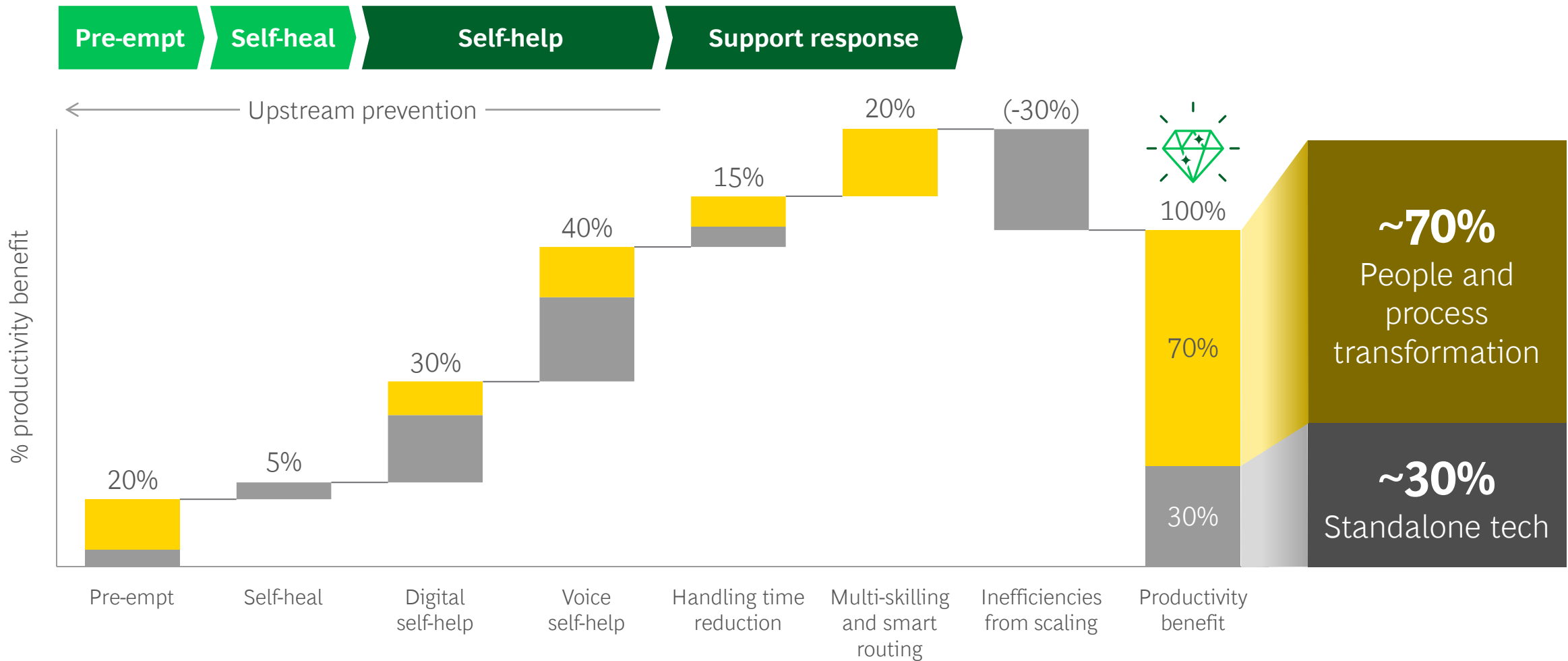
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| Problem | Pre-empt | Self-heal | Self-help | Support response |

Fixed without customer realization

Automation without humans

Attended by humans

Prevent problem from ever existing

Fix error before customer notices

Product/service problem → AI identifies problem → Customer identifies problem → Contacts customer service

Phone → AI voice bot → Human agent call

Web → AI chat bot → Human agent chat

Email → Email form → Human agent email

Branch → Self-service kiosk → Human agent meeting

AI

Human

10

Majority of value is unlocked by upstream prevention and realized by transforming both technology and people and processes

Pre-empt → Self-heal → Self-help → Support response

← Upstream prevention →

% productivity benefit

- Pre-empt: 20%
- Self-heal: 5%
- Digital self-help: 30%
- Voice self-help: 40%
- Handling time reduction: 15%
- Multi-skilling and smart routing: 20%
- Inefficiencies from scaling: (-30%)
- Productivity benefit: 100% (70% / 30%)

~70% People and process transformation

~30% Standalone tech

Note: As visualized, productivity benefit per use case often driven by combination of people and process transformation plus standalone tech; Source: BCG research

Many have started implementing AI in customer service – we identified five common pitfalls that prevent value from being realized

Common pitfalls

1 **Technology-driven**
Limited focus on people, process and change management leading to low adoption

2 **Fragmentation**
Individually built use cases that don't reuse common components

3 **Use case-centric**
Improving status quo w/o leveraging transformative power to change the whole service function

4 **POC-focused**
Implementation w/o pathway to scale and realize business value

5 **Perfectionism**
Striving for AI to be perfect vs. providing a better customer experience than the average agent (while of course still ensuring factually correct responses)

Three key success factors
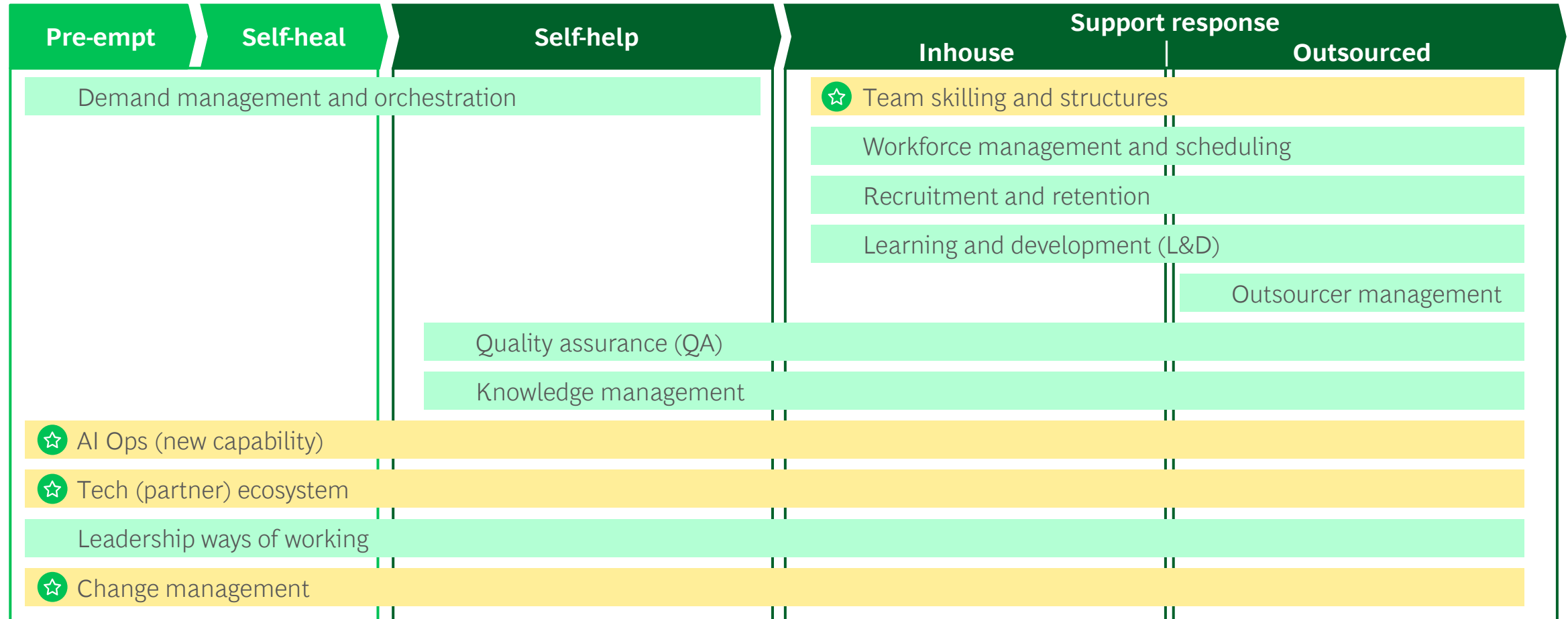
Focus on end-to-end **transformation**

Set an ambitious **top-down target**

Measure P&L impact from "day 1"

AI-driven transformation impacts all elements of customer service operations
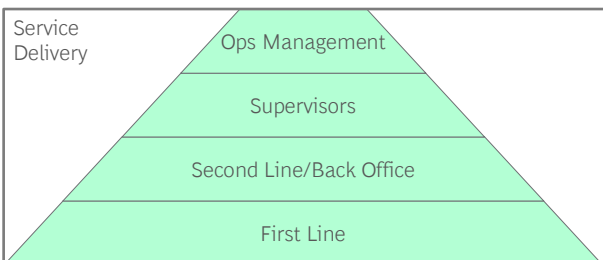
Pre-empt	Self-heal	Self-help	Support response	
			Inhouse	**Outsourced**

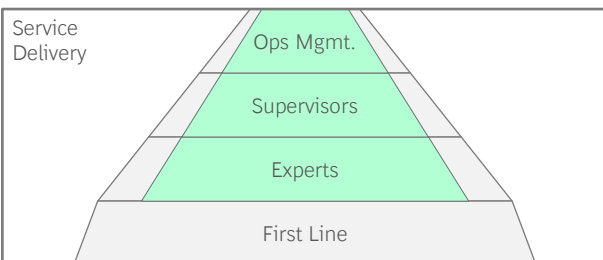| Demand management and orchestration | | | ⭐ Team skilling and structures | |
			Workforce management and scheduling	
			Recruitment and retention	
			Learning and development (L&D)	
				Outsourcer management
	Quality assurance (QA)			
	Knowledge management			
⭐ AI Ops (new capability)				
⭐ Tech (partner) ecosystem				
Leadership ways of working				
⭐ Change management				

⭐ Deep dives

Illustrative – not to scale

Today

Future

Key changes

Team size

Service Delivery (pyramid)
- Ops Management
- Supervisors
- Second Line/Back Office
- First Line

Service Delivery (pyramid)
- Ops Mgmt.
- Supervisors
- Experts
- First Line
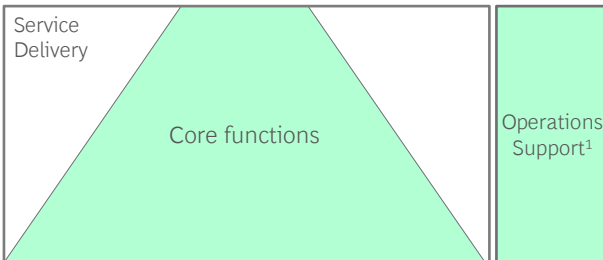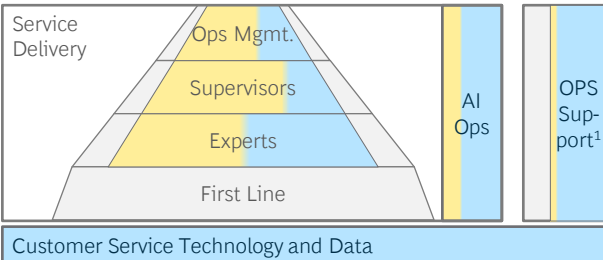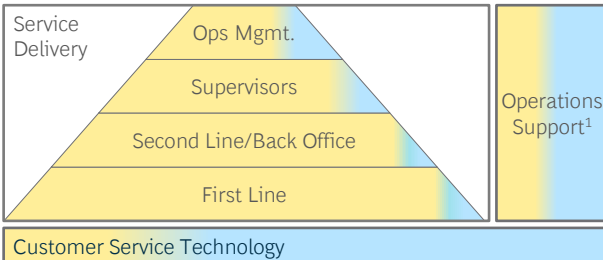
Move from people-heavy teams to 20-40% smaller frontline teams in 2-3 years and 60-70% smaller frontline teams in the long-term

Team composition

Service Delivery
- Core functions
- Operations Support[1]

Service Delivery
- Core functions
- AI Ops
- OPS Support[1]
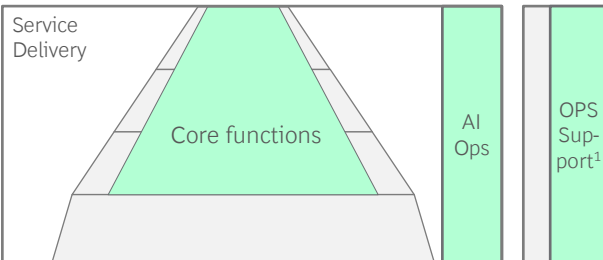
AI OPS to be included as central element of the Service Delivery (with limited role of Operations Support in the future)

Team focus

Service Delivery
- Ops Mgmt.
- Supervisors
- Second Line/Back Office
- First Line
- Operations Support[1]

Customer Service Technology

Service Delivery
- Ops Mgmt.
- Supervisors
- Experts
- First Line
- AI Ops
- OPS Support[1]

Customer Service Technology and Data

Shift from high share of time spent on run activities to **continuous improvement and delivery of long-term change**
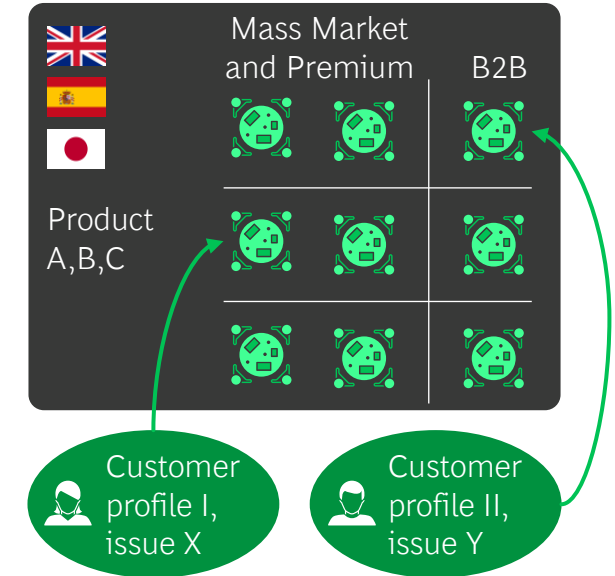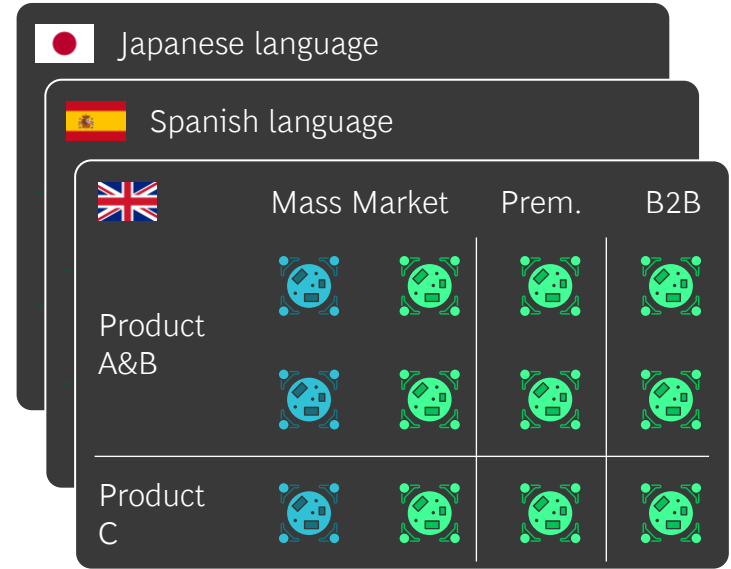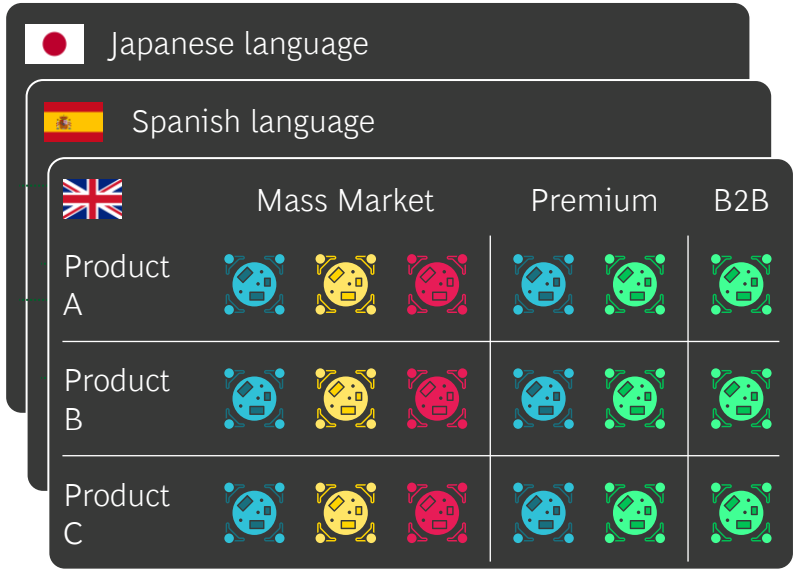
Time spent on activities: ▢ Run ▢ Continuous improvement and delivery of long -term change

1. Functions including : WFM, knowledge management, partner management, training, QA, etc.

14

Deep dive: team skilling and structures |
Shift to multi-skilled second- and third-level support

Starting point: many discrete teams in contact center, split by:

- Product
- Contact reason
- Customer segment
- Language
- Etc.

Next 2-3 years:

- Lower volumes handled
- Mix of contacts is more complex
- Agents assisted by AI co-pilot
- Teams become more multi-skilled and fungible

Target state:

- AI-augmented agents handle broad set of requests, customers, languages, etc.
- Routing based on individual best match, not job title

= single-skilled teams   = multi-skilled team

15

Roles that BUILD AI

Technology specialists who build and monitor AI models and support technology platforms, leveraging advanced technical capabilities

Roles that SHAPE AI

Business and functional experts who collaborate with customer-facing agents to articulate business needs and integrate models into business processes
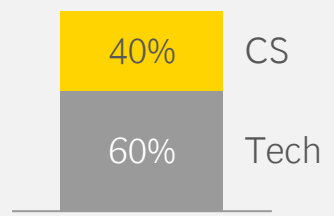
Roles that GOVERN AI

Professionals who monitor AI outputs to ensure software is driving returns while verifying technology is being used safely and ethically

Illustrative split of responsibilities:

	Build AI	Shape AI	Govern AI
CS	10%	40%	80%
Tech	90%	60%	20%
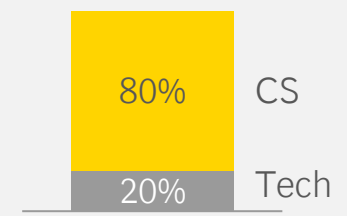
Deep dive: change management | Focus on increasing leadership, customer, and agent engagement

Enablement of leaders

Build case for change and narrative, incl. benefits and metrics to provide leaders with tactics for leading the change and driving adoption

AI adoption by customers

Nudge customers to use AI-enabled self-service through suggestions and adjustments to their options

AI adoption by agents

Establish training programs, change networks and feedback loops to drive adoption

Agents' skillset and capability mix

Drive change in workforce capabilities through agent upskilling, new hiring, and cultural change

Long-term ambition of value realization requires time horizon of over 24 months with first benefits possible after 3 months

1 **Boosting** impact of **early use cases**
(at ~0-12 months)

2 **Unlocking** AI impact **through new use cases**
(at ~3-24 months)

3 **Reimagining** service **experience with AI**
(at ~6-24+ months)

Increased adoption and success of early use cases driving measurable and marketable performance impact

Initial unlocks of **full AI potential** via new **high-impact** and moderate-effort use cases

Fundamental shift of entire service function that **transforms the experience** for customers and employees

Incremental benefits within current service model

Step-function change in experience and efficiency

Watershed leap: Radical change in experience and efficiency

Deploying and scaling AI effectively demands an optimized technology stack tailored to support and expand AI use cases

Smart Business Layer

Conversational App	Copilot	Text	Enterprise System	Other

Case example

AI Layer

1 Guardrails and monitoring | Content moderation | Observability/feedback mgmt. | Transparency and ethical guidelines

2 Orchestration | Prompt flow | Agents | Chains

4 Model garden | First party - Foundational models and pre-trained APIs | Other small models | Open-source models | Other small models

Embeddings

Ops monitoring
PromptOps
3 LLMOps
MLOps
FMOps

5 Model platform | Feature store | Model hosting/activation

Integration Layer

6

Data Layer

| Call recordings | Accounts and contracts | Client profile | Products | Internal policies | Other |

Core Transaction Layer

| ERP | C360 | CRM | Others |

The layer will facilitate access to the client system for retrieving relevant data and other knowledge resources

Infra and Cloud Layer

7

| Public Cloud | Private Cloud | GPU | TPU |

■ Developed and implemented by BCG

Key considerations

1 Guardrails and Monitoring
Capabilities to ensure correct behavior of AI (e.g., RLHF, red-teaming, constitutional AI)

2 Orchestration
New capabilities expected to coordinate different models and calls to internal and external APIs

3 Ops and Monitoring
New capabilities to ensure correct operation of AI use cases (including models, pipelines, and data)

4 Model Garden
Model capabilities required for use cases may impact near-term platform selection. Open source for build use cases. *(expect multiple)*

5 Model Platform
Support multiple models, privacy controls, performance (*1-2 preferred platform(s) in short-run*)

6 Integration
Integrate AI use cases to client enterprise systems to leverage client knowledge base, CRM system, ERP systems, etc.

7 Infra and Cloud
Ensure AI choices align with overall hosting strategy (multi/hybrid cloud); plan for higher infra consumption

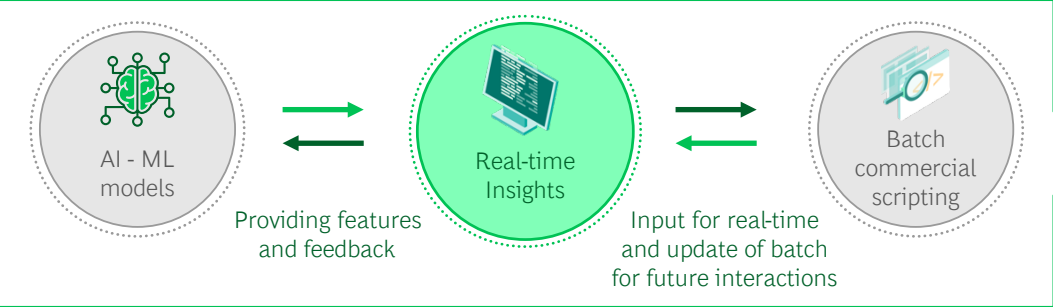19

Reusable modules are key to achieve scale at pace

Reusable MODULES …

Product modules rely on reusable sub-components that combine to enable desired functionalities

Reusable code assets are bundled into reusable modules …

P1 Silence batch slicing   **M1** Call transcription

P2 Whisper on-prem integration   **M2** Transcription post-processing

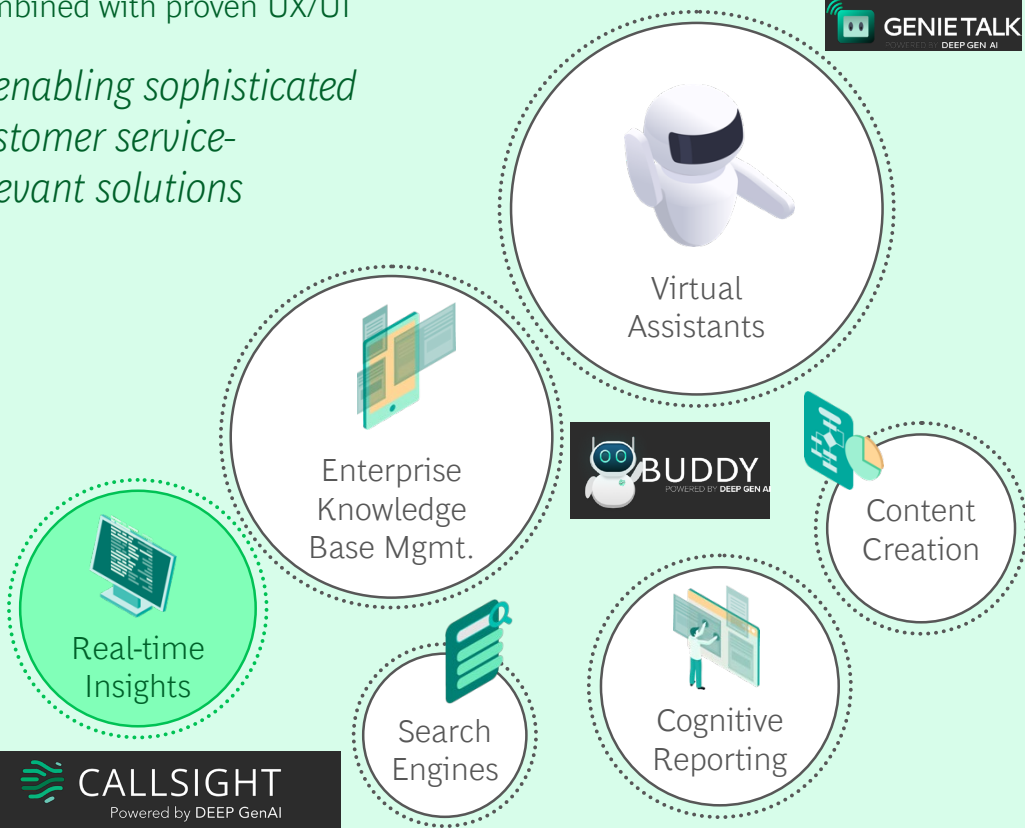**P3** Transcription cleaning   **M3** Call summarization

PX Speaker parser   **M4** Parameters extraction

… that constitute larger tech capabilities. Combinations of multiple modules augment each other's capabilities

AI - ML models

Providing features and feedback

Real-time Insights

Input for real-time and update of batch for future interactions

Batch commercial scripting

Example

… that can be integrated into SOLUTIONS

Product modules integrate into Deep.ai solutions, combined with proven UX/UI

…enabling sophisticated customer service-relevant solutions

GENIE TALK

Virtual Assistants

Enterprise Knowledge Base Mgmt.

BUDDY

Content Creation

Real-time Insights

CALLSIGHT
Powered by DEEP GenAI

Search Engines

Cognitive Reporting

Way forward to a value-focused AI transformation of customer service

AI vision and roadmap

- **Baseline starting point and organizational challenges** today (including baselining of as-is, narrative, tech foundation, etc.)
- **Define North Star vision**/AI ambition and align key stakeholders
- Prioritize and design **use cases**
- Conduct high-level **impact assessment**
- Set up **roadmap** for transformation and tech rollout

PoC and value potential testing

- Build and launch **PoCs** and capture learnings
- Evaluate technical architecture, data options and **build tech readiness plan**
- Create detailed impact assessment and **test future value potential**
- Build out **operational transformation plans** for further rollout and scale-up

Transformation and change management

- Drive and manage **tech rollout**
- **Execute operational transformation at scale,** e.g., integrate AI into key processes, establish op. model
- **Drive change management and communications plan,** e.g., change agent and customer adoption, etc.
- Select and **onboard further tech partners,** as needed
- Capture learnings and **benefits**

*While some companies currently focus on PoCs, the **full potential** will be unlocked through a **strong, tailored vision** and a **successful transformation and change management***