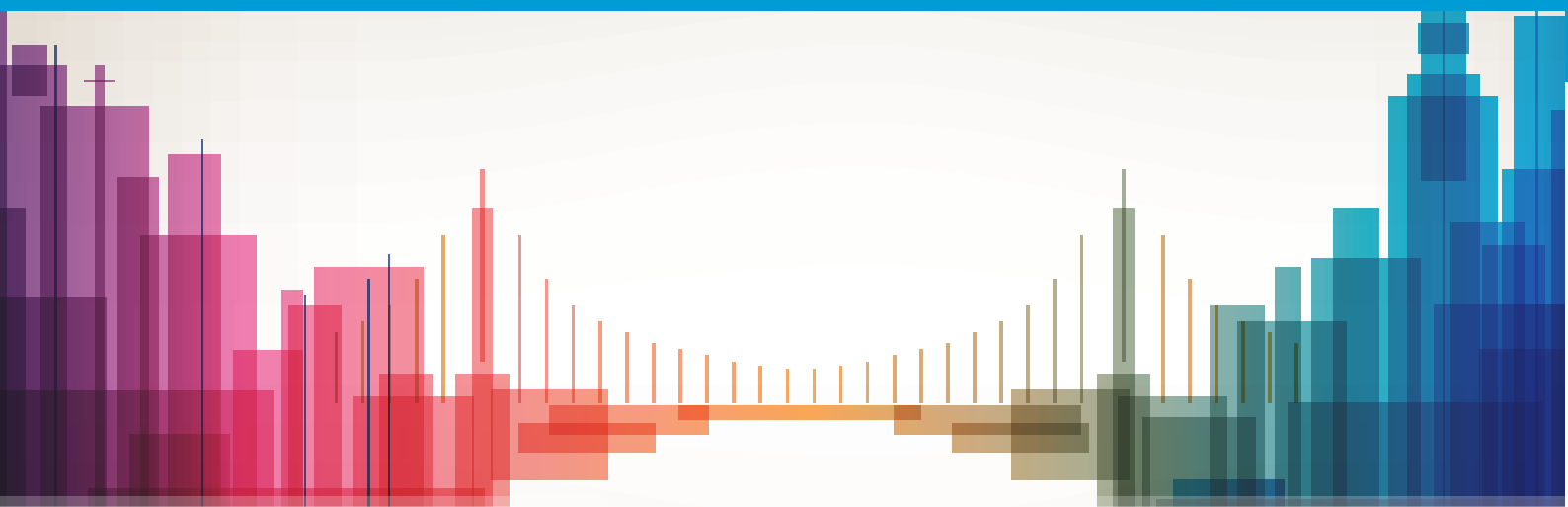


A guide to digital wellbeing







A Guide to Digital Wellbeing



Foreword

This publication was developed within the framework of the United for Smart Sustainable Cities (U4SSC) initiative.

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Disclaimer

The opinions expressed in this publication are those of the authors and do not necessarily represent the views of their respective organizations or U4SSC members. In line with the U4SSC principles, this report does not promote the adoption and use of Smart City technology. It advocates for policies encouraging responsible use of information and communications technologies (ICTs) that contribute to the economic, environmental and social sustainability as well as the advancement of the 2030 Agenda for Sustainable Development and the Pact for the Future and its Global Digital Compact.

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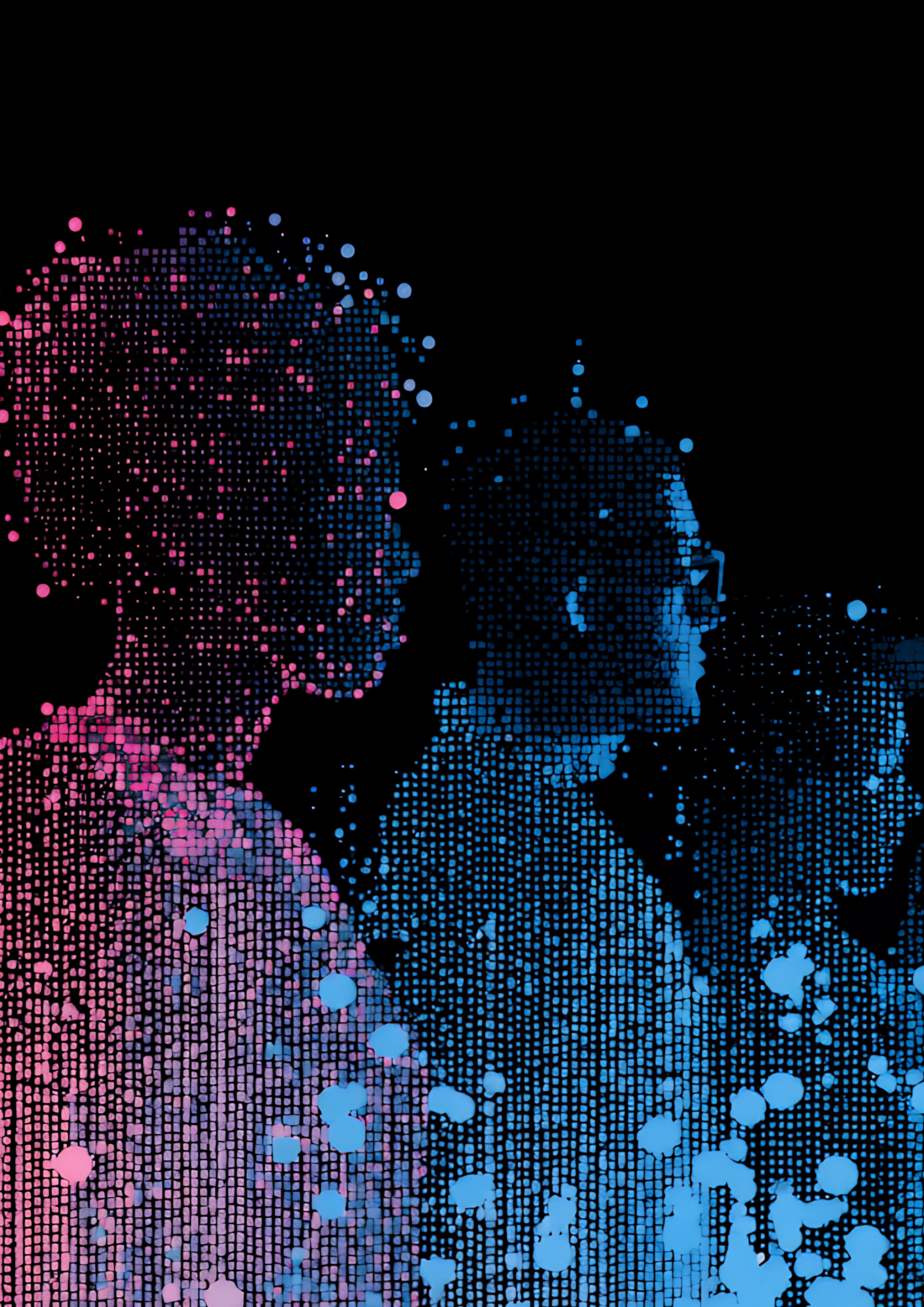
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Abbreviations and acronyms

Abbreviation	Full Form
CDWO	Chief Digital Wellbeing Officer
DDA	Digital divide approach
ICT	Information and communication technologies
IMDA	Infocomm Media Development Authority
ITHRA	King Abdulaziz Center for World Culture
NGO	Non-governmental organization
NUS	National University of Singapore
OEMs	Original Equipment Manufacturers
R&D	Research and development
SDG	Strategic Development Goal
UAE	United Arab Emirates
U4SSC	United for Smart Sustainable Cities



Executive summary

This guide defines a holistic framework for digital wellbeing, as well as an implementation methodology. It emphasizes digital wellbeing's critical role in creating sustainable, people-centred cities through digital transformation, and underscores the importance of balancing technology use to promote wellbeing.

The guide sheds light on the distinction between digital wellbeing and traditional wellbeing, while highlighting the subjective nature of wellbeing in general. The effects of digital technology use tend to impact individuals' mental, physical and emotional health, making it essential to adopt a holistic approach to wellbeing in the digital context. It also features selected examples of global initiatives focused on digital wellbeing.

The Digital Wellbeing Framework aims to provide a structured approach to understanding and managing digital wellbeing. This framework proclaims that digital interactions are shaped by three key perceptions: how individuals see themselves, how they perceive their digital environment and how they interpret digital influences. Together, these components constitute digital wellbeing, influencing engagement and overall experience in the digital space.

The guide also outlines a pragmatic Digital Wellbeing Implementation Methodology, designed to enhance digital wellbeing in cities. It is developed as a simple four-step methodology to help practitioners apply the digital wellbeing framework concepts and to develop targeted interventions. This methodology entails:

- Assessing the current state of digital wellbeing to establish a baseline.
- Prioritizing improvement areas based on the assessment.
- Planning and implementing initiatives with a multi-disciplinary approach.
- Periodically assessing the impact to ensure continuous improvement and success.



1 Why digital wellbeing matters: The link to people-centred cities and sustainability

As digital transformation increasingly shapes urban environments, digital wellbeing is emerging as a key consideration in fostering people-centred cities and driving sustainable development. At its core, digital wellbeing is about finding the right balance and leveraging the benefits of digital technologies, while minimizing their potential downsides for human beings. This ensures that digital advancements enhance, rather than diminish, the quality of life. It also directly aligns with United Nations Sustainable Development Goal 3 (SDG 3), which focuses on ensuring healthy lives and promoting wellbeing for all.

In today's urban environments, where cities are evolving into smart, interconnected hubs, digital wellbeing should be a foundational component of city planning. By making it a priority, city leaders, businesses and communities can ensure a people-centred approach whereby technology contributes to more inclusive, resilient and liveable urban spaces. A city that integrates digital wellbeing into its strategies fosters stronger social connections, supports mental and physical health, and promotes digital equity, making life better for all its residents.

By prioritizing digital balance, all city stakeholders can harness digital transformation and related digital technologies to create more interconnected, efficient and liveable urban spaces, while safeguarding the mental, emotional and physical health of their inhabitants. In urban environments, digital wellbeing is critical to the creation of smart, sustainable cities. These cities leverage digital technologies to enhance infrastructure, improve public services and increase overall efficiency. By incorporating digital wellbeing into urban planning, cities can ensure that technological advancements positively contribute to the quality of life for residents. This includes designing public spaces that encourage healthy digital habits, implementing policies that protect digital rights and providing access to digital wellbeing related resources.

For individuals, digital wellbeing is crucial for maintaining a healthy relationship with digital technologies. In an increasingly connected world, people constantly interact with digital devices for work, education and leisure. Prioritizing digital wellbeing helps individuals manage screen time, reduce the risk of digital burnout, and maintain a balanced lifestyle.

By being mindful of their digital habits, individuals can improve their mental and emotional health, enhance productivity, and strengthen social connections online and offline. This personal focus on digital wellbeing empowers individuals to take control of their digital experiences, leading to a more fulfilling and balanced life.

Achieving digital wellbeing requires a collective effort, one that brings together thoughtful technology design, people-centred city planning and individual awareness. When these components align, city stakeholders create a future where technology enhances human wellbeing, cities become more inclusive and sustainable, and individuals can fully thrive in the digital age.



2 Digital wellbeing vs wellbeing: Understanding the subjective nature of wellbeing

Wellbeing, in a broad sense, encompasses the overall quality of life experienced by individuals, integrating physical, mental and emotional health. It is influenced by a variety of factors, including social connections, economic stability, environmental conditions and personal fulfilment. General wellbeing is an integrated experience, wherein individuals perceive and experience their wellbeing holistically rather than in isolated segments. Rather than existing as separate components, wellbeing is an integrated experience that people perceive and live as a whole.

A key dimension of this holistic wellbeing is digital wellbeing, which refers to how an individual's overall wellbeing is influenced by their digital interactions. Digital wellbeing is how an individual's wellbeing is impacted by the perception of their digital interactions. This concept underscores the unique influence that digital environments and technologies exert on an individual's overall wellbeing.

Digital wellbeing specifically addresses the mental, emotional, and physical health implications of interacting with digital devices, platforms and services.

What makes digital wellbeing particularly complex is its highly subjective nature. Each person's experience with digital tools and platforms can differ significantly depending on their perception of digital interactions, their personal traits, the setting in which these interactions occur and the specific technologies they use. For example, social media can have vastly different effects on different people. Some find it to be a valuable space for maintaining connections, discovering new opportunities, and receiving emotional support, which enhances their overall wellbeing. Others, however, may experience heightened anxiety, self-doubt or even depression due to online comparisons, cyberbullying or a sense of disconnection.

This subjectivity is amplified by socio-economic factors and access to technology. The same digital tool can be experienced differently depending on the context; for example, whether an individual is in a comfortable home office or a high-pressure environment. Furthermore, unequal access to reliable Internet connectivity and digital skills can amplify the digital divide, leading to frustration and exclusion for some, while others experience seamless and empowering interactions. This highlights that digital wellbeing cannot be considered in isolation; it is deeply intertwined with other aspects of life, including social relationships and physical health.

Similarly, productivity apps, which are designed to enhance efficiency, can be perceived in very different ways. For one individual, such tools may bring structure and clarity to their tasks, reducing stress and fostering a sense of control. For another, constant notifications and the pressure to stay productive may feel overwhelming, leading to stress and even burnout.

Beyond individual differences, the environment in which digital interactions take place also plays a crucial role. The same digital tools can be experienced positively or negatively depending on the context. Someone working remotely from a comfortable home office may see digital technologies



as enablers of work-life balance. In contrast, an individual in a high-pressure office environment, constantly interrupted by e-mails, instant messages and digital alerts might view the same technologies as disruptive and stressful.

The design and functionality of digital technologies themselves also influence digital wellbeing. Thoughtfully designed, user-friendly interfaces can create smooth, enjoyable digital experiences that enhance wellbeing. For instance, a well-structured mental health app that offers easy access to resources and support can positively impact emotional wellbeing. Conversely, frustrating, or poorly designed digital technologies such as apps with complex navigation, frequent glitches, or excessive demands for attention can cause stress, frustration, and digital fatigue, ultimately diminishing digital wellbeing.

Since wellbeing is an interconnected experience, digital wellbeing cannot be considered in isolation. It is deeply intertwined with other aspects of life, influencing and being influenced by physical health, social relationships, work-life balance and mental health. For example, excessive screen time can lead to physical issues such as eye strain, poor posture and disrupted sleep, which, in turn, affect overall wellbeing. Likewise, the nature of digital interactions can shape social relationships, strengthening them through meaningful communication or straining them through misunderstandings, distractions, or digital misbehaviour. Ultimately, while general wellbeing encompasses all aspects of life, digital wellbeing specifically examines the impact of digital interactions on an individual's overall state of being.

In summary, while general wellbeing encompasses all facets of life, digital wellbeing specifically focuses on the impact of digital interactions. The subjective nature of these interactions, influenced by individual differences, environmental contexts, and technological design, underscores the importance of a nuanced approach to fostering digital wellbeing. By recognizing and addressing the multifaceted nature of digital experiences and how perceptions of these experiences vary, better support for the overall wellbeing of individuals in an increasingly digital world.

3 Examples of digital wellbeing initiatives

Table 1 includes a representative, though non-exhaustive, selection of digital well-being initiatives implemented by various stakeholders worldwide (website details are included in the bibliography section).

Table 1: A non-exhaustive compendium of digital wellbeing initiative examples

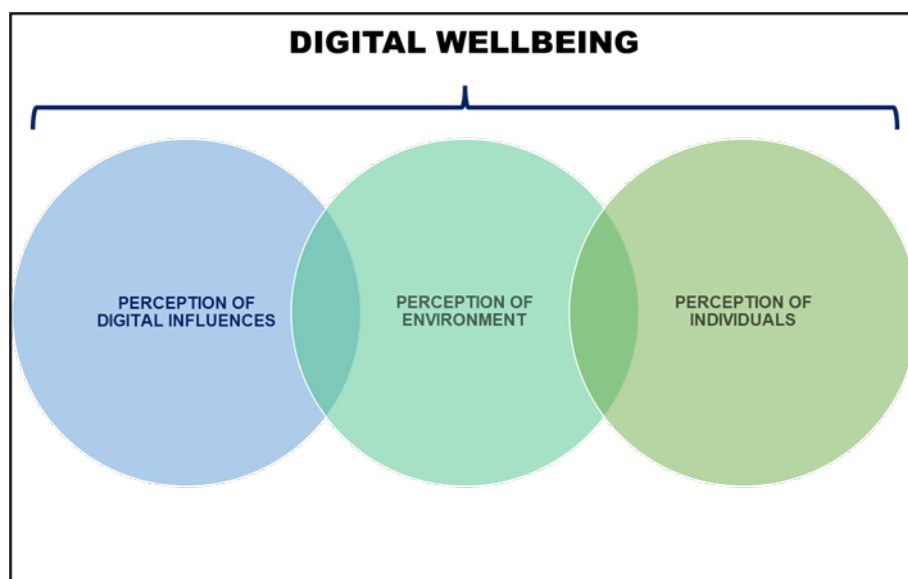
Country/ organization	Stakeholders/ governance	Framework	Marketing	Policies tools	Results/ engagements
Australia	Centre for Digital Wellbeing	No specified framework; strong focus on social media regulation and mental health Centre for Digital Wellbeing	Contact page exists; publications open to the public	Multiple regulations. Research on social media, no tools for consumers or organizations to use Centre for Digital Wellbeing	No results published by private or government entities within the country
United Kingdom	Non-governmental organizations (NGOs) and private sector-led: UK Safer Internet Centre , Age UK Digital Skills (Digital wellbeing approaches embedded not as a standalone)	No government-defined framework. Private entities focus on child safety, elder accessibility. Strong reporting culture of third parties	No campaigns; but many private entities report metrics exist (UK Digital Wellbeing Index , Deloitte Digital Wellbeing Insights)	No government-developed tools. Private entities' resources include Vodafone Digital Parenting and Age UK Digital Wellbeing	Research and indexing conducted on the UK's state of digital wellbeing, however no clear results of a policy have been published Internet Matters Digital Wellbeing Index A new index measuring UK children's digital wellbeing. Deloitte's Insights on Digital Wellbeing - Exploring the impact of digital technologies on wellbeing. UK Safer Internet Centre Research - Various studies related to online safety and digital wellbeing.
United States	Led by Original Equipment Manufacturers (OEMs), software firms, universities. Government largely focused on digitalizing health care, not digital wellbeing. (University of Washington , Samsung)	Digital wellbeing not part of the government strategy, although impact reports highlight its ease of use and customer satisfaction. Private sector companies like Google, Meta and Samsung have detailed approaches.	Significant marketing on Digital Wellbeing by private companies, OEMs like Samsung and software houses such as Google. (Google Digital Wellbeing , Samsung)	Private companies offer apps and products for screen time reduction and digital wellbeing. (Google Digital Wellbeing , Samsung)	Google and Avast Google and Avast .

Country/ organization	Stakeholders/ governance	Framework	Marketing	Policies tools	Results/ engagements
Singapore	Infocomm Media Development Authority (IMDA Singapore), similar to digital divide approach (DDA) at the federal level, promotes digital wellness through initiatives like Digital for Life. Universities such as National University of Singapore (NUS), offer resources like the CTIC-WP-01 (2021) to foster digital well-being. The private sector, represented by companies like Citrix, also emphasizes digital wellness through their Digital Workspace solutions.	IMDA identifies five key "domains" of digital wellness, though the content is consumer-focused and lacks insights into government actions. For more details, visit Digital for Life.	IMDA organizes regular digital wellness events open to the public, with details advertised on their website. Example: CyberliteBooks, CyberSafety, Education Singapore	IMDA has developed a consumer-facing "About" page that defines digital wellbeing and provides specific tools to manage the five highlighted domains. Example: Say no to harassment, Digital Wellness	A clear reporting page is available, labelled as "Stories," where positive results and engagement feedback are shared. Stories Listing
United Arab Emirates	UAE Council for Digital Wellbeing (2020) National Program for Happiness and Wellbeing, Abu Dhabi Early Childhood Authority, Ministry of Interior, Telecommunications and Digital Government Regulatory Authority, Office of Artificial Intelligence, Digital Economy, and Remote Work Applications	Government and Private Organizations Come Together to Enhance Children's Digital Wellbeing (Launched Feb. 2025) to protect children online and combat cyberbullying. Child Online Protection with New Digital Wellbeing Pact	Digital Wellbeing Support Line: Helpline (80091) offering professional advice. Public Awareness Campaigns: Initiatives to educate citizens on safe digital practices	Digital Literacy Programmes: Educating children and parents on safe browsing and digital skills. Digital Wellbeing Implemented to enhance online child protection	Collaborative Efforts: Government and private organizations unite to enhance children's digital wellbeing.
Saudi Arabia	Led by King Abdulaziz Center for World Culture (ITHRA), positioning Saudi Arabia as a global leader - Sync Summit. Through its international reports, events, and thought leader positioning.	ITHRA's Sync programme highlights digital wellbeing aspects but not in a framework format. Global outlook.	Sync Hub, Flagship Sync Digital Wellbeing Summit	ITHRA's modern consumer tools: Digital Wellbeing Quiz, Newsfeed Toxicity Tool	ITHRA's global research is gaining international recognition: Global Digital Wellbeing Report referenced often by international researchers looking into digital wellbeing:

4 Introduction to the digital wellbeing framework

The digital wellbeing framework comprises three core interconnected dimensions: perception of digital influences; perception of the environment; and perception of the individual. This structure provides a robust and logical way to understand the complex factors that shape an individual's digital wellbeing.

Figure 1: Core dimensions of digital wellbeing



Source: Digital Dubai

4.1 Perception of digital influences

This dimension captures how an individual's interactions with digital devices, applications, and services, including their design and functionality, impact engagement and overall wellbeing. This is a critical factor, as technology design can either promote positive habits or create addictive and isolating experiences.

4.2 Perception of the environment

Refers to the broader urban context that defines the digital landscape of a city. It includes factors like the quality of the digital infrastructure, cultural norms around technology use and socio-economic conditions that shape access and use of digital tools.



4.3 Perception of the Individual

Encompasses an individual's internal state including their self-awareness, self-esteem, and mental-emotional state. These factors profoundly shape how a person's identity and internal experiences influence their interactions with digital technologies.

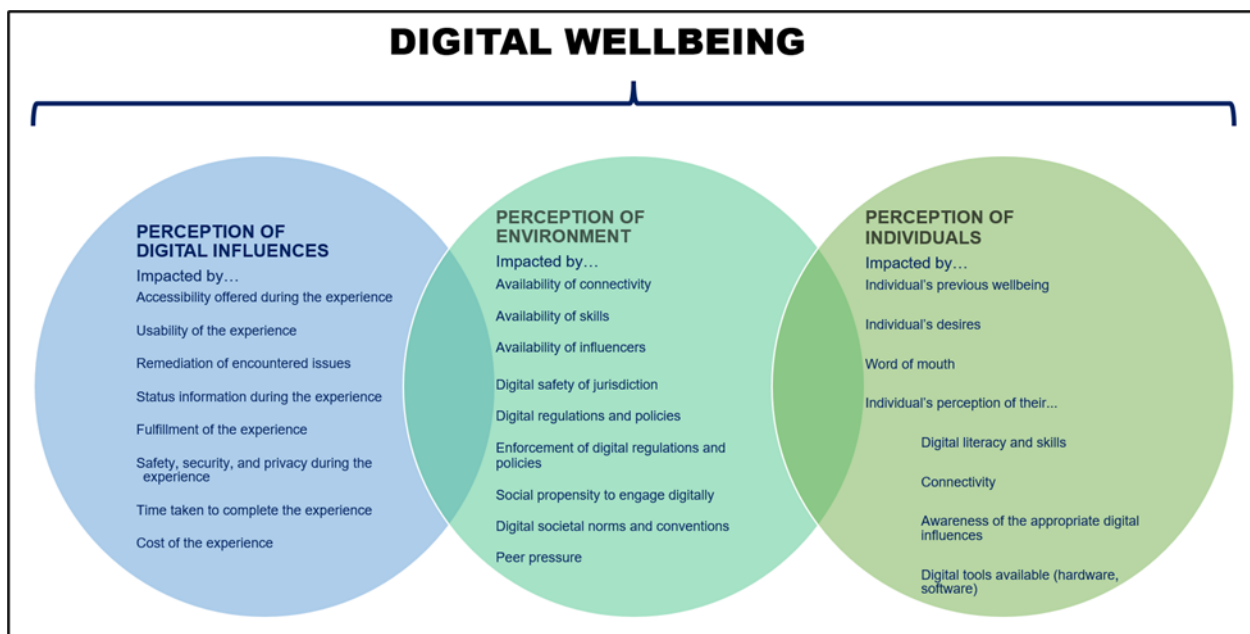
While the framework is comprehensive, a key area for cities to consider is how to influence the "Perception of Digital Influences", which is often driven by private sector companies whose business models may, in some cases, prioritize engagement over wellbeing. To address this, cities can adopt a multipronged approach:

- **Policy advocacy:** Cities can use their collective voice to advocate for national and international regulations that promote ethical design principles. This could include policies requiring platforms to offer robust parental controls, implement transparent data usage policies, or integrate features that support digital breaks and mindful use.
- **Ethical partnerships:** Cities can establish partnerships with private technology companies that demonstrate a commitment to digital wellbeing. These collaborations could involve co-developing public-facing apps for city services that are designed with user wellbeing in mind, or pilot programmes that test new technologies under a clear set of ethical guidelines.
- **Develop public-sector digital services:** To provide a pro-wellbeing alternative, cities can develop and promote their own public-sector digital services. These services such as a city-wide social platform for community events or an app for accessing public health resources, can be designed from the ground up to prioritize user wellbeing, privacy, and community-building, setting a positive example for the private sector.
- **Public awareness and education:** By promoting digital literacy programmes, cities can empower citizens to become more critical and discerning users of technology. This reduces their susceptibility to manipulative design and equips them with the tools to manage their digital lives proactively.

By recognizing the interconnected and complex nature of these perceptions, the framework aims to provide a solid foundation for developing strategies that promote a healthier, more balanced digital experience. This holistic view underscores the importance of how individuals, their surroundings and the digital world shape and influence one another, guiding the way toward a more mindful and harmonious relationship with digital spaces.

5 A holistic approach to digital wellbeing: Core dimensions in detail

Figure 2: Detailed aspects of core dimensions



Source: Digital Dubai

5.1 Perception of digital influences

A key aspect of digital wellbeing is how we perceive the digital world around us. Every interaction with a digital service, whether it's a banking app, an online course or a ride-sharing platform shapes our overall experience. This perception is influenced by several factors, including how accessible and easy to use a service is, how quickly issues are resolved and whether we feel safe and secure while using it. Let's explore these components and how they contribute to a positive or negative digital experience.

Accessibility offered during the experience

The ease with which individuals can access digital services significantly impacts their digital wellbeing. Accessibility involves ensuring that digital platforms are available to all users, including those with disabilities. For instance, a government website that is accessible to visually impaired individuals through screen reader compatibility enhances the digital wellbeing of these users by enabling equal participation in digital interactions.



Usability of the experience

The ease of use and intuitiveness of digital services play a critical role in shaping user perception. A well-designed user interface that is easy to navigate can significantly enhance digital wellbeing by reducing frustration and making digital interactions more enjoyable. For example, a banking app that allows users to effortlessly manage their finances contributes to a positive digital experience.

Remediation of encountered issues

The ability to quickly and effectively address problems that arise during digital interactions is crucial. Efficient customer support and troubleshooting options help maintain positive perceptions of digital services. For instance, an e-commerce platform that promptly resolves payment issues or delivery problems ensures a smoother and more satisfactory digital experience for users.

Status Information during the experience

Providing users with clear and timely updates about their interactions enhances transparency and trust. Status information can include progress updates, confirmation messages, and notifications about service availability. For example, a ride-sharing app that provides real-time updates on the arrival of a driver helps users feel informed and in control, thereby improving their digital wellbeing.

Fulfilment of the experience

The extent to which digital services meet users' expectations and needs impacts their overall perception. It is important to note that fulfilment does not always align with the user's initial desires but rather with the practical and beneficial outcomes of the interaction. For instance, an online learning platform that successfully imparts knowledge and skills, even if the course was challenging, can lead to a sense of accomplishment and satisfaction.

Safety, security and privacy during the experience

Ensuring that digital interactions are safe, secure, and private is fundamental to digital wellbeing. Users need to feel that their personal information is protected and that they are not at risk of cyberthreats. Such as a messaging app that offers end-to-end encryption provides users with confidence that their communications are secure, enhancing their perception of the service.

Time taken to complete the experience

The efficiency with which digital services operate affects user satisfaction. Services that are quick and efficient contribute to a positive digital experience, while those that are slow and cumbersome can lead to frustration. For instance, a fast and reliable online checkout process in an e-commerce site enhances the overall shopping experience.



Cost of the experience

The affordability of digital services is important in digital wellbeing. Services that provide good value for money and are economically accessible to a broad range of users contribute to positive perceptions. For example, a subscription-based streaming service that offers a vast library of content at a reasonable price can be perceived positively by users, enhancing their digital experience.

The perception of digital influences encompasses various components that collectively impact an individual's digital interactions and overall digital wellbeing. By understanding and addressing these factors, individuals can be supported in navigating the digital landscape in a way that enhances their overall quality of life.

5.2 Perception of environment

One of the key components in understanding digital wellbeing is how individuals perceive their environment, specifically, the city they live in. The urban setting plays a crucial role in shaping digital experiences, affecting everything from Internet access to social attitudes toward technology. A city's digital ecosystem is a crucial layer in understanding digital well-being, as it encompasses the interconnected network of infrastructure, policies, technologies, and social dynamics that shape digital experiences. Various aspects of a city influence digital wellbeing, including connectivity, digital skills, access to digital tools, safety, regulations, enforcement and social behaviours.

Availability of connectivity

A city's Internet infrastructure is one of the most fundamental components of digital wellbeing. Reliable, high-speed Internet allows residents to access online services seamlessly, making their digital interactions smooth and frustration-free. On the other hand, poor or inconsistent connectivity can lead to difficulties in accessing essential online resources, causing frustration and limiting participation in digital activities.

Availability of skills

Having access to digital skills training and education within a city greatly impacts how people interact with technology. Cities that invest in digital literacy programmes empower residents to navigate the digital world with confidence. When individuals feel equipped with the necessary skills, they experience less frustration and uncertainty, enhancing their overall digital wellbeing.

Availability of digital influences

The presence of appropriate digital tools, solutions, and applications within the city influences residents' digital interactions. Access to the right apps, efficient digital solutions, and effective tools can significantly enhance digital wellbeing. For instance, cities that offer robust e-government



services, efficient public transport apps, and accessible online educational platforms provide residents with valuable resources that improve their digital interactions and overall quality of life.

Digital safety of jurisdiction

The perceived safety of the digital environment within the city plays a crucial role in shaping digital wellbeing. Cities that prioritize cybersecurity measures and protect residents from online threats create a sense of security and trust among their inhabitants. Conversely, a lack of digital safety can lead to anxiety and reluctance to engage in online activities.

Digital regulations and policies

The presence of clear and supportive digital regulations and policies within the city influences how residents perceive their digital interactions. Effective regulations that protect digital rights, ensure data privacy, and promote fair use of technology contribute to a positive digital environment. For example, policies that prevent data breaches and cybercrimes can enhance residents' confidence in using digital services.

Enforcement of digital regulations and policies

The effective enforcement of digital regulations and policies is critical for maintaining a safe and fair digital environment. A well-regulated environment not only prevents abuses but also fosters vibrant social and economic activities digitally. When residents perceive that regulations are actively enforced, they feel more secure and confident in engaging in various online activities, from e-commerce to digital banking and beyond.

Social propensity to engage digital

The overall inclination of the city's population to engage in digital activities affects individual perceptions of digital interactions. In cities where digital engagement is widespread and encouraged, residents are more likely to feel integrated and supported in their digital endeavours. This social propensity fosters a sense of community and shared digital experiences.

Digital societal norms and conventions

The established norms and conventions surrounding digital behaviour within the city shape how individuals perceive their digital interactions. These norms can vary significantly across different cultures and cities. For example, in some cities, there may be a strong emphasis on digital privacy and cautious sharing of personal information, while in others, there might be a more open and communal approach to digital interactions. Understanding and adapting to these norms is essential for ensuring positive digital wellbeing.



Peer pressure

The influence of peers on digital behaviour and interactions can impact an individual's digital wellbeing. In cities where there is positive peer pressure to adopt healthy digital practices, individuals are more likely to follow suit and engage in beneficial digital behaviours. Conversely, negative peer pressure such as encouragement to engage in risky or unhealthy digital activities can detract from an individual's digital wellbeing.

The perception of the environment, specifically the city in which an individual resides, encompasses various factors that collectively influence digital interactions and overall digital wellbeing. Understanding these environmental components helps us appreciate how the urban setting shapes individuals' digital experiences and perceptions.

5.3 Perception of individuals

The first element in the framework for understanding digital wellbeing is an individual's perception of themselves. The perception a person has of themselves encompasses their self-awareness, self-esteem and mental and emotional state. This element reflects how an individual's personal identity and internal experiences influence their interaction with digital technologies. These factors include the individual's desires, previous wellbeing, digital literacy and skills, word of mouth, connectivity, awareness of appropriate digital influences and the digital tools available to them.

An individual's previous wellbeing

Past experiences with digital technologies can impact current perceptions and interactions. Someone who has experienced cyberbullying or digital addiction may approach digital interactions with caution and scepticism. Conversely, individuals who have had positive experiences such as building supportive online communities, may have a more favourable perception of their digital interactions. These prior experiences influence how individuals navigate digital spaces and their level of engagement.

An individual's desires

An individual's personal goals and aspirations significantly influence how they engage with digital technologies. For example, people seeking to improve their health may use fitness apps and wearable devices to track their progress, while others focused on career advancement might prioritize professional networking platforms and online learning resources. These desires shape the type of digital interactions individuals seek and their overall perception of these interactions.



Word of mouth

Social influences and recommendations from friends, family and peers play a role in shaping an individual's perception of digital interactions. Positive word of mouth about certain apps, devices or online services can encourage individuals to adopt these technologies, while negative feedback may deter them. For example, a trusted friend's recommendation of a mental health app can lead to its adoption and potentially improve digital wellbeing. In contrast, warnings about security vulnerabilities in a particular platform may prompt individuals to avoid it.

Digital literacy and skills

The level of digital literacy and proficiency in using digital tools affects how individuals perceive and navigate their digital environments. Higher digital literacy enables individuals to make better use of technology, enhancing their digital wellbeing. For instance, a person adept at using cybersecurity measures will feel more secure and confident online, whereas someone with limited digital skills may feel overwhelmed and vulnerable. Moreover, digital literacy influences an individual's ability to critically assess online information, reducing the risk of misinformation.

Connectivity

Access to reliable Internet connectivity is fundamental to an individual's digital experience. Poor connectivity can lead to frustration and hinder access to essential digital services, negatively impacting digital wellbeing. Conversely, robust connectivity enables seamless interactions and access to a wide range of digital resources, enhancing the overall digital experience. Reliable Internet access is especially critical for remote work, education and social interactions in an increasingly digital world.

Awareness of appropriate digital influences

An individual's knowledge and awareness of beneficial digital tools and resources influence their digital wellbeing. Being informed about reliable and effective digital solutions such as educational platforms or health monitoring apps, allows individuals to make informed choices that positively impact their digital interactions. Awareness also helps individuals recognize and avoid harmful digital influences such as misleading advertisements or predatory online behaviours.

Digital tools available (hardware, software)

The quality of digital tools plays a crucial role in shaping an individual's digital experience. High-performance devices and user-friendly software can enhance productivity and satisfaction, while outdated or malfunctioning tools can lead to frustration and reduced digital wellbeing. For example, using a high-performance laptop with efficient software can significantly improve a student's online



learning experience. Similarly, intuitive and accessible applications contribute to a smoother and more effective digital interaction.

An individual's perception of themselves encompasses various components that collectively influence their digital interactions and overall digital wellbeing. Recognizing these components helps us understand how personal attributes and experiences shape digital interactions and, ultimately, digital wellbeing.

To effectively assist resource-constrained cities, a prioritized approach to addressing key factors is crucial. A city can use a simple prioritization guide based on two key criteria: **impact** (potential effect on the city and its population) and **feasibility** (ease of implementation based on budget, political will, dependency and complexity).

- **High impact/High feasibility:** These are the “quick wins”. Cities should focus on these first.
 - **Examples:** Launching a public awareness campaign on digital literacy and safe online practices (impact on individual); partnering with local schools to offer free coding classes through volunteers (impact on individual); or creating a simple, well-designed public-facing website for city services (impact on digital influences).
- **High impact/Low feasibility:** These are “strategic goals” that require significant planning.
 - **Examples:** Upgrading city-wide digital infrastructure to improve connectivity (impact on environment); advocating for national data privacy legislation (impact on digital influences); or developing a comprehensive mental health support service specifically for digital burnout (impact on individual).
- **Low Impact/High feasibility:** These are “tactical” projects that can be done if resources permit but are not a top priority.
 - **Examples:** Sponsoring a small local workshop on a niche digital tool (impact on individual); or adding a minor feature to an existing city app (impact on digital influences).
- **Low impact/Low feasibility:** These are “avoid” projects that should not be pursued under most circumstances.
 - **Examples:** Implementing a complex new regulatory framework for a problem that only affects a tiny portion of the population.



6 Digital wellbeing assessment approach

Assessing digital wellbeing within people-centred cities and sustainable development requires a multifaceted and comprehensive approach. Cities can leverage a combination of quantitative and qualitative tools to gain a holistic understanding of digital wellbeing.

Key assessment methods

- Surveys (Perception-based assessment)
 - Capture individuals' experiences and perceptions regarding digital wellbeing (including various dimensions and their components specified in the digital wellbeing framework).
 - Assess indicators such as:
 - Screen time and digital habits
 - Digital literacy levels
 - Privacy concerns and data security awareness
 - Mental and emotional health impact of digital interactions
 - Identify prevalent issues and areas for targeted interventions.
- Big data analytics (Real-time and Macro-level assessment)
 - Utilize data from diverse sources, including:
 - Social media trends and sentiment analysis
 - Mobile application usage patterns
 - Internet traffic and digital behaviour insights
 - Detect emerging issues and disparities across demographic groups.
- Data collection from city entities (Sector-specific insights)
 - Collaborate with:
 - Healthcare providers. Assess correlations between digital usage and health outcomes.
 - Educational institutions. Evaluate the role of digital tools in learning and development.
 - Public service agencies. Understand digital accessibility and inclusivity challenges.



- Ensuring reliability and actionability:
 - Standardized metrics and benchmarks
 - Define key dimensions of digital wellbeing:
 - Mental and emotional health
 - Digital literacy and skills
 - Privacy, security and data protection
 - Digital inclusivity and accessibility
 - Enable consistent monitoring and evaluation to track progress over time.
- Regular assessments and strategic refinements
 - Continuously update strategies based on data insights.
 - Implement data-driven assessment schemes.

Big data analytics can help uncover disparities in digital wellbeing among different demographic groups, enabling targeted interventions to bridge the digital divide.

Data collection from city entities is essential for a comprehensive assessment of digital wellbeing. Collaborating with healthcare providers, educational institutions, and public service agencies, cities can gather data on how digital technologies impact various aspects of life. For instance, data from healthcare providers can shed light on the correlation between digital device usage and health outcomes, while data from educational institutions can highlight the role of digital tools in learning and development.

To ensure the reliability and validity of the assessment process, it is crucial to establish standardized metrics and benchmarks for digital wellbeing. These metrics should encompass the key dimensions of digital wellbeing, including mental and emotional health, digital literacy, privacy and inclusivity. By regularly monitoring and evaluating these metrics, cities can track progress, identify emerging challenges, and refine their strategies to enhance digital wellbeing.

To make the assessment approach more actionable, cities can leverage various tools (e.g., open source, commercial).

- 1 Survey platforms:** These tools are essential for collecting qualitative and quantitative data directly from city residents.
- 2 Data visualization and analytics tools:** These tools help cities make sense of the data they collect, identifying trends and patterns.
- 3 Digital ethics and governance frameworks:** These frameworks provide a structure for ensuring that data collection and analysis are done responsibly and ethically.



By integrating these types of tools, cities can move from a theoretical assessment approach to a practical, data-driven methodology for enhancing digital wellbeing.

7 Digital wellbeing implementation methodology

This section outlines a four-step practical methodology for digital wellbeing, enabling cities to enhance digital wellbeing through an iterative approach.

- Assessing current digital wellbeing (establishing a baseline).
- Determining potential for future digital wellbeing initiatives and prioritizing improvement areas.
- Planning for digital wellbeing initiatives and their implementation
- Assessing projected digital wellbeing impact.

Each of the four steps is explained below in detail:

7.1 Assessing current digital wellbeing (establishing a baseline)

The first step involves conducting a thorough assessment of digital wellbeing using the tools and approaches outlined in the previous section (section 6). This assessment should provide a comprehensive understanding of the current state of digital wellbeing, identifying key issues and areas for improvement. Engaging stakeholders, including residents, businesses, community and organizations is crucial in this stage to ensure that the assessment captures diverse perspectives and needs. This step entails conducting a swift baseline audit, which determines the status of a city or an organization with respect to its digital wellbeing.

It establishes a baseline by integrating quantitative and qualitative assessment tools, as outlined in the previous section.

This step determines a people-centred city's current status (baseline) with respect to:

- The existing city's digital wellbeing initiatives and their applications.
- The existing enablers that would support the implementation of digital wellbeing initiatives.

a) Baseline based on existing digital wellbeing initiatives

This component involves identifying the digital well-being initiatives implemented by a city.

They may have been undertaken as part of a city's overall approach for implementing people-centred city initiatives (e.g., pilots, trials, strategic projects) and may reflect its own particular urban needs. In some cases, they may be national level initiatives (e.g., Sustainable Development Goals, SDGs implementation) undertaken at the city level (or local level).



Cities should prepare a list of its initiatives and actions promoting digital wellbeing. Some of these initiatives and actions may be formulated based on the assessment using quantitative and qualitative assessment tools, as outlined in section 6. It may also include other projects based on the city's overall approach to implementing wellbeing holistically (e.g., pilot projects). In some cases, there may be national level initiatives that are being implemented in a city as well. Several initiatives and actions can be carried out simultaneously.

Table 2 below provides a template that a city or organization can use as a straightforward approach to assess the effectiveness of its digital wellbeing initiatives.

Table 2: Template for collection of initiatives for assessing digital wellbeing

Digital wellbeing initiative name	Brief explanation	Implementation milestones	Owner	Comments
Digital wellbeing initiative 1				
Digital wellbeing initiative 2				
Digital wellbeing initiative 3				
Digital wellbeing initiative N				

b) Enablers

Enablers support the implementation of digital wellbeing initiatives. The utilization of enablers could elevate the likelihood of success for a city in implementing its digital wellbeing initiatives and action items.

Table 3 provides a simple template for assessing the current status of a city's enablers in relation to digital wellbeing initiatives and programmes.

Table 3: Template for assessing digital wellbeing city enablers

Assessment elements	Currently exists	Brief description	Comments
Are there any awareness programmes for digital wellbeing initiatives in the city?	☐		
Are there any skill-boosting programmes focused on digital wellbeing knowledge in the city?	☐		
Does the city foster a dynamic and thriving innovation ecosystem that actively drives digital wellbeing initiatives?	☐		
Does the city have a digital wellbeing or holistic wellbeing framework alongside its digital regulations and policies?	☐		
Is there effective enforcement of digital regulations and policies?	☐		
Are there existing digital wellbeing strategies and policies in the public and private sectors of the city? Are there mechanisms in place to ensure security and safety, safeguarding the digital wellbeing of residents?	☐		
Does the city utilize key assessment methods for digital wellbeing such as surveys, perception-based assessments, data analytics, metrics, benchmarks, and sector-specific reports?	☐		
Are there existing collaborations and partnerships among city organizations for implementing digital wellbeing initiatives?	☐		

Assessment elements	Currently exists	Brief description	Comments
Are there existing Research and development (R&D) programmes or targeted academic initiatives supporting digital wellbeing implementation?	☐		
Are city stakeholders aware of ongoing digital wellbeing initiatives and actions in the city?	☐		
Have broad stakeholder groups been identified for city-level digital wellbeing initiatives and action items?	☐		
Are city stakeholders actively engaged in digital wellbeing implementation efforts?	☐		
Is there an established financial framework, including financial incentives, to support city-level digital wellbeing implementation?	☐		

7.2 Determining potential for future digital wellbeing initiatives and prioritizing improvement areas

Based on the assessment findings, cities should prioritize areas that require immediate attention and have the potential for significant impact. After completing step one, the city can formulate its own digital wellbeing initiatives and actions. Engaging a broad range of stakeholders will help define the city's specific wellbeing priorities and needs, while also identifying initiatives to promote digital wellbeing for implementation.

This prioritization process should consider factors such as the severity of the issues, the feasibility of interventions and the potential benefits for different demographic groups. By focusing on the most critical areas, cities can allocate resources efficiently and maximize the effectiveness of their digital wellbeing initiatives.

Each city's unique needs and priorities can shape the emphasis on certain digital wellbeing city outputs while de-emphasizing or even eliminating others. This process should be tailored to the city's specific context, aspirations and goals. Additionally, benchmarking against successful digital wellbeing initiatives from other cities can provide valuable insights. At this stage, a comprehensive list of potential digital wellbeing initiatives and action items can be developed for implementation. A non-exhaustive compendium of selected examples is presented in Section 3. If a city lacks the capacity or resources to fully implement the proposed digital well-being actions, a prioritization

mechanism can provide a structured and effective approach. This implementation methodology suggests a pragmatic prioritization method based on two key criteria.

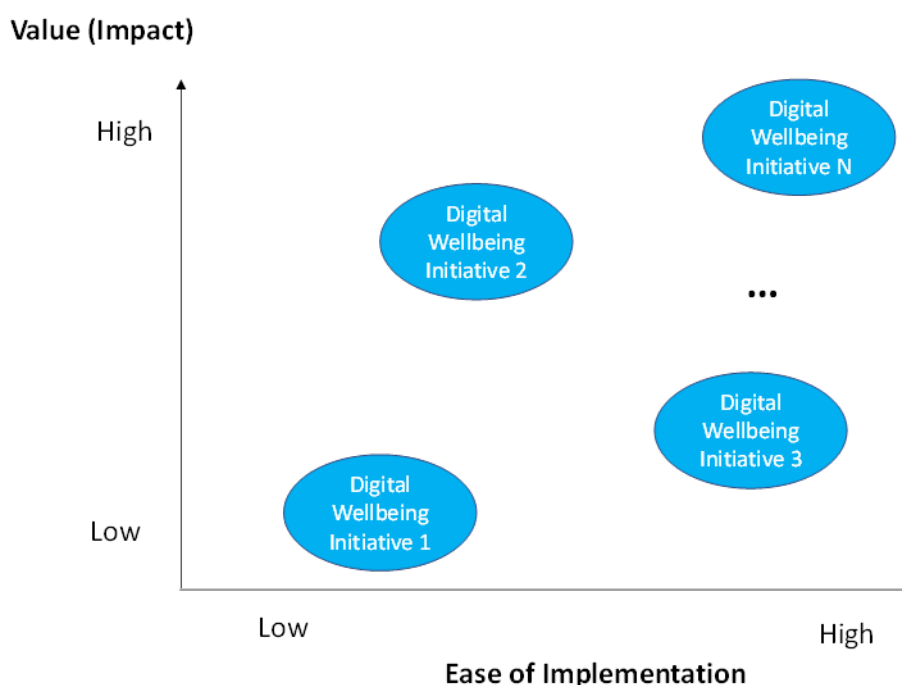
1 Impact on digital wellbeing (Value)

- **High impact:** Initiatives that significantly improve users' digital wellbeing, mental health, focus, and overall wellbeing related to digital interactions.
- **Moderate impact:** Initiatives that contribute to digital wellbeing but may require complementary measures.
- **Low impact:** Initiatives with limited or indirect effects on digital wellbeing.

2 Feasibility of implementation (Ease of implementation)

- **High feasibility:** Requires minimal resources and easy to implement.
- **Moderate feasibility:** Requires moderate effort, investment and moderately easy to implement.
- **Low feasibility:** Requires significant resources, high costs, policy changes or cultural shifts.

Figure 3: Prioritization of digital wellbeing initiatives



Source: Digital Dubai



7.3 Planning for digital wellbeing initiatives and their implementation

Once priority areas are identified, the next stage involves determining the specific initiatives required to address the identified issues for digital wellbeing, their planning and implementation.

These initiatives can range from policy changes, digital services and infrastructure improvements to educational programmes and public awareness campaigns. It is essential to adopt a multi-disciplinary approach, involving experts from various fields such as health care, education, technology, and urban planning, to design holistic and effective interventions. Additionally, leveraging best practices and learning from successful digital wellbeing initiatives in other cities can provide valuable insights and guidance.

A city can leverage a strategic mix of enablers to effectively implement digital wellbeing initiatives, ensuring a balanced, mindful, and sustainable digital ecosystem for its inhabitants. In other words, a combination of supportive mechanisms can facilitate the adoption and success of these initiatives by promoting responsible technology use and fostering a culture of digital wellbeing.

Below are some key enablers illustrating this concept.

Education, awareness, and capacity building

Various tools such as digital literacy programmes, university courses and vocational training can help bridge knowledge gaps and equip individuals with essential skills for responsible and ethical digital engagement. These programmes may focus on topics such as screen time management, online privacy, cybersecurity, and the psychological impact of digital interactions. Existing research, guidelines and best practices on digital wellbeing can also be disseminated through public-awareness campaigns, online platforms, and targeted outreach efforts to ensure widespread accessibility.

Structured professional programmes, including skill-building workshops may further strengthen the capacity of educators, policymakers and digital service providers to integrate digital wellbeing principles into their practices. Additionally, mentorship programmes led by experts in psychology, technology and behavioural science can empower individuals with the knowledge needed to navigate the digital world mindfully. Cities with advanced digital well-being frameworks can also support other cities by sharing insights, case studies and scalable best practices.

Cultural and behavioural adaptation

Cultural and behavioural patterns such as excessive screen time, digital addiction, online toxicity or digital burnout may present challenges to implementing digital wellbeing initiatives. Raising awareness and clearly communicating the benefits of balanced digital habits to key stakeholders can help mitigate these barriers. Behaviour-change strategies, including public campaigns on mindful



technology use, community-based discussions and workshops, can foster a more responsible digital culture.

In such cases, behavioural shifts will be necessary among city inhabitants and digital service providers. Nudging techniques such as app notifications promoting screen breaks, digital detox incentives and gamified self-regulation tools can encourage healthier digital behaviours. Additionally, cities can implement targeted policies such as promoting digital-free zones, encouraging wellbeing-focused workplace policies and incentivizing technology companies to design user-centred, ethical digital products.

Collaboration and policy support

A holistic approach to digital well-being requires collaboration between governments, cities, educational institutions, technology companies and civil society. Public-private partnerships can drive innovative solutions that balance technological advancement with human-centred digital experiences. Regulatory measures, including ethical design standards, data-protection policies and digital rights advocacy can help create a safer and more inclusive digital landscape.

Ultimately, by combining education, behavioural insights and policy interventions, cities can foster a digital environment that enhances mental and emotional wellbeing, promotes digital inclusivity, and supports a healthier relationship between people and technology.

7.4 Assessing projected digital wellbeing impact

To ensure the continuous improvement of digital wellbeing initiatives, it is essential to establish a feedback loop that allows for the assessment and refinement of interventions. This involves systematically evaluating the outcomes of implemented initiatives, and using qualitative and quantitative metrics to measure their impact on digital wellbeing. Gathering feedback from residents, businesses and other stakeholders provides valuable insights into the effectiveness of the interventions and highlights areas for improvement.

Based on the assessment, cities should identify successful strategies and scale them up, while revising or discontinuing less effective measures. This iterative process ensures that interventions remain relevant, effective and aligned with the evolving needs of the community. Additionally, fostering a culture of continuous learning and adaptation within city entities promotes innovation and the proactive addressing of new digital wellbeing challenges as they arise.

By following the Digital Wellbeing Implementation Methodology, cities can systematically enhance digital wellbeing, so creating a healthier and more balanced digital environment for their residents. This holistic approach ensures that digital technologies contribute positively to the quality of life, fostering sustainable, inclusive, and resilient communities.



Assessing the outcomes of digital wellbeing initiatives is crucial to understanding their effectiveness and ensuring alignment with intended objectives. Cities and organizations implementing digital wellbeing strategies should conduct interim and ex-post evaluations, objectively comparing actual results with initial goals. Evaluating various enablers such as policies, technologies and behavioural interventions based on their effectiveness during implementation allows gaps to be identified. Any shortcomings should be addressed promptly, ensuring continuous improvement. Lessons learned from successful initiatives can inform future strategies, optimizing the benefits of digital wellbeing interventions. For instance, a successful policy promoting mindful digital consumption in one initiative might inspire similar strategies in another, enhancing overall digital resilience. Similarly, ineffective enablers should be adjusted or phased out.

Since digital wellbeing initiatives drive behavioural, social and cognitive transformations, assessing their long-term impact is essential. A retrospective (ex-post) evaluation helps understand shifts in digital habits, mental health, productivity, and community engagement, comparing them to pre-implementation expectations. By analysing pre-implementation (ex-ante) and post-implementation (ex-post) assessments, deviations between intended and actual outcomes can be identified. Such insights support the refinement of digital wellbeing strategies, fostering more adaptive and human-centred digital environments.

8 Conclusion

Creating cities where digital wellbeing thrives requires more than just managing screen time or expanding Internet access. It necessitates a comprehensive approach that fosters inclusive digital literacy, safeguards privacy and security, and promotes humane technology, among other things. Digital tools should enhance mental and social wellbeing rather than contribute to stress and isolation. A truly people-centred approach acknowledges the diverse ways individuals interact with technology and calls for policies that support all residents, including children, the elderly, workers, students, and marginalized communities.

Recognizing that digital wellbeing is integral to overall wellbeing, cities should adopt a holistic perspective that balances technology use with mental, emotional, and physical health. The unique challenges of the digital age demand targeted strategies and interventions, informed by successful initiatives and global best practices. A structured Digital Wellbeing Framework serves as a valuable guide for understanding and improving digital wellbeing at individual and societal levels, addressing self-perception, environmental factors, and the influence of digital tools. To ensure a structured and strategic application of these principles across various sectors, a Digital Wellbeing Implementation Framework is essential.

Moving forward, raising public awareness through educational campaigns and responsible digital habits is crucial. Integrating digital wellbeing into education and workplaces can help foster healthier digital practices, while collaboration with policymakers can help establish ethical guidelines and regulations for responsible technology design. Encouraging self-assessment and mindfulness will



empower individuals to reflect on their digital habits, while enhanced research and data collection will provide valuable insights into emerging challenges and refine wellbeing strategies.

A multistakeholder approach, engaging urban planners, businesses, public health officials, community leaders, economists and policy analysts, educators, and individuals, is key to fostering a balanced digital environment. Strengthening digital literacy, promoting ethical technology design, and providing support networks for those struggling with digital dependency are essential steps. Regular monitoring and evaluation through well-defined key performance indicators will ensure continuous improvement in digital wellbeing initiatives. By implementing these strategies, cities can cultivate a sustainable, ethical, and health-conscious digital future, one that prioritizes human wellbeing alongside technological progress.

Cities and policymakers can consider the following concrete policy suggestions:

- **Establish a Chief Digital Wellbeing Officer (CDWO) role:** Designate a dedicated leadership position within city government to oversee and coordinate all digital wellbeing initiatives. This role would ensure that digital wellbeing is not an afterthought but a central tenet of city planning.
- **Integrate digital wellbeing impact assessments:** Require pertinent digital technology city projects to undergo a “Digital Wellbeing Impact Assessment.” This would require project teams to explicitly analyse and report on the potential effects on people’s wellbeing (e.g., mental health, privacy, digital equity) before implementation.
- **Develop a “People-centred Focus” Charter:** Create a public charter that outlines the city's commitment to using technology to enhance, not detract from, people’s wellbeing. This charter would serve as a guiding document for all public sector digital technology projects and a public declaration of the city's values including enhancement of digital wellbeing.
- **Incentivize private sector collaboration:** Develop a framework to incentivize the participation and engagement of private sector companies that actively contribute to digital wellbeing. This could include schemes that encourage responsible practices within the private sector such as financial incentives or official recognitions and certifications for companies that meet a set of city-approved standards.



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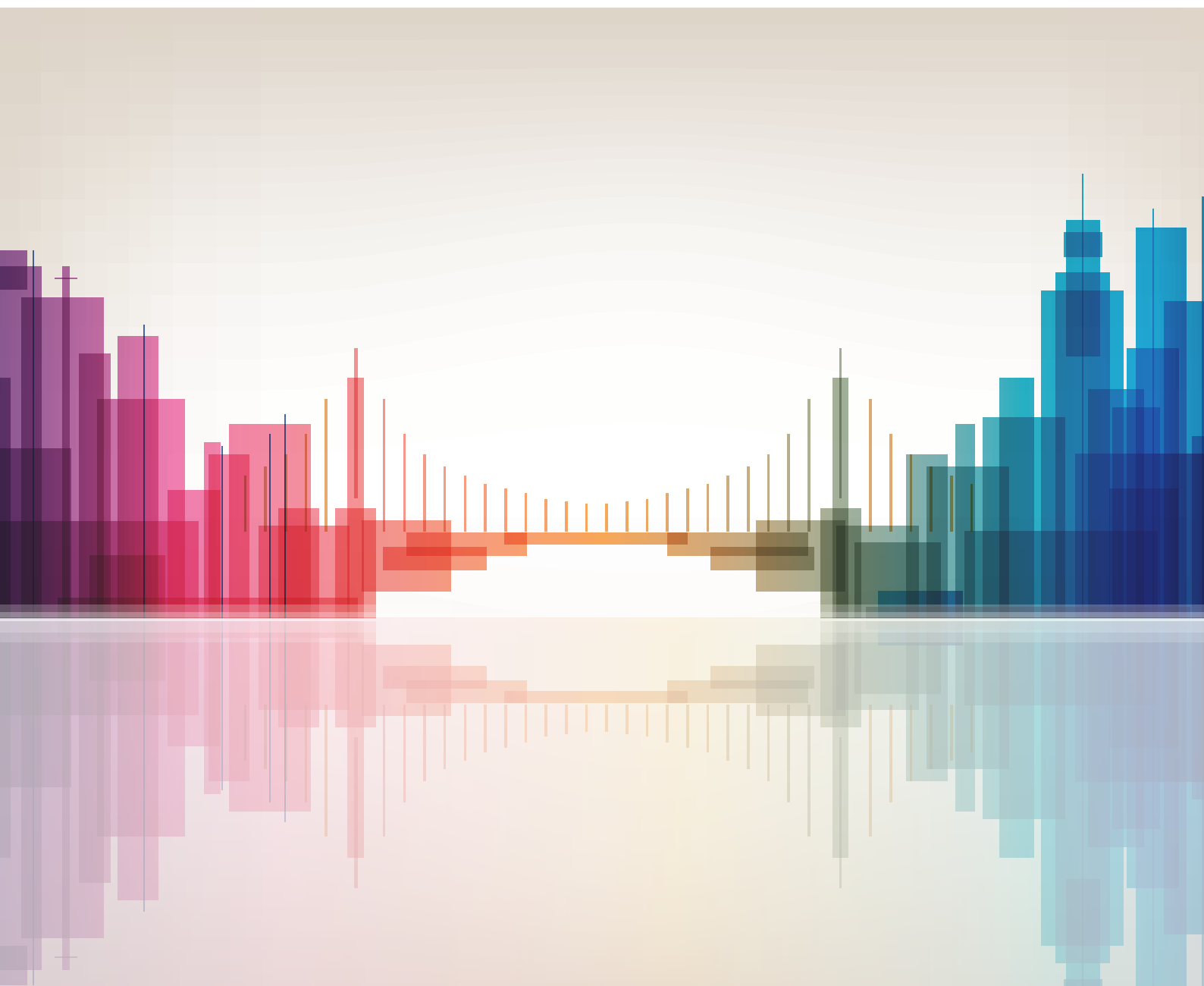
Appendix – Case studies

Types of initiatives

- **Government initiatives:** Examples of local and federal policies promoting digital wellbeing.
- **Private sector initiatives:** Business-led efforts to enhance digital wellbeing in urban settings.
- **Civil society / NGO initiatives:** Community-driven initiatives aimed at improving digital wellbeing through education and advocacy.

List of case studies

- Case Study on Columbus, Ohio, United States of America
- Case Study on The Cybersmile Foundation
- Case Study on Dubai's pursuit of digital wellbeing
- Case Study on Jeddah, Saudi Arabia
- Case Study on Shanghai, China (People's Republic of)
- Case Study on Spotify
- Case Study on The End Now Foundation



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