

A woman in a blue jacket and brown pants is walking across a suspension bridge made of wooden planks and metal cables. The bridge spans a deep valley with a lake and a glacier in the background. The sky is blue with some clouds. A large white diagonal shape is overlaid on the left side of the image.

Nokia Call Management APIs

Expand network services

NOKIA

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Nokia Call Management Application Programming Interfaces (APIs) give developers ready-access to IP-communications features built into carriers' mobile, fixed and cable networks. They accelerate the creation of enticing, high-performance services for consumers, enterprises and vertical markets.

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Overview

Nokia Call Management APIs are telecom APIs that assist you in creating innovative applications and services that integrate seamlessly into carriers' networks.

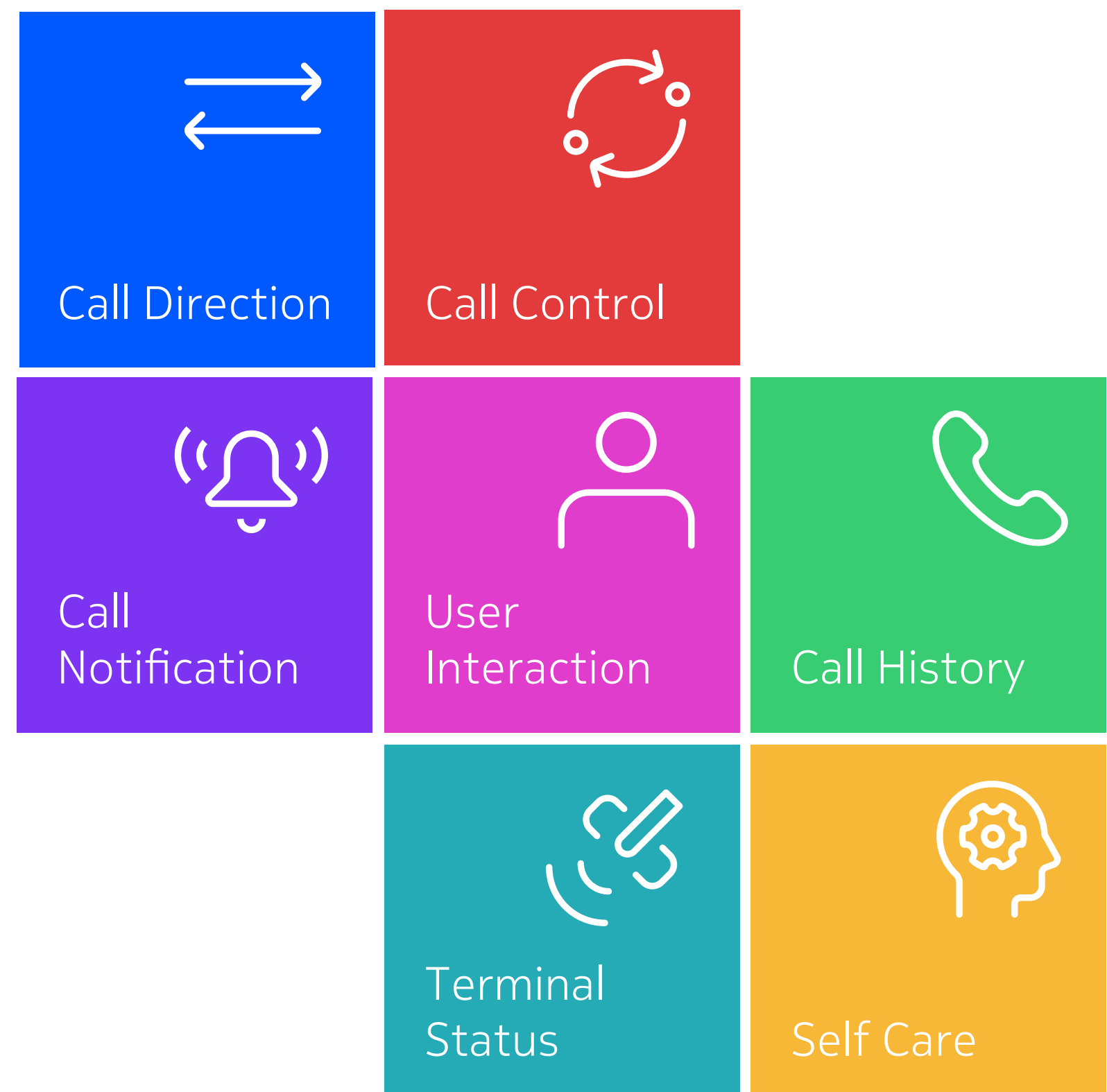
APIs are the glue of digital economy. Call Management APIs help communication services evolving from a standalone service, e.g. Voice over LTE (VoLTE), to a set of sellable and sharable critical features that will be embedded into any mobile application, web application or any device. These API enable contextual, immersive, and seamless communications incorporating artificial intelligence, big data analytics, speech recognition, privacy and security enablement, voice based messaging and internet of things (IoT) notifications/analytics, as necessary, to enrich the end-user voice and video communication experience.

As an example, China Telecom leveraged the APIs for service exploration in the mobile internet area. They launched a new service developed by AlphaUn that allows riders and drivers to keep their phone numbers private when using Didi Taxi service. China Telecom has since grown the opportunities by integrating additional over-the-top (OTT) partners specialized on verticals like eCommerce, real-estate, and dating.

Nokia Call Management APIs are built-in to network components which avoids the complexity of overlay "OTT-like" APIs solution; hence, lowering cost and complexity and opening service innovation and creativity.

But it's more than just APIs. The solution also brings a Sandbox where you can develop and pre-validate your apps.

You may develop and test your application with the latest infrastructure. From our software development kit (SDK) you can generate the SDK for any language you plan to use for the implementation.



Benefits for you as developers

Easy to use and built-in, rich APIs:

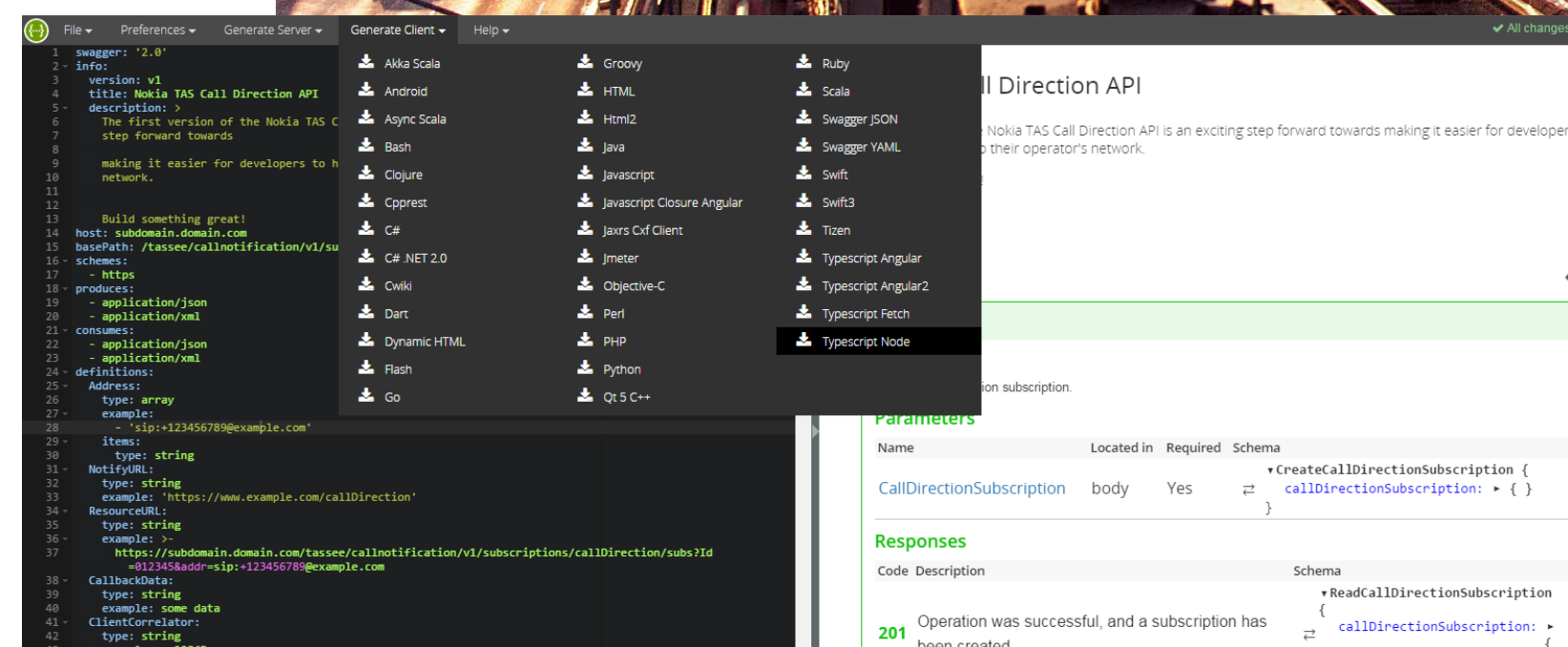
- Simple tools using developers' language (JS, SDK, html) hiding SIP network's complexity
- Full call control and benefit from the available suite of rich calling features
- Leverage number resources: billion of phones reachable globally and well interworked amongst users are the base for service landing

"In-network" apps enhance app's core offering:

- Work on any IMS base network (fixed, mobile, cable)
- Work on any device: smart phone, feature phone, soft phone, fixed line etc.
- Work on any OS, freeing developers from OS specific constraints and dependencies
- Work regardless of device state: works even if phone is off or not connected to network

Focus on the app's development only:

- Leverage the quality and reliability of telecom infrastructure to build apps in the quality of experience the users want
- Avoid redeveloping mandatory features e.g. legal interception services, voice mail etc.



Benefits for users

- Users can benefit from these new services and experiences on their existing phone number
- The innovative API based services both simplify and enhance the value of voice-video communications.

Benefits for operators

Speed-up time to market:

- Simplify new services creation by reducing development and integration time,
- Utilize new services with non-IMS base network (2G/3G/CDMA/PSTN)
- Eliminate the software upgrade dependency,
- Pre-integrated partner applications allow starting quickly with new retailed services.

Differentiate with an offer beyond standard:

- Cultivate operator secret garden of features giving an edge over other rivals.

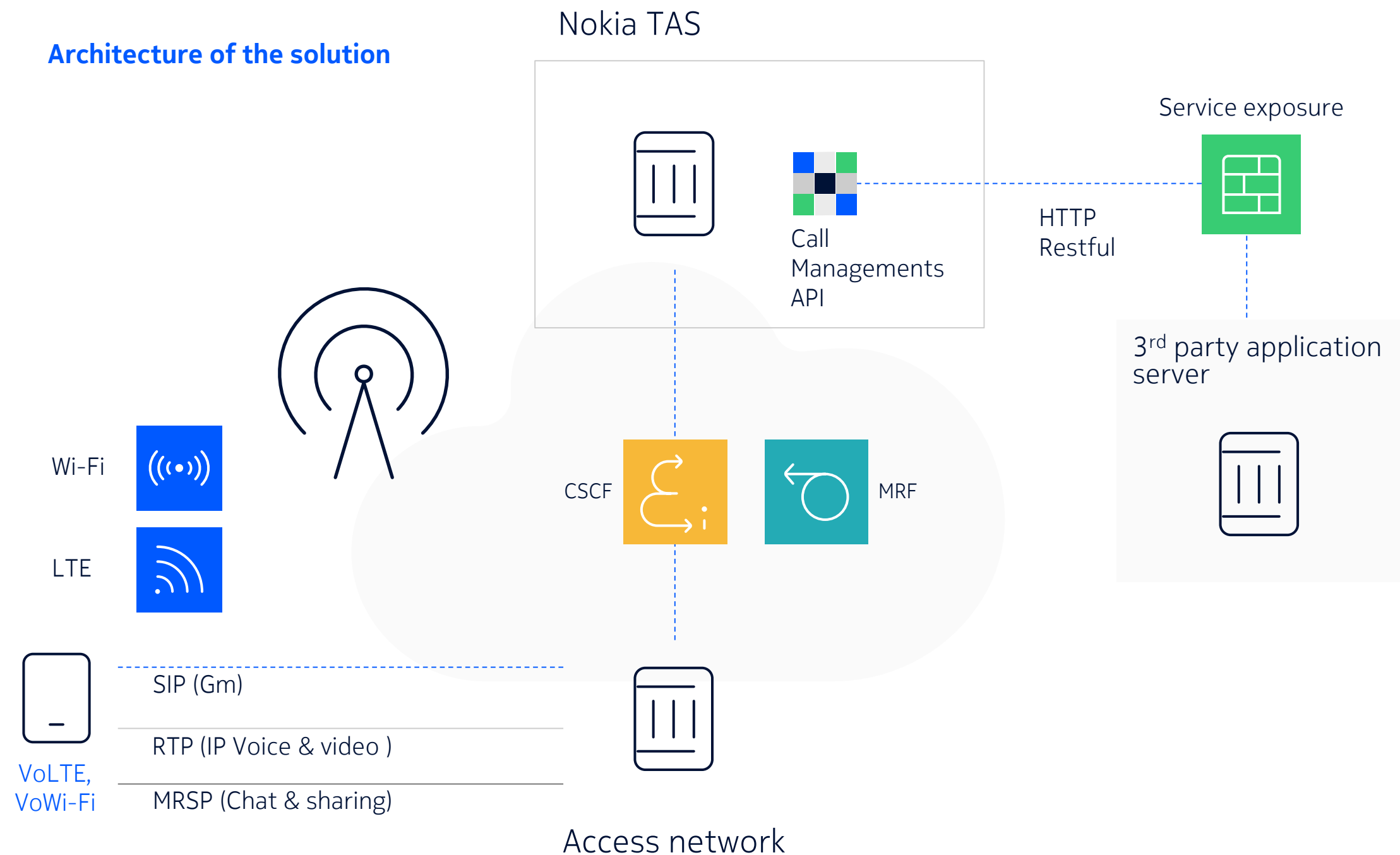
Provide ways of generating new income sources:

- Maximizing the value of IMS core: creating and launching new carrier branded services,
- Expanding into wholesale markets by exposing the value of operator network to app developers and exploring new business models as part of an end-to-end application strategy,
- Extending operator reach to new verticals and connected objects



Call Management APIs

These APIs built in Nokia Telecom Application Server (TAS) align to the Open Mobile Alliance (OMA) API standards and GSMA One API initiative. They are based on Representational State Transfer (RESTful) style, a popular, easy-to-use software architecture methodology used to create applications for the web. You don't need training or detailed telecommunication knowledge — just your web development skills.



Call Management APIs include these APIs:

Call Direction APIs – allow a 3rd party application to subscribe to call events e.g. incoming call, anonymous call, no answer, busy etc. Nokia TAS notifies the app of such event and suspends its call processing, giving full control of the call to the app.

Call Notification APIs – allow an app to subscribe to call events. Nokia TAS notifies the app of such event and continues to process the call.

Call Control APIs – allow an app to create calls or conferences, to drop/add users etc.

Terminal Status APIs – allow the device's registration status to be reported to the app.

User Interaction APIs – allow an app to control the Media Server's capabilities (audio, video, text to speech, DTMF, recording etc.) for calling or called party interactions.

Call History APIs – give an app the access to subscriber records of made, received or missed calls.

Self Care APIs – allow the app to control the activation state and configuration of the underlying Nokia TAS services, e.g. modify a call forwarding based on calendar information.

Partner ecosystem

Nokia is continuing to build a rich ecosystem of third party developer partners that leverage Call Management APIs to develop a variety of innovative applications and services. We are inviting independent developers and start-ups interested in defining

the shape of future of communication. New services are waiting to be discovered and provided to end users changing their lives for better!

Partner applications

The following is a sampling of available products developed by our partners:

Call protector (Privacy Star): blocks nuisance calls and requests anonymous or unknown callers (not in contacts) to record their identity.

Click-to-call-me (Quobis): allow introducing “click-to-call-me” capability on enterprise’s web site or subscriber’s email signature.

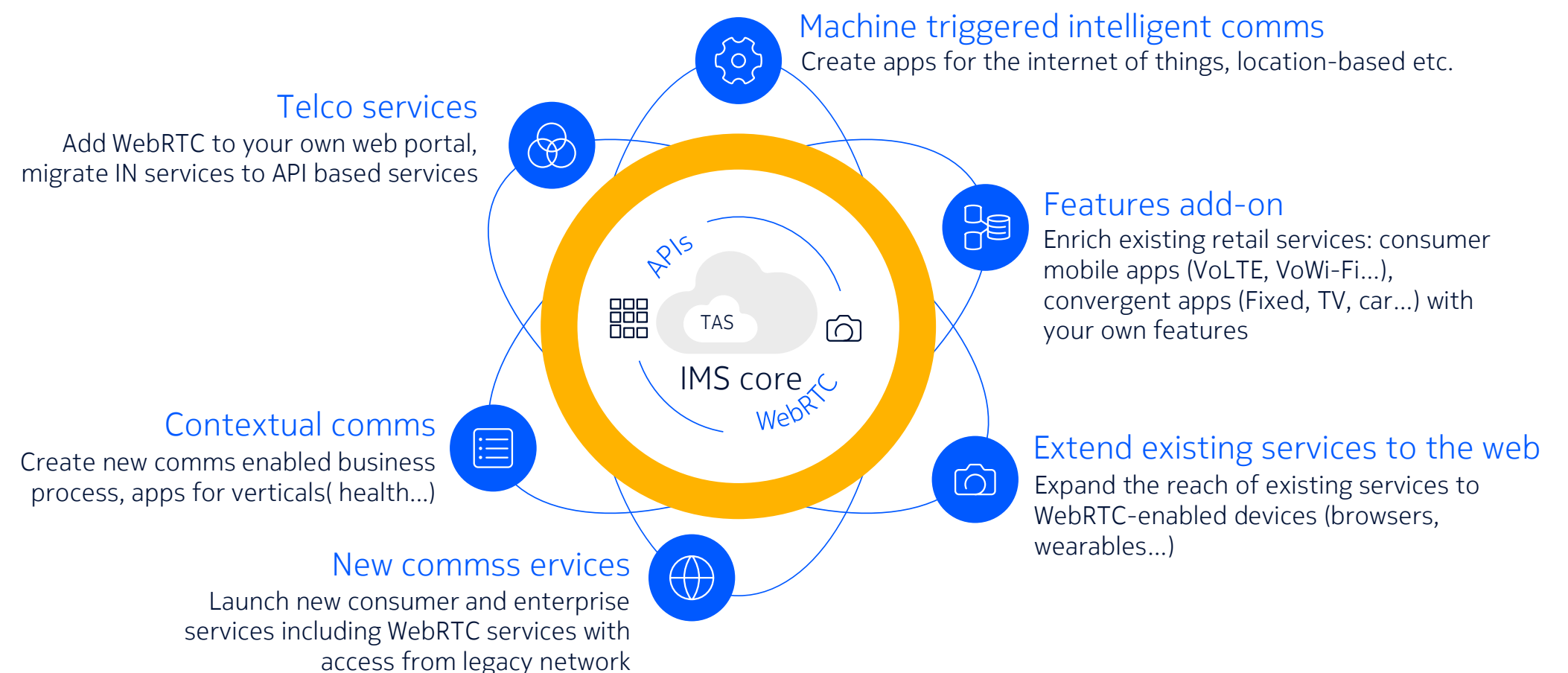
Evanescent reach-me number (23numbers): provides temporary virtual identities to preserve subscriber’s real phone number.

Enhanced Caller id (Hiya): provides caller ID, people search and spam blocking network solution.

Conferencing (Counterpath): launches conference calls from browser and enables joining the conference via URL; anyone invited clicks to join the conference.

Smart-wizard routing (Aricent): eases value-add Intelligent Network (IN) toll-free migration.

Web customer contact (Apizee): B2C/B2B remote assistance, vertical agnostic solution.



Nokia service innovation ecosystem

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About Nokia

At Nokia, we create technology that helps the world act together.

As a B2B technology innovation leader, we are pioneering networks that sense, think and act by leveraging our work across mobile, fixed and cloud networks. In addition, we create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today – and work with us to create the digital services and applications of the future.

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