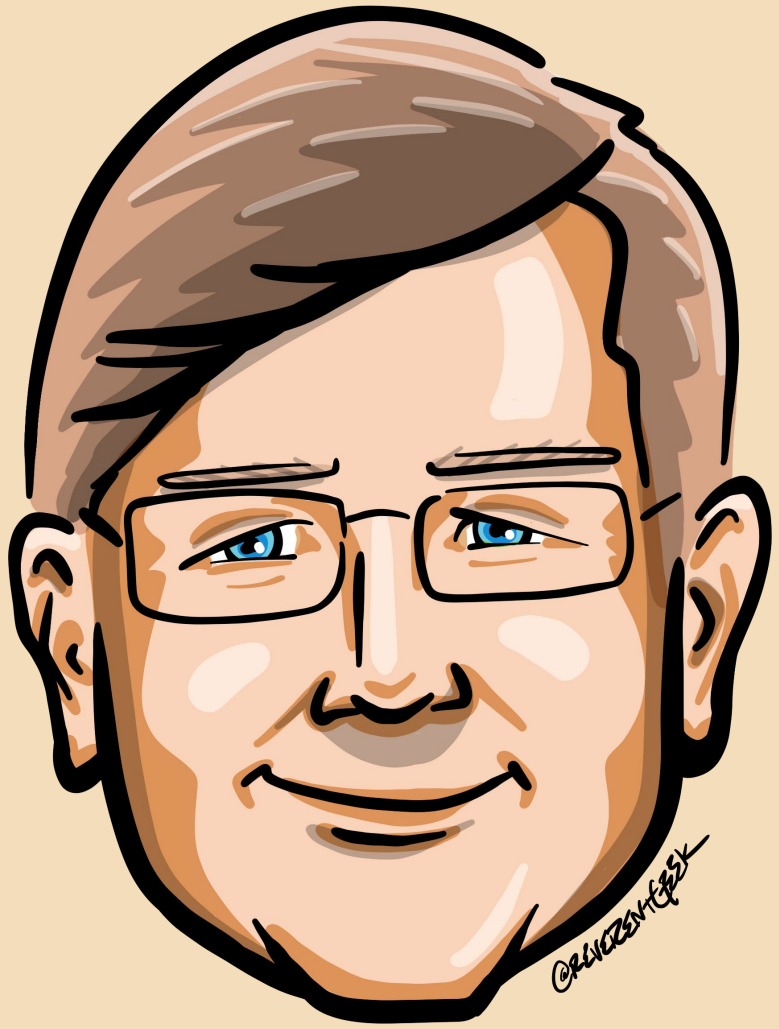

EVENT-DRIVEN
ARCHITECTURE
IN THE CLOUD

Who is Chad Green

Director of IT Architecture
Atria Senior Living / Glennis Solutions

Microsoft® Most Valuable Professional



chadgreen@chadgreen.com

TaleLearnCode

ChadGreen.com

ChadGreen & TaleLearnCode

ChadwickEGreen

PREAMBLE

Enterprise Architecture

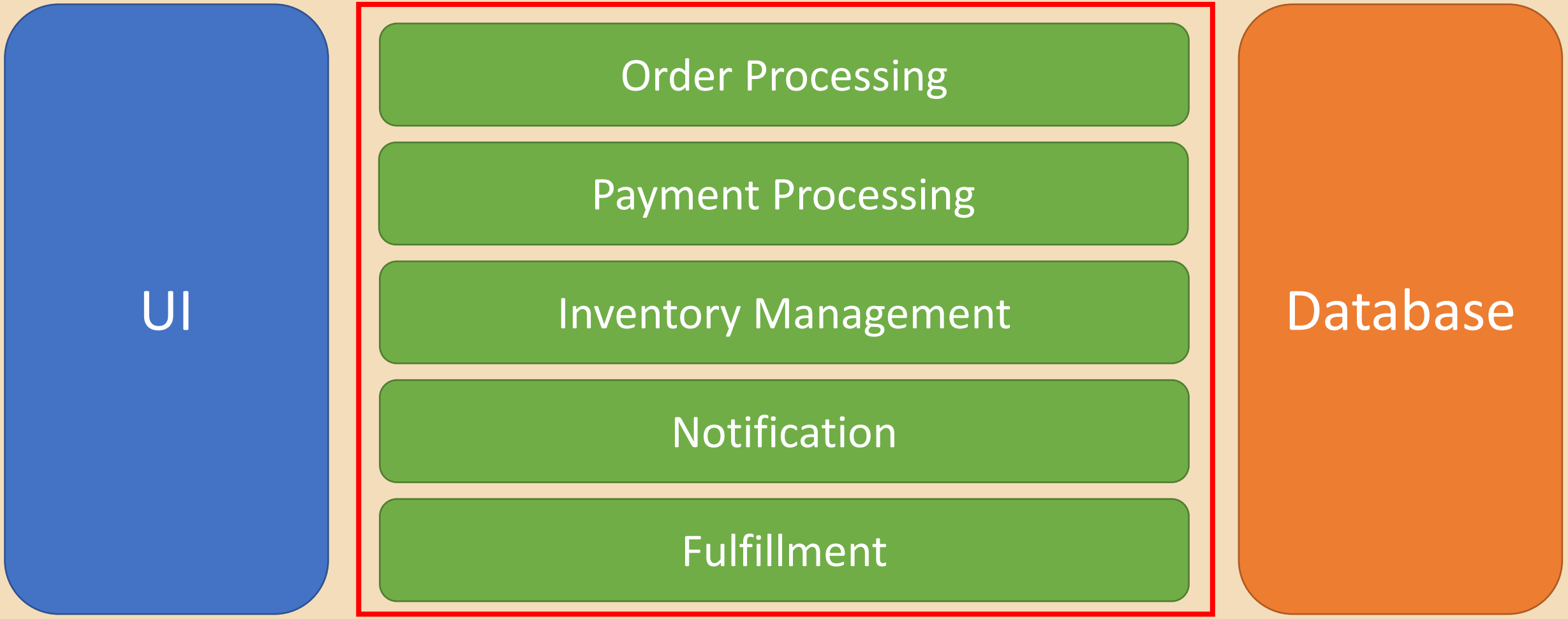
“

Enterprise architecture applies architecture principles and practices to guide organizations through the business, information, process, and technology changes necessary to execute their strategies.

- Wikipedia -

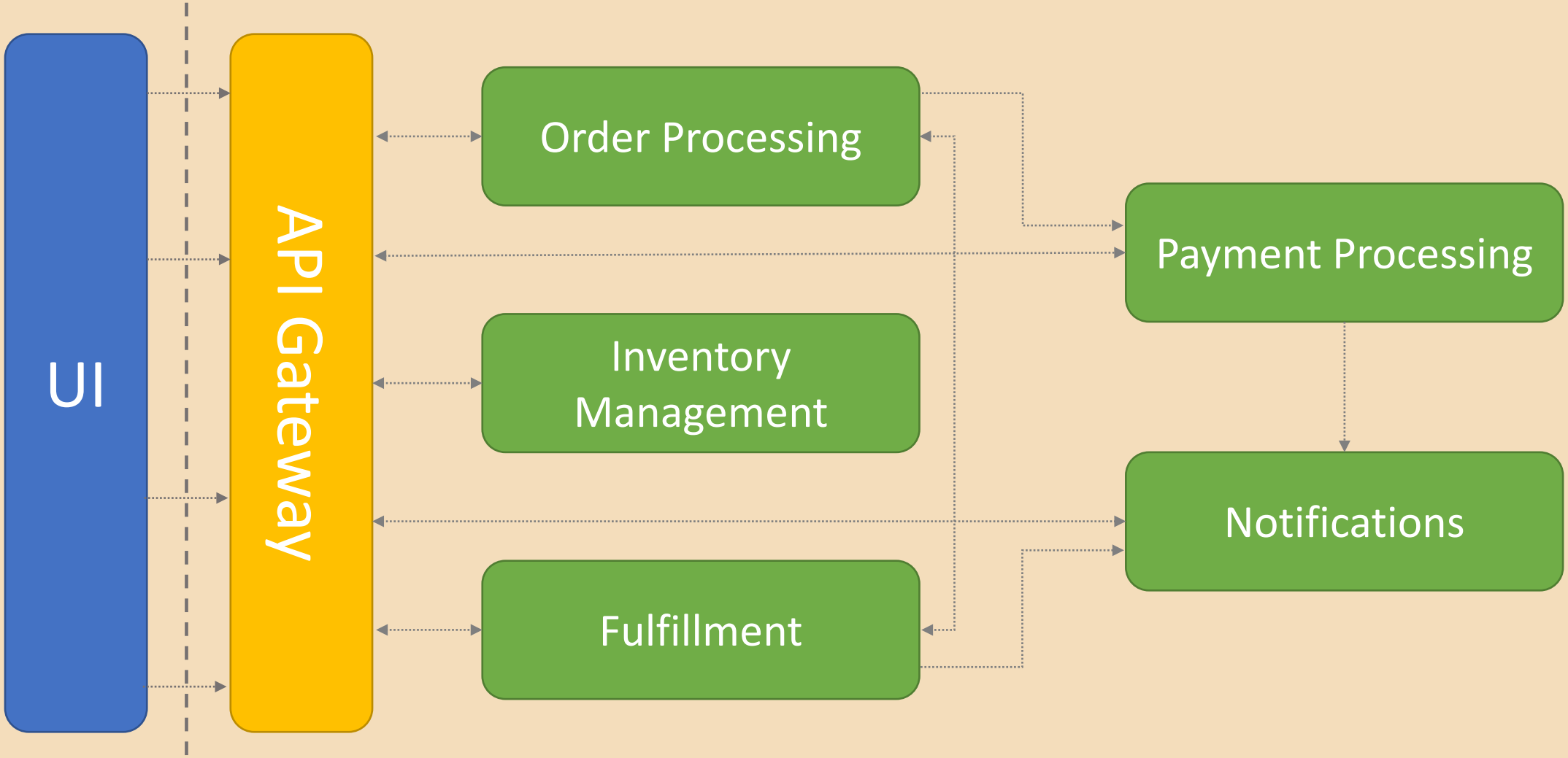
Monolith

Enterprise Architecture



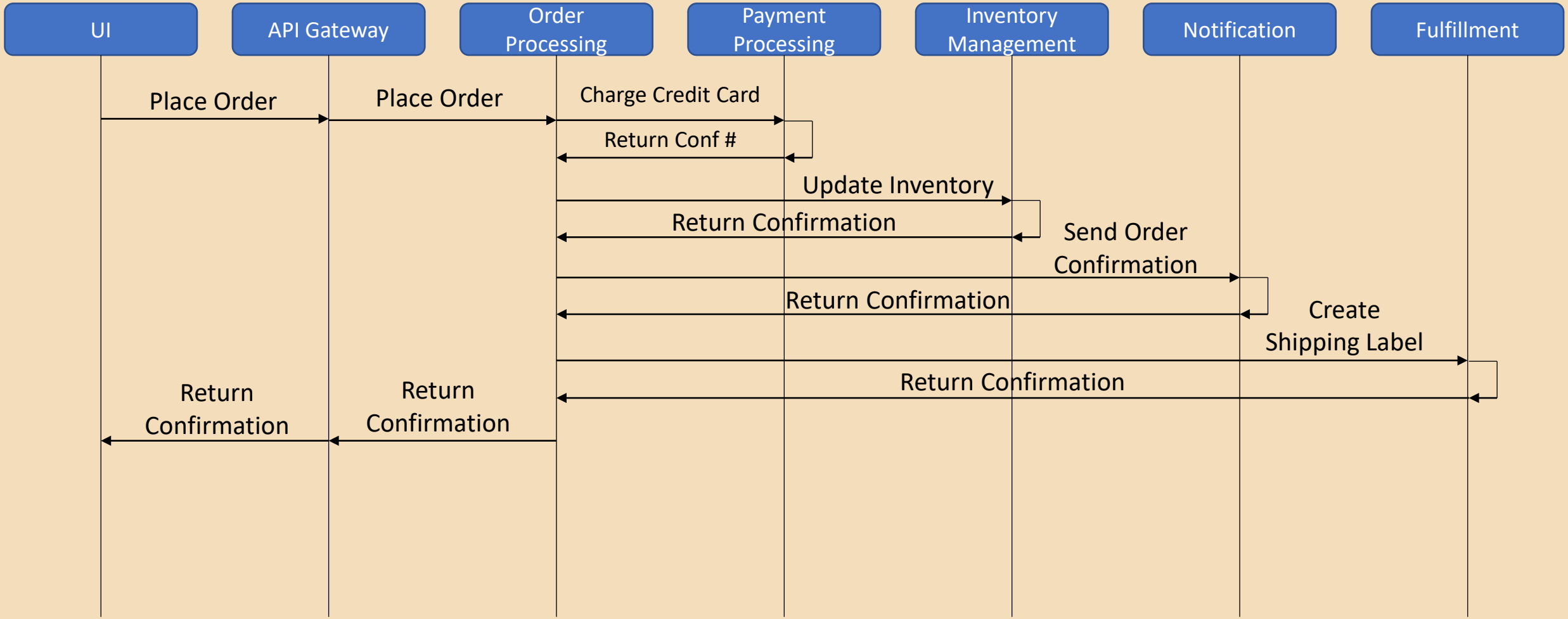
Microservices

Enterprise Architecture



Process Flow

Microservices



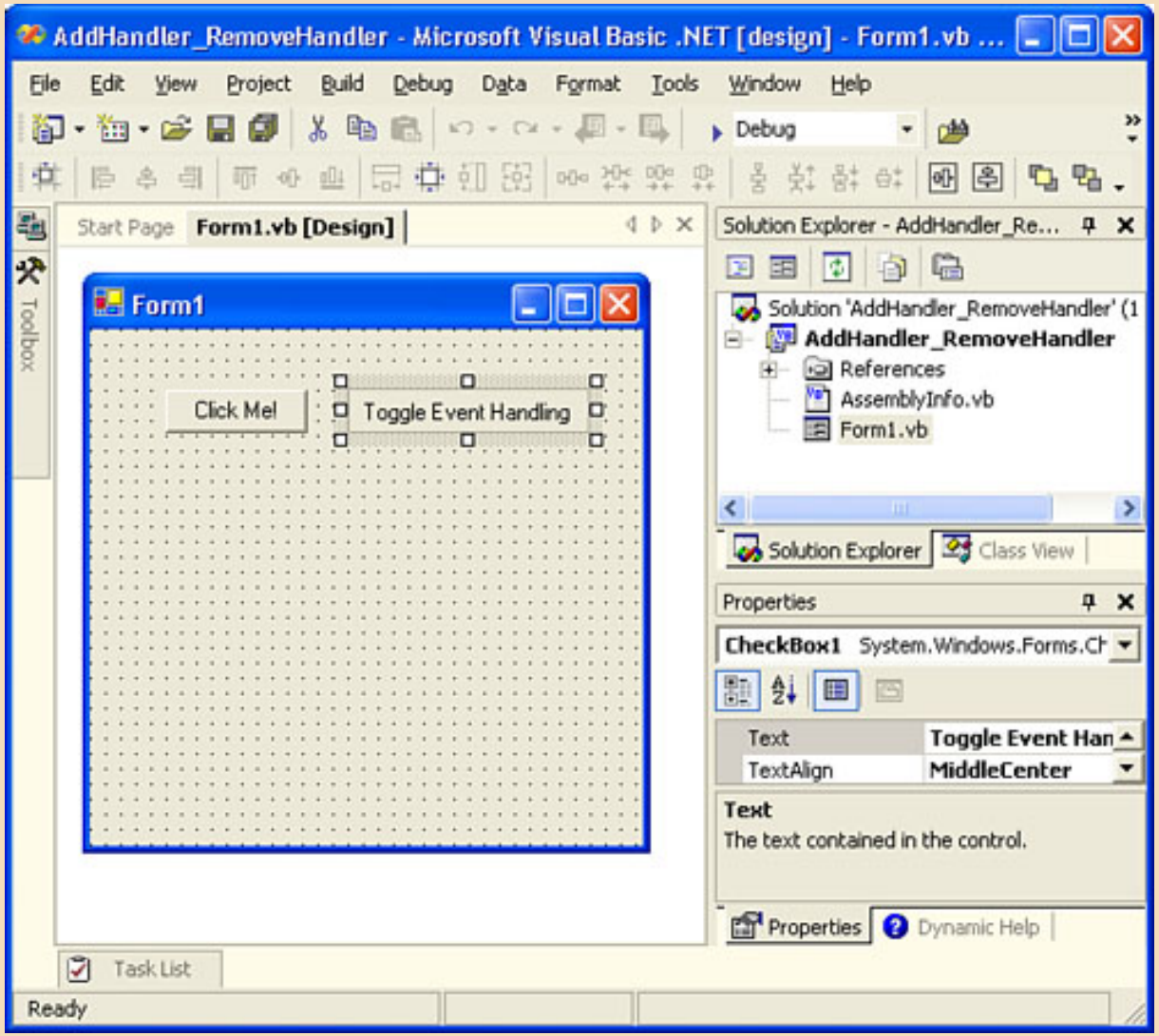
EVENT-DRIVEN ARCHITECTURE

Event-Driven Architecture

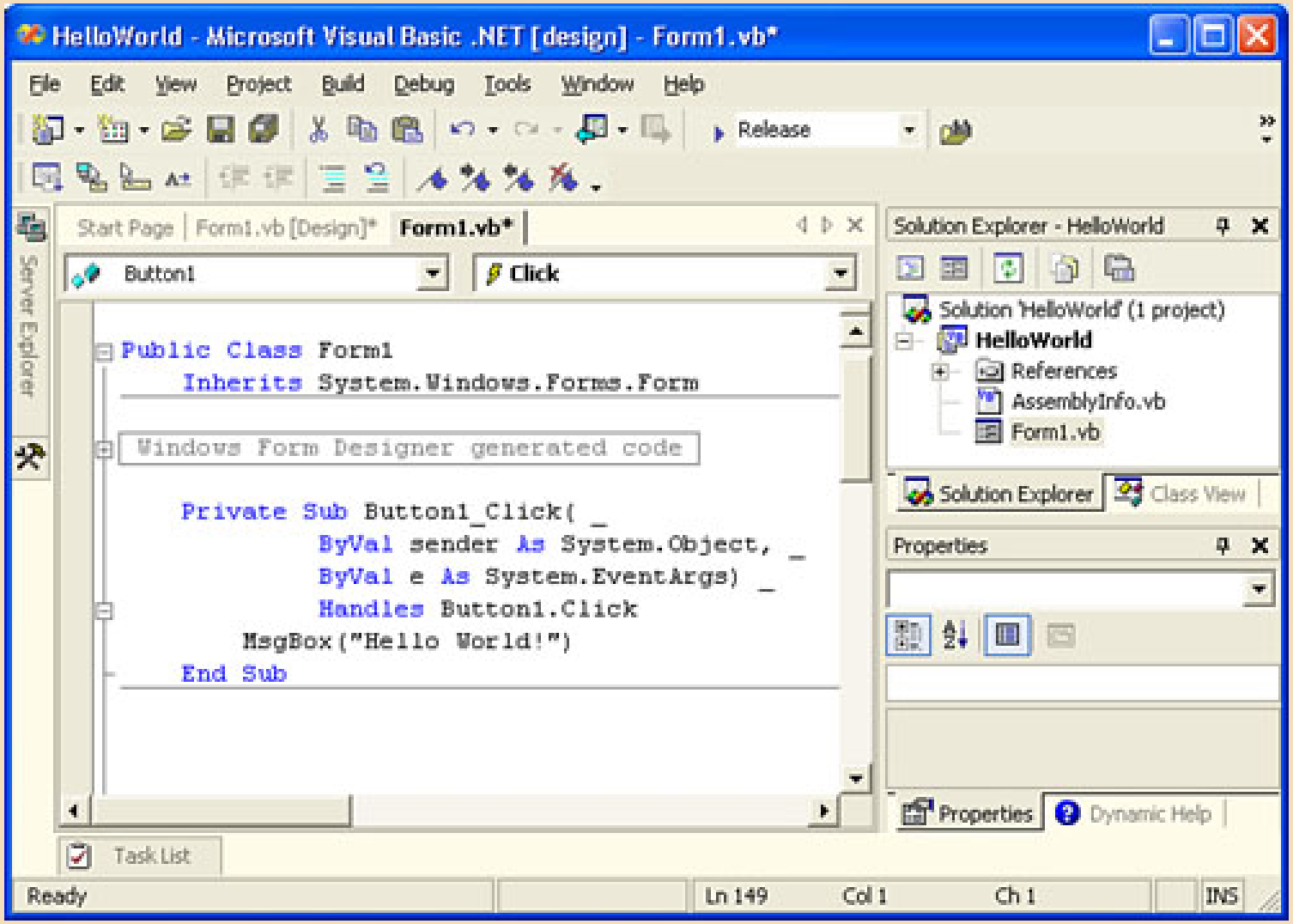
> A software architecture pattern promoting the production, detection, consumption of, and reaction to **events**.

- Wikipedia -

Event-Driven Architecture



Event-Driven Architecture



Event-Driven Architecture

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- Garner -

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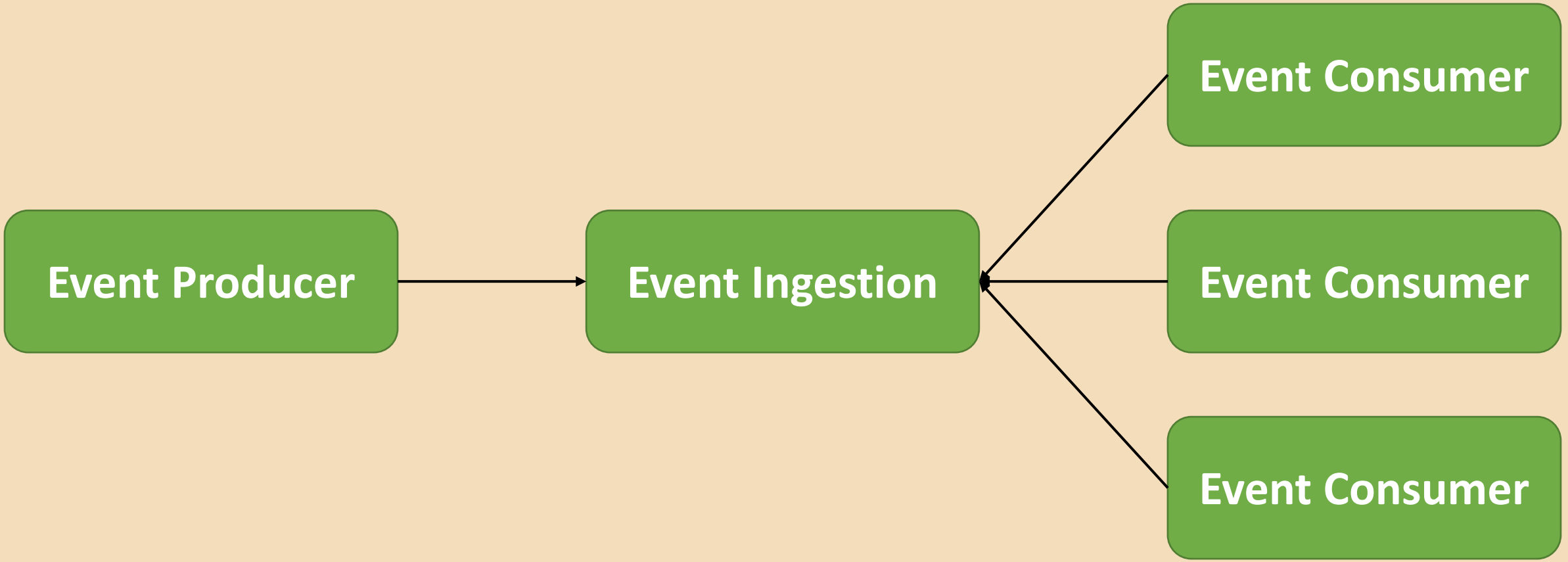
Event-Driven Architecture



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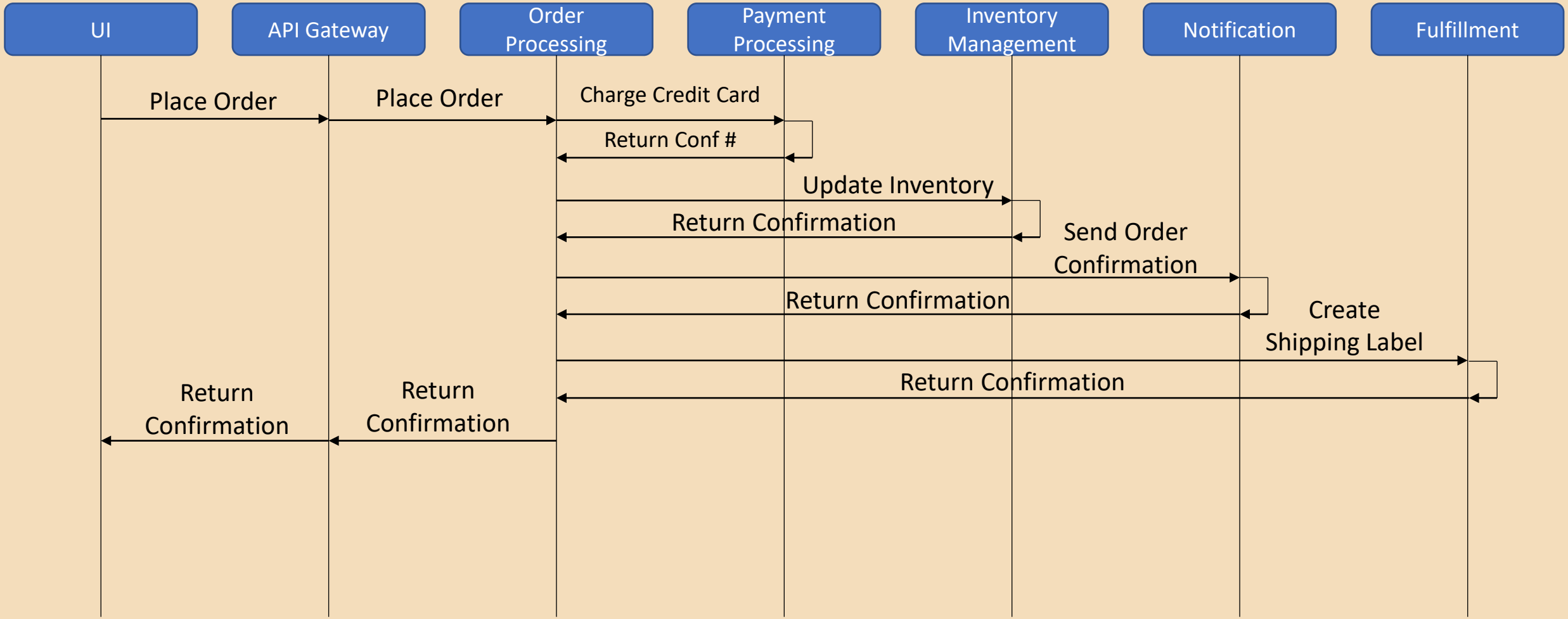
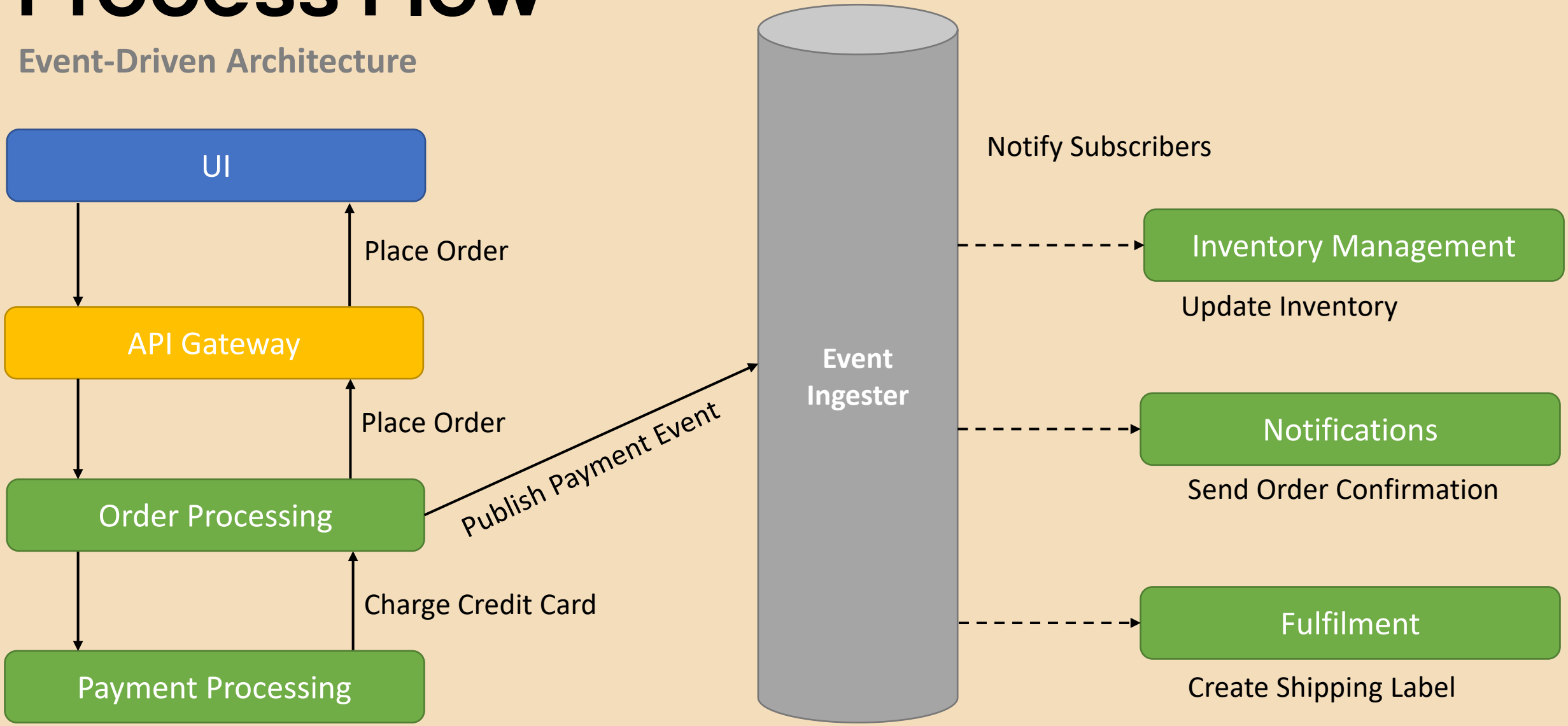


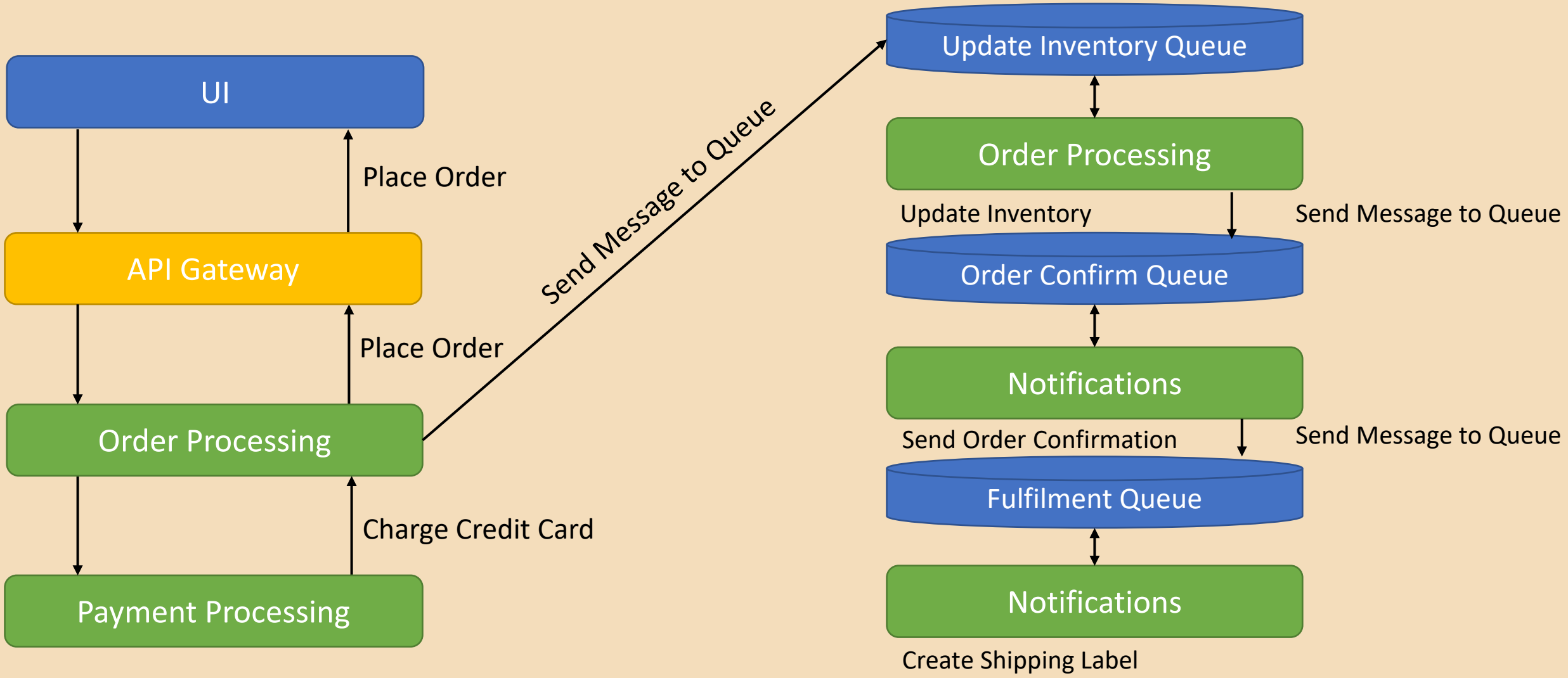
Process Flow

Event-Driven Architecture



Not Queue Based Processing

Event-Driven Architecture

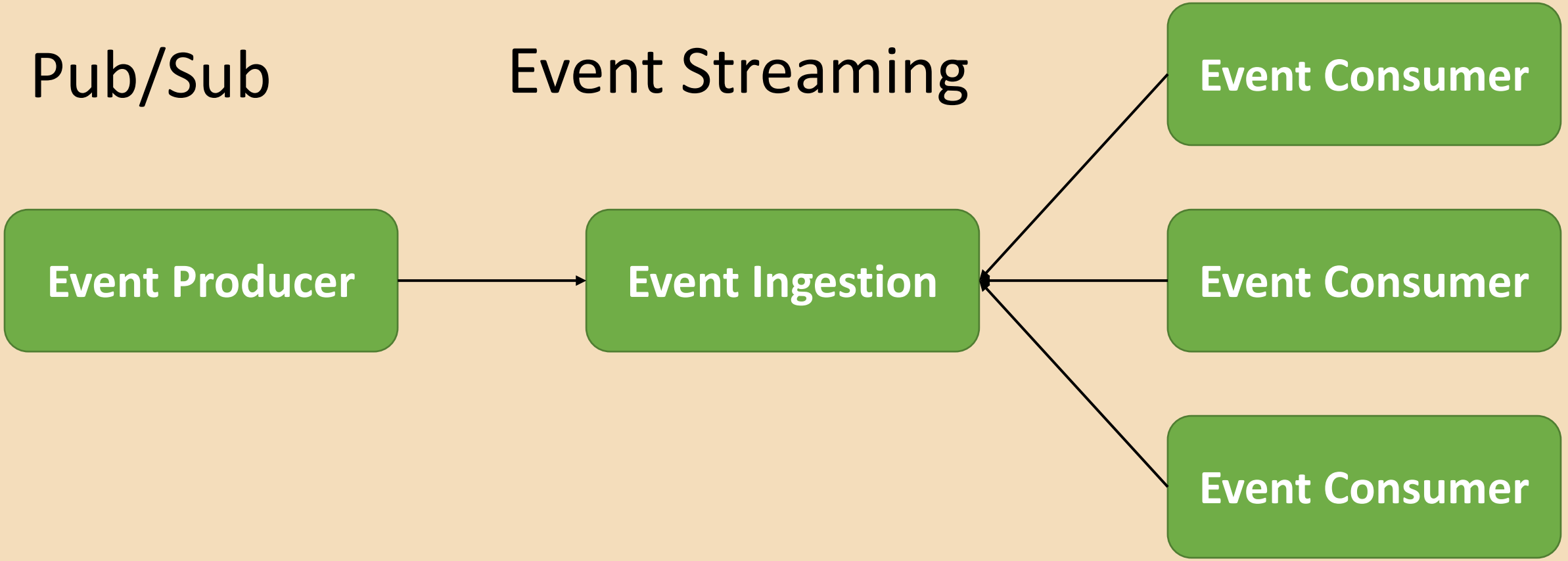


Event Consumption Models

Event-Driven Architecture

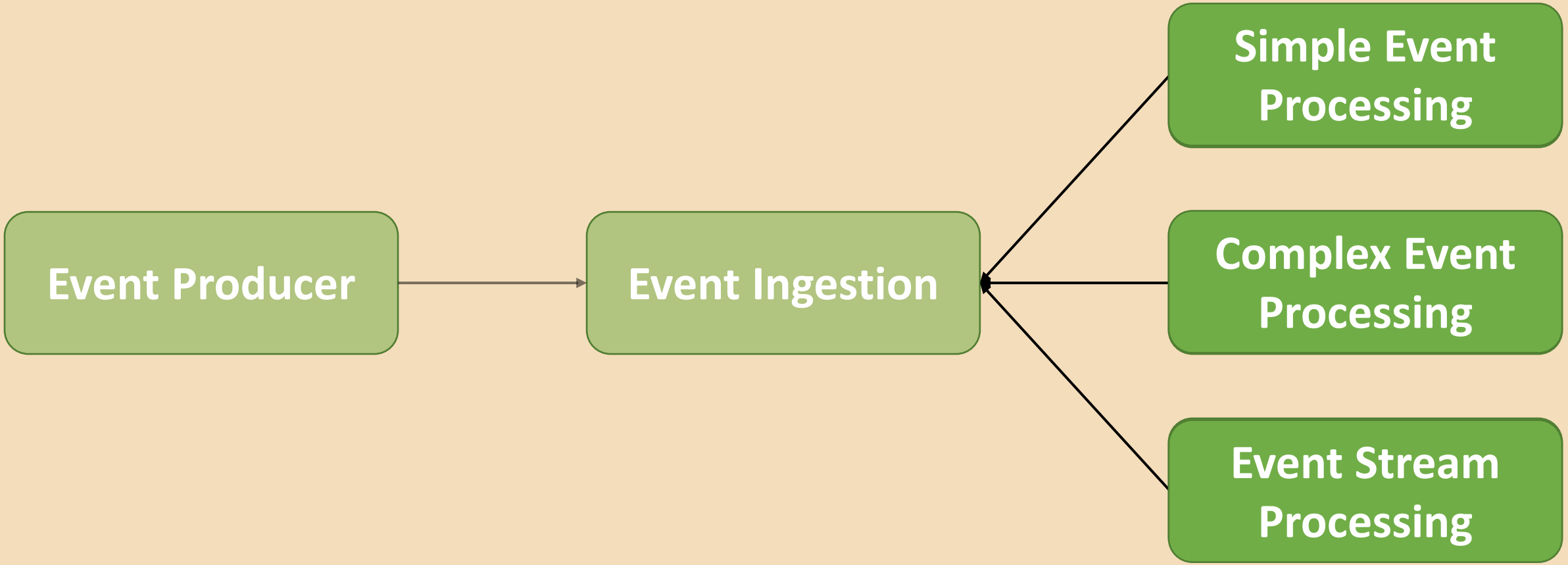
Pub/Sub

Event Streaming



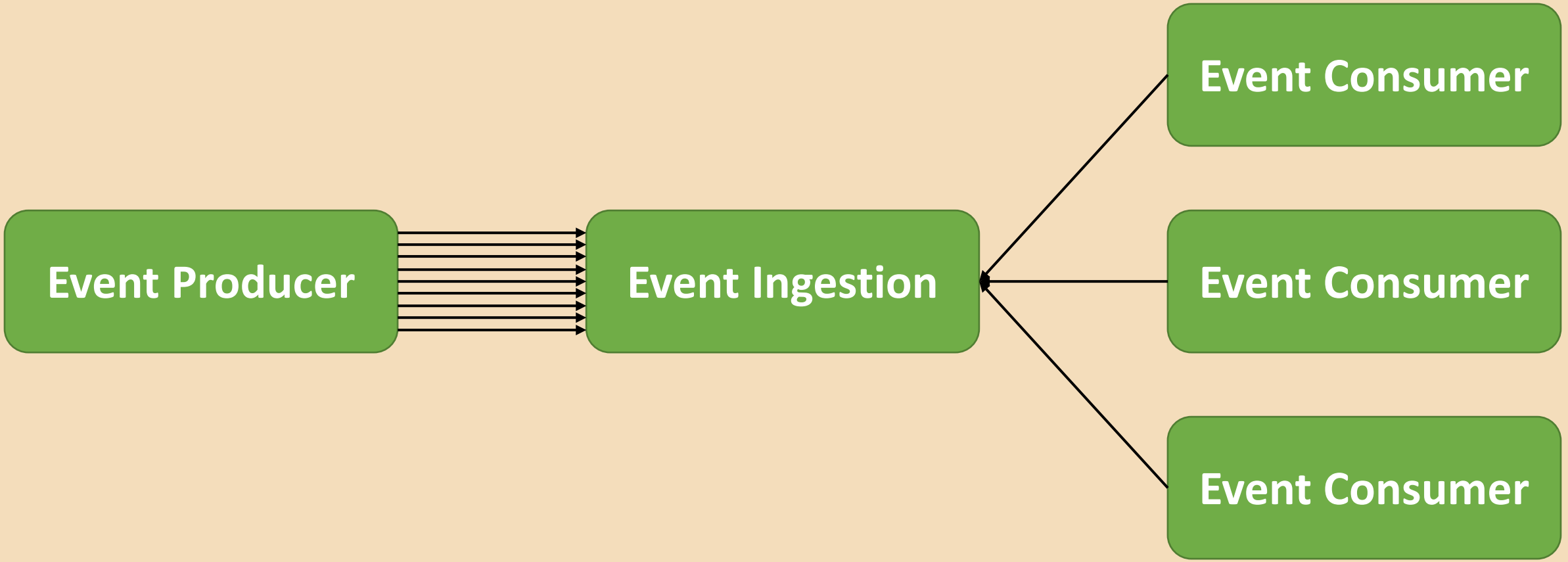
Consumer Processing Variations

Event-Driven Architecture



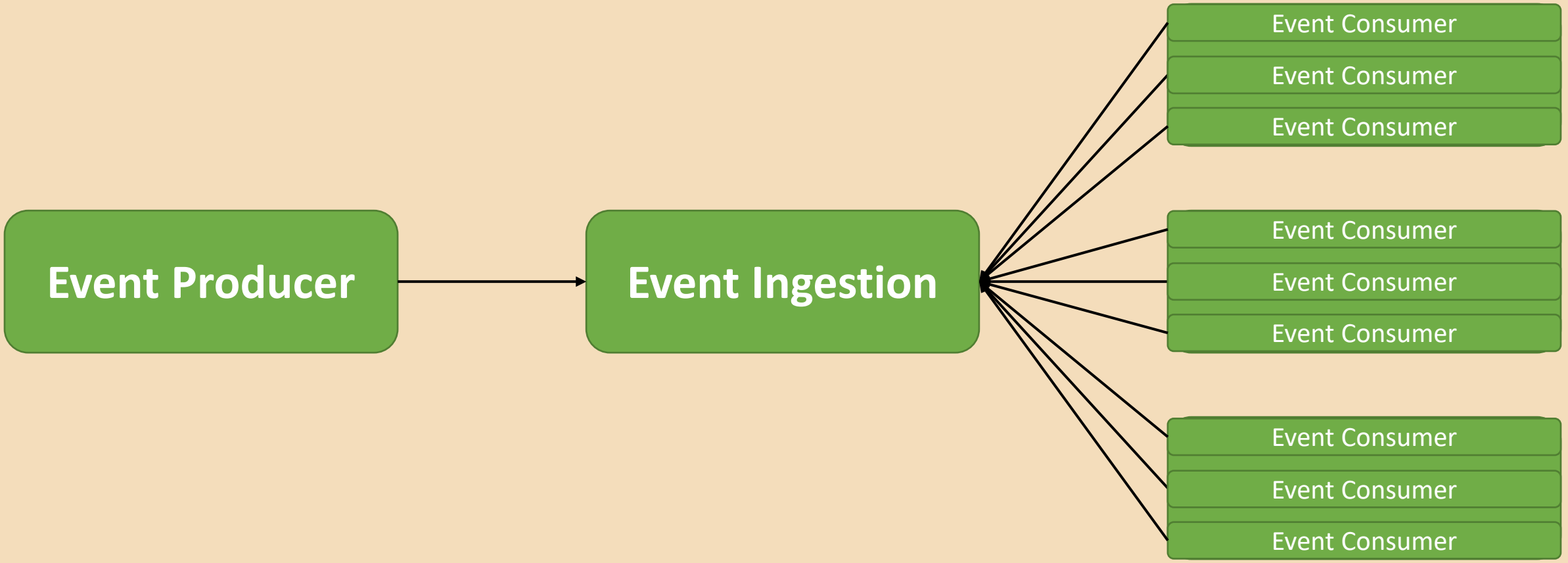
External Event Sources

Event-Driven Architecture



Multiple Consumer Instrances

Event-Driven Architecture



When to use this architecture

Event-Driven Architecture

- Multiple Subsystems
- Real-Time Processing
- Complex Event Processing
- High Volume/Velocity Data

Benefits

Event-Driven Architecture

Decoupling

Encapsulation

Responsive

Scalable/Distributed

Independence

Drawbacks

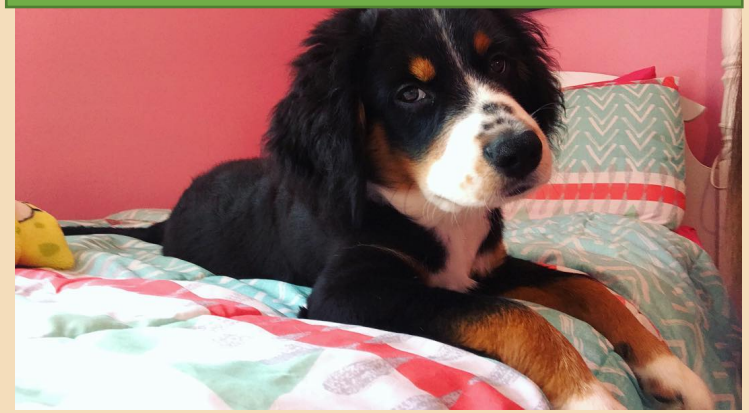
Event-Driven Architecture

Steep Learning Curve

Complexity

Loss of Transactionality

Lineage



Limitations

Event-Driven Architecture

Guaranteed Delivery

Sequencing

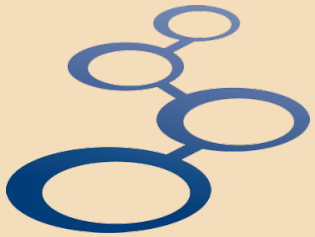
IMPLEMENTATION OPTIONS

Implementation Options

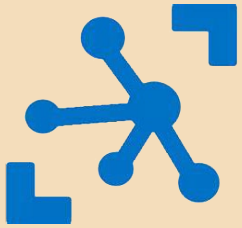
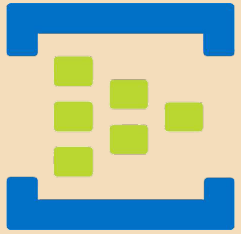










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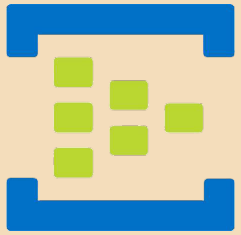
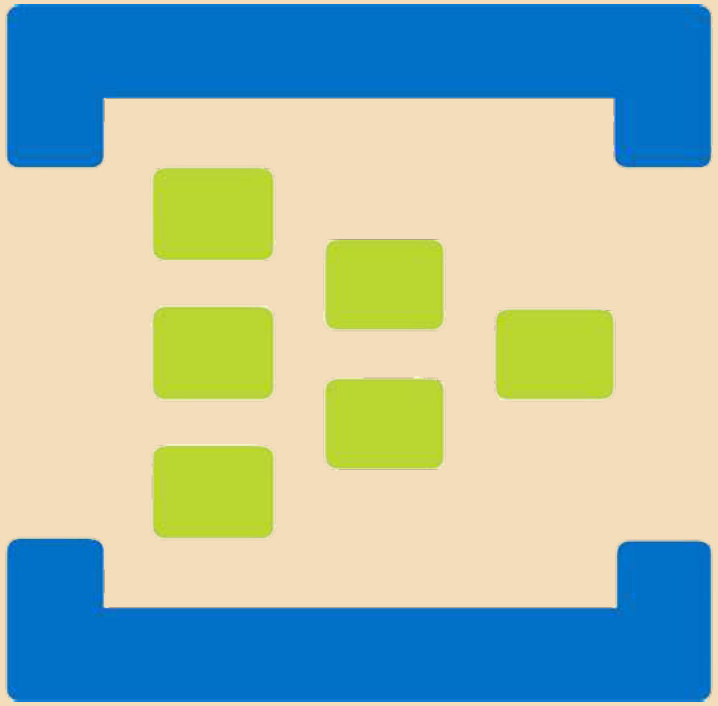


Azure Event Hubs

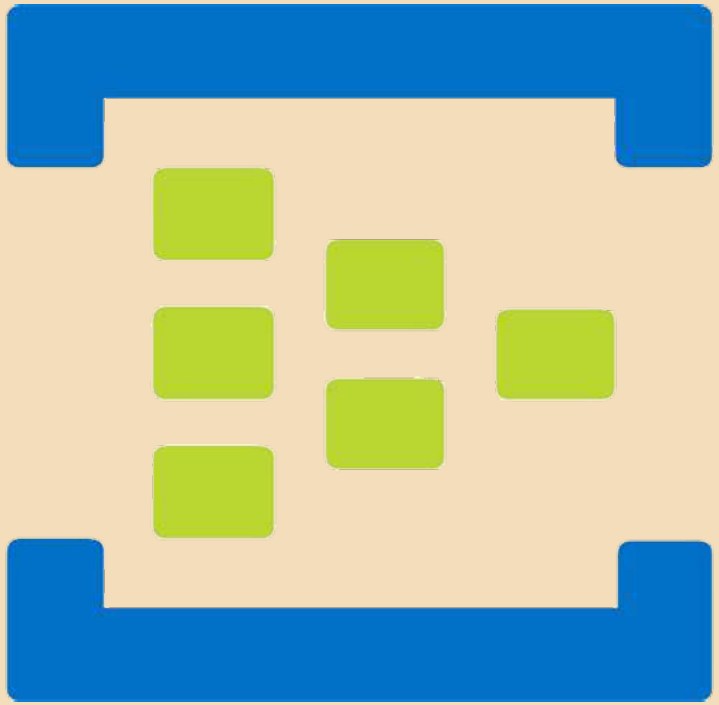
Simple, secure, and scalable real-time data ingestion



Fully managed, real-time data ingestion service that is simple, trusted, and scalable

Why choose Event Hubs?

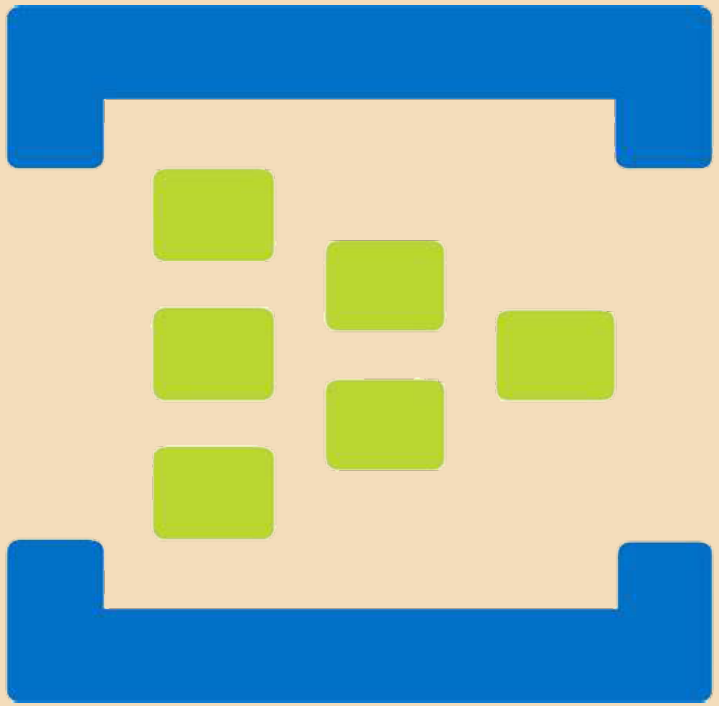
Azure Event Hubs

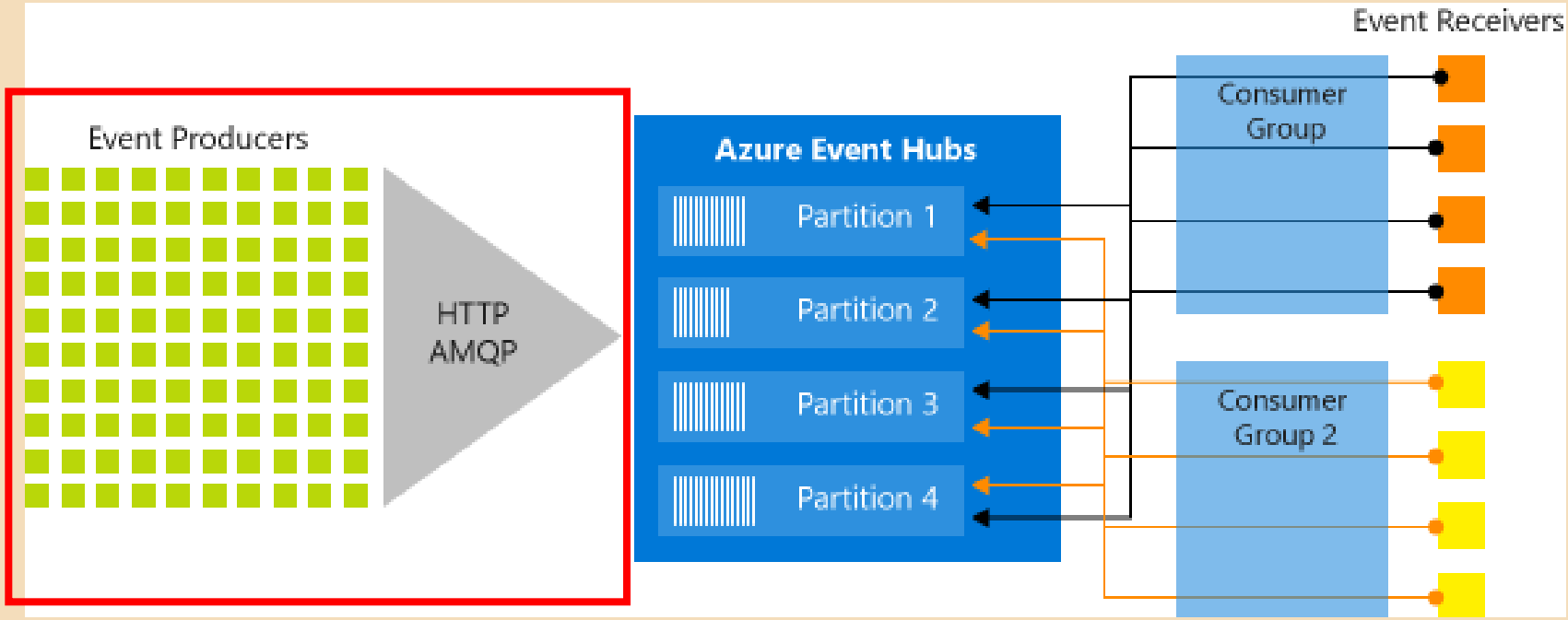


- Simple
- Secure
- Scalable
- Open

Key Architecture Components

Azure Event Hubs

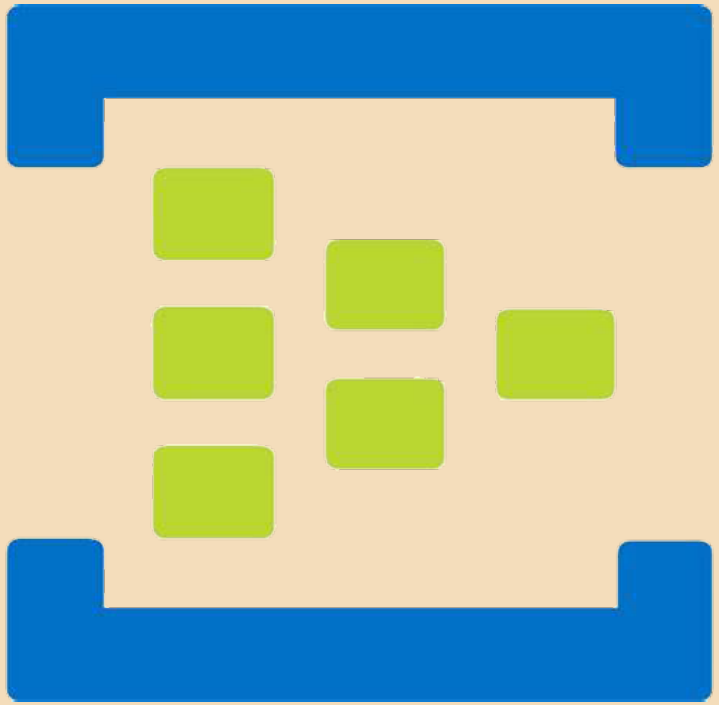


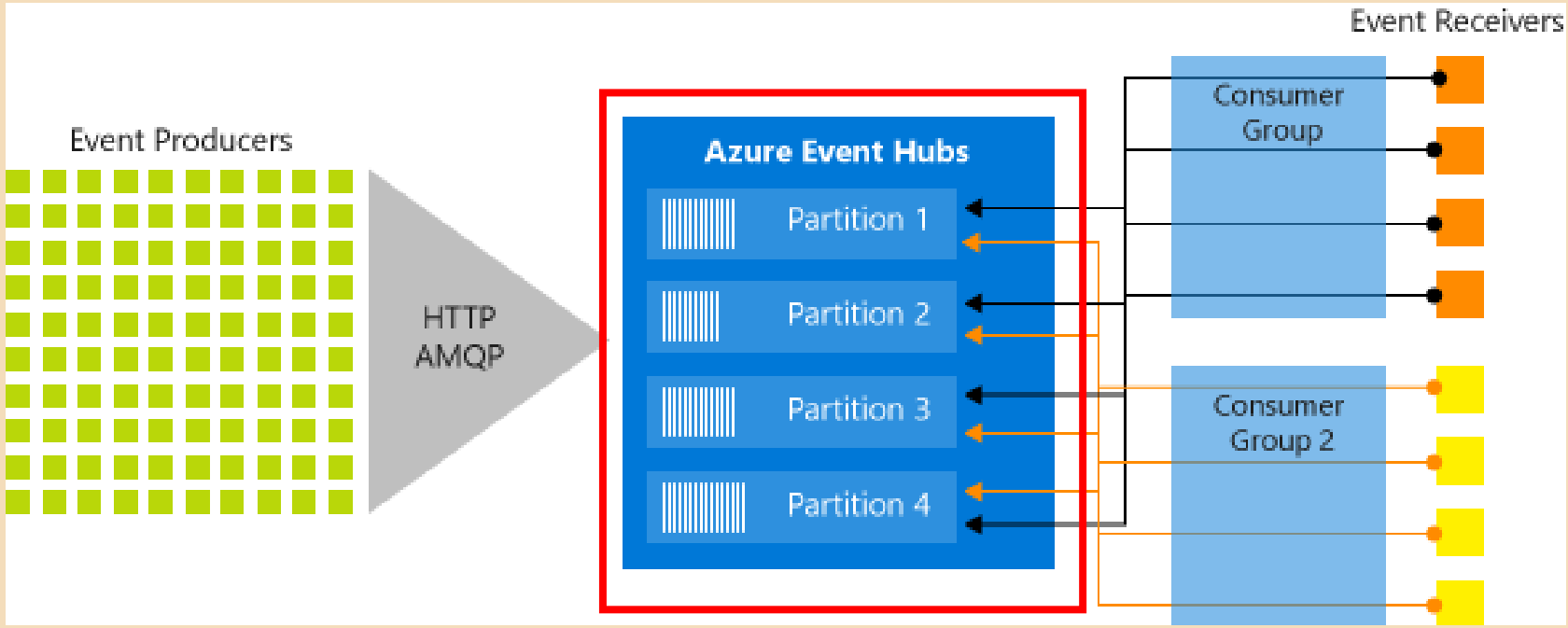


Event Producers

Key Architecture Components

Azure Event Hubs

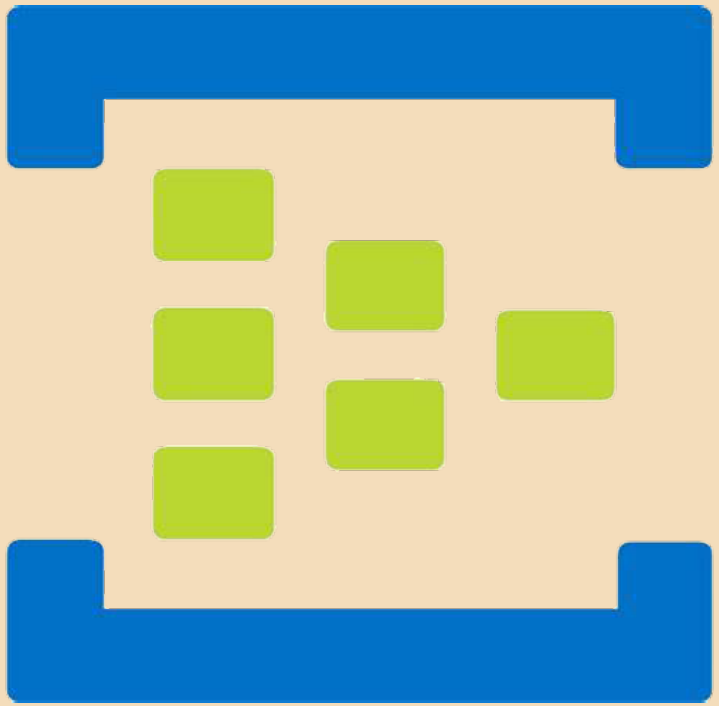


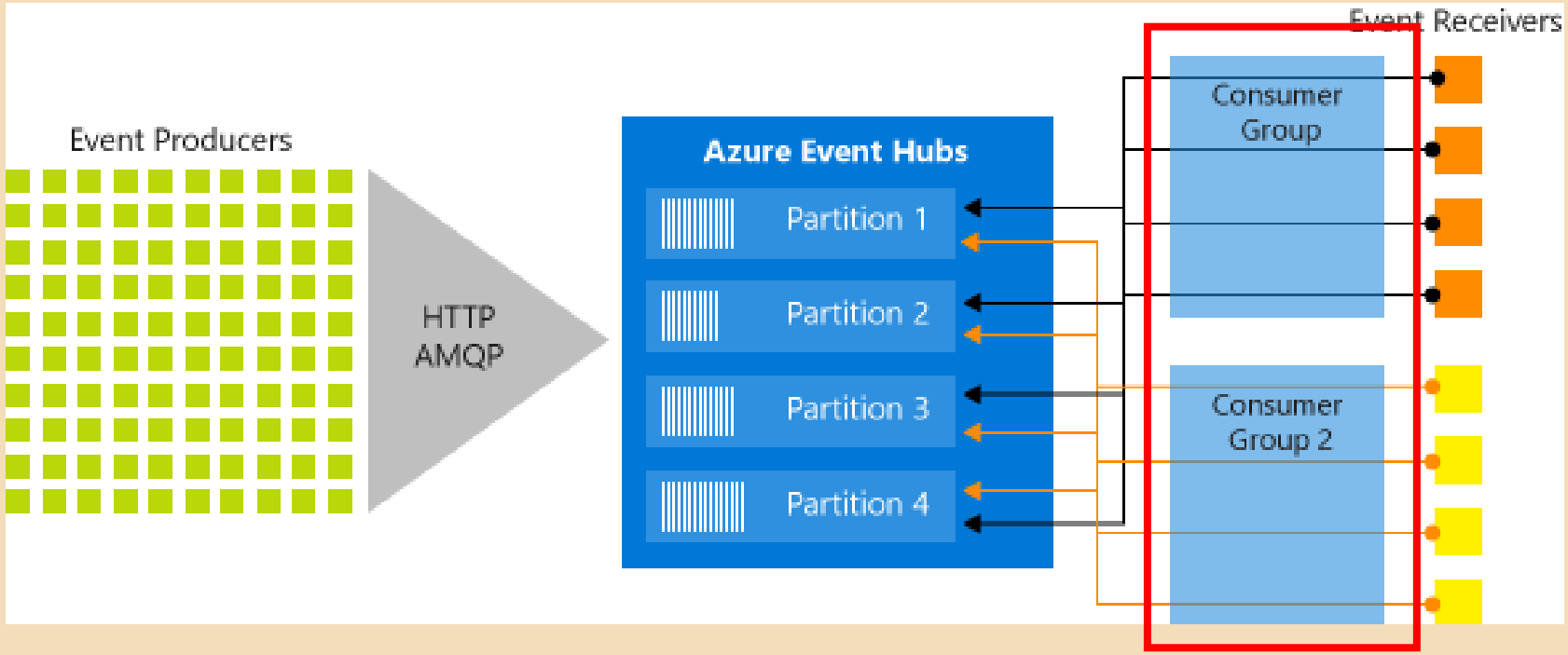


Partitions

Key Architecture Components

Azure Event Hubs

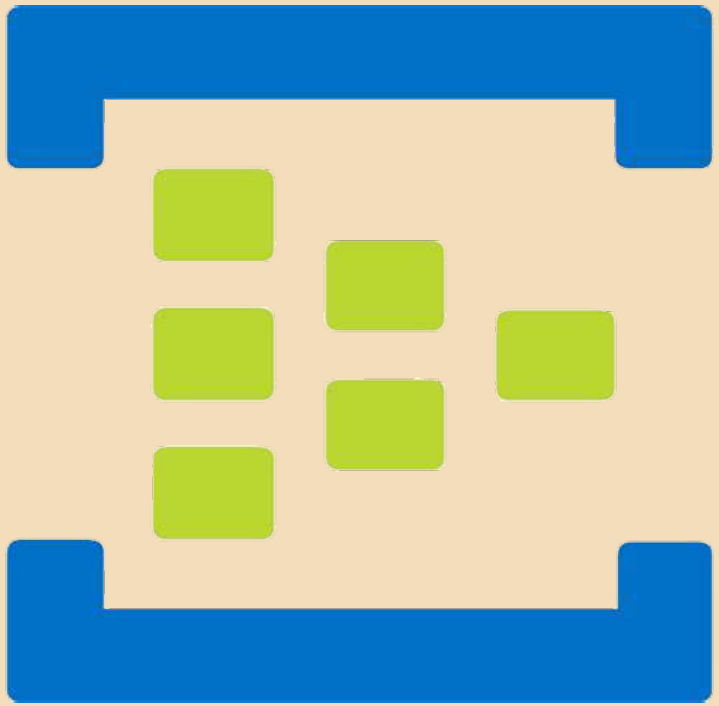


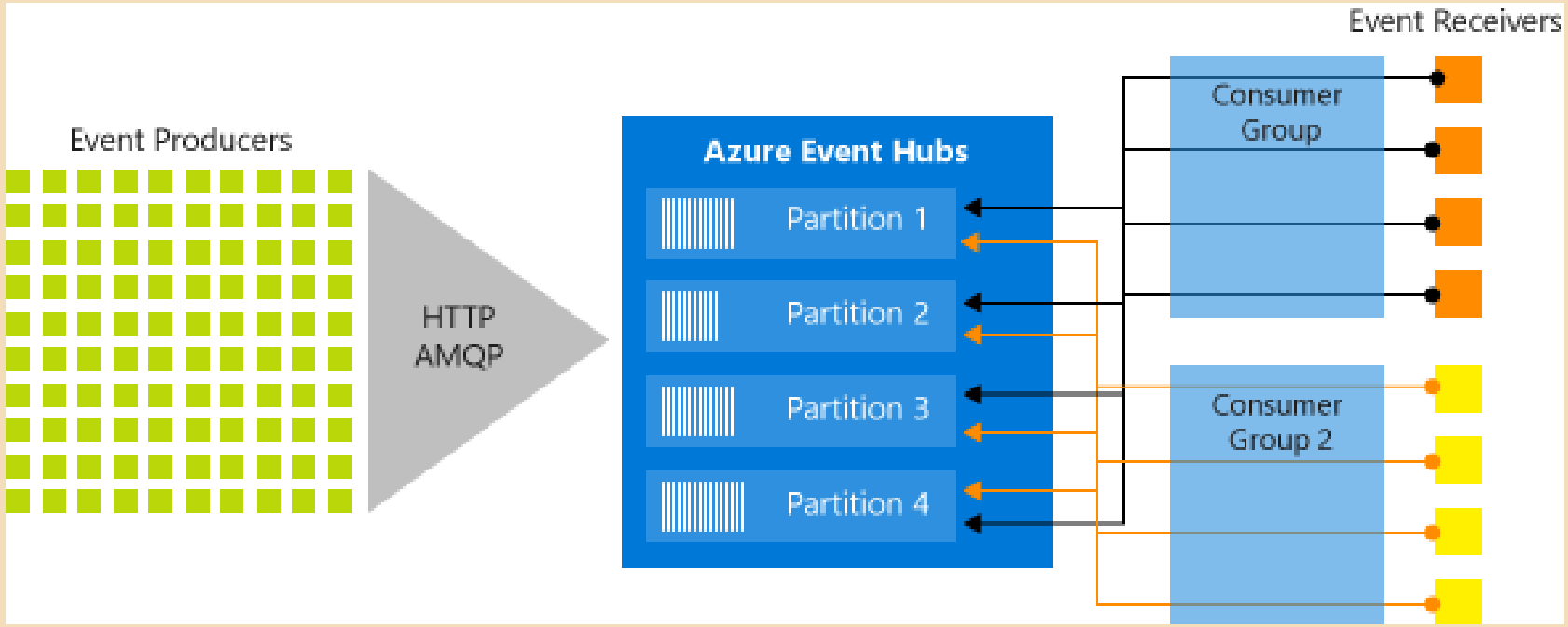


Consumer Groups

Key Architecture Components

Azure Event Hubs

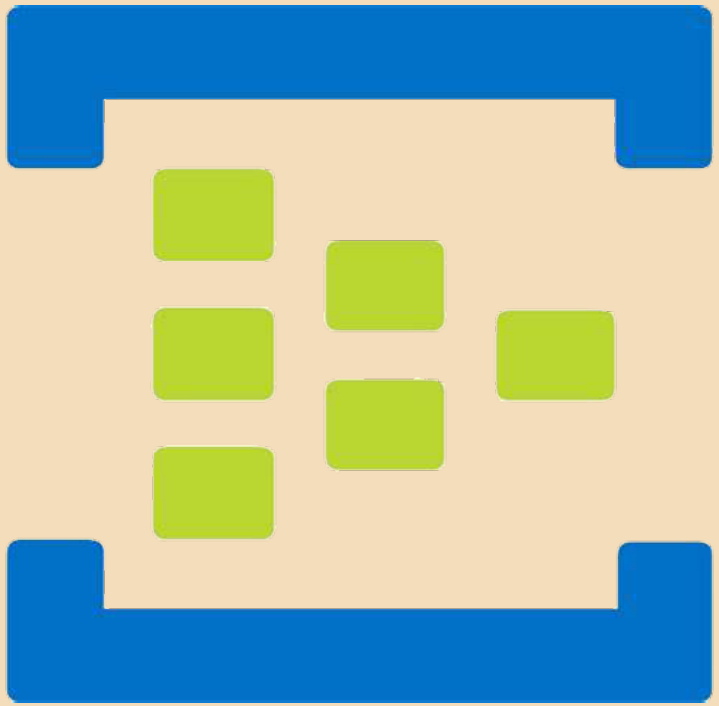


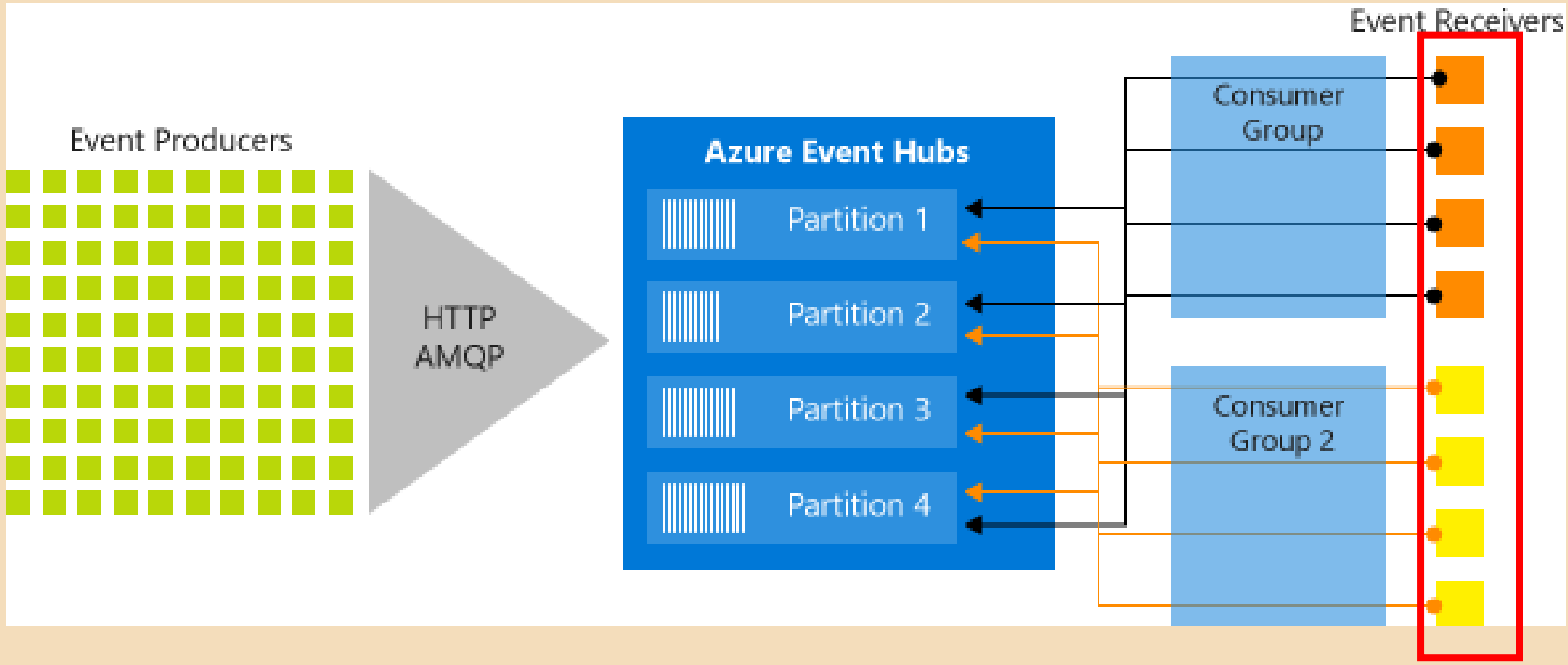


Throughput Units

Key Architecture Components

Azure Event Hubs



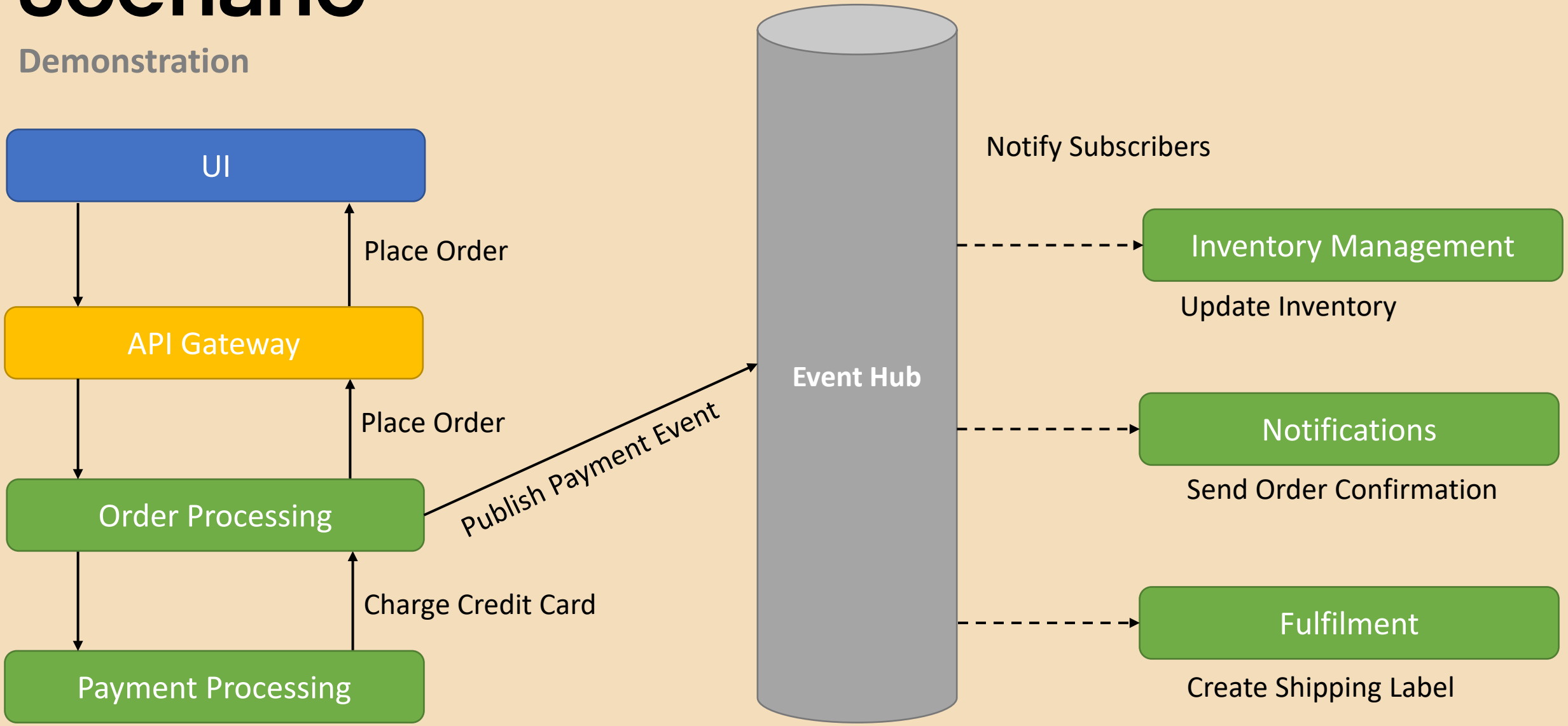


Event Receivers


DEMONSTRATION

Scenario

Demonstration



SUMMARY

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SWOT

Summary

Strengths

- Decoupling
- Encapsulation
- Responsive
- Scalable / Distributed
- Independence

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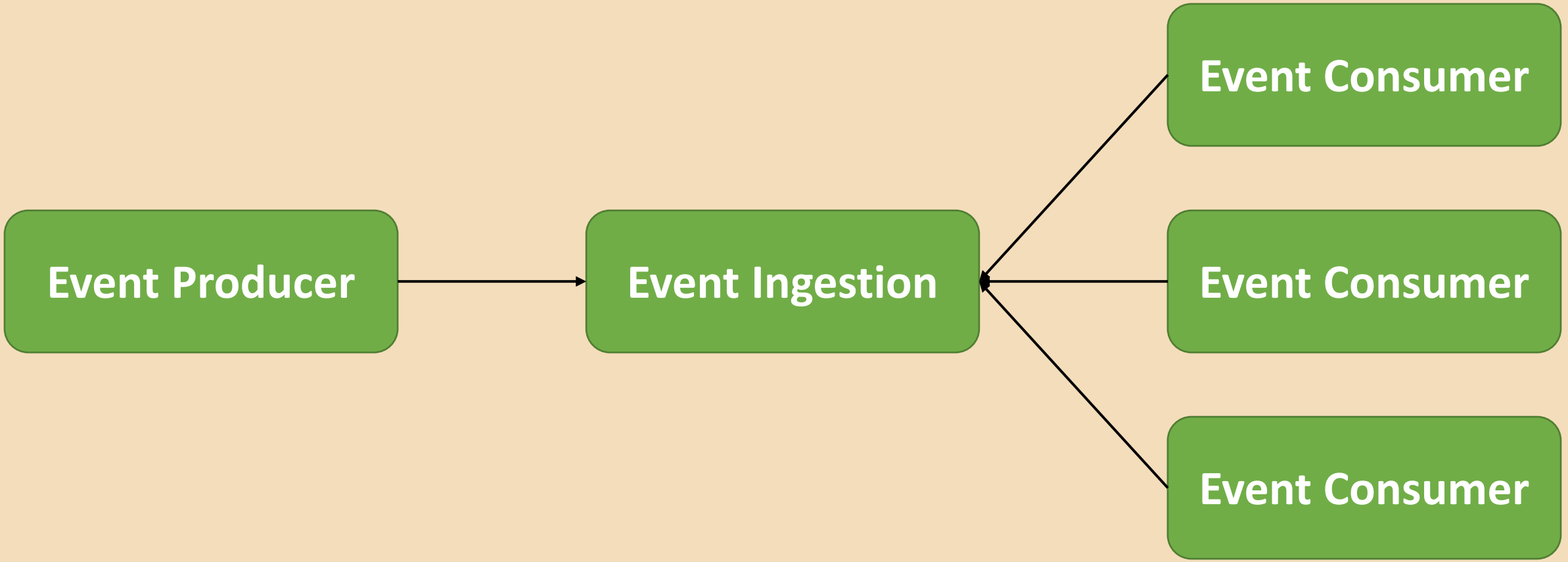

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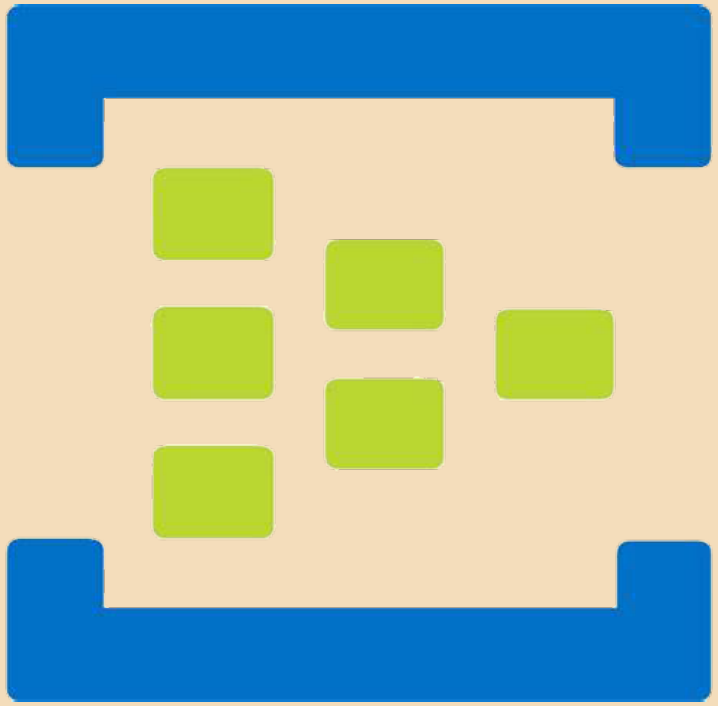

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Thank You!

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