

27&28 October 2021

## Modernization with containers and serverless technologies

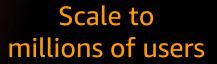
Cameron Senese Container Services Lead, ANZ, AWS

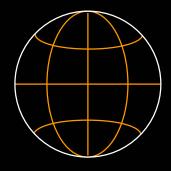




## **Modern Applications**







Global availability



Respond in milliseconds



Handle petabytes of data

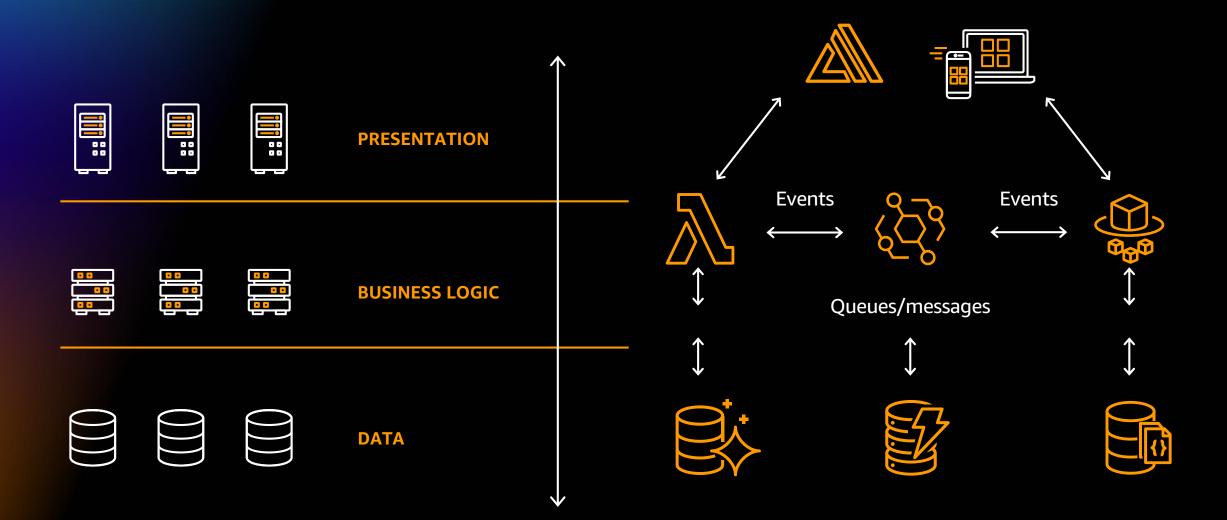


## **Modern Application characteristics**

As serverless as Modular Automated Everyone's Purpose services possible & standardized responsibility Built & decoupled 3 Architectural Operational Software Management & Data model delivery patterns Governance management

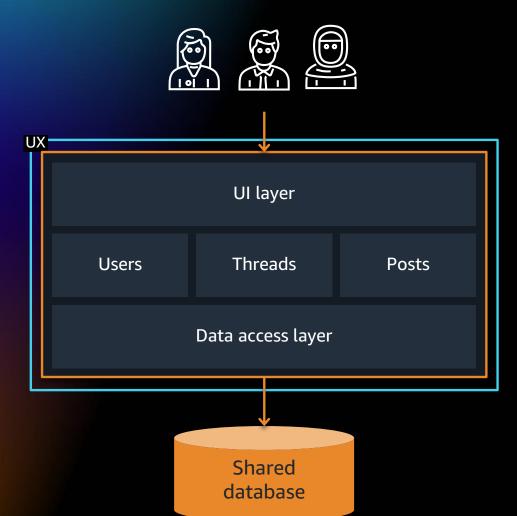


## **Application Architecture: Modular microservices**

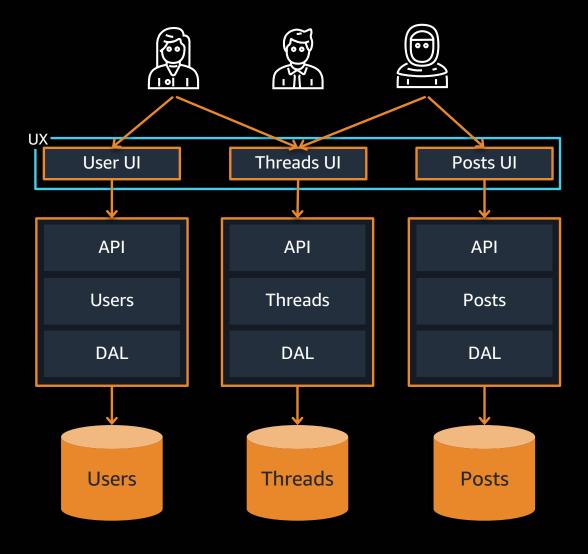




### **Monolith**

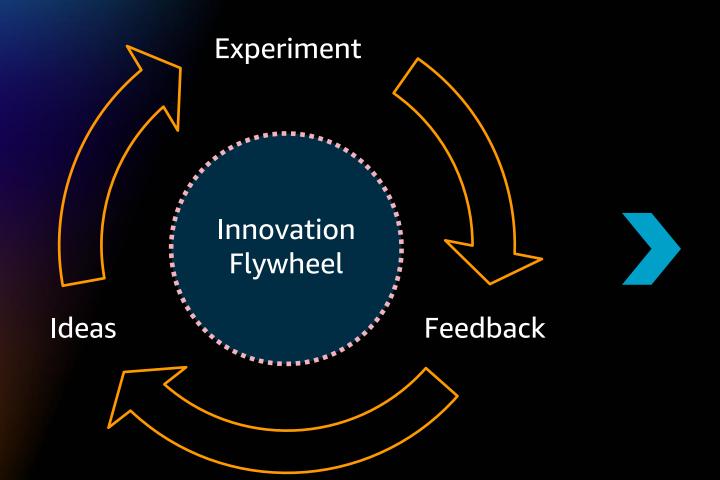


### **Microservice**





## Microservices advantages



#### Implications for IT

Modular architectures

Faster release cycles

Smaller units, lower risks

Continually improving systems

Data driven insights

<u>Automation</u>



## Modernize: Refactor and re-platform

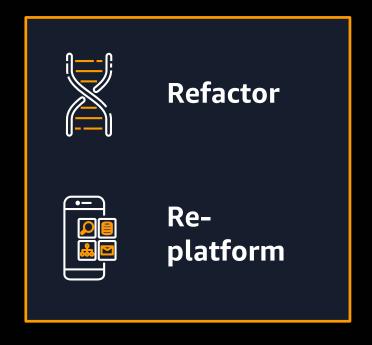
Reduce the size of your estate\*













## **Compute and operations**

More

Opinionated



**AWS Lambda** Serverless functions

#### **AWS** manages

Data source integrations
Physical hardware, software, networking, and facilities
Provisioning

#### **Customer manages**

Application code

**AWS Fargate**Serverless containers

Container orchestration, provisioning Cluster scaling Physical hardware, host OS/kernel, networking, and facilities Application code
Data source
integrations

Security config and updates Network config Management tasks



AmazonECS/ Amazon EKS

Container-management -as-a-service

Container orchestration control plane Physical hardware software, networking, and facilities Application code

Data source integrations

Work clusters

Security config and updates, network config, firewall and management tasks

Amazon EC2
Infrastructure-as-a-Service

Physical hardware software, networking, and facilities

Application code
Data source integrations
Scaling
Security config and updates
Network config
Management tasks

Less



## **AWS** container services

#### **Service Discovery**

And Service Mesh



**AWS Cloud Map** 



**AWS App Mesh** 

#### Management

Deployment, scheduling, scaling & management of containerized applications



Amazon Elastic Container Service (Amazon ECS)



Amazon Elastic Kubernetes Service (Amazon EKS)

#### Hosting

Where the containers run



Amazon EC2



**AWS Fargate** 

#### **Image Registry**

Container Image Repository



Amazon Elastic Container Registry (Amazon ECR)



## **AWS** serverless services

#### Compute





**AWS Fargate** 

#### **Data Stores**







Amazon DynamoDB

#### Integration







Amazon Simple Notification Service (Amazon SNS)



Amazon Simple Queue Service (Amazon SQS)



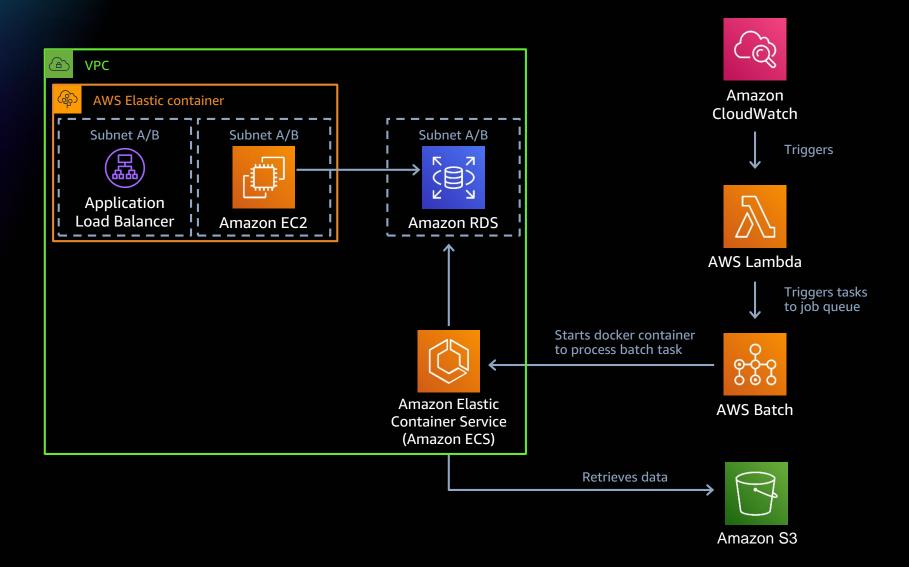
**AWS Step Function** 



**AWS AppSync** 



## Bigger benefits when working together!







## The only constant is change

Businesses today
face unprecedented
business challenges
BUT they also have
incredible opportunities
to reinvent themselves



#### Visit the Modern Applications Resource Hub for more resources

Dive deeper with these resources to help you develop an effective plan for your modernization journey.

- Build modern applications on AWS e-book
- Build mobile and web apps faster e-book
- Modernize today with containers on AWS e-book
- Adopting a modern Dev+Ops model e-book
- Modern apps need modern ops e-book
- Determining the total cost of ownership: Comparing Serverless and Server-based technologies paper
- Continuous learning, continuous modernization e-book
- ... and more!



https://bit.ly/3yfOvbK

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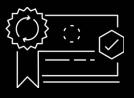
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**Accelerate modernization with continuous learning** 



Free digital courses, including:

<u>Architecting serverless solutions</u> <u>Getting started with DevOps on AWS</u>



Earn an industry-recognized credential:

<u>AWS Certified Developer – Associate</u> AWS Certified DevOps – Professional



Hands-on classroom training (available virtually) including:

Running containers on Amazon Elastic Kubernetes Service (Amazon EKS) Advanced developing on AWS



Create a self-paced learning roadmap

AWS ramp-up guide - Developer AWS ramp-up guide - DevOps



Take <u>Developer</u> and <u>DevOps training</u> today



Learn more about Modernization training for you and your team



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# Thank you!

