

AWS State, Local, and Education Learning Days

New York

AI/ML Track

10:15am – 11:15am

200
level

**Practical AI for
Public Sector**

Explore Generative
AI's potential in
public sector and
higher education

11:30am – 12:30pm

200
level

**Increase
productivity and
satisfaction with an
intelligent contact
center**

Adding intelligence to
your call center

1:30pm – 3:00pm

300
level

**Workshop:
Building Agentic
Workflows**

Advanced AWS
workshop on
building autonomous
AI workflows with
Amazon Bedrock for
developers

3:15pm – 4:15pm

300
level

**Generative AI
Masterclass**

Learn how AI can
modernize customer
service operations
and improve
satisfaction



Practical AI for Public Sector

Maria Fassinger

Solutions Architect
Higher Education
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AI/Machine learning (ML) is at an inflection point

Key drivers: Compute capacity increase | Data growth | Model sophistication

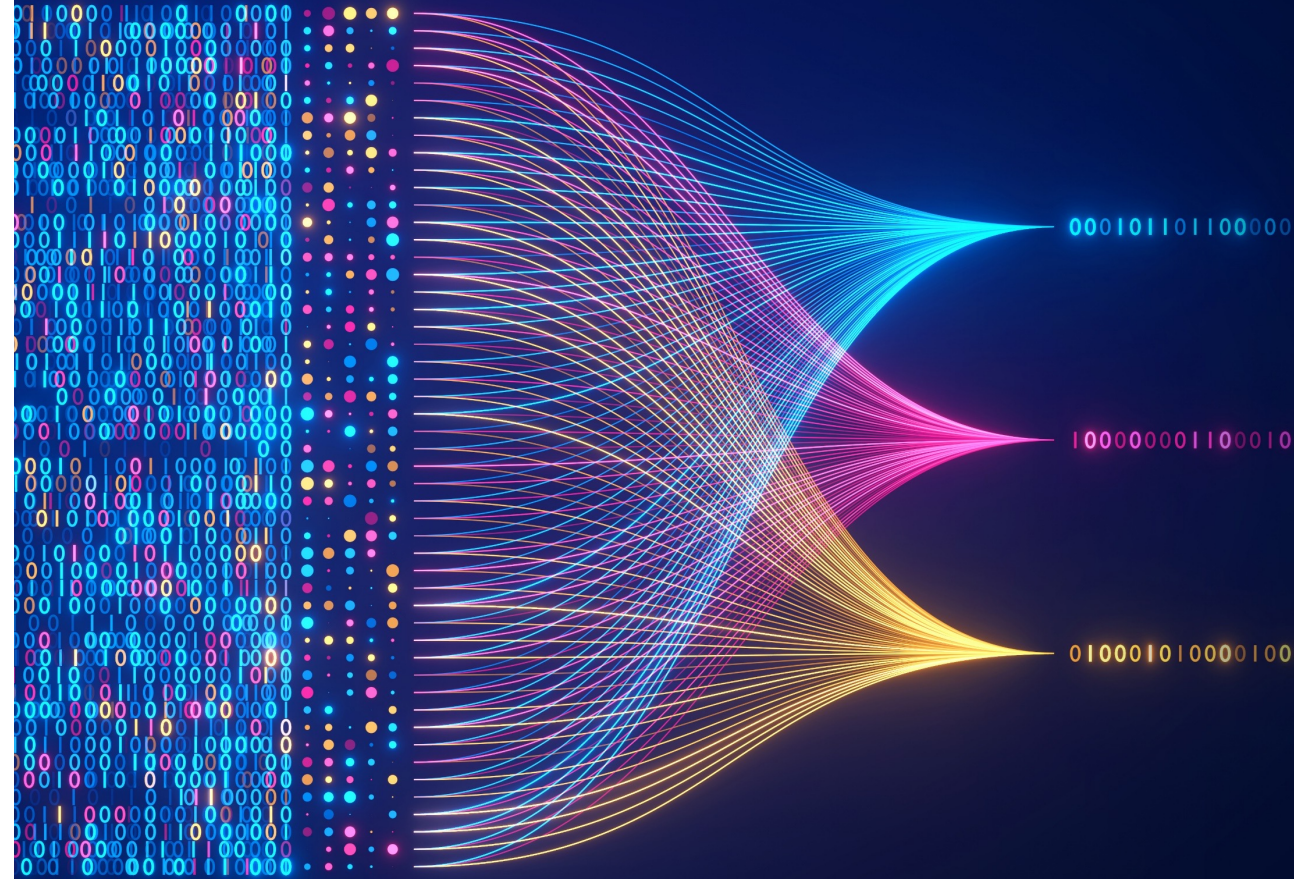
Generative AI is powered by foundation models

Pretrained on vast amounts of unstructured data

Contain large number of parameters that make them capable of learning complex concepts

Can be applied in a wide range of contexts

Customize FMs using your data for domain specific tasks





Generative AI Application



Generative AI
Application

Data
Foundation

STORAGE

GOVERNANCE
& COMPLIANCE

DATABASES,
ANALYTICS,
& DATA LAKES

DATA
INTEGRATION

What could go wrong?



Inaccuracies

Answers that are factually incorrect, irrelevant, or nonsensical, because of limitations in their training data and architecture

“The world record for crossing the English channel on foot is 15 hours”



Bias

Answers that display discriminatory behaviour resulting in prejudiced or unequal treatment of a particular group or groups

“Generate a picture of a person cleaning” returns overwhelmingly women



Copyright and IP

The rights of content creators from whom training data is collected remains uncertain and is currently being challenged

Artists suing creators of foundation models alleging the improper use of its photos



Security and privacy

Some model providers use and store data for training purposes. Entire end-to-end data pipelines require security and data privacy controls.

Engineers accidentally releasing source code by putting into a foundation model for debugging

Your data is the **differentiator**



Generic
generative AI



Generative AI that
knows your organization and your
students & constituents

STEP 1 – Your unstructured information



Documents
Web Content



Generative AI that
knows your organization and your
students & constituents

Images generated with Amazon Canvas

STEP 2 – You structured information

Democratizing Data Access



Data Bases

CRM

ERP

Legacy Systems



Generative AI that
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AWS Generative AI Stack

APPLICATIONS TO BOOST PRODUCTIVITY



Amazon Q Business
Amazon Q in QuickSight
INSIGHTS AND AUTOMATION



Amazon Q Developer
SOFTWARE DEVELOPMENT LIFECYCLE

MODELS AND TOOLS TO BUILD GENERATIVE AI APPS

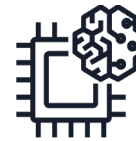


Amazon Bedrock
AMAZON MODELS | PARTNER MODELS

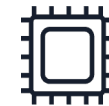
INFRASTRUCTURE TO BUILD AND TRAIN AI MODELS



Amazon SageMaker
MANAGED INFRASTRUCTURE



AWS Trainium
AWS Inferentia



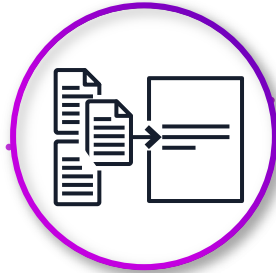
GPUs

HIGH PERFORMANCE COMPUTE

Discover



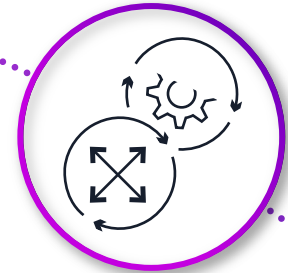
Analyze



Take action



Automate

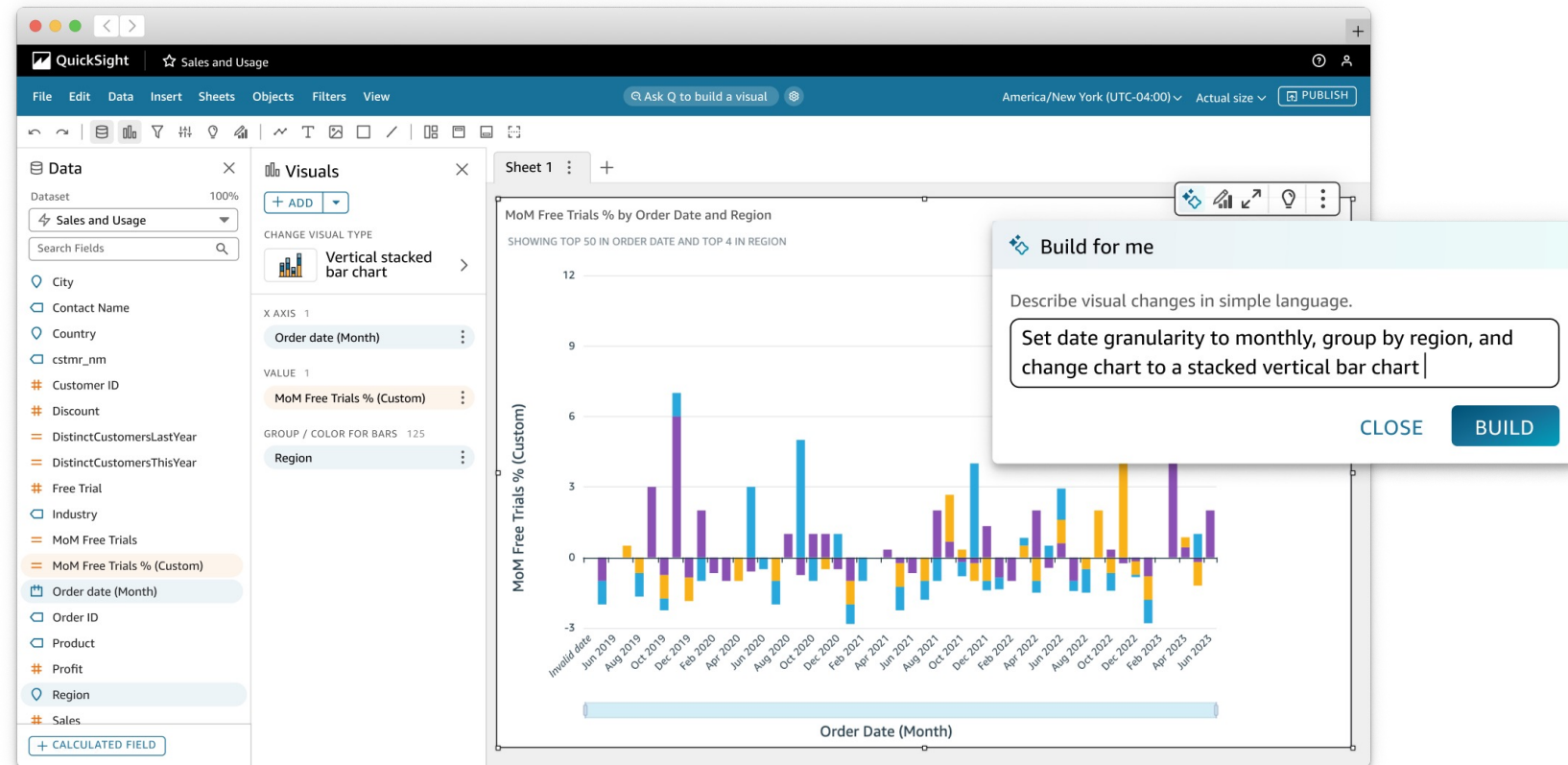


Amazon Q Business

The most capable generative AI-powered assistant for finding information, gaining insight, and taking action at work

Visual authoring in QuickSight

Use everyday language to generate and fine-tune visuals in seconds





- Data**
- Dataset: SaaS-Sales_2023
- Search Fields
- City
 - Contact Name
 - Country
 - cstmr_nm
 - Customer ID
 - Discount
 - DistinctCustomersLastYear
 - DistinctCustomersThisYear
 - Free Trial
 - Industry
 - MoM Free Trials
 - MoM Free Trials %
 - Order date
 - Order ID
 - Product
 - Profit
 - Region
 - Sales
- + CALCULATED FIELD

Sheet 1

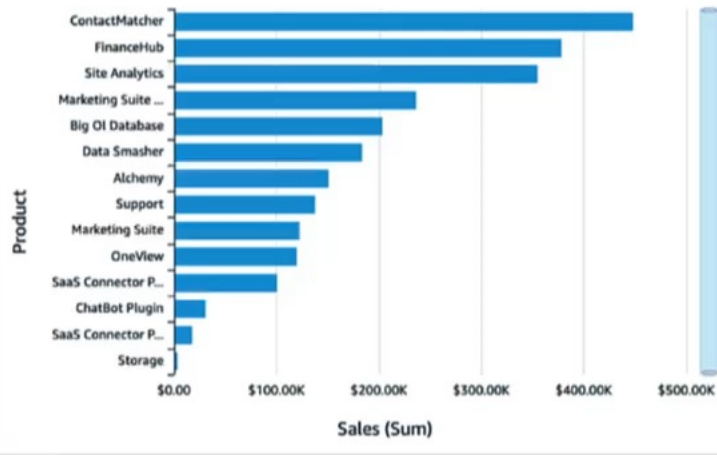
Sales

YTD sales	Sales last quarter	Month-over-month sales
\$189,948	\$81,908	Sales for Jun 2023 increased by 97.41% (\$22,188.88) from \$22,779.48 to \$44,968.36.

Quarterly sales trend



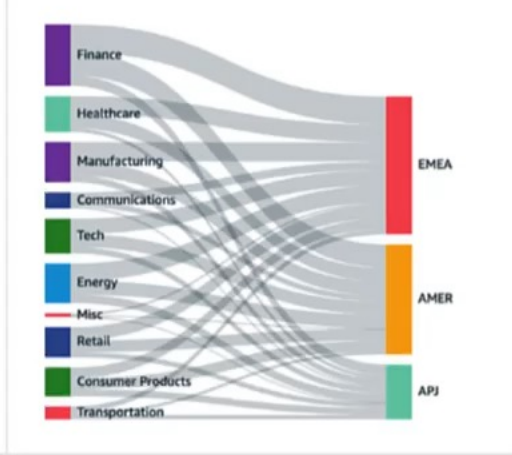
Sales by product



Sales by city



Product sales by industry



Usage

Usage	Active customers	Trial sign-ups	Month-over-month usage	Product usage by industry
MTD usage sessions	MTD	MTD	Total Usage Sessions for Jun 2023	



Amazon Bedrock

The easiest way to build and scale generative AI applications with foundation models




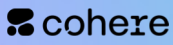









Choice of industry-leading FMs available via a single API

Customize your models using your organization's data

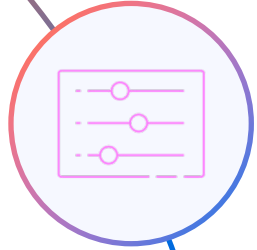
Enterprise-grade security and privacy

Amazon Bedrock

BROAD SELECTION OF FULLY MANAGED MODELS FROM LEADING AI COMPANIES

 <p>Highly efficient processing & grounded generation for long context lengths</p> <p>JAMBA</p>	 <p>Frontier intelligence and industry leading price performance</p> <p>NOVA</p>	 <p>Excels at complex reasoning, code generation, and instruction following</p> <p>CLAUDE</p>	 <p>Powering efficient, multilingual AI agents with advanced search & retrieval</p> <p>COMMAND EMBED RERANK</p>	 <p>Advanced reasoning models that solve complex problems step-by-step</p> <p>DEEPSEEK-R1</p>	 <p>High-quality video generation with natural, coherent motion & ultra-realistic details</p> <p>RAY2</p>	 <p>Advanced image and language reasoning</p> <p>LLAMA</p>
 <p>Specialized expert models for agentic reasoning and multimodal tasks</p> <p>MISTRAL MIXTRAL PIXTRAL</p>	 <p>Automate tasks, enhance creativity, and solve complex problems efficiently</p> <p>GPT-OSS-120B GPT-OSS-20B</p>	 <p>Software engineering AI for large enterprises</p> <p>Coming soon</p>	 <p>Professional-grade images with creative control, deployable at scale</p> <p>STABLE DIFFUSION STABLE IMAGE</p>	 <p>CTRL + F for video data: unlock the full potential of enterprise video assets</p> <p>MARENGO PEGASUS</p>	 <p>Purpose-built models for building and scaling AI agents across the enterprise</p> <p>PALMYRA</p>	

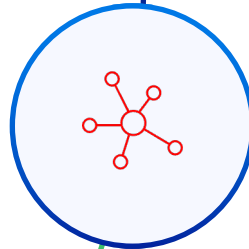
Guardrails for Amazon Bedrock



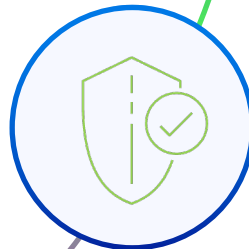
Apply guardrails to multiple foundation models and Agents for Amazon Bedrock



Configure harmful content filtering based on your responsible AI policies



Define and disallow denied topics with short natural language descriptions



Redact sensitive PII information in FM responses



Chat



Library



Apps



Feedback



Info



Log out



Amazon Q Business

Your generative AI assistant

I'm Amazon Q Business. I can help you with your company data.

This demo shows a sample HR use case for Amazon Q Business. In this demo, Maya, an HR Manager at AnyCompany, will use Amazon Q Business to:

- Quickly streamline employee onboarding
- Develop role-specific training materials in minutes instead of days
- Create support tickets, with context already filled out, to implement new HR policies

Begin Demo

Made with Storylane

Company knowledge

General knowledge



Chat with Q



Plugins

Amazon Q Business uses generative AI. You may need to verify responses for accuracy. [AWS Responsible AI Policy](#)

aws

STEP 3 – Your Business Processes



CRM, ERP, Legacy, Other Agencies or
school processes



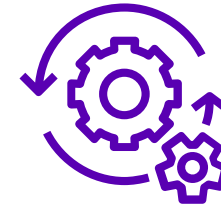
Generative AI that
knows your organization and your
students & constituents

Images generated with Amazon Canvas

Gen AI Agent?



Intelligent,
autonomous
systems



Plan, reason,
and act

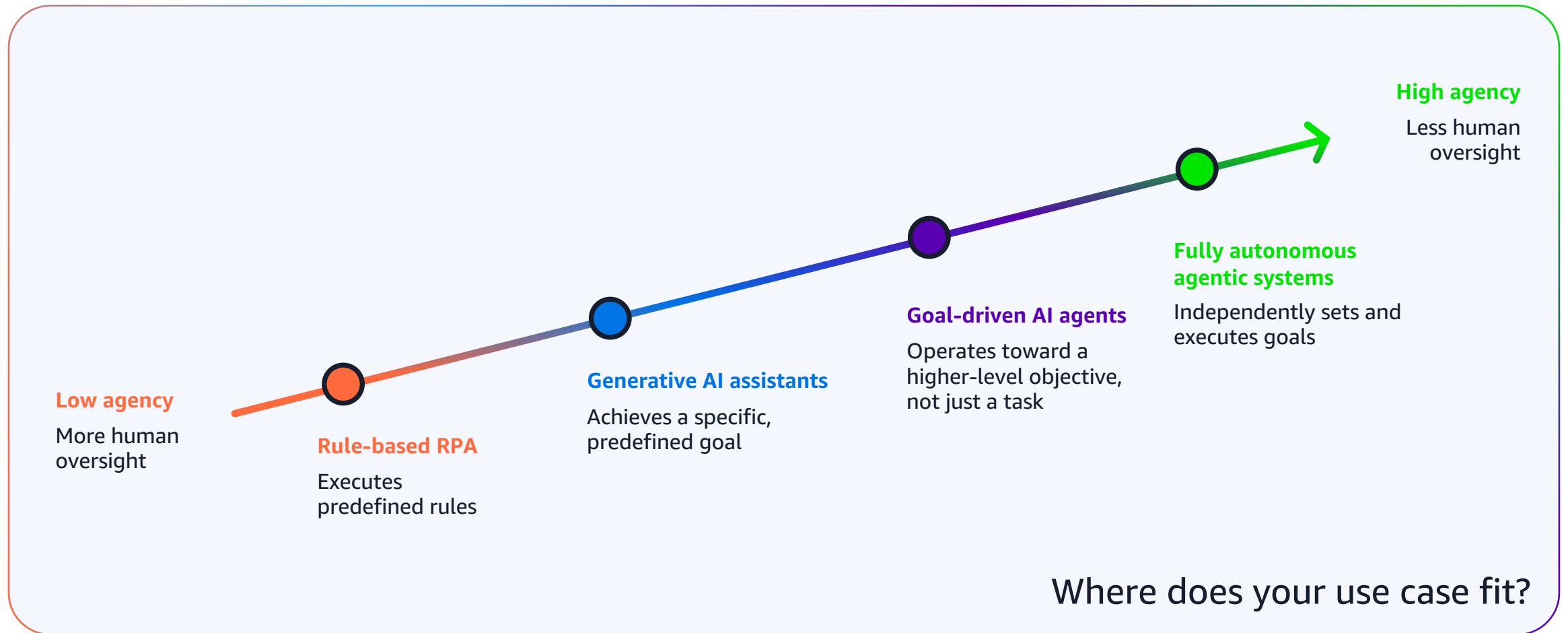


Access to
enterprise data

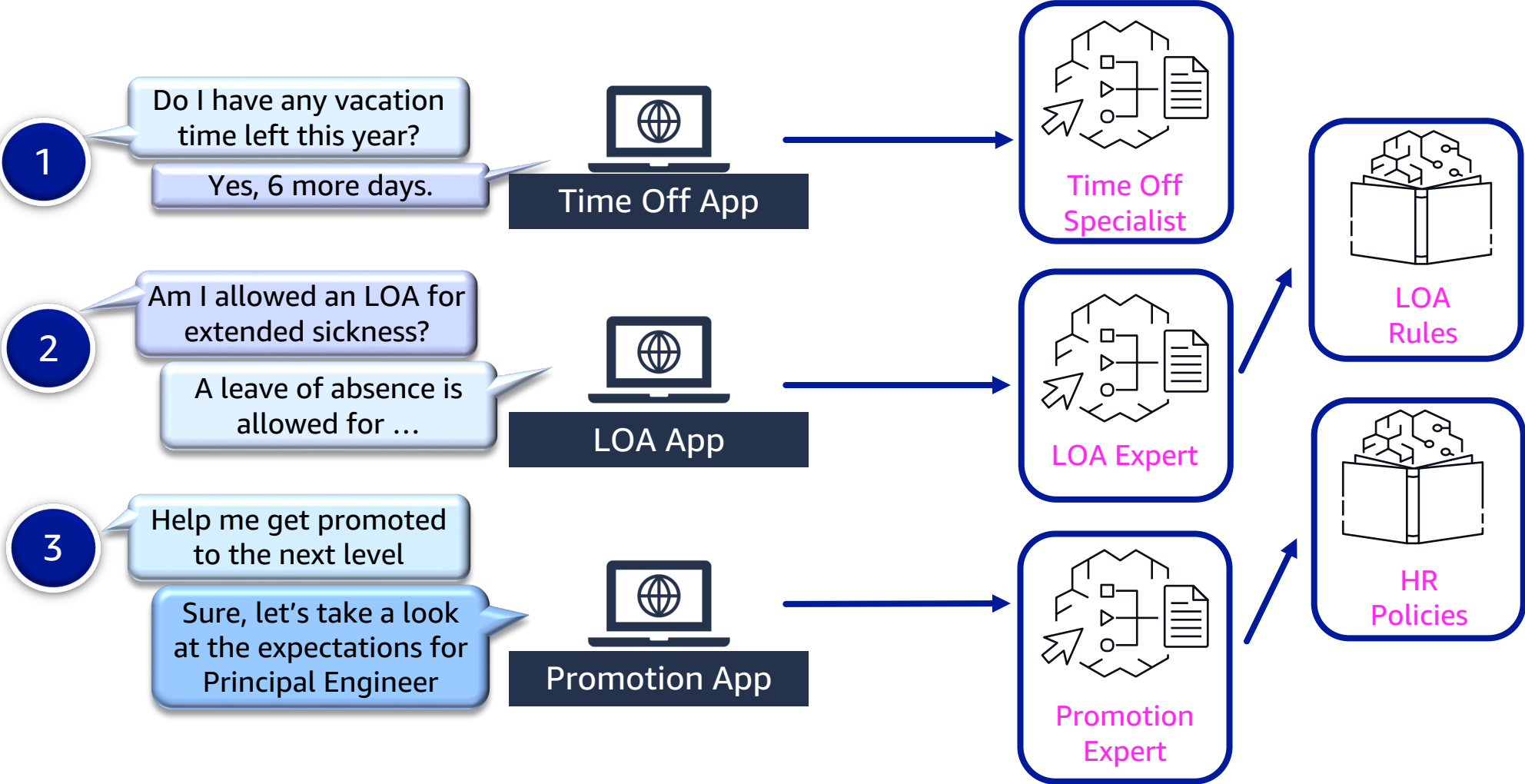


Ability to use
tools

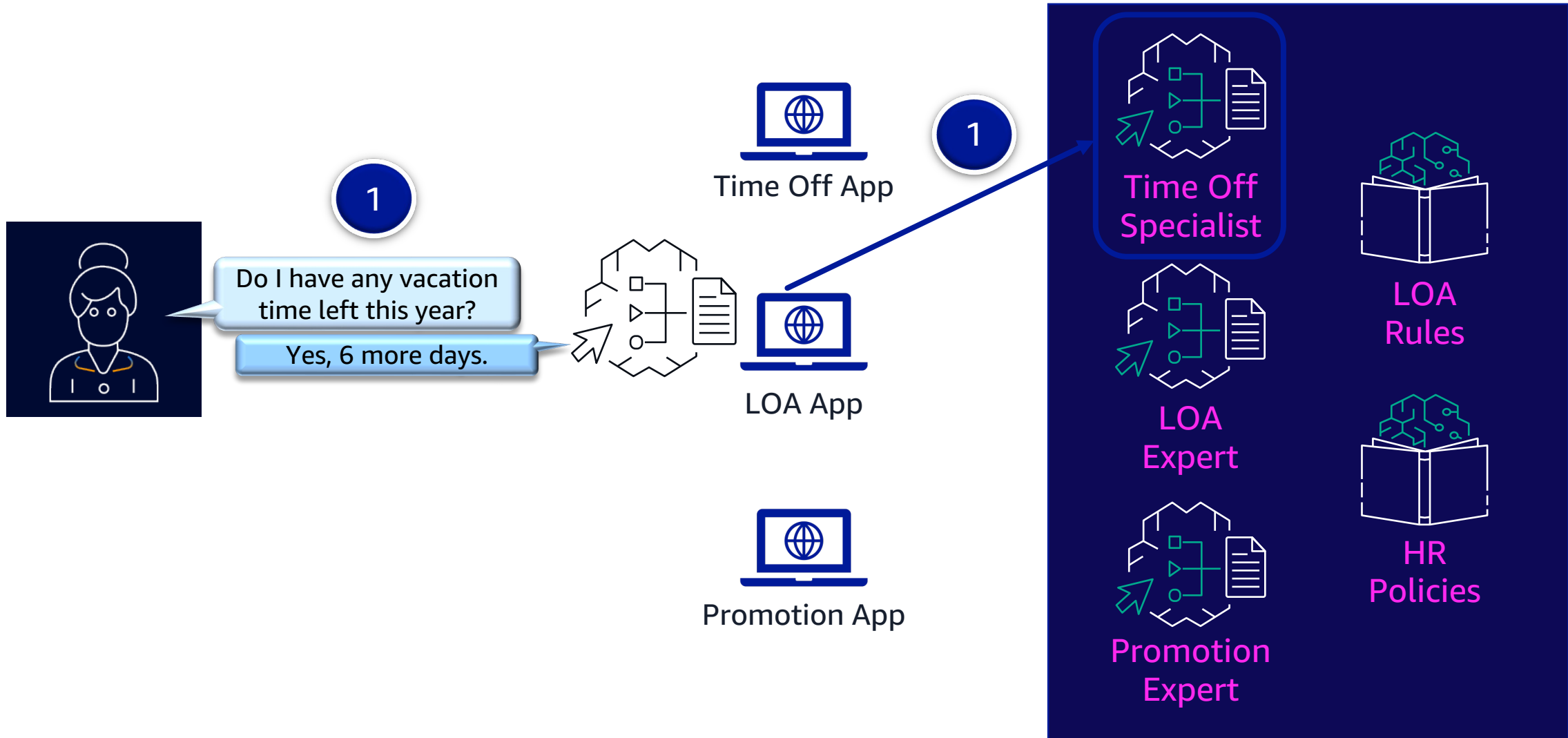
Agentic AI maturity scale – from rules to reasoning



Using multiple agents helps . . .



1. Unify constituent experience



2. Unify constituent experience



2



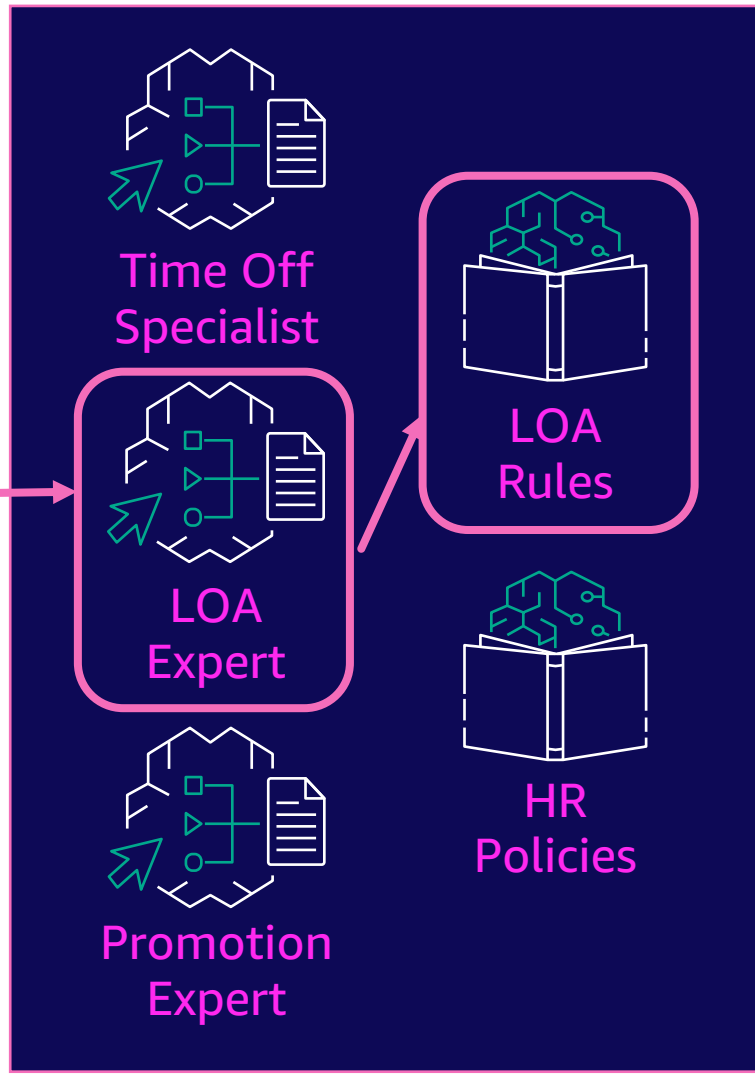
Am I allowed an LOA for extended sickness?

A leave of absence is allowed for ...



HR Agent as supervisor agent

2



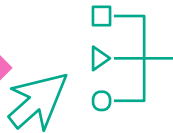
3. Unify constituent experience



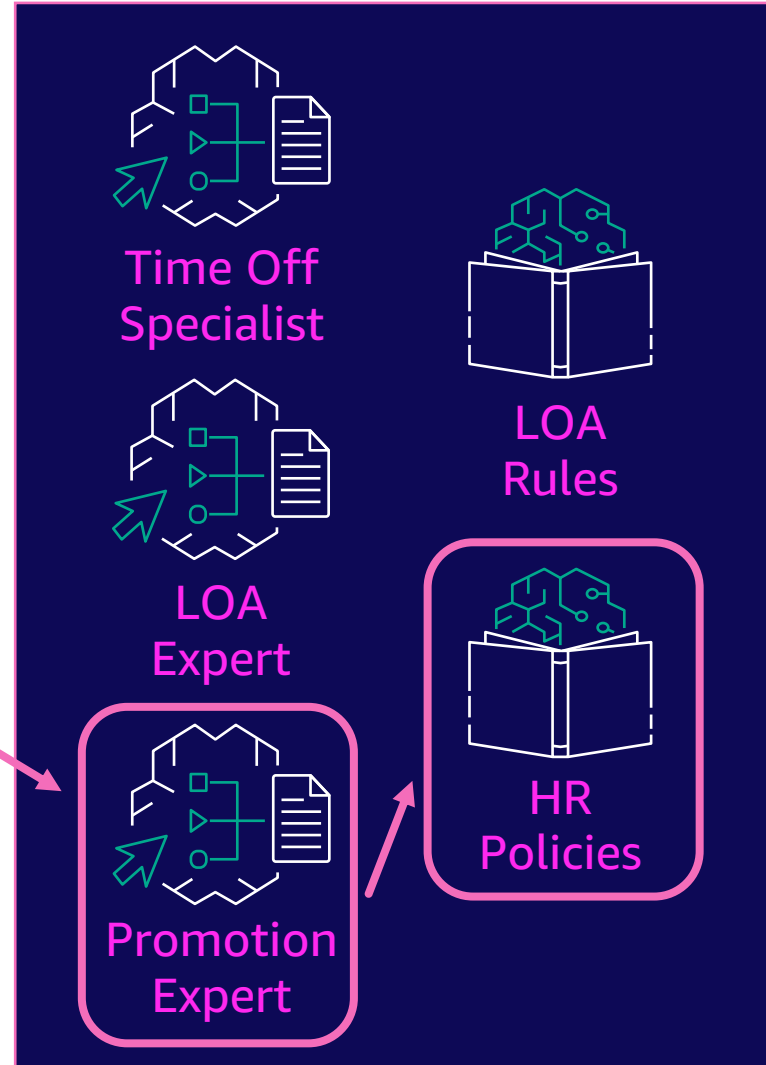
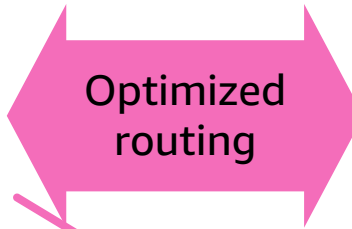
Supervisor provides one-stop shop for customers, with optimized routing and seamless conversation handling



Help me get promoted
One-stop shop
Sure, let's take a look at the expectations for Principal Engineer



HR Agent as supervisor agent



Intelligent Contact Centers

Engage citizens and drive improvements in customer satisfaction

- Improve contact center agent effectiveness with real-time translation and decision support using Amazon Connect and Contact Center Intelligence
- Analyze call and text interactions with citizens to spot issues and trends and drive improvement
- Improve self service



Using AI to improve agent efficiency

“During peak hours, previously you’re 45-50 minutes on hold, and now that’s has been reduced to about three and a half minutes. One of the other benefits we’ve gotten from Amazon Connect is sentiment analysis. On a call, we get real-time feedback on whether or not the customer was happy, frustrated, or angry...”

—Benny Chacko, Deputy General – LA County Internal Services Department



AI Assisted Financial Aid: Highline College

- Quicker and more transparent way for students to access their information—anywhere and anytime.
- Drastically reduced the manual burden on the financial aid department,
- lowered the number of emails, calls, and visits about an applicant's status by 75%



Transcript Processing: Illinois Tech

60,000 pages of international academic transcripts required review annually.
Automating transcript processing for faster student record updates

Converting international grades to US equivalents

Enhancing the user interface to visualize extracted information

Integrating insights with the university's CRM system for quicker academic data handling and reduced manual labor

Providing multilingual support for international students





My Insurance Portal

Welcome back, Jane

Quick Actions

File a Claim

Submit a new insurance claim

Make a Payment

Pay your premium or set up automatic payments

Update Details

Update your personal details

Contact Support

Get help with your insurance needs

My Policies

[View all policies](#)

Policy Number	Type	Effective Date	Status	Premium
POL-123XYZ	BUSINESS OWNER	January 1, 2025	ACTIVE	5000

Recent Claims

[View all claims](#)

Claim Number	Status	Policy	Claim Started
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You don't have any recent claims.



Thank you!

Maria Fassinger

Solutions Architect
fascmari@amazon.com

10:15am – 11:15am

200
level

**Practical AI for
Public Sector**

Explore Generative
AI's potential in
public sector and
higher education

Please complete the survey
for this session



Track : AI/ML

**Session: Practical AI for
Public Sector**