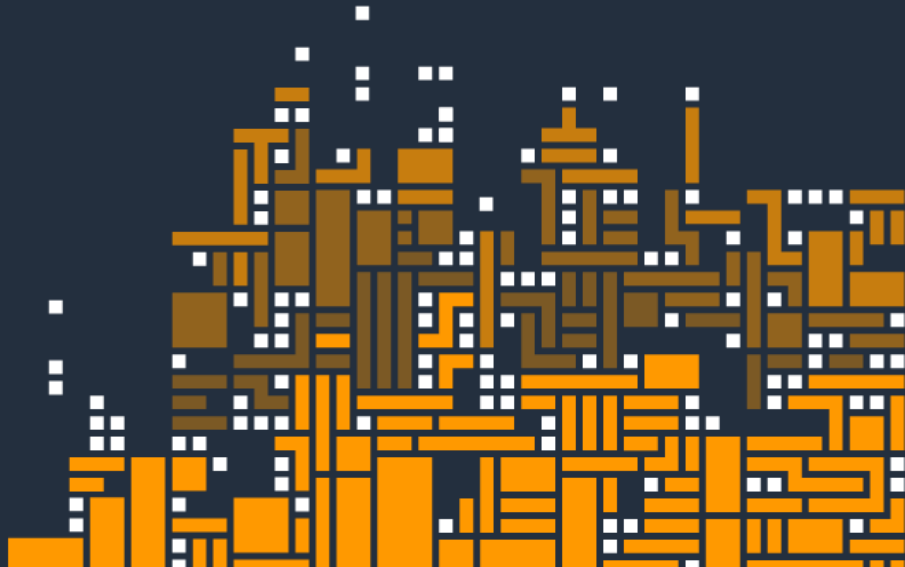
aws public sector

Data-driven transformation in local government

Turn data into valuable insights



© 2020, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Data Strategy

The use of data in combination with AWS can have a significant impact on your business.

- Data is an essential asset of your business
- Starting small to prove value and gain confidence
- Build a platform for your current and future use cases
- With our help choose the right AWS building blocks
- Re-use common architectures and increase the speed for innovation.

© 2020, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

aws

Turn data into valuable insights

Social Care
help and protect the elderly and frail with smart technology

Customer Service
automate repetitive queries

Housing use data solutions for fraud detection

© 2020, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

aws

Getting value from your data

Growing exponentially

From new sources

Increasingly diverse

Used by many people

Analyzed by many applications

© 2020, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

aws

“There is no compression algorithm for experience”

– Andy Jassy, CEO AWS

- AWS has years of experience to help you with your goals
- Working backwards from you and your citizens’ needs
- Use AWS to invent and simplify your operations
- Use AWS to increase accessibility and speed
- Build cost-effective solutions with speed and agility

© 2020, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

A comprehensive and open data portfolio

Data, visualization, engagement, & machine learning

- Data
- Dashboards
- Digital User Engagement
- Predictive Analytics

Analytics

- Data Warehousing
- Big Data Processing
- Serverless Data Processing
- Interactive Query
- Operational Analytics
- Real time Analytics

Data lake infrastructure & management

- Infrastructure
- Security & Management
- Data Catalog & ETL

Data movement

Migration & Streaming Services

© 2020, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

aws

Security will always be our top priority

- Our core infrastructure is built to satisfy the security needs for our most sensitive organisations.
- Backed by a deep set of security tools
- A shared responsibility model between our customers and AWS
- Best practices, encryption tools and other guidance
- Internationally recognised certifications and accreditations

© 2020, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

AWS Technology Roadmap to the Future

- With AWS gain control over your IT environment
- Break free and enable innovation through AWS Cloud
- Define your own AWS cloud strategy and framework
- Build your AWS future proof skill set
- Realise your data use cases with AWS technology

© 2020, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Data driven transformation

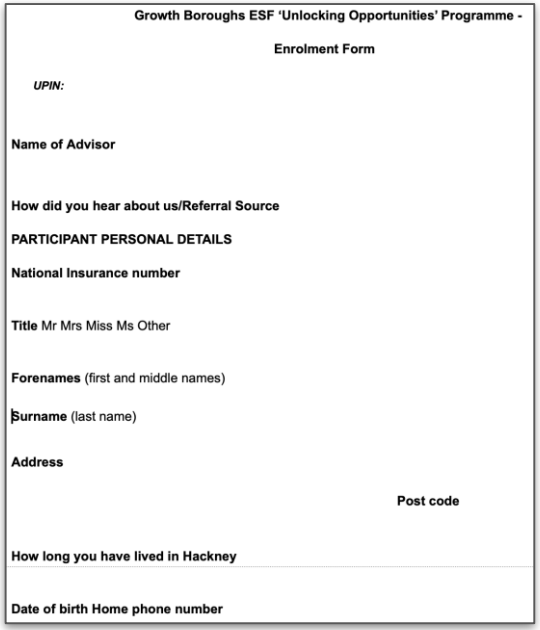
Our story so far

@mcaino

Hackney

Truly starting with the user and working backwards changes everything

From government forms



Growth Boroughs ESF 'Unlocking Opportunities' Programme -

Enrolment Form

UPIN:

Name of Advisor

How did you hear about us/Referral Source

PARTICIPANT PERSONAL DETAILS

National Insurance number

Title Mr Mrs Miss Ms Other

Forenames (first and middle names)

Surname (last name)

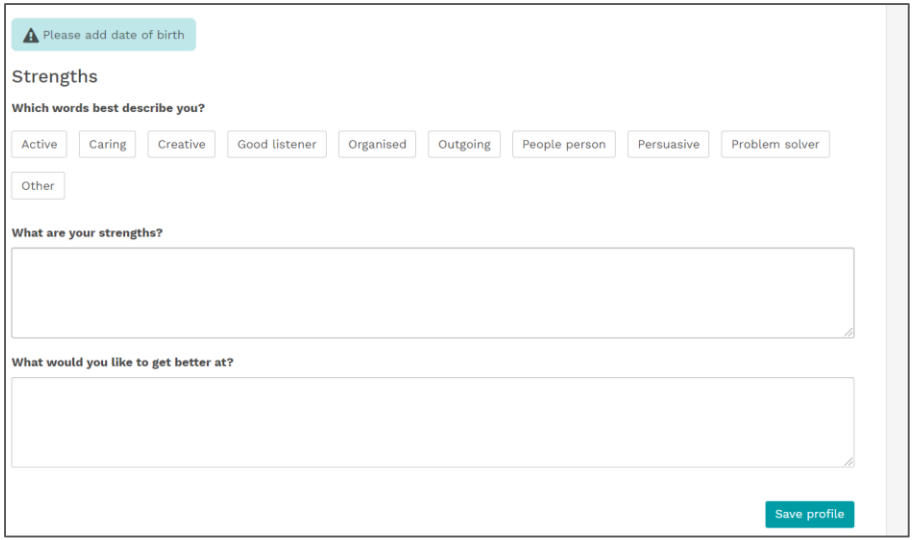
Address

Post code

How long you have lived in Hackney

Date of birth Home phone number

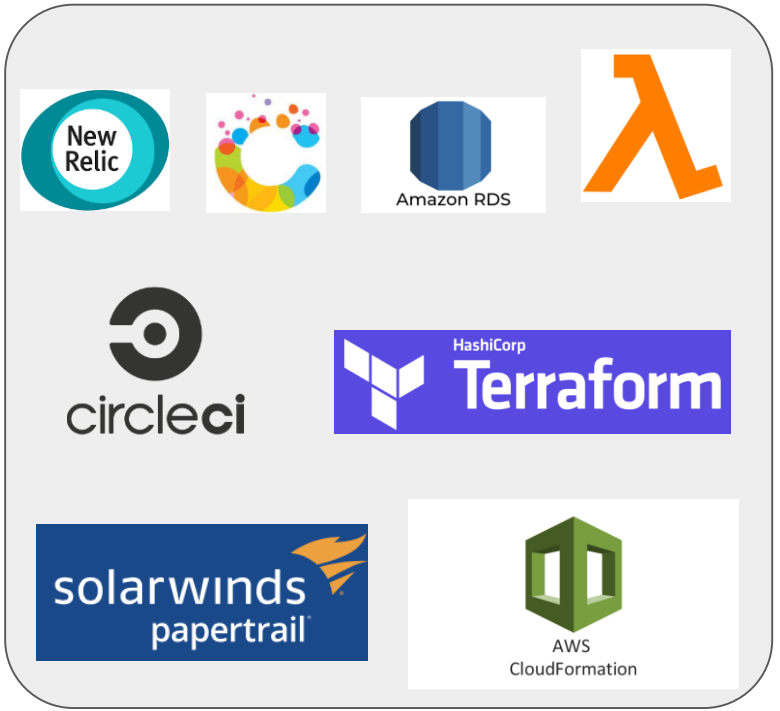
To empathic experiences



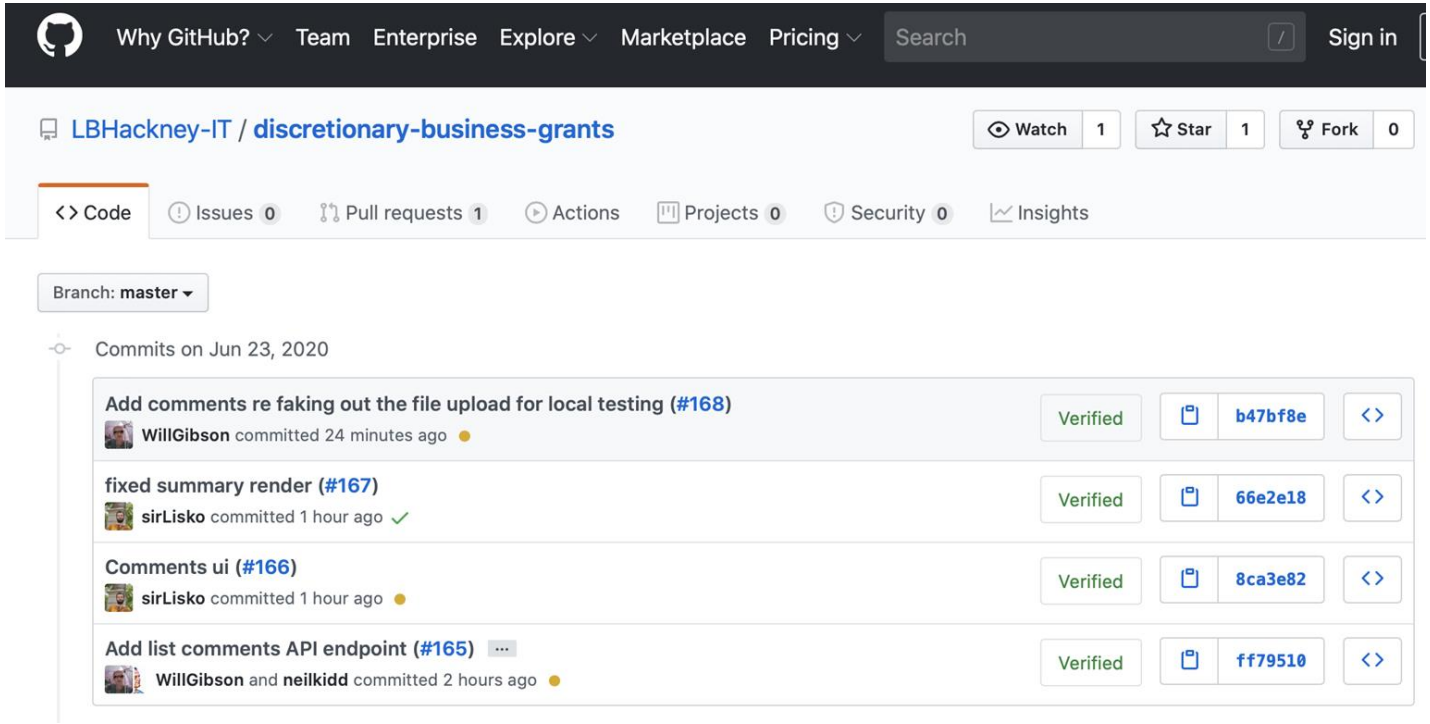
Digital change has to be for everyone

From someone else's server

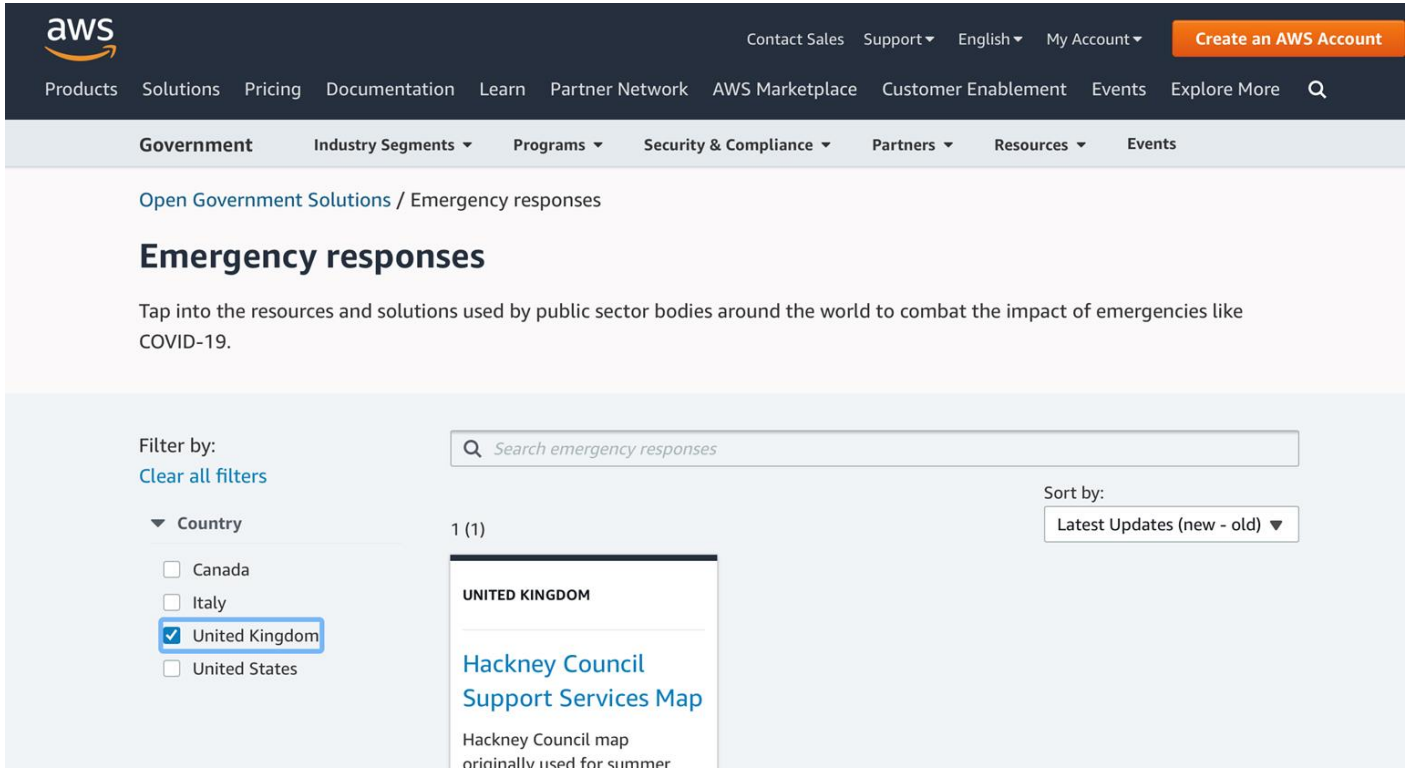
To our current tech stack



Delivering value fortnightly is a key organisational capability



Towards services so good, people prefer to use them



data lab

Come with an idea
leave with a solution

Walter Maguire, Data Lab Architect

© 2020, Amazon Web Services, Inc. or its Affiliates.

aws

aws data lab

Customer need

AWS customers need **to build solutions** composed from multiple AWS services, and they want expert guidance from AWS in how to design and validate their architecture. And once they design it, they need **a roadmap for how to put that architecture to work** for their organization.

The solution

AWS Data Lab was created **to help bridge the gap** between technology and builders. Having customers engage in a Data Lab and learn directly from Data Architects and AWS experts **greatly reduces barriers** of adoption for quicker and more productive project implementation.

© 2020, Amazon Web Services, Inc. or its Affiliates.

aws

aws data lab

WHO?

- 4–8 customer builders
- Data Lab solution architect
- Databases & analytics experts
- Account solution architect

WHAT?

- Database Migration
- Data Lake foundation & innovation
- Predictive analytics
- Microservices deployment
- And many more

WHERE?

- Herndon, VA
- London, UK
- New York, NY
- Seattle, WA
- Bangalore, IN
- Online

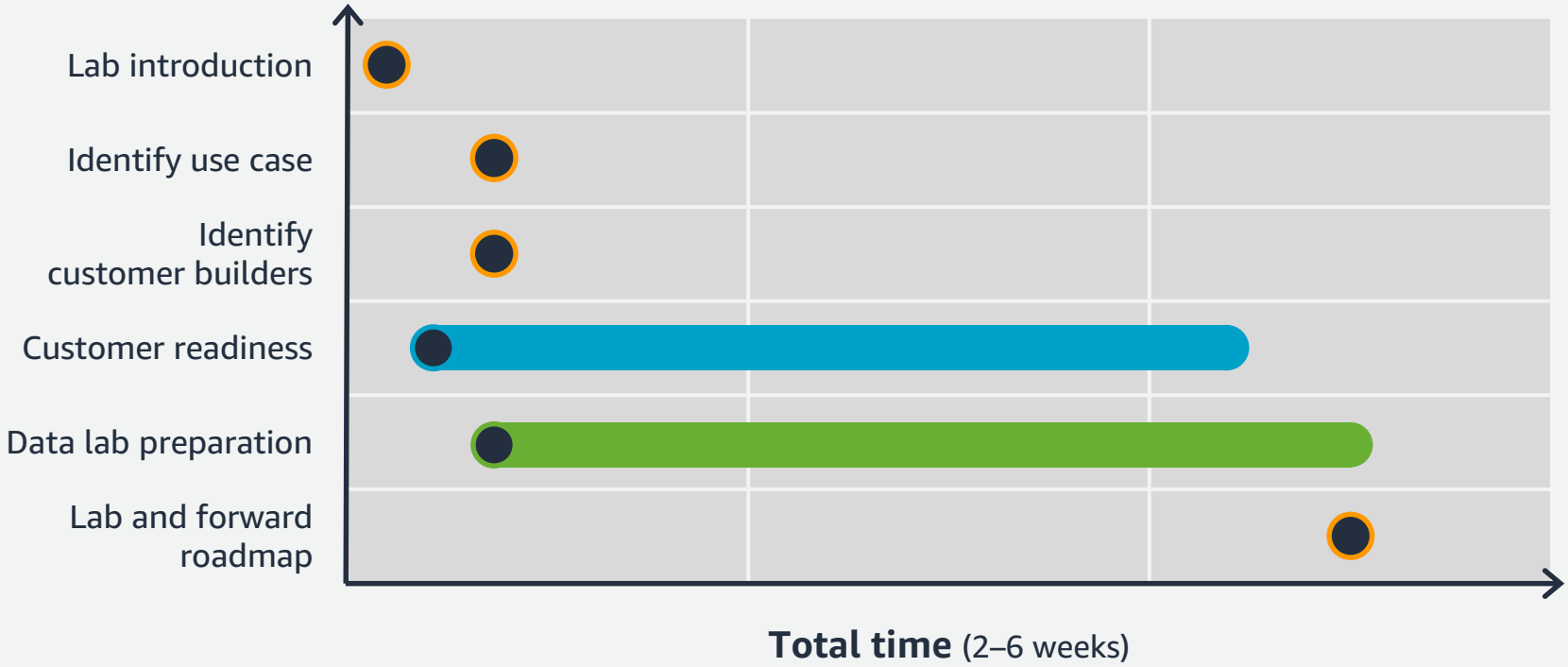
HOW?

- 2-5 day engagement
- Architect solution
- You build in your account
- Learn from experts
- Validate functionality

© 2020, Amazon Web Services, Inc. or its Affiliates.

aws

Data lab high level timeline and milestones



© 2020, Amazon Web Services, Inc. or its Affiliates.

aws

Data Lab phases at a glance

Pre-lab

Prep calls to talk through:

- Business use case
- Technical use case
- Build team readiness
- Current environment
- Lab goals (MVP & stretch)
- Design notional architecture

Lab sprint

- Two to five day build
- Validate use case & goals
- Identify work threads
- Build solution
- Engage with experts
- Finalize build, demo, & roadmap
- Success measurement

Post-lab

- Post-lab DLA follow-up
- Go-forward roadmap
- Service team & expert engagement
- Outcome measurement
- Plan future projects

© 2020, Amazon Web Services, Inc. or its Affiliates.

aws

AWS Data Lab customers

© 2020, Amazon Web Services, Inc. or its Affiliates.

aws

Data lake for analytics

CHALLENGE

This United States military organization needed help to modernize their data architecture in order to keep up with an increasingly diverse stream of data and data types, and to create standardized frameworks for the collection, preparation and analysis of that data by a large group of users.

SOLUTION

During the Data Lab, the customer team built an S3 landing zone, using AWS Direct Connect to get data from their source systems, and built an ETL pipeline using AWS Glue for ETL and catalog. The team also built a searchable metadata store for the lake using DynamoDB and ElasticSearch. Finally, the team used Lambda to take data extracts from the lake and load them to Neptune for graph analytics

BENEFIT

Over the course of the week the customer team developed and iterated on many different pipelines and glue cataloging approaches and identified a successful approach. The team was able adjust to services that were available in GovCloud. This data lake served as the basis for a production deployment by the organization.

US Military Organization

“ I.

Person

”

© 2020, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

aws data lab

Data lake for analytics

CHALLENGE

This Canadian government security organization needed to develop the ability to use machine-learning to detect weapons in parcels. Their current methods were missing weapons, and they needed to dramatically increase the rate at which they could accurately detect them.

SOLUTION

During the Data Lab, the customer team was able to load 4 million images into two different machine-learning test environments for evaluation. They compared a manual approach and an automated approach with Amazon Sagemaker.

Benefit

The automated pipeline showed a 50% improvement in weapon detection. Also, the team was able to easily scale up their environment to improve performance and accuracy when they discovered that the initial tests used an undersized infrastructure.

Canadian Government Security Organization

“ I.

Person

”

© 2020, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

aws data lab

Helping builders build solutions faster!

Are you ready to start your Data Lab journey?
If so, here's your to-do list:

1) Complete the customer readiness checklist
2) Identify your ideal minimum viable product and stretch goals for the lab
3) Identify your build team
4) Identify the business goal or driver behind the lab – what does your business need from the lab?
5) Share this information with your account team so they can kick off the process and we can create a great Data Lab for you

© 2020, Amazon Web Services, Inc. or its Affiliates.

Q&A

© 2020, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Thank you!

aws-uk-local-sales@amazon.com

© 2020, Amazon Web Services, Inc. or its Affiliates. All rights reserved.