



bluenotes
GLOBAL 2022

Explorance API Ecosystem for Interoperability

Product Architecture Update

Presenters

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Before We Start

- **This presentation is very open to questions and feedback**
- **We will pause and ask questions during the presentation**
- **A final question round will be available at the end**

Please turn off your cell phone notifications



API?

Quick Overview

API

- **What does API stand for?**

Answer: Application Programming Interface

API

- **Who has experience with APIs?**
- **Levels**
 - **Beginner:** I understand what they are but did not venture too deep
 - **Intermediate:** I (or my team) have used APIs and understand the concepts
 - **Advance:** I have used them, understand the concepts and the overall standards

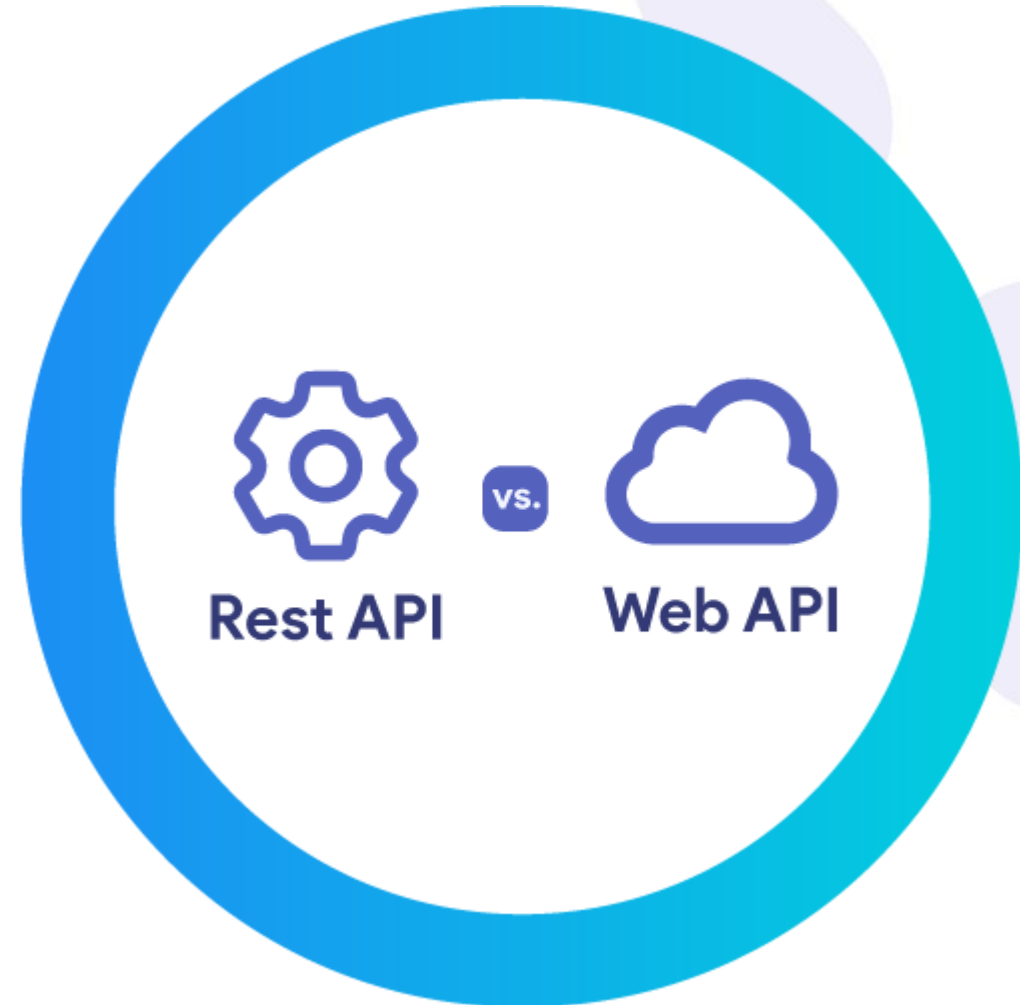
API

- **Current Blue model**
 - Blue currently uses SOAP API (Often called SOAP Web Services)
 - Functionality based
 - XML based
 - Costly on bandwidth
 - No caching
 - No throttling



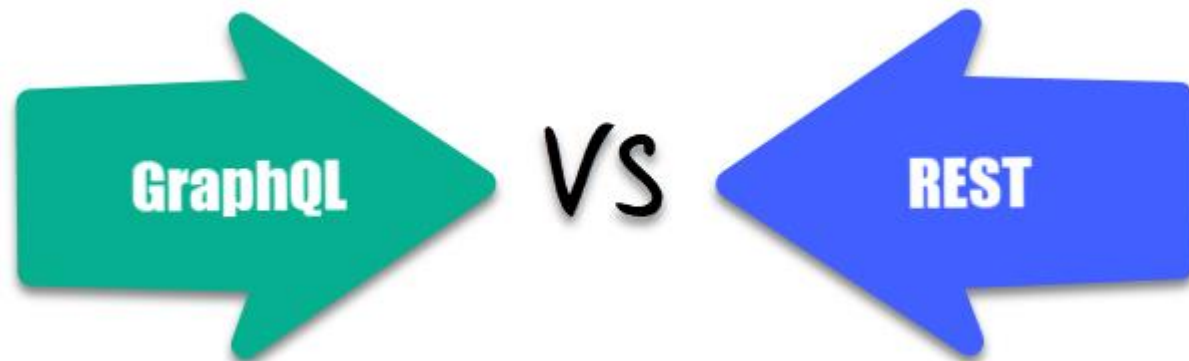
API

- **REST API**
 - Resource based
 - Uniform Interface
 - Guideline based
- **Web API**
 - Functionality based
 - Optimized for machine to machine
 - Unstructured



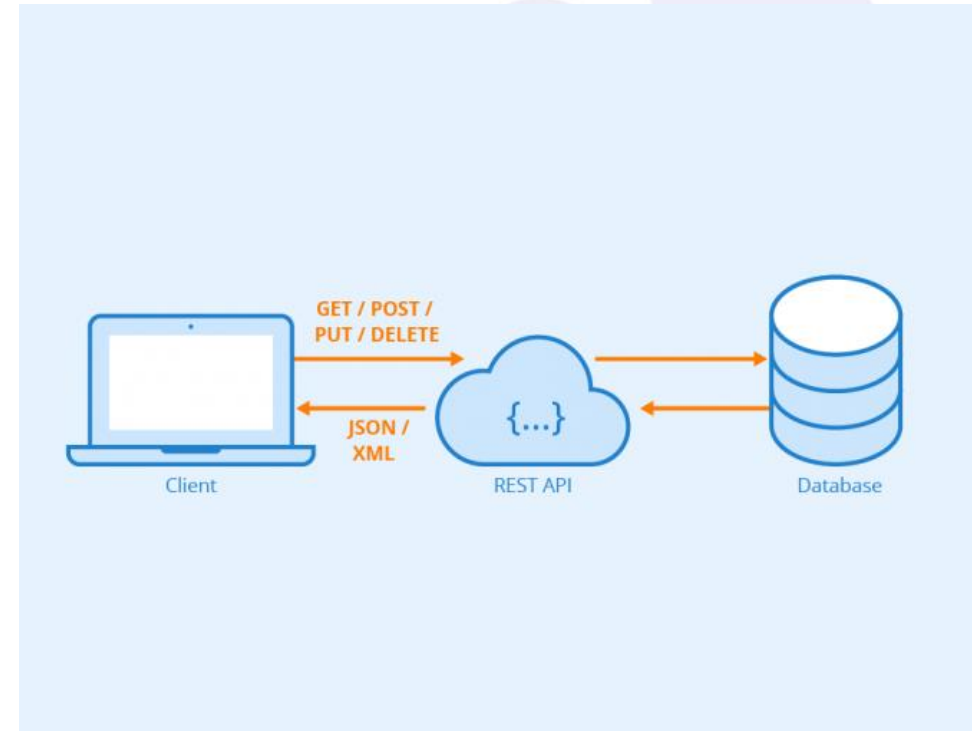
API

- **GraphQL**
 - Application Layer driven
 - Highly decoupled architecture
 - Language HTTP agnostic
 - Strongly Typed



Why would you need APIs?

- Drive Web Interfaces
- Mobile Applications
- Automation of Processes
- Code on Demand (Your Backend)
- Infrastructure as Code



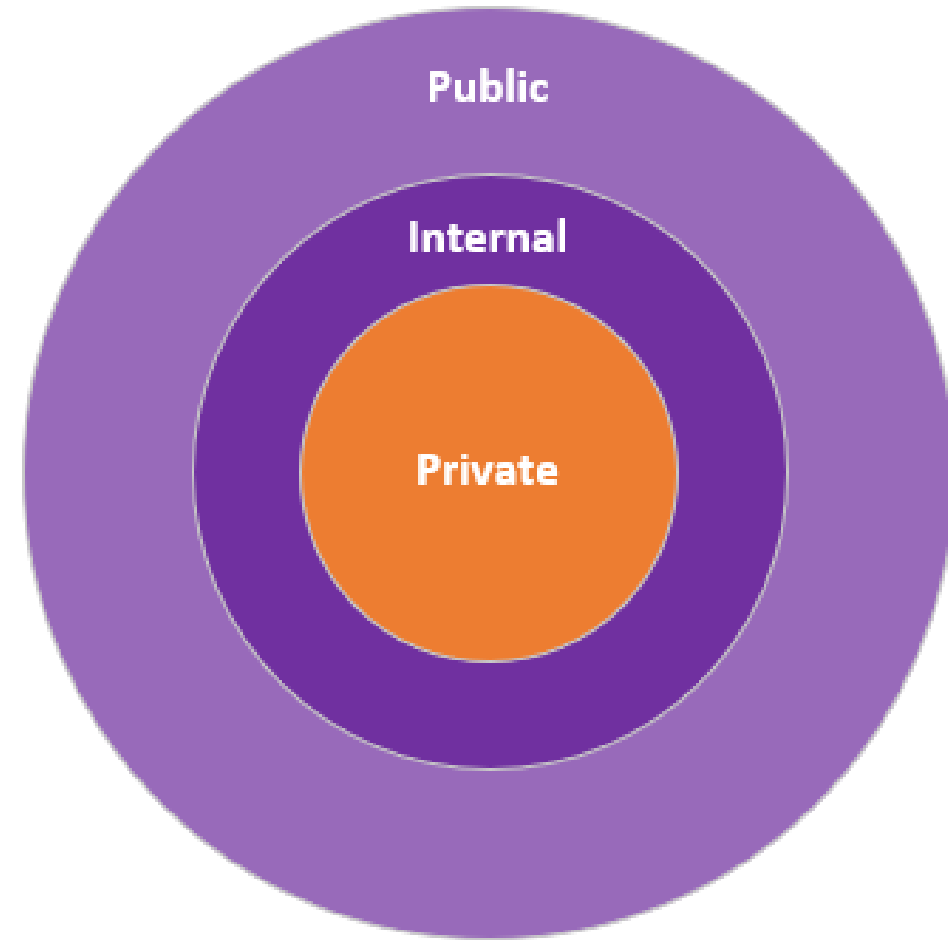
Let's pause

- So far so good?



Access level

- **Public**
 - Publicly available and accessible via a privilege-based system
- **Internal**
 - Internally accessible among Explorance sub-systems
- **Private**
 - Accessible solely by a sub-system
 - BFF realm (Back-End for Front-End)



Our stance

- **Explorance has selected REST moving forward**
 - We produced an internal REST standard that complies with the industry
- **We are using 80% of our APIs internally**
 - Keeps public API consistency
 - We are consuming them before you do
- **GraphQL are occasionally used for BFF (Backends for front-ends)**

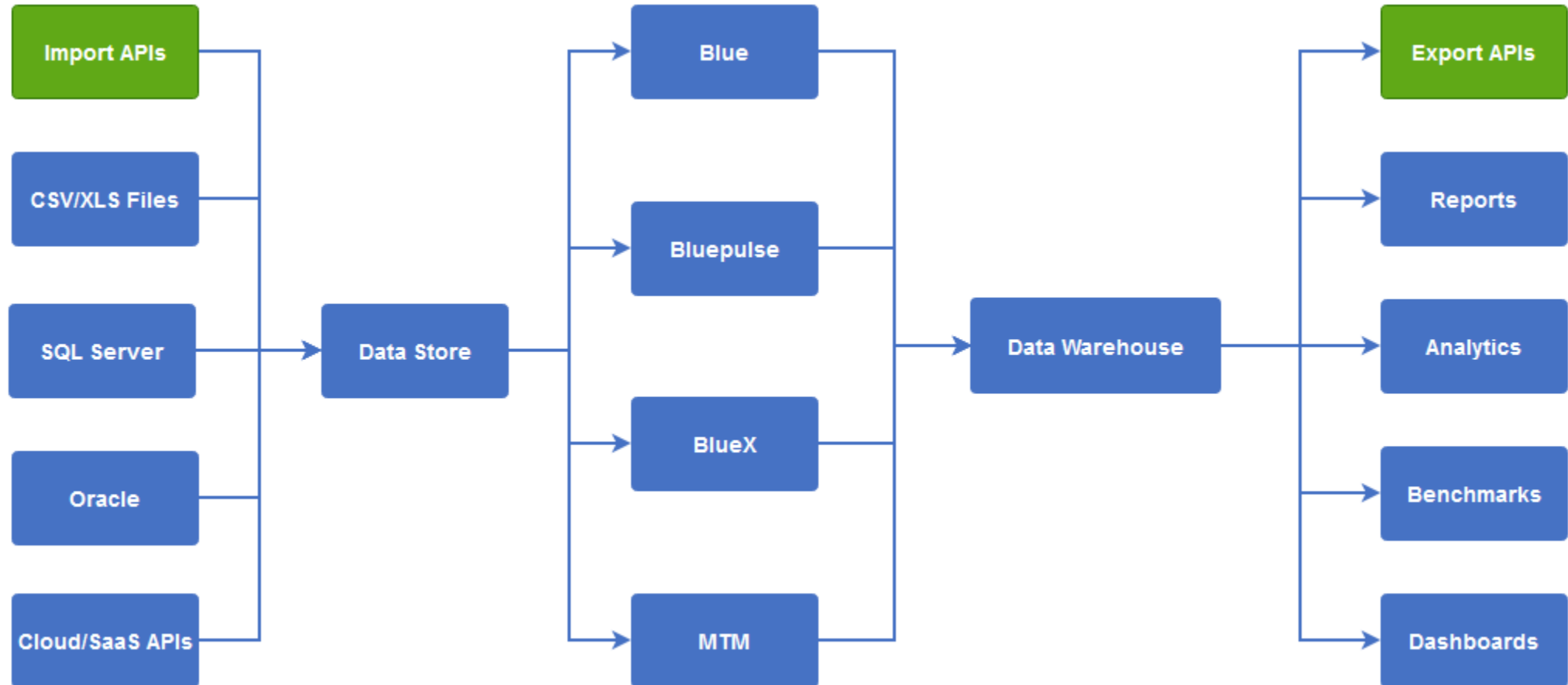




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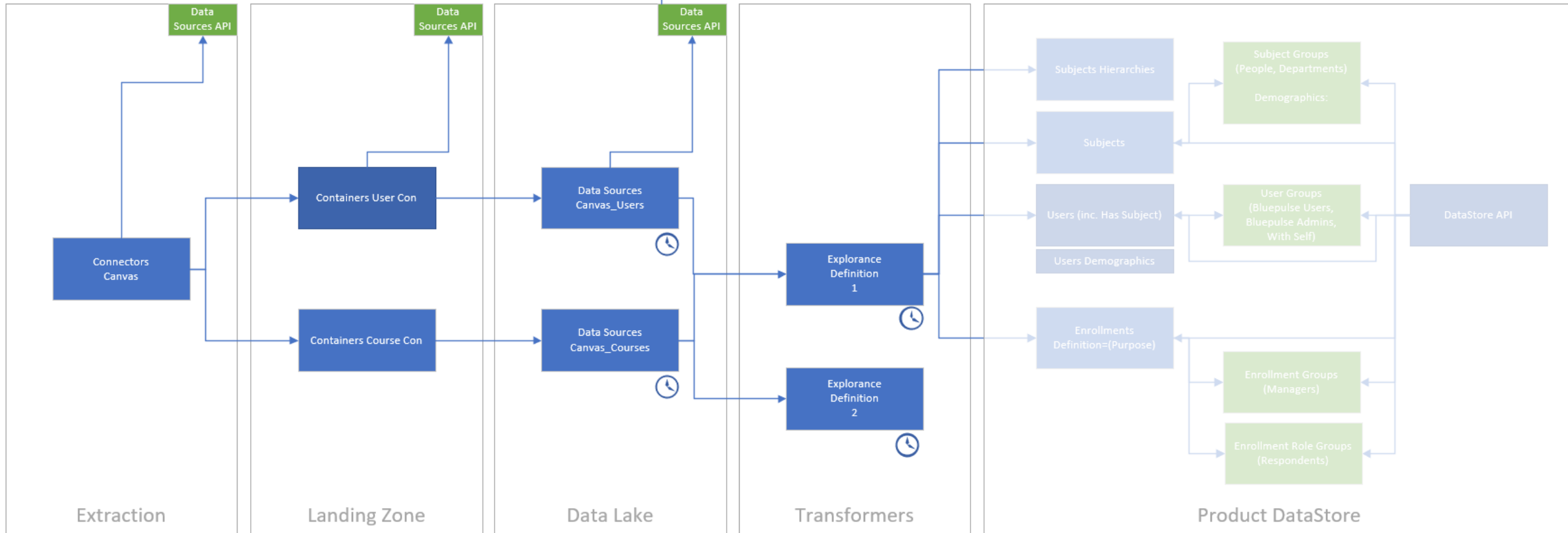
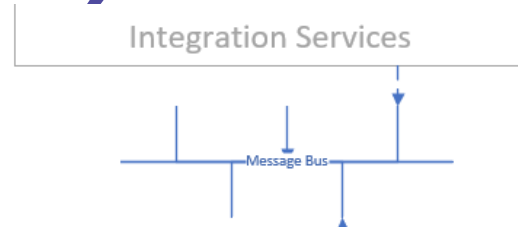
Data In/Data Out

Data Store (IN) / Data Warehouse (OUT)



Questions?

Data Store (IN)



Data Store - Containers



Key Benefits of Our Data Store APIs

- **Segregation of concerns between the integrations and projects**
- **Flexibility (Choose what and when to synchronize)**
- **Hardening of processes and security**
- **Unified data flow across applications**
- **Standardization**
 - **Resource driven exchanges**
 - **JSON DTO**
- **On demand action(s) via code**
- **Community Site - Sample application(s)**



What's Next

Reverse APIs (Webhooks)

- A webhook can be thought of as a type of API that is driven by events rather than requests



Message Bus Registration

- **Message Bus and Message Queues are registration-based event systems that can interact with subscribers based on specific messages**



Putting It All Together – Workflows

Use Case: Institution wants to follow-up with raters based on a condition

Example

- A user fills in a survey using Blue
- A web hook request gets sent out to an external system
- If a condition is met, the external system creates a user followup using the Public API
- The public API creates an event msg that a new user followup was created
- User is notified using Mobile app



Questions?

Warehouse APIs

- **For exporting data from Explorance systems to your own data warehouse**
- **We will provide sample code for importing into PowerBI**
- **We will provide a Web Connector for importing into Tableau**
- **[Swagger Link](#)**

Documentation and Community

- **Our upcoming APIs will use Open API and Swagger for documentation.**
- **We are building a Centralized Developer Network online help tailored-made for API consumption.**
- **We are creating a public Github project to empower our customers and API consumers.**

Questions?



Thank you

- Please reach out and exchange on Slack or on our community site

