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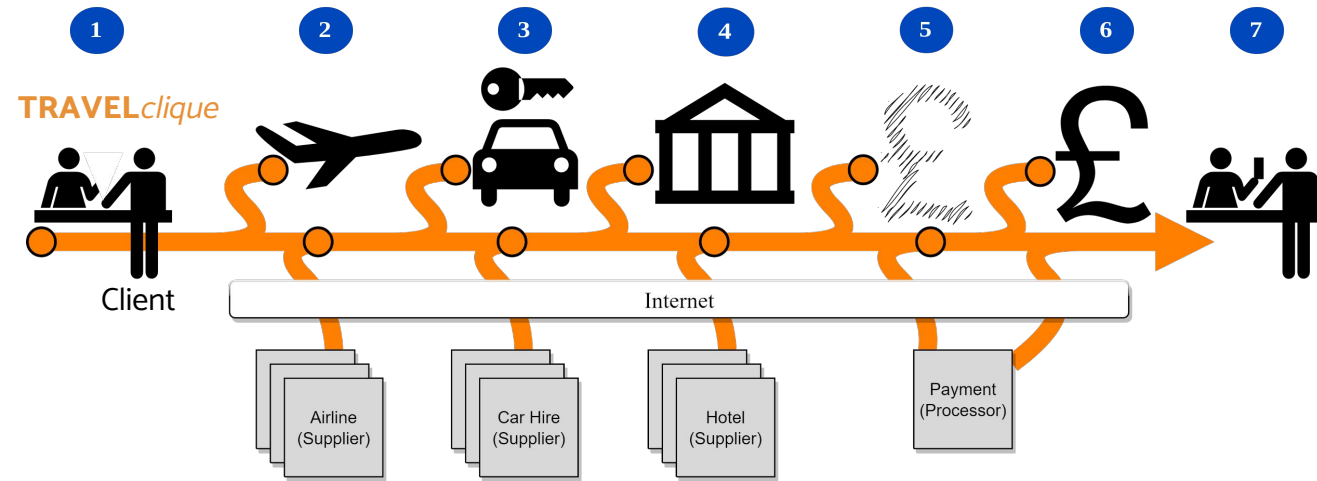
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TRAVEL*clique*

Optimisation and Enhancement

LEE COWDREY

Today

TRAVEL_clique_

Client

Internet

Airline (Supplier)

Car Hire (Supplier)
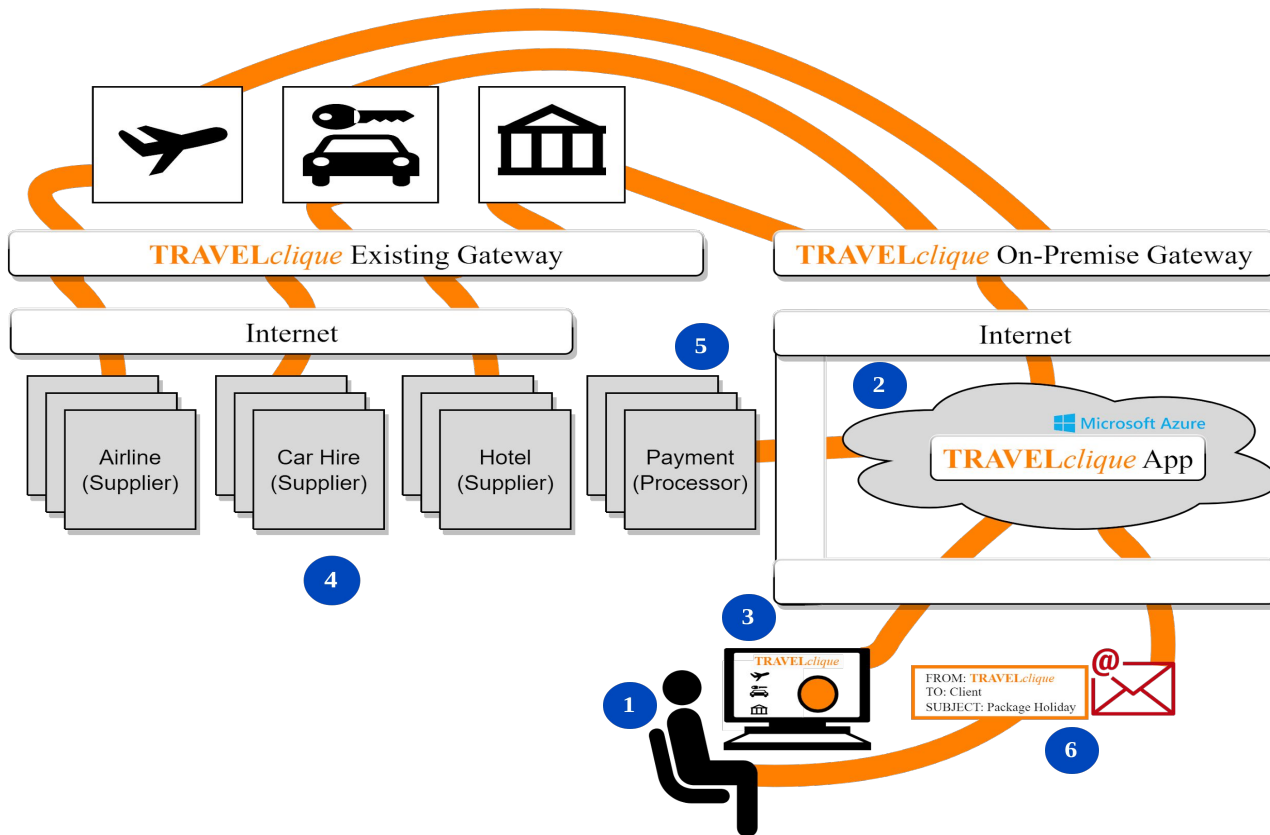
Hotel (Supplier)

Payment (Processor)

1 Client presents holiday package wishes

2 **TRAVEL**_clique_ identifies flight and reserves

3 **TRAVEL**_clique_ identifies vehicle hire and reserves

4 **TRAVEL**_clique_ identifies accommodation and reserves

5 optional, Client pays deposit

6 Client pays outstanding balance

7 **TRAVEL**_clique_ confirms all reservations and proceeds to ticketing

Issues seen include:

- Delays with client accepting each package item including cause reservation expiration
- Availability Change
- Price Change
- Withdrawn
- Overbooked
- Terms & Conditions not met
- Balance not paid in time (deposit)
- Payment Issues (processor failure)
- Payment Not Authorised
- **TRAVEL**_clique_ losing 10% time per package booking just by swivel-chair operation
- Limited ability to upsell additional package items (insurance, upgrades, airport lounges etc.)

Issues cause entire process to be restarted, with potentially all existing remaining valid reservations cancelled or client just withdrawing without purchasing anything !

1. Client searches for holiday package wishes via **TRAVEL**_clique_ App hosted in public cloud

2. **TRAVEL**_clique_ App mixes flight, vehicle, accommodation, connects back to on-site systems for availability etc.

3. Client makes final selection and confirms on **TRAVEL**_clique_ App

4. **TRAVEL**_clique_ App changes reservations to confirmations and retrieves booking details

5. **TRAVEL**_clique_ App allows Client to checkout and takes payment (deposit, full, payment plan etc.)

6. **TRAVEL**_clique_ confirms all reservations and proceeds to ticketing

TRAVEL*clique* App - Infrastructure

Benefits

- Deployed to public cloud avoiding need for dedicated IT facilities
- Uses existing systems for Flight, Vehicle and Accomodation
- Able to automatically scale to meet demand (on-demand computing)
  - Up - when demand is high
  - Down - when no demand/idle
  - OPEX friendly Pay-Per-Use model, not CAPEX investment
  - No need to scale in advance
- Isolates and protects existing systems from Internet and malicious third-parties
- Isolated from outages due to highly available public cloud services

Recommendations

- Dedicated Internet connection to public cloud of choice (to ensure availability and response times)
- Additional gateway (on-premise)
- Public Cloud - Microsoft Azure
  - Data Centre - Cardiff (UK West)
  - Data Residency - 100% UK
    - UK GDPR compliant
  - Disaster Recovery - London (UK South)
    - Cross region replication
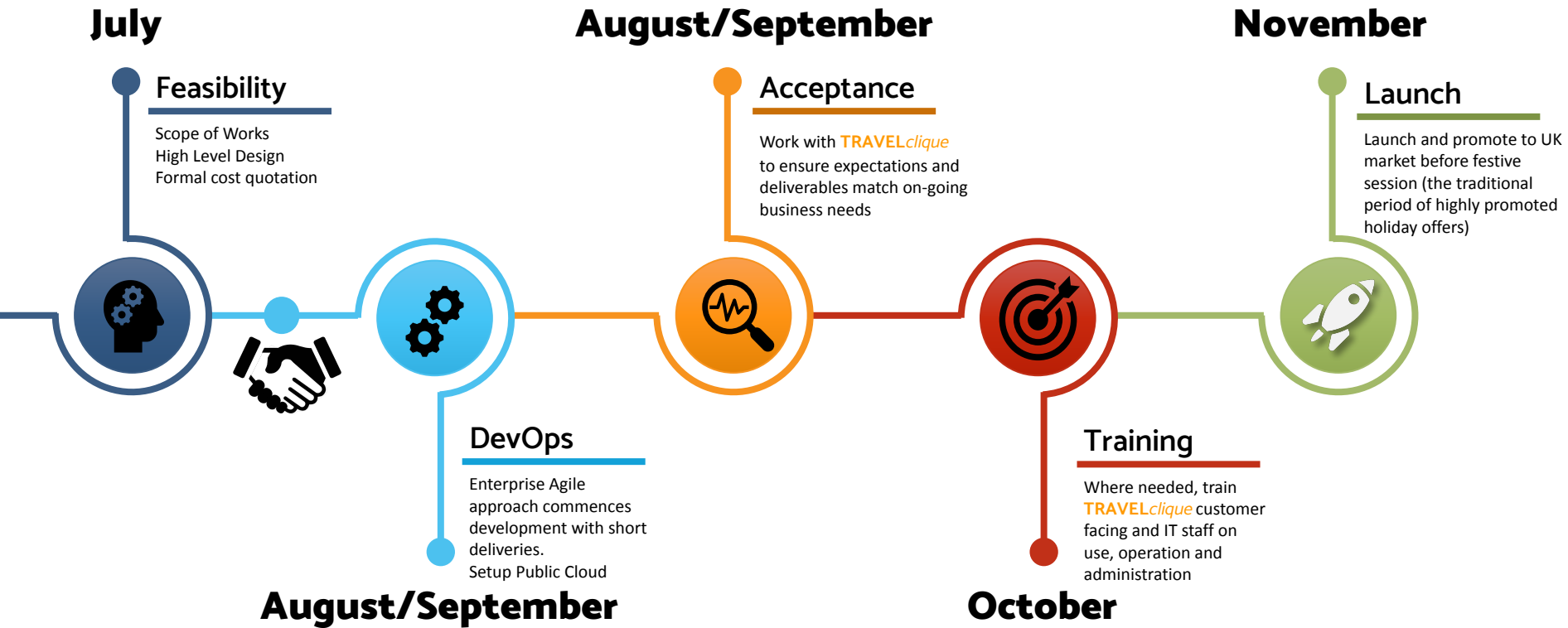 - No restriction on available Azure services

Search - Tailored

- Partial, Wildcard, drop down List for all items
  - Participating airlines, vehicle hire and accommodation suppliers
  - Geographic locations including airports, popular/available destinations
  - Accomodation aspects (single, double etc.)
  - Vehicle aspects (4x4, SUV etc.)
  - Minimum/maximum price
  - Dates ranges
  - Peak/Off-peak periods
- Lists automatically populated from connected systems and used to produce indexes for Partial and Wildcard matching

Payment - Made Easy

- Supported number of payment processors can be increased to reduce fees and provide negotiating advantage
- Payment processor can be selected based on payment need
  - Credit supplier specific (AMEX)
  - Debit supplier specific (Lloyds Merchant)
  - Loyalty Card reward programmes (Nectar)
- Allow Clients to pay through installments using payment plans offered by select payment processors (Payl8r) - **TRAVEL***clique* receives full immediate payment (if Client approved)
- Allows Clients to form a Savings Plan and purchase the package when the Savings Plan has reached its goal; **TRAVEL***clique* App can maintain reserved state (where permitted by suppliers)

TRAVEL*clique* App - Business Benefits

- Increased brand recognition
- Possibility to extend existing services with impacting current business
- Possibility to extend offered services (thus increase revenue)
  - Insurance
  - Upgrades (airport lounges)
  - Foreign currency
- **TRAVEL***clique* App not just for Client's using desktop computers but also portable devices (mobile/tablet) to attract and capture the "sofa shoppers"

- Through automation and modernisation, **TRAVEL***clique* no longer loses 10% time per package booking through swivel-chair operation by adopting a Client Self-Service approach
- In-branch staff can also use **TRAVEL***clique* App and move to remote-work structure, or consider extended high-street presence by opening new branches without incurring high infrastructure costs
- Possibility to expand in to markets outside the United Kingdom

Next Steps

July

Feasibility

Scope of Works
High Level Design
Formal cost quotation

August/September

Acceptance

Work with **TRAVEL***clique*
to ensure expectations and
deliverables match on-going
business needs

November

Launch

Launch and promote to UK
market before festive
session (the traditional
period of highly promoted
holiday offers)

DevOps

Enterprise Agile
approach commences
development with short
deliveries.
Setup Public Cloud

August/September

Training

Where needed, train
TRAVEL*clique* customer
facing and IT staff on
use, operation and
administration

October

Workshop with **TRAVEL***clique* team

- Determine stakeholders for project feasibility, delivery and acceptance
- Determine IT Infrastructure availability, capacity and any restrictions
- Gather license and API details of existing systems
- Gather sample data from existing systems (to be used for data modelling)
- Public Cloud
  - Determine preference (if any)
  - Determine budgetary details (if any)
  - Determine type/size of appliance for on-premise gateway

Outcome

- Scope of Works for commercial engagement
- High Level Design for technical engagement activities
- Formal cost quotation with terms and conditions

The team delivering for **TRAVEL**_clique_ **(to be confirmed post Feasibility Phase)**

- 1 x Project Manager   1 x Technical Architect

Feasibility Phase Only

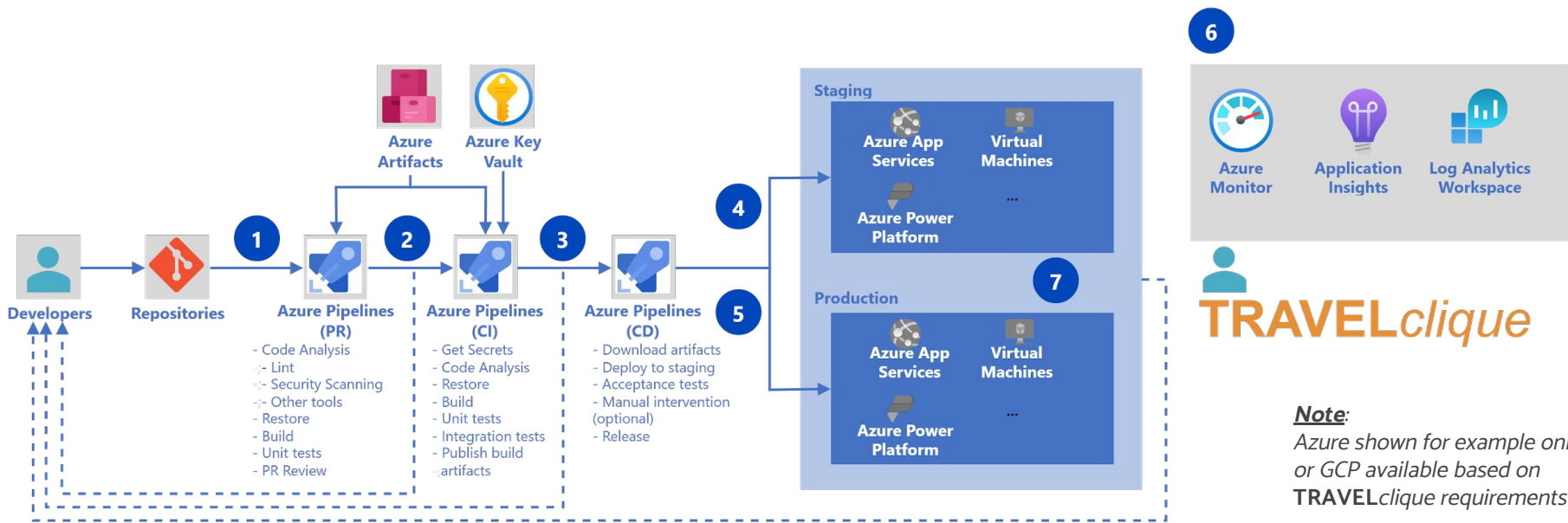- 1 x Commercial Specialist   1 x Legal Specialist   1 x Business Analyst

DevOps/Acceptance Phases Only

- 1 x DevOps Lead   1 x Azure Engineer   2 x Node.js Engineer
- 2 x Back-End Engineer   2 x QA Engineer   1 x Technical Writer/Trainer
- 1 x UX Lead   1 x UI Designer   2 x UI Engineer

Launch Phase Only

- 1 x Marketing Specialist   1 x Advertising Coordinator

DevOps & Acceptance

Azure Artifacts

Azure Key Vault

6

Staging

Azure App Services

Virtual Machines

...

Azure Power Platform

4

7

Production

Azure App Services

Virtual Machines

...

Azure Power Platform

5

Developers

Repositories

1

Azure Pipelines (PR)
- Code Analysis
- Lint
- Security Scanning
- Other tools
- Restore
- Build
- Unit tests
- PR Review

2

Azure Pipelines (CI)
- Get Secrets
- Code Analysis
- Restore
- Build
- Unit tests
- Integration tests
- Publish build artifacts

3

Azure Pipelines (CD)
- Download artifacts
- Deploy to staging
- Acceptance tests
- Manual intervention (optional)
- Release

Azure Monitor

Application Insights

Log Analytics Workspace

TRAVELclique

Note:
Azure shown for example only; AWS or GCP available based on **TRAVEL***clique requirements*

1 Developers pushes code changes

2 Azure repo triggers fast quality check and if no failures will merge the changes

3 Run integration checks & if no failures build

4 Release to staging + manual

5 Release to production (on failure, revert to prior)

6 Continuous Monitoring of Staging and Production
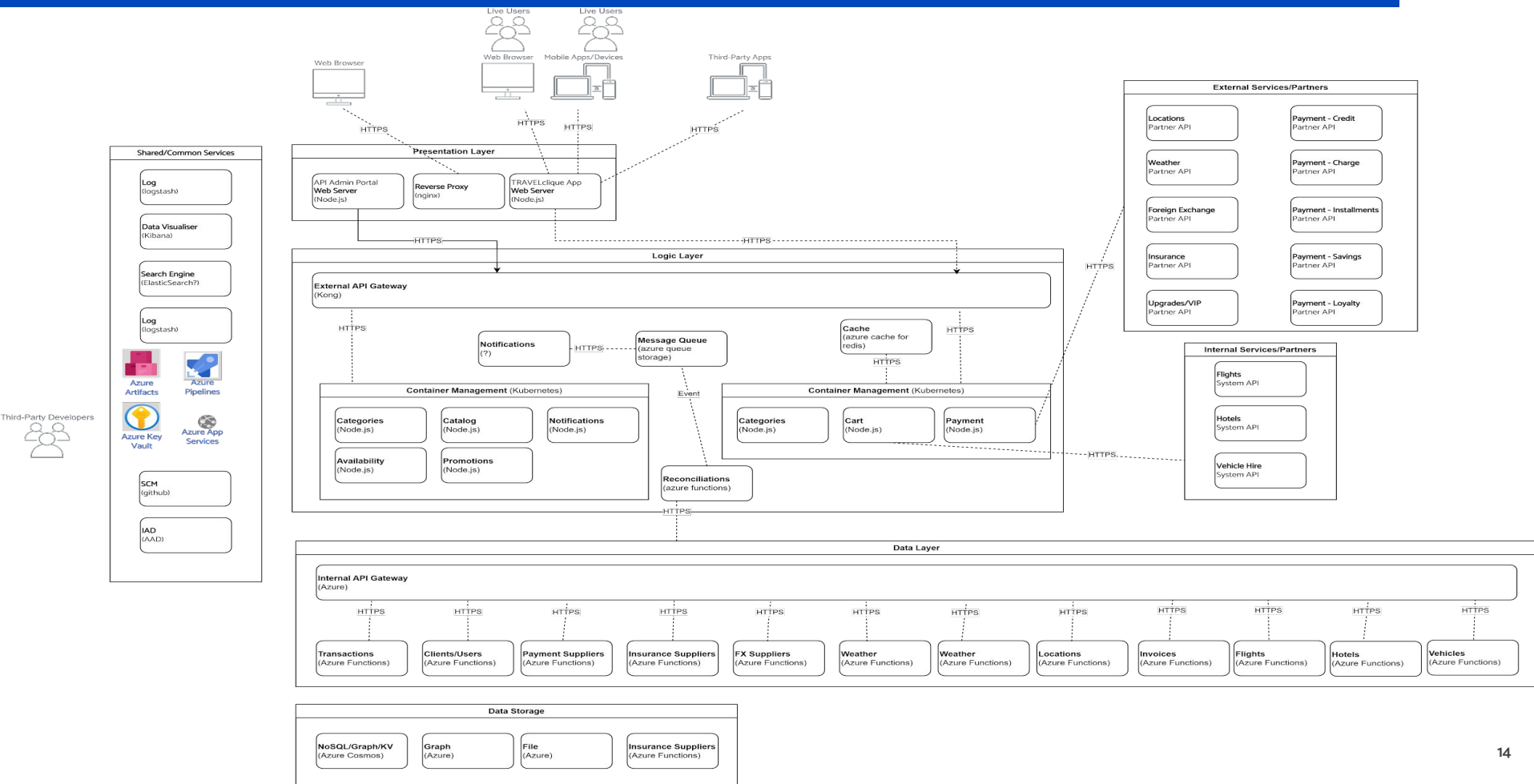
7 New iteration now live

11

Thank you for your time !

Any questions?

Not for **TRAVEL***clique*

Architecture Slides (draft & incomplete)

Deployment