

Camunda Centre of Excellence @ NatWest

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NatWest
Group



Business Overview



Camunda Centre of Excellence



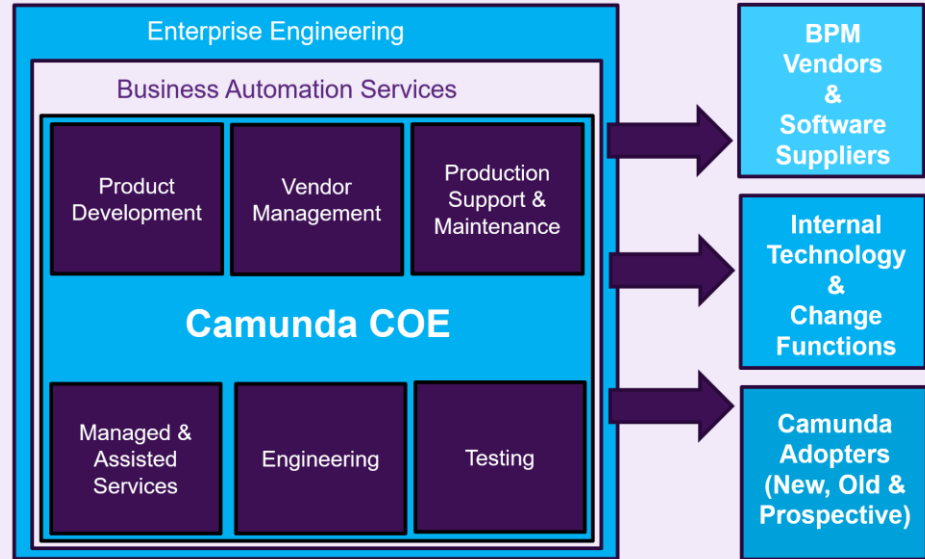
“Camunda COE” established in 2017 with selection of Camunda as Strategic BPM partner

The COE is part of the NatWest Business Automation domain, rolling up into **Enterprise Engineering** Technology

Acts as the Camunda product owner, supporting all internal Camunda adopters, new and old with product development and adoption

Consists of +25 specialist Camunda technologists located across the UK and India, with dedicated roles across Software Engineering, Testing, Business Analysis, Scum Master and Release Train Management

Ensures any use of non-Strategic BPM tools are challenged and justified



Customers and Model

Increased adoption of Camunda since 2017 with 20+ applications across various bank user groups such as **Engineering, Finance, Financial Crime, GDPR, RBS International, Security, Tax & Wealth Management**

Evolved from a centrally owned and managed service, to a self service, assisted journey model

The assisted, self-service model is designed to create a partnership between the COE, the new adopters and end users; from the design, all the way through to implementation and post warranty.

The benefits are a reduction in skills & knowledge gaps, collective responsibility, increased product growth and enabling the COE to focus more resources on product development

Camunda COE Service Models

Managed Services

- COE Owned Design, Built, Test & Implementation
- COE Application ownership

Assisted Journey

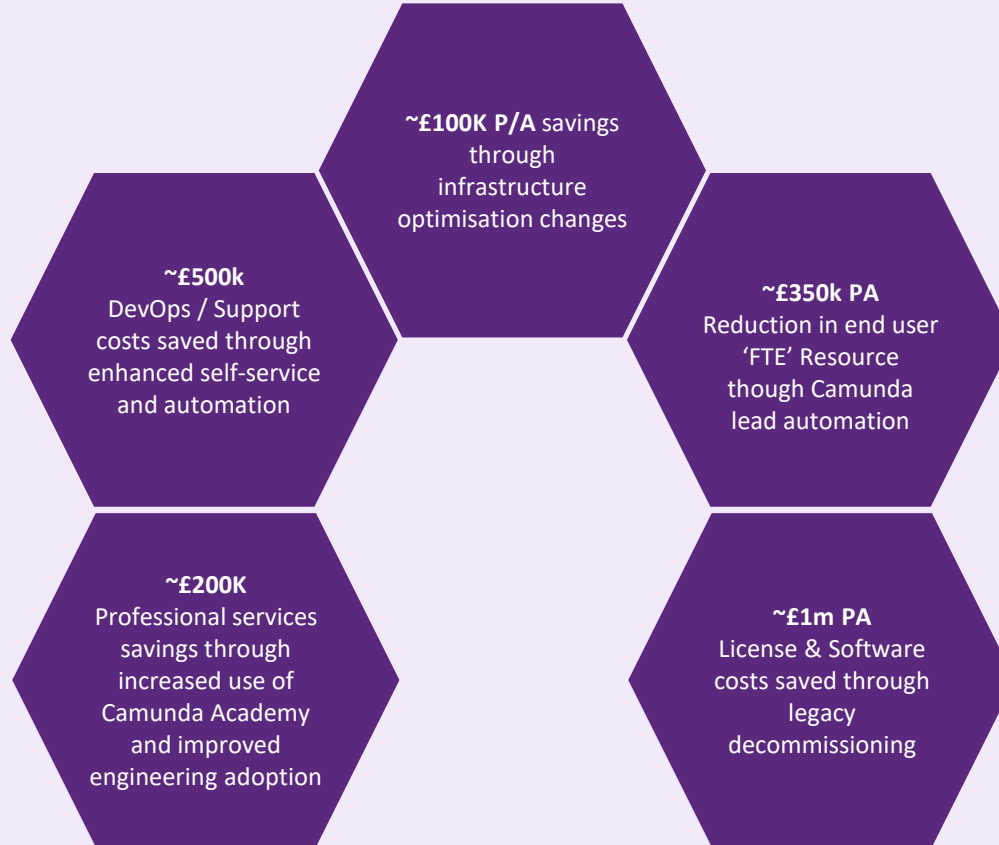
- Joint (Lite or Split) Design, Built, Test & Implementation
- Customer owned application

Self Service

- Customer owned Design, Built, Test & Implementation
- COE governance and consultancy
- Customer owned application



Cost Saving Initiatives – 2022/23

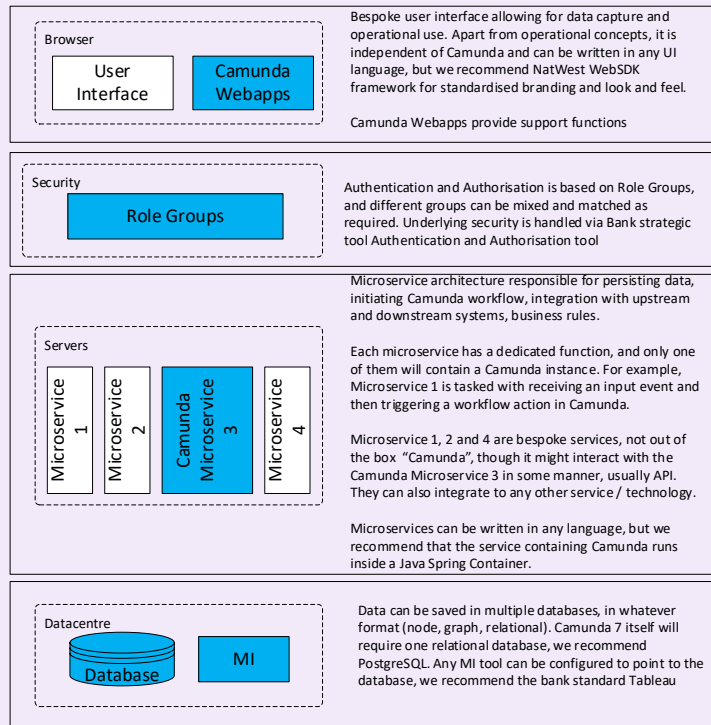


Technology Overview



“Camunda” Architecture

- A typical “Camunda” (7) application within NatWest is a bespoke application, with Camunda only handling BPM concerns
- Camunda manages only the workflow component and is very loosely coupled to the UI
- Clear separation between Business and Camunda data
- Microservice Architecture means the right tool for the job can be utilised, e.g. Spring Batch or a Rules Engine
- The rest is made up of NatWest Strategic technologies, as outlined opposite



Legend

Out of Box Component requiring config only

Bespoke development to user requirements



Principles and Patterns



Data Separation

- Application data and Camunda data are kept in separate schemas. Data in Camunda itself is limited to Business Key reference and routing variables. This leaves your business data free to be used in whatever way you choose.

Event Bus

- Process events (Case start, Task Complete, Gateway result) are received via an Event Bus, meaning subscribers can take any action on the back of the Event – More on this later in Camunda 8 section

Short lived processes linked via Data

- Short lived processes means process change causes minimal impact. Process are linked via the Business Key, meaning that if process X completes, we can run a ruleset on the business data and kick off process Y depending on the rules output.

Queue View

- Task Creation/Completion Events are picked up and task details saved in a table in the Application database, keeping UI concerns out of Camunda.

Archetypes

- A set of Maven Archetypes which Self Service customers can use to spin up bare bones UI and Camunda code repositories, containing recommended patterns.

Standard Submit / Cancel Task Release

- Java Patterns that receives a Task and an Interface instance of a JPA object, along with a Boolean flag indicating success or failure. Object gets saved and task is released with set of variables based on the Boolean flag.

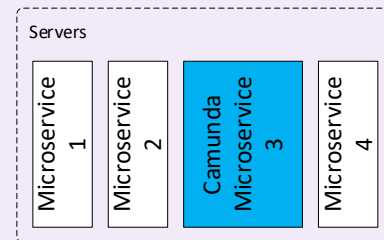
Camunda 8 at NatWest



Camunda 8 Adoption



- Current architecture is suitable for Camunda 8
- Our main challenge will be Infrastructure
- Event bus functionality will be simulated via the Camunda 8 Exporter feature
- Please help us request a decent Event bus via the Camunda 8 Customer Satisfaction team
- Additional High Frequency use cases and freedom of database



Camunda 8.1

Allows creation of a single Camunda 8 cluster hosting the Pilot application for the Camunda COE



Camunda 8.2

Allows for web authoring of processes via Camunda Web Modeler and Role Based Authentication



Camunda 8.3

Tenancy allows for the on-boarding of another application into the Camunda 8 cluster, with individual support teams managing their respective applications. Optimize running over all will allow COE to recommend process improvements



Camunda 8.4

Camunda Web Console will allow multiple clusters to be created and supported via a single support function, with individual application teams supporting their respective applications within those clusters

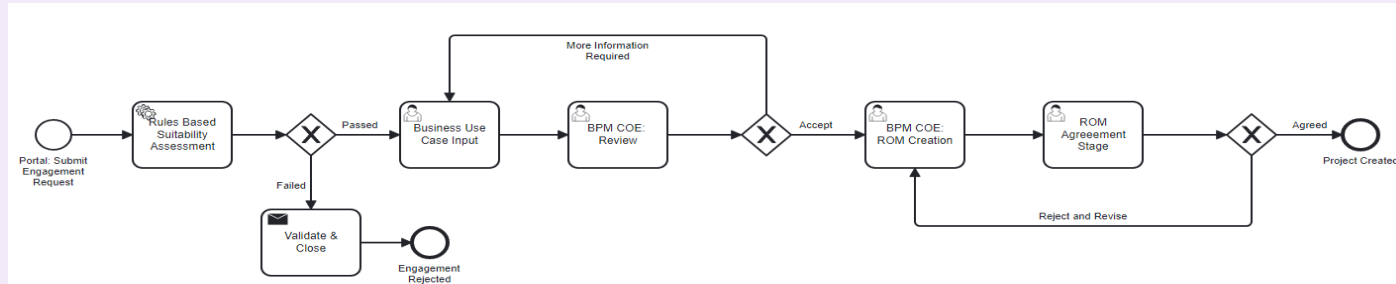
* Provisional Camunda Release Schedule

Camunda 8 Pilot - Requirement



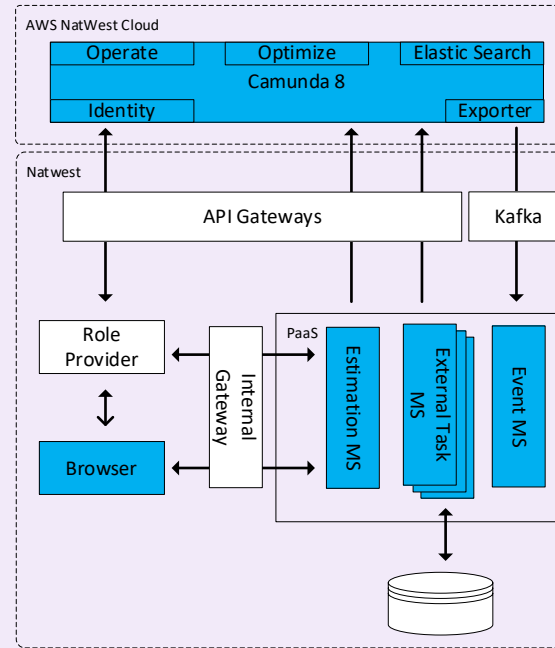
Our own internal COE engagement process is unstructured relying on a single document questionnaire and email communication between COE and prospective Programmes.

Current Process	Target Model	Benefits
<ul style="list-style-type: none"> Initial comms to engage Camunda COE leads Engagement to Introduce customer to Camunda Platforms and capabilities Manual .Docx Front Door form completed by franchise. Offline review, discussions and fit for purpose checks. HL Req meeting Email exchanges to facilitate Business use case information ROM Created and Shared ROM Accepted/declined and Project initiation phase commences. 	<ul style="list-style-type: none"> Initial comms to engage Camunda COE leads Users directed to Engagement portal. Use case captured and assessed in Portal. HL Requirements meetings held Business complete Use Case in portal ROM Created and Shared ROM Accepted/Declined and Project initiation phase commences. 	<ul style="list-style-type: none"> Lead by Example Accelerate COE's Camunda 8 knowledge, learning and Capabilities Optimise internal processes Auto Generate ROM proposals (Rough Order of Magnitude) Central platform for Project information and management Instant access to review project benefits and goals (currently managed through mail) Workstack management and Project Assignment Traceability of Camunda Footprint through NWG



Camunda 8 Pilot - Architecture

- Camunda 8 will be deployed into AWS clusters using Kubernetes and Helm via NatWest strategic Infra As Code tools.
- Camunda 8 Identity will be configured for authentication / authorisation via Strategic NatWest security tools
- Camunda 8 Operate will be used to support the individual Camunda instance.
- Camunda 8 Optimise will be used analyse and optimise processes
- Camunda 8 Exporter will stream events via Amazon Kafka
- A set of Java Microservices will be deployed on PCF tasked with
 - managing UI requests and interfacing with Camunda as required
 - managing external tasks
 - managing process events streamed from C8 exporter
- Bespoke UI developed in Banks Zambesi SDK framework will connect to Estimation MS's via NatWest Strategic API Management platform
- Relational Database for application related data



Legend



Q & A

