

The world is how we shape it

sopra  steria

2026

The Mobile Lifeline



Intro

The beating heart of future-ready digital services

Imagine this: you're on your way to an important meeting. You reach into your pocket and realise... there's nothing there. Your phone is still at home. The slight sense of panic that follows isn't about missing a message or being unable to catch up on the news. It's about feeling disconnected.

Without that device, you can't pay for parking, recalculate your route when traffic builds up, check your bank balance, unlock your front door, carry out your work, or be reached by your family.

The Remote Control for Our Lives

Over the past decade, the smartphone has evolved from a communication device into the remote control for our daily lives. For today's consumers, mobile is no longer simply "another channel". It is the primary lifeline for interacting with the world.

Whether dealing with government services, banking, healthcare or retail, we expect to manage everything ourselves, whenever and wherever we choose. As a result, mobile development has evolved from a marketing feature into a business-critical capability.

The Bar Has Never Been Higher

This level of dependence places enormous responsibility on organisations. The question is no longer "Do we have an app?" but rather, "Is our digital service resilient enough to function as a lifeline?"

- For today's consumers, mobile is no longer simply "another channel". It is the primary lifeline for interacting with the world. —

Intro

Accessibility & User Experience

Digital services must work for everyone, regardless of ability.

Security

Privacy and data integrity are prerequisites, not optional features.

Performance & Efficiency

An app that drains the battery or feels sluggish will simply be deleted.

Key Numbers:

£100 to
£1,000+

Consumers invest hundreds-sometimes thousands-of pounds in premium devices such as flagship smartphones and foldables.

3 to 5

People are actively using and managing three to five connected devices (the 2020s).

From Monolith to Modular Ecosystem

At the same time, the landscape is becoming increasingly complex. The mobile experience no longer ends with the rectangle in our hands. It now extends to the smartwatch on our wrist and the dashboard in our car.

To fulfil this role as a genuine digital lifeline, organisations can no longer rely on a standalone mobile app. Instead, they must embrace a channel-agnostic approach: an architecture built from modular components, supported by a central Design System.

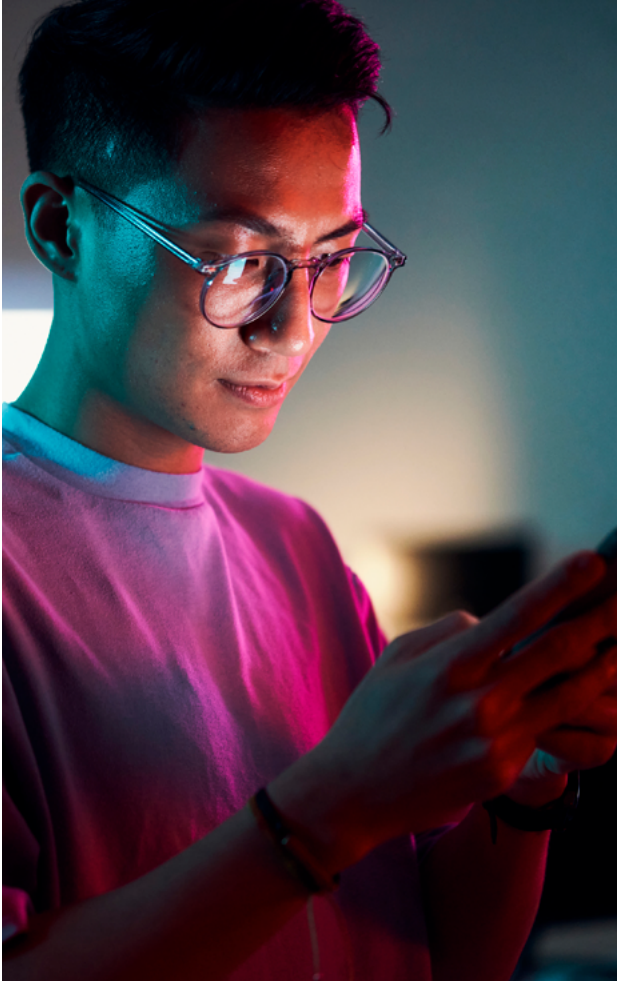
Only then can organisations deliver the same high-quality, secure and personalised experience, regardless of whether users log in via a smartphone, foldable device, tablet or tomorrow's smart glasses.

Consumers invest hundreds-sometimes thousands-of pounds in premium devices such as flagship smartphones and foldables. Naturally, they expect an experience that matches that investment. Meeting those expectations requires more than cutting-edge hardware; it demands an ecosystem that is every bit as sophisticated as the devices themselves.

In this whitepaper, we explore how organisations can make the transition from "mobile as an additional channel" to a mobile lifeline that is ready for the future.

The One-to-Five Reality: Designing for a Continuum of Experiences

We have moved from households sharing a single computer (the 1990s), to individuals owning a single smartphone (the 2010s), to people actively using and managing three to five connected devices (the 2020s). For mobile development, this means we can no longer optimise for a single screen or device. Instead, we must design for a continuum of experiences-modular, portable and channel-agnostic.



01

From device-centric to context-perfect

Beyond the Rectangular Screen

The days when mobile development meant designing an interface for a five- or six-inch rectangular display are behind us. The mobile lifeline is branching out. We are moving from a single-device world to a multi-touchpoint ecosystem. The screen is no longer a fixed frame but a flexible canvas that adapts to the user's context: on the wrist, in the car, folded into a pocket, or even projected directly onto the retina. To remain relevant, we must stop designing for individual devices and instead design for the context in which interactions take place.

96%

of people aged 12 and over in the Netherlands own a smartphone. Like running water, it has become an everyday necessity.

02

The evolution of form factors: foldables & flexible devices

A Layout for Every Situation

A user may begin a task on the small external display—for example, checking a notification—and then unfold the device to view more detailed information. The application must seamlessly adapt without reloading, instantly optimising its layout for the larger screen.

Multi-Window & Productivity

On larger, unfolded displays, users increasingly run multiple apps side by side. Your application is no longer the sole owner of the screen but must function as one component within a broader workspace.

The rise of foldable and flip phones requires a fundamentally different approach to screen real estate. These are not simply larger smartphones—they are devices that change shape, requiring interfaces that can intelligently adapt to an expanding canvas.

Fact Snippets

Around 96% of people aged 12 and over in the Netherlands own a smartphone. Like running water, it has become an everyday necessity.

- Industry analysts predict that Head-Mounted Displays (HMDs) will follow a **growth trajectory by 2030** similar to that of tablets after 2010. The question is no longer if they will become mainstream, but *when*.
- Ownership of smartwatches and fitness trackers in the Netherlands has **doubled over the past five years**. Today, approximately one in four Dutch people wears a wearable device.
- **Nearly 98%** of newly sold cars in Europe now support Apple CarPlay or Android Auto.



03

Extensions of the lifeline: wearables & automotive

The smartphone will often remain the central hub—the computer in your pocket—but the interface increasingly shifts to connected devices at the edge of the ecosystem. In these contexts, one principle applies above all else: Less is more.

Wearables (Smartwatches)

Wearables are all about glanceability. Users typically look at their smartwatch for just two to five seconds at a time. Interactions therefore need to be micro in nature: checking an account balance, approving a two-factor authentication request, or viewing a push notification.

- Wearables are all about glanceability. Users typically look at their smartwatch for just two to five seconds at a time. ■

Automotive (Android Auto & Apple CarPlay)

The car has effectively become a mobile device on wheels. Digital services such as parking apps, navigation, podcasts and even meeting applications are now integrated directly into the dashboard. In this environment, safety and voice control take priority. Visual distraction must be reduced to an absolute minimum.

98%

nearly 98% of newly sold cars in Europe now support Apple CarPlay or Android Auto.

04

The future of interaction: beyond the touchscreen

Voice First

As AI and Natural Language Processing (NLP) continue to advance, voice interaction is becoming a primary interface—not only in the car but also in the home. Applications must no longer be designed solely for visual navigation; they must also be designed to be conversational and voice-enabled.

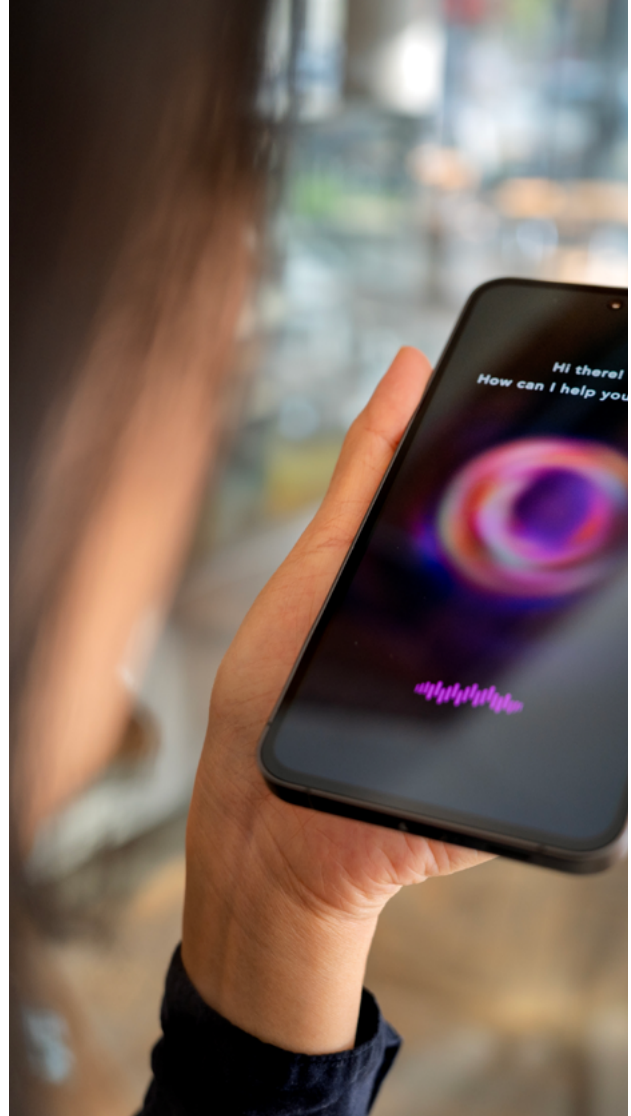
Touchless Interaction

With the arrival of devices such as Apple Vision Pro and smart glasses like Ray-Ban Meta, our gaze becomes the pointer. We select by looking and confirm actions with hand gestures. The interface no longer lives on a screen—it exists within the space around us.

From Screen to Projection

Looking further ahead, the physical display may disappear altogether. Information could be projected onto your hand or into the surrounding environment. Interfaces become entirely data-driven and context-aware.

We stand on the brink of a fundamental shift in the way people interact with technology. The touchscreen is no longer the only method of input. We are moving towards Ambient Computing, where technology fades into the background and presents itself only when it is needed. the context in which interactions take place.



The answer is not to build ten different applications. The answer lies in the architecture.

From Pixel Perfect to Context Perfect

In a rapidly evolving market, it is simply not feasible to develop a dedicated native application for every new device that emerges. The strategy must evolve.

Adaptive Design

We need to think beyond responsive design, which merely scales interface elements. Instead, we should embrace adaptive design, where components fundamentally change according to the device and its context. A navigation menu might appear as a hamburger menu on a smartphone, a tab bar on a tablet, and a voice command in the car.

The Headless Approach

To prepare for interfaces that do not yet exist—such as holographic displays—the business logic must be completely separated from the presentation layer.

A Channel-Agnostic Core

Core functionality—for example, making a payment—should be exposed in an abstract, reusable way, allowing a smartwatch, voice assistant or visual interface to invoke the same capability in the manner best suited to that channel. the context in which interactions take place.

05

Responding strategically to a changing world

How do you build a digital service that works seamlessly on a smartphone, smartwatch, vehicle dashboard and tomorrow's augmented reality glasses?



06

The architecture of scalability

Modular & Channel-Agnostic

Today's reality is hybrid. While mobile has become the primary digital lifeline, traditional channels such as web portals, customer service dashboards and physical service counters continue to play an important role. At the same time, an entirely new—and largely invisible—consumer of digital services is emerging: AI agents. These intelligent assistants perform tasks autonomously on behalf of users and require access to the same data as human users—if not more.

If every channel—mobile, web, service desk and AI—requires its own bespoke integration with back-end systems, complexity quickly becomes unmanageable. Scalability demands a channel-agnostic approach. This means permanently decoupling business logic from user interfaces through a carefully layered architecture for exposing data.

07

The layered API architecture

Rather than creating a tangled web of point-to-point integrations, organisations should establish a foundation built around four architectural layers.

1. System API Layer

This forms the foundation of the architecture. System APIs provide secure, direct access to underlying source systems such as CRM and ERP platforms. They expose raw business data—including filtering and sorting capabilities—without making assumptions about how that data will ultimately be consumed.

2. Process API Layer

This layer orchestrates business processes. It combines multiple System APIs and transforms their data to support specific business domains or workflows. For example, a Customer Onboarding process may combine information from both a CRM platform and an external identity verification service.

3. Experience API Layer

This layer prepares data for presentation. It translates complex business processes into channel-ready data structures that are easy for front-end applications to consume, regardless of the technology being used.

4. Backend for Frontend (BFF)

An optional layer tailored to individual channels. A smartwatch requires a very different level of information density from a comprehensive desktop dashboard. The Backend for Frontend acts as a channel-specific optimisation layer, allowing data to be fine-tuned for a single touchpoint without compromising the generic Experience API.

Event-Driven Self-Service

The same architectural maturity should be applied to asynchronous communication through events and messaging. Rather than applications continuously polling systems for status updates (pull), the business publishes relevant events through a central catalogue. Channels subscribe to those events and respond autonomously whenever something changes (push). This approach not only eliminates duplicate maintenance and significantly reduces the load on back-end systems, but also enables faster, more responsive digital services.

The Catalogue and the Contract

An architecture built on reusable components only delivers value if those components are easy to discover and consume. At the heart of this strategy sits a comprehensive API Catalogue (Developer Portal). Whether the consumer is an internal development team, an external partner or an AI agent, they can use the catalogue to discover available APIs, understand their capabilities, and establish a self-service contract to consume the required data.

08

Fact snippets

Up to 60% of business logic can be reused when launching a new digital channel through a layered API architecture. The result: faster innovation and lower maintenance costs.

One source, limitless channels. Expose your data once through a central platform and effortlessly serve mobile, web, automotive and voice interfaces from the same foundation.

Break down silos. An event-driven architecture prevents vendor lock-in by decoupling systems and enables channels to innovate independently through a self-service model.

Ready for the AI revolution. A layered API strategy makes your data not only accessible to people, but immediately consumable by tomorrow's autonomous AI agents.



60%

Up to 60% of business logic can be reused when launching a new digital channel through a layered API architecture.

09

Choosing the right technology & maximising portability

Once business logic has been decoupled through APIs—the back end—the next strategic question is: which technology should power the user interface? Choosing the right front-end technology always involves balancing performance, development costs and, crucially in a multi-device world, code portability. There is no single universal winner, but every technology choice carries clear architectural implications—particularly in the world of mobile development.

10

The promise—and limitations—of the progressive web app

The Progressive Web App (PWA) emerged several years ago with an attractive proposition: combining the accessibility of the web with the experience of a native app, without relying on app stores.

While PWAs are an excellent solution for lightweight applications, they have yet to replace native applications entirely. The primary reason lies in operating system restrictions imposed by platform providers such as Apple and Google. Deep access to device capabilities—including advanced biometrics, background processing

and seamless push notification services—is often limited or introduced much later for web applications.

As a result, PWAs still fall slightly short of delivering the seamless, premium "digital lifeline" experience expected on high-end devices.

11

Native development: robust, but resource-intensive

Building fully native applications—using Swift for iOS and Kotlin for Android—delivers maximum stability and the deepest possible integration with device hardware. It also minimises reliance on third-party frameworks and ensures immediate compatibility with the latest operating system releases.

The Trade-off: The downside is equally clear: maintaining two separate codebases requires dedicated development teams, duplicated effort and significantly higher maintenance costs.

Predictability: Native development provides exceptional predictability and portability. What you design and build behaves exactly as intended—pixel-perfect—whether it is displayed on an iPhone, an Android foldable or an in-car digital dashboard.

It truly represents "code once, deploy anywhere", with the interface remaining consistent rather than depending on how individual operating systems choose to render standard controls.

Looking Ahead: Although maintaining two native codebases remains a challenge for many organisations today, the emergence of agentic development—where AI-powered software agents generate, synchronise and maintain large portions of application code—has the potential to significantly reduce this burden.

As AI becomes increasingly capable of orchestrating changes across multiple native codebases, fully native development may once again become an increasingly attractive option for scalable digital ecosystems.





13

Flutter: drawing directly on the canvas (A Portability Powerhouse)

When considering the future of truly channel-agnostic user interfaces, Flutter stands out because of its fundamentally different architectural approach. Where most cross-platform frameworks translate interface components into native operating system controls, Flutter takes an entirely different path.

Device-Agnostic by Design: Flutter eliminates the translation layer altogether. Instead, it uses its own high-performance rendering engine to draw the interface directly onto the device's graphics canvas. This gives developers full control over the user experience, regardless of the underlying operating system.

12

React native: bridging the gap between web and mobile

For organisations with a strong web development heritage, **React Native** represents a compelling choice. Built upon the React ecosystem, it creates a natural bridge between web and mobile development. It enables a high degree of reuse, allowing components from a central Design System to be shared relatively easily between websites and mobile applications.

The Challenge: React Native relies on a translation layer—the **bridge**—to convert React code into native iOS and Android components. This translation process can occasionally introduce inconsistencies in the user interface, as Apple and Google render their native components differently. It may also affect performance when handling highly dynamic or graphically intensive interfaces.

14

The portability test

The true measure of success in a modular ecosystem is reusability across fundamentally different touchpoints. Can the code powering a complex onboarding form or identity verification journey be transferred effortlessly to an entirely new environment?

How much adaptation is required before a component originally designed for a smartphone performs flawlessly on a smart thermostat, an in-store kiosk or another emerging device? It is precisely under these demanding portability scenarios that a canvas-driven framework such as Flutter currently demonstrates its strategic value.

15

Building modularly: a flexible front end

Composable Architecture

We now have a layered API architecture that exposes business capabilities cleanly and consistently, alongside a carefully selected front-end technology that delivers both performance and portability. The next question is: How should we construct user interfaces and functionality to maximise adaptability in a rapidly changing digital landscape?

The answer requires a decisive break from the past. We must leave behind the monolithic application—the rigid software model in which even the smallest change requires a complete application update, extensive regression testing and lengthy app store approval cycles.

From Monolith to Orchestration

Within a monolithic application, every component is tightly coupled. A defect in the customer profile module can inadvertently disrupt the payment journey. In today's market—where new devices emerge rapidly and customer expectations evolve continuously—that lack of agility presents an unacceptable business risk. Instead, organisations should embrace a Composable Architecture. Rather than viewing an application as a single block of code, it becomes an orchestration of independent, interchangeable building blocks.

Micro Frontends & Modular Capabilities

Inspired by microservices in the back end, micro frontends we divide the user interface into independent functional domains. Examples include dedicated modules for Customer Onboarding, Profile Management, Transactions.

Autonomy and Speed: These functional domains can be developed, tested and updated by independent teams. If new privacy legislation is introduced, for example, only the consent management module needs to be updated, without putting the rest of the application at risk. This dramatically reduces the time to market for new features.

Maximising Reuse: The Intelligent Building Block

The true strength of modular capabilities becomes apparent when they are reused across multiple applications and channels.



Identity and Payments: An Example: Imagine you have developed a highly effective identity verification module—complete with ID scanning, biometric authentication and liveness detection—or an exceptionally secure payment module. In a traditional architecture, you would build these capabilities for your consumer application and then repeat the entire process for your business application or employee portal.

The Modular Reality: Within a composable architecture, these capabilities are packaged as standardised, independent modules. Complex functionality is built only once and can then be effortlessly plugged into multiple applications and channels.

Designed for a Rapidly Changing Landscape

This architecture provides the ideal response to the fast-moving world of digital services. If a new foldable device with an entirely different screen aspect ratio enters the market next year, there is no need to rewrite the entire application. Only the presentation components within the relevant modules need to be adapted.

This approach also guarantees consistent levels of security and quality across the ecosystem. A security update or performance improvement made to the central identity module is automatically inherited by every application that uses it. The result is a front-end ecosystem that is highly maintainable, inherently scalable and capable of adapting with surgical precision to tomorrow's requirements.

— We must leave behind the monolithic application. —

16

Single source of truth: the design system

The Visual Backbone

If the modular architecture—with its APIs and micro frontends—forms the muscles and organs of the digital ecosystem, then the Design System is its backbone. It provides the framework that holds the entire ecosystem together, both visually and functionally. When independent components are distributed across countless screens, devices and channels, inconsistency becomes a genuine risk. Within a composable architecture, a robust Design System acts as the undisputed Single Source of Truth.

One Language: From Static Guide to Living Code

A mature Design System is fundamentally different from a traditional PDF style guide. Instead, it is a living library of reusable coded components and design tokens—centrally managed variables governing colours, typography, spacing and other visual properties.

Bridging Design and Development: The Design System ensures that designers and developers speak exactly the same language. If a designer updates the Brand Primary colour, that change automatically propagates through the design tokens into the codebase of every connected application. This eliminates interpretation errors, significantly accelerates time to market and makes maintaining multiple digital channels considerably simpler.

A Seamless Brand Experience Across Every Touchpoint

Perhaps its greatest strategic value is the ability to preserve a consistent brand identity across the entire digital landscape. Whether a customer is analysing a complex dashboard on a desktop, submitting an application on a smartphone, or approving a request on the limited screen space of a smartwatch, the interaction should feel unmistakably familiar. The Design System guarantees that consistency, regardless of device or channel.

Designed for Touch: Feedback and Micro-Interactions

In a mobile-first world, design is about far more than appearance—it is about behaviour. Mobile devices are fundamentally touch-based, requiring a completely different interaction model from traditional mouse-and-keyboard interfaces.

Tactile and Visual Feedback: The Design System defines interaction patterns centrally. What happens when a user presses a button? Does it display a clear pressed state? Is subtle haptic feedback provided? Are loading animations consistent throughout the application? By embedding these micro-interactions directly into reusable components,

every application within the ecosystem immediately feels familiar, responsive and premium.

Accessibility by Design (WCAG Compliance)

With the introduction of the European Accessibility Act (EAA), digital accessibility is no longer an ethical aspiration—it is a legal requirement. Retrofitting accessibility across dozens of independent applications and websites is both costly and extremely difficult.

Accessibility Built In: This is where the Design System demonstrates its greatest value. By designing every component from the outset in accordance with the Web Content Accessibility Guidelines (WCAG), accessibility is embedded at the source. This means:

- Colour contrast ratios consistently meet accessibility standards.
- Input controls are fully compatible with screen readers.
- Touch targets are always large enough for users with reduced motor control.
- Keyboard and assistive technology support are built in by default.

When developers use components from the Design System, they inherit accessibility and security automatically. A robust Design System provides the consistent building blocks that future autonomous AI agents can safely use to generate new interfaces at scale.

Preparing for an AI-Driven Future (Agentic UI)

A further—and potentially revolutionary—benefit of combining a rigorous Design System with a modular architecture is that it prepares organisations for the next generation of software development: AI-driven user interface generation. We are moving towards a future in which AI does more than generate code. It will autonomously create new user interfaces and application extensions in real time, tailored to each user's context.

A mature Design System makes the safe adoption of these AI agents significantly easier. Just like human developers, AI agents receive validated, standardised building blocks in the form of approved design tokens and reusable components. The AI no longer needs to invent colours, spacing or button styles. Instead, it assembles interfaces exclusively from your organisation's approved building blocks. This gives organisations complete confidence that every AI-generated interface is secure by default, fully accessible and perfectly aligned with the brand experience.

17

Respect for the user

We may have created a scalable architecture and a highly adaptable interface, but technological excellence is meaningless if it ignores the human experience. The smartphone is the most personal device we own. It travels everywhere with us, sits beside our bed at night and knows our finances, our health, our location and much more.

When someone installs your application or uses your digital service, they are inviting you into that personal space. That privilege demands respect. Within mobile development, we often refer to hygiene factors. These are not exciting features that differentiate your product—they are the fundamental expectations users simply assume will be met. Fail to meet them, and your application will be uninstalled without hesitation.

Respect for the Device: Performance and Efficiency

Consumers invest hundreds—often thousands—of pounds in premium smartphones and wearable devices. As a result, they are highly critical of how applications make use of that expensive hardware.

Battery Life and Data Usage Are Valuable Resources: An application that rapidly drains the battery through inefficient processes or excessive background synchronisation is unlikely to remain on a user's device for long. The same applies to unnecessary mobile data consumption.

Developing with respect for the user means embracing lean development: retrieving data only when it is genuinely required and offloading computationally intensive processes to the cloud—or, preferably, to the layered API architecture—thereby minimising the workload on the device itself.

- Applications that consume excessive storage space are often the first to be removed. —

Storage Space and Bloatware: Applications that consume excessive storage space are often the first to be removed when users need room for photos, videos or other content. A modular architecture helps address this by delivering only the code and assets that users actually need at any given moment.

Security & Privacy by Design: Preserving Trust

Trust takes time to build and moments to lose. In an era where data breaches and cyberattacks have become commonplace, security is the ultimate hygiene factor.

Data Minimisation: Request only the information and permissions that are strictly necessary for the functionality being used at that particular moment. Why should a simple calculator application require access to a user's location or microphone? Being transparent about why permissions are requested is fundamental to earning and maintaining trust.

Invisible Security: Security should be uncompromising without creating unnecessary friction. Seamless authentication through biometrics—such as Face ID or fingerprint recognition—or cryptographic credentials such as passkeys provides a far better user experience than forcing people to remember increasingly complex passwords. Security should adapt to the user—not the other way around.

18

Digital inclusion: designing for everyone

Accessibility extends far beyond complying with the forthcoming European Accessibility Act (EAA). It is fundamentally about digital inclusion. A true digital lifeline must be accessible to everyone, regardless of physical, sensory or cognitive ability.

Accessibility Means More Than Permanent Disabilities:

Accessibility is often associated with blind or partially sighted users who rely on screen readers. In reality, accessibility also encompasses temporary and situational limitations. Consider someone trying to use an application in bright sunlight and depending on high colour contrast, or a parent navigating an app one-handed while carrying a child. Designing for accessibility ultimately improves the experience for everyone.

Integration & identity: the key to a personalised digital lifeline

A modular application with an outstanding user interface remains little more than an empty shell until it understands who the user is. The true power of the digital lifeline emerges when the device can reliably identify the person holding it and seamlessly connect that identity with the underlying business systems. Integration and identity together form the bridge between generic digital services and the deeply personalised experiences modern consumers expect.

Goodbye Passwords. Implementing passkeys and biometric authentication virtually eliminates login friction, removes phishing risks and significantly improves conversion during digital onboarding.

Preparing for the European Digital Identity Wallet? In the near future, European citizens will manage their identity and official credentials directly from their smartphones through the European Digital Identity (EUDI) Wallet. Today's digital architecture should already be prepared for this new world of Zero-Knowledge Proofs.

Always Connected—Even Offline. An offline-first strategy ensures that the digital lifeline never stops functioning. Data is securely stored on the device and intelligently synchronised as soon as connectivity becomes available again.

Universal Design: As discussed earlier, embedding accessibility standards such as WCAG directly into the Design System ensures that buttons are consistently large enough, colour contrasts remain compliant and navigation remains intuitive. Rather than creating a separate version for users with disabilities, organisations improve the quality and usability of the application for everyone.

Frictionless Authentication: The End of the Password

For decades, the login screen has represented the single greatest source of friction in digital services. Users forget passwords, reuse insecure credentials and abandon complicated authentication journeys. Modern mobile architectures move beyond typed passwords altogether.

- The best security doesn't feel like a heavy lock—it feels like an intelligent front door that recognises you and opens effortlessly. —



Integration & identity: the key to a personalised digital lifeline

Biometrics as the Default: Authentication increasingly relies on hardware-based capabilities such as Face ID and Touch ID. This approach is not only more secure—because biometric information never leaves the device—but also dramatically faster and more convenient.

The Rise of Passkeys: The technology industry is rapidly embracing passkeys. These cryptographic credentials are securely stored on users' devices, making phishing attacks virtually impossible while replacing traditional usernames and passwords entirely. For users, the experience feels effortless—the application simply recognises them. Behind the scenes, however, authentication is secured using state-of-the-art cryptography.

The Trust Ecosystem: From DigiD to the European Digital Identity Wallet

Organisations no longer need—and increasingly should not attempt—to manage users' identities themselves. Instead, we are moving towards a connected ecosystem built around trusted identity providers.

National and Sector-Specific Identity Services: Seamless integration with services such as DigiD (Dutch government), iDIN (Dutch banking) and eHerkenning (business authentication) is becoming increasingly important. Using Process APIs, these trusted identity providers can be integrated into a modular platform through a consistent and standardised architecture.

The EUDI Wallet Revolution: Over the coming years, the mandatory adoption of the European Digital Identity (EUDI) Wallet will fundamentally reshape digital identity across Europe. Citizens will carry verified digital credentials—including passports, driving licences and educational qualifications—securely on their smartphones.

Attribute-Based Identity Sharing: This introduces an entirely new privacy model. Rather than sharing an entire identity document, users disclose only the specific attribute required. For example, to verify age, the wallet can cryptographically prove that someone is over 18 without revealing their date of birth, name or any other personal information. Back-end systems must be prepared to receive, validate and process these decentralised digital credentials.

Offline-First and Robust Data Integration

Identity provides access to data, but the mobile environment presents a unique challenge: connectivity can never be guaranteed. A true digital lifeline does not fail simply because a user enters a lift, travels through a rural area or temporarily loses network coverage.

Offline-First Strategy: Mobile applications should be designed with an offline-first approach. This means that the application securely caches data locally on the device, allowing users to continue completing forms, viewing insurance policies or preparing transactions even without a 5G or Wi-Fi connection.

Intelligent Synchronisation: As soon as connectivity is restored, the underlying architecture performs asynchronous synchronisation with the Experience APIs. This prevents data loss and ensures a seamless user experience, regardless of network conditions.

Preparing for Hyper-Personalisation

When digital identity is seamlessly integrated and data flows effortlessly—remaining available even offline—the application is transformed. It is no longer a static portal where users must search for information. Instead, because the system understands the user's identity, context and real-time data, the interface can adapt dynamically. This opens the door to proactive digital services, where the channel anticipates what the user needs at precisely the right moment.

This brings us to the final piece of the puzzle: What will tomorrow's digital interactions look like once all of these foundations are in place?



20 (1/2)

The future vision: contextual & personal

Once a modular architectural foundation has been established, the essential hygiene factors have been embedded, and digital identity has been seamlessly integrated, genuine innovation becomes possible. The application is no longer a static tool waiting for user input. Instead, the mobile lifeline evolves into an intelligent, proactive partner.

Over the coming years, we expect to see a fundamental shift in digital services: from generic to hyper-personalised experiences, and from reactive pull interactions to proactive push engagement.

From Pull to Push:

The Proactive Assistant

For decades, software has operated according to a reactive (pull) model: users open an application, navigate menus, search for the appropriate section and complete a task. In the near future, this model will be turned on its head.

Contextual Anticipation: Because the system understands the user's identity, location and current circumstances, it can act proactively. Rather than waiting for users to realise that their passport is about to expire, the application can notify them well in advance with a secure, one-tap action: "Your passport expires in one month's time. Tap here to renew it immediately using your EUDI Wallet."

Micro-Interactions at Exactly the Right Moment: These proactive notifications appear precisely where they are most relevant. A reminder may appear on your smartwatch during a meeting, or on your vehicle dashboard through Android Auto or Apple CarPlay as you approach a relevant location. Interactions become short, timely and highly relevant.

Hyper-Personalisation:

The Interface as a Chameleon

The era of providing every customer with the same generic home screen is coming to an end. An eighteen-year-old student arranging their first health insurance policy has fundamentally different needs and priorities from a seventy-five-year-old retiree.

Dynamic Dashboards: Powered by AI and built upon a modular composable architecture, the interface adapts continuously in real time. Frequently used functions automatically move to the foreground. For users with visual impairments, contrast levels can adjust seamlessly without requiring them to navigate complex settings menus.

Agentic UI (AI-Generated Interfaces): As discussed earlier, a robust Design System enables autonomous AI agents to generate secure, brand-consistent user interfaces on demand. If a customer needs to complete an unusual combination of services—for example, updating a mortgage while simultaneously registering the birth of a child—the AI can assemble a bespoke user journey in real time using only approved components from your Design System.



20 (2/2)

The future vision: contextual & personal

Cross-Border Data Sharing and Open Ecosystems

We are moving away from isolated corporate applications towards interconnected digital ecosystems. With the introduction of the European Digital Identity (EUDI) Wallet and the continued maturation of open API standards, digital services will no longer stop at national borders—or at the boundaries of individual organisations.

Seamless Data Exchange: Imagine a Dutch citizen hiring a car in Spain. Instead of photocopying identity documents and completing paper forms, they simply provide a cryptographically verified proof of both their driving licence and their age through their mobile lifeline, authorised with a single biometric confirmation. Your systems must be capable of acting as trusted nodes within this European data ecosystem, where secure, consent-driven and frictionless information exchange becomes the norm.

Context as the Ultimate Security Layer

The more personalised and proactive digital services become, the more important security becomes. Yet in this future, security increasingly disappears into the background for legitimate users.

Zero Trust & Continuous Authentication:

Authentication is no longer a single event that takes place when an application is opened. Instead, security becomes continuous and context-driven. Is the user holding their phone in the usual way? Does the current location make sense? Does the network behaviour appear normal? As long as these contextual signals remain consistent, the user experiences no additional friction. Only when something appears unusual does the system request further verification, such as biometric authentication. Security therefore fades into the background while protection becomes significantly stronger.

21

Conclusion & key takeaways: completing the circle

We began this whitepaper by observing that the smartphone has become the remote control for modern life. As we have seen, however, that remote control is rapidly evolving into a continuum of connected experiences spanning smartwatches, foldable devices, vehicle dashboards and, ultimately, spatial computing.

The winners of tomorrow will therefore not be the organisations with the most visually impressive standalone applications. They will be the organisations with the smartest and most adaptable architecture—one that orchestrates complexity behind the scenes while delivering a seamless, hyper-personalised and secure experience to every user.

22

Sopra Steria's vision: a partner for transformation

At Sopra Steria, we witness this evolution in practice every day. We see the shift towards a channel-agnostic, modular world not simply as a technological challenge, but as a strategic transformation.

We believe that real value for end users is created where robust back-end integration meets innovative front-end technology. Guided by this vision, we help organisations make this complex transition both achievable and manageable.

Whether it involves modernising legacy monolithic systems through a smart, layered API architecture or establishing a future-ready Design System that complies with the highest WCAG accessibility standards, we do not build isolated applications—we orchestrate sustainable digital ecosystems. Ecosystems that are ready for the European Digital Identity Wallet, the integration of AI agents and the ever-increasing expectations of today's digital users.

23

Personal motivation

The Dream of the Ultimate Customer Journey

Documenting the theory and architecture is one thing, but the real magic lies in bringing it to life. Why am I so passionate about this? Because I firmly believe that technology should always serve people first. My ultimate ambition as a professional is to create the perfect, frictionless customer journey—an experience in which users genuinely feel understood, valued and supported at every interaction.

After all, your customers' lives—and therefore your business—cannot be confined to a single smartphone screen. The overall experience is a continuous journey: from a brief notification on a smartwatch, to a more in-depth task completed on a tablet at home, through to a seamless approval on a self-service kiosk or the dashboard of a connected vehicle. I want to build solutions that embrace this entire customer journey and make every touchpoint feel like part of one premium, uninterrupted experience—an experience that feels uniquely personal to every individual.

Yet the true craft of our profession lies in enabling that unique front-end experience.

It is the ultimate paradox: delivering an exclusive, personalised user experience powered behind the scenes by an architecture that is highly scalable, generic and straightforward to manage.

I want to contribute to projects that solve this challenge through:

- **A channel-agnostic engine:** An infrastructure of scalable, channel-agnostic components that respond to intelligent event streams and proactively deliver the right data, regardless of which device requests it.
- **One generic foundation, limitless interfaces:** Developing from a modular, shared codebase—using a portable framework such as Flutter. Rather than building separate applications for every device, we create a robust engine capable of powering any interface.
- **The visual backbone:** A central Design System that allows a premium brand experience and digital accessibility to scale consistently across every conceivable screen and touchpoint.
- **Radical respect for the user:** Designing with digital inclusion at its core. Building systems that adapt to individual capabilities, treat device resources such as battery life and storage responsibly, and minimise data collection wherever possible.

When these elements come together, we are no longer delivering isolated IT projects. We are orchestrating seamless digital journeys that exceed users' expectations while remaining scalable, efficient and future-ready for the organisations behind them.

To me, that is the true essence of building the mobile lifeline.

Talk to us

Learn how we can help your organisation accelerate towards a more sustainable tomorrow:
www.soprasteria.be

Remi Appels

Solution Lead Mobile
Sopra Steria

sopra  steria



The world is how we shape it

Sopra Steria, a major Tech player in Europe with 51,000+ employees in nearly 30 countries, is recognised for its consulting, digital services and software development. It helps its clients drive their digital transformation and obtain tangible and sustainable benefits. The Group provides end-to-end solutions to make large companies and organisations more competitive by combining in-depth knowledge of a wide range of business sectors and innovative technologies with a fully collaborative approach. Sopra Steria places people at the heart of everything it does and is committed to putting digital to work for its clients in order to build a positive future for all. In 2025, the Group generated revenues of €5.6 billion.

soprasteria.be

The world is how we shape it

sopra  steria