



Radisys

Engage Digital Platform

June 2022

Agenda



- Who we are : An introduction to Radisys
- Overview of *Engage Digital Platform*
- Deep Dive into Programmable Applications and Platform Capabilities (inc. Demonstrations)
- Why do organizations and enterprises use EDP?
- How are we different from Twilio and other CPaaS platforms?
- Next Steps



Radisys

Engage Digital Platform

Overview

The Programmable Communications and video analytics market are set for double digit growth



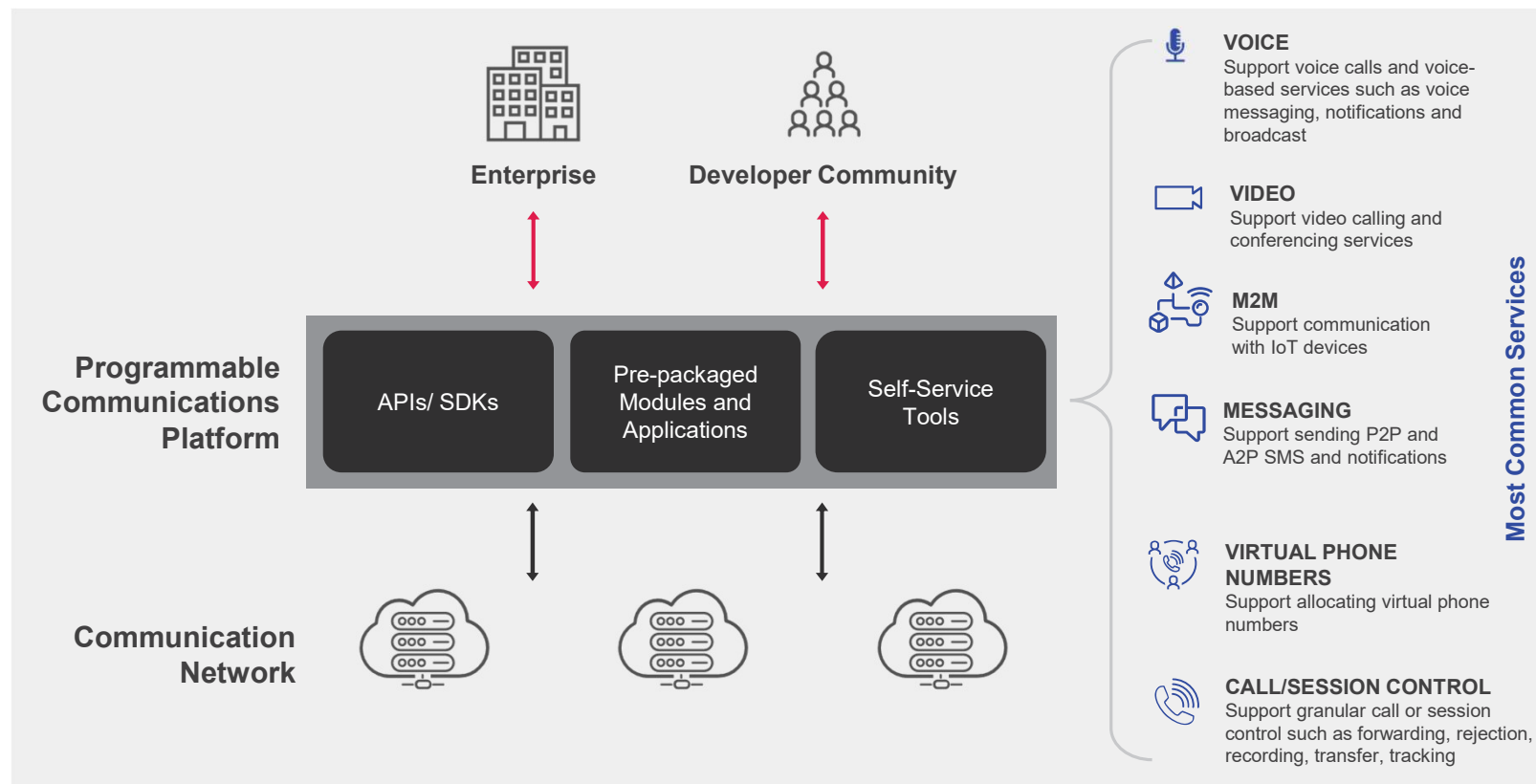
A cloud-based approach to accelerate enterprise digital transformation by programmatically embedding communications in enterprise and consumer applications

\$7.5_B

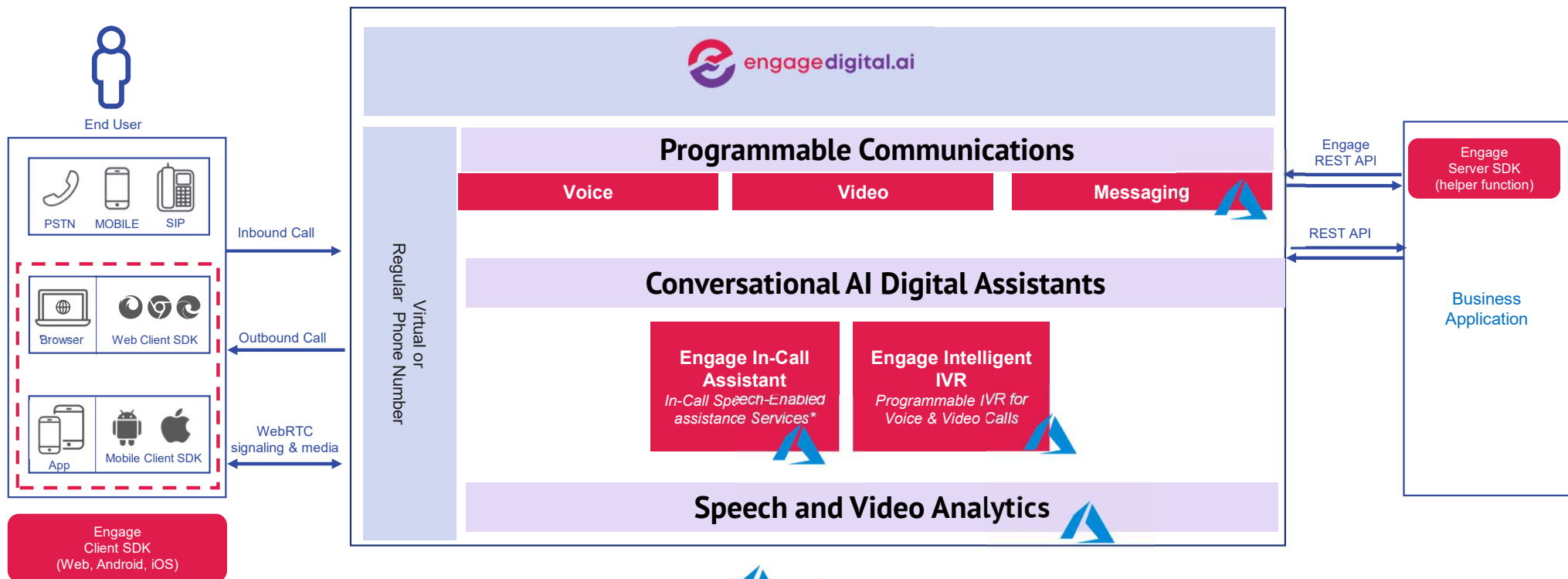
market in 2021 with
30-35% growth per
year through 2024

\$11_B

Video-Analytics going
to be 11B+ market in
next 5 years, with
CAGR 18%

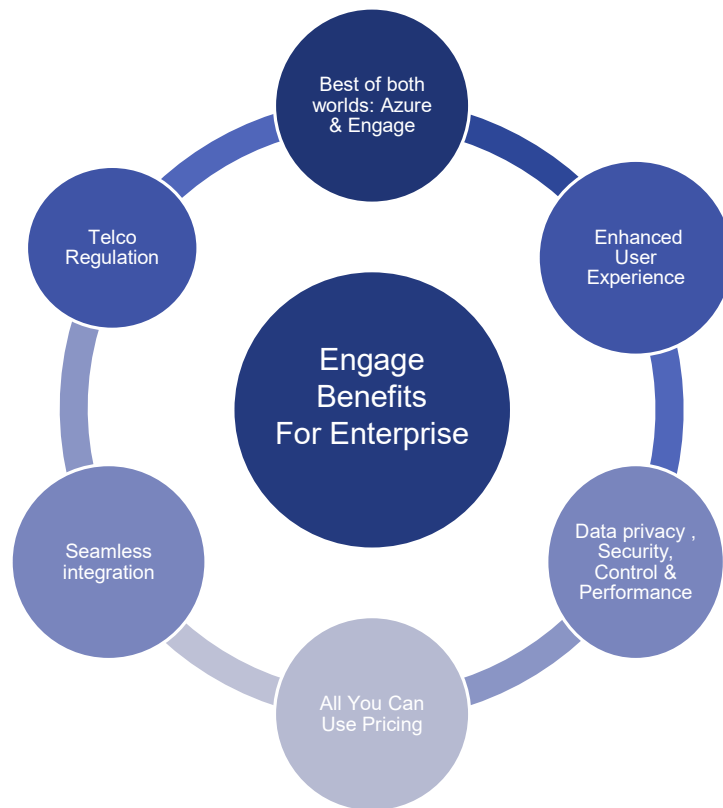


Engage Digital Platform offers media-focused capabilities as well as no-code plug-and-play digital engagement applications



EDP is architected to leverage  **Azure** language, speech and vision services to offer advanced AI and media capabilities to customers

EDP offers a flexible, cost efficient, and compliant platform that helps dramatically improve customer experience



Best of both worlds – Azure & Engage

Use Azure for Cloud and Engage for Immersive Media Communication

Enhanced User Experience

Unified Communication & Media rich services

Lower TCO (All you can use pricing)

Engage Capacity based pricing is cheaper than usage-based-pricing in XaaS platform and help reduce TCO

Telco Regulations/Laws

Integration with local telcos (Jio) enables quick compliance with local telco regulations. Going local also reduces costs significantly.

Data privacy, Security, Control & Performance

On-prem or Cloud or Edge deployment – Your choice based on your data privacy, security and performance needs.

Seamless integration with existing CC/CRM

No forklift upgrade

Programmable Applications & Platform Capabilities

What experiences can Radisys enable in enterprises?

EDP Offering Summary and Applications

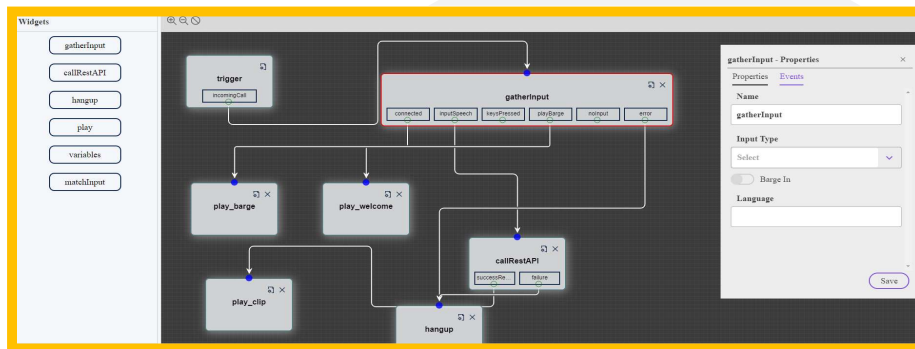
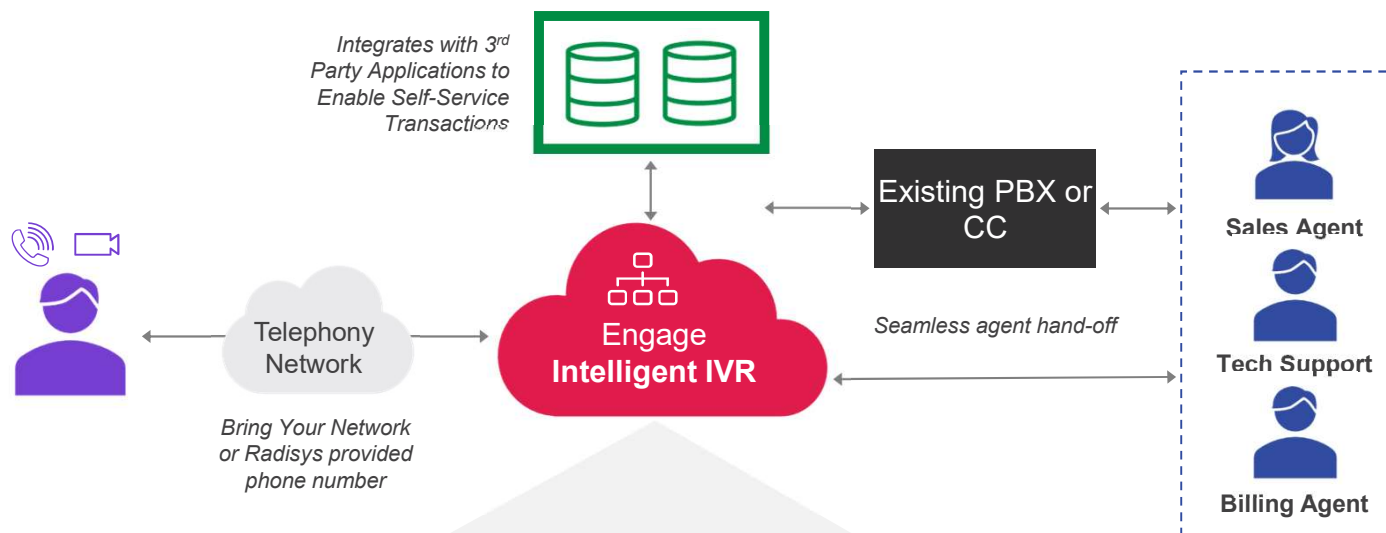
What is it?	What can it be used for?	Key Benefits to Customers
Engage Intelligent IVR	<ul style="list-style-type: none"> • Modernize old IVR with Speech Enabled services 	<ul style="list-style-type: none"> • Easy to create and manage IVR apps w/Visual studio • Integration with voice and video channels • Integration with Contact Center sol'ns (Genesys/Cisco)
Engage Speech Analytics & In-call Assistant*	<ul style="list-style-type: none"> • Conferencing and collaboration: invoke a variety of speech capabilities using keyword • Detect keywords to wake in-call assistants for calls/conferences 	<ul style="list-style-type: none"> • Hands free operations to invoke advanced speech capabilities in a wide variety of contexts • Integrates with 3rd party applications • Support for all major popular languages
Engage Computer Vision & Video Analytics **	<ul style="list-style-type: none"> • Biometric detection of black-list individuals • Identify anomalies in real time media streams – video and audio • Secure conferences 	<ul style="list-style-type: none"> • Deploy anywhere, edge, cloud or data center • Greater control over data and security • Reduce public cloud processing and costs • Backhaul savings • Regulatory compliance

• Prof Svcs effort needed for in-call assistant

** in Roadmap for 2H2022

Engage Intelligent IVR

Engage Intelligent IVR enables easy and flexible development and deployment of complex IVR integrations across channels



Web-based Drag and Drop Visual Design Studio to Build IVR Response Logic

Capabilities

- Visual design studio to take full control of your IVR & its changing needs
- Play announcement clips, Prompt user
- Collect user input in the form of DTMF or user speech (selected grammar, non NLU)
- DTMF/ Voice barge-in supported
- Integrate 3rd party Rest APIs to retrieve and post info
- Optimize Text to Speech (TTS) playback using embedded TTS variable in standard announcement clips
- Transfer IVR call to agents

Use Cases

- Call registration leads collection for businesses
- IVR for cash-on-delivery order booking
- Customer Service ticket logging, transfer to 3rd Pty Agents Systems
- Outbound campaign: Survey and feedback collection

Intelligent IVR – Demo Context



IVR Menu Internet Service Provider

- i. New Internet Service
- ii. Billing
- iii. Service Outage
- iv. **Relocation**
- v. Cancel the service



Collect Zip Code via Speech

Playback Zip Code &
Confirm availability of service



Transfer the voice-call
to Agent on Web App



Next: IVR Demo on the Portal

Why use Intelligent IVR?

Easy to create & manage IVR apps via Visual studio

Utilize **Microsoft STT & TTS for speech-enabled** services

Seamless Integration with voice/video communication channels

BYO Connectivity: Jio PSTN or Customer's own SIP trunk

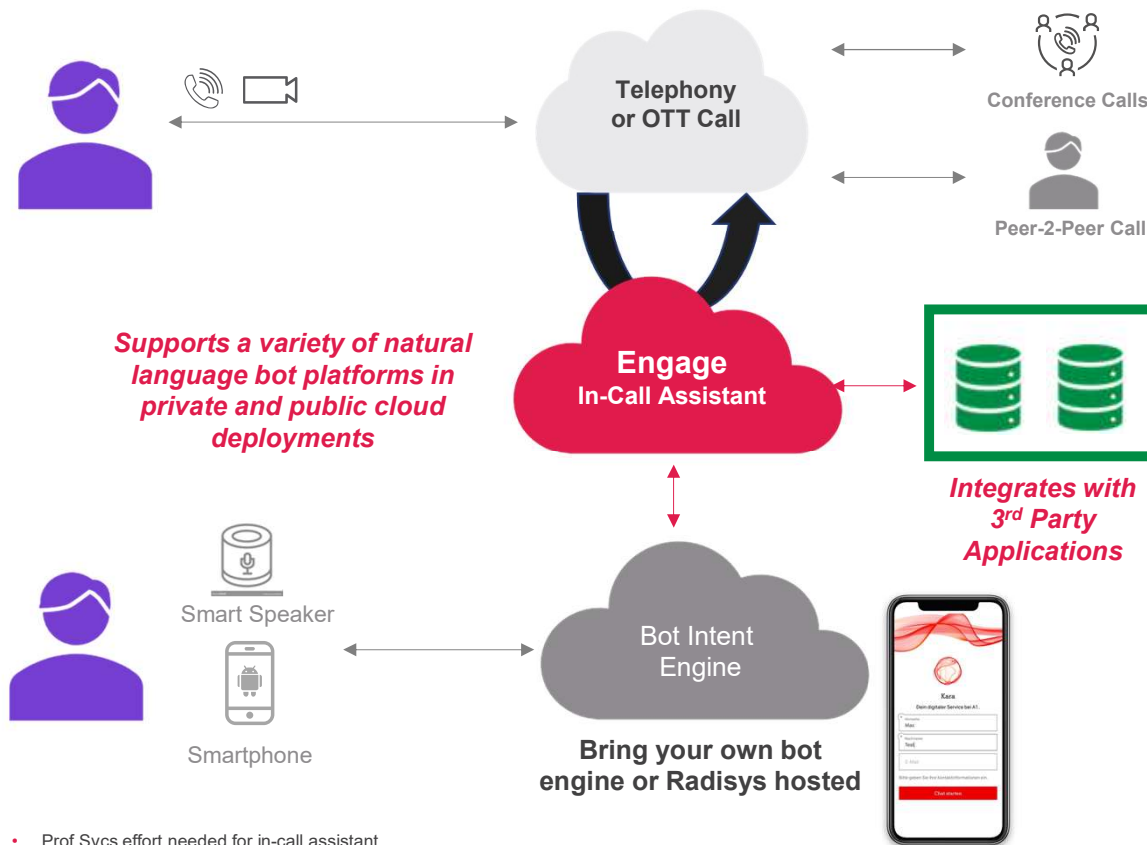
Integration with Contact Centers(Genesys/Cisco) & CRM

Speech Analytics & In-call Assistant

Engage Advanced Speech Capabilities can be consumed separately or as part of the Engage In-Call Assistant *



For Consumers and Business Customers



• Prof Svcs effort needed for in-call assistant

** in Roadmap for 2H2022

"In-Call" Speech Analytic Services

Real-time Background Noise Reduction **

In-Call Biometric Authentication **

Keyword & Sentiment triggered alerts and promotions

In-Call Real Time Language Translation

Integrate Kara to provide personal digital assistance on real-time calls

"Hey Kara...."

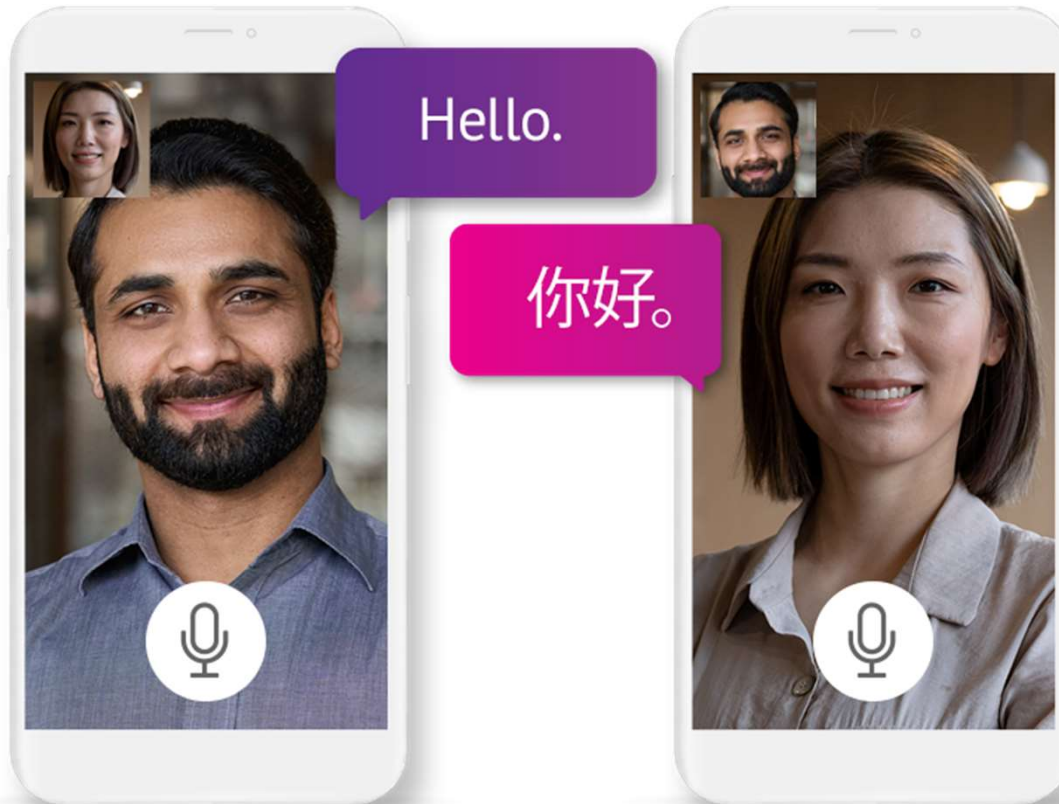
In-Call Handsfree Operations
(Ex: Hold, mute, transfer, add user)

Record and Transcribe the Call (Ex: Meeting notes)

Speech-enabled search (Ex: Find a time on my calendar on Wednesday)

Speech-enabled commerce (Ex: book me a ticket)

Live Call Translation



[Watch Demo](#)

In-Call Assistant for AI-Based Noise Reduction on Live Calls



Call centers

Increase agent productivity when they work from home or from open office



Remote Teams

Have noise-free meetings with your team members by giving them more flexibility



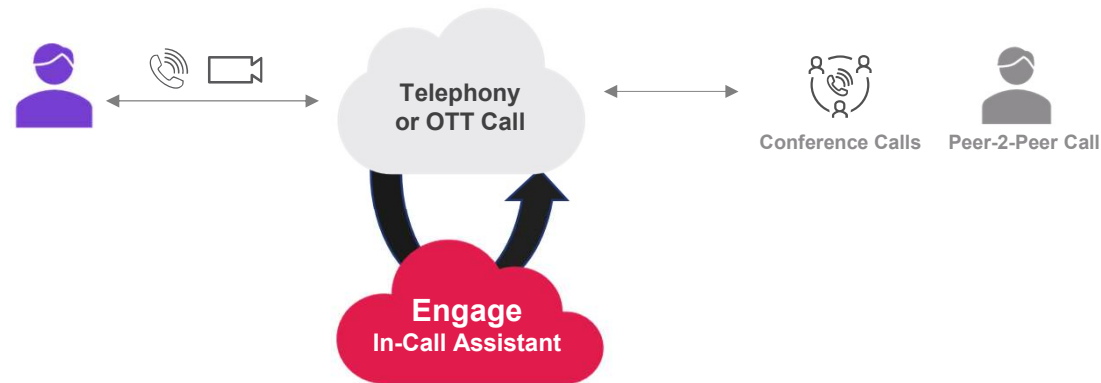
Online teachers

Enjoy noise-free productive remote classes with your students



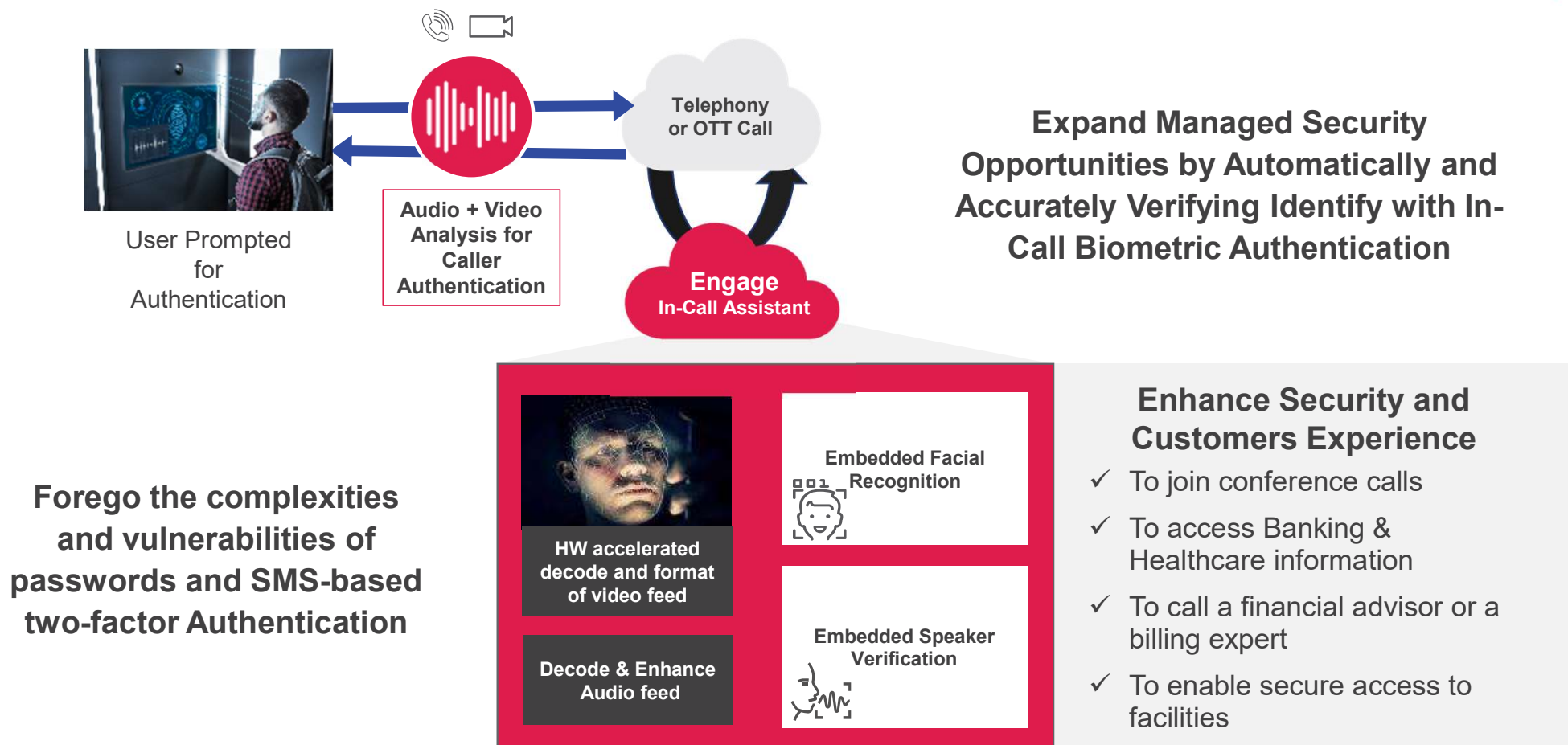
Business Leaders

Work from home or public workspaces without worrying about background noise



Adaptable to various noises and conditions using integrated AI / ML technology

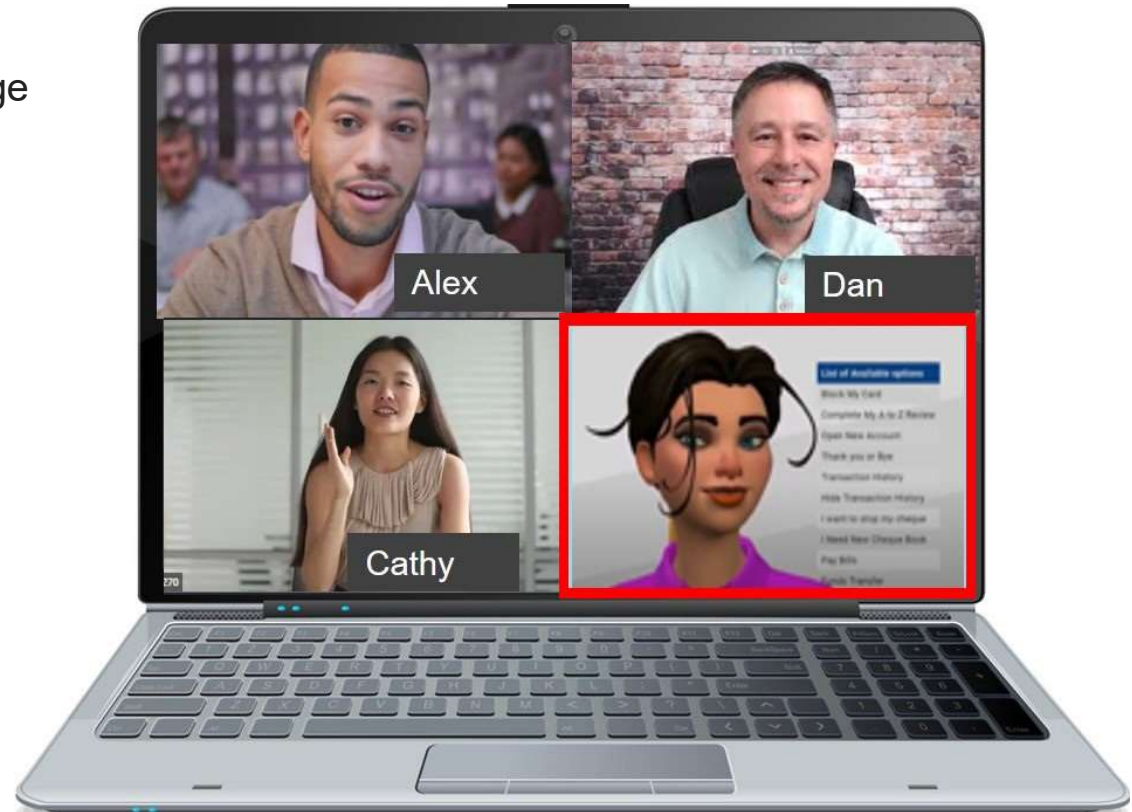
In-Call Assistant for Dual Factor Biometric Authentication



In-Call Assistant for Video Conferences



- A digitally generated character that provides information by voice, recognizes a basic language and interacts with the attendees in different languages.
 - Triggered by wake word (like “Hey Alexa”)
 - Answers to Queries
 - Captures meeting minutes, Action items.
 - Take instructions – Dial-out participants, set reminders, mute/un-mute participants, record conference, etc.
- The virtual character is mixed with your real environment through an interactive screen.
- It can be the surprise element / assistant in your conference and adds a futuristic touch to your communication action.



Computer Vision Analytics

Engage Computer Vision offers advanced video analytics capabilities seamlessly integrated with communication platforms



hospitality

wheelchair detection white cane detection



detection of sudden illness (fall)

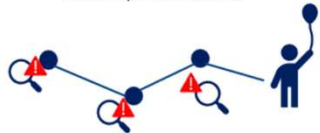


prevention of crime

face verification detection face verification x full body verification tracking



a retrospective search



marketing

visitor count visitor attribute analysis



NUMBER OF VISITORS VISUALIZATION MAP



COVID-19 COUNTERMEASURES

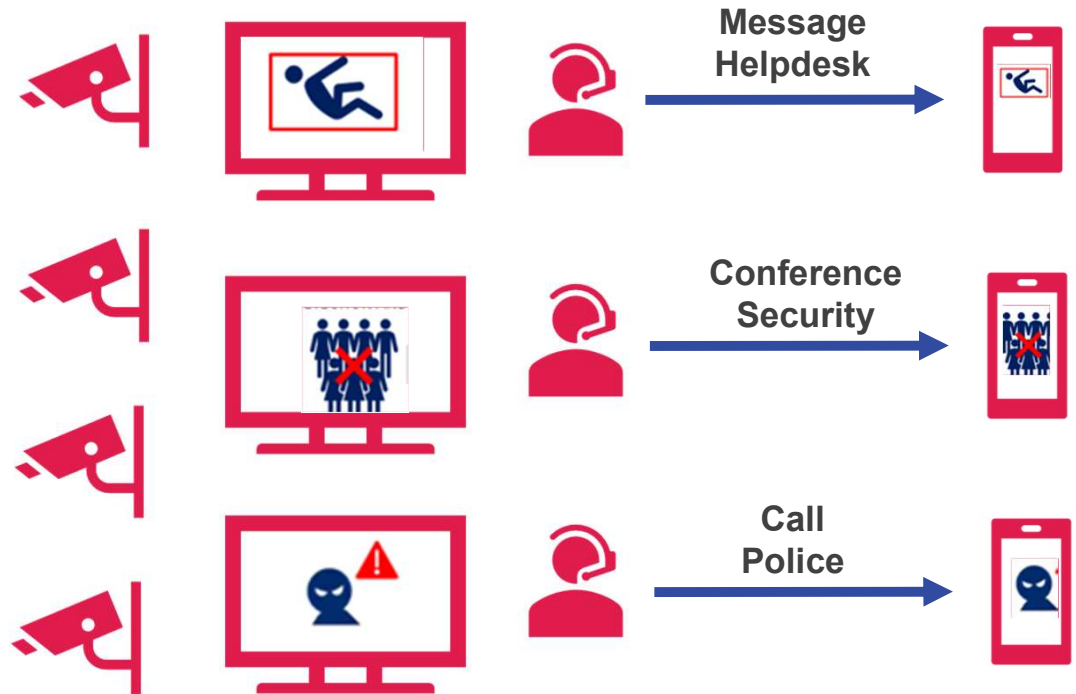
DENSE DETECTION AND CONGESTION MAP



heat generation detection
(thermo camera linkage)



a retrospective search



Radisys Engage Platform can do much more than inferencing.
It can video conference the call with intended recipients
It can trigger a call or conference during events
It can suppress noise and detect safety/security-alert 'keywords'

** Video analytics in Roadmap for 2H2022

Use Case: Crowd Counting (Demonstrated at MWC 2022)

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engagedigital.ai

Radisys AI-based Video Analytics Solutions

People Count : 70



Video Analytics
with social distancing capabilities

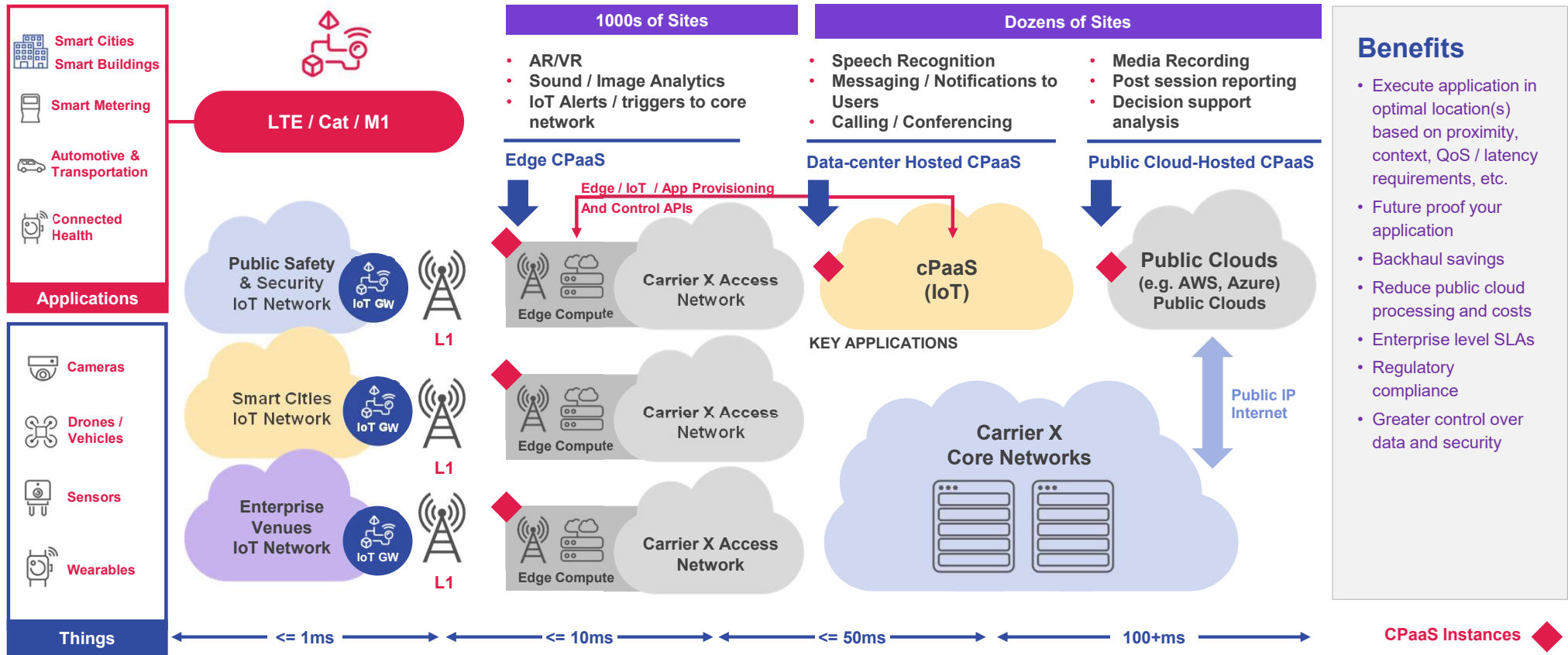


0:01:23

0:00:27

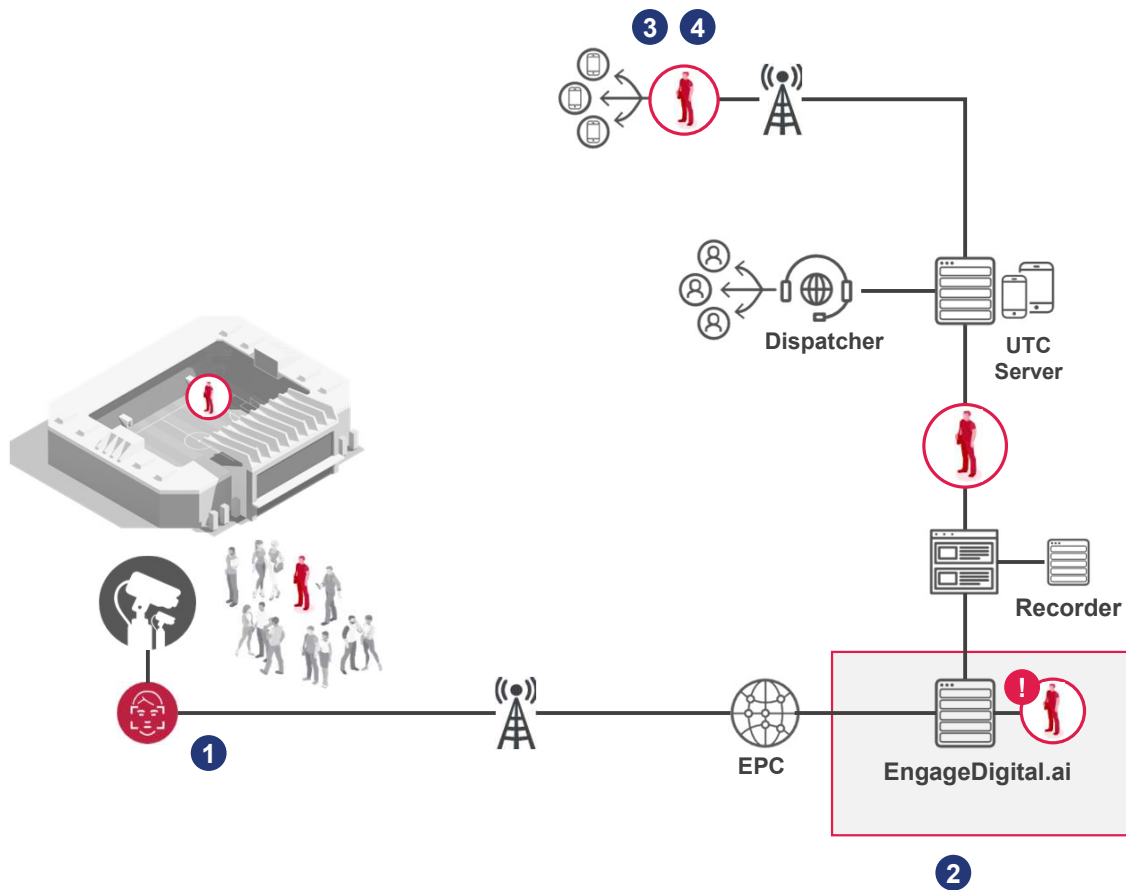


Engage CV Analytics capabilities can be deployed at Edge, Cloud or Data Center, enabling Richer Range of Services



Representative Distributed CPaaS Applications / Capabilities

Video Analytics Use Case: Surveillance in a Large Gathering



	Use Case Elements	Engage Platform Functionality	Engage Platform Value
1	Cameras are mounted on key locations, which are networked and connected to the processing platform		
	Cameras capture and send images for processing	Video stream processing	Video processing in the network lowers device CAPEX and OPEX
2	Video is processed by the application layer for suspicious actor detection	Programmable Computer Vision	Video processing on demand lowers cost
3	Images of suspicious actor are sent to mobile devices of the on the ground security teams	Messaging functionality	Messaging services via Engage increases flex and lowers cost
4	Communication channel is established between the on the ground security team and the centralized security team	Conferencing	Conferencing and exchanging messages via Engage increases flexibility and lowers cost
	Images, files are exchanged	Messaging	
5	The transactions are recorded for storage and post event analysis	Media Recording and Analytics	Recording is much cheaper and secured
	Post event reports are generated and are further distributed to the larger team for communication and co-ordination	Messaging	Messaging services via Engage increases flexibility and lowers cost

Programmability

Tools for Programmability



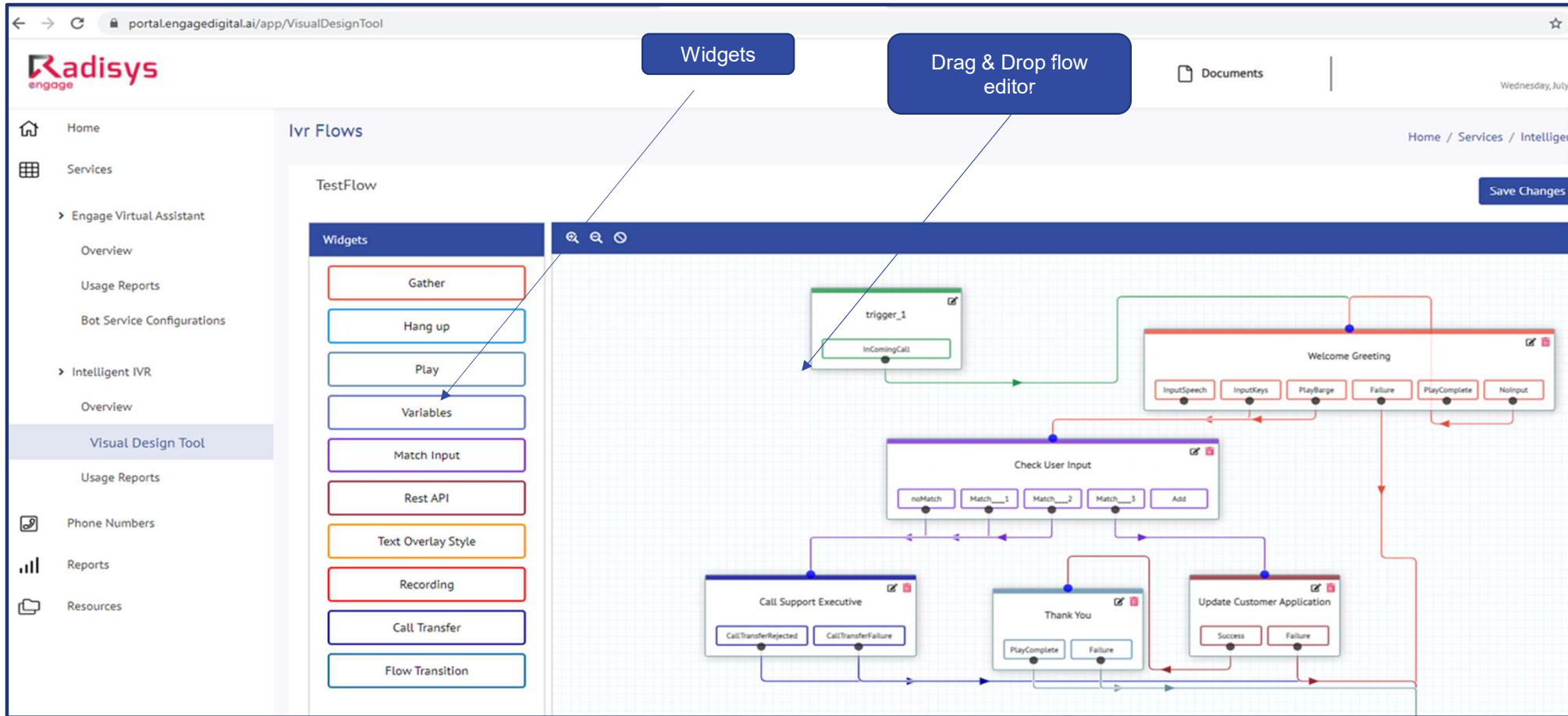
Visual Designer Tool (VDT) for Call Flows (IVR etc)

REST APIs, Server SDKs for Voice/Video Comm. Management

Engage Markup Language

WebRTC Clients SDKs – Web/Mobile

Visual Design Tool (VDT) Widgets & Flow



Ready-to-use Flow Templates available. Simple to use drag-n-drop widgets. Customize and launch within minutes.

Programmable Voice/Video - REST APIs



Search...

Authentication

Call

POST Make a voice or video call

GET Get Multiple Call Records

GET Get Call Record

Documentation Powered by ReDoc

Make a voice or video call

Make an outbound voice or video call to one or more destinations. The destination can be PSTN or mobile phone, SIP endpoint, or WebRTC endpoint. The API returns a unique call identifier which can be used to refer this call in subsequent API request.

AUTHORIZATIONS: None

PATH PARAMETERS

→ **ac-id** string
required Example: AC-XXXXXX
Account Id of the tenant who is try to perform the operation

REQUEST BODY SCHEMA: application/json

One of

MakeCallMetadata-sample1

MakeCallMetadata-sample2

MakeCallMetadata-sample3

→ **From** string
required Mandatory. The number to display as calling (i.e. Caller ID). This must be Radisys EDP verified phone number. The number value is specified in E164 format.



POST /accounts/{ac-id}/call

Request samples

Payload

cURL-sample1

cURL-sample2

cURL-sample3

JS

Content type

application/json

Example

MakeCallMetadata-sample1

Copy Expand all Collapse all

```
{
  "From": "+16045671234",
  "To": "+18001234567",
  "ApplicationID": "VDT-ID",
  "StatusCallback": "http://www.examp.",
  "StatusCallbackMethod": "POST",
  "StatusCallbackEvent": "initiated, ",
  "Type": "voice",
  "Bridge": "none"
}
```

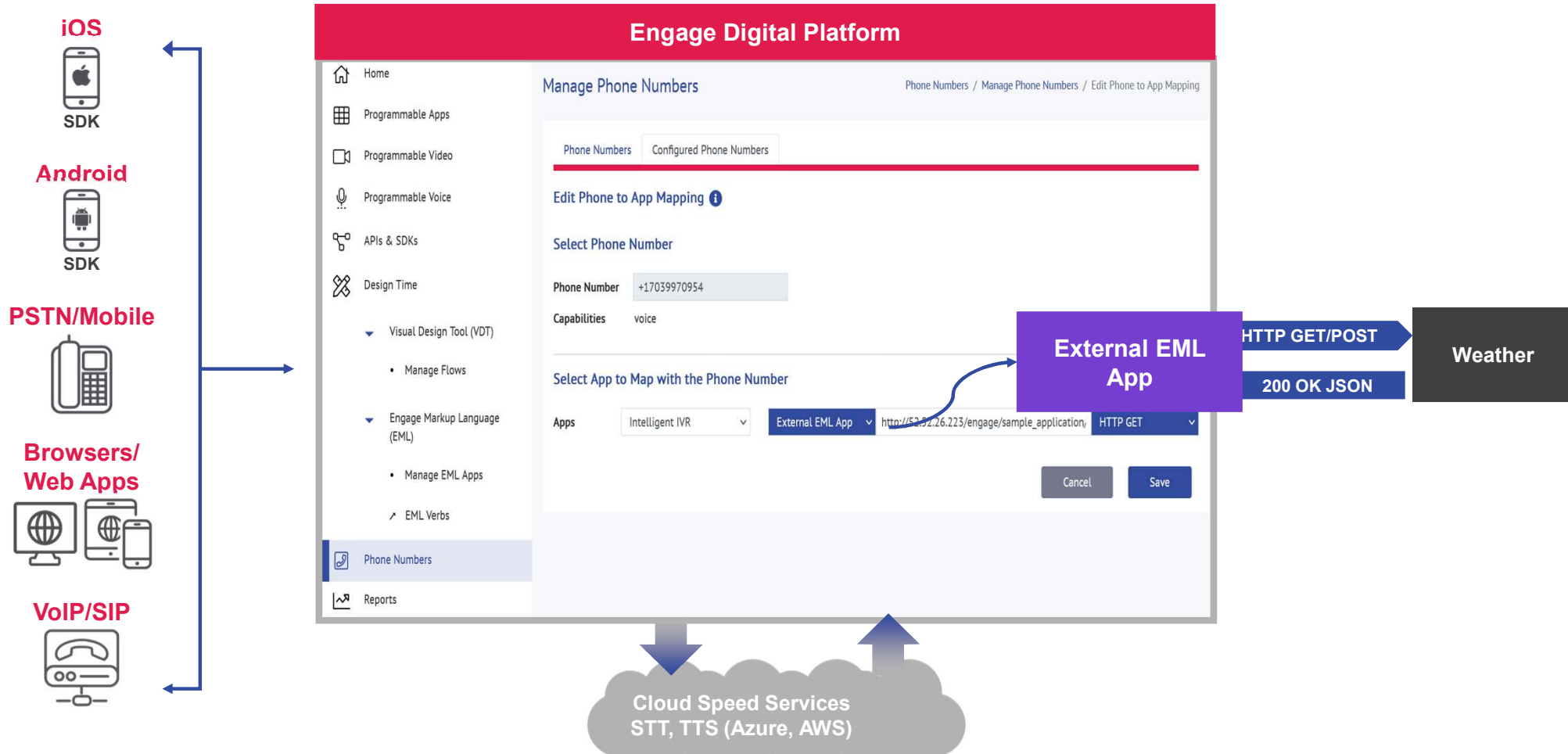
Engage Markup Language (EML)



- EML is XML based & uses simple verbs/commands. EML document is like using a script to program/control the call flow
- The EML document can be sent **inline as part of our API. So all these capabilities are available via API**
- The EML document can be hosted locally on EDP or hosted by customer in external HTTP server. This document can be associated with a phone number via the portal (see next slide)
- **Here is the list of EML verbs that extends the capabilities of our REST APIs**

Element	Description
<Gather>	The Gather verb allows you to prompt user (clip or TTS) and collect user input DTMF/speech.
<Play>	The <Play> verb plays an audio file back to the caller. EDP retrieves the file from specified URL (preferably over HTTP).
<Say>	The <Say> verb plays text to the user (TTS).
<Dial>	During an active call, you can use <Dial> verb to connect the current caller to another party. It can be used to join a party into a named Conference room also. This can be used to realize bridge call transfer scenario also.
<Record>	The <Record> verb records the caller's media and returns to you the URL of a file containing the recording.
<Refer>	The <Refer> verb can be used to initiate SIP REFR based call transfer.
<Redirect>	The <Redirect> verb transfers control of a call to a different URL. All verbs after <Redirect> are unreachable and ignored.
<Hangup>	The <Hangup> verb ends a call.
<Number>	The <Number> noun specifies a Phone number to dial.
<Client>	The <Client> noun specifies a Client (SIP / WebRTC) URI to dial.
<Kwd>	The <Kwd> verb enables keyword detection on an active call or a named conference

Engage Markup Language (EML) App – Via the Portal



Programmable Video/Voice – Web RTC SDKs for Web/Mobile Apps



The screenshot shows the Allstate website with a Radisy SDK code snippet injected into the HTML. The code is highlighted with a red dashed box and includes the following elements:

```
<!-- Radisy EVA demo -->
<div class="floatingButton" onclick="toggleIframe()">
  <div class="floatingButtonText">Speak With EVA</div>
  <div class="iframeContainer" id="iframeContainer">
    <iframe id="iframe_callock" width="600" height="900"
      name="myIframe" src="about:blank" allow="camera;
      microphone; autoplay"></iframe>
  </div>
  <div id="backgroundDimmer"></div>
  <script type="text/javascript"
    src="https://52.52.26.223/webrtc/eva-web-
    plugin/assets/css/phoneOverlay_floatingButton_text.css"
    media="all"></script>
  <script type="text/javascript"
    src="https://52.52.26.223/webrtc/eva-web-
    plugin/assets/js/insurance-bot-1.js"></script>
  <!-- Radisy EVA demo -->
</div>
</html>
```

- Very easy to use our SDK to build mobile/web apps
- For example, Add a few lines of provided HTML code on existing website to enable a click-to-call button.

Programmable Capabilities *Competitive Positioning*

Radisys vs Twilio, Amazon Connect (CPaaS)



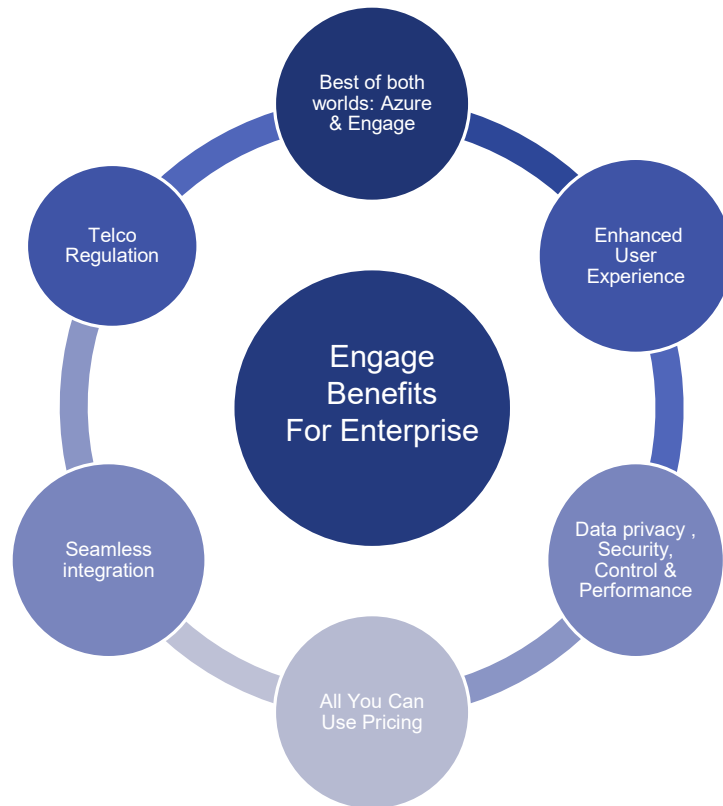
Category/Feature	Radisys	Twilio	Amazon Connect
CPaaS Platform?	✓	✓	No, it's only CCaaS (Contact Center)
Programmable Voice	✓	✓	✓
Programmable Video	✓	✓	✗
Channels: PSTN, SIP, OTT (WebRTC)	✓	✓	✓ No SIP
Messaging – SMS	✓ Roadmap	✓	✗
Messaging - Chat	✓ Roadmap	✓	✓
Contact Center Integration	✓ Genesys, Cisco	✓	✓

Radisys vs Twilio , Amazon Connect (Conversation AI + Analytics)



Category/Feature	Radisys	Twilio	Amazon Connect
Conversational AI Digital Assistants: Chat, Voice, Video		 No Video	 No Video
STT/TTS Engines : Cloud, Custom, In-Built		 Cloud Only	 Cloud Only
Voice Biometric	 Roadmap	 Partner	
Face Biometric & CV Analytics	 PoC Ready		
Audio & Video Analytics @ Edge	 Roadmap		
White Label			
Flexible Deployment – Cloud, On-Prem, Edge		 Cloud Only	 Cloud Only
Pricing Model	Capacity Based: Per session*	Usage Based: Per min/transaction	Usage Based: Per min/transaction

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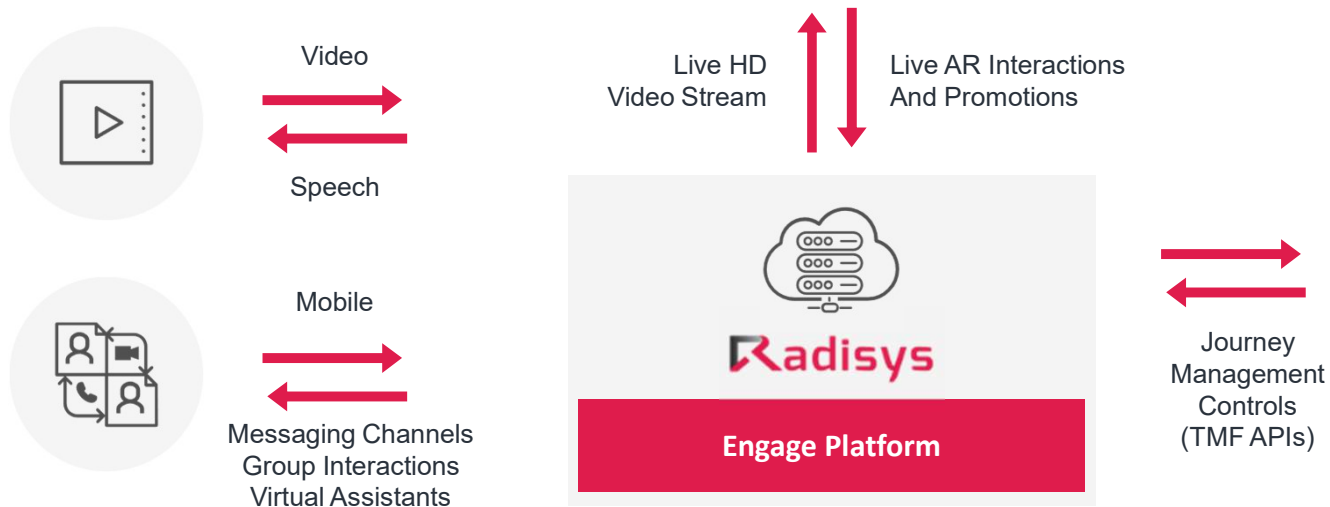
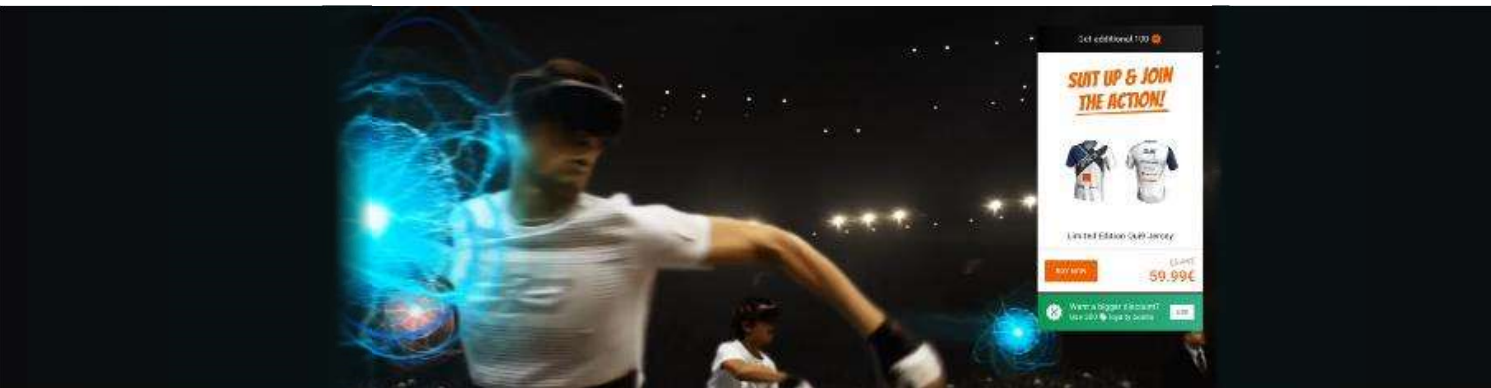
On-prem or Cloud or Edge deployment – Your choice based on your data privacy, security and performance needs.

Seamless integration with existing CC/CRM

No forklift upgrade

Programmable Communications and Video Analytics market presents a sizeable (7.5B and 11B) market with a projected growth of 35% and 18% respectively

Hyper-personalized, real-time customer interaction



- Ultra HD High Bandwidth Video
- Ultra Low Latency Media
- Live VR, AR, 360 Video
- Speech AI Intents and NLU
- Realtime Partner Promotions
- 5G Applications Automation

[WATCH VIDEO](#)



Thank You