

## Introducing

# Customer Journey as a Service (CJaaS)

Technology Architecture, Cloud Platform & Open API

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Feb 2021

</>

Analytics

Builder

Creation

Design

Evolution

Flow

Graph

Insight

Customer Journey

Platform



Select All

Profile

Mapping

Management

Orchestration

Visualization

# Introduction to Journeys

## What is a Customer Journey ?

A customer journey is a visual representation of customer interactions, experiences and activities - captured and/or orchestrated across channels and over time.

Regardless of the fields, journeys are built from sequences of events that an individual ("**the customer**") may take while interacting with a brand, this could often be a potential customer who may be looking to buy a product or service or a paying customer looking for delivery of a service.

Each interaction at every touchpoint leaves an event trail, that could be anything from browsing a page (**tracked via digital beacon**), the click of an ad (**clickstream**), reading of an email (**pixel tracker**), adding an item to a cart (**pushed api event**), talking to a agent or even just few moments of pause to look at a display while at a physical store (**captured by a IoT beacon**) – each and every interaction contains tiny bits of information that is stored (**on a CDP**) as an series of events leading up to that very moment of truth. Knowing this sequence of events, adds to intelligence and insight that allows a company to personalize an interaction (**MarTech**), to optimize for revenue (**Adtech**), or simply to empathize while delivering a great experience (**Contact Center**).

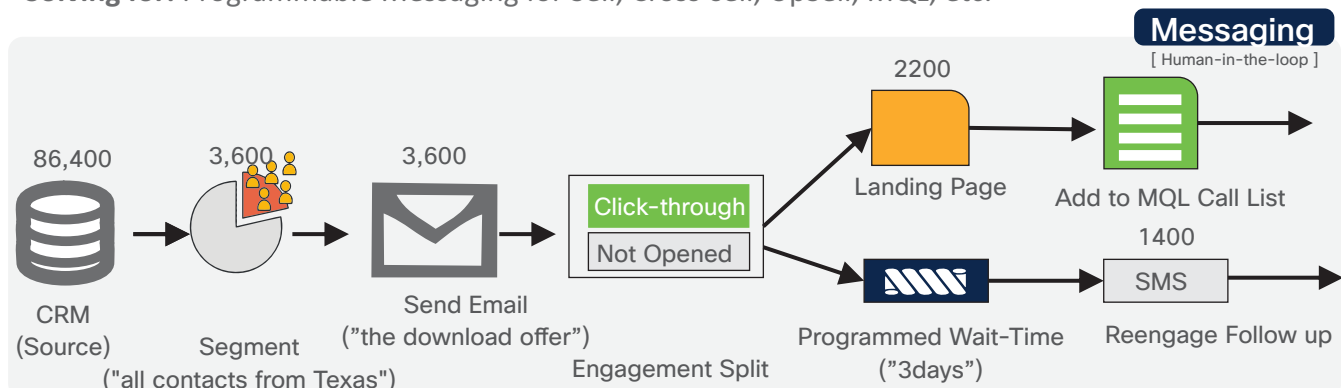
Customer Journeys are used in several fields, but each field implements a different flavor, depending on the circumstances. Regardless of the terminology, each solve for different objectives with unique analytics to enable different outcomes. Generally tools & services built for one segment do not easily translate to solve problems for others. Let us look at the 4 major flavors:

## #1 MarTech Journey (CRM Centric)

CRM Centric - Outbound customer journeys are built by hand (aka "orchestrated") to enable slice/dice and adaptive messaging applied to a workflow over time. Typically, solutions include "Marketing Automation" of yesteryears that eventually evolved to offer "Journey Builders of Today".

**Channels:** Primarily driven off CRM, via Email, SMS, Push or Social Media.

**Solving for:** Programmable Messaging for Sell, Cross-sell, UpSell, MQL, etc.



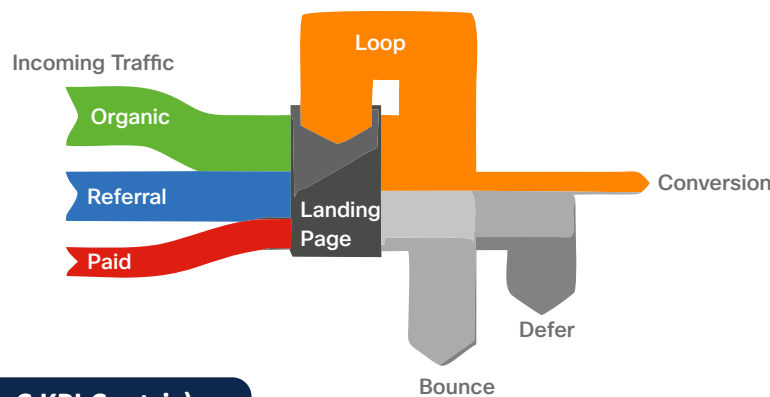
## Introduction to Journeys

### #2 AdTech Journey (Web Centric)

Web ad display centric journeys are visualizations of single or multi-site clickstreams (as in unfiltered web clicks/navigation), primarily tracking potential customers across one or more pages as they move about with goal to optimize ads, drop-offs and click-throughs. These are typical web analytics / optimization systems of yesteryears evolving to offer "Journeys" of Today.

**Channels:** Primarily driven off cookies, via Web beacon trackers (even multisite).

**Solving for:** Improve ads, increase click-throughs, better conversions.



### Page Flow

### #3 CEM Journey (VoC KPI Centric)

Voice of Customer (VoC) Centric Experiential Customer Experience Management (CEM) journeys are primarily visualized around touchpoints ("Aggregates"), driven off user surveys that segment based on KPI metric such as NPS/CES to follow perceived customer experience across touchpoints to optimize customer service.

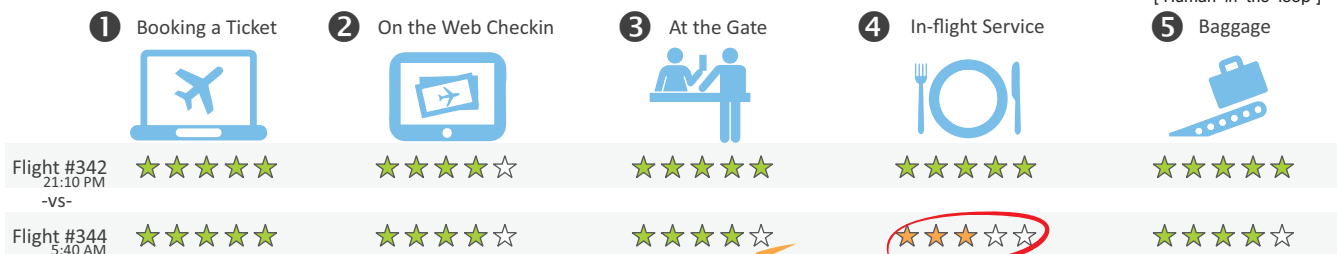
**Channels:** Survey, Intercepts, Questionnaires

**Solving for:** Improve Service Delivery, Brand Experience

While "experience" could in theory be estimated, it likely will not be a replacement for NPS/CES as rated by a real human input and today still remains in realm of experimental research.

### NPS/CES

[ Human-in-the-loop ]

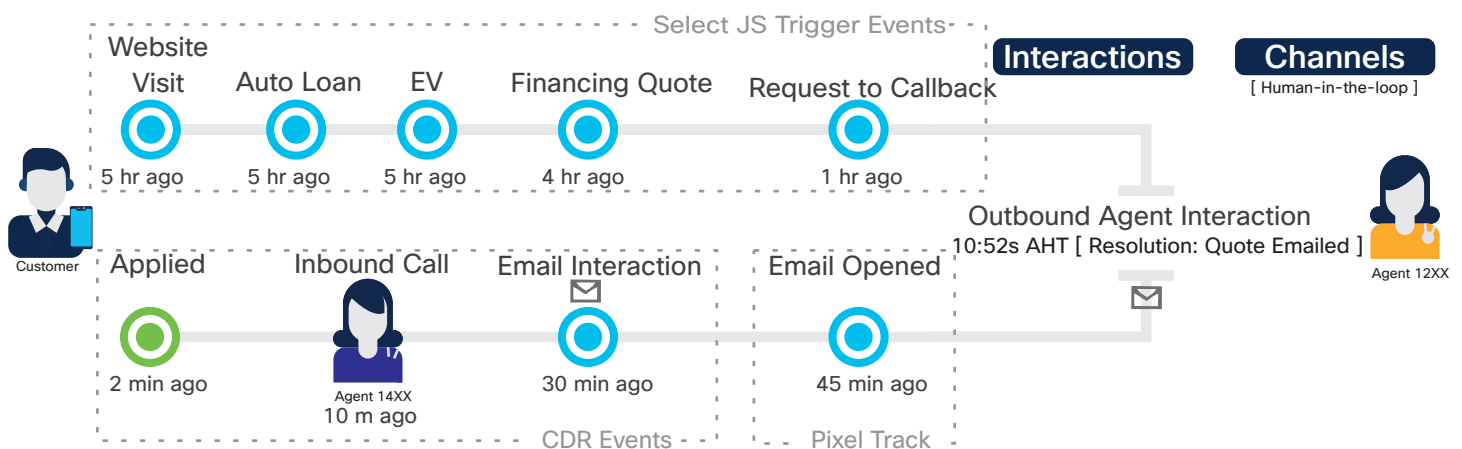


## Introduction to Journeys

### #4 Contact Center Journey ( Agent Centric )

Contact center journeys (inbound) revolve around agents and their channels, that usually track the channels to maximize for efficiency, to lower average handling time (AHT) and/or improve customer satisfaction.

Agents aware of near term context at the time of interaction are better placed to field the customer and provide faster resolution times.



Outbound only contact center journeys also may include outbound offers to connect with agents, using journeys built for intercepts that display content to help with maximizing utilization of available agent minutes for revenue.

**Channels:** Web tracking w/ Inbound Voice/Chat/Email or Outbound proactive reach out

**Solving for:** Utilization (inbound contact center) or Revenue (outbound opportunities)

## Customer Journey: Feature Transitivity Across Fields

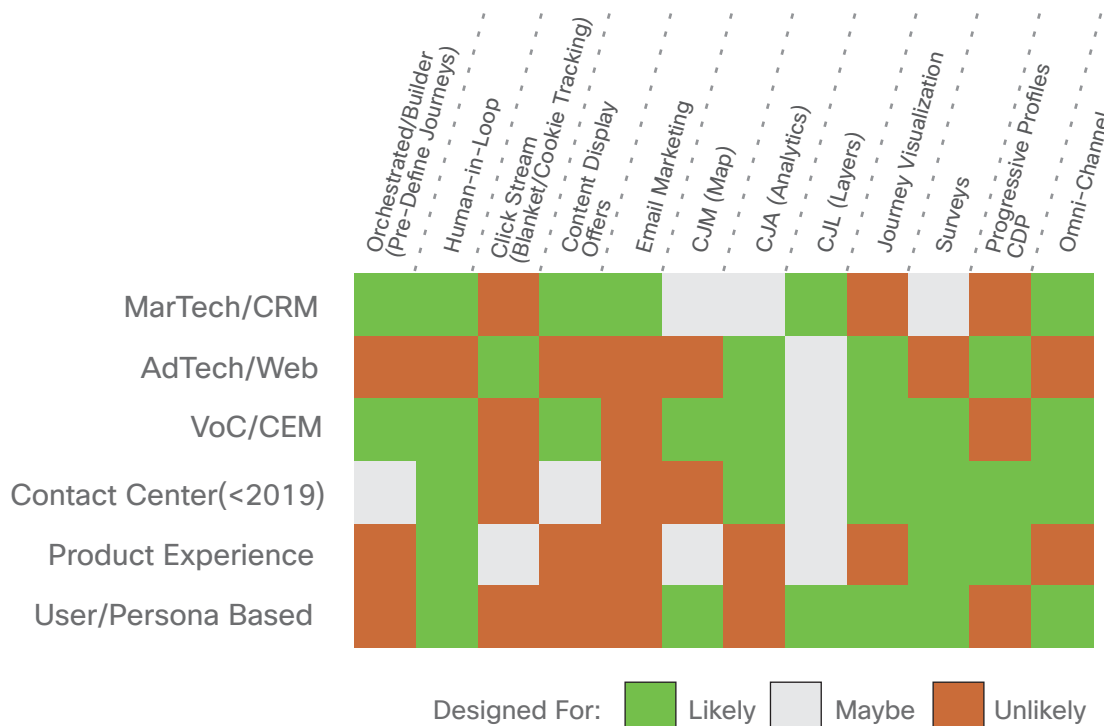
The challenges of comparing journey feature capabilities across fields.

Elements of the customer journey differ based on the circumstances. Some fields may build workflow to curate the pathway to purchase while others may cover the product adoption cycle. Different terminology need to be considered in the context of the field, for instance, below is an example of what a “Journey Builder” looks like across fields:

### Orchestration-Journey Builder:

- **MarTech:** Core of any marketing workflow orchestration is the Journey Builder.
- **AdTech:** Not applicable, as Journeys are being observed rather than being designed.
- **VoC/CEM:** Across channel survey delivery work flow builder is the Journey Builder.
- **Contact Center:** IVR Designer & “Ensemble AI Routing” orchestration could be Journey Builder.

## Customer Journey Capabilities: Confusion Matrix



## CJaaS: Customer Journey as a Service

CJaaS provides a common journey infrastructure that can easily be consumed as a drop-in SDK Communications Platform as a Service (CPaaS) to enable customer journey capabilities across fields featuring:

- Dynamically scalable data sinks from any channel
- Low cost, Serverless APIs
- Low latency
- Firehose capable of receiving and processing millions of events per second
- Ability to query/pipe/subscribe to data streams for custom analytics
- Delivery of powerful orchestrated action at any point in journey across channels

Applications can select from a menu of pre-built tools and features to build a customer journey capability that fits their specific customer journey needs:

- CJaaS is the Journeys capability part of larger CPaaS offering (Product Neutral)
- Cloud Contact Center + CJaaS = Native Cloud Customer Journey for Cloud Contact Center
- Enterprise Contact Center + CJaaS = Enterprise Contact Center with Customer Journeys on Cloud.
- Experience Management + CJaaS = XM turbo charged with Customer Journey++

By utilizing a common infra, a unified journey sink and powerful orchestration, companies have the option to use any product while following their customers' journeys everywhere, across channels.

CJaaS also enables companies to mix-and-match customer journeys across on-prem, hybrid and cloud environments thus making it a choice for highly regulated sectors such as Finance and Healthcare. Significantly, "as a service" delivery enables the underlying products to invest in core capabilities while customer journey becomes a plugged-in capability via CPaaS. By moving Customer Journey infrastructure to a CPaaS model, applications can focus their time and resources in developing innovations in core solutions.

Events

Profiles

Orchestrate

## Customer Journey As A Service Platform

Journey Open API  
cj.xm.webex.com/api

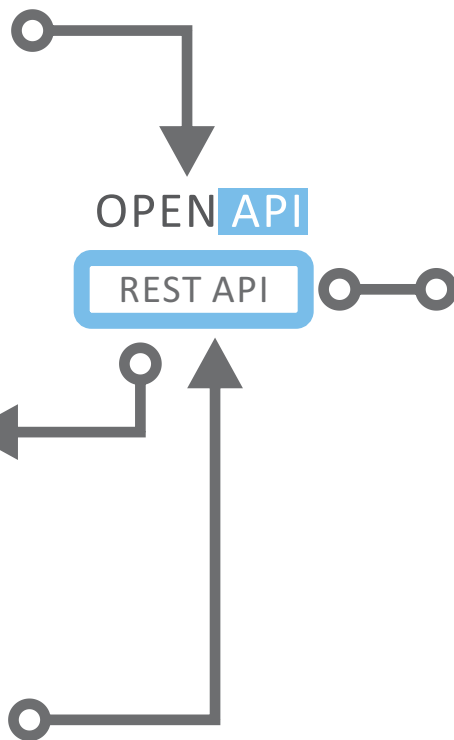
- REST/JSON
- .NET SDK
- PHP Package
- Java Lib

CJA/CJO Visualization  
Web Components



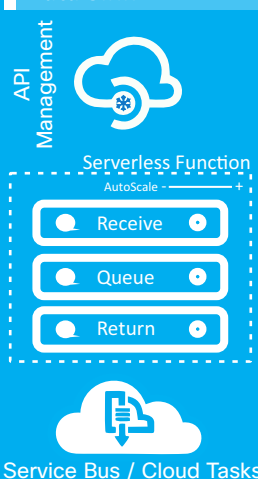
CJ Ingestion Channels  
Journey Touchpoints

- Contact Center
- Web
- Chat
- Email
- Queue Listener
- Kafka Consumer

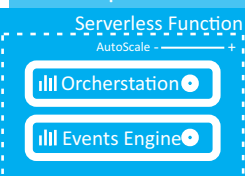


Serverless Decoupled  
High Capacity Sink  
Rated 1M/s Events

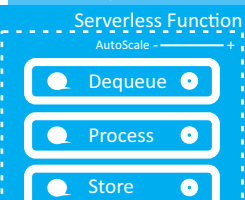
### Data Sink



### The "Tape" Reader



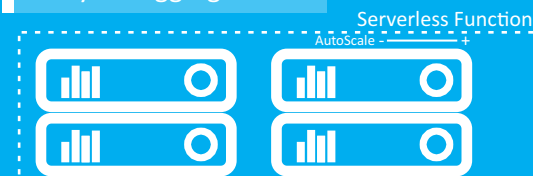
### The "Tape" Writer



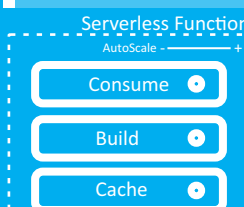
NoSQL datastore  
Low-latency



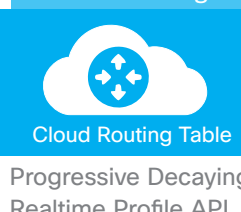
### Segment Journeys Analytics Aggregation



### Profile Builder



### Walk-In Routing



### Events Streamer



### Analytics & Profile



Data Lake



Tahoe

Registry



Flow Control

Events



Allow List

Progressive



Profiles

ETL Map



Transform

Orchestrate



Actions

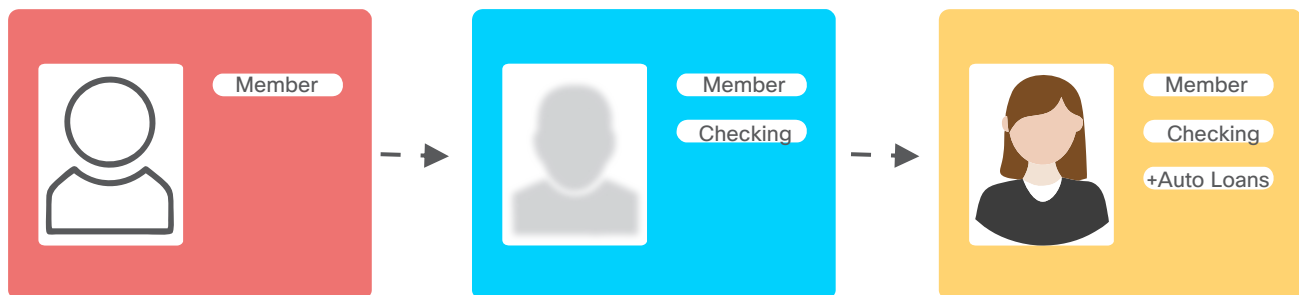
Platform Built On



## Customer Data Platform: Profiles Built On The Go

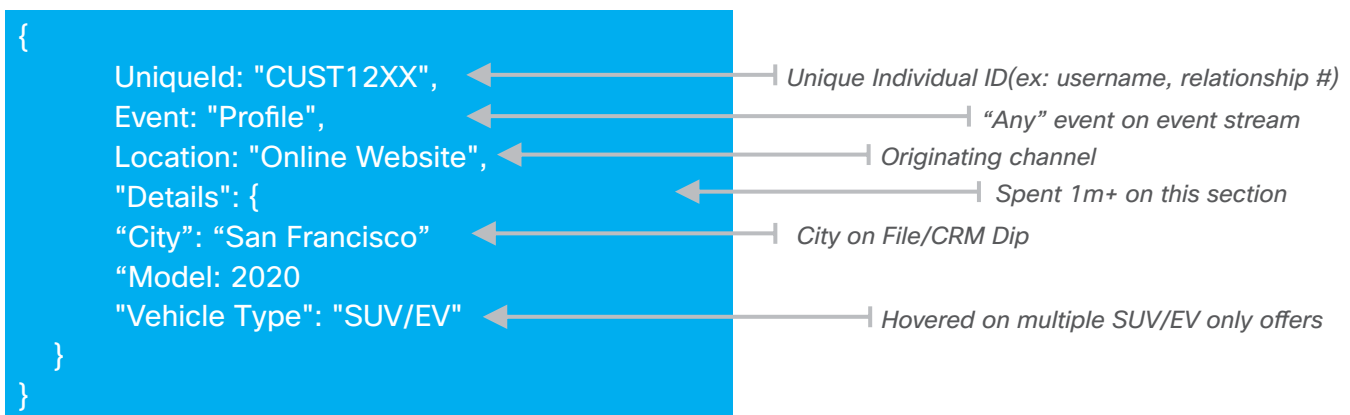
Customer Journeys are only as good as the context they capture, and with every journey there is a human customer profile that needs to be known, otherwise the context would be lost.

Context can be **built incrementally as the journey progresses, instead of at all once**. While CRM may hold the bio essentials - it remains a static snap shot. Progressive profiles are much more than a static record profile that may be held in the CRM. These profiles are dynamic and living as they **capture interests - intent and details over time**.



Context is a significant advantage to both agent and AI models in a contact center setting. Consider for instance, an existing checking account customer who browses auto loans online before calling in for a routine service request for banking, this may provide an opportunity for a cross-sell while behind the scenes **“ensemble routing”** can override the IVR and route directly to connect with an agent who has auto loan quoting competency, in-addition to general servicing to make serendipity more likely.

Example Profile Tracking:





## Engagement Tracking Across Channels: The Tape

Every customer journey needs to track a wide range of events across touchpoints over a period of time to best capture the full range of interactions that occur when a customer engages with their products and services. Each interaction is composed of an event that describes: **what occurred – when – by whom**.

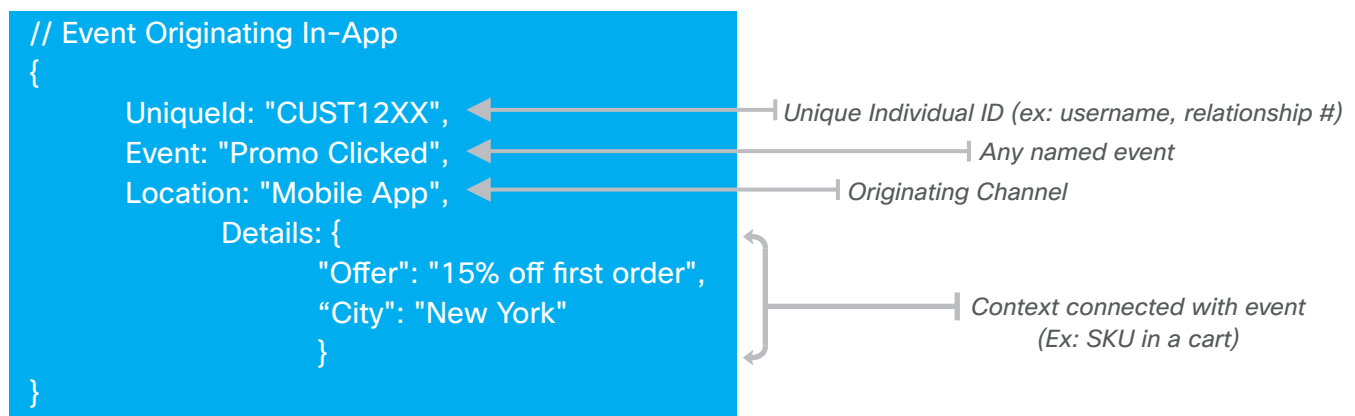
Interactions may take place physically at a location/store/branch or online on a website or in an email. Each event is a granular data point from which a journey is built.

### Customer Journey as a Service: Inbound Tracking Channels



Each event data has information about what happened but does not have the data that triggered the event. For instance, an event notifies that a customer clicked an offer displayed, and it may have general information about the promos, but it does not have the offer image itself.

Example Interaction Stream:



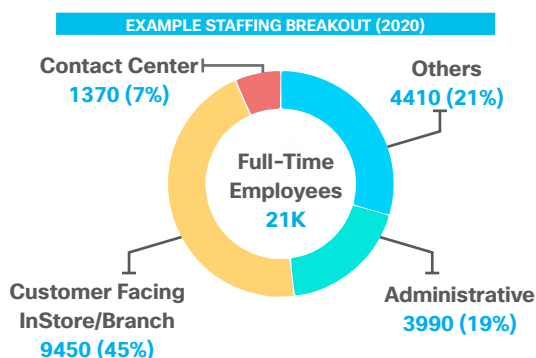
## Customer Journey Orchestration: The Bridge to Possible

**Q: Can Contact Center increase top-line and improve bottom line at the same time?**

**A: Customer Journey Orchestration Makes it Possible!**

In recent times with much of world socially distancing, most people in customer facing jobs have found it challenging to stay productive and fill their quotas/slots with serviceable customers or leads. This includes insurance agents, personal bankers, real estate agents, fitness trainers & even mattress sales staff.

Many people may prefer to meet over video rather than in person at a physical location. To match this need with the supply geographically, companies can leverage their entire workforce as in-the-moment agents to provide just-in-time resolution or sales in their regions, thereby replicating the previous experience of transacting in a physical world (branch/location).

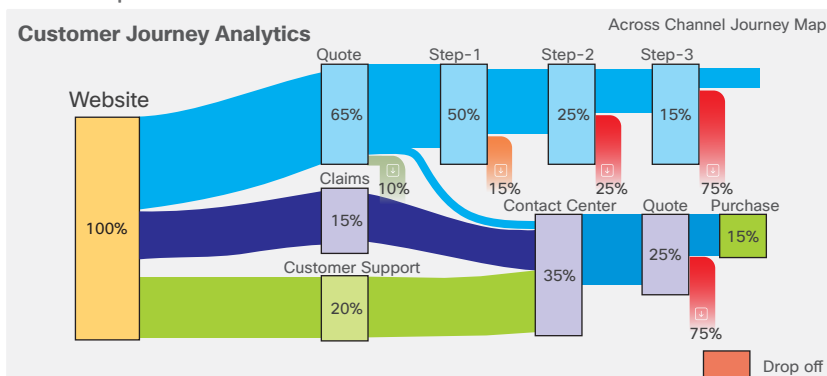


### Work is a Activity, Instead of Location

As companies increasingly realize that work is an activity instead of a location, Customer Journey Orchestration (CJO) empowers workforces to remain agile, nimble and service their customers remotely from any location, while also staying relevant and providing meaningful digital connections.

Journey orchestration allows companies to create virtual walk-ins on par with the physical walk-ins experience.

**Journey Orchestration** draws inputs from **Journey Analytics** to pro-actively intervene in keeping customers happy with personalized content, real-time agents, or just-in-time virtual walk-ins. These work across channels, preventing what otherwise may have been a drop-off, lost sale or negative experience.



### **Journey Orchestrated Actions**

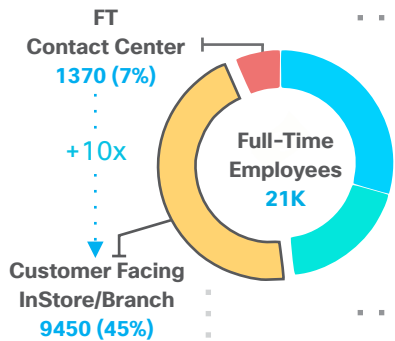
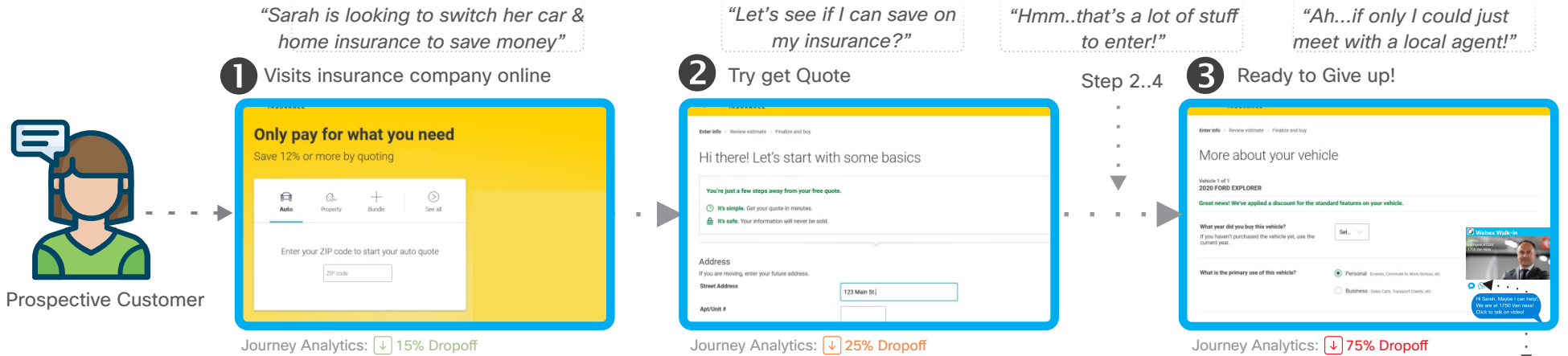
#### **Action #1: Journey Drop-off Interception On**

Journey ▼  
 At more than Step-3 ▼  
 and if Wait Time ▼ greater than 30 seconds  
 then Action ▼ within Distance ▼  
 Walkin Offer  
 Agent Offer  
 Content

5 Miles  
 25 Miles  
 Anywhere

# Orchestration Example- Insurance

Customer Side Journey  
Online Web Experience



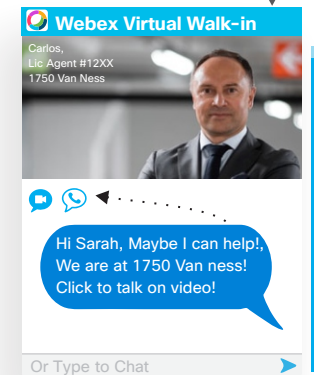
## Webex Walk-In

Customer Journey

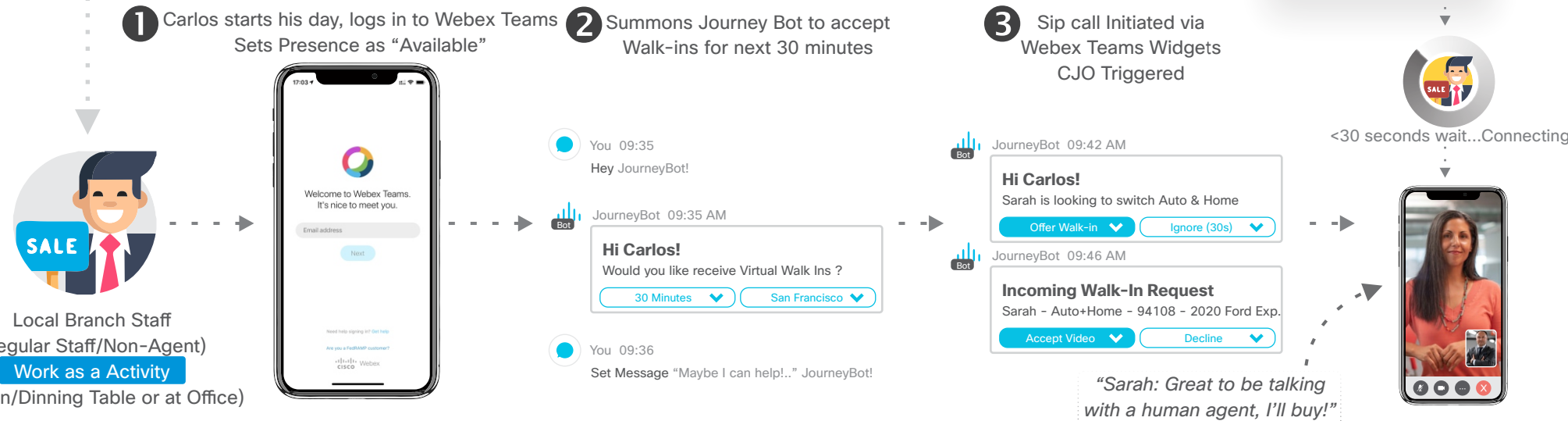
Digital  
Just-in-Time  
Frictionless  
In-Person

WFH Staff Journey

Drop off Interception  
w/ Webex Walkin

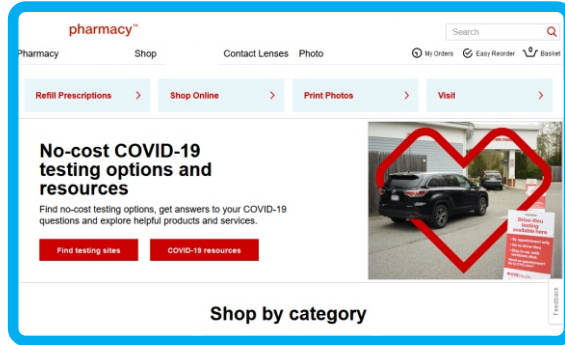


Wfx Staff Side Journey  
Work as an Activity



# Customer Journey By Example: Online Store

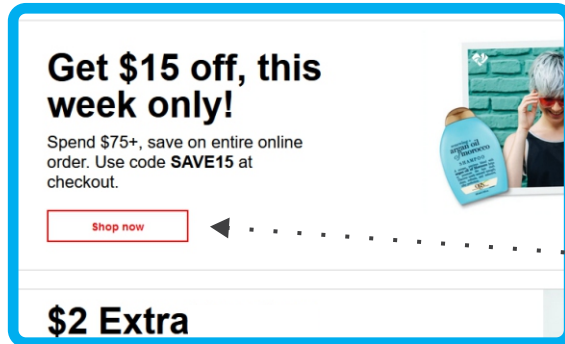
## 1 Cut & Paste JS for Web or Add to Tag Manager



```
<html>
..
<script async
src="https://cjaas.webex.com/cj.js"></script>
Cjtag('XX1232'); <- Customer Journey Token
Cjtag('config', 'PAGE_TRACK', true);
Cjtag('config', 'MEMBERID', '12XXX');
Cjtag('config', 'DIV_INTERACTION', 'promobtn');
Cjtag('config', 'DIV_CONVERSION', 'conversion');
..
</html>
```



## 2 Click Throughs on Offer Tracked



### "Automatic Tracking!"

Journey script is aware of the website structure by setting DIV pattern used on items that are tracking interaction (clicks, navigation) or conversion (offer display)"

```
<A href="#" class="promobtn red-outline">Shop
now</a>
```



## 3 Key Events Posted via One Line JS



```
JS One-liner:
Cjtag('post' { 'Added to cart', 'Advil 250mg' });
```



IVR: Enter your member id  
A: 12XXX

### Agent Dashboard



Connected  
Agent:14XX



Now  
**Speaking!**



2m ago  
**Added to Cart: Advil 250mg**



3m ago  
**\$15 Offer Clicked**



4n ago  
**Member Logged In**



3 Days Ago  
**Checkout, Value \$72**

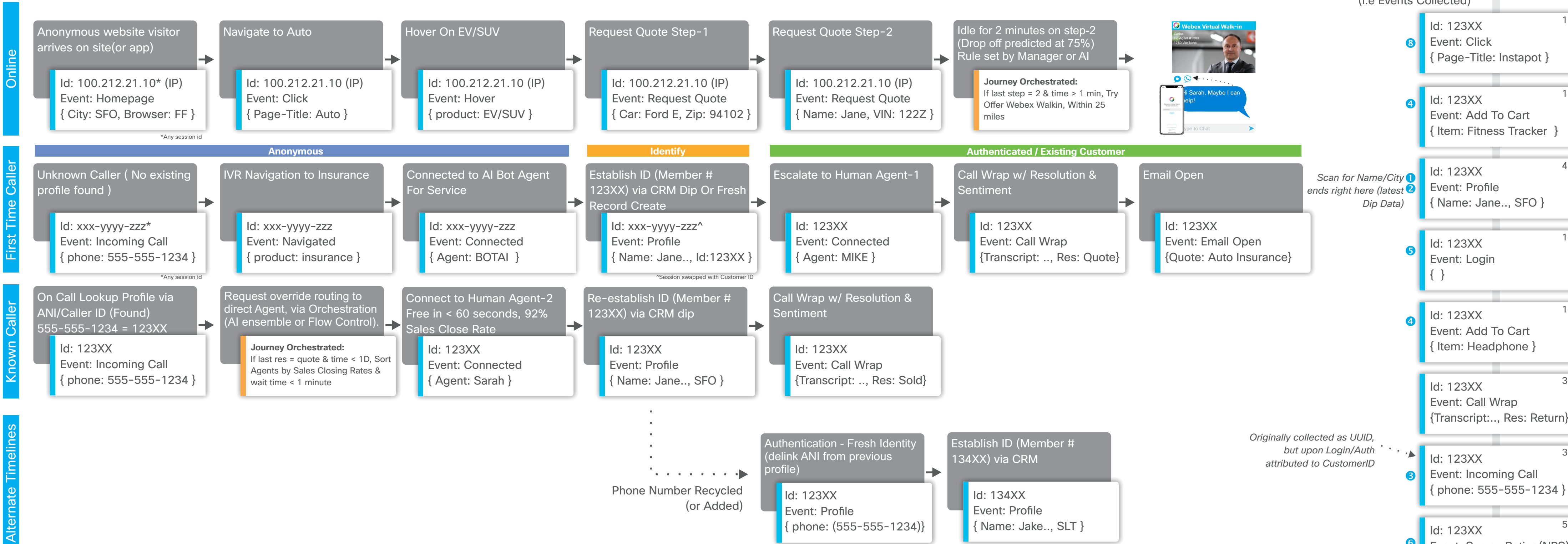
Emails | Chats



# 1 The “Tape” (~Events Ledger) Illustrated:

Tape is the collection of journey points that is posted as a series of events from one or multiple sources (web, contact center, mobile app, crm). Tape is an immutable (i.e read-only) running ledger of the highest granularity of data collected, while profiles are higher level views selectively aggregating data from the running Tape.

## Example Journey Events Recorded on Tape



# 2 “Profiles” (~View) Illustrated:

Profiles are simply curated "View/query" of the Tape with selected attributes and not a full data collection itself. Views are cached for performance and updated upon access (ex: all hits within 30 min may have the same snapshot), Identity resolution is external (ex: Human could merge two IDs together, after which all new events will go to newest profile). There can be more than one "profile" view/query customized to industry/segment/department or on function (AI Bot using for routing). For instance, a “basic profile” showing just customer name, city and product is appropriate for Level-1 support, while billing support can use a view that includes home address, credit score, invoice amounts. Views are built always by scanning the Tape from latest to oldest.

Example Profile View Built by Business Customer

Value Posted on Event

Select this many events latest

Aggregation Type

You name it field

Display	Event/Attrib	How Many	How Long	Type
1 Name	Profile/Name	1	365d	Value
2 City	Profile/City	2	365d	Value
3 Phone	Profile/Phone	3	365d	Value
4 Items in Cart	Add To Cart/SKU	-	7d	Count
6 Products	Purchased/Product	3	90d	Value
7 Interested	Click/Page-Title	1	1d	Value
8 Calls	Call Wrap/*	4	30d	Value
9 Emails	Email Received/Text	4	30d	Value
Chats	Chat Wrap/Transcript	4	30d	Value
5 Activity	Login	-	30d	Sum

Lookback period

- Unique Aspects**
- Offers highest grade of security and data governance for privacy with compartmentalization of information queries.
  - Simpler views help reduce cognitive load on contact center agents while increasing their efficiency.
  - Since each category solves a different problem or appeals to different functions within a business, views tailor usability with high performance lookups.

**Query for “Profile” of 123XX Over The Right Tape**

**Id: 123XX**

1 Name: Jane Doe

2 City: San Francisco

3 Phone: 555-555-1234

4 Items In Cart: 4

5 Activity: 5 (1 Month)

NPS: 7

6 Products: Sneaker, Bike

7 Interested: Instapot

Emails 9

Calls 8

Hello, I Needed if this product is available in ...

OPEN

Who provides installation for this product ?

RESOLVED 8

CRM Dip/Validation being posted

Originally collected as IP, but upon Login/Auth, attributed to CustomerID

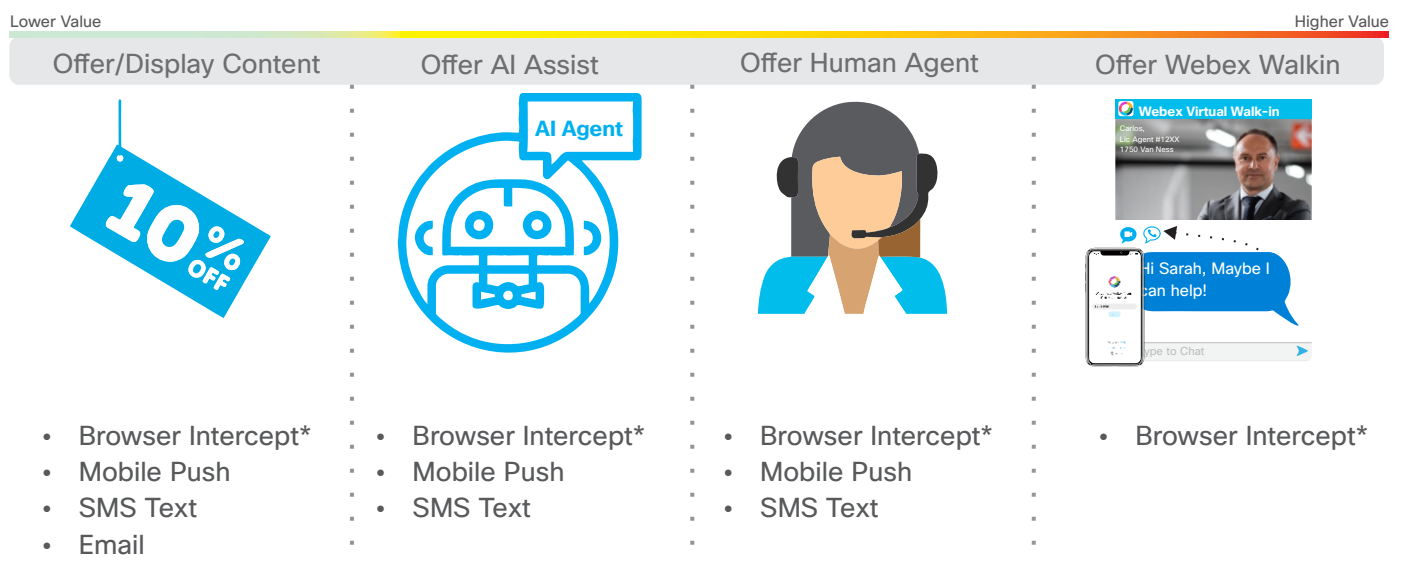
Oldest Event

## Conclusion

This paper showcases the immense possibilities of capitalizing Journeys within the contact center - designed to be delivered as part of an CPaaS offering, especially in the post-covid era where social distancing is the new normal. It outlines the innovative idea of virtual walk-ins that leverage a companies' existing larger customer-facing workforce to deliver exceptional experiences **digitally - just-in-time and frictionless**.

It also attempts lend common definition to customer journeys as it applies to various segments such as Martech, Adtech, CEM & Contact Center.

### Summary of Orchestration Actions by Value:



\*When using CJaaS JS Tag