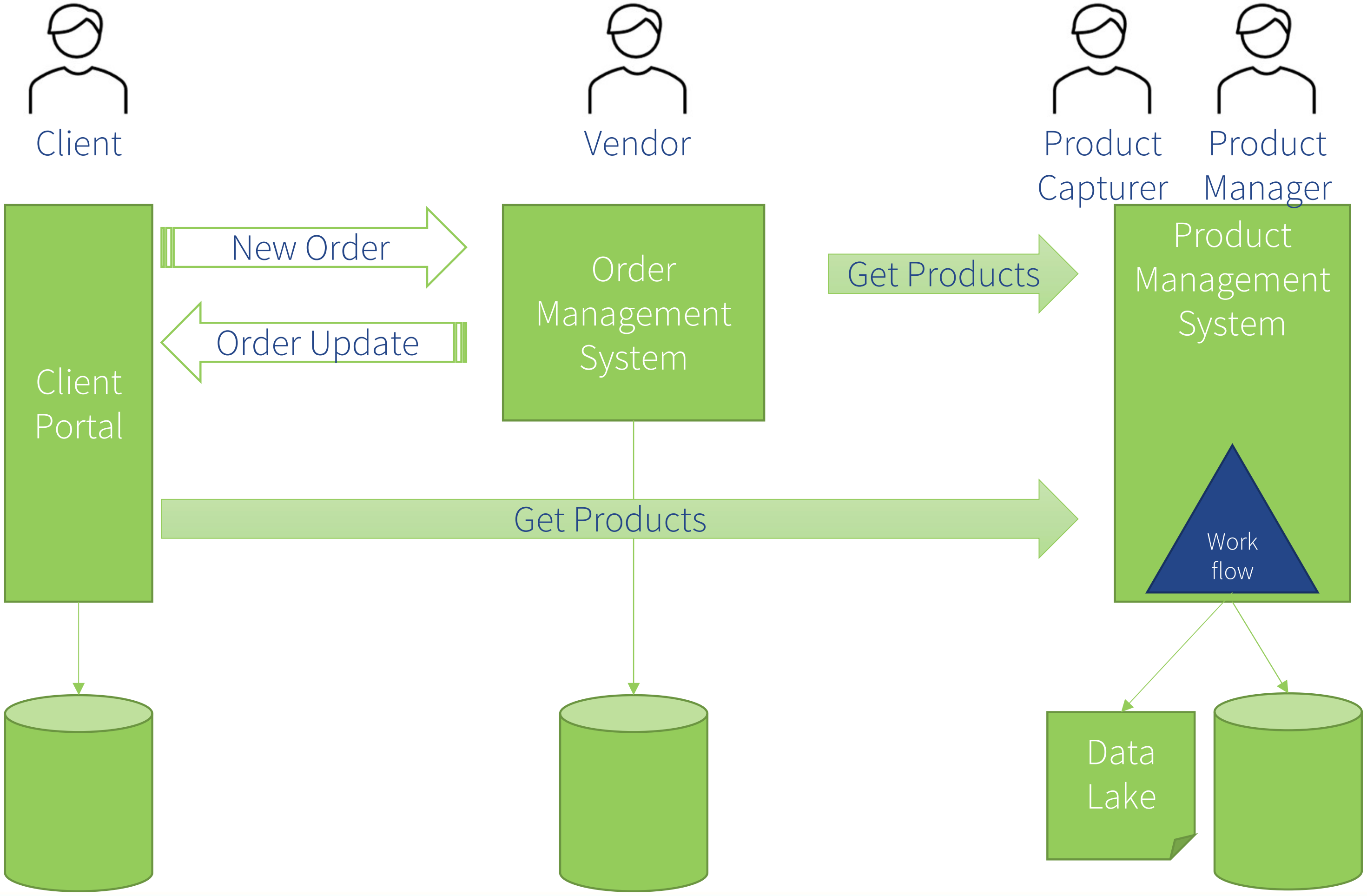
MOYO

Driving Significance Together

Online Order Solution – Case Study v1.2

Software Development Solutions

Online Order Solution



Solution Technology Options

.NET Core

Microsoft
Focused Stream

Java

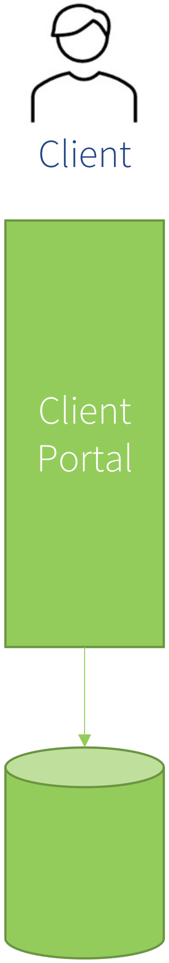
Java
Focused Stream

Implementation Plan

- The candidate has the following options:
  - The candidate can decide which of the 3 systems of the overall solution he/she wants to implement
    - □ *Client Portal*
    - □ *Order Management System*
    - □ *Product Management System*
  - Technology choices
    - □ *Microsoft focused Stream (with Modern UI technology options)*
    - □ *Java focused Stream (with Modern UI technology options)*

Microsoft Focused Stream

Client Portal



Client

Client Portal

Microsoft Focused Stream

This is a system that allows:

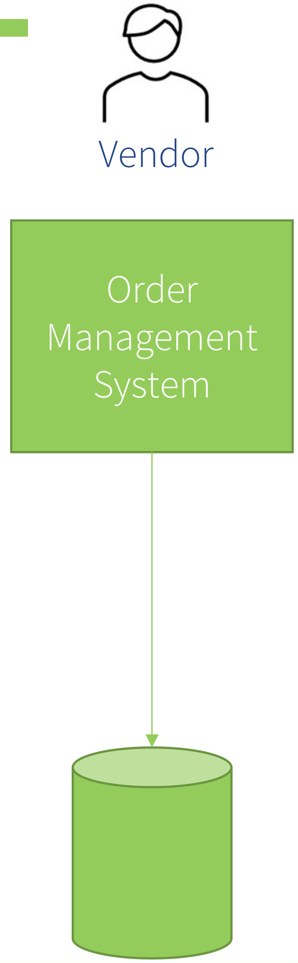
- a client to login
- browsing of Products (basic: 1 table)
- browsing & viewing orders
- Adding of new Orders

Technology:

- Angular / React Front End
- OAuth 2.0/OpenID Connect
- C# (.Net Core)
- Entity Framework (DB First)
- Asynchronous Communication to Order Management Platform (new Orders)
- Asynchronous Communication from Order Management Platform (Status updates)
- Synchronous Communication with Product System
- Public Cloud based PaaS

Order Management System

Microsoft
Focused Stream



This is a system that allows:

- a Vendor to login
- a Vendor to configure prices per Product
- a Vendor to configure stock per Product (inventory)
- the system to receive asynchronous Events regarding Orders
- the system to allocate Orders based on price & inventory to specific Vendors

Technology:

- Angular / React Front End
- OAuth 2.0/OpenID Connect
- C# (.Net Core)
- Entity Framework (Code First)
- Asynchronous Communication from Client Portal (new Orders)
- Asynchronous Communication to Client Portal (Status updates)
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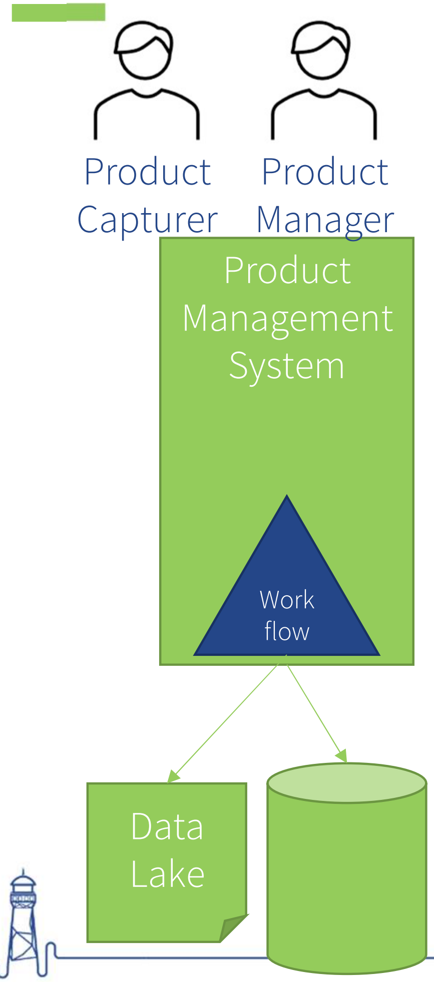
Product Management System



Microsoft Focused Stream

This is a system that allows:

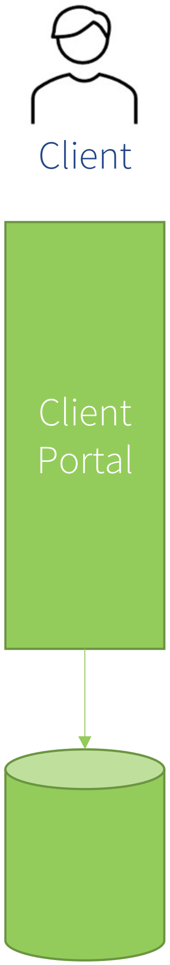
- a Product Capturer & Manager to login
- CRUD functionality on Products
  - Create, Read, Update = Capturer
  - Approve (Update & SoftDelete) = Manager
- Workflow functionality to approve changes to Products (Manager only)

Technology:

- Angular / React Front End
- OAuth 2.0/OpenID Connect
- Authorisation functionality important
- C# (.Net Core)
- Entity Framework (Code First)
- Data Lake for Approved content (quick retrieval)
- Synchronous Communication from Client Portal
- Synchronous Communication from Order Management System
- Public Cloud based PaaS

Java Focused Stream

Client Portal



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Technology:

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- Java (JEE/Spring Boot)
- Hibernate / JPA / Spring Data
- Asynchronous Communication to Order Management Platform (new Orders)
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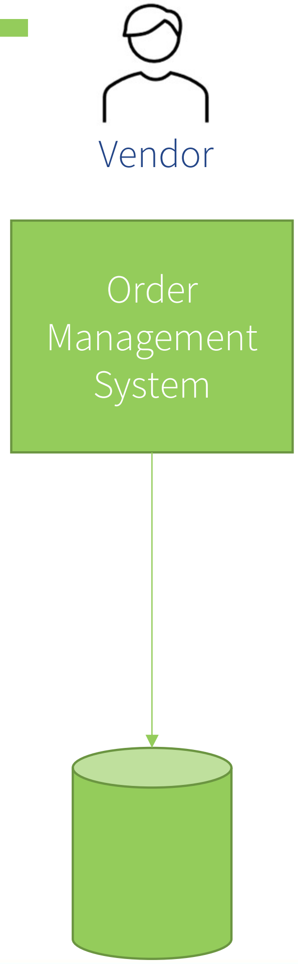
Java
Focused Stream

Order Management System

Java
Focused Stream



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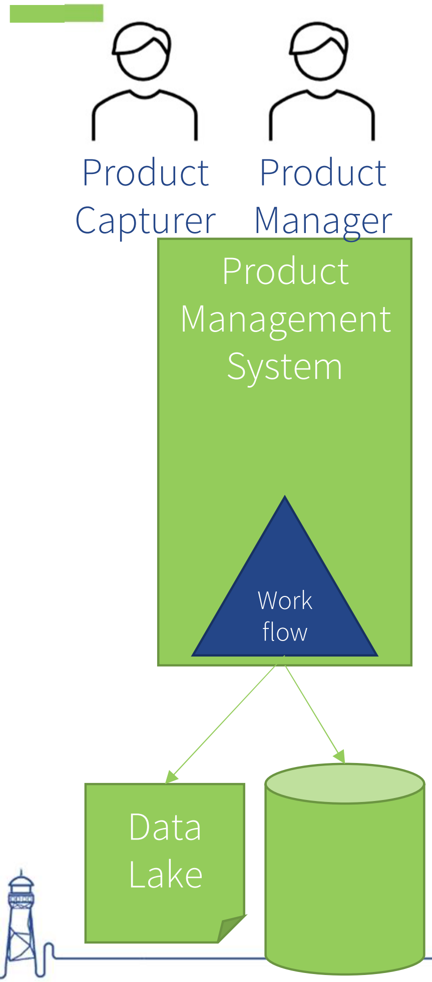
Product Management System

Java
Focused Stream



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General

Solution Principles & Notes

- Less is more
- Software Architecture considerations are critical
- Assume multiple subsequent enhancements would be required, so a good foundation is key.
- Assume large enterprise with large customer base.
- Public Cloud Platform (e.g. Azure/AWS)
- Paas > IaaS
- CI/CD beneficial
  - Infrastructure as Code not critical