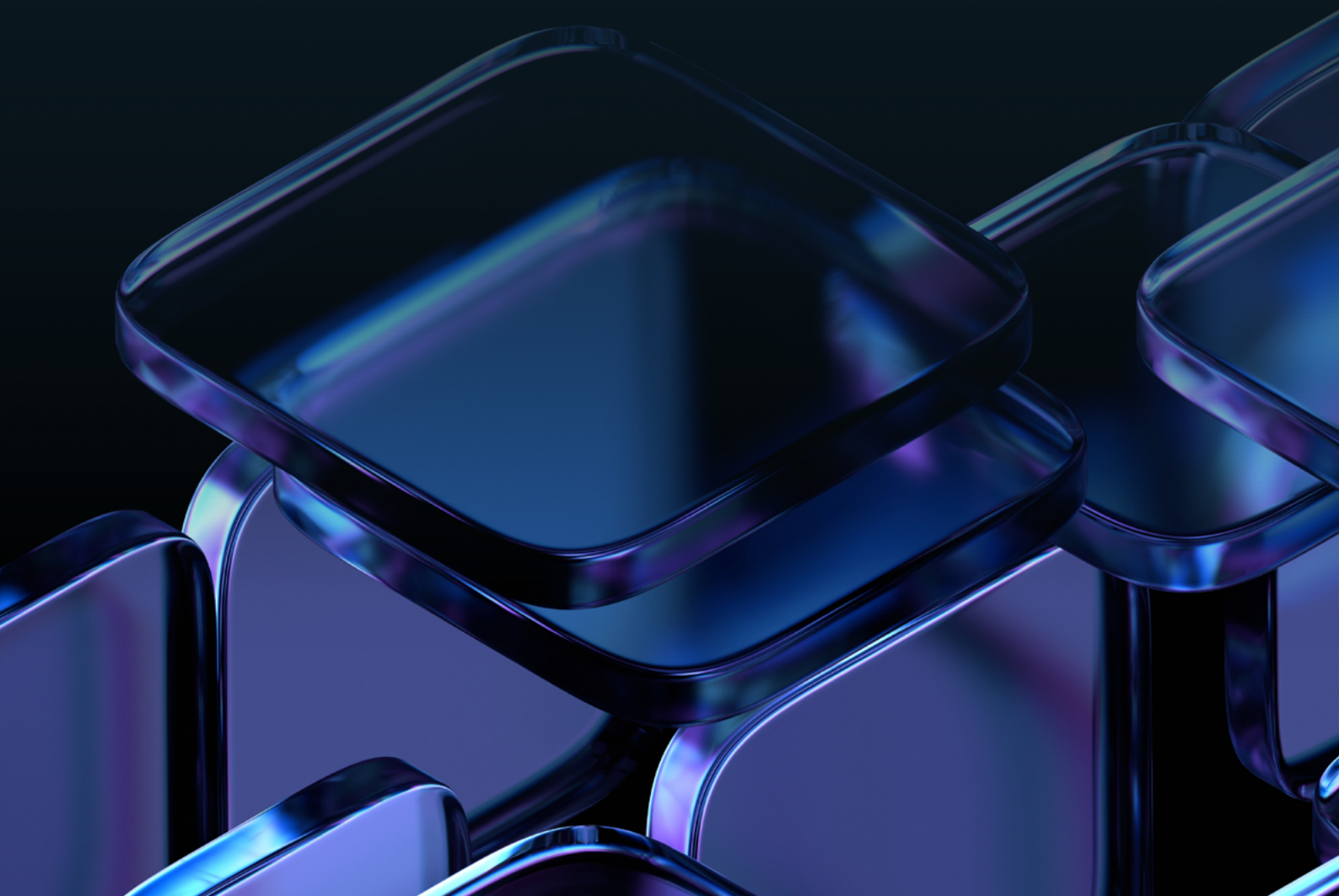




Whitepaper

# **The Next Frontier: eSIM as a Digital Distribution Channel**



Douglas Adams once observed that people “are stuck with technology when what we really want is just stuff that works.” eSIMs fit that description perfectly: effective, seamless, and transformative, yet still perceived as complicated to use.

But what if businesses approached them differently?

Instead of selling eSIMs as a product needing to be explained, what if brands embraced this technology as an invisible layer? In doing so, what if eSIMs offered an experience so intuitive that users barely notice it's there?

**The global eSIM market is projected to grow by 440% by 2028. Whoever integrates an “easy mode” for eSIMs can capture that growth, build long-term loyalty, and make eSIM the cornerstone of a larger digital ecosystem, creating a super-app that users will return to again and again.**

In this model, connectivity is no longer a one-time transaction. It becomes a consistent channel: the first connection when someone lands abroad, the thread that ties users to your app ecosystem, and the platform for deeper engagement over time. In other words, a service with truly universal potential.

## **This whitepaper explores:**

### **From roaming add-on to infrastructure:**

Why traditional eSIM positioning limits adoption, and how invisible architecture changes the game.

### **Invisible connectivity in action:**

How app-first provisioning, zero-rated usage, and universal profiles create seamless user experiences.

### **Business benefits:**

From owning the arrival moment to unlocking new revenue streams, richer insights, and ESG value.

### **Enabling technology:**

How cloud-native, API-driven platforms make invisible eSIM possible at a global level.

### **Implementation guidance:**

Where to embed provisioning, how to design tiered models, and how to support users at scale.

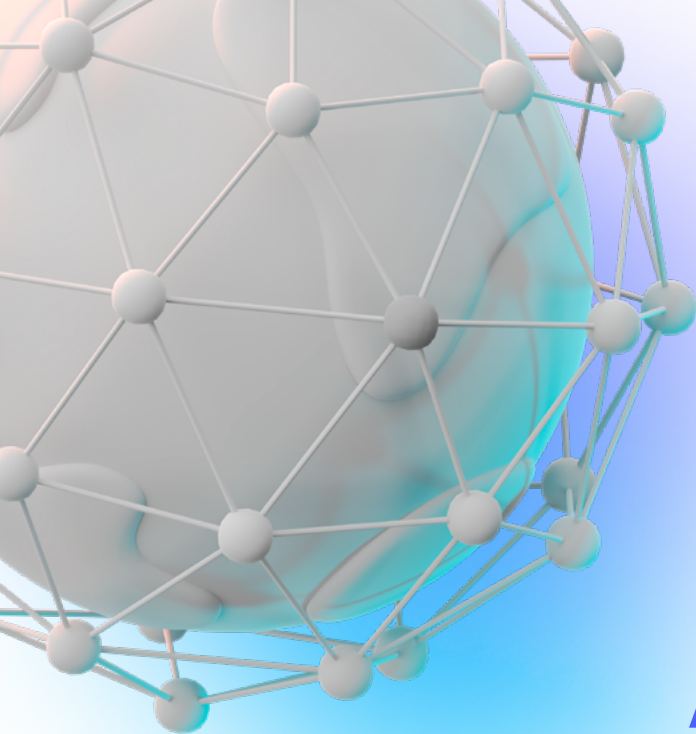
### **Illustrative scenarios:**

How travel super-apps, fintech wallets, and hospitality brands are already turning connectivity into a competitive edge.

### **Future roadmap:**

The next wave of opportunities – from IoT and wearables to digital identity and new industries beyond travel.

By rethinking eSIM as infrastructure, enterprises can position themselves strongly in a market on the precipice of immense change.



## From Roaming Add-On to Strategic Infrastructure

In travel contexts, many mobile users continue to rely on traditional data roaming, despite the higher costs and weaker service that these plans provide. Worse, 39% of travelers do not use data abroad, becoming [silent roamers](#). Limited internet access is inconvenient for users and enterprises, who are unable to communicate with each other, reducing customer satisfaction and retention rates.

eSIM technology makes international data cheaper, easier, and better for consumers, yet penetration has not met expectations. Why? Currently, eSIM providers tend to sell connectivity as a freestanding product. This approach is successful with tech enthusiasts and business travelers, who are particularly proactive and clued in. Still, it overlooks a key truth: most people [don't know what eSIM is](#), let alone that their device supports it.

**App-first provisioning is a promising mechanism for eSIM delivery. Instead of asking users to buy or activate a roaming plan, an app can include its own branded connectivity the moment it's installed. The eSIM profile connects only what matters (the app itself) so users enjoy zero-friction access without extra steps. Networking complexity disappears into the background, while the brand owns the experience from the very first tap.**

Ultimately, the goal of making eSIM architecture invisible is to allow users to interact only with the benefits of connectivity, not manage its complexity. This shifts the focus from encouraging consumers to understand eSIM to ensuring they never have to.





# Invisible Connectivity: Your App, Everywhere

What would invisible connectivity mean for users and businesses?

## **Instant connection**

eSIM technology lets apps give users the right profile as soon as they install it, so connectivity is included from the very first interaction.

Connectivity can be restricted to the app itself, or activity in the app could be zero-rated and made free. To the consumer, international usage feels like an unexpected perk. For super-apps, this means reaching silent roamers the moment they land, and creating a captive audience for upsell and cross-sell.

## **Persistent presence**

A brand-based eSIM profile keeps the

connection live long after the first use, embedding the app into the device at a network level.

That presence enables continual touchpoints (e.g., usage notifications, upsells, location-aware services, support) over time, without asking the user to log in again or engage.

Connectivity becomes a retention engine: low friction for users, high lifetime value for brands.

## **Buy it for life – Telna’s universal eSIM**

With Telna, users don’t need a new plan for every trip. One universal eSIM profile works worldwide, with on-demand packages activated whenever required.

This model creates “stickiness” similar to a long-term mobile contract, solving the churn issues travel eSIM providers face today.



# Benefits for your Business

Embedding eSIM functionality into your app is a powerful lever for driving deeper user engagement, improving retention, strengthening brand identity, and unlocking new revenue streams.

## 1. Own the arrival moment:

Activation of eSIM on arrival allows platforms to be the first connection a user makes in a foreign country. This early engagement builds immediate trust, encouraging continued use while traveling, and enables opportunities to promote other functions of your app – such as ride-hailing, booking local experiences, buying travel insurance, or hotel check-in – exactly when a customer is most interested.

## 2. Customer loyalty and retention:

Apps can foster repeat usage and trust by providing a seamless and intuitive connectivity experience. Users who were not previously aware of eSIM functionality are unlikely to shop around for other connectivity options once they receive a seamless, convenient method through an app they rely on, allowing you to capture a captive audience by broadening provision to this segment of the target market.

## 3. Rich customer insights:

With user consent, anonymized data on usage patterns and location can power smarter segmentation and contextual offers. This

enables more relevant marketing and higher conversion rates compared to generic loyalty campaigns or static audience targeting, strengthening your understanding of the markets for your business' other offerings.

## 4. New revenue streams:

Integrating eSIM services opens a range of monetization opportunities for organizations not previously involved in telecommunications. This includes premium connectivity tiers, sponsored data access (e.g., for partner apps), co-branded packages with telecoms, and potential revenue sharing from ongoing usage. Non-telecoms organizations can then access their features without building the infrastructure themselves.

## 5. Brand differentiation and ESG appeal:

Offering eSIM connectivity positions your brand as modern, customer-centric, and eco-conscious. Unlike physical SIM cards, eSIMs eliminate plastic waste and packaging, aligning with sustainability goals and providing a valuable talking point in ESG reporting and marketing.

By embedding eSIM functionality, your business can demonstrate added value to users in an unprecedented way, facilitating seamless experiences that turn transactions into long-term relationships.



## Illustrative Scenarios

To understand what the next frontier of eSIM might look like in real life, imagine the first row of an international flight in 2027.

### Travel Super-App

**In the window seat** sits an avid traveler who loves exploring new places and getting the best deals: she used a travel app to find her next destination and book flights, as [850 million](#) people did in 2023. This super-app bundled flights, accommodation, transport, and eSIM-based connectivity into a single, tap-to-purchase package.

Consumers love it because it provides complete transparency on how much their holidays have cost them and reduces

confusion over dealing with several providers while in a foreign country. In return, the app receives a loyal, repeat customer who buys into all its services, as well as an option to advertise local experiences and other upsells through direct device notifications.

### Fintech Travel Wallet

**In the middle seat** is a digital nomad served by a modern neobank. His bank offers a borderless financial experience powered by integrated eSIM, tailored for the [millions of](#)



[remote workers](#) globally. By embedding eSIMs directly into the banking app, the neobank ensures its customers have uninterrupted access to real-time balance updates, FX conversion, and insurance, removing the friction that typically disrupts cross-border banking.

Because the eSIM profile ties the user persistently to the app, the bank gains a “stickiness” usually reserved for traditional banks with physical infrastructure. That loyalty translates into greater pricing power: the neobank can charge competitive margins on FX conversions and premium services, while still delivering a seamless digital-first experience.

## Hospitality brand

**In the aisle seat**, a grandmother is traveling to a resort managed by an innovative hospitality brand. This hotel chain has adopted eSIMs as part of its digital guest experience strategy.

Guests are issued hotel-branded eSIMs tied to their booking profiles. The eSIM attaches a profile to each phone that corresponds with the specific room booked to enable mobile check-in and room access, doing away with flimsy hotel key cards and long waits at reception. Further, the app also includes an in-built communication platform, facilitating constant connection between staff and guests through zero-rated data.

For the brand, this means fewer support calls, reduced check-in queues, and a richer data profile of guest preferences. Premium data plans can be offered as upsells or loyalty perks, creating luxe experiences for higher-tier guests while opening up additional revenue opportunities.





# The Technology that Enables Invisible Architecture

Delivering seamless, embedded eSIM connectivity requires a powerful, flexible, and deeply integrated technical framework beneath the surface.

Telna has built exactly that, providing a cloud-native, fully digital platform designed to power the invisible architecture that makes eSIM truly effortless for users, while giving businesses total control behind the scenes.



## Cloud-native, global core

Telna's multi-IMSI core is modular and app-native, designed for global reach and high availability. Brands can launch connectivity anywhere, instantly, without needing to build telecom infrastructure.



## API- and SDK-driven provisioning

Through Telna's APIs and SDKs, eSIM profiles can be pushed directly to a device without a manual setup or QR codes. For businesses, integration is straightforward. For users, activation is instant.



## App-specific data controls

Brands can define exactly how connectivity is used: zero-rating certain domains, limiting data to the app, or offering tiered packages. This flexibility unlocks new business models like sponsored data and premium subscriptions.



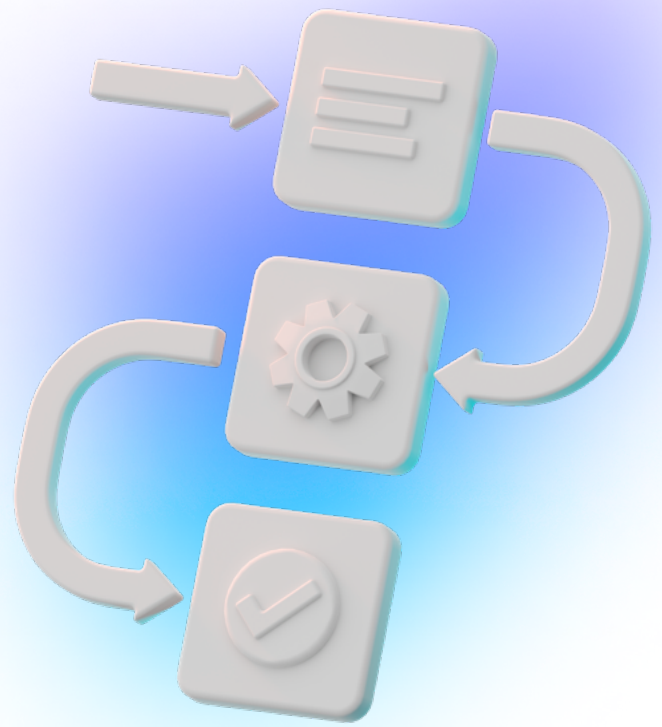
## Security and compliance built in

Telna manages the complexity of international compliance, data privacy, and GSMA standards across markets. With telecom-grade security and a proven regulatory track record, businesses can innovate with confidence.

Telna makes eSIM simple to implement and invisible to the end user, powering a new class of apps that just work, everywhere.

# Implementation Considerations

Successfully integrating eSIM into your product requires thoughtful assessment of user flows, support frameworks, and business goals. A good provider will assist you in this journey by minimising friction and building in flexibility so you can offer the best customer experience possible. Here are a few potential points to consider when looking to offer eSIM.



## 1. User Experience:

Where in the customer journey should eSIM provisioning happen?

The point during a user flow where eSIM provisioning would be best placed is highly dependent on your app's purpose and target market. Whether during onboarding, at checkout, or triggered by a specific event (e.g., arriving in a new country), Telna enables seamless integration through robust APIs and SDKs. The goal is zero user confusion, just instant, intuitive connectivity.

## 2. Flexible Provisioning Models:

How should we provide eSIM?

The specificities of your business will determine the connectivity options you offer consumers. Advanced eSIM service providers, like Telna, support multiple provisioning models, such as automatic activation, user-triggered flows, or hybrid models. You can also consider creating tiered profile offerings (e.g., free basic connectivity, paid premium tiers) and managing them through your provider's platform.

## 3. Operational Support:

Will there be troubleshooting support for users?

Connectivity issues require a responsive support system. Businesses should prepare for operational issues by looking for a partner with a strong track record of provision. Further, ensure end-to-end support infrastructure, including tools for troubleshooting, diagnostics, and customer service training, to resolve user issues quickly.

## 4. KPIs and Analytics

How can we learn from usage patterns?

User interaction with eSIM can teach you a great deal about your business. Find a partner who allows you to tailor analytics according to the metrics most relevant to you, and provide you with real-time data presented intuitively.



# Roadmap and Future Opportunities

The vision laid out above is just the beginning of eSIM's future. As it becomes more mainstream and user expectations shift toward frictionless experiences, the opportunities exceed travel; invisible, app-native infrastructure can revolutionize processes and industries far beyond current use cases.

## IoT and wearables

The Internet of Things (IoT) is critically linked to eSIM – with the development of invisible architecture, the relationship between the two will deepen.

Personal devices with eSIM compatibility, from smart luggage trackers to access keys to watches, can extend digital connectivity far beyond the smartphone. These devices can automate tedious processes, update in real-time, and tailor their services: app-native eSIM grants users heightened flexibility and control around what their smart devices provide.

## Digital identity convergence

Combined with Mobile Identity technology, eSIM-enabled devices could evolve into tokens, allowing users to authenticate, access

services, and manage preferences regardless of where they are or what they have with them.

This could transform vehicle rental, financial services access, and healthcare provision, radically simplifying stressful situations for user and provider both.

## Beyond travel

Such changes will not only impact the world of travel, which is currently the largest use case for eSIMs on an individual level, but also other verticals where persistent, device-level connectivity is essential. For example, gaming platforms with free in-app play, healthcare providers offering remote monitoring, or retail apps embedding connectivity into loyalty programs.

The roadmap ahead is about more than just coverage and convenience: we are on the cusp of the next generation of connected experiences, happening everywhere, in any possible form.



# Conclusion

Countless players in the telecommunications space have forecasted eSIM as the future of travel and travel-adjacent brands because of its clear benefits to users and businesses. Confusion and lack of awareness have delayed this new dawn in travel, but by integrating invisible eSIM architecture into your provision, you can take the reins.

If you're interested in positioning yourself at the frontier of telecoms tech, contact Telna's solutions team today to find out what we can make possible together.



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## About Telna

Telna is a global leader in providing managed wholesale eSIM platforms to MNOs, MVNOs, and other telecom providers. Telna's platform enables seamless eSIM activation, management, and connectivity across multiple devices and networks, offering innovative solutions that drive scalability and revenue growth for its partners. With the largest global eSIM platform, 35+ roaming partners, 10 points of presence, and coverage in more than 200 countries (and growing), Telna delivers unmatched reach and reliability.



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**info@telna.com**