



ADC - A10

Enabling a culture of experimentation with AWS Prototyping

Simon Higgins

Innovation Director
M-Group

Gaurav Kaila

Head of UKI Prototyping
AWS

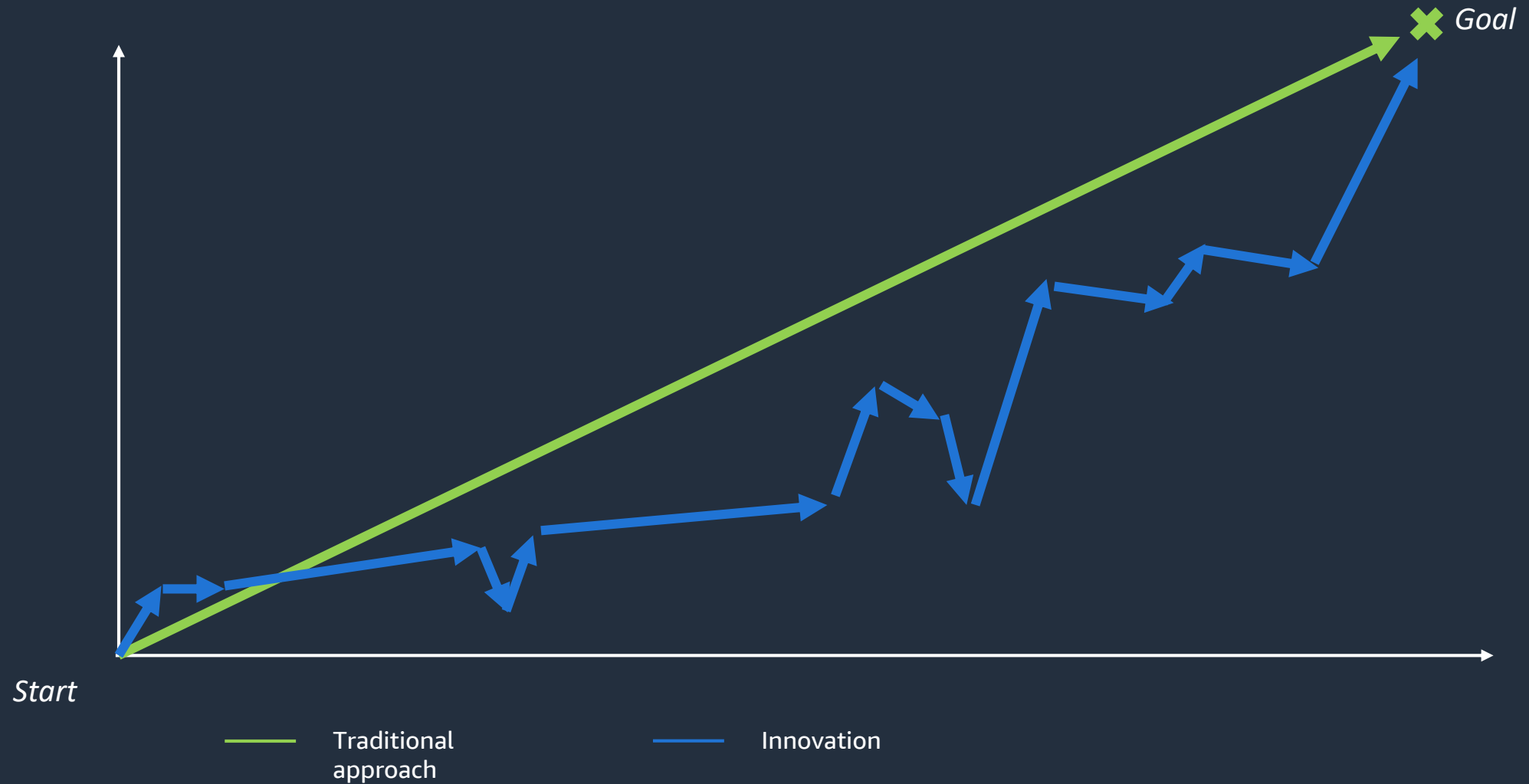
Innovation at Amazon



Just Walk Out

technology by amazon

All these innovations were made possible through experimentations



If you double the number of experiments you do per year, you're going to double your inventiveness.

Jeff Bezos

Just Walk Out

2012

- Computer Vision technology to revolutionize retail space
- PR - FAQ

2013

- Year of brainstorming (kind of stores, customer experience)
- “Just Walk Out” – focussing on checkout lines

2014

- Grocery store selected for pilot
- Initial prototypes included using RFID, bar codes
- Circling back on Computer Vision

2015

- First prototype store in Seattle
- Amazon stock drops by 10%, project still goes ahead

2016

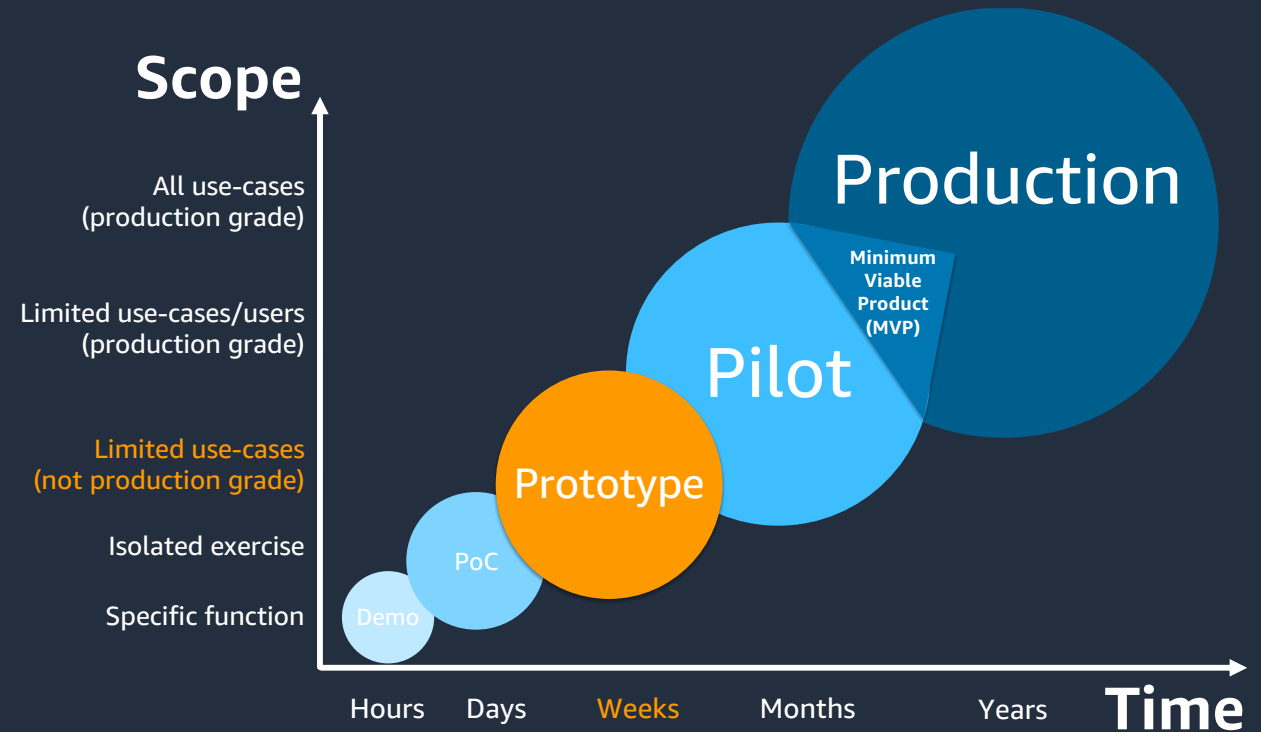
- First Amazon Go store opens to employees in Seattle
- Amazon Books store opens

2023

- 23 Amazon Go stores in US & 27 in U K
- Just Walk Out technology used by other retailers (WH Smith, Hudson)

Building a safe environment for Experimentation

Prototype is a **functional** proof-point, addressing a **genuine business challenge**, developed in a time-boxed manner helping business achieve **specific outcome(s)**



The Prototyping Journey



Listen



Define



Experiment



Refine



Deliver

The Prototyping Journey



Listen



The Prototyping Journey



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Define



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Deliver



How can AWS help?

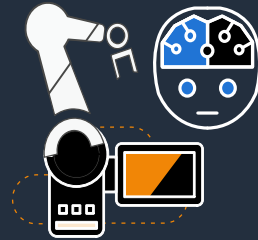


AWS Prototyping Program accelerates the customer decision process by enabling (their) developers to build new workloads on AWS through hands-on experimentation during an average 6 weeks period.

How does the customer benefit from prototyping?



**Empowered
builders**



**Tangible & demonstrable
business deliverable**



**A decision to continue
on AWS**



**Clarity on
costs & risks**



**Refined
requirements**

Our Customers



callisto

A part of **MGroup**Services

A customer engagement perspective

KILKENNY | SEPT 27TH 2023



M-Group - Callisto

About: We provide regulated data management services for the UK energy suppliers. We are the UK's largest provider of Data Management services to the utilities market, managing over 55 million data records. Committed to supporting energy and gas retailers via innovative solutions and scalable services.

Problem: UK Energy suppliers are moving from forecasting solutions based on estimated annual advances to half hourly actuals. The roll out of smart meters and the move to market wide half hourly settlement provides the opportunity to forecast energy consumption based on historic half hour data.

Solution: Prototyping team enabled Callisto to implement a demand forecasting prototype for half hourly data. The solution can provide real time forecasts based on historic data and weather for day ahead market.

Impact: Demonstrating the forecast demand model to UK energy suppliers has broadened our engagement with our customer. Delivering business insight for their business decisions.

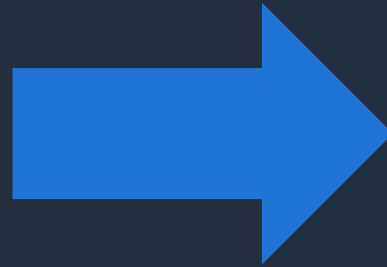
The logo for Callisto, featuring the word "callisto" in a lowercase, white, sans-serif font. The letter "o" at the end is a solid teal circle.

A part of **MGroup**Services

"The engagement with the AWS Prototyping team has enabled us to rapidly generate interest from customers, elevating our relationships from supplier to insight consultants. The honest and pragmatic approach by the prototyping team enabled a proof of concept to be delivered within just 5 weeks"

-- Simon Higgins, Innovation Director, Callisto

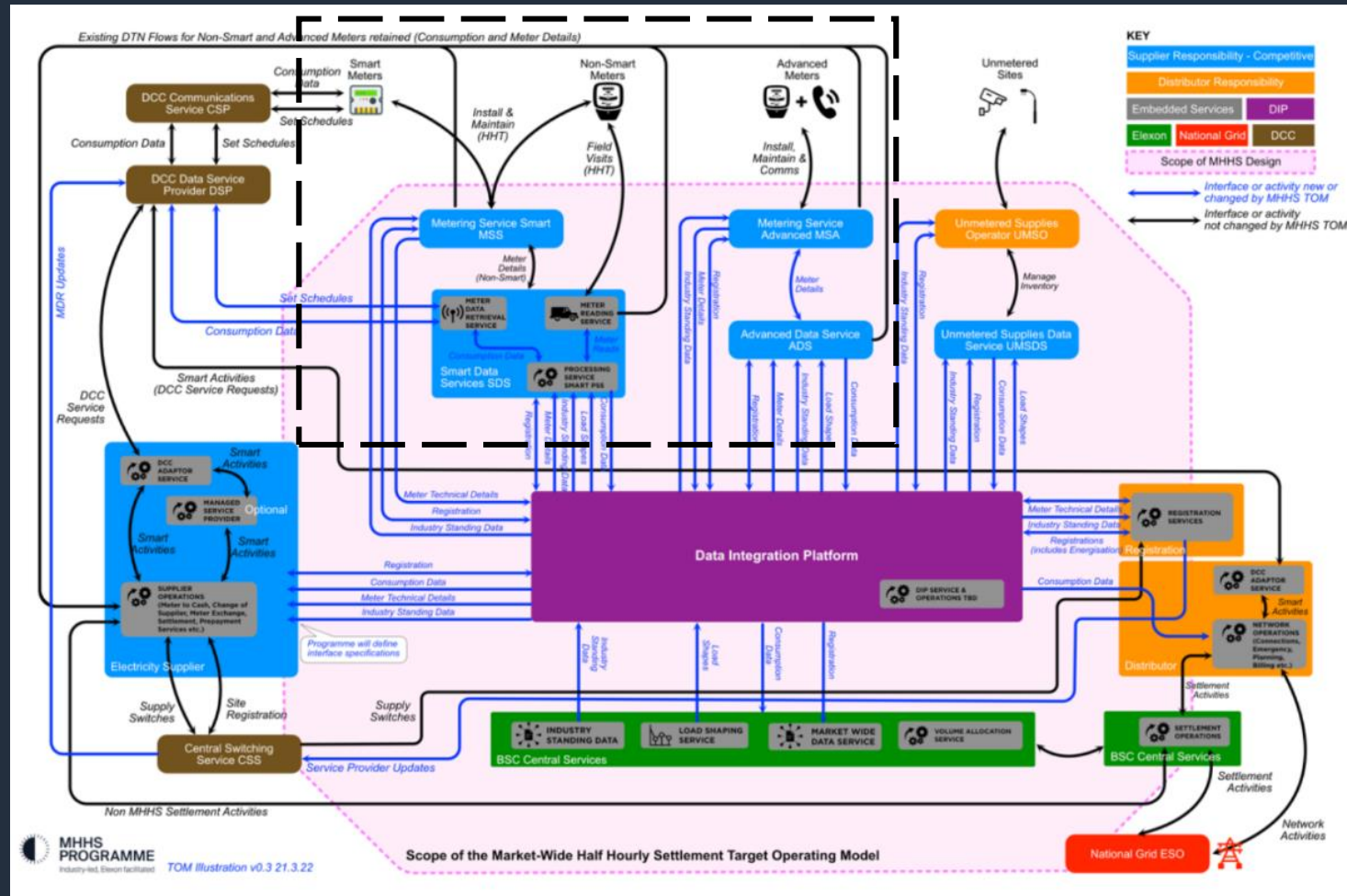
Initial MVP - CoRe



Less than one week



Marketwide half hourly settlement - MVP



Assistance with the building the business model

Cost optimised model

- AWS assisted with the development of a PoC
- Provided a cost target for the operation of the solution
- Evidenced the ability to meet the cost target through the POC
- Tested the POC at scale.
- POC was successfully demonstrated
- Sign-off achieved

Options considered

- Lift and shift
 - Using RDS
- Refactoring
 - Using AWS database PLSQL
- Optimisation (Native AWS)
 - Serverless

Comparison -cloud providers

- Help with discovery for a comparison with the other cloud providers
- We developed cost comparisons for
 - Azure
 - OCI
 - GCP
- Central systems chose Azure, energy suppliers already on AWS

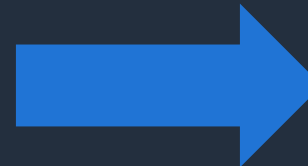
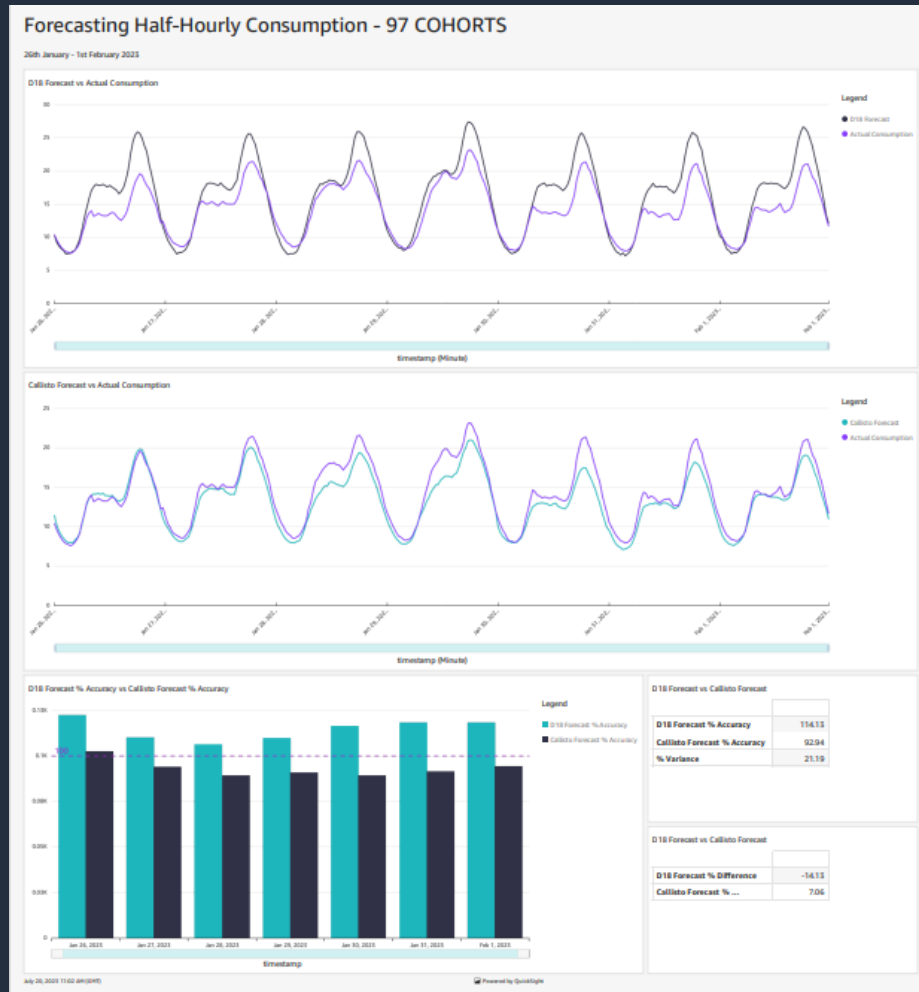
Reducing the skills gap

- AWS helped us identify our latent experience within the business and to develop a training programme to bring our teams up to scratch with the AWS tool set.
- The team evaluated our expertise through a learning needs assessment.
- This was tailored to the development for market wide half hourly settlement services.
- We now have AWS certified architects and developers for the services we are running.

Prototyping Team – from a supplier to consultant

- Demand forecasting based on actual and estimated values.
- The prototyping team evaluated our team's expertise in AWS.
- Low code, no code options were selected, reduced learning without compromise of the objectives of the MVP.
- Experts in understand the data, but no data scientists or
- MVP built a framework for end-end forecasting pipeline
- Forecasting demand for the day ahead market.

Meaningful results to drive business decisions



*“Elevating our relationships
from supplier to consultant in
just five weeks”*



Thank you!

Simon Higgins
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M-Group

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