Telefónica

API OVERVIEW

Overview, use cases and case studies on the Device Swap API

Telefónica Open Gateway

OPEN GATEWAY
GSMA
CERTIFIED API

March 3rd, 2025

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Description

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When adaptability meets security, the Device Swap API becomes the key-offering seamless protection and confidence whenever a mobile device transition occurs.

This API is designed to detect and mitigate risks associated with unauthorized device swaps, which could indicate potential fraud or account misuse. By identifying when a phone number is being used on a different device, organizations can enhance their security measures, prevent unauthorized access, and protect user identities in real time.

Features and Categorization

CAMARA	✓
COUNTRIES	🇪🇸 🇧🇷
SECTORS	E-COMMERCE & RETAIL FINANCIAL SERVICES & INSURANCES DRIVEN DATA MARKETING ICT SERVICES SOCIAL & CUSTOMER ENGAGEMENT
SERVICES	AUTHENTICATION AND FRAUD PREVENTION

Characteristics

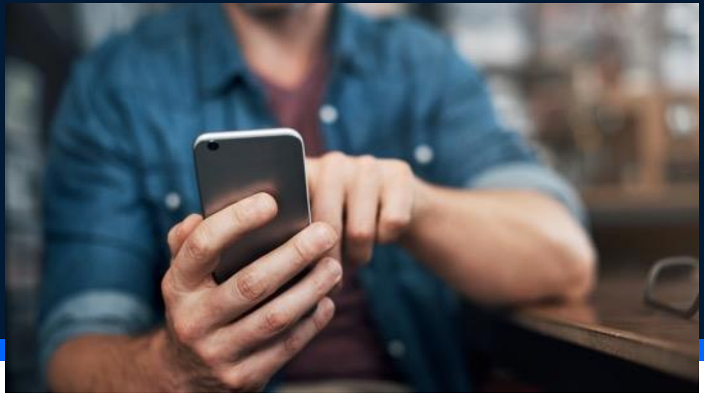
02

Overview

Characteristics of Device Swap API

Fraud Detection and Prevention

Device Swap API provides an essential service for detecting fraud by identifying when a phone number is used in a new device. By analysing SIM-to-device binding, businesses can trigger fraud alerts or additional verification steps to prevent unauthorized account access or data breaches. This API strengthens applications with real-time responses to potential risks, empowering proactive security measures.



Identity Validation & Compliance

By verifying device changes, the Device Swap API ensures the validity of user identities during critical actions such as account logins, transactions, or password resets.

Data-driven Marketing

The API enables personalized experiences and recommendations. For example:

- Notify users about subscriptions or related services when a device change is detected.
- Adjust communication based on the specifications or behaviour of the new device.
- Inform users with older device about potential upgrade options that may be relevant to them.

Overview

Characteristics of Device Swap API

Effortless Integration

The standardized Device Swap API simplifies integration by offering a unified, operator-agnostic interface. Developers can easily embed Device Swap capabilities into their applications without the need for custom implementations per telco operator, reducing complexity and accelerating time-to-market.

Consistent Access to Telco Features

The Device Swap API, developed within the CAMARA framework, ensures consistent and reliable access to telco capabilities, such as detecting and managing device swap events. This standardization enables seamless scaling across multiple operators and diverse markets.

Enhanced Dev Experience

Designed with a developer-first approach, the Device Swap API ensures simplicity, reliability, and flexibility. This eliminates the challenges of operator-specific requirements, empowering developers to focus on building advanced, innovative solutions while maintaining consistency in user experience.

Use Cases

03

Overview / Use Cases

Fraud Detection and Prevention

Integrating the Device Swap API into fraud detection systems enables businesses to identify suspicious activities linked to unauthorized device changes. Real-time notifications help improve risk scoring, activate additional security layers, and block fraudulent transactions proactively. When combined with SIM Swap data, it offers a comprehensive risk assessment.

OTHER RELATED APIs

Location Verification API

SIM Swap API

Number Verification API

SECTOR	FINANCIAL SERVICES & INSURANCES
SERVICE	AUTHENTICATION AND FRAUD PREVENTION

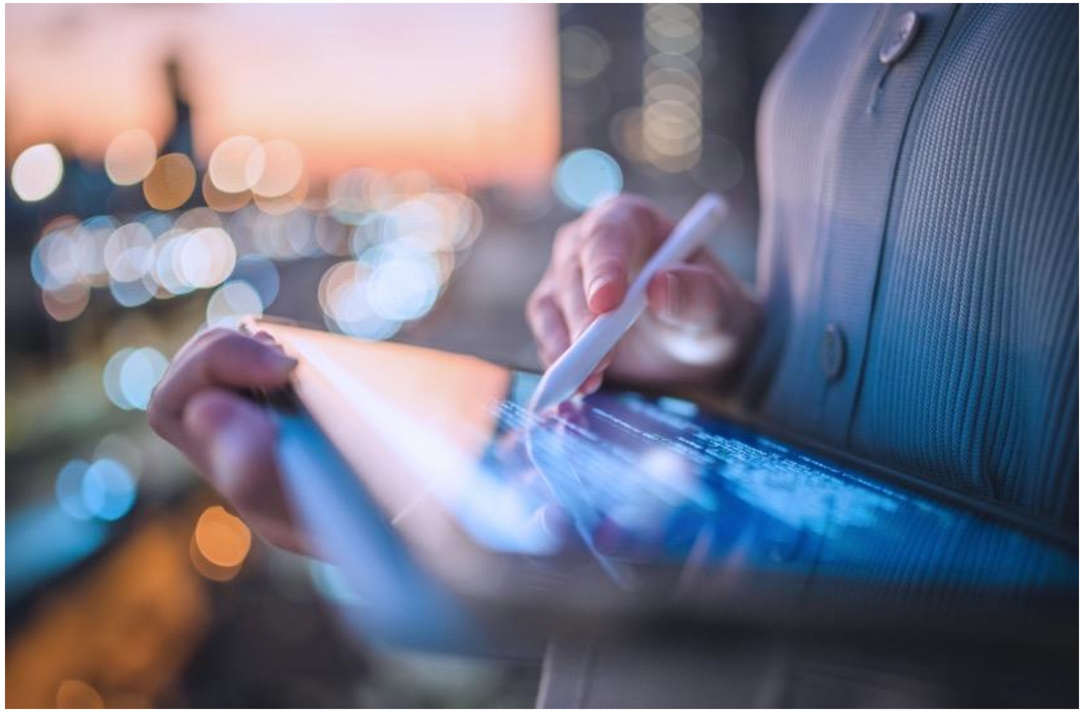
DEVELOPER NEEDS

- Real-Time Fraud Detection: Immediate identification of unauthorized device swaps to prevent account takeovers.
- Enhanced Risk-Based Authentication: Enable step-up authentication or adaptive security policies.
- Improved Transaction Security: Protect sensitive transactions by flagging abnormal device changes.

Overview / Use Cases

Personalized Marketing and Customer Engagement

By analysing Device Swap API data, businesses can design targeted marketing strategies based on device changes. For example, offer premium services when users upgrade to high-end devices or provide discounts on new phones to users with older devices. This insight allows businesses to optimize upselling and cross-selling opportunities.



OTHER RELATED APIs

Location Verification API

Carrier Billing API

Number Verification API

SECTOR	DRIVEN DATA MARKETING E-COMMERCE & RETAIL
SERVICE	AUTHENTICATION AND FRAUD PREVENTION

DEVELOPER NEEDS

- Targeted Recommendations: Suggest accessories or service upgrades for newly swapped devices.
- Upselling Opportunities: Promote premium services that align with the capabilities of users’ newer devices.
- Customer Retention: Enhance engagement and loyalty by offering personalized deals when a device change is detected.

Overview / Use Cases

Secure User Access and Identity Verification

The Device Swap API improves identity verification processes by providing visibility into whether a user's assigned SIM card is being used on a different device. Businesses can verify whether device swaps are legitimate, flagging potential unauthorized access attempts during logins, password resets, or sensitive transactions.

OTHER RELATED APIs

Location Verification API

SIM Swap API

Number Verification API

SECTOR	ICT SERVICES
SERVICE	AUTHENTICATION AND FRAUD PREVENTION

DEVELOPER NEEDS

- Authentication Security: Confirm if users are accessing accounts from trusted devices.
- Unauthorized Access Prevention: Trigger security notifications or require re-verification for unexpected device swaps.
- Smooth User Transition: Minimize customer friction during legitimate device changes while maintaining security.

Overview / Use Cases

Enterprise Device Fleet and Policy Compliance (B2B)

Enterprises can use the Device Swap API to monitor and enforce compliance for corporate mobile lines. By identifying unauthorized device swaps, businesses can ensure that employees do not misuse corporate plans for personal devices, helping maintain security and control expenses.

OTHER RELATED APIs

Location Verification API

SIM Swap API

Number Verification API

SECTOR	ICT SERVICES SOCIAL & CUSTOMER ENGAGEMENT
SERVICE	AUTHENTICATION AND FRAUD PREVENTION

DEVELOPER NEEDS

- Policy Enforcement: Ensure employees use corporate SIMs only on approved devices.
- Expense Control: Monitor usage of business plans to avoid unnecessary charges.
- Data Security: Reduce the risk of data breaches from unauthorized devices accessing corporate accounts.

Case Studies

COMING SOON

04

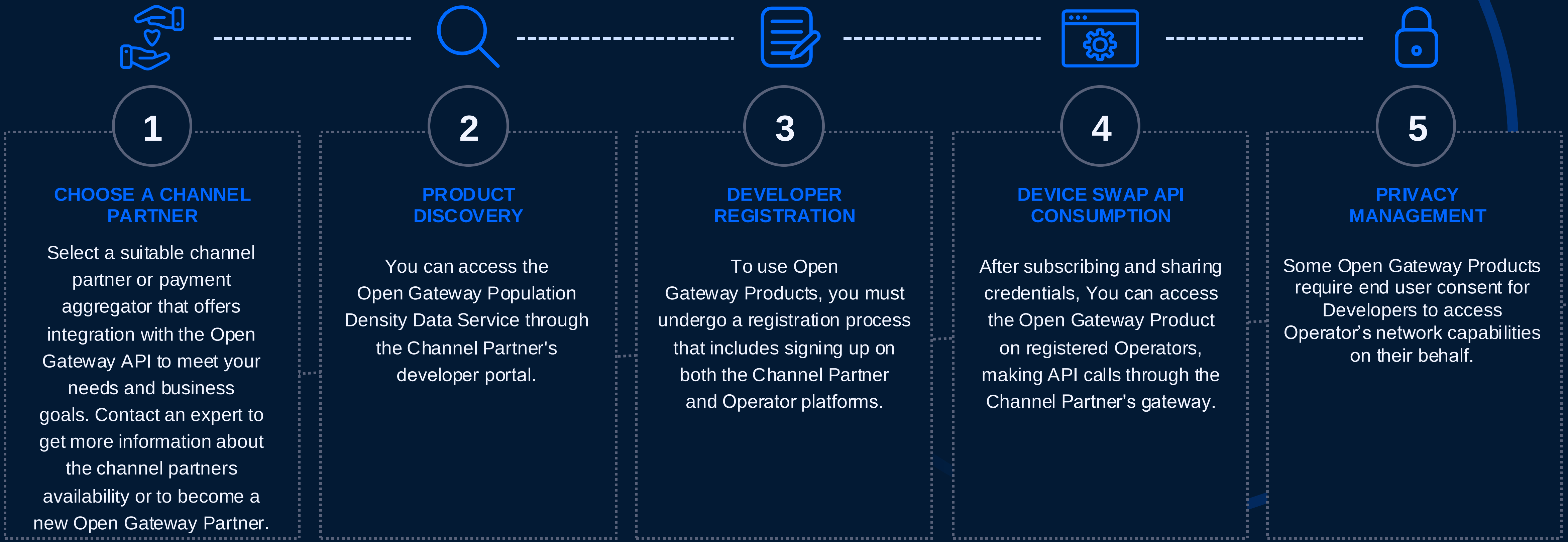
Getting Started

05

Getting Started with Device Swap API

Harness the power of Open Gateway and seamlessly integrate our API services into your app

Follow these initial steps for seamless API services to Developers within Channel Partners' environments, including Operators API Services integration for a cohesive product experience and efficient collaboration among stakeholders.



1

CHOOSE A CHANNEL PARTNER

Select a suitable channel partner or payment aggregator that offers integration with the Open Gateway API to meet your needs and business goals. Contact an expert to get more information about the channel partners availability or to become a new Open Gateway Partner.

2

PRODUCT DISCOVERY

You can access the Open Gateway Population Density Data Service through the Channel Partner's developer portal.

3

DEVELOPER REGISTRATION

To use Open Gateway Products, you must undergo a registration process that includes signing up on both the Channel Partner and Operator platforms.

4

DEVICE SWAP API CONSUMPTION

After subscribing and sharing credentials, You can access the Open Gateway Product on registered Operators, making API calls through the Channel Partner's gateway.

5

PRIVACY MANAGEMENT

Some Open Gateway Products require end user consent for Developers to access Operator's network capabilities on their behalf.

Documentation

06

Official Device Swap CAMARA API Documentation

Over CAMARA

CAMARA is an open-source project within Linux Foundation to define, develop and test the APIs. CAMARA works in close collaboration with the GSMA Operator Platform Group to align API requirements and publish API definitions and APIs. Harmonization of APIs is achieved through fast and agile created working code with developer-friendly documentation. API definitions and reference implementations are free to use (Apache2.0 license).

Camara is supported by:

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Microsoft
NOKIA
orange
T Mobile
ALEPH ZERO
CableLabs
CENTILLION
Charter
INDY
invia
OpenID
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startelogic
stechs
SUMMIT
swisscom
syniverse
TATA ELXSI
TELUS
TIM
TruSense
UNRYO
VIRTUS
VROMBR
wray castle
Whale Cloud
xacria
SECURITYPULSE
XFLOW
ZTE

Meetings

- Regular Virtual Meetings
- Bi-weekly on Wednesdays
- 14:00 to 15:00 CET

CCB (Subproject)

✓ CAMARA Device Swap GitHub

FAQs

07

Device Swap API FAQs

What is the CAMARA Device Swap API?

The Device Swap API is a standardized technology solution that allows developers to integrate the detection and management of device swaps into their applications. It provides real-time insights into whether a SIM card (and associated phone number) has been moved to a new device, enhancing security and ensuring a seamless user experience.

How does the Device Swap API work?

The API works by interacting with mobile network data to monitor device-related activities. Specifically, it detects changes in the association between a phone number (MSISDN) and a device (IMEI). Upon detecting a device swap, the API can trigger notifications or provide timestamp information, allowing businesses to respond with appropriate measures.

What are the benefits of using the Device Swap API?

The Device Swap API enhances security and user experience by detecting unauthorized device changes, strengthening fraud prevention, and improving verification during logins or transactions. It ensures seamless device transitions for users while also enabling personalized marketing campaigns based on device usage changes.

In which use cases can the Device Swap API be applied?

The Device Swap API is versatile, supporting fraud prevention in banking, securing device transitions in telecommunications, enabling targeted marketing campaigns in retail, and ensuring compliance in enterprise IT for corporate device management.

How does the Device Swap API prevent fraud?

By monitoring and analysing device-related activities, the API detects unauthorized SIM-to-device pairings or abnormal device changes. These insights allow businesses to flag suspicious activities, enforce additional authentication measures, and protect user accounts or sensitive transactions.

How does the Device Swap API enhance user experience?

The API enhances user experience by enabling smooth transitions when users legitimately switch devices. It allows businesses to sync data, preferences, and settings seamlessly while protecting accounts from unauthorized access, reinforcing user trust and satisfaction.

Device Swap API FAQs

How does the Device Swap API integrate with existing security measures?

The Device Swap API complements existing security measures by adding an additional layer of protection. It integrates with authentication mechanisms such as 2FA or risk-based authentication systems to provide more robust defences against fraud or unauthorized access.

Can the Device Swap API be used in combination with other security solutions?

Yes, the Device Swap API can be combined with other Open Gateway APIs such as SIM Swap, Number Verify, and Device Location. Integrating multiple APIs enables a comprehensive security ecosystem, providing superior fraud detection and account protection.

Does the Device Swap API support subscription-based notifications?

Yes, the Device Swap API can provide updates when a device swap event is detected. This allows businesses to respond accordingly, such as reinforcing security measures, requesting additional authentication, or adjusting user permissions as needed.

What is the benefit of early detection through the Device Swap API?

Early detection helps mitigate risks by identifying suspicious device changes before they escalate into unauthorized actions. Businesses can prevent financial losses, reduce security breaches, and maintain customer trust through proactive measures.

Can early detection minimize reputational damage?

Absolutely. Early detection minimizes reputational risks by preventing high-profile security incidents. Businesses can avoid negative publicity, mitigate customer dissatisfaction, and maintain their brand's positive image.

How does the Device Swap API support regulatory compliance?

The API helps businesses comply with data protection regulations such as GDPR, LGPD, and financial security standards by enabling secure identity verification and fraud prevention. It operates within a privacy-first framework, ensuring that sensitive data is handled responsibly and in compliance with legal requirements.

Further Information

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Further information

Join our Developer Hub

Join the **Telefónica Open Gateway Developer Hub** to test our APIs, develop use cases with the power of the network and improve user experiences.

Enroll our Partner Program

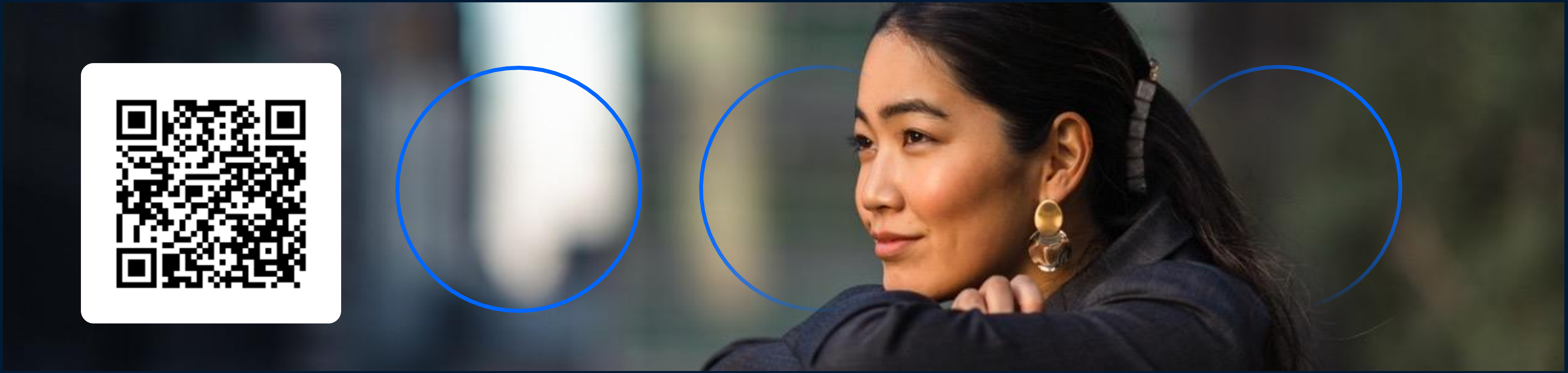
If you are interested in the potential of Telefónica Open Gateway and you are willing to collaborate with us, you can **enroll our exclusive Partner Program**.

Subscribe our newsletter

Find out all about the latest of Telefónica Open Gateway in our **newsletter**.

Contact our experts

If you have any questions about the initiative, don't hesitate to **contact our experts**.



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