



The Shift to Remote Learning and Your District's "Cloud-First" Strategy

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Leader, K12 Education at Amazon Web Services

School District's can't afford to be slow



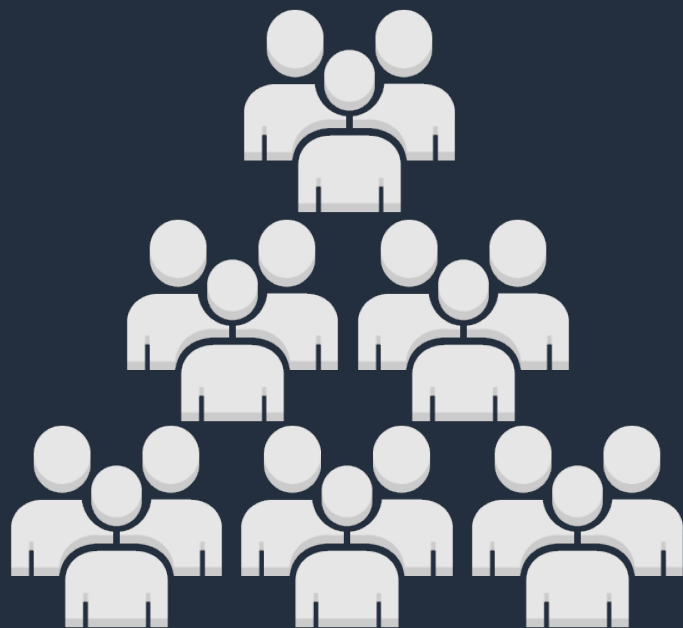
Old World:
Infrastructure adapted in
WEEKS/MONTHS



AWS:
Infrastructure adapted in
MINUTES



**A new level of
agility transforms
IT's ability to
support student
success**



- Add new dev environment
- Add new prod environment
- Add new environment in Ohio
- Add 1,000 servers
- Remove 1,000 servers
- Deploy 1 PB data warehouse
- Shut down 1 PB data warehouse

Loudoun County Public Schools in Virginia



Two data centers
over 20 years old



Rigid IT resources and
delayed time to value



Increased agility, faster
time to value, and
improved security



Moved 50% of workloads to
AWS—VDI, backup,
analytics



Los Angeles Unified School District

The Los Angeles Unified School District is the second largest K12 school district in the US. In response to a request from the school district to transition 700K students to remote learning, AWS helped establish a contact center to field IT questions, provide remote support, and enable staff to answer calls.






“ In normal times, we work with Amazon in several areas. During this pandemic and as our needs shifted, the mental health and family hotlines were up and running within just a few days.”

- Austin Beautner, Superintendent, Los Angeles Unified School District

”



What sets AWS apart?

-  **Experience** Building and managing cloud since 2006
-  **Service Breadth & Depth** 175+ services to support any cloud workload
-  **Pace of Innovation** 4,653+ customer-driven service/feature releases since 2006
-  **Pricing Philosophy** 80 proactive price reductions to date
-  **Partner Network** 35,000+ new APN Partners added since 2016

The AWS Cloud in **K12 Education**



Lower costs and reallocate resources so you can deliver more efficient and equitable solutions.



Innovate faster and solidify your education services by merging agility with experience and resources.

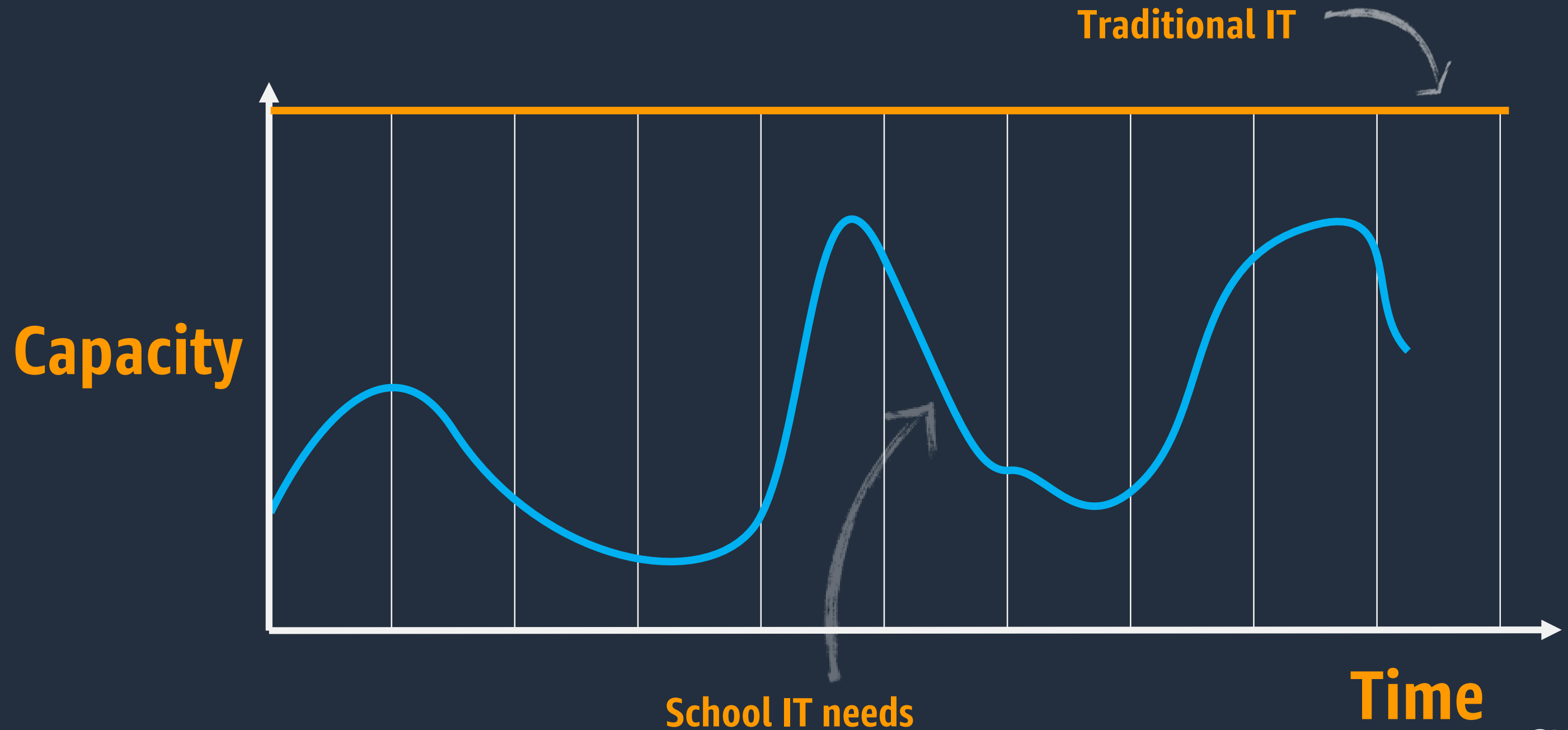


Reduce risk by utilizing security infrastructure and practices designed to meet the most stringent government requirements.



Improve equity by leveraging data analytics, virtualization, and AI tools.

Traditional IT as a fixed cost model



Pay for **what you use**

Understanding the total cost of AWS Cloud is **knowing what you use, not what you have.**

- Scale down or stop instances when not in use
- Setup notifications and alerts based on usage
- Move files to archive storage when data is not needed
- Purchase savings plans for compute
- Take advantage of the AWS Free Tier



West Windsor-Plainsboro Regional School District

Challenge

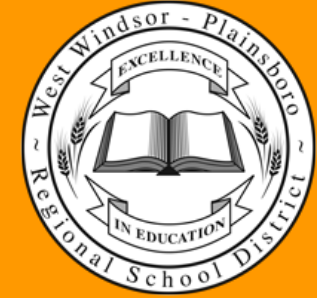
Improving resiliency, infrastructure flexibility and reducing costs that did not impact staff workload in terms of support.

Key Business Results

- Reduced replacement costs by 50% to 75%.
- Flexibility to move workloads onto and off of the cloud.
- Improved preparedness and agility.
- Improved uptime.

Economic Quantified Benefits

- Avoided application redesign, saving \$2.7M.
- Reduced labor hours for operations, saving \$1.2M.
- Reduction in data center operating costs, saving \$1.4M.
- Software and hardware savings of \$3.2M.



Company: West Windsor-Plainsboro RSD

Industry: Education

Country: United States

Students: 10,000

Website: <http://www.west-windsor-plainsboro.k12.nj.us/>

“

If we had been all on-premises when they closed the schools, we would have had to have gone out and bought all sorts of hardware or just not have been able to support the resources our students need.”

”

Technology infrastructure manager, West Windsor- Plainsboro Regional School District

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About WWPRSD

Located in West Windsor, NJ the district consists of 10 schools and provides services to over 10,000 students. The West Windsor-Plainsboro RSD maintains a single data center, supporting technology services delivered to students, teachers, and administrators.



Portland Public Schools



“Now our annual cost is a third of what it would have been to replace. And we now have increased capacity and disaster recovery—things we didn’t have access to with an on-premises data center.”

Travis Paakki
Portland Public Schools

Reduce risk across schools in key ways



Decrease time spent with complicated infrastructure management that adds little value to schools or IT departments.



Deploy services from AWS that already meet the most stringent government standards.

The **AWS footprint** in the United States

Regions

AWS services are dispersed into separate geographical locations



Five U.S. Regions



Availability Zones

Each Region contains two to six Availability Zones isolated from one another



Number of U.S. Availability Zones

○ New Region coming soon



Data centers

Each Availability Zone includes one or more data centers that house thousands of servers



Shared responsibility security model

Customer

Responsible for security in the cloud

Customer data

Services, applications, identity and access management

Operating system, network, and firewall configuration

Client side data encryption and data integrity authentication

Server-side encryption (file system and/or data)

Network traffic protection (encryption/integrity/identity)

AWS

Responsible for security of the cloud

Compute

Storage

Database

Networking

AWS global infrastructure

Regions

Availability Zones

Edge locations

Prince William County Public Schools

Challenge

Current Student Information System (SIS) was hosted on premises. Availability and reliability of teacher access was an issue.

Solution

Migrated their SIS with Edupoint Synergy hosted in the AWS Cloud.

Benefits

- Anytime, anywhere access to resources for teachers
- Increased availability, reliability, and security—all at a low cost
- No disruption to current stakeholders
- Improved security both physically and technologically

“

We did not have concerns about going to AWS. Actually, we felt that there was an improvement in security with AWS as compared to our on-premises infrastructure, both physically and technologically.

”

Dr. Andy Wolfenbarger, Supervisor of Student Data and Information Security
Prince William County Public Schools



Prince William County
PUBLIC SCHOOLS
Providing A World-Class Education

Company: Prince William County PS

Industry: Education

Country: United States

Students: 90,203

Website: <https://www.pwcs.edu/>

About PWCPS

Located in Manassas, VA, Prince William County Public Schools educates 90,000 students per year and employs over 11,000 teachers, administration and support staff.



Improve equity by leveraging data



Democratize access
to real-time data

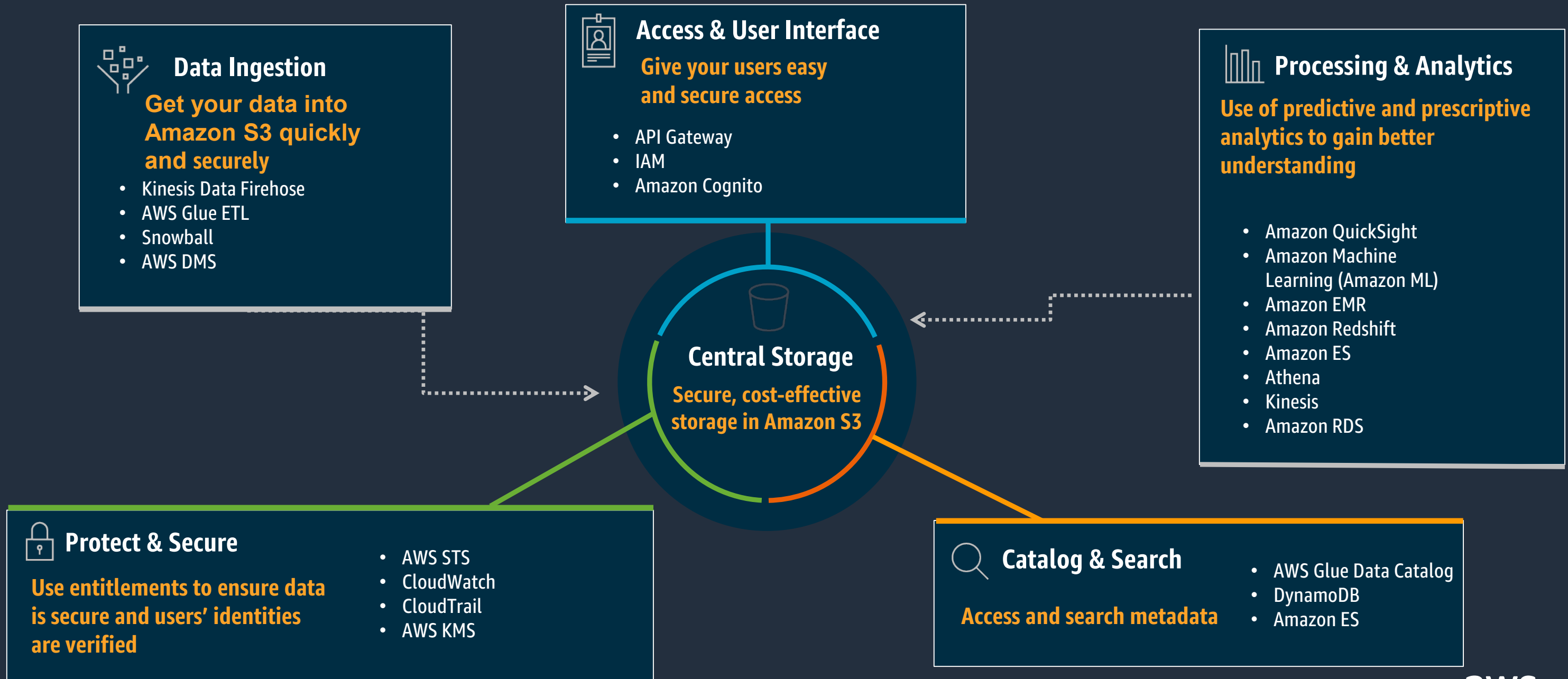


Support deeper
learning



Inclusive access
to services

Getting value out of your data



Expanding access with Amazon AppStream 2.0

Amazon AppStream 2.0 allows students to access Windows desktops and applications on Chromebooks

- Accelerate delivery of Career and Technical Education (CTE) learning resources like *Project Lead the Way*
- Stream 3D and graphics applications from AutoDesk, MathWorks, SolidWorks, and more
- Scale automatically and only pay for what you use
- Students can access in the computer lab, the classroom, or from home



Run desktop applications on other devices



On demand



Fully managed service

Customer success for CTE



From

Incompatible devices and physical computer labs are challenging to scale, costly to maintain, and can't support the velocity of changing application, hardware, and user access demands.

To

Reclaim and reimagine valuable school real estate and provide students with access to learning resources on any device, anywhere, while paying only for what you use.



"Our challenge was that, although every student in our district had a device, not every application was compatible. Traditional computer labs were costly. We started using AppStream 2.0 so that students could access these applications without the extra cost to our district. Not to mention that the tools inside of AppStream 2.0 allow us to know when we need to scale, providing further cost-savings."

– John Stile, Supervisor for Network and User Support, Council Bluffs Community School District



**Council Bluffs
Community**
SCHOOL DISTRICT



The Cloud is a Transformational Opportunity

Almost **20 years**
in market



The cloud is a **transformational opportunity**



It's a well-worn path
yet it's still a **disruption**



Getting started with AWS...

Best Practices

Immediate Resiliency Questions To Ask and Areas to Focus Post COVID-19

1 Learning Continuity

Do we have a plan to function remotely and provide education with limited access to the physical building?

2 Human Resources

Do we have a way to identify essential Personnel needed for the entire school system?

3 Facilities

Do we have a seamless way to communicate the safety of our facilities to the parents, teachers, students, employees and the public?

4 Technology

Do teachers and students have the proper resources for remote learning and to collaborate with each other?

5 Post Mortem

Do we know and understand our deficiencies during the crisis and what our actions should be in the future to minimize risk?

6 Vendor Community

Do we have the right contracts and procurement mechanisms in place to make quick fixes and fill technical gaps?

7 Analytics

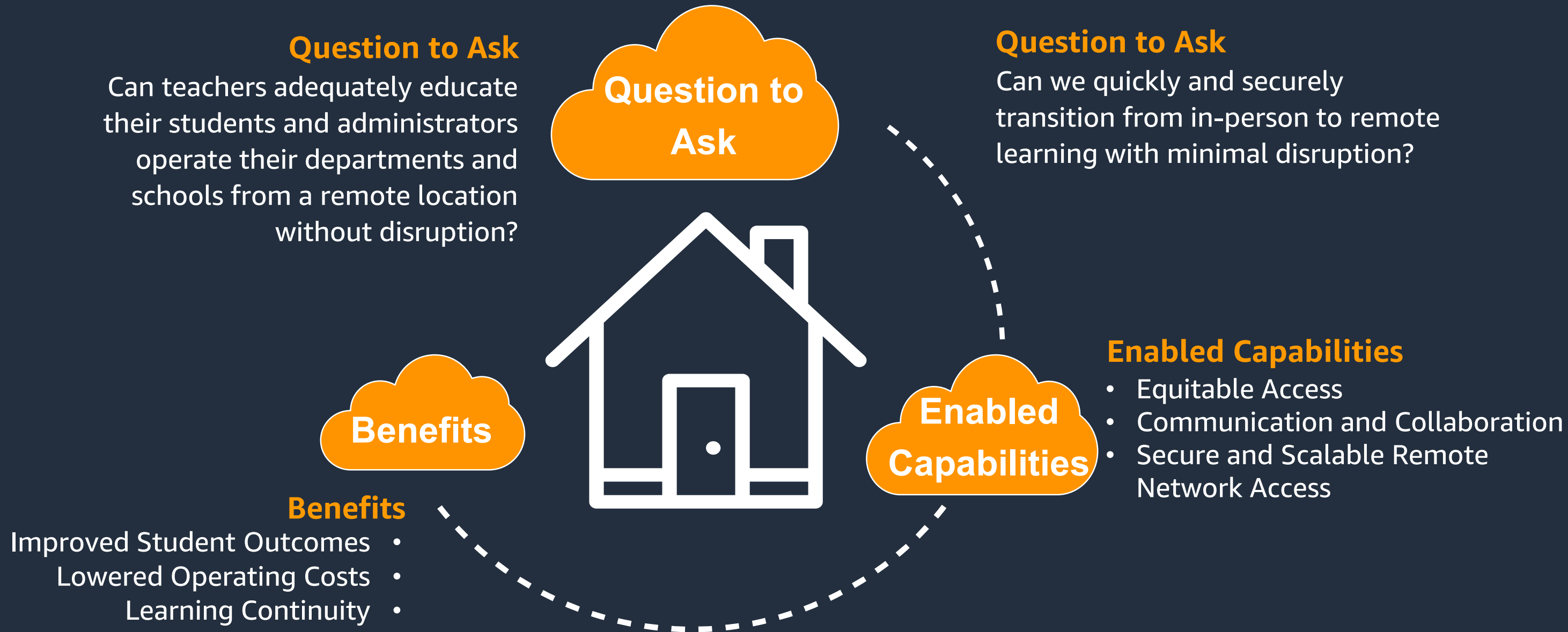
Do we have the right infrastructure in place to make data driven decisions and quickly analyze information during an emergency?

8 Public Engagement

Do we have the correct infrastructure to allow end-to-end digital services and modern communication with our constituents?



Pillars to Enable a Resilient School District



Migration outcomes

Agility

Build and operate your **foundation for future innovation**

Operational efficiency

Obtain substantial **cost savings**, freeing up resources to **focus on what matters most, learning outcomes**

Reduced risk

Migrate through a secure and proven approach that reduces IT risks by moving to a more **resilient IT model**

How Do I Get Started?

Leverage the experience of others



AWS Cloud Adoption Framework (AWS CAF)

Building a Comprehensive Approach to Cloud

- Leverage experience of 1000s of cloud adoption journeys
- Understand how cloud adoption transforms the way you work
- Evaluate the impact of cloud adoption across affected stakeholders
- Build project plans that address all areas of the organization – technical and non-technical.

AWS CAF Perspectives

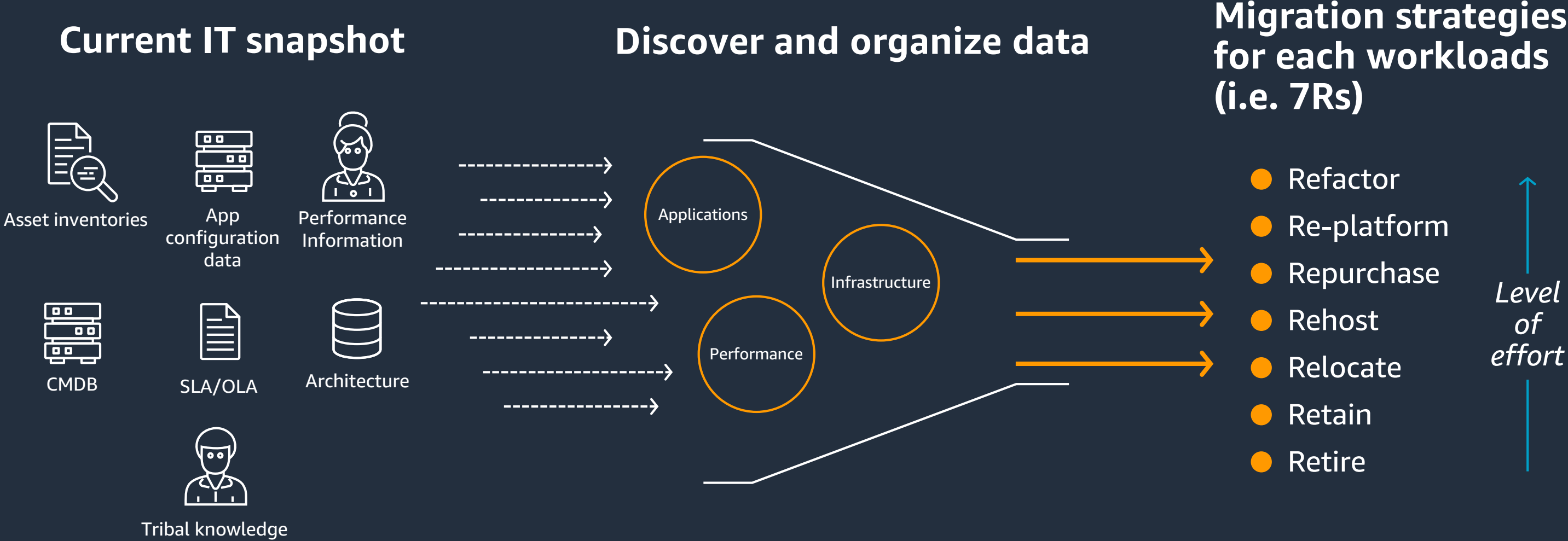
 BUSINESS	 PLATFORM
 PEOPLE	 SECURITY
 GOVERNANCE	 OPERATIONS

How Do I Get Started?



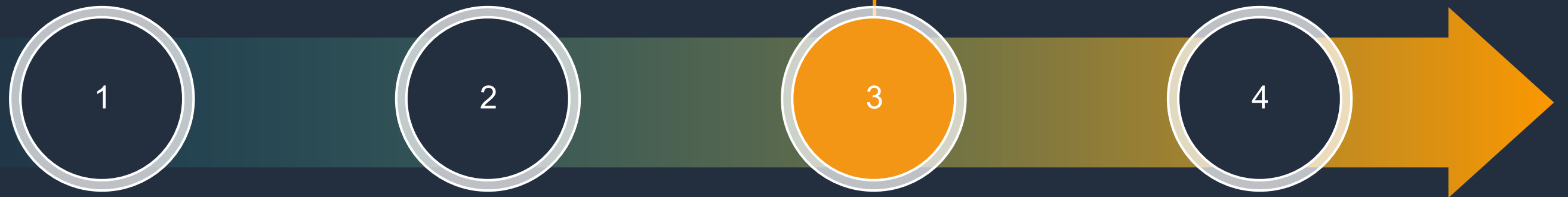
Find the right strategy for
current environment

Migration Planning



How Do I Get Started?

Build cloud skills and capabilities



AWS training and certifications

Comprehensive Training Accelerates Cloud Adoption



Digital Learning

Learn at your own pace, from a library of over 350 topics.



Instructor-led Training

Build technical skills and learn best practices from an accredited instructor.



AWS Certification

Validate knowledge with an industry-recognized credential.



Needs Analysis and Planning

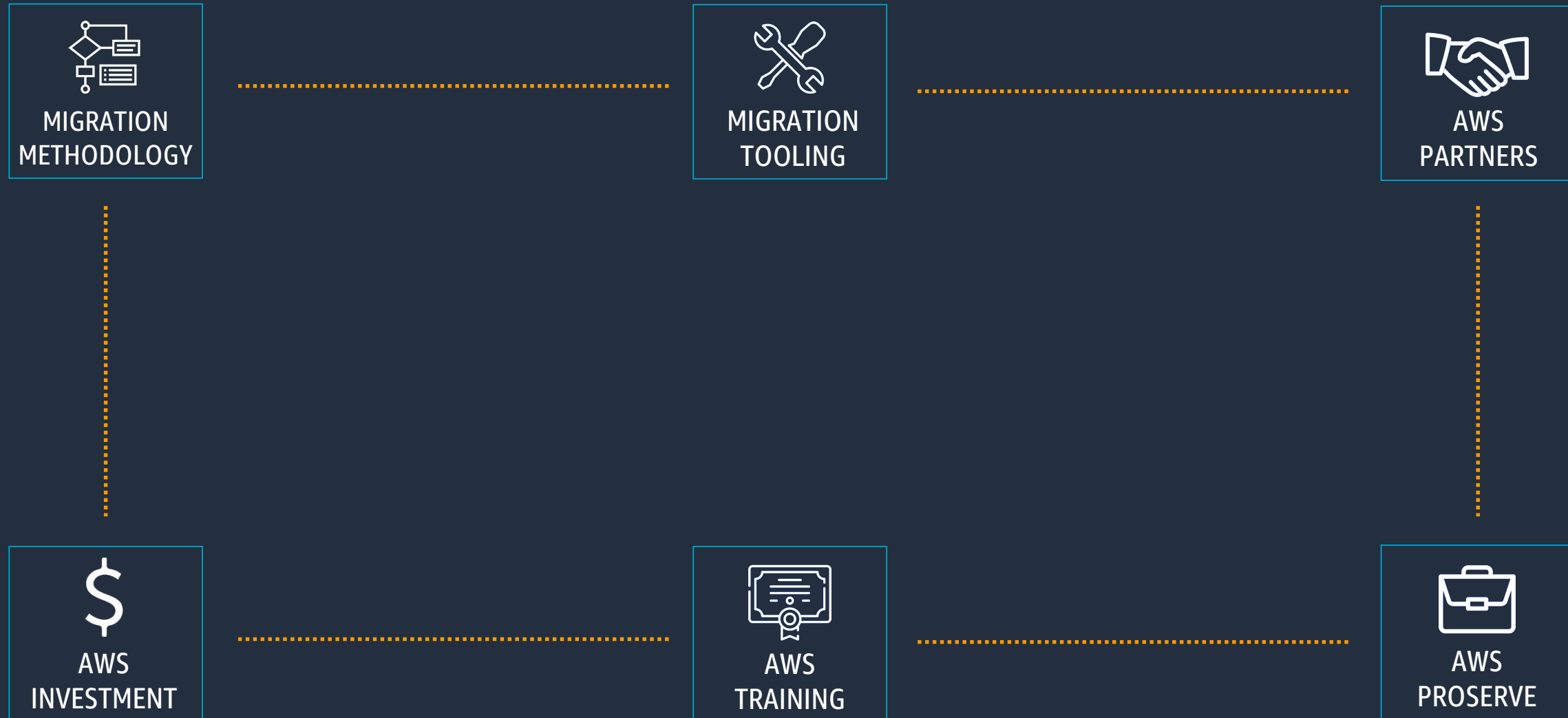
Take a snapshot of your organization's current skill sets and customize a plan to fill gaps.

How Do I Get Started?



Create a foundation
for success

How AWS Helps You Move Forward



We're here for the **long haul**



Best
practices



Migration
assistance



K12 partners

Next Steps

Next Steps



Take 15-minutes to take the Cloud Adoption Readiness assessment <https://cloudreadiness.amazonaws.com/>



Use the CART report to initiate a discussion with your team about next steps in your migration planning



Reach out to me chadste@amazon.com to start deeper cloud conversation and connected with the right support





Thank you!

