By Kennedy Chengeta, Phd

CAMUNDA
CON
2022

myInsureHub/Funeral Marketplace with Camunda

By KaribuTech AI,

South Africa, Pretoria/Zimbabwe, Harare

JANUARY 2022

Agenda

3.10pm - Welcome & Introduction

3.15pm – Our History
Kennedy Chengeta

3.17pm – myInsureHub and Funeral Marketplace
Kennedy Chengeta

3.20pm - Integration Journey: Camunda & MicroInsurance Zero
Kennedy
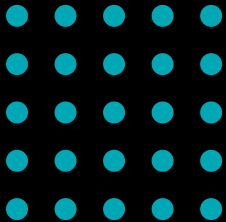
3.25pm –Patterns- PleaseCallMeBack/DontCallMeBack

3.28pm – Batch Processing and Infrastructure Automation

3.30pm – Kubernetes as an enabler of hyperautomation
Kennedy Chengeta

3.45pm - Open Q&A

3.50pm - Wrap-up

Presenter

- Phd in Computer Vision/Artificial Intelligence,
- Finance, Artificial Intelligence, Computer Vision , *Telecommunications/5G* and *Autonomous Driving*
- 400+ workflows past decade for South African financial institutions.
- Non open source BPMs using BPEL and BPMN
- Camunda 4 years, Insurance Reloaded 2.0, myInsureHub21.

Co-mentors Justice, Cebisa, Frans, Mark

Who we are

15 young students and graduates

Enjoying ourselves

Journey

- Young Students
- Highly skilled mentors
- Remote towns first approach
- Rural Students first

Rebound

- Non-working mothers-back to job market
- Difficulties -job market
- Skills realignment-Hyperautomation, Cloud

Achievements

- Trained interns and graduates which some big banks onboarded permanently

Pay it forward

- Mentor someone in life about something
- Put free hours to teach

What defines us

- Use what we have
- Open Source First Approach
- We not defined by our challenges-Network, Electricity

Motto

- Even at 21 you supposed to innovate-Mark Zuckerberg
- No one is an intern-we all innovators
- No spoon-feeding-We show you the way

Introductions

Neliswa, 21 , Database

Britney, 21, Bulawayo Zimbabwe, BPM Process Analyst

Lloyd,21, Camunda Developer,

Tanatswa, 21, BPM Process Designer

Director, Department

Camunda

Mandla, 21 , Chatbot, Kubernetes

Manager, Team

Camunda

Danai, 21 , Camunda Developer, Chatbot, WhatsApp Process Intergration

What we do

Camunda BPM

BPMN/BPEL Orchestration

Offshore Development Consulting

IBM and Oracle Fusion, SoftwareAG

API Technologies

myInsureHub21 microinsurance hub, InsuranceZero

Focus on funeral insurance, link customers, burial parlours and other added services eg photography

Funeral as a Service open source first approach, ApacheInfested

Table of Contents - 5 Items

Topic 1

myInsurehub journey

Topic 2

Technology Stack

Topic 3

Camunda orchestrating Insurance/Funeral

Topic 4

Patterns and Intelligent Routing

Topic 5

Costing and Monitoring on Kubernetes

With myInsureHub
- Get quotations on whatsapp,
- web and by email
- Apply for policies
- Claim using audio and own language

Problem Case 1

- Creation an application of new policy language and technology prohibitive

- New policy applications workflow includes customers, agents on behalf of customers as well as the company staff. Key points include
  1. Underwriting
  2. Contract Signing Digitally
  3. Email and WhatsApp applications
  4. Converting of all rejected applications into a leads hyperautomation process

Business Outcome 1

Customers can use own language, Xhosa, Zulu, Shona, to apply new policy, recordings

Business Outcome 2

Customers can send emails or whatsapp to initiate application process

Business Outcome 3

Customers can check pending applications on their own portal, suppliers and agents are interlinked in one ecosyste

Problem Case 2

Funeral Insurance to Funeral as a Service

- How do I make a claim and Book a funeral service through Camunda process?
- Hyperinflation led to world 1st trillion, quadrillion dollar note
- Schedule all events leading up to the funeral using Camunda. Key points include
  - Make an insurance claim
  - Buy coffin
  - Selecting a parlour near you digitally
  - Selecting a photographer
  - Music Group Booking
  - Book custom clothing

Business Outcome 1

Book for a funeral and Camunda orchestrates event proceedings +claims-automated/manual

Business Outcome 2

Use various payment cheap options, mobile money –use existing mobile money options

Business Outcome 3

Broadcast need of a funeral service eg coffin to variou[s] parlours and they subscribe for service and they bid

Problem Case 3

Bulk Payments as a Service, Hyperinflation, Mistrust among burial society members, Costs of Technology

- Burial Societies collect payments for members
- Withdrawals cause disagreements
- Inflation erodes policy investments for micro-insurers
- Parlours profit margins too small
- Reduce costs of technology and make it visible-KubeCost and Camunda Optimize

Business Outcome 1

Members send allocation files using whatsapp and email.

Business Outcome 2

Policy investments in inflation resistant instruments –livestock eg cattle

Business Outcome 3

Claim approval buy a group of designated signatories using Camunda parallel tasks

Problem Case 4

Challenges

Immigrant Communities in Europe or other African Countries need to organize and pay for funeral service

Solutions

Camunda orchestrates an end to end process with claims process and other

Challenges

The Housewife Task Distribution Problem-Employees have Workflow Tasks, Task in CRM System, HR System. Team Building Events etc

Solutions

To measure effective SLA we propose a BlackBox Task Mirror Model

> " During a funeral its not only a claim I need, I need to hire a music person, food caterer, online burial streaming , but I am 5000 km away

Case Study – Cost Management

Use of KubeCost

Challenge
The client needs to split their costs by business unit

Solution
Use Kubernetes Workspaces and KubeCosts

Outcome
Efficiency and Costs are shown per business unit. Both for Kubernetes components and tagged AWS components like RDS Database
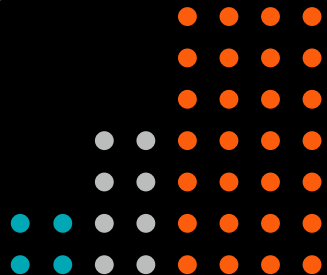
myInsureHub Marketplace

AI-Powered Automation to boost. business outcomes and improve. operational efficiency

Cloud Native Application –runs on AWS, Azure and other Cloud vendors seamlessly, Robotics Process Automation to integrate to company legacy data

AI powered Workflow driven task management and SLA management, Intelligent document management with document capture

myInsureHub21 Channel Aggregation

Customer Mobile-WhatsApp/Web

Agent Mobile/Web

Insurance-Staff Mobile/Web, Other Insurers-Reinsurance-B2B

Approvers Portal-Underwriters, Assessors

Supplier Portal-Parlours

Service Providers-Doctors, Panel Beaters

*my**Insure**Hub Market**place***

Get	Apply	Approve	Apply	Maintain
Get Quotations from different suppliers	Apply for policies digitally from different suppliers	Approve payments and claims digitally	Apply for policies with uploaded applications in different technologies	Maintain policy and customer data on the digital platforms eg address, policy, claims both on mobile and web as well as WhatsApp platform

We Link suppliers and customers
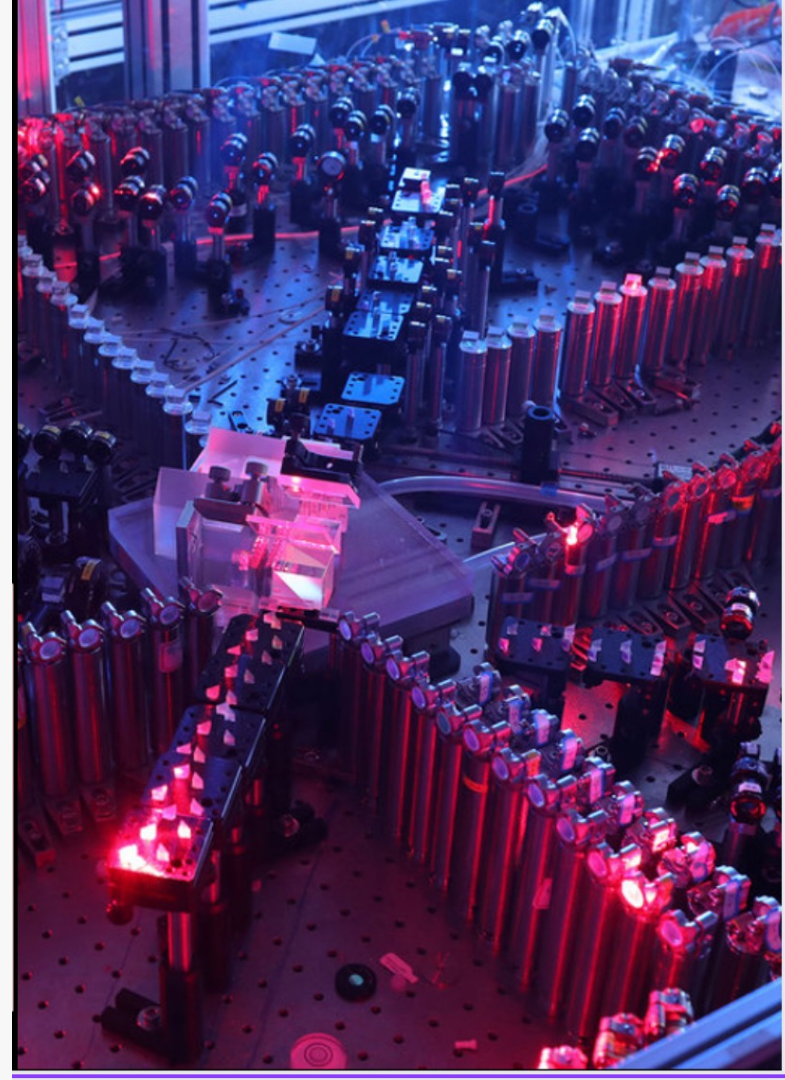
Book Photographer

Find Parlours

Send parting gifts

Book Caterers

Book for body repartriation

Book Singers

EEZIFUNERALS MARKET PLACE!

Funeral as a Service

What matters to her is to bury her loved one

Language

Xhosa ✓

PRESS START TO BEGIN RECORDING AND STOP WHEN DONE

Start   Stop

Identity Document

Browse... No file selected.

Application Type

Record Audio ✓

Recorded Audio

Browse... No file selected.

Proof Of Residence

Browse... No file selected.

Back   Submit

- Facial Verification on Mobile (In Progress)
- Trigger insurance claim from whatsapp
- Notifications
- Musical company for the event
- Choose a food management company
- Make insurance claim using her own language

Customized Portals for Agents, Customers and Service Providers

Burial Parlours get own tasks to deliver caskets from various insurers

Agents can manage from one platform for different insurers

25 GENERIC Camunda Processes

12 DMN Rules

Home / Agents Dashboard

1

MY PROFILE — View

VIEW CUSTOMERS — Go

ADD CUSTOMER — Go

SALES AND LEADS MANAGEMENT — Go

EMAIL LEADS MANAGEMENT — Go

Dashboard Quotations   test1_consultant1 nbf0gh

Home / Customer Dashboard

MY PROFILE — View Profile

MY POLICIES — View Policies

MY CLAIMS — View Claims

REQUEST FOR QUOTE — Request Quote

APPLY FOR POLICY — Go

PRODUCT MARKETING — Go

REFER A FRIEND — Go
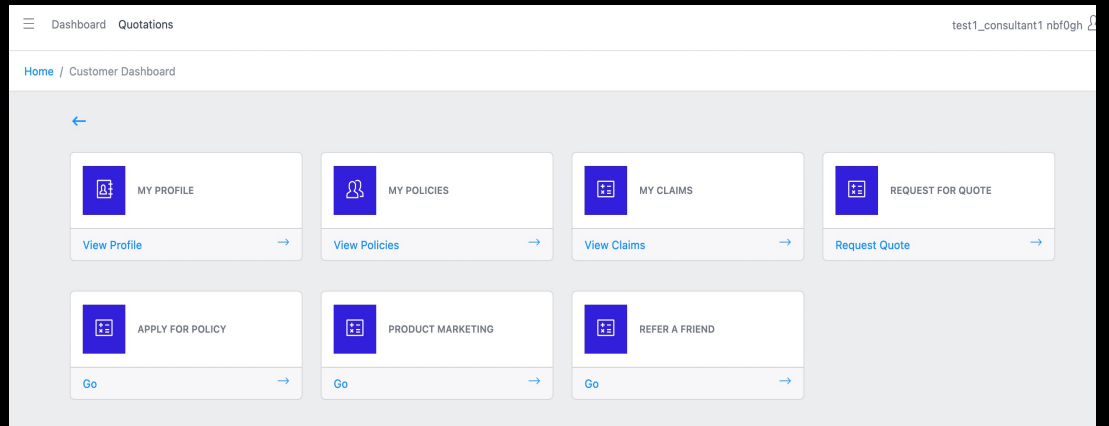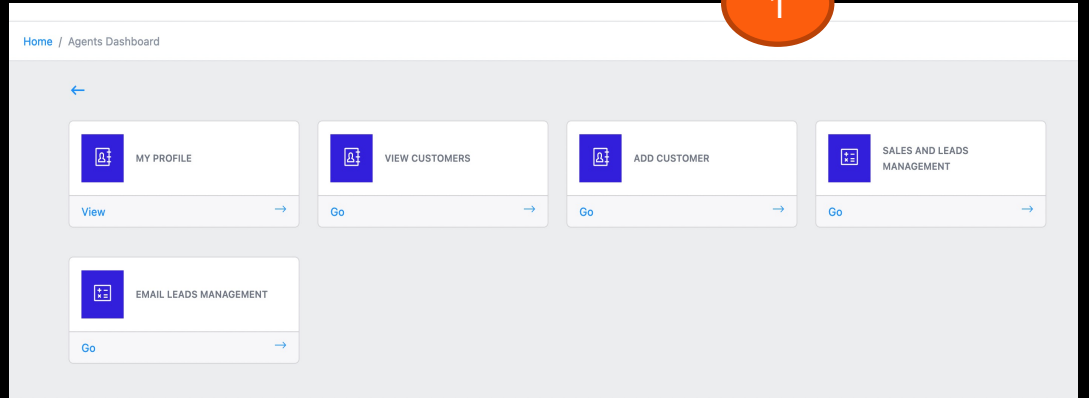
2

Generic Approval Portal

17 different insurance product types catered for

Generic Workflow API eg assign task, cancel, approve abstracted from Camunda

Funeral Insurance Worklist Admin Portal

Search By...   Search...

ID	Assignee	Process Name	Category	Date Created	Customer Name	Action
3a75f7b	app-admin	Underwrite Customer	New Business	2022-09-29	Neliswa Evidence Sambo	View Task
6e56ca8	calvin	Assign Consultant	New Business	2022-09-10	Wellington Mpofu	View Task
71a6f4b	calvin	Assign Consultant	New Business	2022-09-04	Kennedy Chengeta	View Task
8c4e83d	calvin	Assign Consultant	New Business	2022-09-08	Neliswa Evidence Sambo	View Task

New Business Application Profile (Customer CN120)

Application Number	dd24dac8	Task ID	a4ffd04a	Task Creation Date	2022-08-15T13:51
Application Status	Pending	Task Name	Confirm Policy Premiums	Task Due Date	N/A
Applicant Name	Tinashe Makara	Task Assignee	makaratinashe22@gmail.com	Application By	Tinashe Makara
Customer Type	Personal	Policy Type	Funeral	Product	Gold

Policy Holder   Employer Information   Partners   Dependants   Insurance Options   Insurance Questions   Documents   **Application History**

	Activity Name	Activity Type	Assignee	Start Time	Completion Time	Status
1	Assess Application	User Task	wellington.t.mpofu@gmail.com	2022-08-15 02:17:21+02:00	2022-08-15 00:21:46+02:00	Completed
2	Application Started	Start Event	-	2022-08-15 02:17:20+02:00	2022-08-15 02:17:20+02:00	Completed
3	Notify customer on task creation	Service Task	-	2022-08-15 02:17:30+02:00	2022-08-15 02:17:35+02:00	Completed
4	Notify Assignee (escalation)	Service Task	-	2022-08-15 02:19:26+02:00	2022-08-15 02:19:30+02:00	Completed
5	Underwrite Customer	User Task	macbhunu@gmail.com	2022-08-15 00:21:46+02:00	2022-08-15 15:51:24+02:00	Completed
6	Generate Policy Premiums	N/A	-	2022-08-15 15:51:26+02:00	2022-08-15 15:51:48+02:00	Completed

Claim Task   Assign Task   Re-Assign Task   Review Premiums

Make Decision

Reject

- Select Choice
- Approve
- Approve With Conditions
- Approve With Exclusions
- Request For More Details
- Pend Task
- ✓ Reject

Comment	Future Action	
	Select	

Confirm

Landscape

Customers

Service Providers/Parlours

Potential Customers

Agents

25 GENERIC Camunda Processes

12 DMN Rules

API

Web

Mobile/Android/Flutter/React Native

WhatsApp/Email

Web

Marketplace -Own Frontends and use our process orchestration

AWS API Gateway

WS02 API Gateway

Business MicroServices

Funeral MicroService

Premiums MicroService

Vehicle MicroService/API

Payment Collections API

Business Insurance MicroService

Reinsurance API

Medical Insurance MicroService

Claims API

NLP API-Python

Voice to Text Conversion

Image Detection API-TensorFlow/Flask ValueMyCar

Contracts Management-Smart Contracts

Camunda Process Automation/DMN rules Engine

Backend Components

Amazon RDS

REDIS

MongoDB

Firebase-Mobile

Neo4J-Graph

Amazon Redshift

AWS Lambda/Knative

AWS Step Functions

Amazon S3/MNIO

PowerBI

Neo4J-Graph

Amazon Redshift

CodeCommit/Deploy

Logging-ELK Stack Elastic Search

Premotheus and Grafana

Premotheus and Grafana

Monitoring

PowerBI

Amazon QuickSights

Camunda Optmize

Apache SuperSet

Reporting

Apache Camel

SpringBatch

TensorFlow

BlockChain Smart contracts

Enablers

Kafka

SQS/SNS

Twilio Emails/

Rasa Chatbot

Enablers

Zookeeper

Hashicorp

Ansible

Kubernetes

Infrastructure

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High Level Component View

Channels

| Consumers | Funeral Parlour | Staff Portal | Customer Portal | Agent Portal | Burial Society Portal |

AWS API Gateway/ WSO2 API Gateway

APIs

| Create Claim API | Create Policy API | New Customer API | New Business Application API | GetQoute API | Make Payments API |

Tech Enablers

Backend

| Customer Management | Customer Leads Process | Claims Process | New Business Process | Premiums Payments | Quotations | Manage Products |

1. GraphQL

2. REST

3. SOAP

4. GRPC

SpringBoot

| Stop Order Processing | Debit Order Processing | Batch Processing | Marketing/S Sales | Refunds Processing | Rewards Processing | Manage Burial Society Members | Leads Processing |

5. Event Driven Programming (Amazon SQS)

Camunda Workflow

6. Kafka

Flask-Python

| Manage Customers | Payments Management | Complaints Management | Manage Inventory | Automated Document Capture | Confirmation of Policy | Maintain Addresses | Manage Dependencies | Manage Beneficiaries |

7. Apache Camel

8. Spring Batch

DBs

| Database/ AWS RDS PostGres | Database/ AWS DynamoDB/MongoDB | Database/ Firebase (Mobile) | Graph Database |

Third Party Intergration

| Amazon S3 Documents | Address Validation (Google Maps API) | SAGE PAstel Account Intergration | Twilio SMS Integration | Camunda Optimize Data analytics | UIPath Robotics Process Automation | Salesforce Integration- Customer |

Payment APIs

| Pepeya Payment Integration |

Execution of Individual APIs based on Business Rule or based on consumer request

myInsureHub Solution Landscape (Hyperautomation Platform)

InsureHub Marketplace	Eezi-Capture	Eezi-MedsInsure	Eezi-Funeral	Eezi-Health	Eezi-Broker/Agent

Other 3rd party Frontends

-Process as a Service

Automation accelerators

Process mining and modeling

RPA and digital labor

Dashboarding with Camunda Optimize

Core automation

Capture

Camunda Workflow

Camunda Decision management-DMN/FEEL

Document Repository-AWS S3/Alfresco

Foundation layer

Robotic Process Automation

Natural language interactions

Artificial Intelligence (AI)

Machine learning

3rd Party integrations

AWS

IBM Cloud

Microsoft Azure

Google Cloud

VMware

Private

Technology Stack

Channel	Middle Layer	Middle Layer	Backend
Mobile	REST	SpringBoot	Camunda
WhatsApp	GraphQL	AWS Serveless Lambda	Amazon RDS
Web	Amazon API Gateway	Flask python	Amazon S3
Email	Kafka /Event Driven JMS	Quackus	SuiteCRM
Video Recording	Amazon SQS/Event Driven JMS	Knative-serveless	MongoDB

Camunda

MYINSUREHUB MARKETPLACE TECHNOLOGIES

BPM WorkFlow-Camunda, IBM BPM, Filenet

Robotics Process Automation_ UIPath, BluePrism

Decisioning-ODM, Camunda DMN

AI and Machine Learning-Tensorflow, Facial Recognition,kEras, PyTorch

Web and Mobile development- React, AngularJS, ReactNative, Flutter, Anroid, IOS, SpringBoot

BPM WorkFlow- Camunda, Other workflow tools

Robotics Process Automation_ UIPath, BluePrism

Decisioning-Camunda DMN, ODM

AI and Machine Learning-Tensorflow, Facial Recognition,keras, PyTorch

Web and Mobile development- React, AngularJS, ReactNative, Flutter, Anroid, IOS, SpringBoot
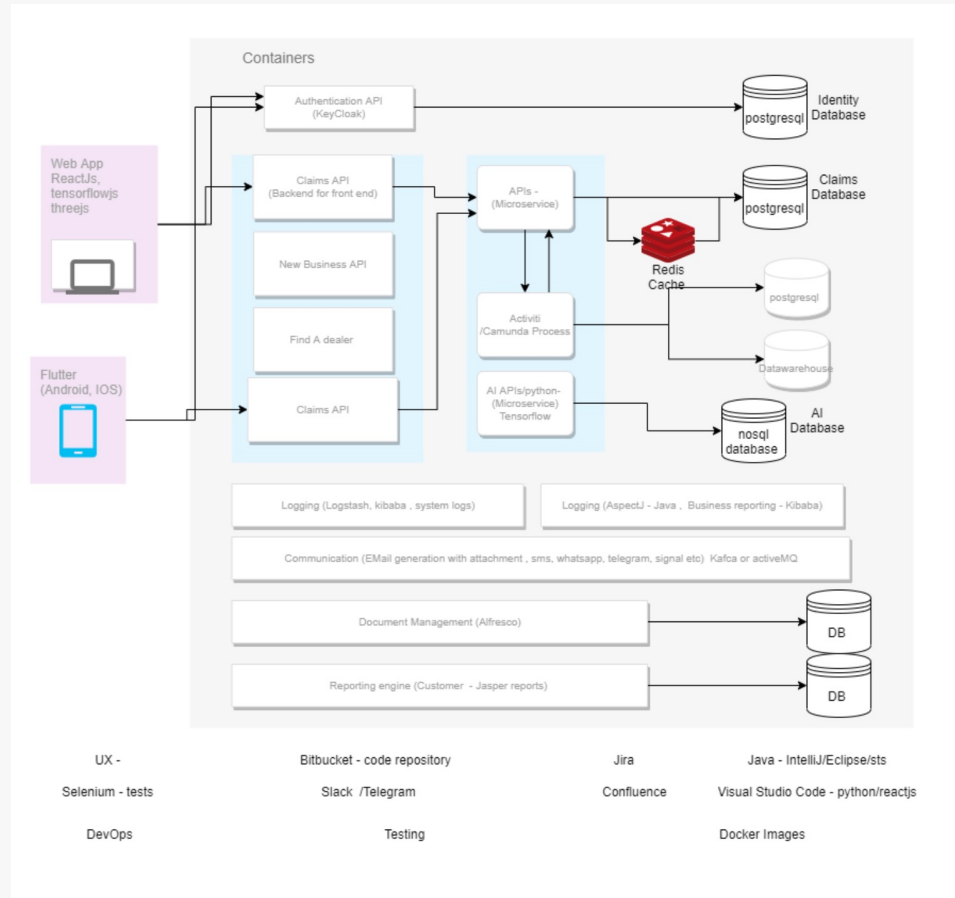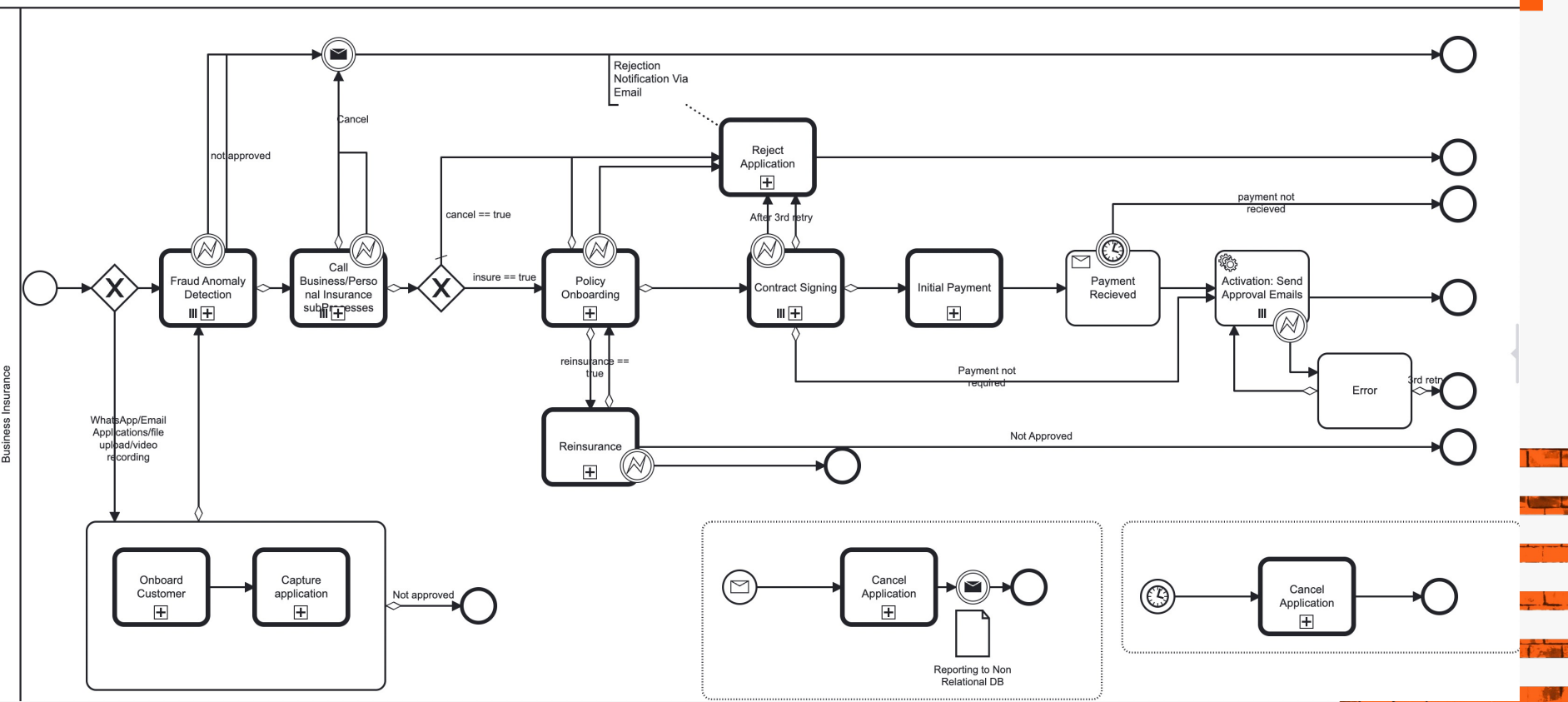
Service Integration-CallBack Pattern

Camunda Patterns-callback

- Java Delegate-MicroService

- Event Driven write to a inbound queue

- With JMS MicroService Executes and feeds to a CallBack Queue

- Camunda receives feedback using inbound messaging

Event Driven Approach

Camunda process

Write to inbound Amazon SQS Queue

Microservice executes

Writes to CallBack Queue

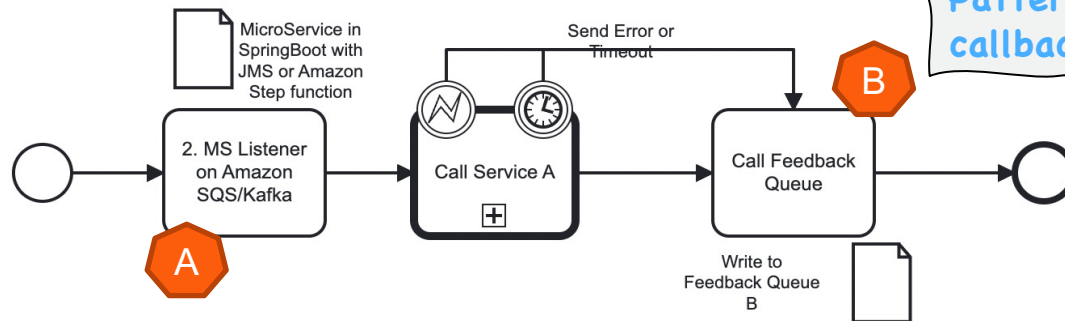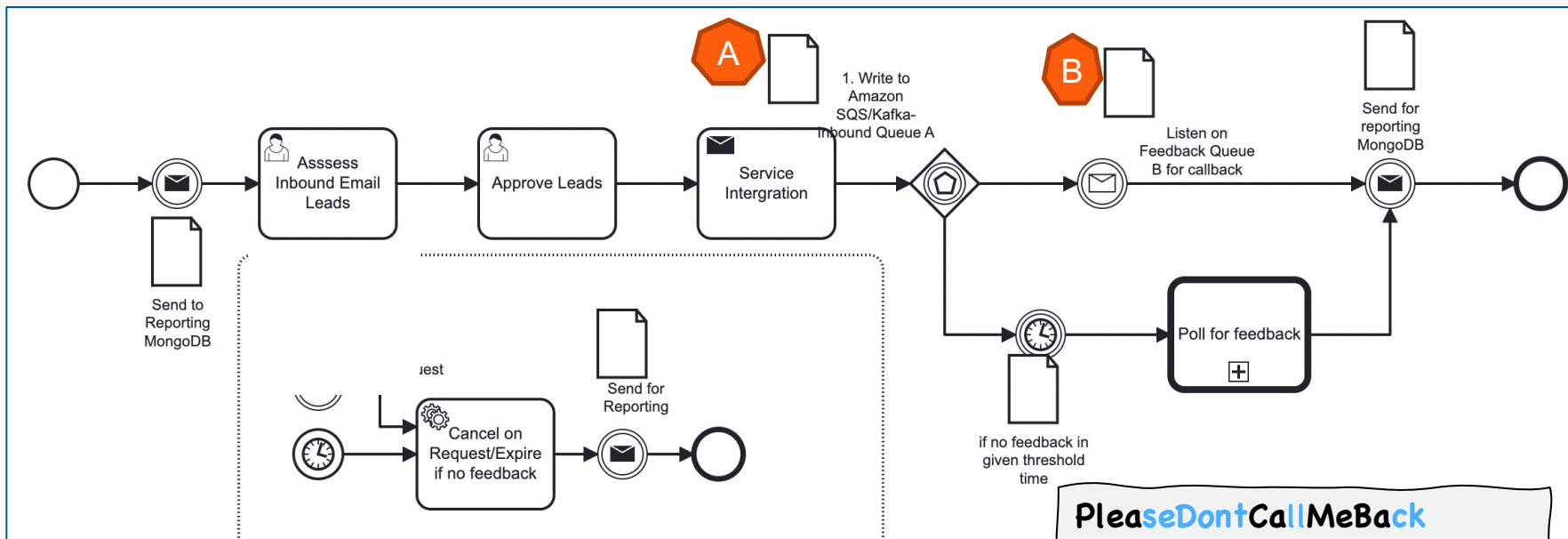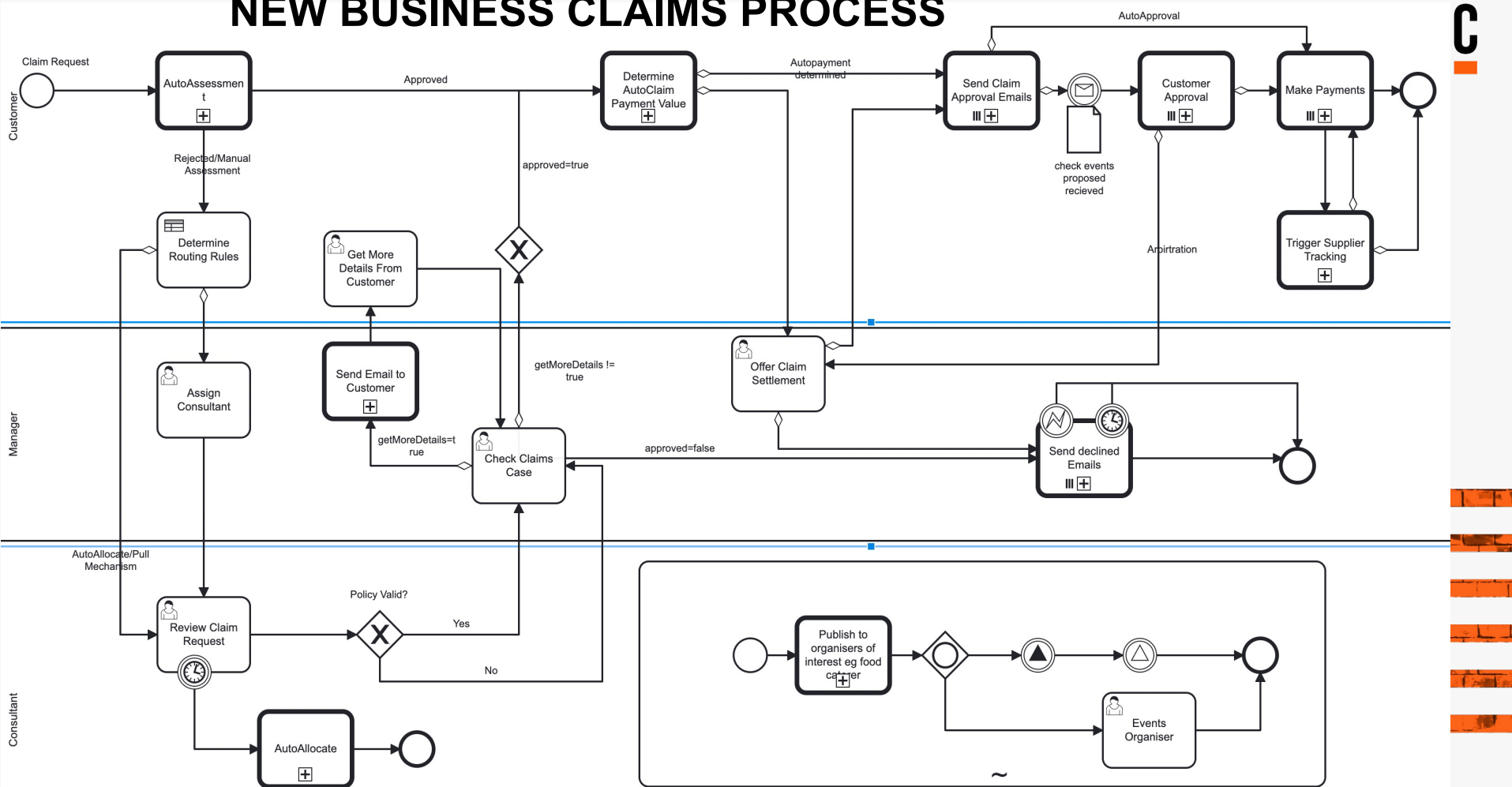Process Message Event receives feedback and continues

Connectors

REST

Email

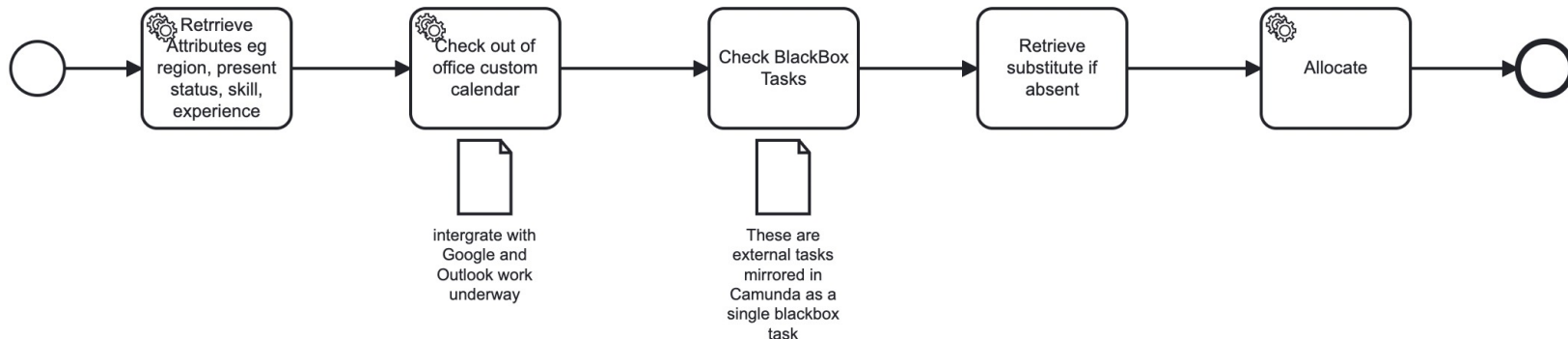RPA-UIPath-Legacy Integration

PleaseCallMeBack Pattern

Assess Inbound Email Leads

Approve Leads

Service Intergration

1. Write to Amazon SQS/Kafka-Inbound Queue A

A

B

Listen on Feedback Queue B for callback

Send for reporting MongoDB

Send to Reporting MongoDB

Cancel on Request/Expire if no feedback

Send for Reporting

Poll for feedback

if no feedback in given threshold time

PleaseDontCallMeBack Pattern doesn't have a callback

MicroService in SpringBoot with JMS or Amazon Step function

2. MS Listener on Amazon SQS/Kafka

Call Service A

Send Error or Timeout

Call Feedback Queue

B

A

Write to Feedback Queue B

NEW BUSINESS CLAIMS PROCESS

Solving the issue of Intelligent Work Routing-Housewife Task problem

Retrieve Attributes eg region, present status, skill, experience

Check out of office custom calendar

intergrate with Google and Outlook work underway

Check BlackBox Tasks

These are external tasks mirrored in Camunda as a single blackbox task

Retrieve substitute if absent

Allocate

Check allocation attributes from user repository, addons will be in database

Those with absent are sent back into the pull by a batch program every night

Blackbox tasks from CRM, HR systems are sent through event messaging platforms, and completed same way

Intelligent Work Routing-Present Absent problem

Test_second1_cf@myinsurehub.co.za 🗑

Details	**Attributes**	Credentials	Role Mappings	Groups	Consents	Sessions	Identity Provider Links

Key	Value
Availability Status	Present
Claims Funeral Max Ammount	10000
Claims Vehicles Max Ammount	19 000
Region	Matebeleland
Skills Level	Junior
Substitute	Test_second2_cf@myinsurehub.co.za
Date of return	

If approval amount is >60 000, only James and Tendai are picked up

If Region is Cape Town only Kennedy is picked up

If Kennedy is chosen and absent then Tanatswa will take his work else other team members will

Batch runs nightly to put back people into the pool for the next day allocation

Name:Kennedy
Availability Status:Absent
Return Date:12-11-2022
ClaimsFuneralMaxAmmount:10000
ClaimsVehicleMaxAmmount:10000
Region:Cape Town
Skills Level:Junior
Substitute:Tanatswa
CalendarType:Internal

Name:Tendai
Availability Status:Present
Return Date:12-11-2022
ClaimsFuneralMaxAmmount:100000
ClaimsVehicleMaxAmmount:100000
Region:Matebeleland
Skills Level:Junior
Substitute:Tanatswa
CalendarType:Internal

Name:Kennedy
Availability Status:Present
Return Date:
ClaimsFuneralMaxAmount:10000
ClaimsVehicleMaxAmount:10000
Region:Matebeleland
Skills Level:Junior
Substitute:Tanatswa
CalendarType:Internal

Name:James
Availability Status:Present
Return Date:
ClaimsFuneralMaxAmmount:100000
ClaimsVehicleMaxAmmount:100000
Region:Matebeleland
Skills Level:Junior
Substitute:Tanatswa
CalendarType:Internal

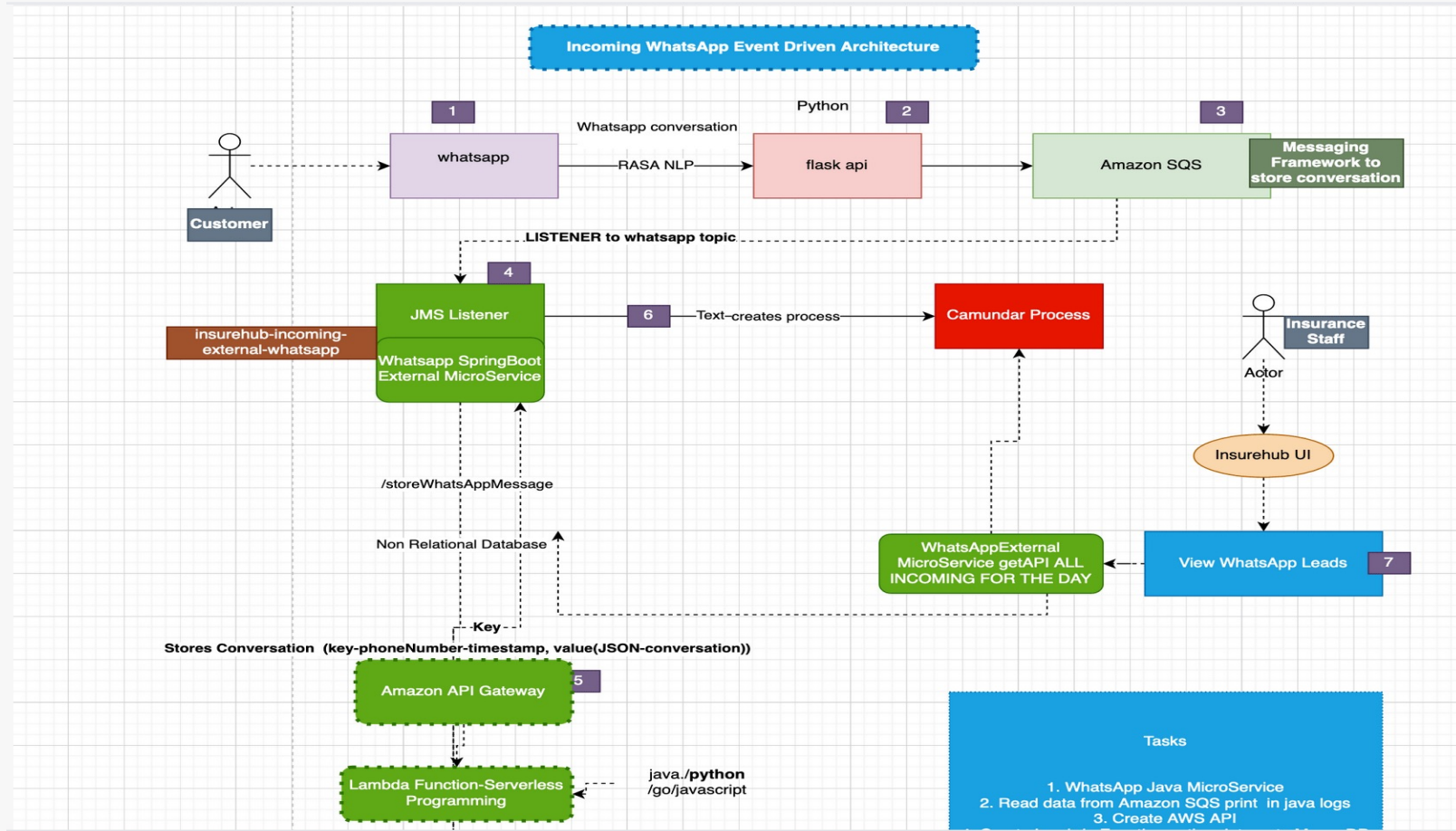# Bulk Payments with Camunda, Apache Camel and SpringBatch
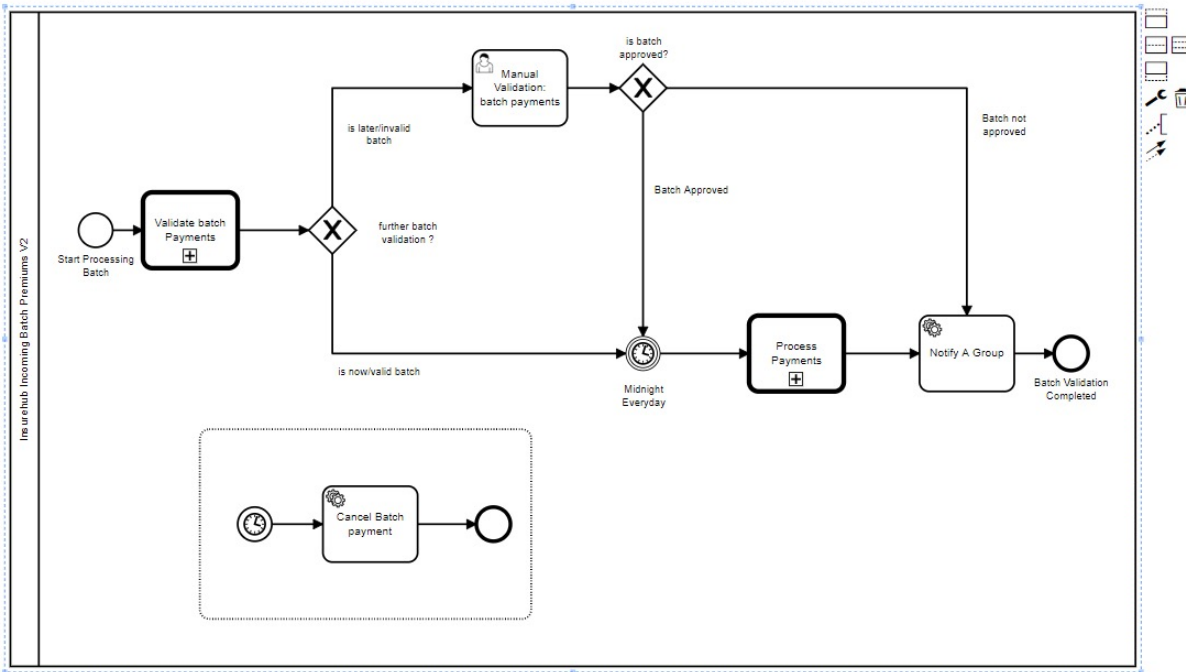
Store File in Amazon S3 on receipt

Commit parent record in the process

All payment line items are entries in a Database
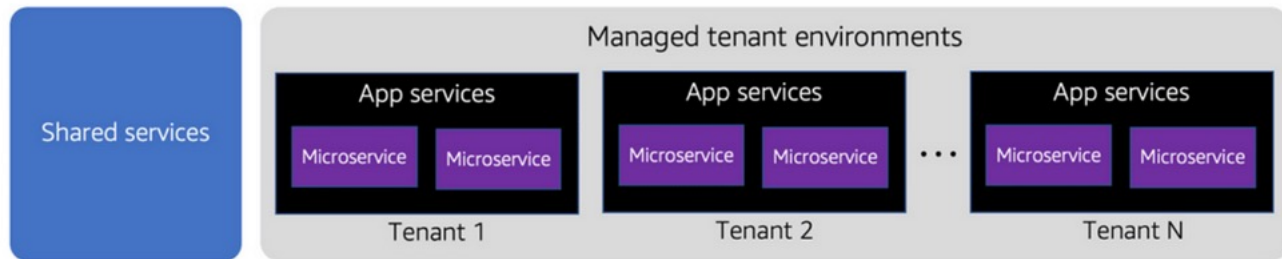
WhatsApp Applications with Danai the Chatbot

Incoming WhatsApp Event Driven Architecture

1 — whatsapp

Whatsapp conversation — Python — 2 — flask api — 3 — Amazon SQS — Messaging Framework to store conversation

RASA NLP

Customer

LISTENER to whatsapp topic

insurehub-incoming-external-whatsapp

4 — JMS Listener — Whatsapp SpringBoot External MicroService

6 — Text–creates process — Camundar Process

Insurance Staff — Actor

Insurehub UI

/storeWhatsAppMessage

Non Relational Database

WhatsAppExternal MicroService getAPI ALL INCOMING FOR THE DAY

7 — View WhatsApp Leads

Key

Stores Conversation (key-phoneNumber-timestamp, value(JSON-conversation))

5 — Amazon API Gateway

Lambda Function-Serverless Programming

java./python/go/javascript

Tasks

1. WhatsApp Java MicroService
2. Read data from Amazon SQS print in java logs
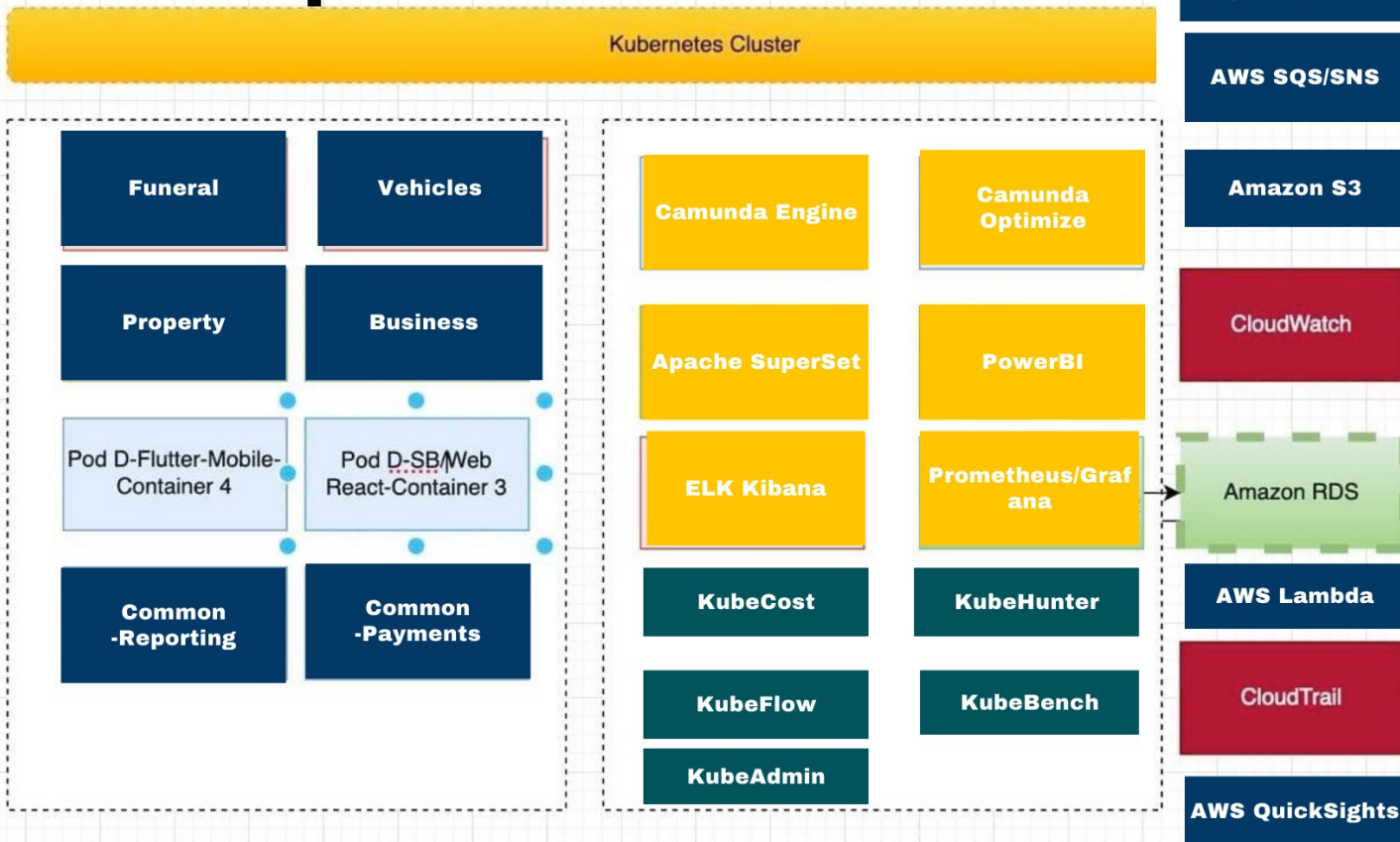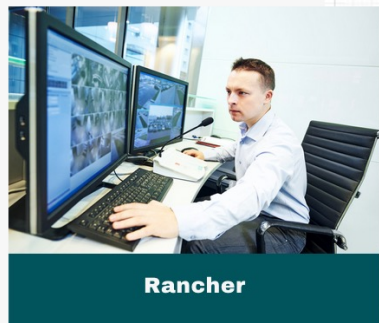3. Create AWS API

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myInsureHub Marketplace as Cloud Native

❑ CloudWatch, Lambda functions, API Gateway, Kubernetes, EC2, Step Functions, IAM Access and Identity Management

❑ Amazon Data- Amazon RDS with PostGres Database.

❑ Machine Learning,Data Science and Warehousing

❑ Azure
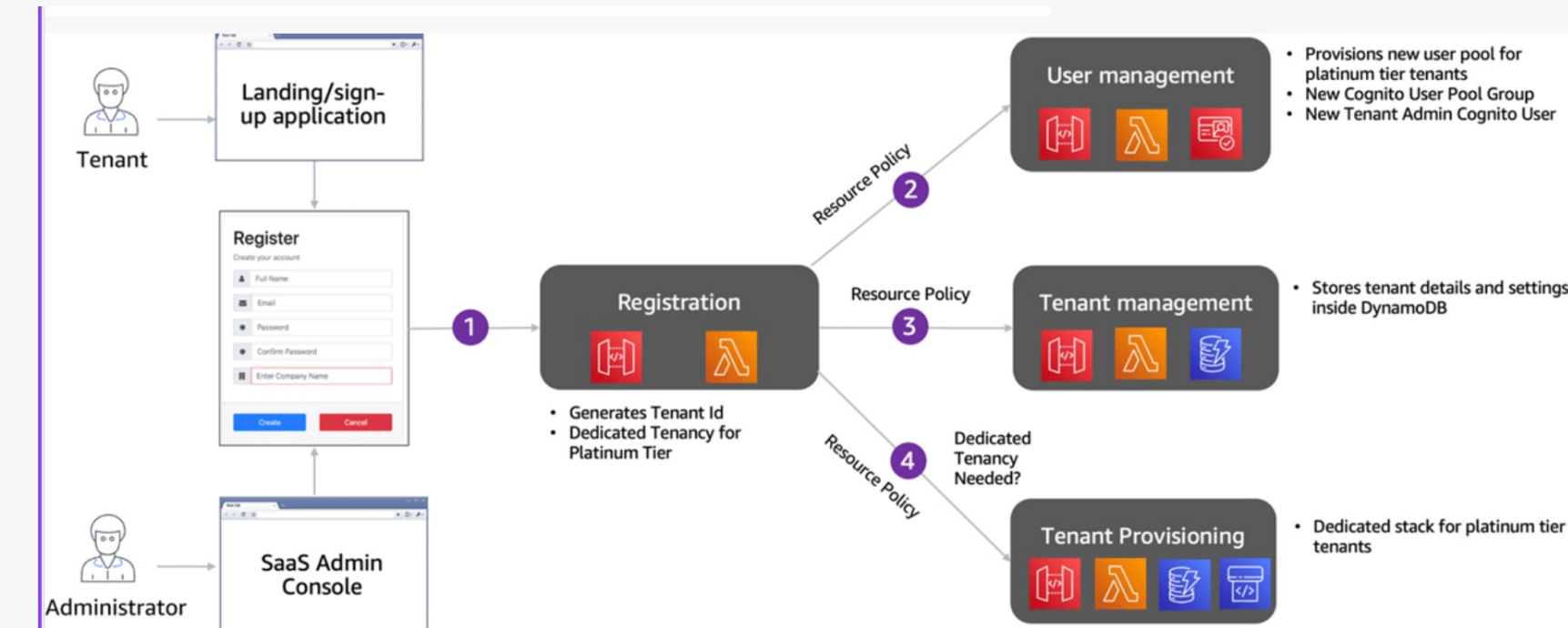
❑ Machine Learning

❑ Data Science and Warehousing

Managed tenant environments
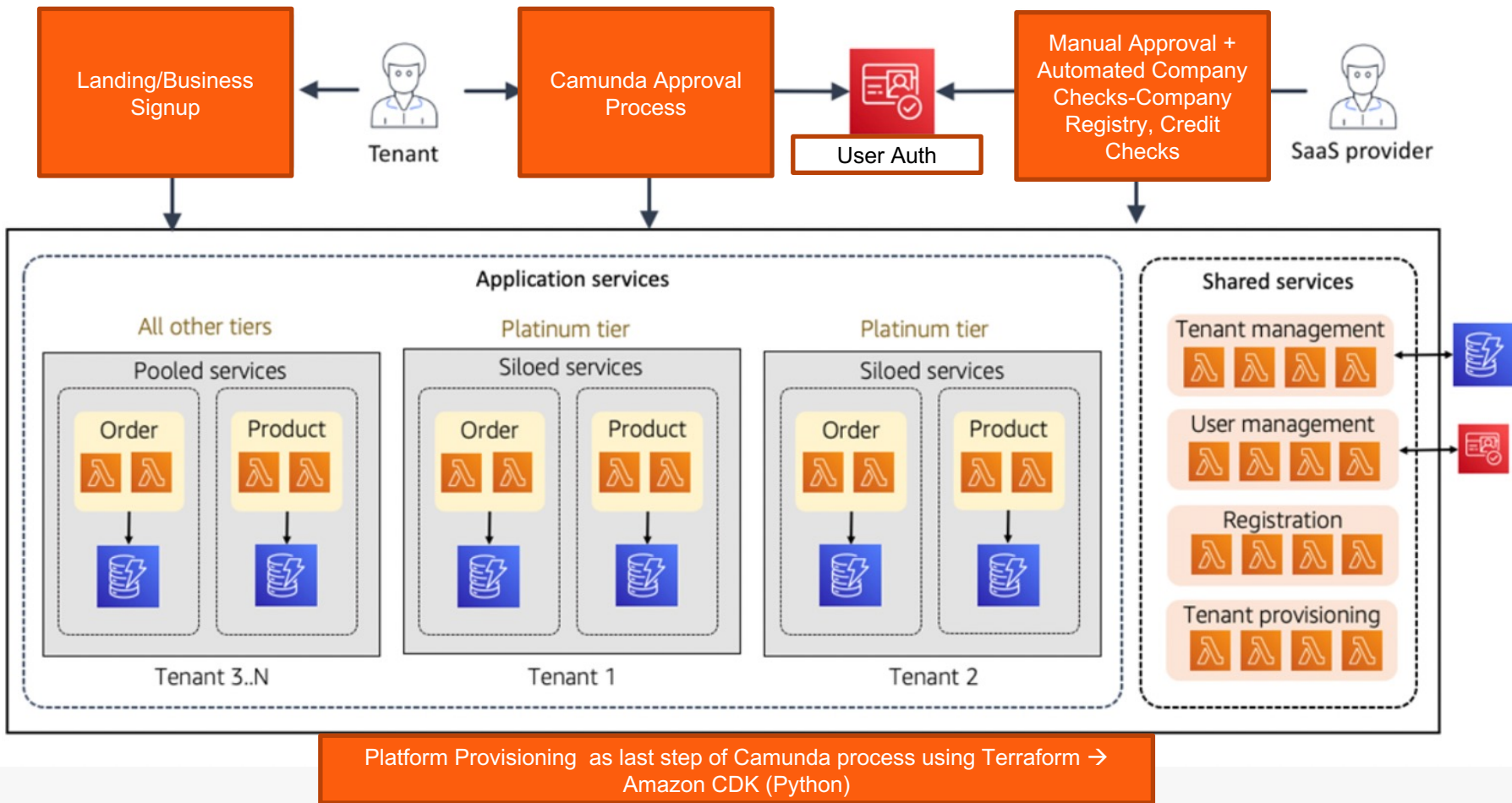
Shared services | Tenant 1 — App services (Microservice, Microservice) · · · Tenant 2 — App services (Microservice, Microservice) · · · Tenant N — App services (Microservice, Microservice)

Kubernetes Components

Kubernetes Cluster

Funeral

Vehicles

Property

Business

Pod D-Flutter-Mobile-Container 4

Pod D-SB/Web React-Container 3

Common-Reporting

Common-Payments

Rancher

Camunda Engine

Camunda Optimize

Apache SuperSet

PowerBI

ELK Kibana

Prometheus/Grafana

KubeCost

KubeHunter

KubeFlow

KubeBench

KubeAdmin

KeyCloak SAAS

AWS SQS/SNS

Amazon S3

CloudWatch

Amazon RDS

AWS Lambda

CloudTrail

AWS QuickSights

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Kubernetes Multitenants

Camunda Registration Process

Kubernetes Multitenants

Landing/Business Signup

Tenant

Camunda Approval Process

User Auth

Manual Approval + Automated Company Checks-Company Registry, Credit Checks

SaaS provider

Application services

All other tiers — Pooled services: Order, Product — Tenant 3..N

Platinum tier — Siloed services: Order, Product — Tenant 1

Platinum tier — Siloed services: Order, Product — Tenant 2

Shared services
- Tenant management
- User management
- Registration
- Tenant provisioning

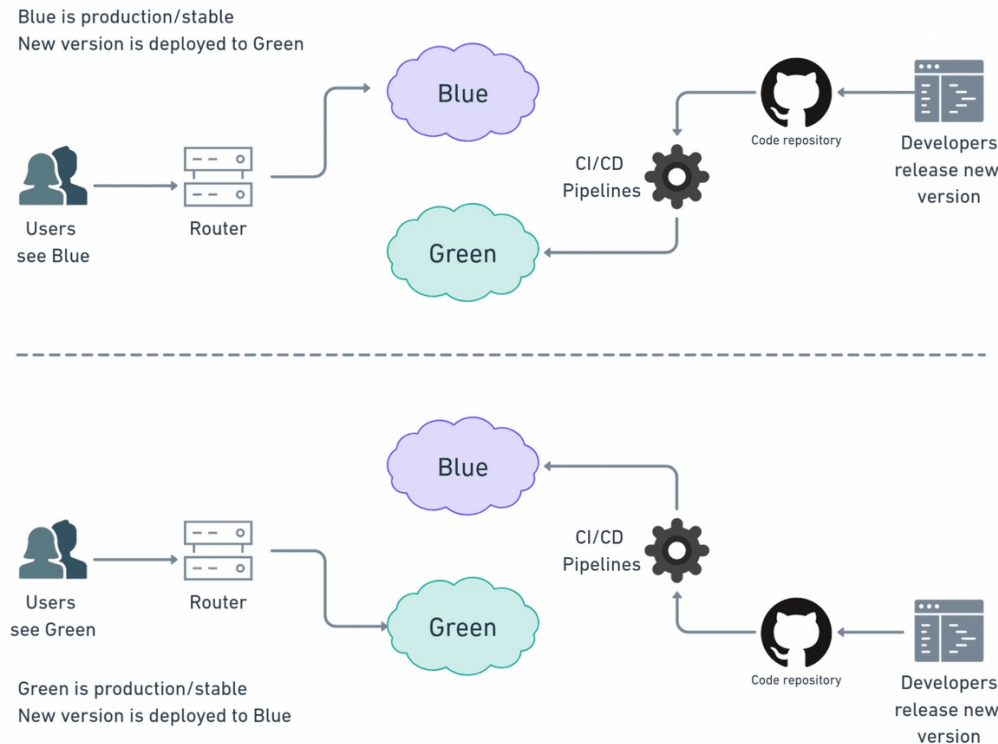Platform Provisioning as last step of Camunda process using Terraform → Amazon CDK (Python)

Kubernetes Multitenants

Multi-tenant Kubernetes Platform for Hybrid & Multi-cloud Environments
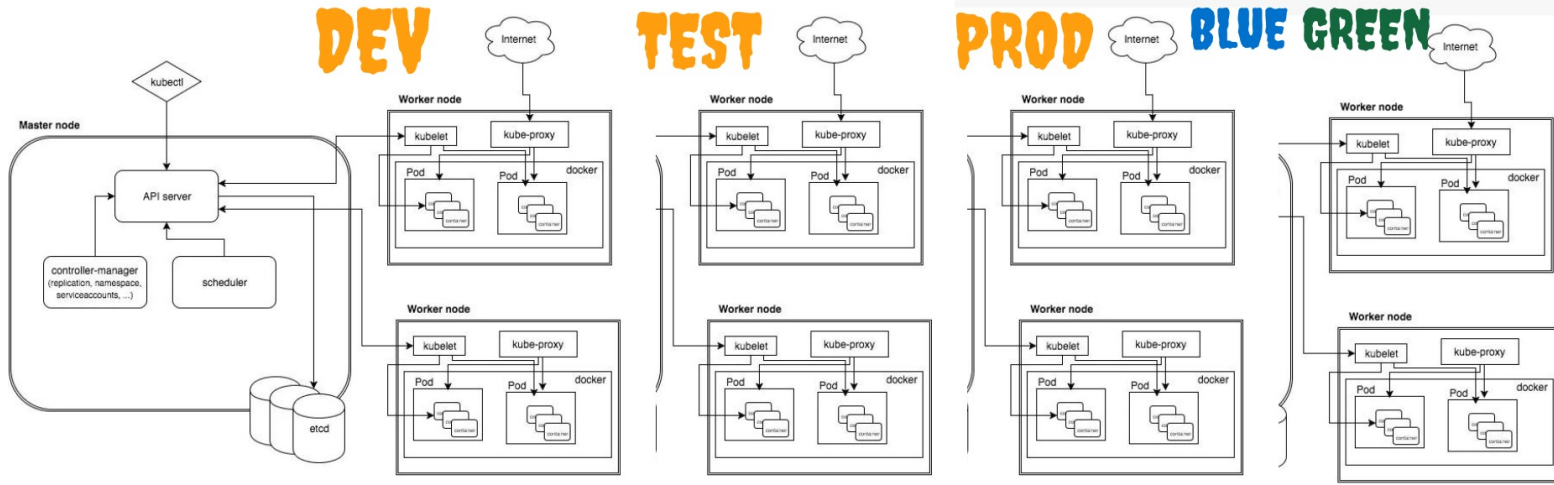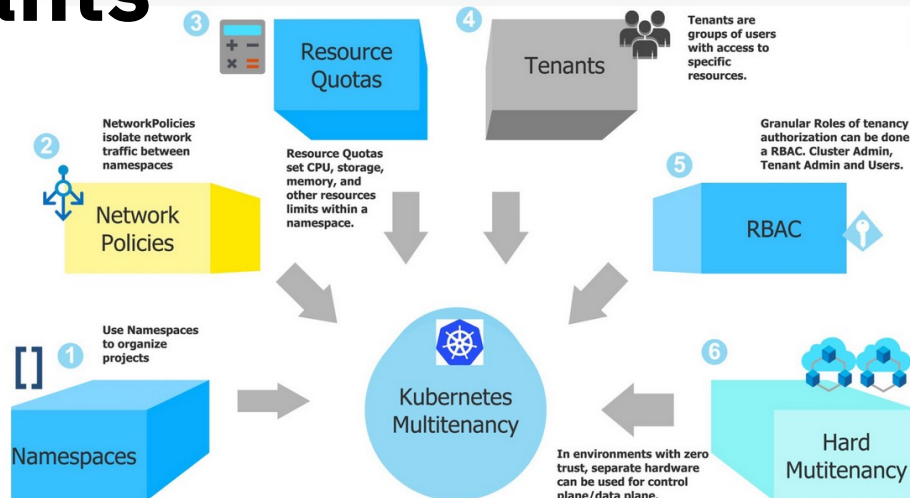
Kubernetes Blue Green Deployment

Blue is production/stable
New version is deployed to Green

Blue

Green

Users
see Blue

Router

CI/CD
Pipelines

Code repository

Developers
release new
version

Green is production/stable
New version is deployed to Blue

Blue

Green

Users
see Green

Router

CI/CD
Pipelines

Code repository

Developers
release new
version

Blue-green deployments at a glance

Blue Green Kubernetes Architecture

- Deploy new version—deploy the new (green) version alongside the current (blue) version. Test it to ensure it works as expected, and deploy

- Switch over traffic—when the new version is ready, switch overall traffic from blue to green.

This should be done seamlessly so end-users aren't interrupted.

KubeCosts

- Overview
- Cost Allocation
- Assets
- Savings
- Health
- Reports
- Alerts

US$190.35
Monthly savings identified

VIEW SAVINGS >

US$578.89
Monthly Kubernetes costs

MONTHLY COSTS >

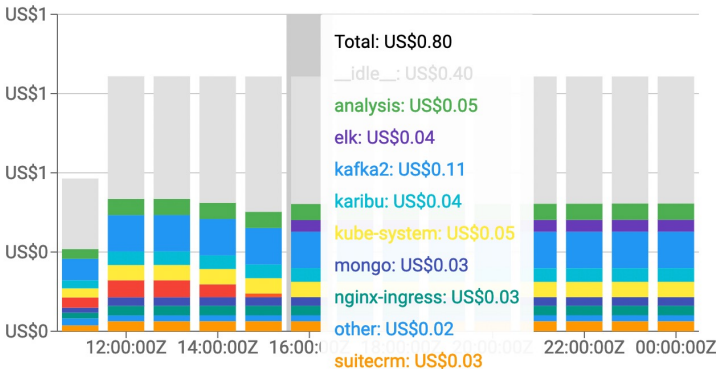## 23.4%
Cost efficiency

COST EFFICIENCY >

Cost Allocation
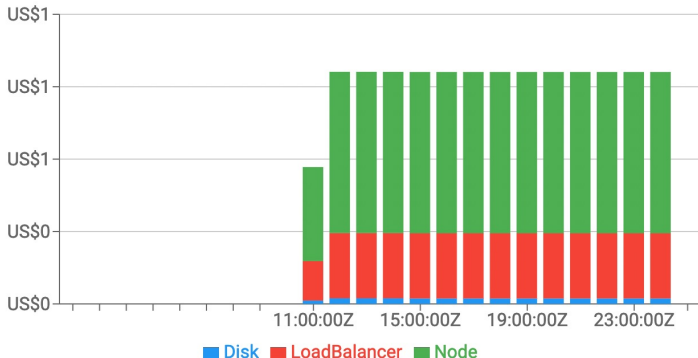Cumulative Kubernetes cluster costs per namespace over the last day. Includes Network costs (if enabled).

Total: US$0.80
__idle__: US$0.40
analysis: US$0.05
elk: US$0.04
kafka2: US$0.11
karibu: US$0.04
kube-system: US$0.05
mongo: US$0.03
nginx-ingress: US$0.03
other: US$0.02
suitecrm: US$0.03

US$1
US$1
US$1
US$0
US$0

12:00:00Z 14:00:00Z 16:00:00Z 22:00:00Z 00:00:00Z

COST ALLOCATION >

Kubernetes Asset Costs
Cumulative Kubernetes cluster costs per asset type over the last day. Does not include Network costs.

US$1
US$1
US$1
US$0
US$0

11:00:00Z 15:00:00Z 19:00:00Z 23:00:00Z

■ Disk ■ LoadBalancer ■ Node

ASSETS >

Switch Context
AWS Cluster #1

Search Docs

KubeCosts

Overview

Cost Allocation

Assets

Savings

Health

Reports

Alerts

Cumulative cost for last 7 days by namespace
20 September 2022 through now by namespace

	Date Range	Aggregate by
	Last 7 days	Namespace
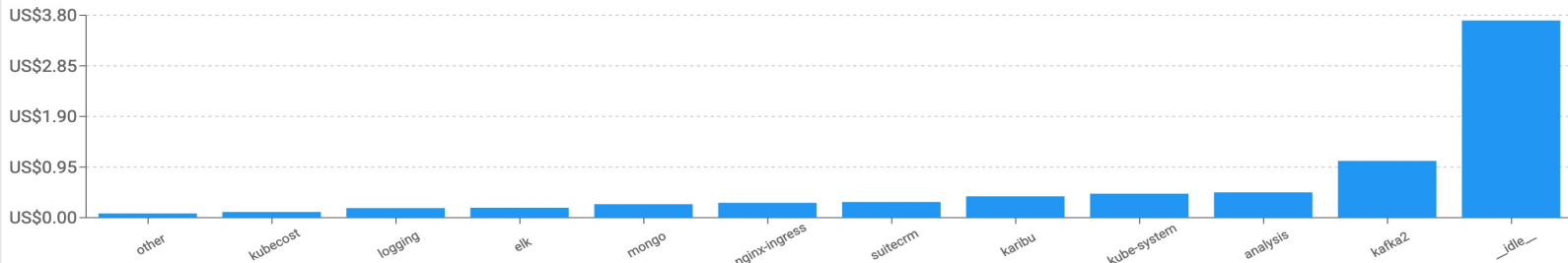
Name	CPU	GPU	RAM	PV	Network	LB	Shared	Efficiency	Total cost
Totals	**US$3.38**	**US$0.00**	**US$1.78**	**US$0.05**	**US$0.00**	**US$2.13**	**US$0.13**	**73.5%**	**US$7.47**
__idle__	US$2.38	US$0.00	US$1.32	US$0.00	US$0.00	US$0.00	US$0.00	—	US$3.70
kafka2 ⧉	US$0.00	US$0.00	US$0.08	US$0.00	US$0.00	US$0.94	US$0.04	Inf	US$1.06
analysis ⧉	US$0.14	US$0.00	US$0.07	US$0.01	US$0.00	US$0.24	US$0.02	64.9%	US$0.47
kube-system ⧉	US$0.39	US$0.00	US$0.05	US$0.00	US$0.00	US$0.00	US$0.02	32.1%	US$0.45
karibu ⧉	US$0.08	US$0.00	US$0.07	US$0.00	US$0.00	US$0.24	US$0.01	42.5%	US$0.40

Switch Context
AWS Cluster #1

Search Docs

Settings

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Camunda Reporting

SYSTEM ARCHITECTURE

System Architecture : Management

Input → **Process** → **Output**

- MongoDB
- RDS-non process Data

Start of Process

End of Process

Strategic Key points

Sche...
Repo...
Ad H...
Exce...
Repo...
Feed...
syste...

PowerBI

Amazon Quick Sights

Elastic Search

Camunda Optimize

Step A → Step B → Step C

Send to Reporting

Reporting to MongoDB

Send to Reporting
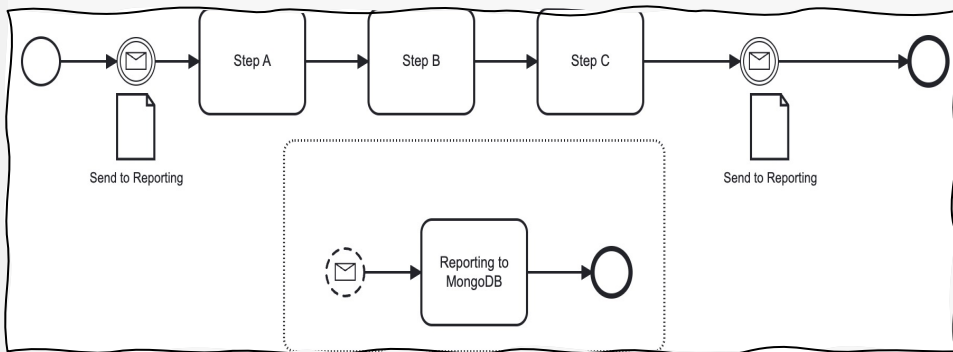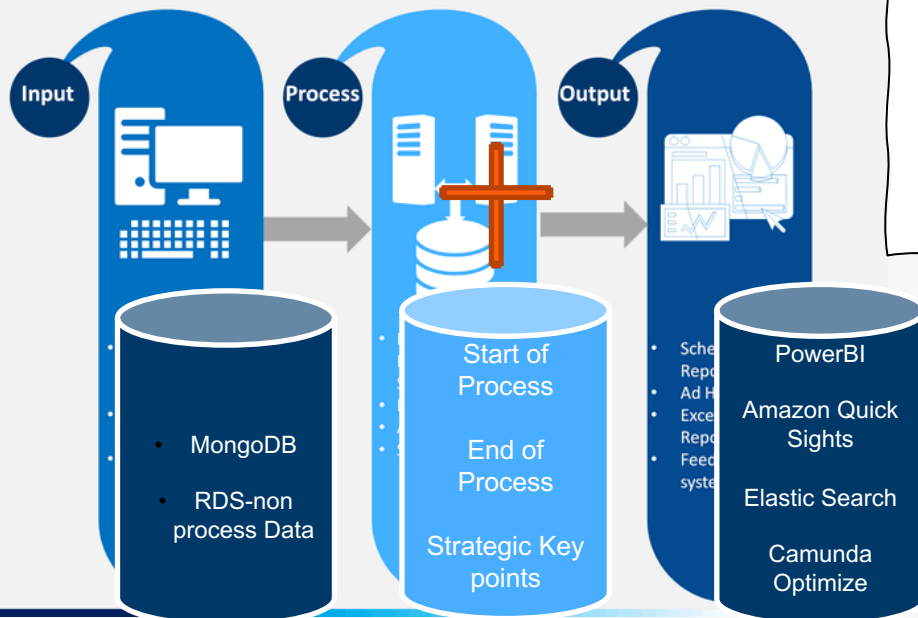
- Camunda Optimize as primary workflow reporting tool
- How much we track in the process needs to be selected carefully
- Archiving or process data is a sensitive issue
- put only process data and minimal business data in the process

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Enterprise Content Management (ECM)

Document Management

- **Record Claims by Video**
- **Store Forms for claims, new business for downloads**
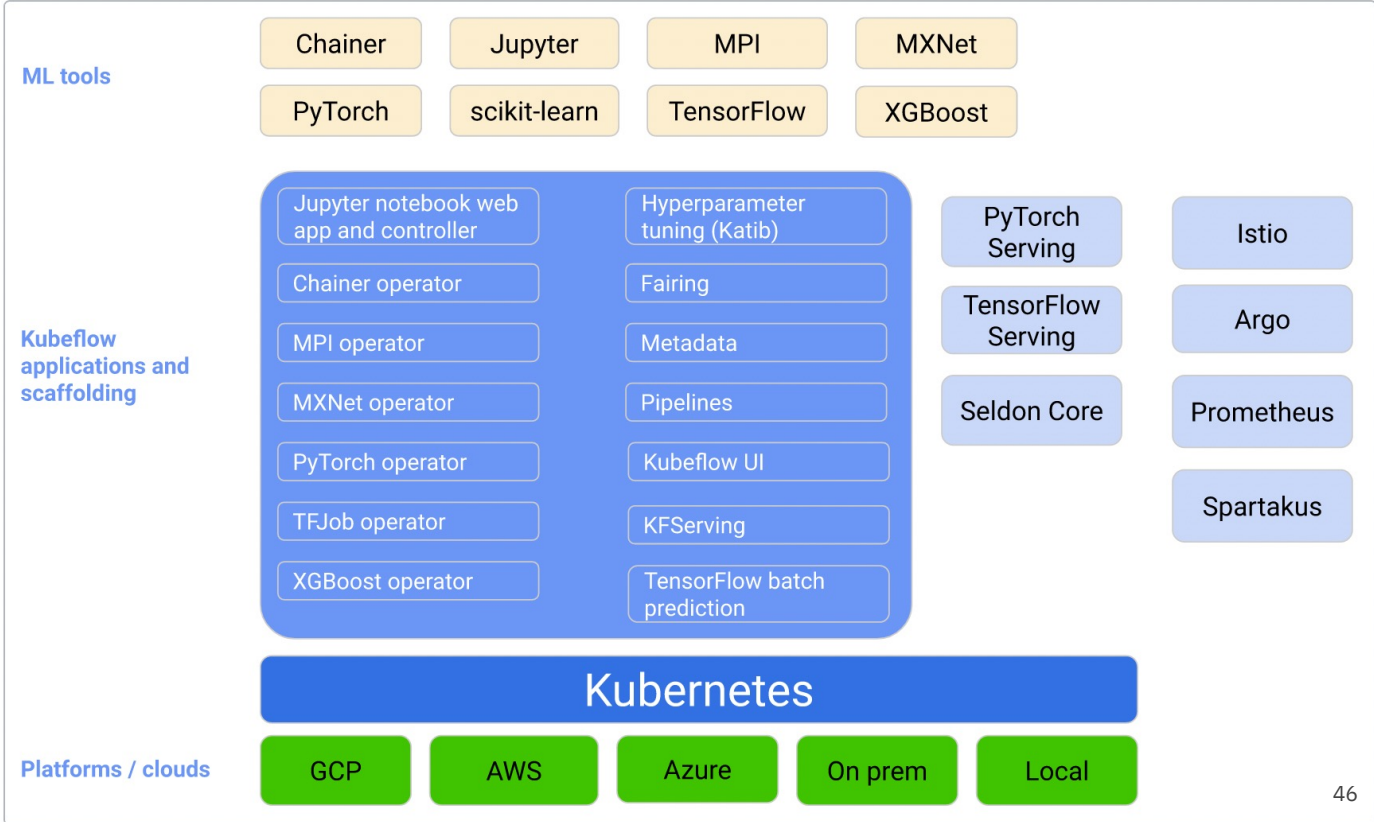- **Upload Claims with prefilled documents**
- **Store smart contracts**
- **Submit documents by email into processes**
- **Submit audio claims**
- **DeFi transactions**

Kubernetes KubeFlow ML

Kubeflow is *the ML toolkit for Kubernetes.*

KubeFlow

ML tools

Chainer	Jupyter	MPI	MXNet
PyTorch	scikit-learn	TensorFlow	XGBoost

Kubeflow applications and scaffolding

- Jupyter notebook web app and controller
- Hyperparameter tuning (Katib)
- Chainer operator
- Fairing
- MPI operator
- Metadata
- MXNet operator
- Pipelines
- PyTorch operator
- Kubeflow UI
- TFJob operator
- KFServing
- XGBoost operator
- TensorFlow batch prediction

PyTorch Serving

TensorFlow Serving

Seldon Core

Istio

Argo

Prometheus

Spartakus

Kubernetes

Platforms / clouds

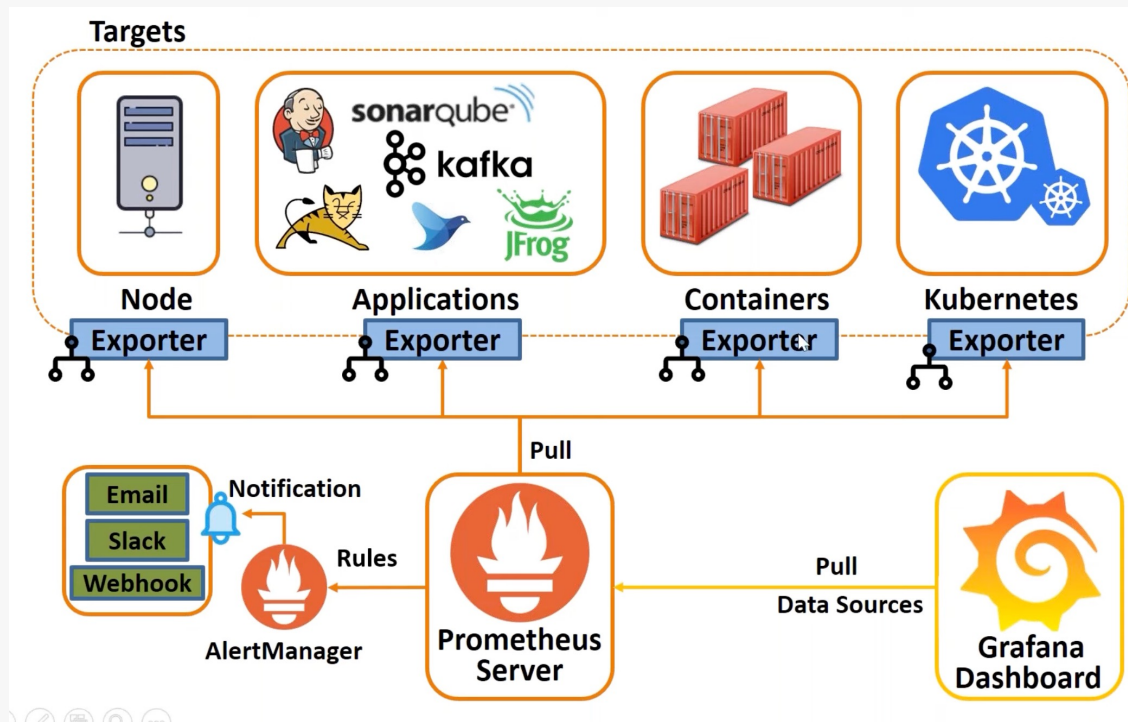| GCP	AWS	Azure	On prem	Local

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Automated Vehicle Detection

ValueMyCar service without a valuer-if it fails then the human valuer comes in

ValueMyProperty

ProcessMining in predicting workload routing

PRODUCTION MONITORING

myInsureHub BLOCK CHAIN

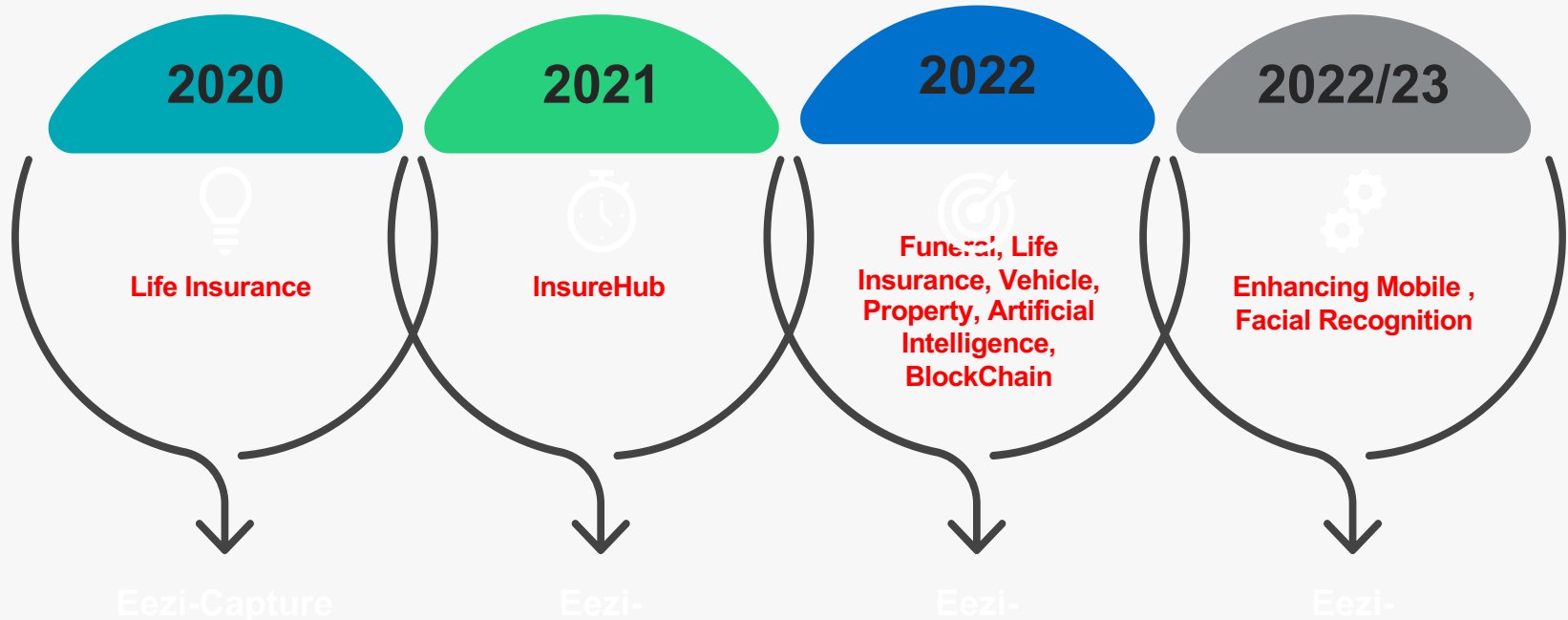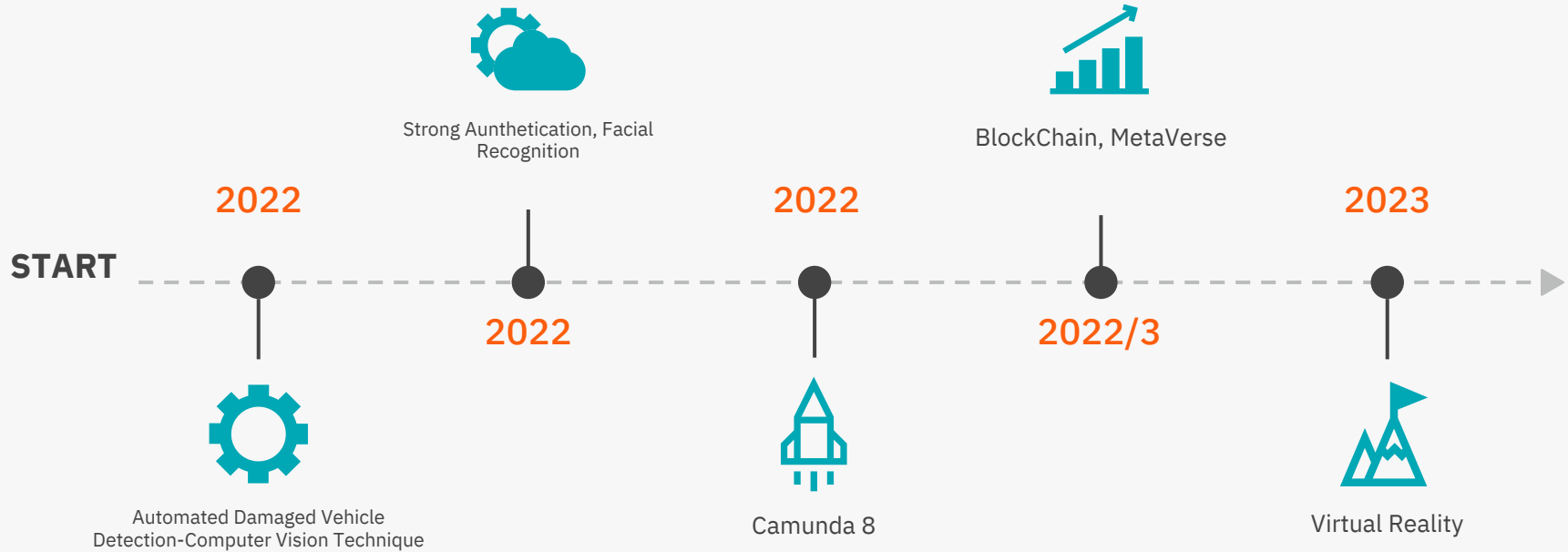|	
Detect Fraudulent Patterns	Smart Contracts
Validate Document Auntheticity	Check Police Reports
NFT in parlour products, DeFi transactions	Bitcoin For payments
Vehicles	Blockchain in file claims

InsureHub Solution Timeline

2020 — Life Insurance — Eezi-Capture

2021 — InsureHub — Eezi-

2022 — Funeral, Life Insurance, Vehicle, Property, Artificial Intelligence, BlockChain — Eezi-

2022/23 — Enhancing Mobile , Facial Recognition — Eezi-

Timeline

Strong Aunthetication, Facial Recognition

BlockChain, MetaVerse

2022   **2022**   **2023**

START

2022   **2022/3**

Automated Damaged Vehicle
Detection-Computer Vision Technique

Camunda 8

Virtual Reality

Machine Learning ++Wishlist and WIP

	Funeral	Vehicle	Medical	Property
Process Mining	●	●	●	●
Advance NLP	●	●	●	●
Advanced Computer Vision	●	●	●	●
NFTs	●	●	●	●

Project Status

Topics	Explanation	Status	Notes
BlockChain Use	Smart Contracts	🔴 **In Progress**	
Virtual Reality	Explaratory	🔵 **In progress**	
Metaverse	Wishlist	🟢 **Wishlist**	
RPA Intergration	UIPath	🟡 **Discovery**	

We ahead of the Gartner curve
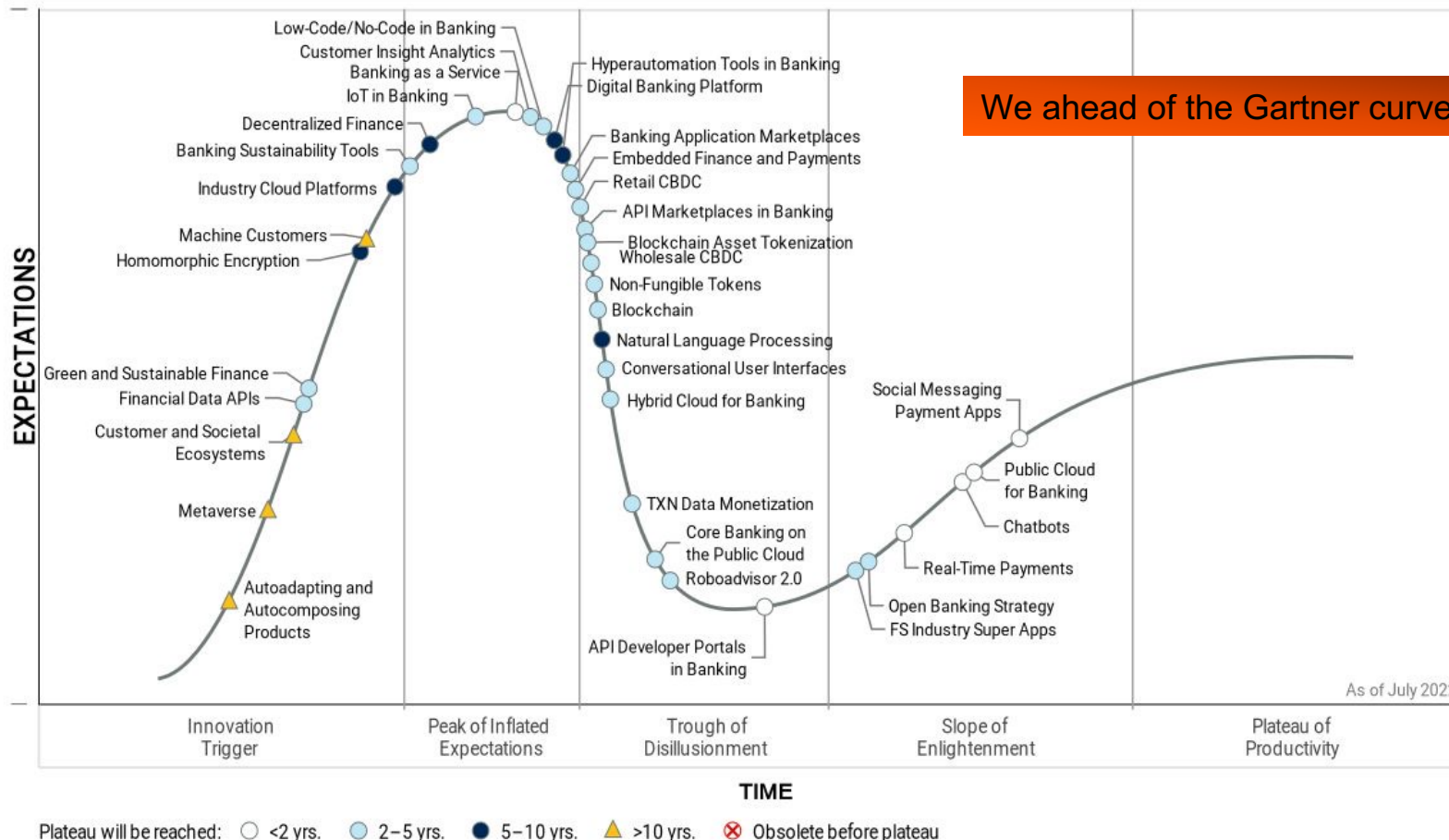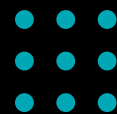
THANK YOU

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🌐 www.kaributechs.com