

AI for Service Desks

Separating Hype from Opportunity



Welcome!



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Josh Streets lives and breathes contact centers and service management, as a thought leader in this space. Leadership, Executive Leadership, Consulting and Advisory opportunities with major brands fill his portfolio. He regularly speaks, writes and is interviewed by publications for I.T. and contact center related topics.

CONTACT CENTER/SERVICE DESK STRATEGY

A+

CUSTOMER / EMPLOYEE EXPERIENCE DESIGN

A

AI & DIGITAL TRANSFORMATION

A+



Full Course Agenda Preview



Unit 1

Artificial Intelligence in Modern Support Organizations

- Understand the benefits of AI for you customer experience & industry predictions through 2030
- Assess your company's digital business maturity and readiness for artificial intelligence
- Identify how AI ties into your IT & CX vision, to consider your company's human to bot augmentation level
- Describe the 5-step AI strategic planning process (**Align, Design, Launch, Scale, and Refine**)
- Craft a high-level AI vision

Unit 2

Designing Your Ecosystem

- Understand data infrastructure in the support organization
- Identify pain points and use cases
- Assess financial benefits & prioritizing projects
- Define technology requirements & effort planning
- Develop a strong AI roadmap

Unit 3

Develop an MVP to Scale

- Understand how to build or hire the right talent & project team
- Define Pilot vs Proof of Concept
- Understand Change Management for AI in support organizations
- Understand how to choose the right KPI's to measure success
- Develop best practices
- Associate governance & communication

Unit 4

From Alignment & Design to Scale & Refine

- Identify how to monitor AI results through business change and innovation
- Evaluate impacts to CX, AI forums and pivots
- Understand the marathon mentality, a journey not a destination

Getting HDI Certified



Review course information



Review and Study the **HDI-AI Certification Standard!**

Title		
Topic	Competency	Range of Knowledge
1.1 Align	1.1.1 Document AI strategy	• Understanding the importance of strategy documentation • Key elements of AI strategy

UNIT 1

Artificial Intelligence In Modern Support Organizations

State of the CX, ITSM & AI Union (Cont'd)

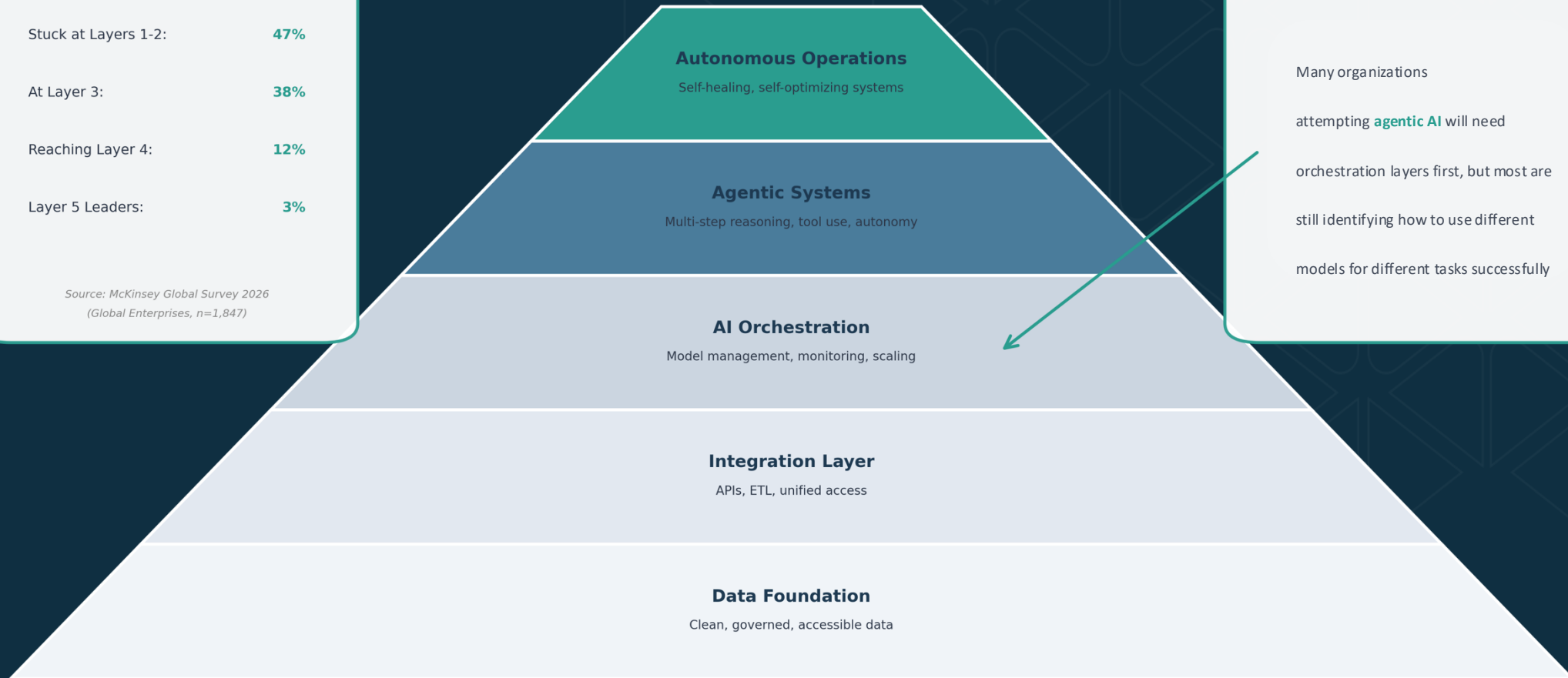
2026 Benchmark

Stuck at Layers 1-2:	47%
At Layer 3:	38%
Reaching Layer 4:	12%
Layer 5 Leaders:	3%

Source: McKinsey Global Survey 2026
(Global Enterprises, n=1,847)

2027 Imperative

Many organizations attempting **agentic AI** will need orchestration layers first, but most are still identifying how to use different models for different tasks successfully



USA leads on Layer 3-4 adoption | Global markets focused on Layer 1-2 foundation

Artificial Intelligence Types

AI Type	Abbreviation	Brief Definition
Natural Language Processing	NLP	Enables machines to understand and interpret human language
Natural Language Understanding	NLU	Comprehends context and intent behind text/speech
Natural Language Generation	NLG	Produces human-like text from structured data
Robotic Process Automation	RPA	Automates repetitive rule-based tasks with software bots
Intelligent Process Automation	IPA	RPA enhanced with AI for decision-making capabilities
Machine Learning	ML	Algorithms that improve through experience without explicit programming
Deep Learning	DL	Neural networks with multiple layers for complex pattern recognition
Computer Vision	CV	Extracts information from images and video content
Optical Character Recognition	OCR	Converts scanned documents and images into editable text
Speech Recognition	ASR	Converts spoken language into machine-readable text
Text-to-Speech	TTS	Synthesizes natural-sounding speech from written text
Sentiment Analysis	SA	Identifies emotional tone and opinions in text data
Predictive Analytics	PA	Forecasts future outcomes using historical data patterns
Recommendation Engines	RE	Suggests relevant products/content based on user behavior
Conversational AI	CAI	Powers chatbots and virtual assistants for dialogue
Generative AI	GenAI	Creates new content including text, images, code, and audio
Large Language Models	LLM	Foundation models trained on vast text for diverse tasks
Retrieval-Augmented Generation	RAG	Combines LLMs with external knowledge retrieval
Knowledge Graphs	KG	Structured networks connecting entities and relationships
Intelligent Document Processing	IDP	Extracts data from unstructured documents using AI
Process Mining	PM	Discovers and analyzes actual business processes from event logs
Anomaly Detection	AD	Identifies unusual patterns that deviate from normal behavior
Federated Learning	FL	Trains models across decentralized devices without data sharing
Reinforcement Learning	RL	Learns optimal actions through trial and error feedback
Neural Machine Translation	NMT	Translates between languages using deep learning
Voice Biometrics	VB	Authenticates users through unique voice characteristics
Emotion AI	EAI	Detects and responds to human emotional states

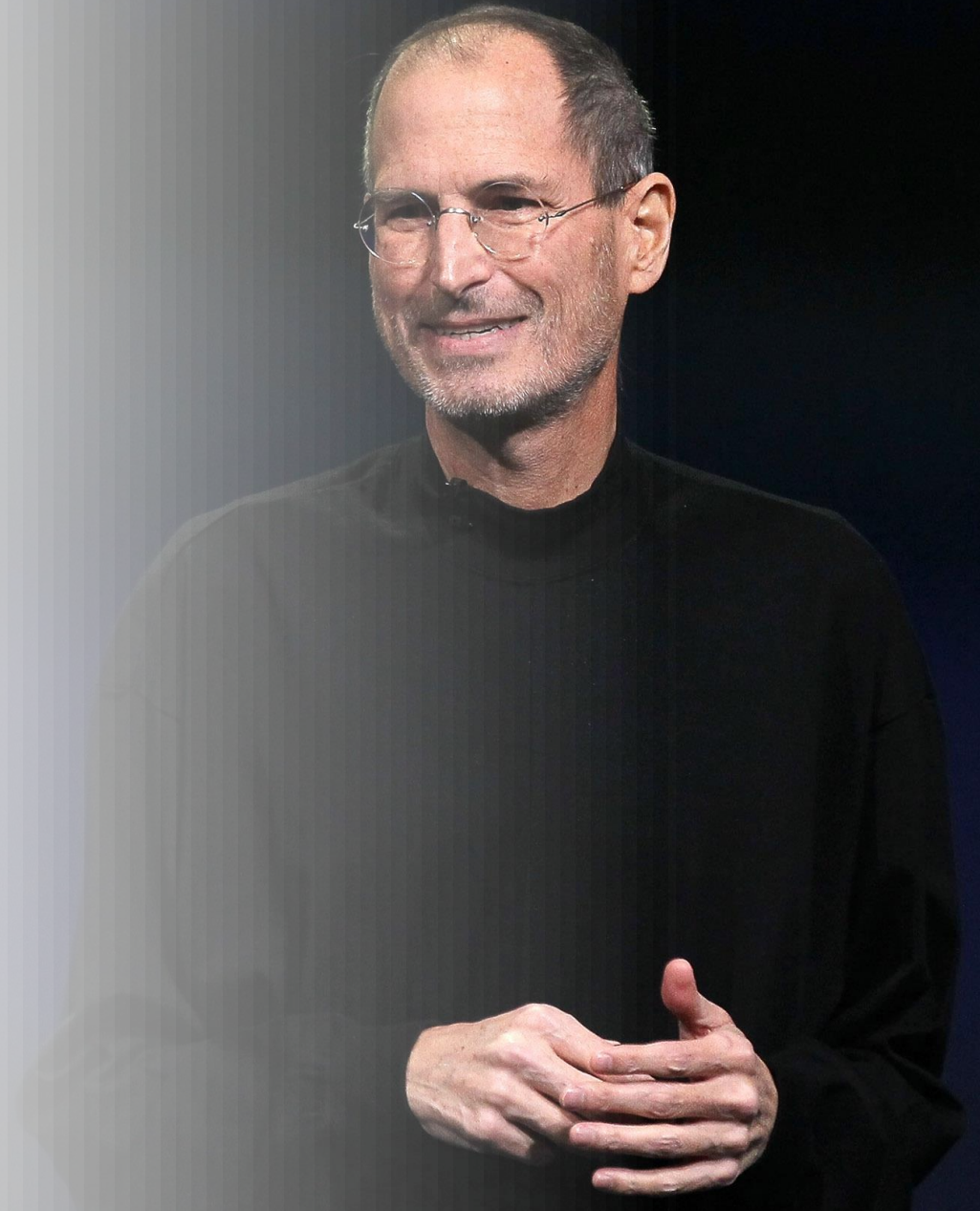
Defining Artificial Intelligence

Technology Term	Definition
Data Lake	Raw data storage in native format—structured & unstructured—without predefined schemas
Data Warehouse	Structured, processed data repository optimized for querying and business reporting
Data Mesh	Decentralized architecture where domain teams own and manage their data as products
ETL Pipeline	Extract, Transform, Load—processes moving and converting data between systems
API Integration	Interfaces enabling different software systems to communicate and share data
Microservices	Applications built as loosely coupled, independently deployable services
Containerization	Packaging code with dependencies into standardized units for consistent deployment
Kubernetes	Orchestration platform automating deployment and scaling of containerized applications
Cloud-Native	Applications designed for cloud infrastructure using microservices and containers
Hybrid Cloud	Combines on-premises infrastructure with public cloud services
Data Governance	Policies ensuring data quality, security, privacy, and compliance
Master Data Management	Centralized management of critical business entities—customers, products, suppliers
Data Catalog	Inventory of data assets with metadata for discovery and self-service analytics
Data Lineage	Tracking data origin, movement, and transformation across systems
Vector Database	Database optimized for storing and querying high-dimensional vectors for AI
Semantic Layer	Business-friendly abstraction translating technical data into familiar terms
Feature Store	Centralized repository for storing and serving ML model features
MLOps	Practices combining ML, DevOps, and data engineering for production model deployment
CI/CD Pipeline	Automated build, test, and release processes for frequent software updates
Low-Code/No-Code	Visual development platforms minimizing traditional hand-coding requirements
Headless Architecture	Decoupled design separating frontend from backend via APIs
Event-Driven Architecture	System design where events trigger communication between services
Data Fabric	Unified data access layer across distributed environments
Lakehouse	Hybrid combining data lake flexibility with warehouse management features



“You’ve got to start with the customer experience and then work backward toward the technology - not the other way around.”

- STEVE JOBS



AI IS NOT A PROJECT

IT'S A

TRANSFORMATION

POLL:



Is AI at your organization currently a:

- A) Project
- B) Program
- C) Governance & Steering Committee
- D) Planned Multi-Year Transformation

Activity: AI Readiness Checklist



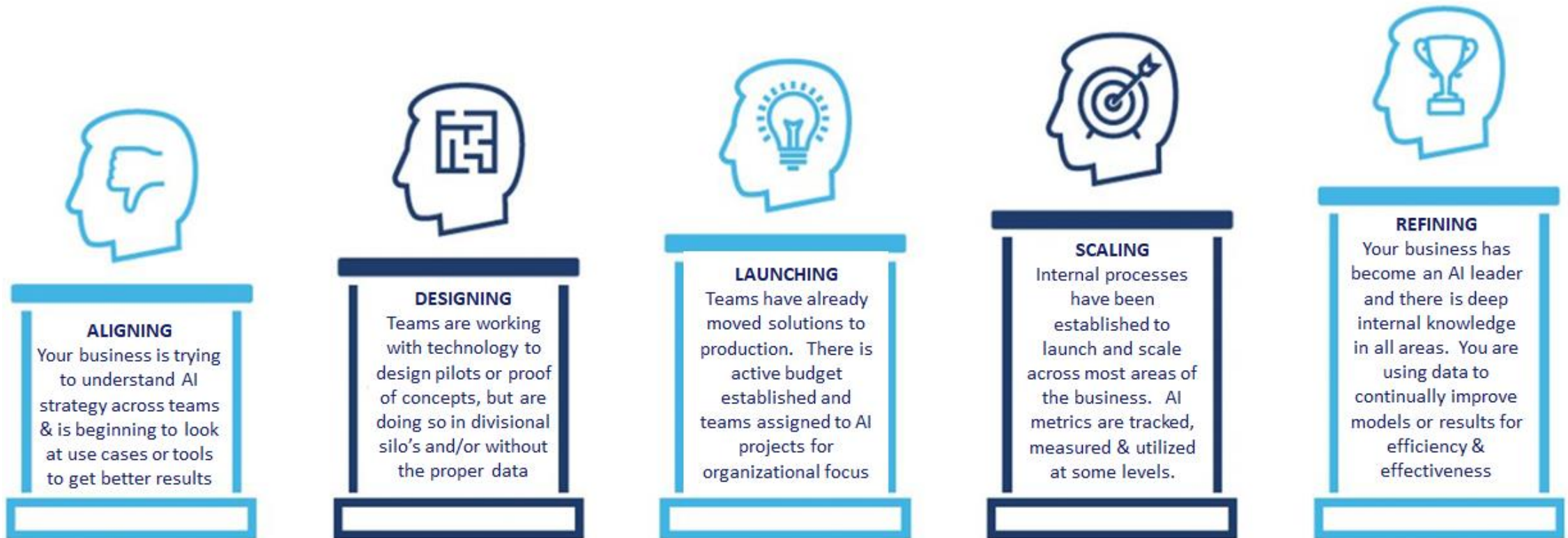
Purpose: Determine where you are aligned in preparation for an AI transformation.

Instructions:

1. Check each readiness area you currently have in place.
Is there a specific area you or your organization should focus on now?

WHY	WHO	HOW	WITH	WHEN
Strategy 	People 	Processes 	Policies 	Technology 
AI Vision	Revised Structure	Use Cases	AI Security	Phased Roadmap
Augmentation Ambition	AI Trained Talent in Place	Success Measures	Privacy & Compliance	Budget Commitment
Cross Function Alignment	KM & Data Disciplines	Funding Approach	Deployment Model	Tools Purchased

Five Stages of AI Maturity

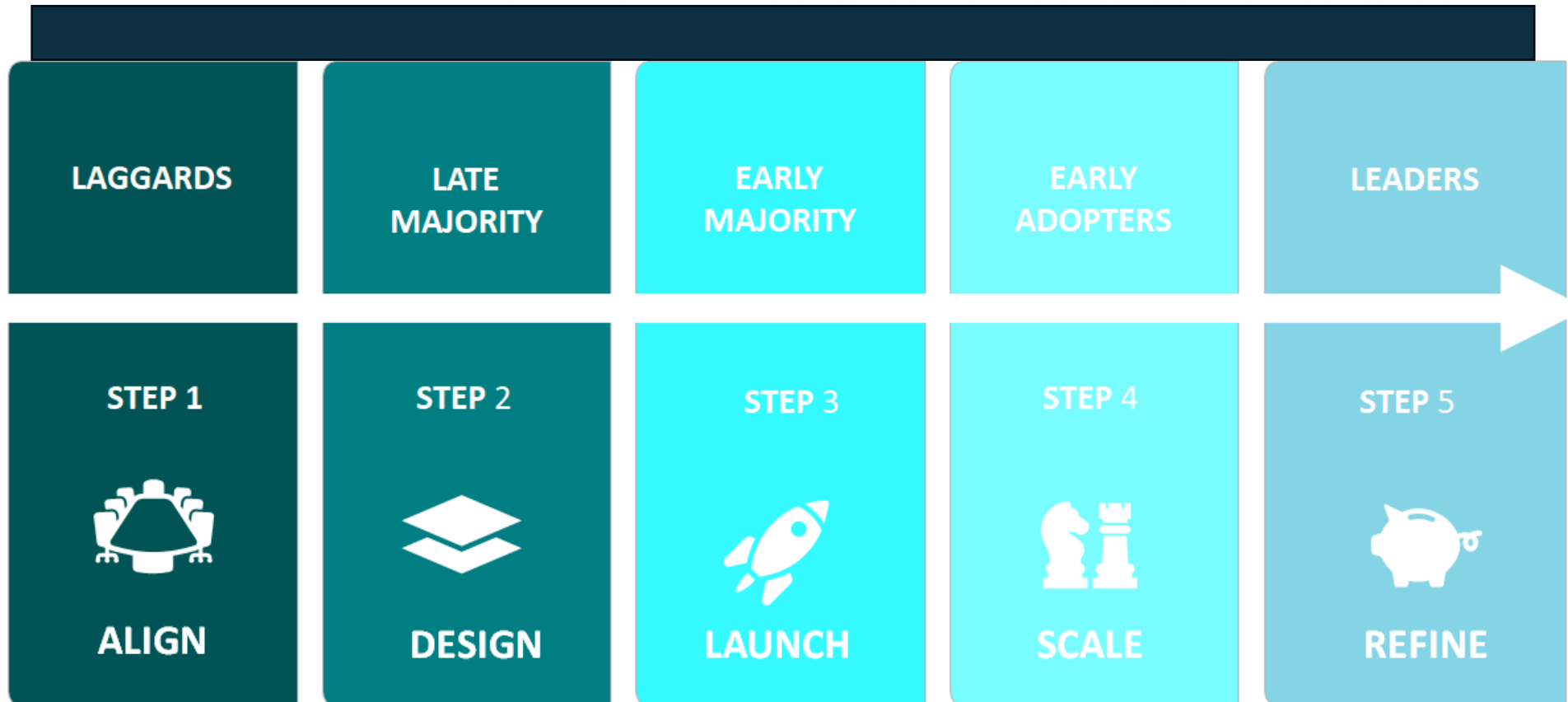


POLL:

Where would you rate your organization on AI?



Assessment scoring:



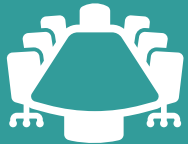
1-27

AI Staff Costs (2026)

Role Title	Offshore Rate	Onshore Rate
Engagement Manager	NA	\$330.00
Project Manager	\$90.00	\$250.00
Architect	\$100.00	\$350.00
Technical Lead	\$75.00	\$250.00
Senior Bot Developer	\$55.00	\$200.00
Bot Developer	\$40.00	\$155.00
Infrastructure Architect	\$100.00	\$325.00
Principal Conversational Designer	NA	\$425.00
Lead Conversational Designer	NA	\$325.00
Conversational Designer	\$75.00	\$200.00
Business Analyst	\$75.00	\$230.00
Lead NLP Analyst	NA	\$250.00
NLP Analyst	\$50.00	\$140.00
QA Lead	\$60.00	\$200.00
Senior QA Engineer	\$45.00	\$180.00
QA Engineer	\$35.00	\$140.00

Step 1: Align

STEP 1



ALIGN

Your business is trying to understand AI strategy across teams & is beginning to look at use cases or tools to get better results

- Align business and technical leaders on the need for AI strategy to move forward
- Align and seek commitment from leadership on AI investments using potential use cases or previous successes
- Document AI strategy for the organization to secure shared understanding
- Gain budget and C-suite sponsorship for AI projects
- Align AI strategy with other organizational roadmaps
- Discover opportunities to coordinate AI efforts across functions for greater impact

UNIT 2

Designing Your Ecosystem

Step 2: Design

STEP 2



DESIGN

Teams are working with technology to design pilots or proof of concepts, but are doing so in divisional silo's and/or without the proper data

EFFICIENCY

- Reduces production time
- Speeds up transactions
- Optimizes operations
- Reduces or repurposes staff
- Reduces system resources
- Proactively finds problems
- Allows faster decisions

Metric Examples

AHT, Response Time, MTTR, MTTD, CPC, Service Level

EFFECTIVENESS

- Reduces errors
- Improves quality & process
- Improves user experience
- Enhances products
- Enables better decisions
- Creates new products
- Allows differentiation

Metric Examples

CSAT-NPS-CES, Revenue, Quality, Employee Engagement, FCR

- a) Chatbots
- b) Conversational Intelligence
- c) Agent Assist
- d) Next Best Action
- e) Self service
- f) SMS Deflection
- g) IVR Deflection
- h) Natural Language Processing
- i) Speech to Text Transcription
- j) Customer Sentiment
- k) Advanced Biometric Authentication
- l) Generative Intelligence
- m) Predictive Algorithms & Forecasts
- n) System Remediation (AIOps)
- o) Agentic AI / RPA
- p) Other

Chatbot Priority, Detailed

Use Case	Data Sources	Data Consistency	Time to Value	Ability to Execute	Data Safety	Overall Rank	Notes
Password reset	4	4	4	3	2	1	Consistent across globe today
General location & hours of operation	2	2	4	3	4	2	Low data risk, but in PDF, has gatekeeper
Order status & delivery details	2	2	2	3	3	3	Dependency on supply chain project
Reinstatement of Distributor	2	2	2	3	3	4	Record retention & some security concerns
Earnings statements & tax forms	3	2	2	3	2	5	Form variance & privacy considerations
Loyalty program explanation & offer redemption	2	2	2	2	3	6	Requires consistency & knowledge base
Promotions & event qualifications/registration	2	1	2	2	3	7	Requires knowledge base & framework
Order intake & payment	2	1	2	3	1	8	Genesys for payments
General FAQ for additional language support	1	1	1	3	4	9	For languages not in scope at launch
Refunds & returns	2	2	2	1	1	10	Needs BCA & risk assessment

#	Scoring Key
5	Very Strong
4	Strong
3	Neutral
2	Weak
1	Very Weak

AI Metrics to Note			
Customer & Employee Performance Indicators			
Metric	Calculation	Benchmark	Context
Chatbot Resolution Rate	(AI-resolved tickets ÷ total chatbot tickets) × 100	70-90%	Higher for FAQ-focused bots
Chatbot Containment Rate	(Unassisted sessions ÷ total sessions) × 100	60-80%	Avoids unnecessary escalation
Avg. Chatbot Response Time	Total response time ÷ # of interactions	<2 sec	Lower = better satisfaction
Abandonment Rate (AI Session)	(Unfinished sessions ÷ total sessions) × 100	<15%	Indicates poor UX or latency
Escalation Rate to Human Agent	(Chats transferred to human ÷ total AI chats) × 100	15-30%	Lower is better for automation ROI
AI Tool Adoption Rate	(Active AI users ÷ total employees) × 100	60-90%	Baseline of usage
AI Usage Frequency	Avg. # AI tool sessions per employee / month	10-50	Indicator of habit formation
AI Literacy Index	(% of staff scoring ≥4 on literacy scale)	70-90%	Internal AI readiness survey
Task Time Reduction (AI-assisted)	(Baseline time - AI time) ÷ baseline × 100	20-40%	Track after AI rollout
Employee Satisfaction (AI Tools)	Avg. score (1-5)	4.0-4.5	Pulse survey metric
AI Confidence Index	Avg. comfort level rating (1-5)	3.5-4.5	Used in training planning
Training Completion Rate (AI)	(# trained ÷ total required) × 100	85-100%	Core skill development KPI
Internal Support Tickets (AI)	(# AI help tickets ÷ total employees) Customer-Centric Employee-Centric	↓ over time	Proxy for usability

AI Metrics to Note

Knowledge, Operations & Strategic ROI Indicators

Metric	Calculation	Benchmark	Context
 Knowledge Retrieval Accuracy	$(\text{Correct results} \div \text{total results}) \times 100$	85-95%	Validation sampling
 Avg. Query Latency	$\text{Total response time} \div \text{total queries}$	<3 sec	Include LLM & KB searches
 Document Index Freshness	$(\text{Docs updated in 90 days} \div \text{total docs}) \times 100$	>80%	Measures KB relevance
 Knowledge Article Use Rate	$(\text{Articles accessed} \div \text{total articles}) \times 100$	50-70%	Prune unused content
 Self-Service Resolution Rate	$(\text{AI/self-service resolved} \div \text{total issues}) \times 100$	60-80%	Core deflection metric
 Average Search Depth	Avg. # of queries before resolution	1-2	Lower = better
 Model Response Accuracy	$(\text{Correct model responses} \div \text{total tested}) \times 100$	85-95%	Validation dataset
 Model Drift Detection Rate	$(\text{Detected drifts} \div \text{total drift events}) \times 100$	>90%	Needs monitoring
 AI ROI	$(\text{AI benefits} - \text{AI cost}) \div \text{AI cost} \times 100$	150-400%	Depends on maturity
 Cost per AI Interaction	$\text{Total AI ops cost} \div \text{\# AI interactions}$	↓ over time	Track YoY reduction
 AI Project Success Rate	$(\text{\# projects meeting KPIs} \div \text{total AI projects}) \times 100$	60-80%	Delivery success
 AI Policy Compliance Rate	$(\text{\# compliant AI use cases} \div \text{total use cases}) \times 100$	95-100%	Supports AI Act readiness
 AI Revenue Contribution	$(\text{AI-influenced revenue} \div \text{total revenue}) \times 100$	5-15%	Emerging KPI
 Model Deployment Velocity	$(\text{\# models deployed} \div \text{\# developed}) \times 100$	60-80%	Indicates pipeline maturity
 AI Downtime Rate	$(\text{AI system downtime hours} \div \text{total uptime hours}) \times 100$	<1%	Availability benchmark
 AI Carbon Efficiency	$(\text{CO}_2 \text{ per AI inference or training run})$	↓ over time	Emerging ESG metric

Track these metrics monthly to measure AI knowledge management effectiveness and business value

POLL:



What new types of metrics are you being asked to measure more of?

- A) Experience Metrics
- B) Efficiency Metrics
- C) ROI Metrics
- D) TCO Metrics

Activity: Types of Data You Have Access To



What data do you have access to for your customer/employee experience measures?

- **STRUCTURED** (NPS, CSAT, CES, Reviews, Ratings, MTTR, Service Levels, Response Time)
- **UNSTRUCTURED** (Write in comments, focus groups, stakeholder comments, online forums, voice of the employee)

Journey Mapping



2-43

Discuss: The Journey Map



Dr. John Quincy

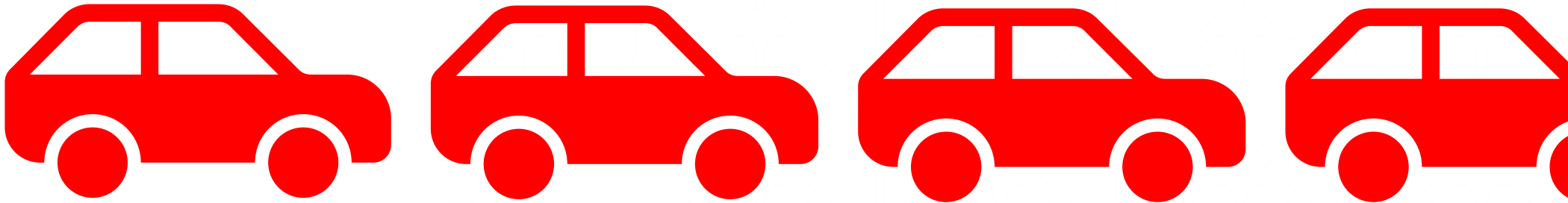
Medical Researcher
Customer Journey – Ordering MacBook Pro

	Request Laptop	Confirmation	Request Review	Procurement Review	Request for Purchase Order	Deployment	Post Transaction Survey
Actions	- Log into ServiceNow Portal to request laptop - Search for MacBook Pro - Notice no options for MacBook Pro - Enter "Other Hardware" request	Receive confirmation e-mail from ServiceNow with no detail	- Receive an e-mail requesting details on the type of Macbook Pro I want - Responded to e-mail	Receive an e-mail that Procurement Team has received my request	Receive an e-mail that Procurement Team with a quote from Apple requesting that I request a purchase order through PeopleSoft	- Receive an e-mail that my MacBook Pro has arrived - Scheduled appointment for deployment - Received MacBook Pro	- Receive an e-mail requesting a survey - Survey has no details other than ticket number
Thinking	- I hoped this was going to be an easy process - This was a very complicated ordering process - Why do I have to retype <u>all</u> of my information when I logged in?	I'm not sure what is being confirmed. There are no details in this e-mail. I have several outstanding requests	If I could have selected the type of MacBook Pro from the <u>start</u> we wouldn't have to this.	This process is taking forever	Why didn't I just go and buy a MacBook Pro on my expense card	- Why did it take 68-days to fulfill this request - Receiving my MacBook Pro was easy	- What ticket am I about to review - There are a lot of questions on this survey
Feeling	 FRUSTRATED about how the ordering process for my new laptop went.	 UNSURE of how long it will take to receive my new laptop.	 UNSURE of how long it will take to receive my new laptop.	 FRUSTRATED about how long this is taking	 FRUSTRATED about how long this is taking  AGGRAVATED that I <u>have to</u> enter my own PO request after going through the IT request process	 HAPPY that my MacBook Pro has <u>arrived</u> and I have an appointment to receive it	 UNIMPRESSED over the entire process  FRUSTRATED that it took 68-days to obtain a standard laptop
Opportunities & Measures	Develop service catalog and establish SLAs	Enhance confirmation e-mail	Eliminate this step	Eliminate this step	Stock MacBook Pros	Streamline deployment process	Enhance survey request e-mail

Red Car Theory & AI/Automation



The **Red Car Theory** is based on a simple premise: if you are thinking about buying a red car, you will suddenly start noticing red cars everywhere



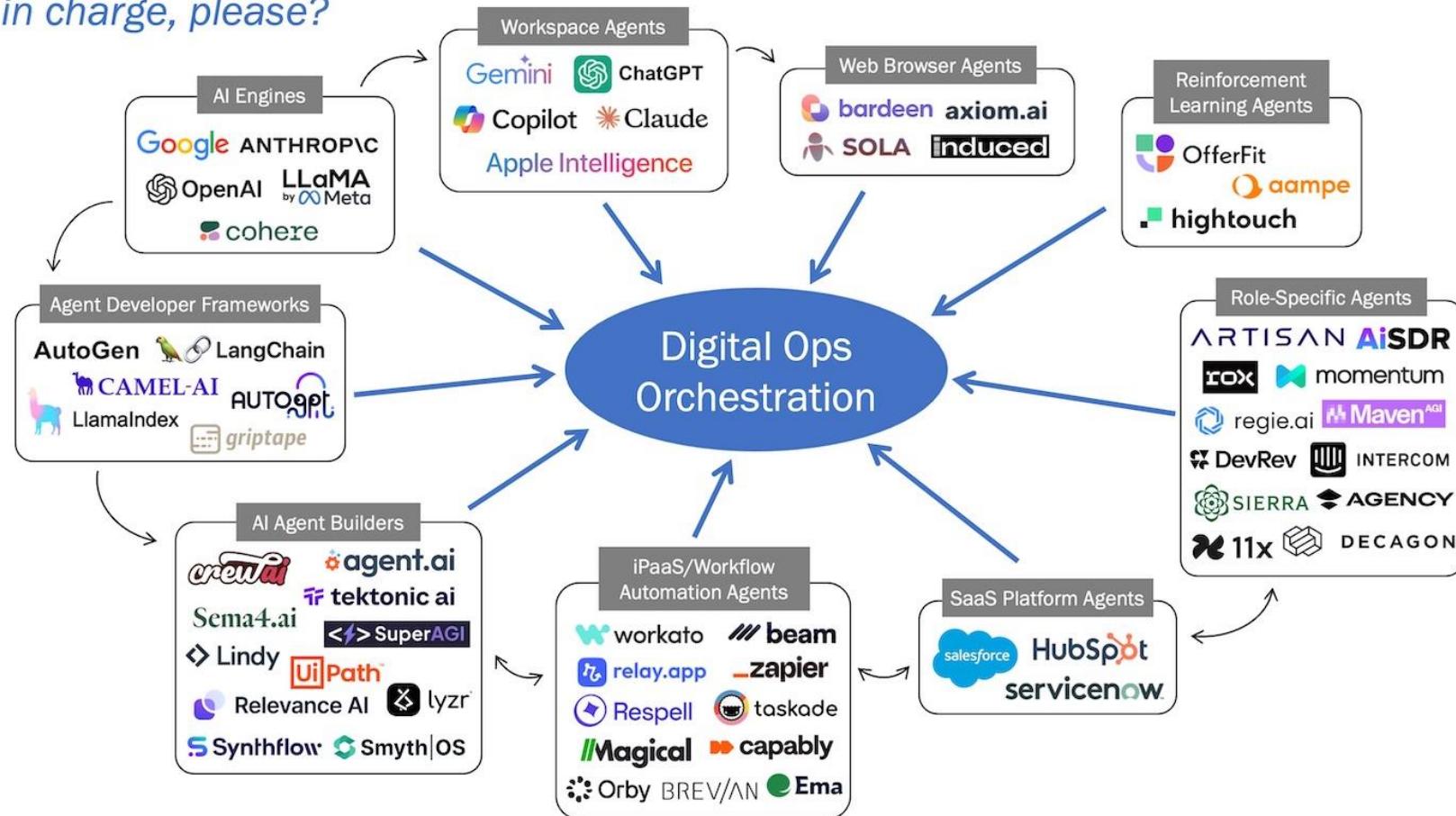
Alternatively Known As:

- *Baader-Meinhoff / Selective Attention / Confirmation Bias*
- *Frequency Illusion*
- *Subconscious Awareness*

Discuss: What might your ecosystem look like?



*May I speak to the agent
in charge, please?*



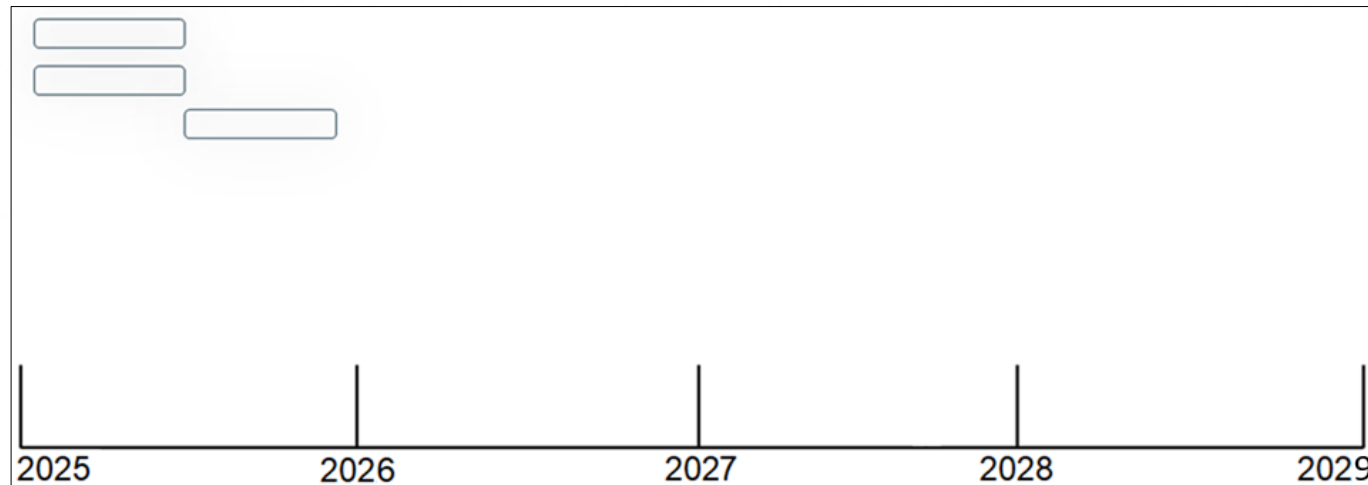
Activity: Create A Strategic Roadmap



Purpose: Build out your organizational roadmap of projects to align all business units to the same ecosystem design and strategy.

Instructions:

1. Go to the ***Strategic Roadmap*** tab in your worksheet.
2. Write out what would you do first if you were making the decision to transform your service desk or contact center.
3. Layer in different projects or initiatives in the corresponding order through 2029 and be realistic about the time it takes for each.



UNIT 3

Developing A Minimum Viable Product to Scale

Step 3: Launch

STEP 3



LAUNCH

Teams have already moved solutions to production. There is active budget established and teams assigned to AI projects for organizational focus.

You've aligned your team and designed some early solutions to leverage AI.

- ✓ You've done your roadmap correctly
- ✓ You've enabled the right structure
- ✓ You've confirmed the right tools and information to have aligned teams begin to prepare for launch

This is the most exciting part of the transformation, to see your concepts, turn to reality.

3-56

Activity: Defining the MVP



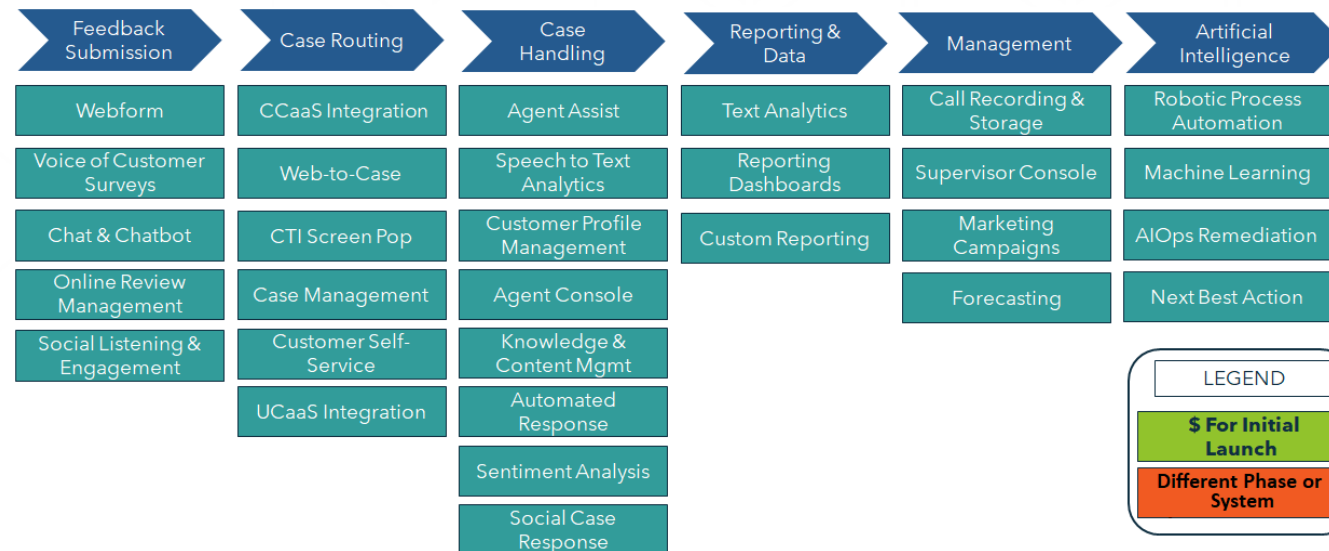
Purpose: Determine the features you need to deliver on your roadmap.

Instructions:

1. Go to the **Defining MVP** tab in your worksheet.
2. Using the *color* legend, color the cell either as:

a. \$ (need funding) for Initial Launch

b. Different Phase or System



POLL: ITIL 5 & AI STRATEGY



Are they:

A) Complementary to Each Other

B) Opposing to Each Other

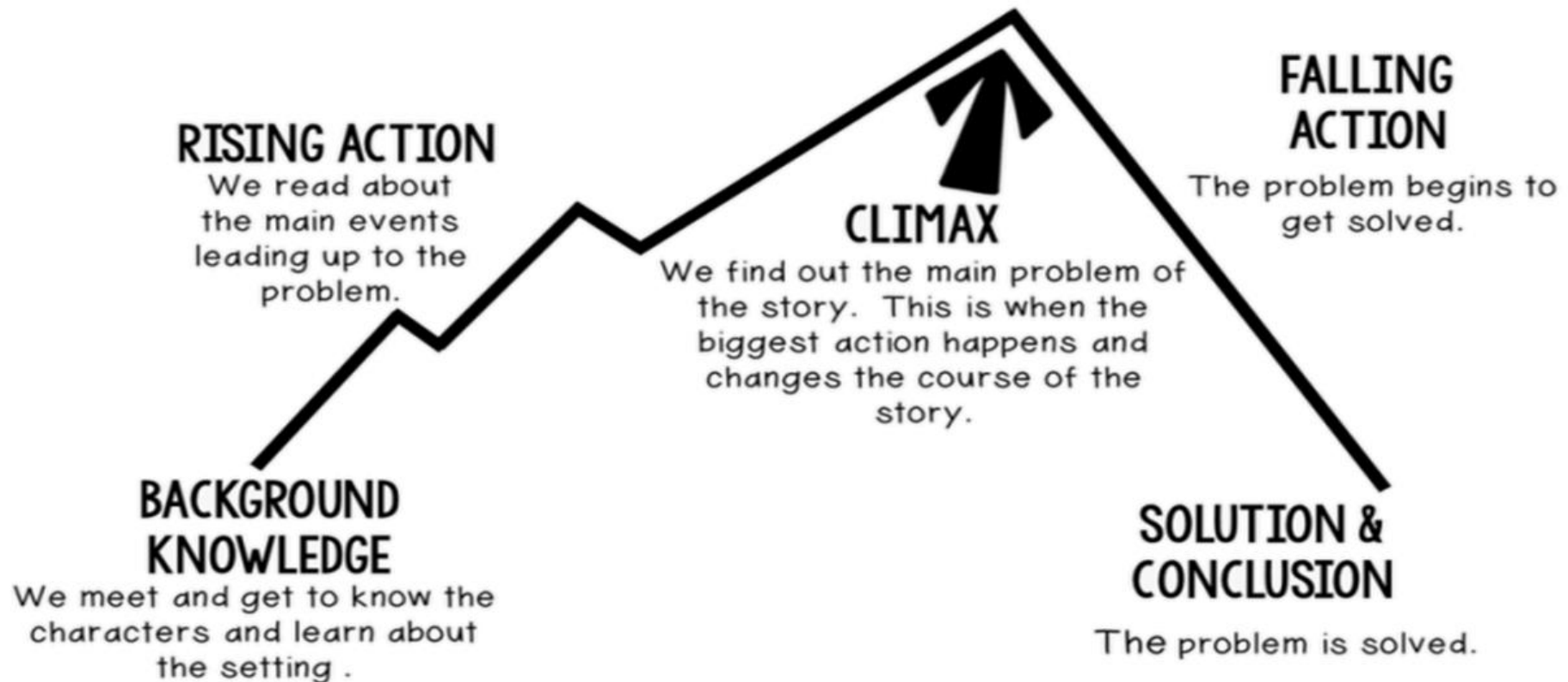
C) Both

D) I Don't Know! I Need ITIL 5 Learning & Certification

Tell Your Success Story



Use a story mountain to successfully tell your early success story internally. This format is how many companies who disrupt use their marketing internally and externally to win support.



UNIT 4

From Alignment & Design to Scale & Refine

Steps 4 & 5: Scale & Refine

STEPS 4 & 5



SCALE & REFINE

Internal processes have been established to launch and scale across most areas of the business. AI metrics are tracked, measured & utilized at some levels.

Scale:

- Involve different stakeholders to gain a complete view of potential challenges and opportunities for reliability, safety, trustworthiness, and accountability
- Translate principles into concrete role responsibilities, processes, and metrics
- Synthesize existing practices into guidance that generalizes to more use cases

Refine:

- Continually improve models, engines and creative use cases to improve results
- Build organizational structures to manage the strength and scalability of AI ethics and governance across multiple parts of the organization, such as an ethics board
- Transform your organization and your industry for the long haul

4-70

Support Redefined

Human Assisted (1990's-2020s)

Call centers become contact centers, chat, Email, social media, human-led service

Reactive: customers initiate interactions

Limited scalability, high costs, shifts from multi to omni

AI-Assisted (2020–2025)

Contact deflection, automation, AI-powered responses

Still reactive, but AI reduces effort for routine tasks & self-service

Gains in efficiency, but AI lacks trustworthy intelligence

AI-Automated (2025–2030)

AI gets trained & anticipates issues before they arise

Automated resolutions for many inquiries

Faster problem-solving or creation with reduced human effort

Quantum Experience, QX (2030+)

AI resolves most customer needs independently, with ethical guardrails

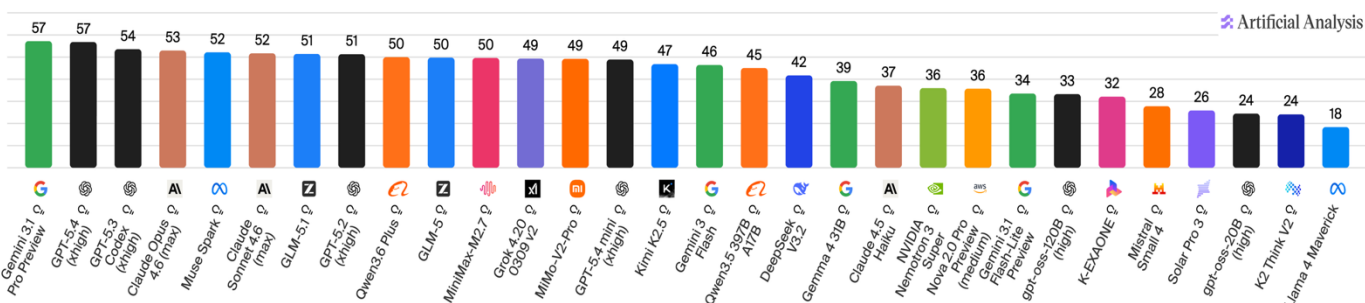
Humans step in for complex, high empathy/revenue, or escalated issues primarily

True proactive sales & service: AI prevents issues & recommends solutions to issues before they arise

Refining Bias, Hallucinations and Models

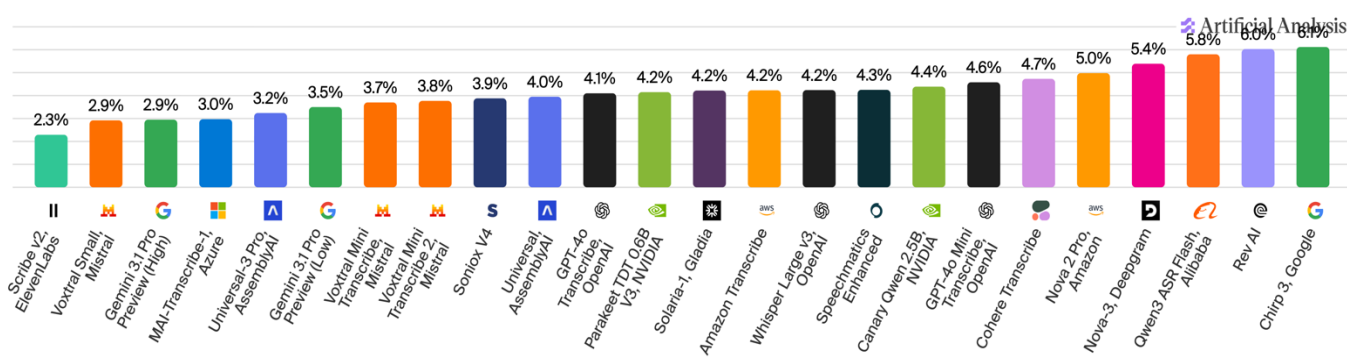
Artificial Analysis Intelligence Index: Results

Independently benchmarked by Artificial Analysis



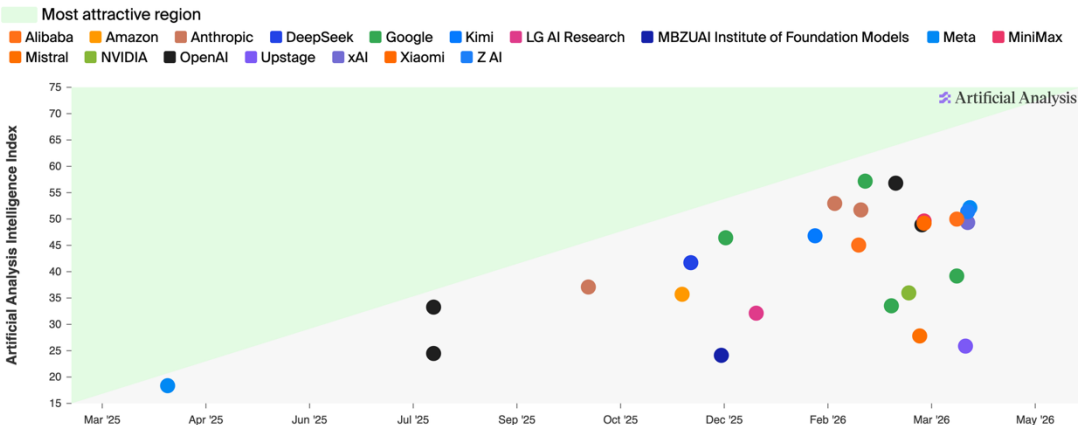
Artificial Analysis Word Error Rate (AA-WER) Index

% of words transcribed incorrectly; lower is better. AA-WER v2.0 incorporates 3 datasets: AA-AgentTalk (50%), VoxPopuli-Cleaned-AA (25%), Earnings22-Cleaned-AA (25%)



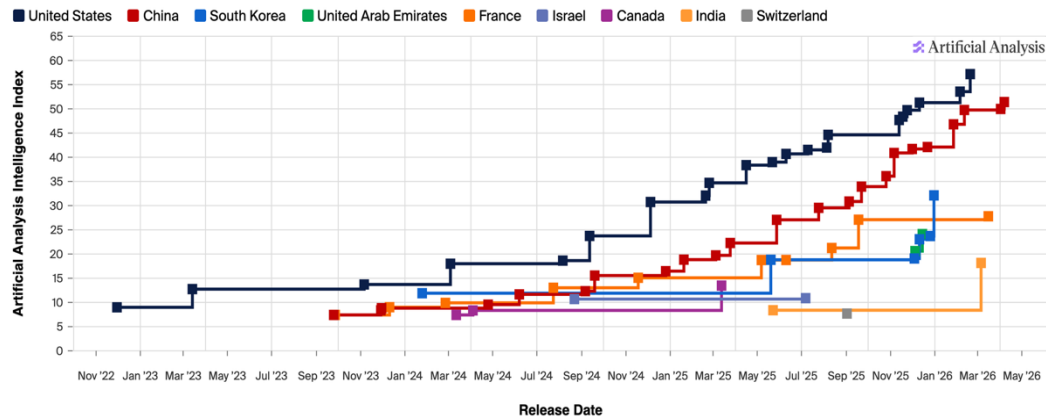
Intelligence vs. Release Date

Artificial Analysis Intelligence Index; Release Date



Frontier Language Model Intelligence By Country, Over Time

Artificial Analysis Intelligence Index v4.0 incorporates 10 evaluations: GDPval-AA, r^2 -Bench Telecom, Terminal-Bench Hard, SciCode, AA-LCR, AA-Omniscience, IFBench, Humanity's Last Exam, GPQA Diamond, CritPt



Retrieval Augmented Generation

Key RAG Benefits

- **Improved Accuracy:** Leverages vast knowledge databases
- **Enhanced Trust:** Grounds responses in vetted information
- **Timeliness & Relevance:** Uses most current data available.
- **Greater Control:** Augments with specified data sources.



Implementation Challenges

- **Computational Cost:** Resource intensive processing
- **Data Management:** Maintaining up-to-date knowledge bases
- **Retrieval Quality:** Finding truly relevant information
- **Security Concerns:** Protecting sensitive data sources



Real-World RAG Applications

- **Content Generation:** Articles, blogs, social media
- **Chatbots:** More accurate, contextual responses
- **Translation:** Improved accuracy and fluency
- **Q&A Systems:** Fact-based answers with sources



Discuss: Risk Mitigation



What are the risks in the way of delivering on your AI transformation?

How could you mitigate risk or influence action?

Activity: Most Meaningful Takeaway



What is your most meaningful takeaway from this 60 minutes?

Getting HDI AI Certified



Receive e-mail in 24 to 48 hours following class



Pass the **HDI-AI Certification Standard!**



Thank
You