PubSub+ Event Portal

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Module Objectives

- Introduce the PubSub+ Event Portal and its purpose in event-driven solutions
- Understand the different components of the portal
- Learn how to design an event-driven solution through a sample use case

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Why an Event Portal for Event Driven Applications?

It’s Hard to Build Event Driven Applications

Where do you discover events for reuse?

Why does an event exist?

What topic do you use to subscribe to it?

What changed?

How do you determine the data structure of its payload?

Who should have access to it?

Who made the latest revision?

Who can tell you more about it?

Is your change backward compatible?

Who is impacted by your change?

Does it comply with security policy?

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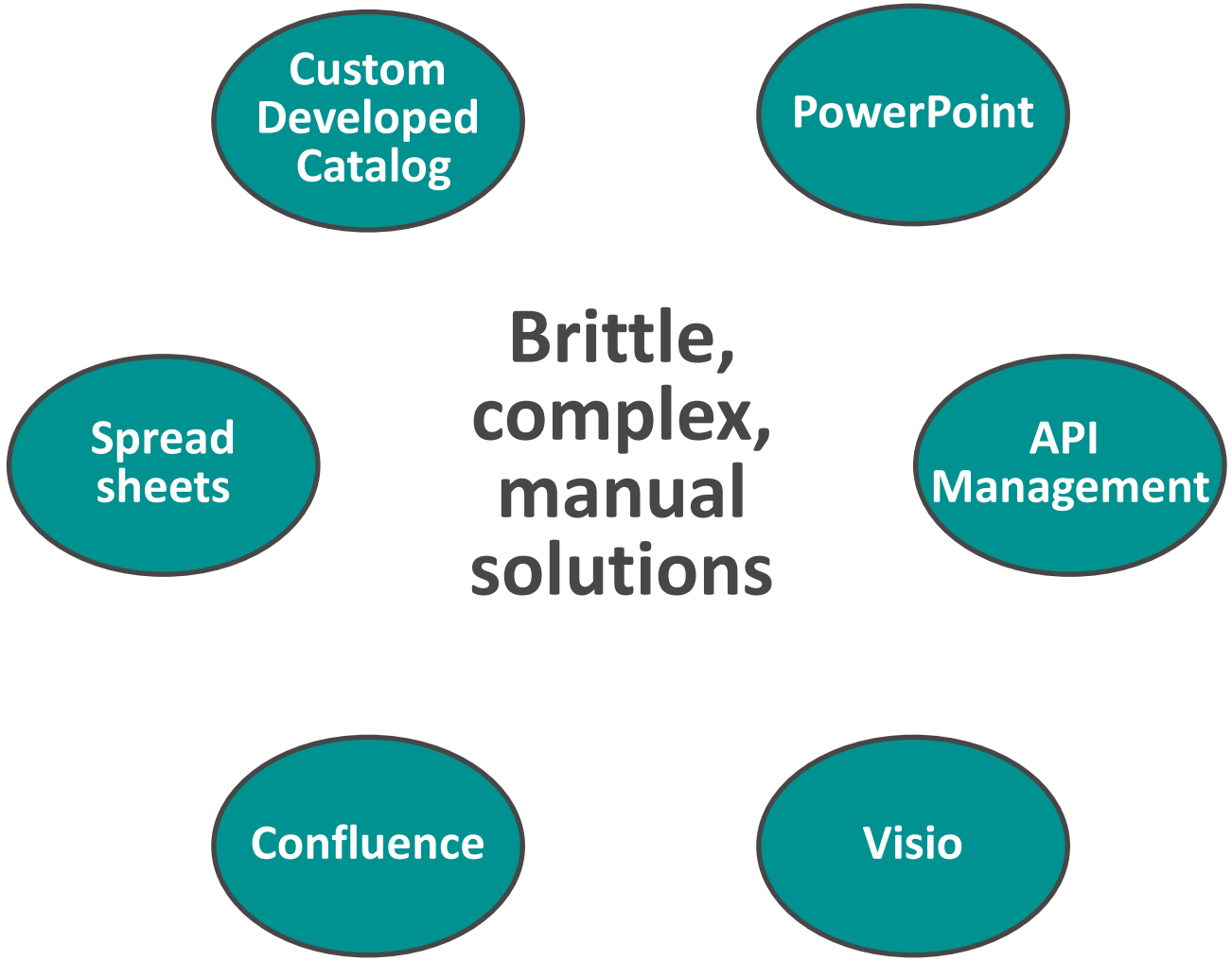
Some Try Solutions Not Intended for Event Management



- Hampers your productivity
  - No single place to discover and share/reuse events
  - No best practices guidance
- Makes it difficult to control and govern your ecosystem
  - Suffer from changes with unintended consequences
  - Hard to audit changes when data is stored in different tools

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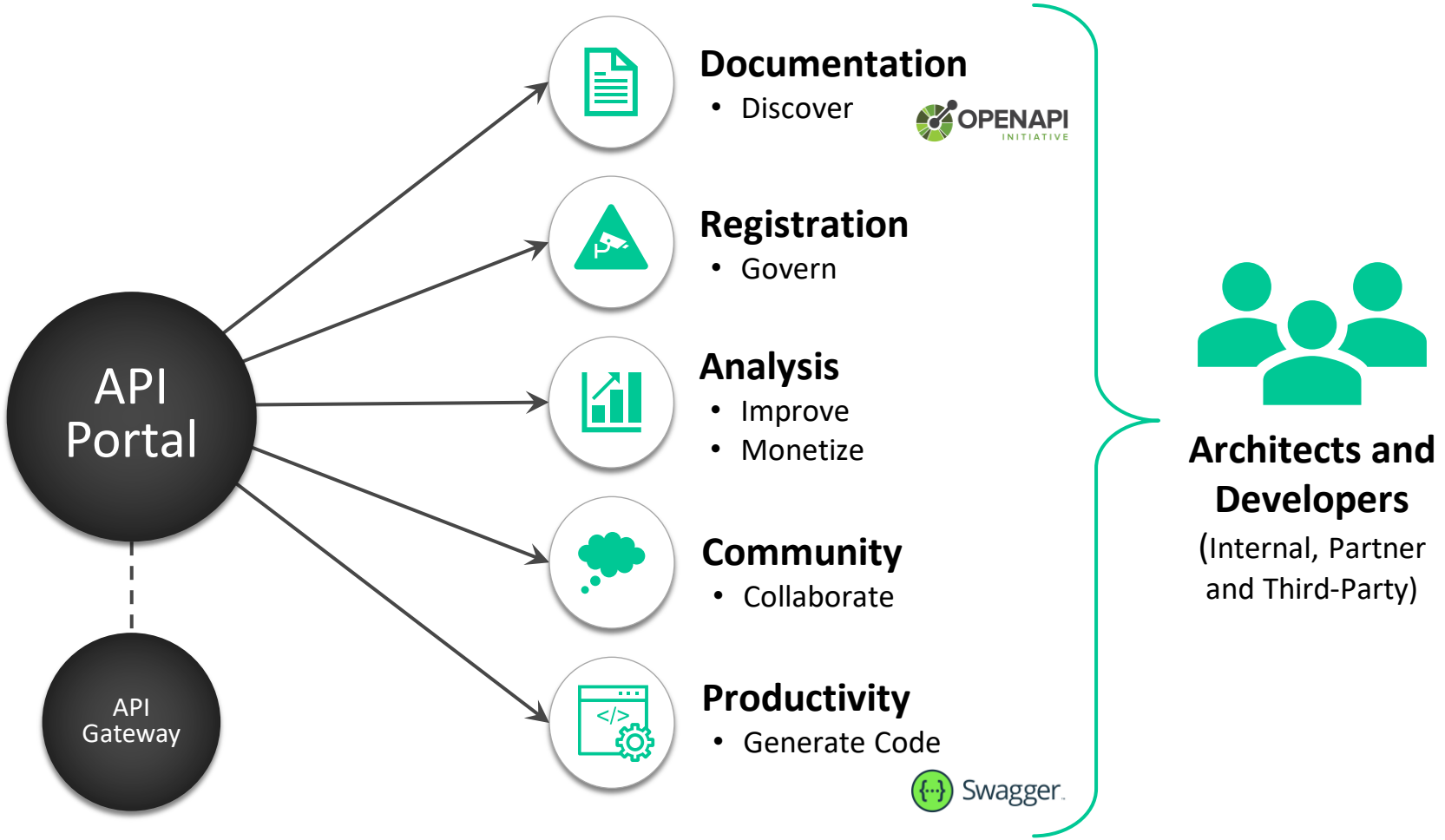
Inspired by API Management Platforms



Answers the *Who*, *What*, *When*, *Where*, *Why* and *How* For RESTful APIs…but what about Events?

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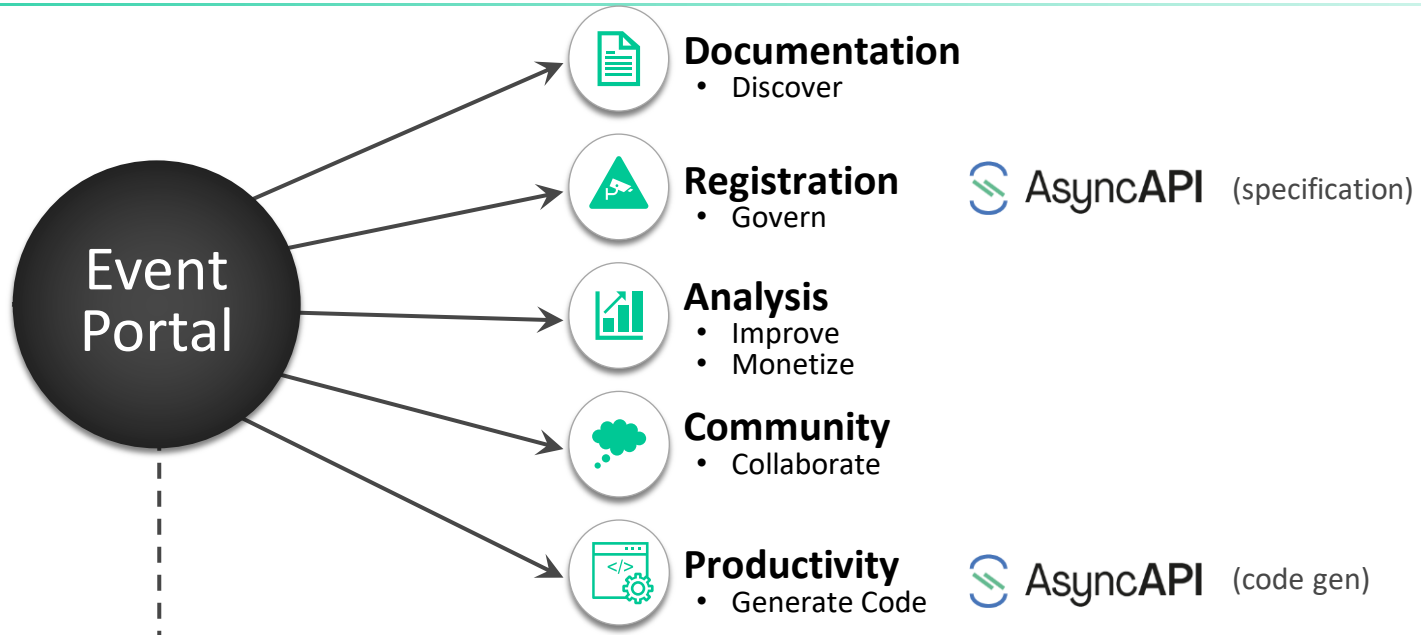
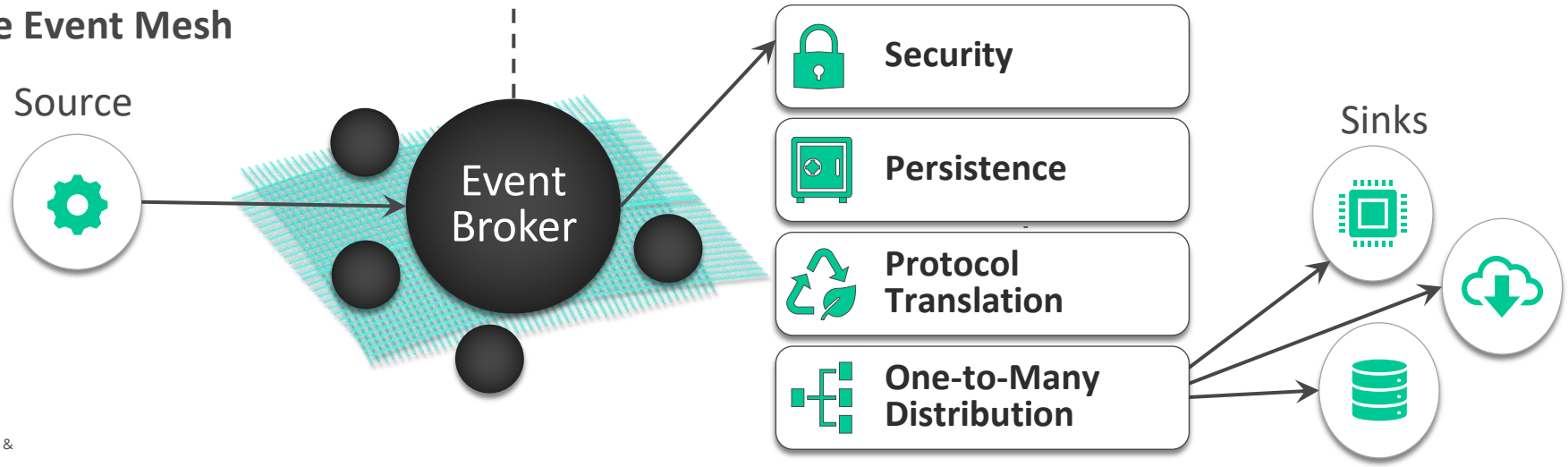
We Need an Event Portal for Asynchronous Interactions

Design, Develop and Manage Event-Driven Applications



Runtime Event Mesh



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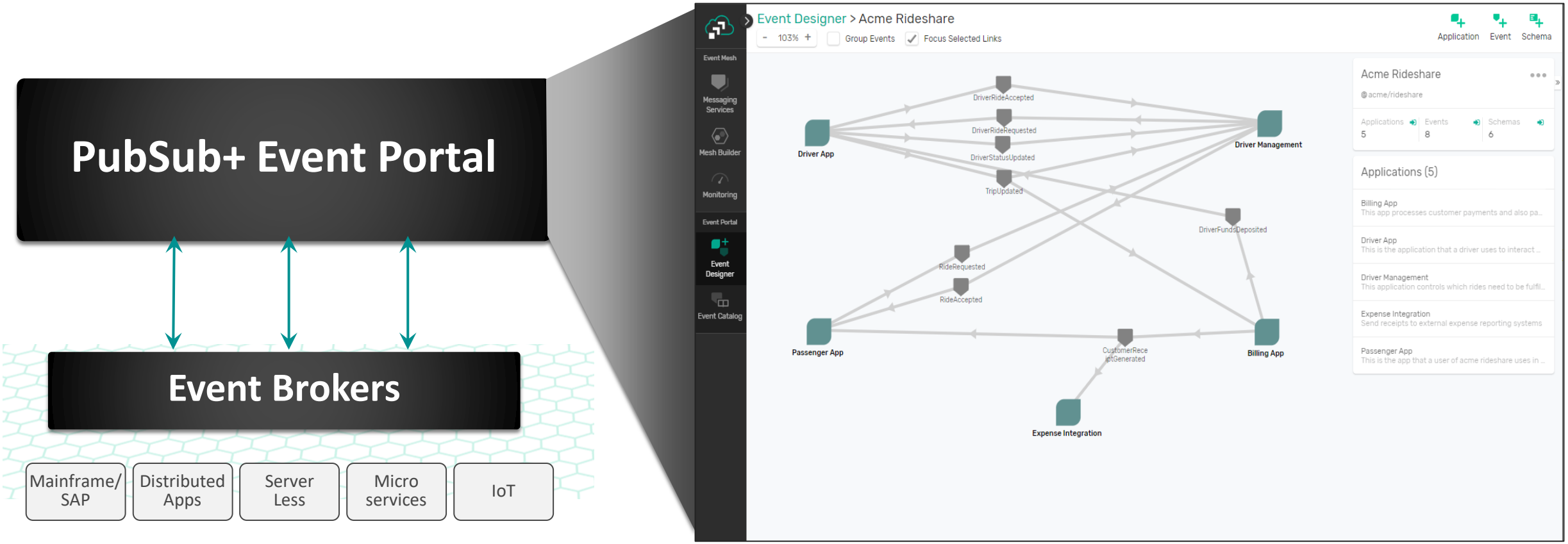
PubSub+ Event Portal

Single place to design, create, catalog, visualize, discover, share, secure and manage all events within your ecosystem



How Users Interact with Event Portal

Your Event Driven Enterprise

Event Management (Design Time)

Architects

- Discover, create, update, review apps, events and payload schemas
- Map payload schemas to events; and events to apps
- Govern event consumption across app domain boundaries

Developers

- Collaborate with architects on design
- Export AsyncAPI app contracts for each app
- Generate and implement event-driven apps that provide business value

Data Scientists

- Understand event-driven data
- Discover new insights by combining events

B2B/B2C Ecosystem

Existing Tools

- Schema registries
- Data lineage
- CI/CD pipelines

REST API

PubSub+ Event Portal

Customers & Partners

- Discover and consume events in real-time

AsyncAPI

Generate Code

Server-less

Micro-services

IoT

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The Foundational Elements of Event Portal

Application Domain

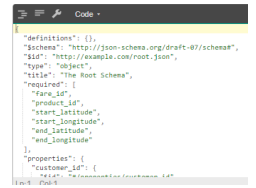
Team, LOB, process
(i.e. HR, Inventory, Billing)

Application

A Publisher
and/or Subscriber

Event

Topic address + metadata that
references a payload schema



Schema

Payload object definition
JSON, Text, Binary, XML, Avro

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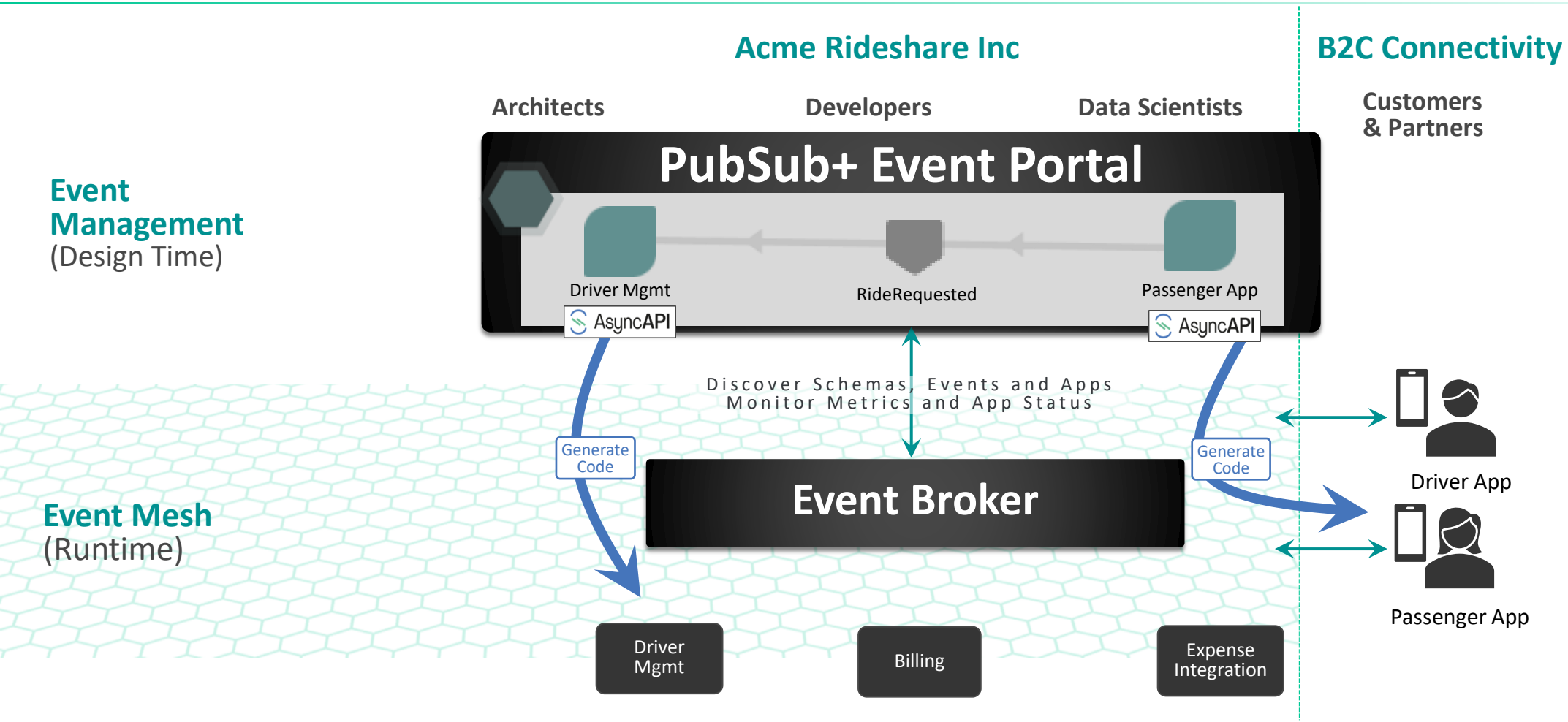
Use Case: Acme Rideshare



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Hands-on Activity

- Document Events that apps need to produce and consume
- Define payload schemas for events
- Map events to apps and visualize a graph of the event flows
- Generate plumbing code for applications

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Benefits of PubSub+ Event Portal

Productivity

Architects & developers can:

- Collaborate on events and event-driven apps
- Visually see event-driven interactions to understand impact of changes
- Low Code: Generate app code by exporting AsyncAPI definitions
- Benefit from best practices & consistently apply conventions
- Discover via rich search capabilities

Control

CDO/Data Governance can:

- Understand where data is coming from (lineage) and going
- Track changes and audit for deviations while promoting apps and dependencies though Dev, Test, QA, and Prod
- Use application/event relationships to create security policies and validate compliance with schema

Reuse/Sharing

Your business can…

- Understand who is consuming which events, how much, for what
- Create value-added services and gain insights by combining events
- Make it easy for users across app teams, LoBs and partner ecosystem to find and reuse events
- Monetize popular or particular high-value event streams

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