



# From 1 to 200

Choosing the Right Technical Services  
for Your Startup at the Right Time







## Igor Geyfman

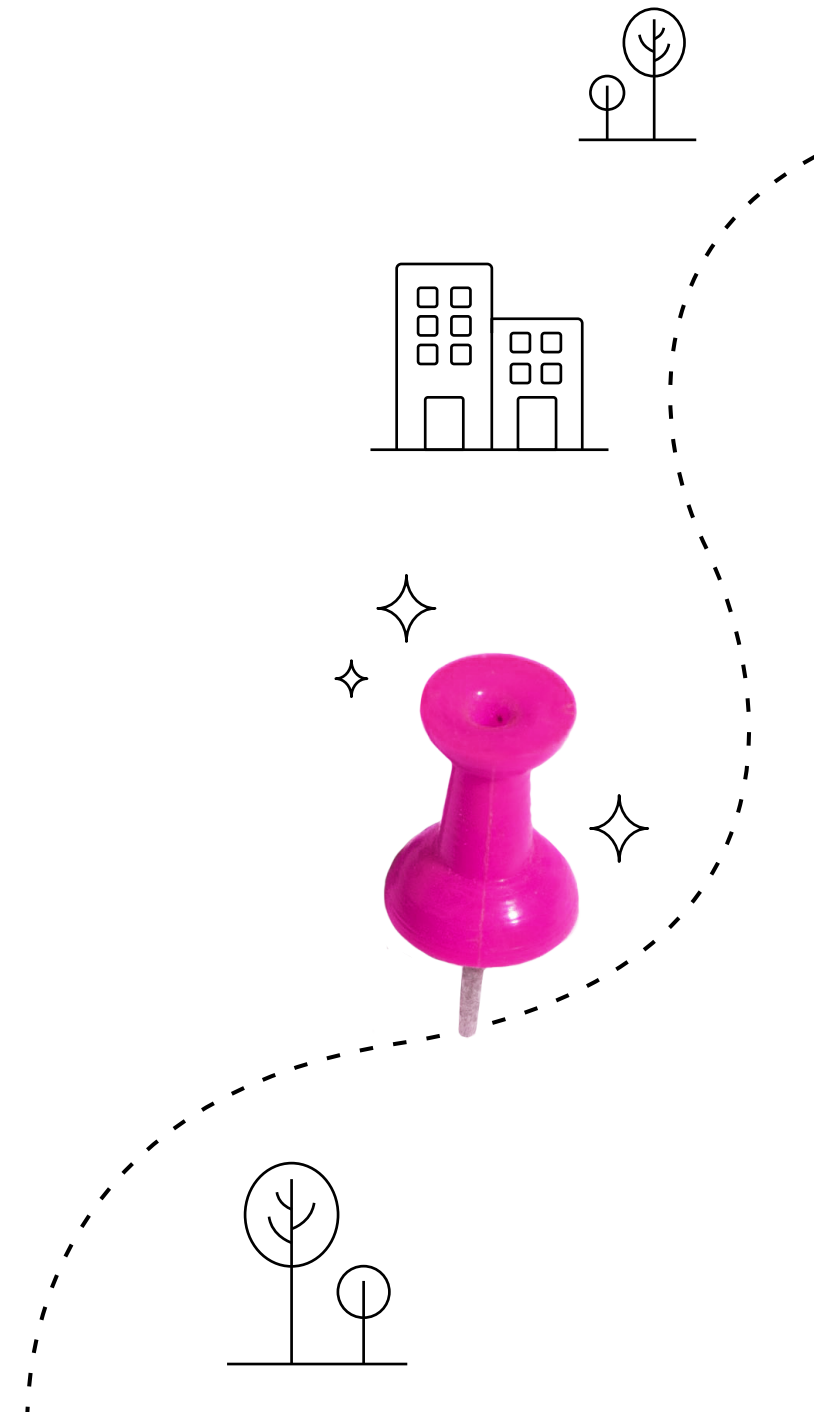
### **Principal SA, Startups**

### **Irvine, CA**

For over 20 years applied the lessons learned from driving Architecture Strategy for some of the largest US corporations to building and scaling various startups as a founder and CTO. Currently as part of AWS Startup Team helping startups leverage cloud to build and scale their businesses. In my free time I'm volunteering as an innovation adviser at a local startup incubator.

# Agenda

1. The Journey
2. Why Build on AWS?
3. Key Services and When You Need Them
  - Establishing Strong Foundations
  - Security Baked In
  - Accelerate Your MVP
  - Move Fast, With Confidence
  - Scale & Maturity
4. Build Less, Deliver More

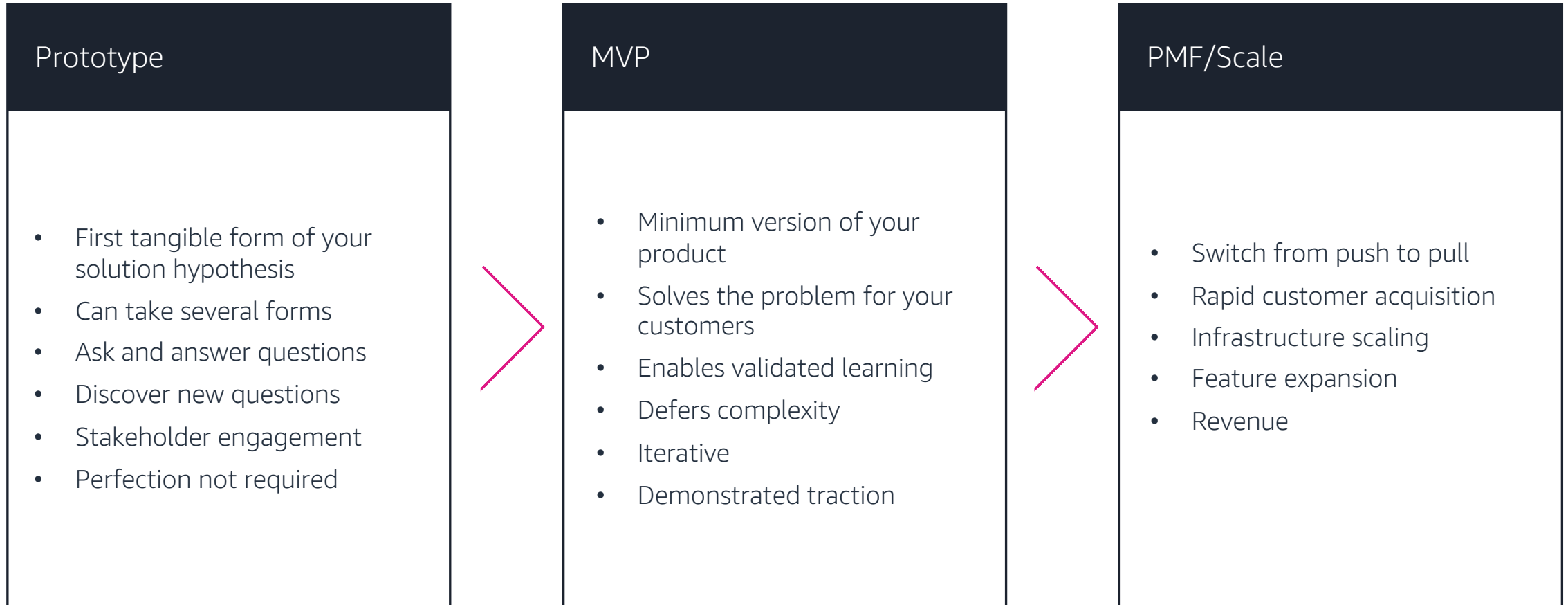


# The Journey



*Unicorn.Rentals*

# The Journey



# Why Build on AWS?

# Why Build on AWS



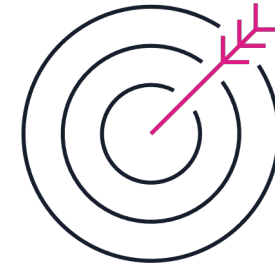
No Upfront Cost



Launch Faster



Experiment Often



Focus on Core Value

“We chose Amplify libraries because we believed it would accelerate our development speed and time to market, it did just that.

Amplify libraries, particularly the authentication feature, moved us so much quicker to MVP phase and onboarding customers. Amplify invoked the many steps needed to create an authentication flow so we just didn't have to think about, the Amplify library did it out of the box.

**I credit Amplify for getting us to market 6 months faster than if we had not used it.** As our business continues to scale, Amplify also allows us to customize AWS services to match our business needs, this has been another important aspect of getting started with Amplify.”

- Adithya Reddy, Full Stack Engineer, Branch Insurance



# Key Services and When You Need Them



# Elevate Your Security in the Cloud

- Build with the Highest Standards for Privacy and Data Security
- Inherit the Most Comprehensive Security and Compliance Controls
- Scale Securely with Superior Visibility and Control
- Automate and Reduce Risk with Deeply Integrated Services
- Largest Ecosystem of Security Partners and Solutions

# Security Baked In



## AWS IAM

Manage access to, and integration between, AWS services and resources securely



## AWS Secrets Manager

Protect API keys and application secrets throughout their lifecycle



## AWS Certificate Manager

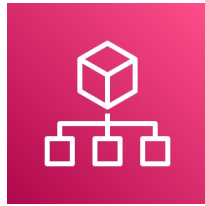
Provision, manage, and deploy public and private SSL/TLS certificates



## AWS KMS

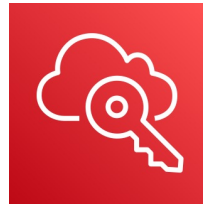
Simplify data encryption and key management across your AWS workloads

## Establish Strong Foundations



### AWS Organizations

AWS account and environment management and automation



### AWS SSO

Centrally manage access to your AWS account and resources



### AWS Budgets

Track and take action on your AWS cost and usage



### AWS Cost Explorer

View, analyze, and explore your AWS costs and usage

## Accelerate Your MVP



### Amplify Console

Control center for fullstack web and mobile application deployments



### Amazon Lightsail

Easy-to-use VPS with everything needed to build an application or website



### Amazon Elastic Beanstalk

Easy-to-use service for deploying and scaling web applications



### AWS Marketplace

Find, buy, deploy and manage solutions, including SaaS, in minutes



## Move Fast, With Confidence



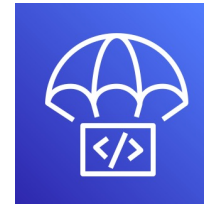
### AWS Code Pipeline

Continuous delivery service that helps you automate your releases



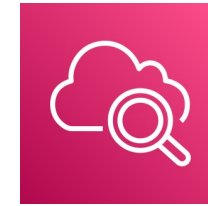
### AWS Code Build

Continuous integration service for building, testing, and packaging



### AWS Code Deploy

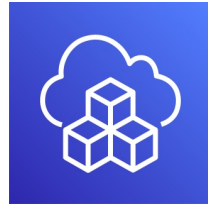
Deployment automation service to a variety of compute options



### Amazon CloudWatch

Monitoring and observability built to provide data and actionable insights

## Scale & Maturity



### AWS Infrastructure as Code

Manage your infrastructure the same way you treat your application



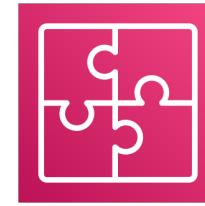
### AWS AI/ML

Putting machine learning in the hands of every developer



### AWS Analytics

Fastest way to get answers from all your data to all your users



### AWS Application Integration

Integrate distributed systems and serverless applications with less code






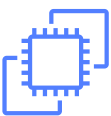
“Using Amplify solves multiple challenges in our development process. The main problem we were trying to solve was to improve the speed to build and deploy new versions of our website. At Noom, on the Growth team, we run on average 8 - 12 A/B tests per week, so we require a robust and simple-to-use deployment pipeline. The Amplify Console provides many features we want without having to build them from scratch which dramatically improves our development speed.

**The ability to use webhooks to trigger deployments from our custom build management system, coupled with Cypress end-to-end testing to ensure a stable experience for users, enables us to iterate at a blindingly fast pace.** Amplify Console's excellent and timely support via their GitHub issue tracker allows us to interact directly with the product engineering team to resolve questions.”

- Patrick Lee, Senior Engineer Growth Team, Noom

**Build Less, Deliver More**

# Compute Operational Models

<p>Least</p> <p>What you manage</p> <p>Most</p>	 <p><b>AWS Lambda</b> Serverless functions</p>	<p><b>AWS manages</b></p> <ul style="list-style-type: none"> <li>Data source integrations</li> <li>Physical hardware, software, networking, and facilities</li> <li>Provisioning</li> </ul>	<p><b>Customer manages</b></p> <ul style="list-style-type: none"> <li>Application code</li> </ul>	
	 <p><b>AWS Fargate</b> Serverless containers</p>	<ul style="list-style-type: none"> <li>Container orchestration, provisioning</li> <li>Cluster scaling</li> <li>Physical hardware, host OS/kernel, networking, and facilities</li> </ul>	<ul style="list-style-type: none"> <li>Application code</li> <li>Data source integrations</li> <li>Security config and updates</li> <li>Network config</li> </ul>	<ul style="list-style-type: none"> <li>Management tasks</li> </ul>
	 <p><b>Amazon ECS/EKS</b> Container-management -as-a-service</p>	<ul style="list-style-type: none"> <li>Container orchestration control plane</li> <li>Physical hardware software, networking, and facilities</li> </ul>	<ul style="list-style-type: none"> <li>Application code</li> <li>Data source integrations</li> <li>Work clusters</li> </ul>	<ul style="list-style-type: none"> <li>Security config and updates, network config, firewall, management tasks</li> </ul>
	 <p><b>Amazon EC2</b> Infrastructure-as-a-Service</p>	<ul style="list-style-type: none"> <li>Physical hardware software, networking, and facilities</li> </ul>	<ul style="list-style-type: none"> <li>Application code</li> <li>Data source integrations</li> <li>Scaling</li> <li>Security config and updates</li> <li>Network config</li> </ul>	<ul style="list-style-type: none"> <li>Management tasks</li> <li>Provisioning, managing scaling and patching of servers</li> </ul>

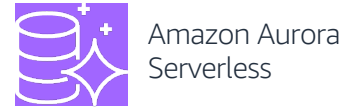
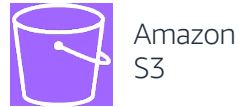


# Serverless is More than Compute

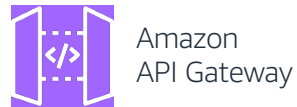
## COMPUTE



## DATA STORES



## INTEGRATION

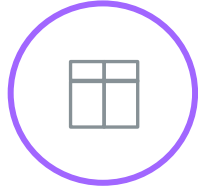


# Decoupling Your Data



## Relational

Referential integrity, ACID transactions, schema-on-write



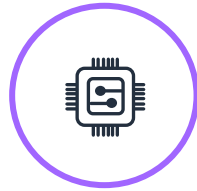
## Key-value

High throughput, Low latency reads and writes, endless scale



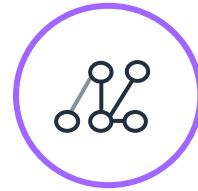
## Document

Store documents and quickly access querying on any attribute



## In-memory

Query by key with microsecond latency



## Graph

Quickly and easily create and navigate relationships between data



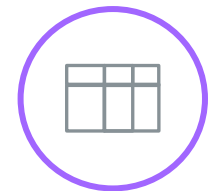
## Time-series

Collect, store, and process data sequenced by time



## Ledger

Complete, immutable, and verifiable history of all changes to application data



## Wide Column

Scalable, highly available, and managed Apache Cassandra-compatible service

*AWS Service(s)*



*Common Use Cases*

Lift and shift, ERP, CRM, finance

Real-time bidding, shopping cart, social, product catalog, customer preferences

Content management, personalization, mobile

Leaderboards, real-time analytics, caching

Fraud detection, social networking, recommendation engine

IoT applications, event tracking

Systems of record, supply chain, health care, registrations, financial

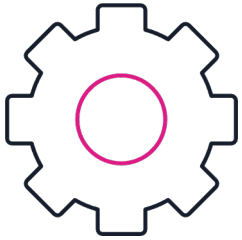
Build low-latency applications, leverage open source, migrate Cassandra to the cloud

“HyperTrack is a managed service for live location tracking. Developers across industries and countries build location-aware applications with HyperTrack, and count on us to power real-time experiences.

Amplify and AppSync are a core part of streaming hundreds of millions of live location events between apps in real-time. **Amplify and AppSync accelerated time to market for HyperTrack, and saved us months of engineering effort.”**

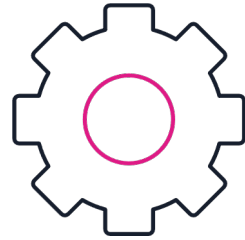
- Alexander Kishinevsky, Vice President of Engineering, HyperTrack

# Key Takeaways



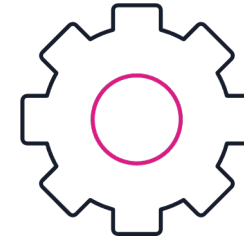
## **Strong Foundations**

Capitalize on a platform built for the most security conscious customers in the world, and invest in the right first steps



## **Fast Experimentation**

Explore, experiment, and validate fit-for-purpose across a variety of service offerings at low cost and with low risk



## **Build To Scale**

Leverage managed services and the serverless operational patterns across to platform to build for maximum scale and efficiency





# Thank you

Igor Geyfman  
Principal SA, Startups

