Why RISE on AWS

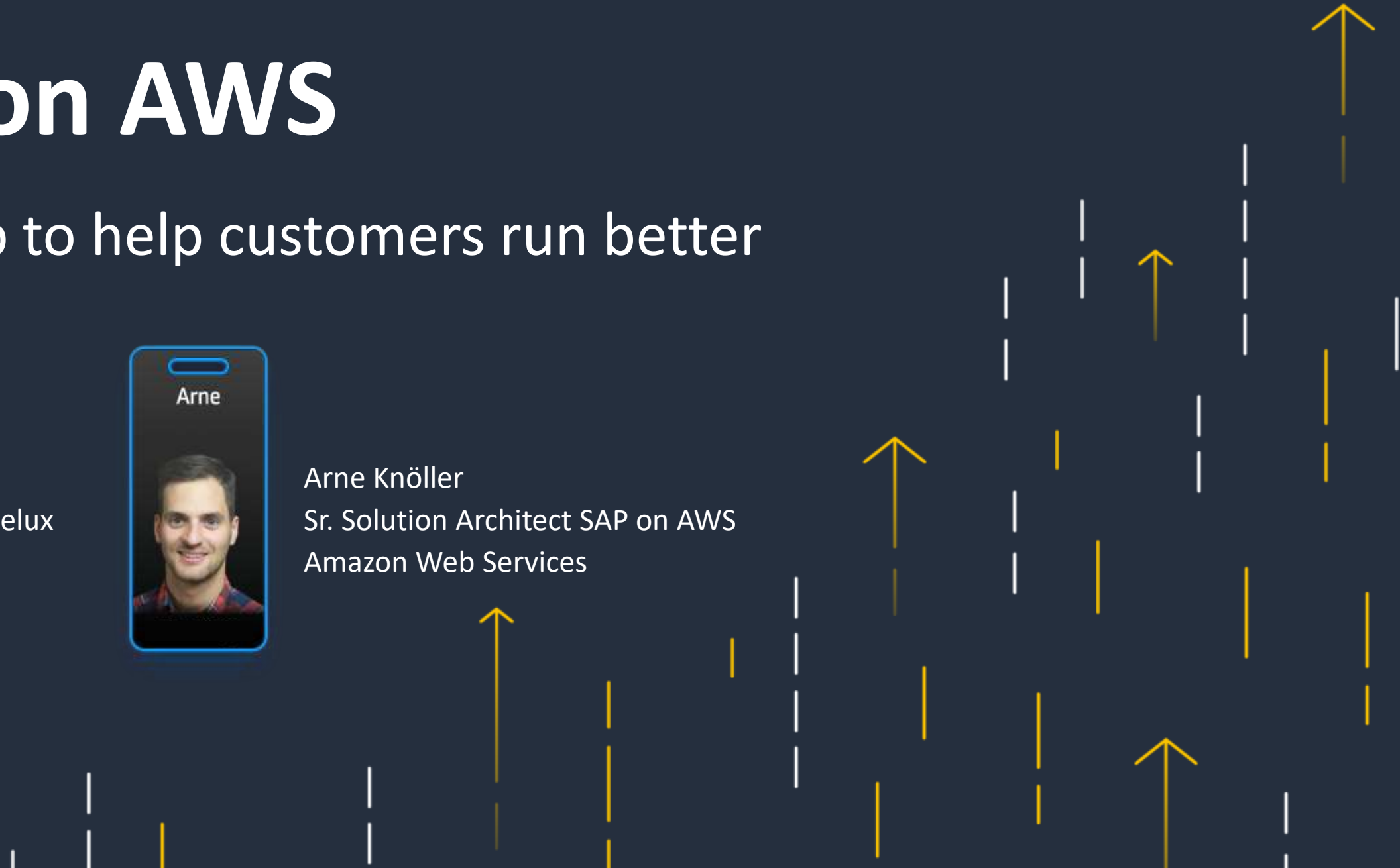13 year partnership to help customers run better

Wouter van Hertum
Head of SAP on AWS Benelux
Amazon Web Services

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Sr. Solution Architect SAP on AWS
Amazon Web Services

Monday, November 8, 2021

Content

- Intro to Amazon and AWS
- Why companies are moving SAP to the cloud
- Why RISE on AWS
  - Experience
  - Reliability and Performance
  - Innovation and Global Footprint
  - RISE Funding
  - Partner Ecosystem
- Wrap up and Q&A

aws

Intro to Amazon and AWS

Our mission

To be Earth's most
customer-centric company

Where innovation begins

Start with the customer
and work backwards

aws

amazon go
No Lines.
No Checkout.
(No, Seriously.)

1994	Founded
1995	Amazon.com
1998	CDs & DVDs
2006	AWS
2007	Kindle
2011	Video
2012	Groceries
2014	Alexa/Echo
2015	Bookstores
2017	Go

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Invent and simplify

Leaders expect and require innovation and invention from their teams and always find ways to simplify. They are externally aware, look for new ideas from everywhere, and are not limited by "not invented here". As we do new things, **we accept that we may be misunderstood for long periods of time.**

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Willingness to be misunderstood for a long time…
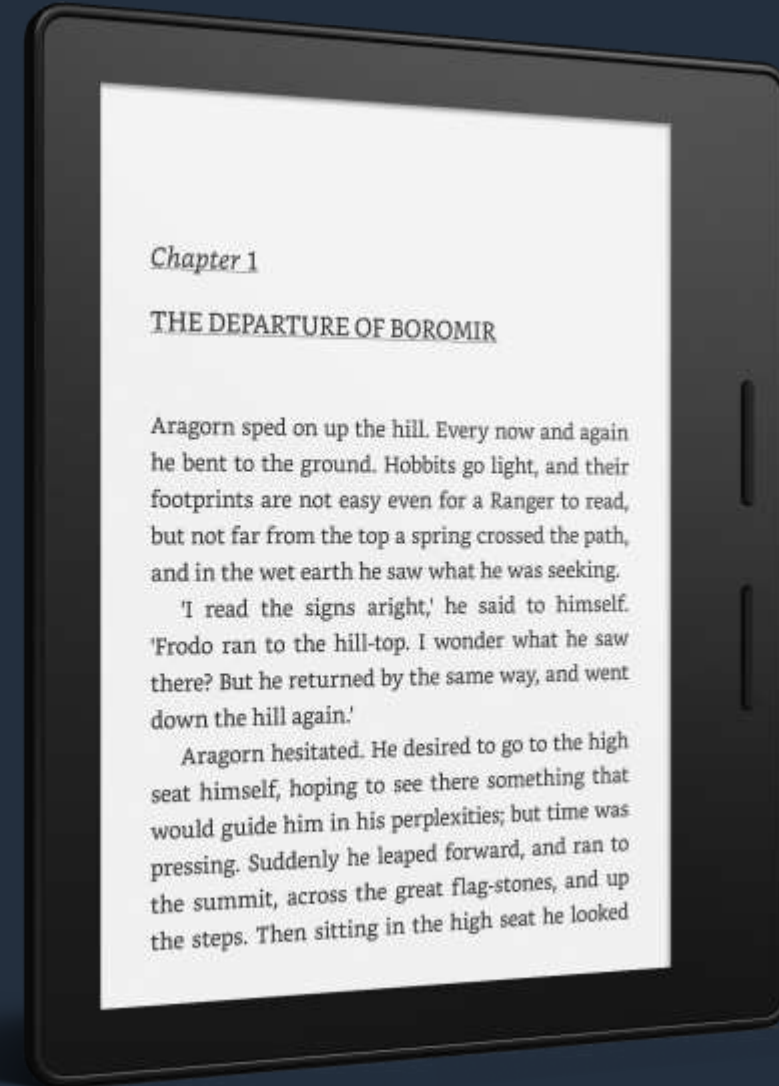
107
Price reductions (since '06)

2757
New services and features introduced in 2020

Millions of
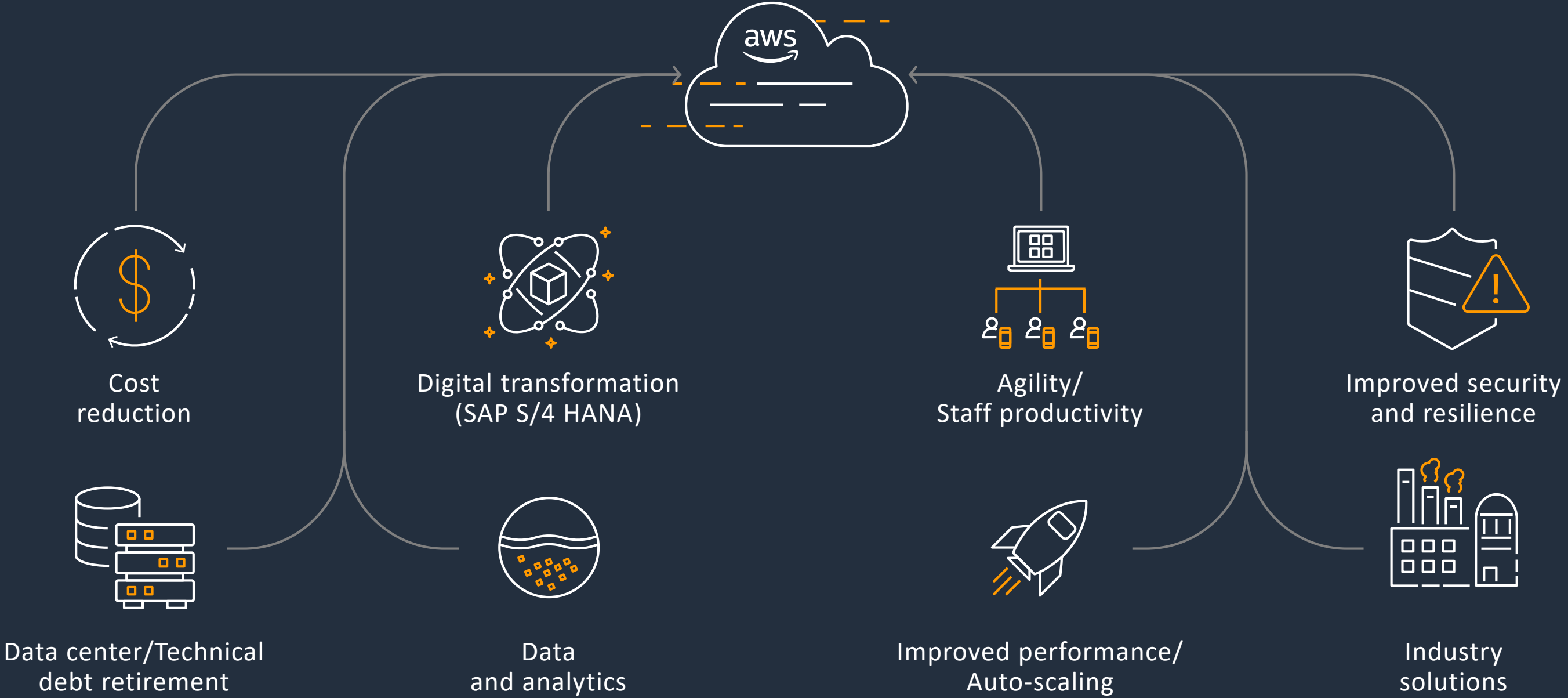Monthly active customers

Pretty good bet

Breadth and depth of services (200+)

ANALYTICS

ANALYTICS
- DATA EXCHANGE
- DATA LAKE
- DATA PIPELINES
- DATA WAREHOUSE
- ELASTICSEARCH

STREAMING
- ETL
- HADOOP/SPARK
- INTERACTIVE SQL QUERIES
- VISUALIZATIONS

AR + VR
- AR/VR EXPERIENCES

AWS COST MANAGEMENT
- ANALYZE AWS COSTS
- COST & USAGE BUDGETS
- COST & USAGE REPORTS
- RESERVED INSTANCES REPORTING

APPLICATION INTEGRATION
- EMAIL
- MESSAGE BROKER
- QUEUEING & NOTIFICATIONS
- SEARCH
- TRANSCODING
- WORKFLOW

BUSINESS APPLICATIONS
- EMAIL & CALENDARING
- ONLINE MEETINGS
- SHARING & COLLABORATION
- UNIFIED COMMUNICATIONS
- VOICE-ENABLED WORKPLACE

BLOCKCHAIN
- BLOCKCHAIN TEMPLATES
- LEDGER DATABASE
- MANAGED BLOCKCHAIN

CUSTOMER ENGAGEMENT
- CONTACT CENTER
- EMAIL TARGETING
- USER ENGAGEMENT ACROSS CHANNELS

COMPUTE

COMPUTE
- AUTO SCALING
- BATCH JOBS
- EVENT-DRIVEN SERVERLESS COMPUTING
- INSTANCE TYPES
- MANAGED VIRTUAL PRIVATE SERVERS
- MANAGED REPOSITORY FOR SERVERLESS APPS
- RUN & MANAGE WEB APPS
- SERVERLESS COMPUTE
- VIRTUAL SERVERS

CONTAINERS
- CONTAINER SERVICE
- MANAGED KUBERNETES
- STORE & RETRIEVE DOCKER IMAGES

DATABASE

RELATIONAL DATABASES
- HIGH-PERFORMANCE RELATIONAL DATABASE BUILT FOR THE CLOUD
- MANAGED MARIADB
- MANAGED MYSQL
- MANAGED ORACLE
- MANAGED POSTGRESQL
- MANAGED SQL SERVER

PURPOSE-BUILT DATABASES
- DOCUMENT DATABASE
- GRAPH DATABASE
- IN-MEMORY CACHING
- KEY-VALUE STORE DATABASE
- LEDGER DATABASE
- TIME SERIES DATABASE

DEVELOPER TOOLS
- ANALYZE & DEBUG
- APPLICATION LIFECYCLE MANAGEMENT
- AUTHORING
- BUILD & TEST
- CONTAINERS
- DEVOPS RESOURCE MANAGEMENT
- ONE-CLICK APP DEVELOPMENT
- PATCHING
- PIPELINE ORCHESTRATION
- RESOURCE TEMPLATES
- TRIGGERS

END USER COMPUTING
- APP STREAMING
- DESKTOP COMPUTING
- MOBILE ACCESS
- STORAGE & COLLABORATION

HYBRID ARCHITECTURE
- AWS SERVICES ON PREMISES
- DATA INTEGRATION
- INTEGRATED DEVICES & EDGE SYSTEMS
- INTEGRATED IDENTITY & ACCESS
- INTEGRATED NETWORKING
- INTEGRATED RESOURCE & DEPLOYMENT MANAGEMENT
- VMWARE CLOUD ON AWS

GAME TECH
- CROSS-PLATFORM 3D GAME ENGINE
- GAME SERVER HOSTING

INFRASTRUCTURE
- AVAILABILITY ZONES
- CUSTOM HARDWARE
- DATA CENTER INFRASTRUCTURE
- GLOBAL NETWORK BACKBONE
- POINTS OF PRESENCE
- POWER INFRASTRUCTURE
- REGIONS

INTERNET OF THINGS (IOT)
- RULES ENGINE
- DEVICE ANALYTICS
- DEVICE GATEWAY
- DEVICE SDK
- DEVICE SHADOWS
- EVENT DETECTION & RESPONSE
- LOCAL COMPUTE
- LOCAL DATA COLLECTION
- MANAGEMENT & SECURITY
- MICROCONTROLLER OPERATING SYSTEM
- REGISTRY
- VISUAL APPLICATIONS DEVELOPMENT

MACHINE LEARNING

ML FRAMEWORKS & SAGEMAKER
- DEEP LEARNING AMIs & CONTAINERS
- HARDWARE ACCELERATION
- ML AT THE EDGE
- TENSORFLOW, PYTORCH, MXNET
- AUTOMATIC MODEL TUNING
- DATA LABELING
- HOSTED NOTEBOOKS
- ML MARKETPLACE
- MODEL HOSTING
- MODEL OPTIMIZATION
- MODEL TRAINING

AI SERVICES
- CHATBOTS
- ENTITY EXTRACTION
- FACE ANALYTICS
- FACE SEARCH
- FORECASTING
- IMAGE LABELING
- NATURAL LANGUAGE PROCESSING
- PERSONALIZATION & RECOMMENDATION
- SENTIMENT ANALYSIS
- SPEECH TRANSCRIPTION
- TEXT & DATA EXTRACTION
- TEXT TO SPEECH
- TRANSLATION
- VIDEO & IMAGE ANALYSIS
- CONTENT MODERATION
- PRE-BUILT ALGORITHMS
- TOPIC MODELING
- DEEP LEARNING MODELS
- REINFORCEMENT LEARNING
- SPOT INSTANCES
- BATCH PREDICTIONS
- REAL-TIME PREDICTIONS

MANAGEMENT & GOVERNANCE
- ACTIVITY & API USAGE TRACKING
- CHATBOT
- CONFIGURATION TRACKING
- GOVERNANCE
- INVENTORY TRACKING
- LICENSE MANAGER
- MANAGE POLICIES
- MANAGE RESOURCES
- MONITORING
- PROVISIONING
- RESOURCE TEMPLATES
- SECURITY RECOMMENDATIONS
- SERVER MANAGEMENT
- SERVICE CATALOG
- SYSTEMS MANAGER

MARKETPLACE
- ANALYTICS
- DATA PRODUCTS
- DATABASES
- DEVOPS
- IOT
- MACHINE LEARNING
- NETWORKING
- OPERATING SYSTEMS
- SECURITY
- STORAGE

MEDIA SERVICES
- LIVE VIDEO TRANSPORT
- MEDIA STORAGE
- TRANSCODING
- VIDEO ORIGINATION & PACKAGING
- VIDEO PERSONALIZATION & MONETIZATION
- VIDEO PROCESSING & DELIVERY
- VIDEO STREAMING ANALYSIS

MIGRATION & TRANSFER
- APPLICATION MIGRATION
- DATABASE MIGRATION
- EXABYTE-SCALE MIGRATION
- ONLINE DATA TRANSFER
- SCHEMA CONVERSION
- SERVER MIGRATION
- TRANSFER FOR SFTP

MOBILE
- API GATEWAY
- DEVELOPMENT FRAMEWORK
- IDENTITY
- MOBILE ANALYTICS
- MOBILE APP TESTING
- SINGLE INTEGRATED CONSOLE
- SYNC
- TARGETED PUSH NOTIFICATIONS

NETWORKING & CONTENT DELIVERY
- APPLICATION DELIVERY
- DEDICATED NETWORK CONNECTION
- DOMAIN NAME SYSTEM
- LOAD BALANCING
- MONITOR APIS
- MONITOR MICROSERVICES
- NETWORK TOPOLOGY
- NETWORKING HUB
- PRIVATE CONNECTION TO APPS
- SCALE VPC & ACCOUNT CONNECTIONS
- SERVICE DISCOVERY
- VIRTUAL PRIVATE CLOUD

ROBOTICS
- CLOUD ROBOTICS

SATELLITE
- SATELLITE OPERATIONS

SECURITY, IDENTITY, & COMPLIANCE
- ACCESS CONTROL
- ASSESSMENT & REPORTING
- CONFIGURATION COMPLIANCE
- DATA PROTECTION
- DDOS PROTECTION
- IDENTITY MANAGEMENT
- KEY MANAGEMENT & STORAGE
- MONITORING & LOGGING
- RESOURCE MANAGEMENT
- THREAT DETECTION
- WEB APPLICATION FIREWALL

STORAGE
- ARCHIVE STORAGE
- BACKUP & RESTORE
- BLOCK STORAGE
- DATA TRANSFER
- EDGE PROCESSING & COMPUTING
- FILE STORAGE
- HIGH-PERFORMANCE FILE SYSTEM
- HYBRID CLOUD STORAGE
- OBJECT STORAGE
- WINDOWS FILE SYSTEM

CUSTOMER ENABLEMENT
- ACCOUNT MANAGEMENT
- DASHBOARD PERSONALIZATION
- ENTERPRISE SUPPORT
- EXPERTS MARKETPLACE
- OPTIMIZATION GUIDANCE
- PARTNER ECOSYSTEMS
- PROFESSIONAL SERVICES
- SECURITY & BILLING REPORTS
- SOLUTIONS MANAGEMENT
- TRAINING & CERTIFICATION

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Why companies are moving SAP to the cloud

Business drivers for migrating SAP to the cloud

Cost
reduction

Digital transformation
(SAP S/4 HANA)

Agility/
Staff productivity

Improved security
and resilience

Data center/Technical
debt retirement

Data
and analytics

Improved performance/
Auto-scaling

Industry
solutions

Is RISE with SAP the right choice for you?

What is RISE with SAP?

RISE with SAP is an S/4HANA offering that includes software licensing, cloud infrastructure, and managed services in a single contract from SAP.

RISE with SAP vs. SAP on AWS Native

	RISE with SAP	SAP on AWS Native
Migration approach	Short-term S/4HANA migration required	Lift and shift, move to suite on HANA, or migrate to S/4HANA
Management	SAP manages infrastructure and software	Customer/ partner manages infrastructure and software
Extensibility	Extend with SAP Business Technology Platform (more BTP services on AWS than all other providers combined)	Extend by natively integrating with all 200+ AWS services
Compliance	General compliance frameworks	Industry and country-specific compliance frameworks
Pricing	Includes Infrastructure, Software Subscription, Software Support and Technical Managed Services.	Includes Infrastructure; bring your own license and support for SAP app, Database and OS/ work with AWS Partners
Optimization	SAP landscape set in the RISE contract with options to ramp the usage tiers during the term.	Maximum flexibility to optimize your architecture and operations, and take advantage of commercial programs/ price reductions.
*Additional Cost for Disaster Recovery, Digital Access (Data Blocks), Customer Evaluation System, 99.9% SLA, Additional Storage and Usage tier		

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Why RISE with SAP on AWS?

Experience

Tap into AWS's 10+ years supporting mission-critical SAP workloads to accelerate your success

Reliability and Performance

Run critical SAP workloads on the world's most secure, extensive, and reliable global cloud infrastructure

Innovation and Global Footprint

Extend to the SAP Business Technology Platform in 10 AWS Regions globally to modernize and innovate your core business processes

Partner Ecosystem

Tap into the largest SAP cloud ecosystem for migration, transformation, managed services, and software solutions purpose-built for SAP customers

RISE Funding

Offset migration costs with RISE funding from AWS

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Experience

13 years of customer-obsessed innovation

An unparalleled track record of **industry firsts** for SAP in the cloud

2020
Wizard-based
deployment automation

2019
High Memory Instances
18/24TB

2017
High Memory Instances
4TB

2016
Purpose-built
infrastructure for SAP
HANA

2013
SUM Database
Migration Option

2013
SAP NS2 on AWS
GovCloud

2012
Customers leverage
AWS for production SAP
deployments

2021
Automated SAP
software install
and HA
configuration

2008
SAP starts
using AWS

R5b

HMI

HMI

X1

2020
R5B: up to 260k
IOPS per instance

2011
AWS and SAP certify
infrastructure

2012
SAP HANA in
production

2013
AWS SAP Partner Competency
Program

2014
Deployment automation for
SAP HANA

2017
ProServe SAP
Specialty Practice

2018
High Memory
Instances 6/9/12TB

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5000+ SAP customers across industries and geos trust AWS

HEALTHCARE & LIFE SCIENCES
moderna · Cerner · Bayer · Thermo Fisher SCIENTIFIC · Bristol Myers Squibb · vyaire MEDICAL · CHANGE HEALTHCARE

ENERGY & NATURAL RESOURCES
bp · PHILLIPS 66 · ENGIE · seaco · Contact Origin · HUDBAY · Northern Gas Networks · PETRONAS · TC Energy · TIDEWATER · Newmont · e·on

RETAIL & CONSUMER GOODS
PELOTON · Zulily · UNIQLO · Fender · Zappos.com · Delivery Hero · zalando · BOSE

MEDIA & ENTERTAINMENT
deluxe · MGM · NHL · LIONSGATE · twitch · LIVE NATION · HEARST · RAZER · Fairfax Media

PUBLIC SECTOR & DEFENSE
NS2 · LOCKHEED MARTIN · US NAVY · MAGELLAN AEROSPACE · Sab · CAMBRIDGE UNIVERSITY PRESS · HOOPP

AUTOMOTIVE & TRANSPORTATION
VW · LAMBORGHINI · LAND·ROVER · TATA MOTORS Connecting Aspirations · FCA FIAT CHRYSLER AUTOMOBILES · KARMA · DB · BMW GROUP · JAGUAR

MANUFACTURING & INDUSTRIAL
SIEMENS · GE · INVISTA · Schneider Electric · KOMATSU · Garrett ADVANCING MOTION · HOYA · JABIL · SUMITOMO CHEMICAL

AGRICULTURE, CPG, & FOOD/BEV
Dole · rbi restaurant brands international · Kellogg's · SWIRE COCA-COLA · TATA CONSUMER PRODUCTS · Royal Flora Holland · CHS · Ferrara · GROWMARK · CCI · Sysco · E&J Gallo Winery

PROFESSIONAL/ FINANCIAL SERVICES
Liberty Mutual · MassMutual · pitney bowes · Edelweiss · nationale nederlanden · CITCO · medibank · usg people · XINJA

TECHNOLOGY
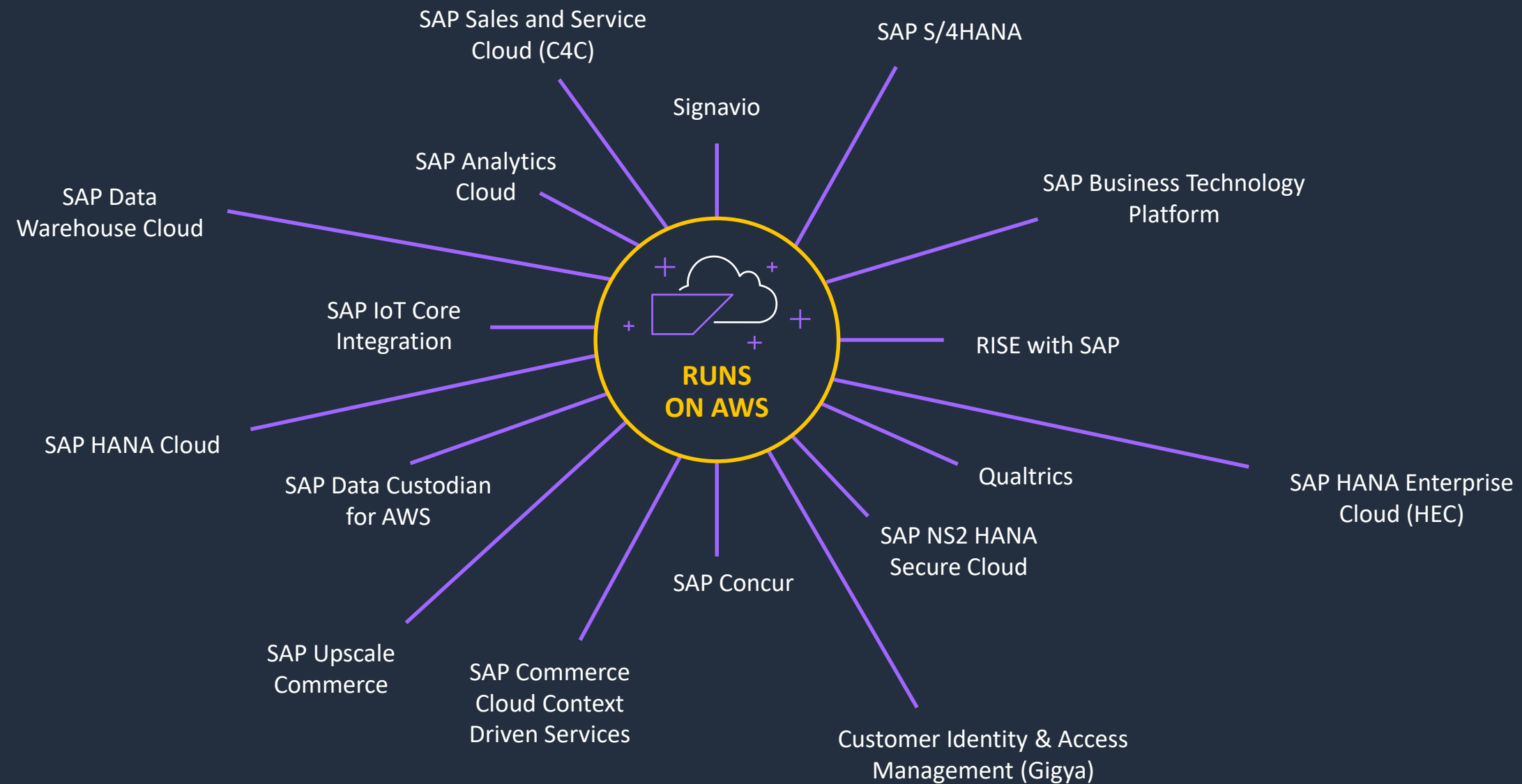Infosys · lemongrass · HP, Inc. · TIBCO · CSS CORP · L&T Infotech · msg · bizzy digital · SAP

aws

SAP's innovation platform of choice

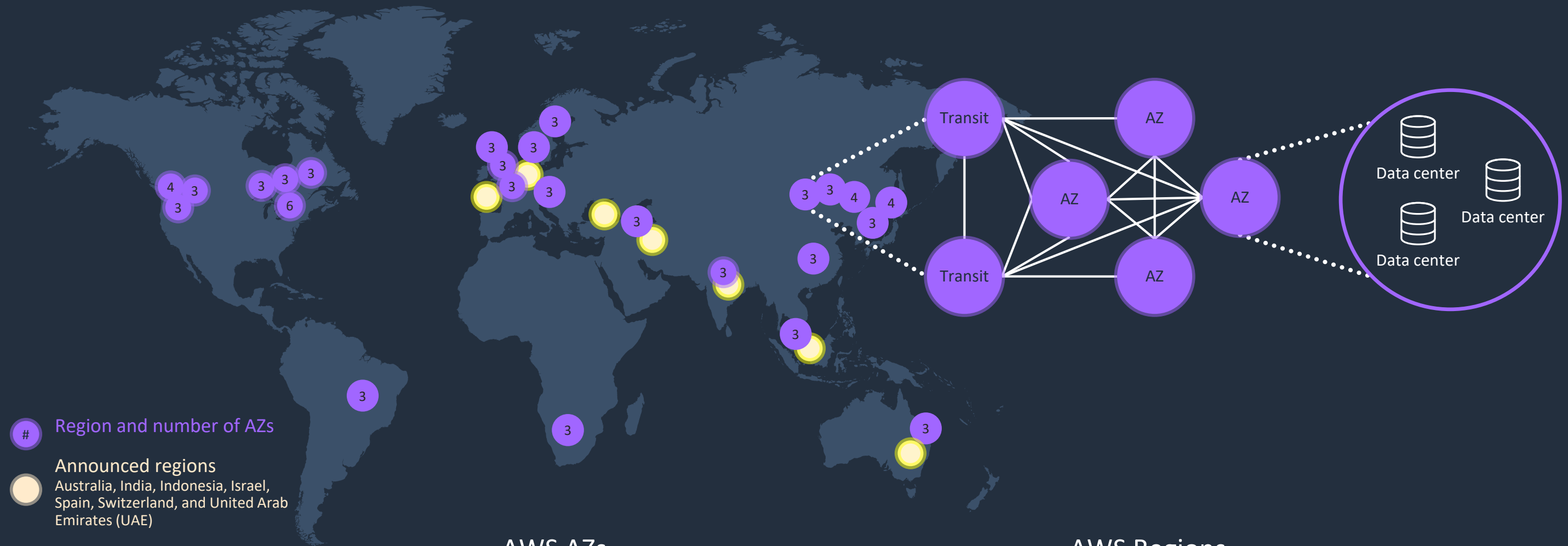SAP has been using AWS since 2008 and runs most of its customer facing offerings on AWS today:

SAP Sales and Service Cloud (C4C)

SAP S/4HANA

Signavio

SAP Analytics Cloud

SAP Business Technology Platform

SAP Data Warehouse Cloud

RUNS ON AWS

SAP IoT Core Integration

RISE with SAP

SAP HANA Cloud

SAP Data Custodian for AWS

Qualtrics

SAP HANA Enterprise Cloud (HEC)

SAP NS2 HANA Secure Cloud

SAP Concur

SAP Upscale Commerce

SAP Commerce Cloud Context Driven Services

Customer Identity & Access Management (Gigya)

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Analysts also notice our partnership

Source: ISG Research 2018

Source: ISG Research 2019

Reliability and Performance

Uncompromising approach to infrastructure design

AWS offers **2x more regions with multiple AZs** than the next closest cloud provider

Region and number of AZs

Announced regions
Australia, India, Indonesia, Israel, Spain, Switzerland, and United Arab Emirates (UAE)

25 Regions | **81** AZs

AWS AZs

AZs consist of one or more discrete data centers, each with redundant power, networking, and connectivity, housed in separate facilities.

AWS Regions

AWS Regions are physical locations in the world where we have multiple AZs

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DR Options for RISE with SAP on AWS

Short range DR

DR within the same AWS region

RTO: 12h
RPO: 0
(optional: RTO: 4h)

Long range DR

DR across AWS regions

RTO: 12h
RPO: 30min
(optional: RTO: 4h)

Only on AWS, SAP provides an RPO of 0 for short range DR!

Source: SAP Disaster Recover Service - Service Description Documentation

Why Recovery Point Objective (RPO) = 0 matters

Innovation and Global Footprint

SAP Business Technology Platform on AWS

Regions of BTP by provider

Pie chart segments: 9 (AWS, orange), 6 (light blue), 1 (blue), 1 (green)

Legend: AWS ■ ■ other hyperscalers
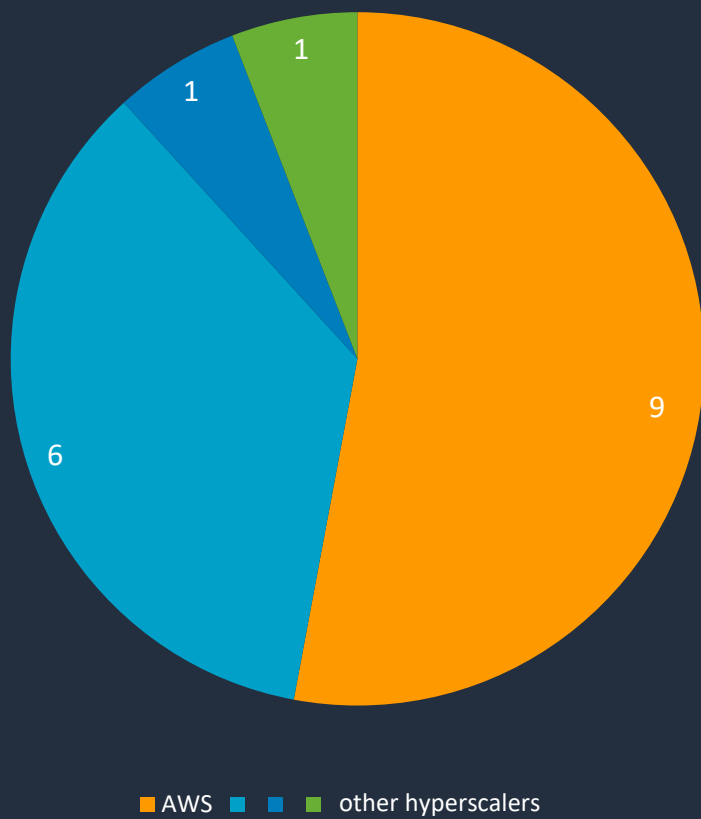
BTP services by provider

Bar chart values: AWS 82 (orange), 48 (light blue), 25 (blue), 13 (green)

Legend: AWS ■ ■ other hyperscalers
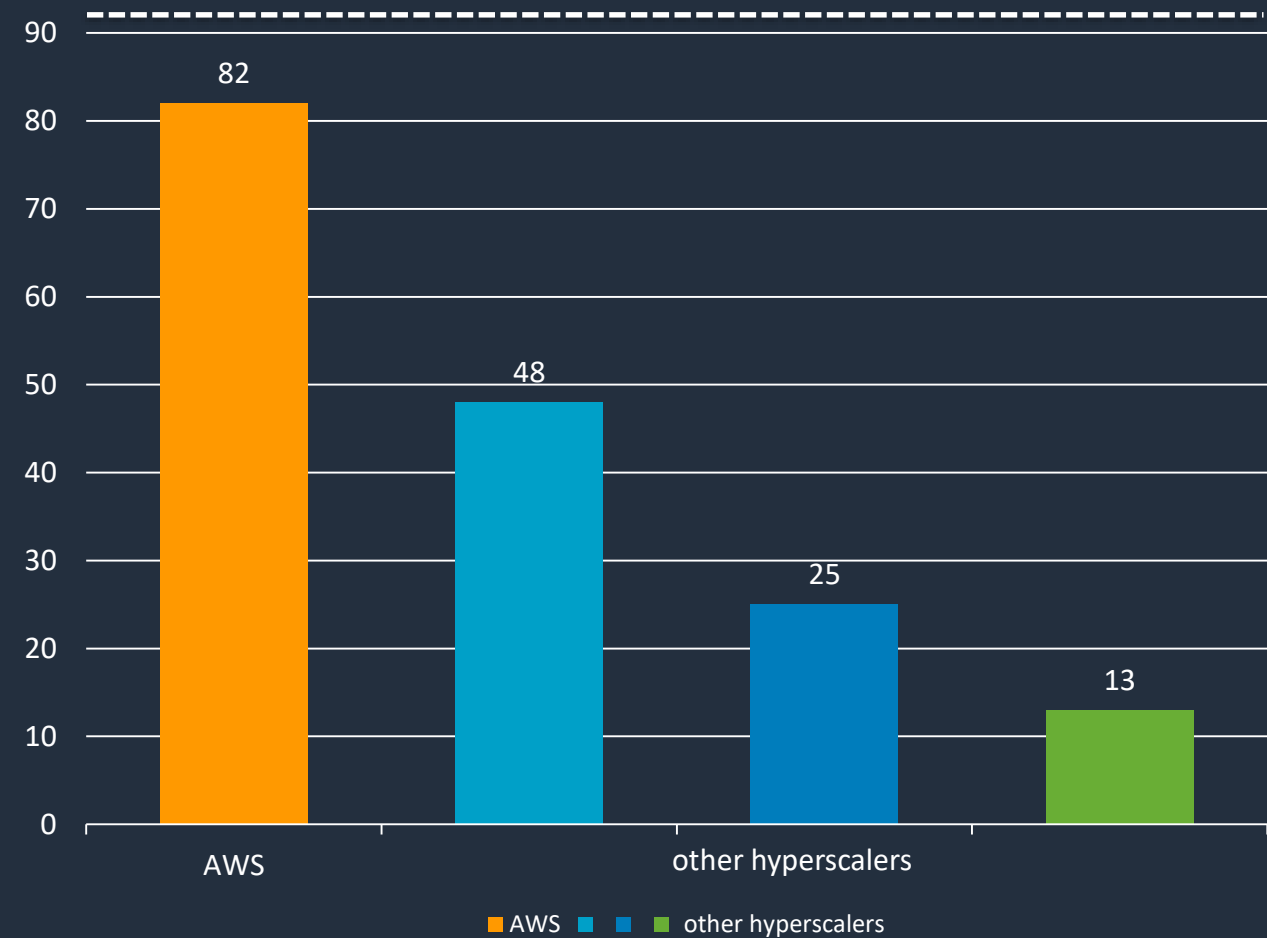
- EU Access Region only available on AWS

as of November 2021 – SAP Discovery Center – Service Catalog

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Top Reasons for Running RISE with SAP and BTP on AWS

9
AWS Regions
for BTP vs **8** total from other hyperscalers

34
more BTP services available on **AWS** than on next hyperscaler

57
more BTP services available on **AWS** than on second next hyperscaler

0
RPO
only on AWS
due to AWS' unique multi AZ architecture
(short range DR – synchronous)

1
Global Network
with simplified connectivity patterns

100%
Performance - AWS Nitro frees up 100% of EC2 instance for customer use

as of November 2021 – SAP Discovery Center – Service Catalog

Source: SAP DR SLA document, SAP 2nd DR SLA document

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Key BTP services **only** available on AWS

SAP ABAP Environment

> Enables RISE customers to move their ABAP assets and investments to the cloud and leverage their ABAP developers to build and run ABAP applications in the cloud

Signavio

> Allows SAP RISE customers to quickly understand, improve, transform and manage their business processes at scale with business process intelligence and management

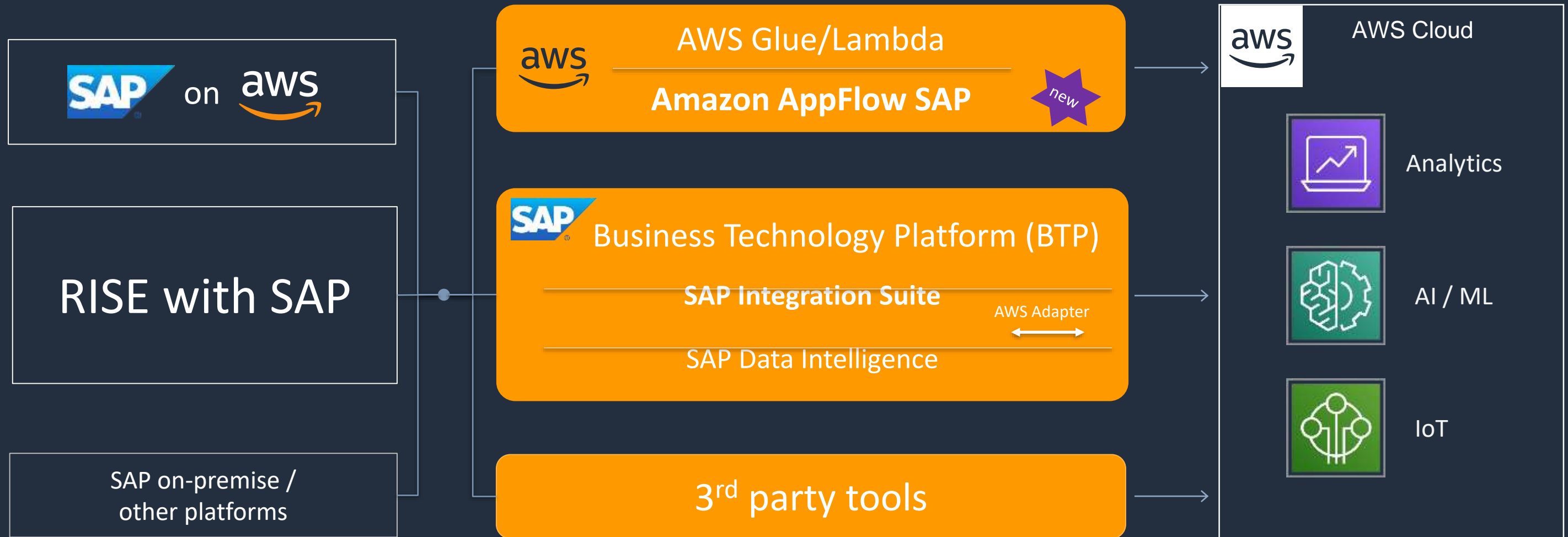**Master Data Integration for Business Partners Service**

> Allows SAP RISE customers to share Master Data with other SAP and non SAP applications without impacting performance of their ERP/S4HANA systems and building one off integrations. Examples include sharing Master Data with cloud HR and cloud CRM solutions.

**Advanced Variant and Pricing Configuration Service**

> Enables RISE customers, especially in Manufacturing and High Tech industries, to share complex Pricing and Product Configuration data from ERP and S/4HANA with other SAP and non SAP ecommerce applications.

Source: https://discovery-center.cloud.sap/#/viewServices?

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Integration Options to AWS Services

SAP on **aws**

RISE with SAP

SAP on-premise / other platforms

aws | AWS Glue/Lambda
Amazon AppFlow SAP | *new*

SAP Business Technology Platform (BTP)

SAP Integration Suite

AWS Adapter

SAP Data Intelligence

3rd party tools

aws AWS Cloud

Analytics

AI / ML

IoT

aws

Bring Data from SAP into AWS

Use Amazon AppFlow to connect and run data flows from SAP using OData Services. Build your solution quickly via the Console, and scale out your configurations using APIs, CLI, or CloudFormation templates.

SAP → Amazon AppFlow → Amazon S3 → Lambda, Redshift, Rekognition, SageMaker
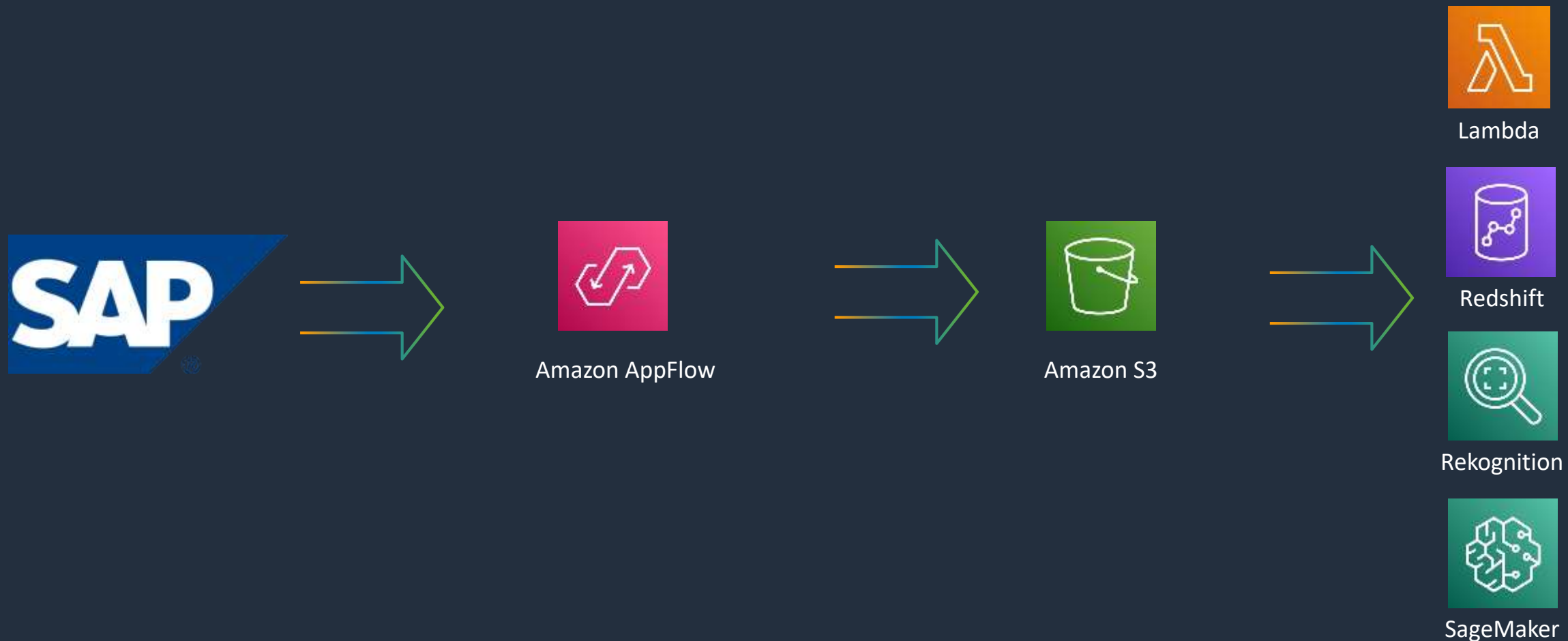
Partner ecosystem

Kickstart your RISE journey with the SAP on AWS partner community

40

MIGRATION ACCELERATION PROGRAM FOR SAP PARTNERS

Gain consulting support, training and services credits to accelerate your SAP migration

65

AWS SAP COMPETENCY PARTNERS

Streamline migration and innovation with AWS partners that have proven SAP on AWS customer success

RISE Funding

RISE with AWS funding

Flat funding amounts provided, based on T-shirt size to offset migration costs

Global availability across all segments

? Email woutervh@amazon.com to learn more

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Key takeaways

Why RISE with SAP on AWS?

Experience

Tap into AWS's 10+ years supporting mission-critical SAP workloads to accelerate your success

Reliability and Performance

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Q&A

Thank You

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