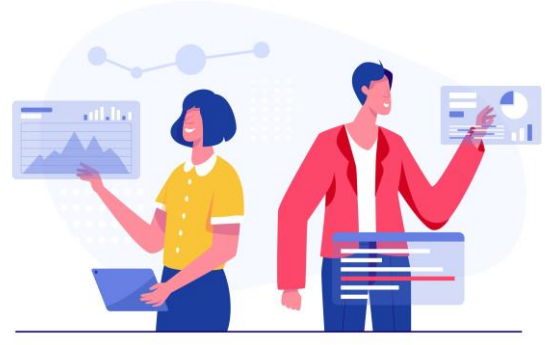




# Art of Now: Training for Public Health



This pathway will help public health leaders become more familiar with key cloud concepts. It presents a recommended set of online resources that provide an orientation to the benefits of the cloud and data analytics, artificial intelligence (AI), and machine learning (ML) services available with Amazon Web Services (AWS). Individuals who complete this training pathway should understand the concepts behind a modern data architecture and which AWS services can accelerate their modernization journey.

## Foundational material

Become familiar with key cloud concepts, the benefits of the cloud, and core AWS services that you'll encounter in your cloud journey.

Total time: 90 minutes

**What is cloud computing?**

[5 min video](#)

**What is AWS?**

[3 min video](#)

**How are Health and Human Services orgs using AWS?**

[20 min video](#)

**Cloud essentials**

[60 min digital training](#)

### Additional resources

[AWS Glossary: Search for unfamiliar terms here](#)

Real-world story: [U. S. Census brings nationwide count to the AWS Cloud](#)

Real-world story: [Utah migrates to the cloud to rapidly scale its data infrastructure](#)

## Modern data architectures

Your modern data architecture should be flexible and scalable, able to rapidly adjust to new data types and analytic strategies. It will break down data siloes that have plagued public health for decades, while still maintaining data privacy and security. It should provide you with a self-serve environment, that empowers you and your colleagues to engage with data in the way that works best for each person. A modern data architecture means you get back into the business of public health science, with more automation of the processes that don't leverage your best skills.

Total time: 125 minutes

**Understanding modern data architectures**

[60 min video](#)

**What is a data lake?**

[10 min webpage](#)

**Data governance in a modern architecture**

[55 min video](#)

**Roles and responsibilities**

[5 min infographic](#)

### Additional resources

Real-world story: [The Minnesota Department of Health breaks down data siloes](#)

Real-world story: [New York state rapidly ingests and uses clinical data during pandemic](#)

## Analytics in the AWS cloud

In AWS, you can bring your favorite licensed analytic tools—open-source and licensed products—and work with your data in a secure, scalable environment. AWS also provides low- and no-code tools that don't require coding skills. These services allow you to work faster, scale your analytic capacity within your organization, and bring the data and information to the people who need it, when they need it. Plus, these services can be tied to the governance of your modern data architecture, which means you no longer have to slice the data multiple ways for different personas. You'll build dashboards once with assurance that your audience will only see the data they're allowed to see (like automatic access restrictions by geography or condition). You can work smarter, not harder.

Total time: 120 minutes

### Overview of ML

[10 min video](#)

AWS low / no-code analytic services	Function	Video training link
Amazon Glue DataBrew	Data preparation	<a href="#">10 min</a>
Amazon QuickSight	Data visualization	<a href="#">60 min</a>
Amazon SageMaker	Low/no-code ML Geospatial analyses	<a href="#">25 min</a> <a href="#">25 min</a>

### Additional resources

Blog: [Create your RStudio environment in Amazon SageMaker in 3 easy steps](#)

Explore the [AWS Open Registry](#), that includes health, census, climate, and genomic data, plus sample SageMaker code so you can put it use today

## Reduce burden in public health with AI

Public health staff still do a lot of manual processing of paper and manual review of content in free-text fields. You also spend a lot of time maintaining rules-based data transformations to health-related standards. Communicating with the populations you serve requires timely information-sharing at scale. This section's sessions introduce you to AI services that you can apply in your agency to reduce burden, improve time to decision-making and data completeness, and get you back to the business of public health practice.

Total time: 240 minutes

### Understand where AI sits in the ML stack

[60 min digital learning](#)

AWS AI service	Function	Digital learning link
Amazon Textract	Take paper (virtual or hard copy) and automatically transform it into data	<a href="#">65 min</a>
Amazon Comprehend	Natural language processing (NLP) of free text to make it usable content for analyses	<a href="#">25 min</a>
Comprehend Medical	NLP that transforms to health standards	<a href="#">70 min</a>
Amazon Connect and Lex	One-stop shop for contact centers and chatbots	<a href="#">70 min</a>
Amazon Pinpoint	Text messaging mobile service	<a href="#">10 min</a>

### Additional resource

Real-world story: [Maryland uses cloud-based contact center for contact tracing response](#)

## Ready to learn more?

AWS has many training opportunities to explore:

- Complete an online, on-demand set of trainings based on one of 3 public health personas.
- Immerse yourself and your colleagues in a 1-day session to see these services in action with a public health use case.
- If you're ready to use these services, schedule a multi-day training with one of our training experts to come up to speed quickly.



Contact us at [AWSpublichealth@amazon.com](mailto:AWSpublichealth@amazon.com) to find the right fit for you and your team today!

