Omni-CAPI:
A Reference Architecture* for a Non-Linear Journey

ACCELERATING CLIENTS' CAPI ADOPTION THROUGH REUSE

*for educational purposes
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Problem Statement

[P5 4th pillar] Some clients still struggle with sending good quality 'signals' - the raw material for Meta's state-of-the-art machine learning.

[P5 2nd pillar] Clients might have suboptimal ASC+ campaigns' results without a proper signals integration.

[P5 4th pillar] Customers can become confused with so many CAPI "flavors", resulting in an overhead due to multiple CAPI integrations.

* Meta Performance 5 (P5): en, pt-br

Solution

CAPI is CAPI: it should be a single "pipeline" between the client's and Meta's servers.

A reference architecture can provide clients with recommended structures and integrations of IT components to form a single CAPI solution yet encompassing all channels.

This material could be used for:
i) a technical consultation (1:1);
ii) technical advocacy (1:few) events; and
iii) scalable technical acceleration (1: many) – together with the open-source sample program.

Having the right **solutions architecture** in place allows clients to save business time and money.

CHANNELS & SYSTEMS

Mobile App

WhatsApp

Consumers

Physical Store

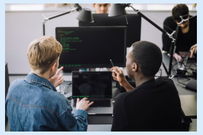
Website

Client's **Cloud** Computing Environment

CRM

lower-funnel events

CDP



IT Team

3rd Party Platform

upper-funnel events

Tag Manager

Marketing Team

Meta

MACRO PROCESSES

Mobile App

WhatsApp

Consumers

Physical Store

Website

Data Ingestion

Client's **Cloud** Computing Environment

Data Handling

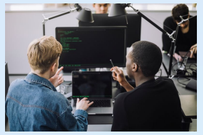
Data Usage

Meta

CRM

lower-funnel events

CDP



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upper-funnel events

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KNOW YOUR INGEST OPTIONS

Consumers

Mobile App

MMP SDK
Meta Mobile SDK
~~App Events API~~
Conversions API

WhatsApp

Conversions API
WMG*
Via BSP/Partner

Physical Store

Conversions API
Manual Upload
GCP Connector
CAPI Gateway*
~~oCAPI~~

Website

Pixel
Conversions API
CAPI Gateway
[redacted]

Data Ingestion

Client's **Cloud** Computing Environment

Data Handling

1

1

Data Usage

Meta

Conversions API
Via Partner

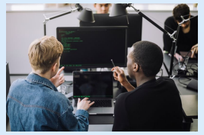
Conversions API
Via Partner

Conversions API
Via Partner

GA 4
Conversions API

CRM

lower-funnel events



IT Team

CDP

3rd Party Platform

upper-funnel events

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*alpha/beta products

TAKE PRIVACY INTO ACCOUNT

Consumers

Mobile App

WhatsApp

Physical Store

Website

MMP SDK
Meta Mobile SDK
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Conversions API
WMG*
Via BSP/Partner

Conversions API
Manual Upload
GCP Connector
CAPI Gateway*
~~oCAPI~~

Pixel
Conversions API
CAPI Gateway
[redacted]

Data Ingestion

Client's **Cloud** Computing Environment

Data Handling

Opt-In/Opt-Out
Enrichment
PII Hashing
Message Format

1

2

1

Data Usage

Conversions API
Via Partner

Conversions API
Via Partner

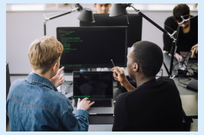
Conversions API
Via Partner

GA 4
Conversions API

CRM

CDP

lower-funnel events



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(P5) BUSINESS RESULTS VALIDATION

Consumers

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[redacted]

Data Ingestion

Client's **Cloud** Computing Environment

Data Handling

Opt-In/Opt-Out
Enrichment
PII Hashing
Message Format

1

2

1

Data Usage

Audiences
Measurement/Reporting
Validation/Tests
Optimization

3

HTTPS endpoint
Meta Business SDK
FTP (feed)

Meta

Conversions API
Via Partner

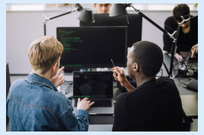
Conversions API
Via Partner

Conversions API
Via Partner

GA 4
Conversions API

CRM

lower-funnel events



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Event-Driven Architecture

- An architectural approach/pattern that **applications can leverage regardless of their programming language** or platform.
- A system of **loosely coupled microservices** that exchange information with each other through the **production and consumption of events**.
- **Advantages** include:
  - Producers do not need to worry about how the events they produce will be consumed (so **additional consumers can be added without affecting producers**).
  - **Consumers don't need to worry** about how events were produced.
  - This loose coupling provides a level of **resiliency within the system**, so, if a microservice goes down, the application can continue running in its absence.
    - This is achieved by **storing events in the messaging backbone** so that the consuming service can retrieve them when it recovers.

OMNI-CHANNEL CAPI AS AN EVENT-DRIVEN ARCHITECTURE

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Consumers

Physical Store

Conversions API
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CAPI Gateway*
~~oCAPI~~

Website

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Conversions API
CAPI Gateway
[redacted]

Data Ingestion

Client's **Cloud** Computing Environment

topic → event of interest

µservice → Store Event

queue → events

+ hashed external_id
[e.g., membership #, and Fbp (cookie) and "GA's id"]
+ not hashed **Fbc** (cookie)
+ not hashed **IPv6**

Data Handling
Opt-In/Opt-Out
Enrichment
PII Hashing
Message Format

µservice → Handle Event

→ up to 1K events
fbtrace_id ←
(logs)

µservice → Forward Signal

queue → signals (**event + id**)

HTTPS endpoint
Meta Business SDK
FTP (feed)

Data Usage
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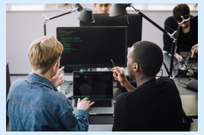

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[EXAMPLE] OMNI-CHANNEL CAPI AS A NEAR REAL-TIME EVENT-DRIVEN ARCHITECTURE ON AWS

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WMG*
Via BSP/Partner

Consumers

Physical Store

Conversions API
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GCP Connector
CAPI Gateway*
~~oCAPI~~

Website

Pixel
Conversions API
CAPI Gateway
[redacted]

Data Ingestion

aws Client's **Cloud** Computing Environment

event of interest → Store Event → events → Handle Event → signals (**event + id**) → Forward Signal

+ hashed **external_id**
[e.g., membership #, and Fbp (cookie) and "GA's id"]
+ not hashed **Fbc** (cookie)
+ not hashed **IPv6**

Data Handling
Opt-In/Opt-Out
Enrichment
PII Hashing
Message Format

→ up to 1K events
fbtrace_id ←
(logs)

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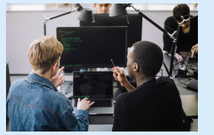

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Let me give you Six **Next Steps**

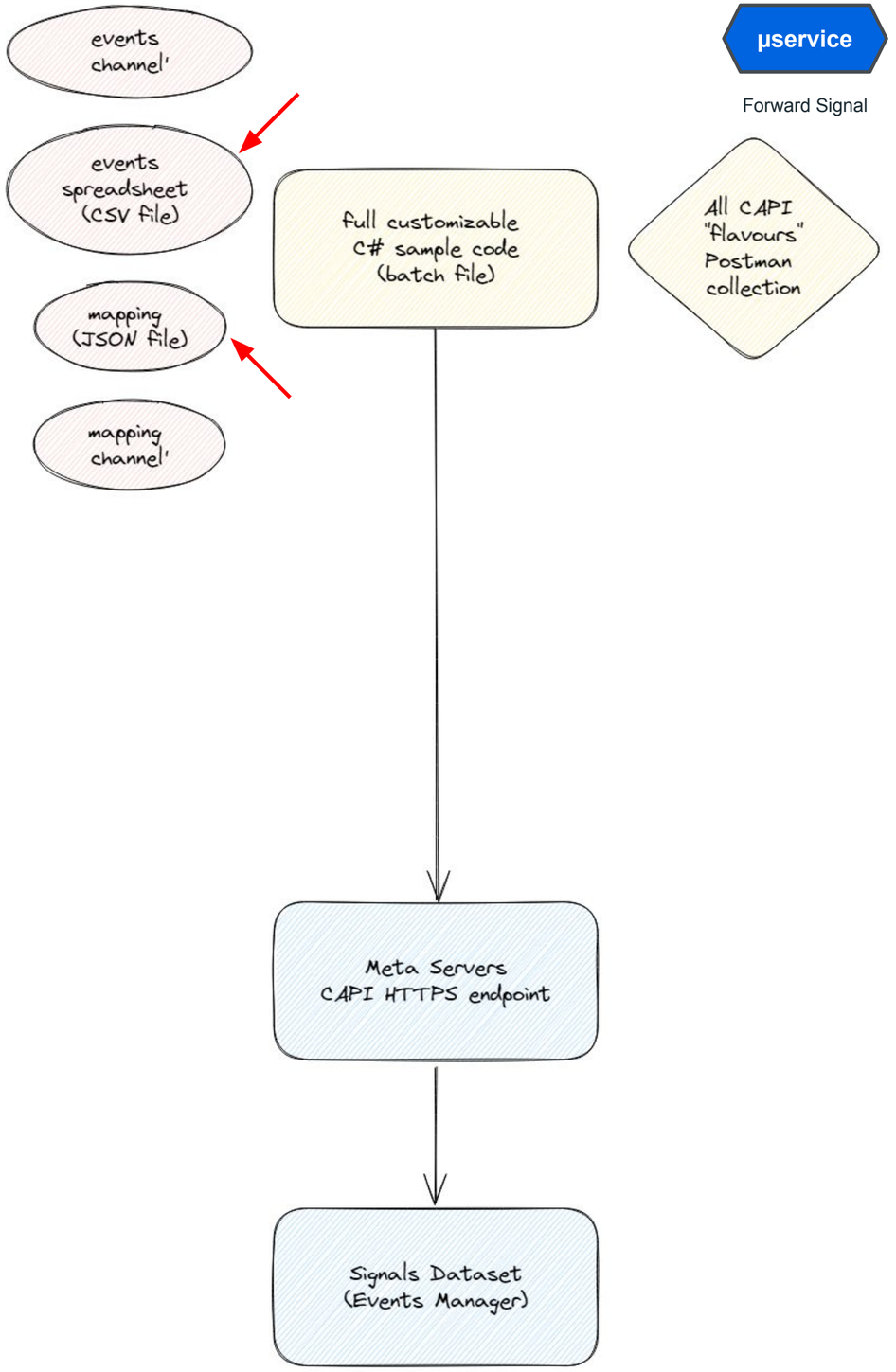
1. Make sure you familiarize yourself with our **Performance 5** (P5) framework for growth
2. Keep improving your event match **quality (signals)** for better performance
3. Leverage both strategies for **lead acquisition**: Lead Ads and Conversion Leads
4. Take advantage of the growing impact of **Short-Form Video** in your product catalog
5. Understand the key for getting the most out of Advantage+ ads: a **strong catalog**
6. Consolidate your omni-channel presence by learning more about your customers using **app-based signals**

BUT WAIT... THERE'S MORE!

New Omni-CAPI Technical Accelerator

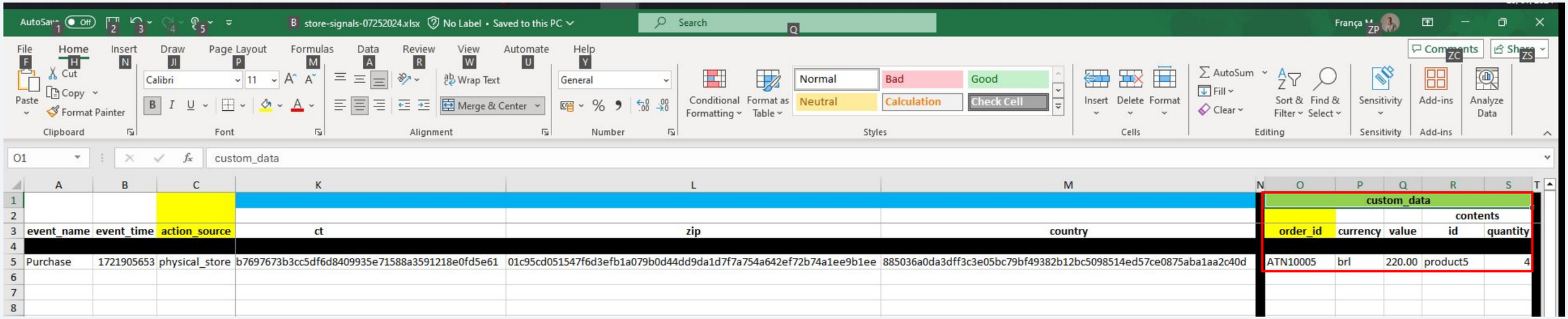
- C# Open-Source **sample** leveraging our Postman [collections]
  - Adaptable for running in the cloud (serverless)
  - Customizable for different spreadsheet columns/names
  - Can **forward data** from different channels (formats)
- Illustrates some **best practices** for a CAPI integration
- Allows for **bootstrapping** an **Omni-CAPI** integration
  - **Can reduce time-to-market**
    - Getting dev teams up to speed by not starting from scratch

[source code] https://github.com/fbsamples/lead-ads-webhook-sample/tree/main/omni
[workshop recording **pt-br**] https://events.atmeta.com/metaperformancehub#to3597944662



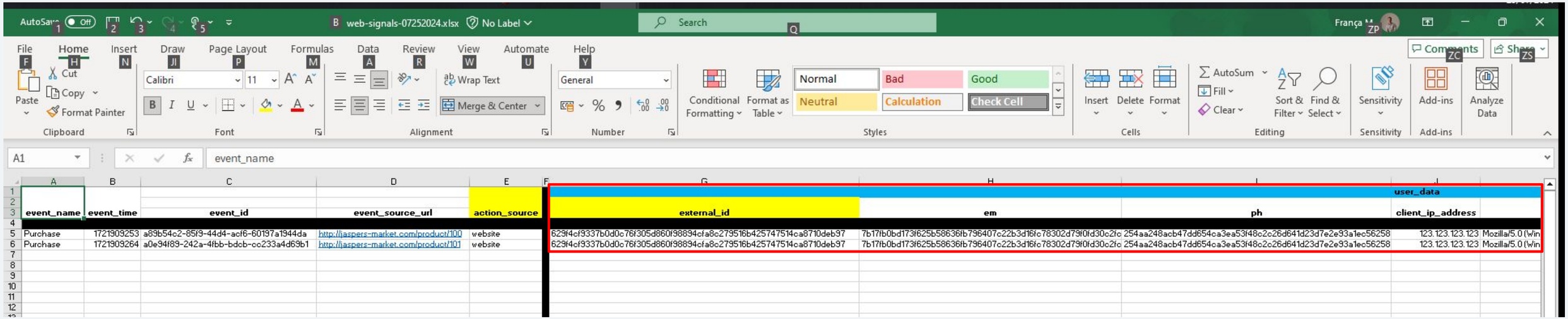
SAMPLE: CSV FILES – PHYSICAL STORE AND WEBSITE

Physical Store



	A	B	C	K	L	M	O	P	Q	R	S
1							custom_data				
2										contents	
3	event_name	event_time	action_source	ct	zip	country	order_id	currency	value	id	quantity
4											
5	Purchase	1721905653	physical_store	b7697673b3cc5df6d8409935e71588a3591218e0fd5e61	01c95cd051547f6d3efb1a079b0d44dd9da1d7f7a754a642ef72b74a1ee9b1ee	885036a0da3dff3c3e05bc79bf49382b12bc5098514ed57ce0875aba1aa2c40d	ATN10005	brl	220.00	product5	4
6											
7											
8											

Website



	A	B	C	D	E	F	G	H	I	J
1							user_data			
2										
3	event_name	event_time	event_id	event_source_url	action_source		external_id	em	ph	client_ip_address
4										
5	Purchase	1721909253	a89b54c2-85f9-44d4-acf6-60197a1944da	http://jaspers-market.com/product/100	website		629f4cf9337b0d0c76f305d860f98894cfa8c279516b425747514ca8710deb97	7b17fb0bd173f625b58636fb796407c22b3d16fc78302d79f0fd30c2fc	254aa248acb47dd654ca3ea53f48c2c26d641d23d7e2e93a1ec56258	123.123.123.123
6	Purchase	1721909264	a0e94f89-242a-4fbb-bdcb-cc233a4d69b1	http://jaspers-market.com/product/101	website		629f4cf9337b0d0c76f305d860f98894cfa8c279516b425747514ca8710deb97	7b17fb0bd173f625b58636fb796407c22b3d16fc78302d79f0fd30c2fc	254aa248acb47dd654ca3ea53f48c2c26d641d23d7e2e93a1ec56258	123.123.123.123
7										
8										
9										
10										
11										
12										

SAMPLE: MAP FILES – PHYSICAL STORE AND WEBSITE

Physical Store – phone number on column “G”

store-mapping.json

```
{
    "EVENT_NAME": 0,
    "EVENT_TIME": 1,
    "ACTION_SOURCE": 2,
    "EXTERNAL_ID": 4,
    "EMAIL": 5,
    "PHONE": 6,
    "FIRST_NAME": 7,
    "LAST_NAME": 8,
    "DATE_OF_BIRTH": 9,
    "CITY": 10,
    "ZIP": 11,
    "COUNTRY": 12,
    "ORDER_ID": 14,
    "CURRENCY": 15,
    "VALUE": 16,
    "CONTENT_ID": 17,
    "CONTENT_QUANTITY": 18
}
```

Website – phone number on column “I”

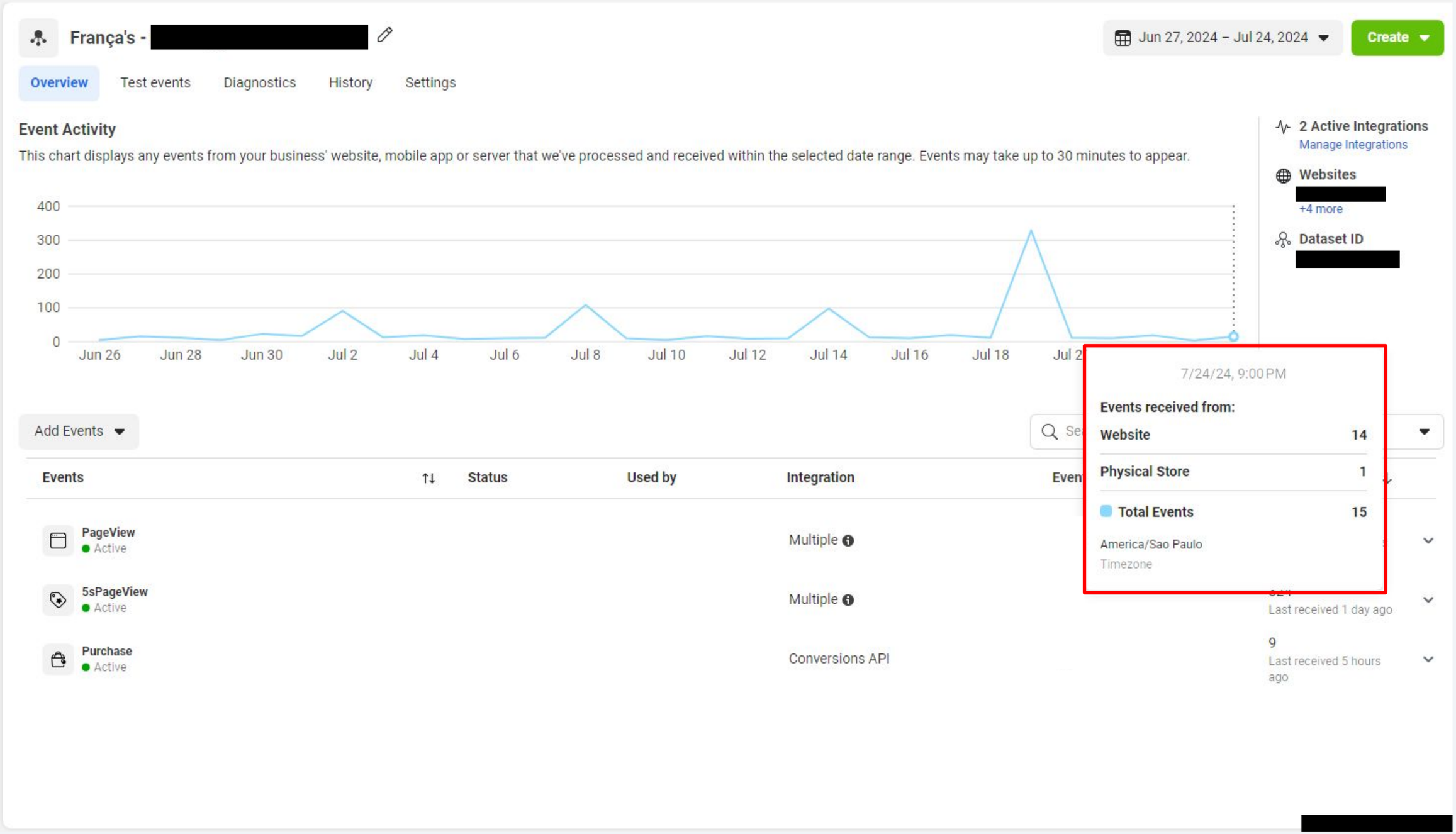
web-mapping.json

```
{
    "EVENT_NAME": 0,
    "EVENT_TIME": 1,
    "EVENT_ID": 2,
    "EVENT_SOURCE_URL": 3,
    "ACTION_SOURCE": 4,

    "EXTERNAL_ID": 6,
    "EMAIL": 7,
    "PHONE": 8,
    "CLIENT_IP_ADDRESS": 9,
    "CLIENT_USER_AGENT": 10,
    "FBC": 11,
    "FBP": 12,

    "ORDER_ID": 14,
    "CURRENCY": 15,
    "VALUE": 16,
    "CONTENT_ID": 17,
    "CONTENT_QUANTITY": 18,
    "CONTENT_DELIVERY": 19
}
```

DATASET (EVENTS MANAGER)



REVIEWERS WHO CONTRIBUTED TO THIS WORK

Thank You

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Akash Puri – Solutions Architect
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