

# *Mobile Applications in Mental Health and Public Safety: Challenges and Gaps in Digital Transformation*

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Diego Mattera

UCASAL

Buenos Aires, Argentina

mattera9@gmail.com

ORCID: 0009-0001-2937-7229



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# Mobile Applications in Mental Health and Public Safety: Challenges and Gaps in Digital Transformation

## Aplicaciones Móviles en Salud Mental y Seguridad Ciudadana: Desafíos y Brechas en la Transformación Digital

Diego Mattera   
UCASAL

Buenos Aires, Argentina  
mattera9@gmail.com

**Abstract**—Mobile applications in mental health and public safety have evolved from individual tools into strategic digital infrastructures within the process of digital transformation. This study presents a narrative and documentary review focused on the United States context. The results show that, although these applications demonstrate high functional effectiveness and sustained growth, their social impact is limited by inequalities in access, digital literacy, institutional trust, and interoperability with public services. In mental health, app use among individuals with diagnosed disorders remains low, with moderate effects on reducing anxiety and depression symptoms and intermittent adherence, despite high levels of smartphone ownership. In public safety, platforms such as Life360 and Citizen report user growth; however, evidence regarding their real operational impact, response time reduction, and perceived security is limited and heterogeneous. The social sustainability of these technologies requires institutional validation, inclusive design, data protection, community participation, and alignment with public policies. The convergence with artificial intelligence, wearable devices, and hybrid intervention models projects future trends toward intelligent personalization and the strengthening of community resilience.

**Resúmen**—Las aplicaciones móviles en salud mental y seguridad ciudadana han evolucionado de herramientas individuales a infraestructuras digitales estratégicas en la transformación digital. Este estudio realiza una revisión narrativa y documental, centrada en el contexto estadounidense. Los resultados muestran que, aunque estas aplicaciones presentan alta eficacia funcional y crecimiento sostenido, su impacto social se ve limitado por desigualdades en acceso, alfabetización digital, confianza institucional e interoperabilidad con servicios públicos. En salud mental, el uso de aplicaciones entre personas con trastornos diagnosticados es reducido, presenta efectos moderados en la reducción de síntomas de ansiedad y depresión y adherencia intermitente, pese a la alta propiedad de smartphones. En seguridad ciudadana, plataformas como Life360 y Citizen registran crecimiento de usuarios, pero la evidencia sobre impacto operativo real, reducción de tiempos de respuesta y percepción de seguridad es limitada y heterogénea. La sostenibilidad social de estas tecnologías requiere validación

institucional, diseño inclusivo, protección de datos, participación comunitaria y articulación con políticas públicas. La confluencia con inteligencia artificial, dispositivos vulnerables y modelos híbridos de intervención proyecta tendencias futuras hacia personalización inteligente y fortalecimiento de la resiliencia comunitaria.

**Keywords**—mobile applications, mental health, citizen security, digital divide, technology adoption, digital transformation.

**Palabras clave**—aplicaciones móviles, salud mental, seguridad ciudadana, brecha digital, adopción tecnológica, transformación digital.

### INTRODUCTION

In recent decades, mobile applications have evolved from tools designed for individual convenience into critical infrastructures for managing public safety and mental health, within the framework of an accelerated process of digital transformation (Ventola, 2014). These technologies driven by the integration of artificial intelligence, geolocation, process automation, and community engagement have reshaped approaches to prevention, monitoring, and intervention in situations of individual and collective risk, expanding both institutional response capacities and digitally mediated forms of social participation.

In the field of mental health, several studies conclude that mobile apps enhance service coverage through digital therapies, emotional monitoring, and asynchronous interventions, particularly in contexts characterized by high demand and limited availability of in-person services (Luxton et al., 2016; Hwang et al., 2021; Havard et al., 2015). In parallel, platforms oriented toward public safety have demonstrated potential to strengthen real-time incident reporting, community coordination, and integration with emergency systems, fostering new dynamics of collective intelligence and distributed surveillance.

Nevertheless, the expansion of these mobile applications occurs within a landscape marked by persistent structural barriers. Current literature highlights that the digital divide, technological fragmentation, limited interoperability with public systems, and risks related to sensitive data protection and algorithmic bias significantly constrain their effectiveness as instruments of social protection (Kitchin, 2014; WHO, 2022). Specifically, while research such as that of McCloud et al. (2020), published in *JMIR Mental Health*, reports significant reductions in symptoms of depression and anxiety through sustained use of digital therapy applications, notable inequalities have also been observed in terms of access, continuous use, and quality of outcomes. These disparities are largely determined by digital literacy, socioeconomic status, and institutional context. This tension between high functional potential and unequal structural conditions raises critical questions regarding the actual scope of mobile applications as sustainable instruments of social intervention.

Against this backdrop, the present article aims to analyze how mobile applications oriented toward mental health and public safety are being developed and implemented as tools for prevention, monitoring, and response to risk situations, as well as to examine the main technical, ethical, and institutional challenges that affect their effective integration with public systems. Although the scope of analysis is general, the empirical evidence focuses particularly on the case of the United States, given its high adoption of technological tools, availability of institutional data, and advanced development of digital infrastructures.

Through a narrative and documentary review of scientific literature, institutional reports, and representative digital platforms from both fields of study, this work seeks to contribute a strategic and critical perspective on the role of mobile applications as instruments of digital change, risk prevention, and collaborative governance, with particular attention to the structural inequalities that shape their adoption, impact, and social assimilation.

## **THEORETICAL FRAMEWORK: CONCEPTUAL, FUNCTIONAL, AND TECHNOLOGICAL APPROACHES**

### **A. Mobile Applications and Digital Transformation**

Recent academic production converges in conceptualizing mobile applications as central socio-technical devices in the current phase of digital transformation, as they structure technological developments, automation processes, and advances in mediation between individuals, institutions, and social protection systems.

In the domains of mental health and public safety, these mobile platforms not only fulfill instrumental functions but also operate as digital infrastructures for intervention, prevention, and risk management. From a systemic perspective, Luxton et al. (2016) argue that mental health applications reconfigure traditional care models by enabling asynchronous interventions, continuous monitoring of emotional states, and rapid access to therapeutic resources, thereby reducing limitations related to geographic location, professional availability, and access costs. In a similar vein,

Firth et al. (2017) situate them within the field of digital mental health interventions, emphasizing their potential as technological extensions of traditional clinical systems in contexts of high demand.

### **B. Mental Health Applications**

From a functional standpoint, mobile mental health applications can be grouped into three major categories: Therapeutic support apps, which provide mood tracking, psychoeducation, and structured tactics for digital psychological intervention (e.g., Youper, Sanvello).

Emotional well-being and prevention apps, which focus on reducing stress, regulating emotional health, and improving sleep (e.g., Calm, Headspace, Insight Timer).

Crisis management apps, aimed at suicide prevention and urgent support, prioritizing immediate access to support networks and emergency services (e.g., MY3, NotOK).

This classification underscores the progressive expansion of the digital mental health field toward devices of prevention, intervention, and continuous support.

Building on this functional basis, mobile mental health applications are developed through diverse patterns of digital therapeutic mediation. On one hand, tele-psychotherapy platforms (e.g., Talkspace, BetterHelp) rely on multichannel communication schemes text, audio, and video that sustain technology-mediated therapeutic processes under conditions of greater temporal flexibility and spatial delocalization. On the other hand, these technologies also incorporate artificial intelligence (e.g., Woebot, Wysa), which employ conversational systems grounded in cognitive-behavioral therapy principles, oriented toward emotional self-regulation, psychological training, and early symptom detection. These advances fall within the domain of digital therapies, characterized by the fusion of clinical knowledge, automated processes, and the potential for large-scale expansion.

In this same line, the systematic review by Almuqrin et al. (2025) highlights sustained growth in evidence-based mental health applications. Nevertheless, significant barriers remain in their clinical validation, regulation, and effective translation into healthcare systems, requiring standardized criteria for their responsible incorporation.

### **C. Public Safety Applications**

Recent literature on public safety highlights a progressive shift from patterns of targeted surveillance toward distributed surveillance schemes and citizen participation mediated by digital platforms.

From a functional perspective, public safety applications exhibit a clear differentiation:

Alert and reporting apps, which enable direct contact with emergency services and the georeferenced transmission of real-time information (e.g., official emergency applications). Preventive personal safety apps focus on location monitoring, automatic alert activation in risk situations, and communication with trusted contacts (e.g., Life360, bSafe).

Collaborative surveillance apps, based on citizen participation for incident reporting, risk mapping, and information exchange among neighbors (e.g., Citizen, local neighborhood alert systems).

These typologies reflect the transition from reactive models to preventive schemes of digital risk management.

Several studies have noted that these technologies not only restructure urban self-protection practices but also reshape the social production of surveillance and territorial control. In this regard, Kitchin (2014) argues that the digital infrastructures of so-called “smart cities” reorganize traditional forms of security governance by implementing decentralized citizen participation, real-time decision-making processes, and algorithmic systems.

Consequently, these mobile applications are analyzed as risk communication infrastructures that enable decentralized information production, real-time incident reporting, coordination of family and community trajectories, and the generation of situational alerts (e.g., Citizen, Nextdoor, AlertCops). These platforms do not replace state security mechanisms but act as complementary layers of information, thereby expanding event recording capacity, accelerating response circuits, and reshaping social perceptions of protection. In this sense, security ceases to depend exclusively on vertical structures and increasingly incorporates horizontal dynamics of digital cooperation.

#### D. Technological Architecture and Functional Impacts

From a technical-structural standpoint, mobile applications in public safety and mental health share a modular, scalable, and user-centered architecture, sustained by the integration of multiple technological layers.

Key structural components include:

1. Artificial intelligence, oriented toward predictive analysis of emotional states, behavioral patterns, and risk scenarios.
2. Geolocation, supporting the identification of critical areas, spatial coordination of responses, and contextualized activation of alerts.
3. Process automation, through conversational bots, emergency protocols, and instant notification systems.
4. Advanced information security mechanisms, including end-to-end encryption, biometric authentication, and access control, which are essential in environments managing sensitive data, as documented by Kitchin (2014) and Lupton (2015) in their analyses of digital infrastructures applied to health and safety.

From a functional perspective, specialized literature documents that mental health applications enable, unprecedented forms of longitudinal monitoring of emotional states through systematic records, psychological assessment scales, affect regulation exercises, and crisis intervention tools (Berrouiguet et al., 2016; Lipschitz et al., 2022; Lehtimäki et al., 2021).

More broadly, hybridization is observed between technological logic, social intervention, and institutional risk management, characteristic of new regimes of digital governance, where platforms, algorithms, and mobile devices articulate institutional practices and social dynamics of prevention and control (Lupton, 2015; Kitchin, 2014; Lyon, 2018).

#### E. Ethical and Regulatory Tensions

Specialized literature warns that the expansion of these digital infrastructures is marked by complex ethical,

regulatory, and political tensions. Among the main challenges are the vulnerability of personal data privacy, the opacity of algorithmic systems, biases in classification and prediction mechanisms, and technological fragmentation that limits interoperability between private platforms and public services.

Regarding algorithmic ethics, authors such as Mittelstadt et al. (2016) caution that automated decision-making systems may reproduce structural inequalities, generate unintended discriminatory effects, and complicate the attribution of responsibility—particularly when they operate as opaque “black boxes” for users and institutions.

These issues must be addressed in alignment with regulatory frameworks and international standards, such as the General Data Protection Regulation (GDPR), the Health Insurance Portability and Accountability Act (HIPAA) in the healthcare domain, and the recommendations of the National Institute of Standards and Technology (NIST) in cybersecurity. These frameworks aim to ensure principles of transparency, fairness, security, and algorithmic accountability in the deployment of such technologies.

## METHODOLOGY

### A. Study Design

This study adopts a narrative and documentary review approach, aimed at analyzing the adoption, impact, and challenges of mobile applications in the domains of mental health and public safety. This type of research design allows for the integration of scientific literature, sectoral reports, institutional documents, and data from representative digital platforms, providing a critical and comprehensive perspective on models of implementation and use of these technological tools. The choice of this approach is justified by the heterogeneity of available data, the diversity of application contexts, and the need to identify both general trends and structural constraints.

### B. Source Selection and Inclusion Criteria

This work incorporates relevant sources published between 2015 and 2025, prioritizing studies with official reports, empirical evidence, and international documentation on digital health and emergency systems. The following were considered:

Scientific articles on mobile applications for mental health and public safety. Institutional reports from national and international organizations, including EENA, GAO, and U.S. government agencies. Data from representative technological platforms, such as Life360 and Citizen, to contextualize adoption and market penetration. Market studies and sectoral reports on expansion, demand, and functional coverage of apps.

Anecdotal sources, studies focused exclusively on technical aspects without social or functional implications, and reports lacking clear references were excluded.

### C. Analytical Strategy

The analysis was structured around three main axes: Adoption patterns and structural gaps: evaluation of inequalities in access and use, considering socioeconomic, geographic, cultural, digital literacy, and institutional trust factors.

Impact on mental health: review of evidence on the use of applications for psychological support, digital therapies, and

emotional monitoring, including prevalence of use, adherence, continuity, and reported outcomes.

Scope in public safety: analysis of the adoption of community surveillance and reporting apps, their relationship with official emergency systems (Next Generation 911), and a critical evaluation of their actual impact on response times and perceptions of safety.

A comparative and critical approach was applied, triangulating institutional reports and market data with academic studies, with particular attention to the United States as the central context.

#### D. Synthesis Procedure

Extracted information was organized into thematic matrices that enabled comparison across adoption patterns, functional impacts, and structural limitations.

The narrative synthesis combined quantitative results—such as market estimates, adoption percentages, and user coverage—with qualitative analysis of structural inequalities, digital exclusion factors, technical challenges, and ethical barriers.

Through this procedure, general trends and gaps in empirical evidence were identified, guiding the discussion of findings toward digital inclusion policies, participatory design approaches, and strategies for institutional strengthening.

#### E. Implementation of the Analysis

The narrative review was organized through a systematic process of searching, selecting, and synthesizing scientific literature, institutional reports, and documentation from relevant digital platforms. The collected data were coded and analyzed narratively, with emphasis on the functional potential and the structural barriers that condition the adoption, effectiveness, and social appropriation of mobile applications.

This approach enabled a comparative analysis across different contexts and technologies, as well as the identification of ethical, technological, and institutional challenges, together with opportunities to strengthen digital inclusion, interoperability, and collaborative governance.

The results of the review are presented below, organized according to the axes of adoption, impact on mental health, and scope in public safety. Socioeconomic inequalities directly affect processes of digital exclusion, as evidenced by the digital divide based on access to connectivity and technological devices, particularly among populations residing in rural areas or in contexts with precarious infrastructure, lower income, and lower educational attainment. This pattern has also been observed in the United States, where data reflect the impact of structural inequalities on low-income populations, rural residents, and racial minorities, who face greater difficulties in accessing available digital applications. Such asymmetry limits the capacity of health and safety applications to function as universal tools (Hernández & Roberts, 2018). The mere incorporation of digital technologies into the population does not guarantee homogeneous results in terms of use, especially in territories with limited infrastructure. In this respect, a recent study by Wen and Tian (2024) indicates that the mental health benefits associated with digital access are more evident in urban than in rural contexts.

Table I. Limiting Factors in Access to Mobile Health and Public Safety Applications

Dimension	Limiting Factor	Impact Description
<b>Socio-educational</b>	Low digital literacy	Hinders the effective use of mobile health, including mental health and public safety applications, particularly among populations with lower educational attainment.
<b>Structural</b>	Access inequalities	Limitations in access to mobile devices, connectivity, and digital services, which reduce the possibilities of technological adoption.
<b>Sociocultural</b>	Cultural and/or linguistic barriers	Linguistic and cultural differences hinder the understanding, appropriation, and proper use of mobile applications.
<b>Technological-institutional</b>	Distrust in data privacy	Fear of misuse of personal information discourages the download and use of digital platforms.

In the specific case of mobile applications oriented toward public safety, a study published in *Police Practice and Research* (Elphick et al., 2021) analyzed the privacy terms and conditions of 240 applications and revealed the existence of scarce—or even absent—regulations regarding data protection. This situation acts as a deterrent for users who distrust institutions. Most applications require registration or login; only slightly more than half (55%) of reporting apps allow anonymous submissions, and barely 10% provide comprehensible privacy policies. These characteristics generate vulnerability, particularly among individuals with lower digital competencies who face greater difficulties in accessing these tools equitably.

In the United States, deficits in privacy terms and institutional distrust particularly affect migrant communities, African Americans, and individuals with histories of police surveillance. In addition, economic inequalities limit access to safety applications that require constant connectivity, mobile data consumption, and updated devices. In this context, so-called “digital public protection” tends, in practice, to exclude those with fewer social advantages. The absence of access to mobile technologies constitutes the first level of the digital divide and has a direct impact on security conditions, as noted by Mihale-Wilson et al. (2025). At the same time, the increase in the use of neighborhood surveillance and reporting applications in the United States has reignited debates on privacy, distrust of authorities, selective surveillance, and algorithmic bias. Moreover, the collection of sensitive data under low or nonexistent protection standards does not effectively guarantee rights such as anonymization nor foster genuine community participation, contributing to the rejection of these technologies by marginalized or vulnerable communities (Elphick et al., 2021). In summary, the systems and literature reviewed demonstrate that the development and expansion of public safety applications hold significant potential to strengthen citizen participation, reduce

bureaucratic barriers in reporting systems, and optimize security mechanisms. However, their deployment must be accompanied by policies aimed at improving digital literacy, infrastructure, data protection, and technological inclusion. Furthermore, it is essential to promote designs that actively address existing economic and structural inequalities. To overcome the unequal conditions that determine who can benefit from technological innovations and access to health, coordinated interventions are required across institutional, social, and political domains.

*A. Impact in the Field of Mental Health*

Digital mental health applications can serve as complementary or alternative tools for psychological support. This potential is linked to data from the MHA 2023 report, which indicates that 20.8% of the U.S. adult population—over 50 million people—experienced a mental disorder during that year, and a significant proportion expressed dissatisfaction with the treatments received. Several studies conducted in recent years show that the rapid increase in smartphone adoption has not corresponded to an equivalent growth in the use of mental health applications among individuals with diagnosed disorders.

According to Deressa Guracho et al. (2023), the combined prevalence of app use among people with mental disorders was approximately 23.3%. In a survey of the general population, 41% of participants reported having used a mental health application in the past 12 months (Fürtjes et al., 2024), while another study indicated that in the United States, 43% accessed mental well-being applications, though only 18% used them for clinical purposes (Vera Cruz, 2023). Available empirical evidence suggests that these applications have moderate effects in reducing symptoms of anxiety and depression (Bell et al., 2022; Vera Cruz, 2023; Fürtjes et al., 2024).

However, adherence and continuity of use are often limited, which restricts their long-term therapeutic impact. In parallel, the global market for mental health applications is projected to grow steadily, with estimates reaching USD 17.5 billion by 2030 (Grand View Research, 2025).

Table II below presents a synthesis of the use and impact of mental health applications, according to recent studies.

Source	Indicator	Results
MHA 2023 [22]	Prevalence of mental disorders in U.S. adults	20.8% of adults (50 million people)
Deressa Guracho et al. [23]	Use of apps among individuals with diagnosed mental disorders	23%
Fürtjes et al. [24]	Use of apps in the general population	41%
Vera Cruz [25]	Use of apps for clinical purposes	18%
Bell et al. [26]	Use of apps for clinical purposes	Moderate reduction of anxiety and depression

Grand View Research [27]	Global market projection	Is projected to reach USD 17.5 billion by 2030
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Table III below synthesizes the main digital public safety platforms, emergency response systems, and their territorial scope.

Main Platforms / Systems	Scope	Indicators
Life360	EE.UU.	More than 50 million active users.
Citizen	EE.UU.	Over 5 million users; coverage in more than 60 cities.
Next Generation 911 (NG911)	EE.UU.	Uneven implementation across states.
PSAP (EENA)	More than 60 countries	Transition toward next-generation models.
GAO	EE.UU.	Financial, technical, and institutional limitations.

*B. Actual Scope in the Field of Public Safety*

In the field of public safety, various indicators show sustained growth of community-based digital platforms. Among them, Life360 reports more than 50 million active users, with presence in approximately one out of nine families in the United States, according to company data (Life360, 2023).

Another relevant case is the Citizen application, designed for real-time incident notifications, which recorded more than 5 million active users in 2020 and was present in over 60 U.S. cities, according to Bradbury (2025). However, these data must be interpreted with caution, as they do not originate from official public safety agencies but rather from reports disseminated by the financial-technology sector. This suggests primarily market growth and increases social visibility of these platforms, rather than direct validation of their impact on safety.

On this matter, although the expansion of these technologies may be positive as a complementary tool to support public safety, there is still no conclusive evidence demonstrating their effective integration into official emergency services such as 911. Nor is there solid proof that their widespread use directly increases perceptions of protection or objective levels of public safety.

**DISCUSSION OF FINDINGS**

The results of the review highlight a central paradox: while mobile applications demonstrate high functional efficacy and sustained growth in terms of adoption and market expansion, their social impact remains conditioned by profound inequalities in access, institutional trust, and systemic integration (Teke et al., 2025; Wen & Tian, 2024). In particular, empirical evidence from the United States shows that racial minorities, rural communities, and households with lower socioeconomic status face significant barriers to accessing and using these technologies, which limits their effective social coverage. This tension constrains their reach as universal devices of emotional and physical protection.

Concerning this, the literature agrees that the consolidation of these technologies requires institutional validation strategies, through their formal incorporation into public policies, school programs, primary healthcare services, and municipal security plans (McCloud et al., 2020; Hernandez & Roberts, 2018). Data on mental health applications indicate

that, despite high smartphone ownership, only a limited percentage of individuals with diagnosed disorders access and sustain their use, underscoring the need for interventions that combine institutional recommendation, digital education, and continuous support. Official endorsement by governments, hospitals, and educational systems emerges as a key factor in strengthening social trust and promoting sustained use.

Another critical axis is interoperability with public services. Integration with emergency hotlines, healthcare centers, social assistance networks, and law enforcement agencies would allow platforms such as Life360 and Citizen to evolve from isolated tools into genuine digital infrastructures of social protection (EENA, 2023; United States Government, 2025). However, it should be noted that penetration data for Life360 and Citizen come primarily from commercial reports, which limits the possibility of drawing definitive conclusions about their actual operational impact. Strategic social integration, through mechanisms of community participation and digital support networks, could foster their appropriation without falling into addictive dynamics (Elphick et al., 2021).

Regarding future trends (2025–2030), the field of mental health is moving toward intelligent personalization, driven by emotional AI, convergence with wearable devices, and the consolidation of hybrid therapy models combining human professionals and automated systems (Luxton et al., 2016; Hwang et al., 2021). However, the effectiveness of these innovations will depend on overcoming structural barriers of access, digital literacy, and socioeconomic inequality, so that benefits are not concentrated exclusively in privileged segments. In parallel, the public safety sector is advancing toward predictive alert systems, interoperability with urban services, and the strengthening of neighborhood collective intelligence (Life360, 2023; Bradbury, 2025). Yet, evidence of direct operational impact remains limited and heterogeneous, requiring longitudinal and comparative evaluations to validate the real benefits in public safety.

At the same time, the advancement of these technologies intensifies debates on surveillance, algorithmic bias, and data governance (Kitchin, 2014; WHO, 2022). Ethical regulation and institutional responsibility thus emerge as indispensable conditions for these applications to consolidate as legitimate, inclusive, and socially sustainable tools (Mihale-Wilson et al., 2025).

Within this framework, the reviewed literature emphasizes that the social sustainability of these platforms depends not only on data protection and anonymization, but also on strategies of community participation and inclusive design that take into account cultural, linguistic, and socioeconomic differences.

## CONCLUSIONS

This study, based on a narrative and documentary review of scientific literature, institutional reports, and representative digital platforms, aimed to analyze the adoption, impact, and challenges of mobile applications in the fields of mental health and public safety, with particular emphasis on the United States context. This methodology allowed for the identification of usage patterns, structural gaps, operational limitations, and opportunities for institutional integration of these technologies.

The findings demonstrate that mobile applications constitute a critical digital infrastructure for the comprehensive protection of citizens, articulating technology, community participation, and social inclusion potential. However, their effective social impact is conditioned by inequalities in access, digital literacy, institutional trust, and fragmented interoperability with public systems. Racial minorities, rural communities, and households with lower socioeconomic status face significant barriers to fully benefiting from these tools, limiting their reach as universal devices of emotional and physical protection.

The review shows that the consolidation of these technologies requires institutional validation, through their incorporation into public policies, educational programs, primary healthcare services, and municipal security plans. Likewise, interoperability with public services, community participation, and strategic social integration are identified as key factors to transform these platforms from isolated tools into sustainable and socially inclusive digital infrastructures.

Regarding future trends (2025–2030), the field of mental health is oriented toward intelligent personalization, convergence with wearable devices, and hybrid therapy models, while public safety is advancing toward predictive alerts, urban interoperability, and the strengthening of neighborhood collective intelligence. Nevertheless, the effectiveness of these innovations will depend on overcoming existing structural barriers and ensuring ethical regulation, data protection, and institutional responsibility, to prevent benefits from being concentrated exclusively among privileged segments.

In summary, mobile applications should not be considered merely technological products, but rather vehicles of emotional resilience, situational prevention, and collaborative governance. Their social and functional sustainability requires comprehensive strategies that combine inclusive design, institutional validation, technical interoperability, and digital inclusion policies, enabling their benefits to be distributed equitably and contributing to the digital transformation of social protection.

## USE OF ARTIFICIAL INTELLIGENCE TOOLS

The author declares that during the preparation of this manuscript, an artificial intelligence-based tool was used exclusively for translation. This tool was employed to improve linguistic quality and readability, while the scientific content, data analysis, interpretations, and conclusions are the sole responsibility of the author.

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# AUTHORS

## Diego Mattera



Diego Mattera, in terms of academic training, holds a Bachelor's degree in Criminalistics and a Master's degree in Criminology, Delinquency, and Victimology from the Universidad Internacional de Valencia, together with additional postgraduate studies in Cybersecurity, Criminal Profiling, and Cybercrime Investigation. He has extensive experience in law enforcement, complex crime investigation, and fraud prevention. He began his career within the Argentine security forces, where he managed criminal complaints, ethical violations, and forensic procedures such as fingerprint extraction. Subsequently, at the

Interpol headquarters, he carried out complex investigations into organized crime, employing intelligence tools, databases, and criminal profiling methodologies. His work included the preparation of comprehensive reports and coordination with international policing bodies. He currently works as a researcher in the field of Fraud Prevention in the private sector, where he analyzes cases of fraud, theft, and losses through advanced systems such as TMS/WMS and satellite monitoring, while also advising on preventive strategies for logistics operations.