



Maribyrnong
CITY COUNCIL

A SMART CITY FOR SMART COMMUNITIES

A Strategic Framework
for improving our city
with digital technology,
data and innovation.



SMART CITIES
Maribyrnong

APRIL 2022

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Acknowledgement of Country

Council is proud to represent a municipality filled with important and significant Aboriginal history. It acknowledges the Traditional Custodians of this land, the Wurundjeri Woi Wurrung and Boon Wurrung peoples of the Kulin nation, and acknowledges the rich culture and considerable contributions Aboriginal and Torres Strait Islander peoples have made and continue to make to this City.





Foreword

A city of activity, innovation and inspiration delivering a bright future for Maribyrnong.

We are living in an exciting time of change, with a rapid acceleration of new technologies worldwide over the last few years.

To keep pace, Maribyrnong is committed to using innovation and technology to support a green, liveable and sustainable environment for our community to enjoy well into the future.

Together, with our residents, businesses, industries and partners, we intend to make the most of the opportunities and benefits of digital technologies, data and innovation to keep our community healthy and safe through effective and efficient management of our systems and urban landscapes.

This Smart City Strategic Framework sets out Council's intentions, plans and initiatives to address local challenges with community focused and technology-driven action.

The Strategic Framework connects with existing strategies and plans across Council to help enhance their delivery through smart city ideas and innovations.

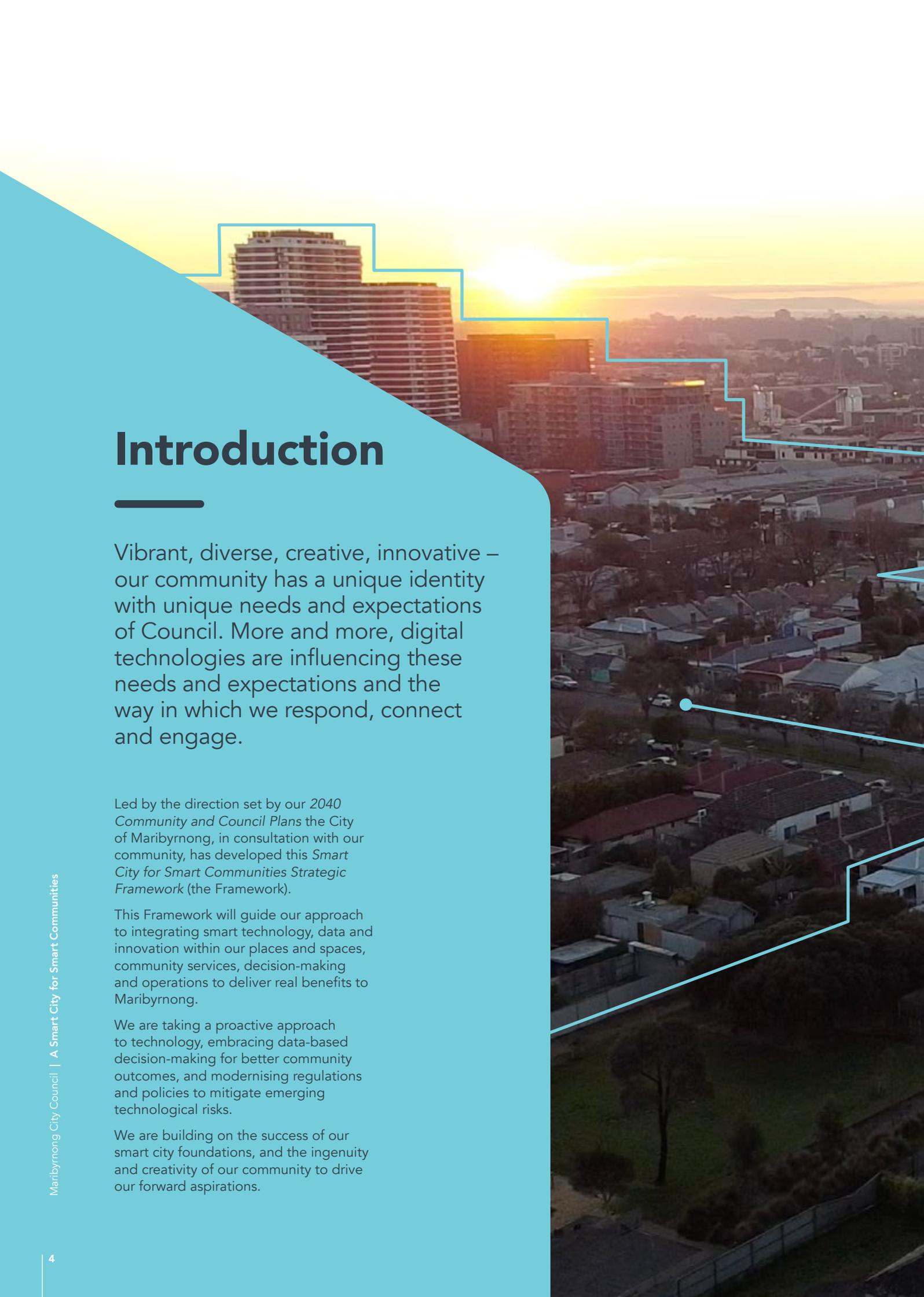
It was developed with valuable feedback and ideas gathered during discussions with our community and aligns with the direction outlined in the 2040 Community Plan. It includes plans for the future of transport, our environmental focus and how the City will continue to adopt new and emerging technologies in a wide range of projects.

The Framework sets a course for us to continue to improve energy efficiency, keep our streets clean, decrease traffic congestion and support the smooth delivery of essential services and will guide Council to better support and respond to the needs of the community with leading technology, skills, infrastructure, and systems.

We look forward to the many benefits and opportunities new technologies will deliver, for a bright and prosperous Maribyrnong of the future.

Anthony Tran
Mayor
City of Maribyrnong





Introduction

Vibrant, diverse, creative, innovative – our community has a unique identity with unique needs and expectations of Council. More and more, digital technologies are influencing these needs and expectations and the way in which we respond, connect and engage.

Led by the direction set by our *2040 Community and Council Plans* the City of Maribyrnong, in consultation with our community, has developed this *Smart City for Smart Communities Strategic Framework* (the Framework).

This Framework will guide our approach to integrating smart technology, data and innovation within our places and spaces, community services, decision-making and operations to deliver real benefits to Maribyrnong.

We are taking a proactive approach to technology, embracing data-based decision-making for better community outcomes, and modernising regulations and policies to mitigate emerging technological risks.

We are building on the success of our smart city foundations, and the ingenuity and creativity of our community to drive our forward aspirations.

Smart City

A city that applies digital technology, data, and innovative practices to improve liveability, sustainability, collaboration, and economic opportunities.



Smart Community

The diverse and intersecting groups who are involved and/or benefit from smart city activity regardless of their skills, interests, level of involvement or degree of smart city understanding.



Smart City & Smart Communities

A smart city is designed with people at the centre. They use digital technology, data, and innovation to enhance outcomes such as liveability, prosperity, and sustainability for their communities.

They are proactive and agile, using data to help inform planning and decision-making.

Smart cities encourage collaboration, participation, and co-design in decision-making, promoting the creativity, expertise, and ingenuity of their community.

Above all, smart cities are inclusive. They use the benefits of technology to help inform service delivery that best meets the needs of all members of the community and promotes digital empowerment and accessibility.

A simple way to look at it is that a 'smart city' is one which uses data and technology to help make the city a better place.

A smart city is made up of a diverse range of intersecting smart communities, each with their own skills, interests, levels of involvement and degrees of understanding in smart city activity. Our smart communities are you – our community members, residents, business owners, investors and everyone else who sees the benefit of smart city activity in Maribyrnong.

Vision

This Framework is founded on the Vision from the 2021-2025 Council Plan:

An inclusive, flourishing, progressive city that cares for both its residents and its environment.

Building on this long-term Vision, and based on consultation with the community, the Smart City Vision for this Framework is:

A community that is empowered to embrace the benefits of smart technology to support...

Innovation

Inclusion

Creativity

Transparency

Leadership

Connection



Sustainability



Collaboration



COVID-19 and the acceleration of Smart Cities

This Framework was developed during the 2021 COVID-19 lockdowns.

The appetite, and the need for change has accelerated around the world as offices were traded in for remote work, doctors' visits for telehealth appointments, and community halls for online calls.

The pursuit of this Smart City Vision will help Council and our community become more robust and agile, better connected to essential services and generally better suited to the uncertainty presented by global pandemic scenarios.

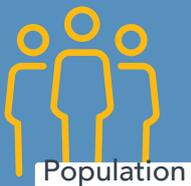
It will set up our City to flourish beyond the COVID-19 pandemic and well placed when the next challenge or opportunity arises.

Smart City Environment

Smart cities build on the established environment of a city and leverage its key strengths, opportunities, and priorities. This environment includes demographic factors, all existing smart city projects, partnerships, policies and plans, and the broader state and federal government priorities.

The City of Maribyrnong

Our demographic, social, economic, and environmental context lends itself to a strong foundation for smart city activity. Additionally, our growing and diverse population and high commuter base will benefit from smart city opportunities.



Population

ESTIMATED RESIDENTIAL POPULATION[^]

93,448	164,637
2021	2051

MEDIAN AGE (2016)^{*}

33	36
City of Maribyrnong	Greater Melbourne

DIVERSITY: POPULATION BORN OVERSEAS (2016)^{*}

40%	34%
City of Maribyrnong	Greater Melbourne



Education^{*}

POPULATION COMPLETED YEAR 12

66%	59%
City of Maribyrnong	Greater Melbourne

POPULATION COMPLETED BACHELOR'S DEGREE OR HIGHER

34%	28%
City of Maribyrnong	Greater Melbourne

POPULATION TRADE QUALIFICATION

11%	15%
City of Maribyrnong	Greater Melbourne

[^] Australian Bureau of Statistics Estimated Residential Population 2051 ^{*} Australian Bureau of Statistics 2016 Census Data
[~] National Institute of Economic and Industry Research 2020 ⁺ Unemployment Rate March 2021 by .id (informed decision)
[#] Australian Business Register July 2021 [‡] City of Maribyrnong Council Plan 2021–25



Economy

LOCAL BUSINESSES (2021)*

9,796

LOCAL JOBS (2020)~

45,911

LOCAL INDUSTRIES (2020)~

17%

Healthcare & Social Assistance

15%

Retail Trade

10%

Education & Training

UNEMPLOYMENT RATE (2021)+

7.6%

City of Maribyrnong

7.1%

Greater Melbourne



Attraction to Maribyrnong†

- > Location
- > Arts & Culture
- > Retail
- > Education
- > Innovation
- > Open Spaces & Environment
- > Public Transport



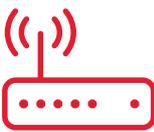
Residents' Commute (2016)*

19%

Live & work in the area

78%

Live in the area but work outside



Internet Connectivity (2016)*

79%

Internet Connection

11%

No Internet Connection



Strategic Context

With strong local strategic documents, successful neighbouring council smart city strategies, and supportive legislation leadership, Maribyrnong is well positioned to leverage its policy context for smart city success.



This diagram provides a snapshot of Council's key strategic plans and policies mapped across the smart city directions outlined in this Framework. Smart city aspirations do not work in isolation. In reality, smart city activity can reach and be incorporated right across Council's functions, services and plans.

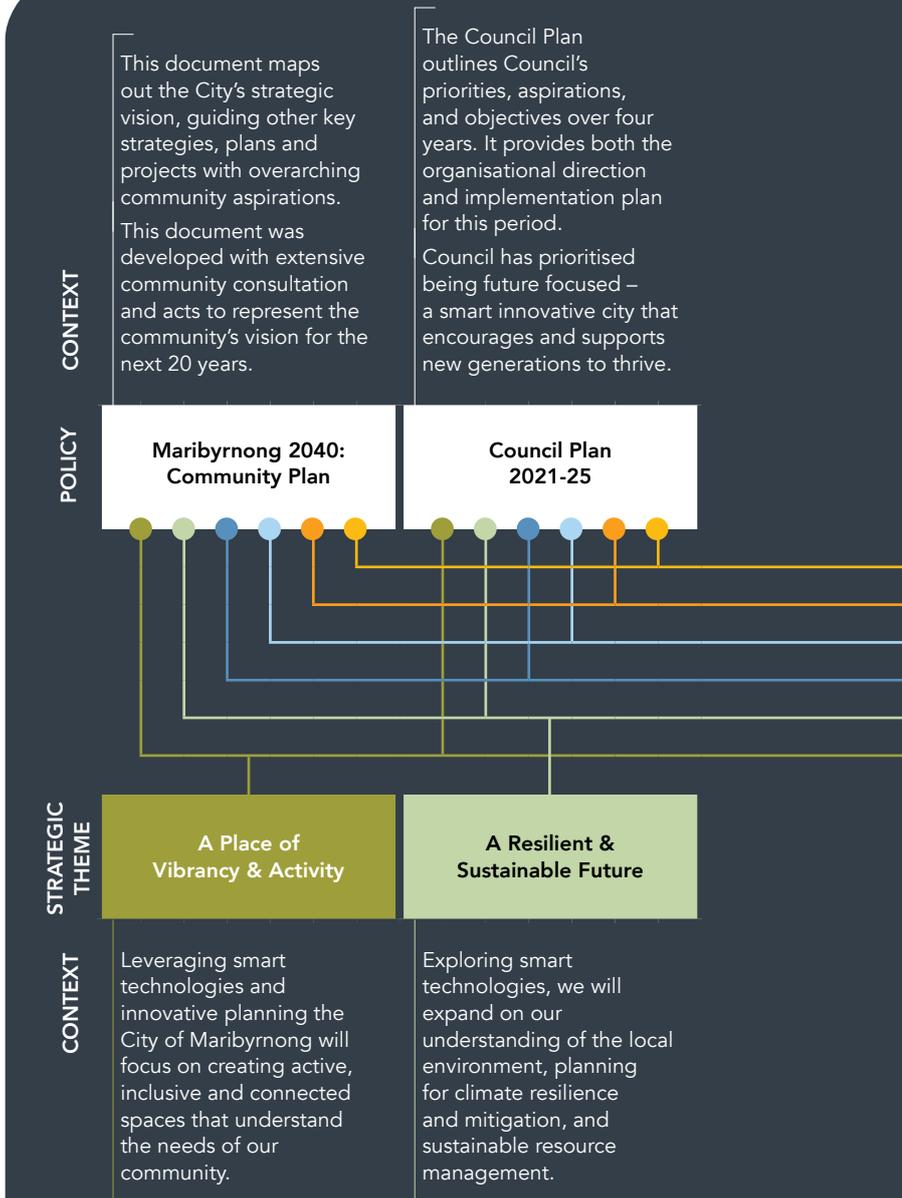
In addition to these plans and strategies, this Framework also takes into account:

- Tourism Strategy**
 This Strategy sets a framework for decision-making and investment in tourism and visitor experience from 2017-2021.
- Community Infrastructure Plan**
 Under development but will align to smart city infrastructure needs.

Smart Cities in context

Smart cities are a strategic priority for Council, and included in the Council Plan 2021-25.

STRATEGY	ACTION		
4.2	<table border="1"> <tr> <td>Advocate and deliver projects that support a growing community now and into the future.</td> <td>Develop and implement a Smart Cities Framework to make the best use of technologies for our community.</td> </tr> </table>	Advocate and deliver projects that support a growing community now and into the future.	Develop and implement a Smart Cities Framework to make the best use of technologies for our community.
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Incorporated into the Council Plan, this Plan outlines Council's role and commitment to fostering community wellbeing. Council's health and wellbeing actions focus on improving the physical, social, natural, cultural, and economic environments that promote health and wellbeing in Maribyrnong.

This plan outlines detailed programs, projects and actions that have been set out to meet the goal and visions set out in the Climate Emergency Strategy.

The Action Plan is guided by three key objectives: ceasing emissions of greenhouse gasses, drawing down existing emissions, empowering, and mobilising community action and building community resilience. The Climate Emergency Strategy will be reviewed in 2025.

This Strategy provides direction for future planning, provision, design, and management of open space in the City of Maribyrnong from 2013 to 2031.

The strategy is amended every five years to assess what has been completed, what is currently in progress and what remains to be completed.

Council's Privacy Policy outlines responsible management, collection, storage, access, disclosure, and destruction of private information collected by Council.

This policy has been informed by the Privacy and Data Protection Act 2014 and the Health Records Act 2001.

Municipal Public Health & Wellbeing Plan 2021-25

Climate Emergency Action Plan

Open Space Strategy

Maribyrnong City Council Privacy Policy 2018

An Economy for the Digital Age

Growing our digital capability and economy we will help create jobs, attract businesses and drive investment.

An Empowered & Connected Community

Focussing on smart mobility, digital infrastructure, and digital skill building we will connect our community in the physical and online world.

A Celebration of Culture & Creativity

Enhancing our vibrant, creative and diverse identity, we will leverage digital technology to showcase our cultural heritage, celebrate our creativity and encourage innovation.

A Future-Ready Council

Council will support our smart city aspirations from the inside out, developing the skills, processes, systems and information to drive transparency, accountability, informed decision-making and benefit to our community.

Smart City Showcase

This Framework provides a coordinated approach, and clear vision for smart city activity. It will enable Council to build on the strong foundations set by current and existing smart city projects.

Highlights of successful and new projects are detailed in this diagram.



Building our foundation: Smart Cities for Social Cohesion

The Smart City for Social Cohesion (SC²) Project has created a strong foundation for future smart city initiatives in Maribyrnong. Partly funded through the Australian Government's Smart Cities and Suburbs Program, the SC² project has provided Council with the foundational smart city infrastructure to build upon, and the experience and reputation to support investment and talent attraction.

In partnership with Victoria University, the SC² was designed to test the potential of smart technology in helping Council respond to the influx of new residents, visitors, students, and businesses in Footscray.

Within the confined geographic area, the project aimed to build social cohesion by improving city activation, amenity, and safety through the implementation of interactive kiosks, free public Wi-Fi, smart lighting, and environmental sensors.

Additionally, the technology allows Council to monitor how people move through the area with pedestrian, people, and cyclist counters. This information has been particularly useful in understanding the impact of COVID-19 on businesses in the area and will continue to inform Council planning and decision-making in the area.



SMART CITIES
Maribyrnong





SMART LIGHTING

ENVIRO SENSOR

FLORA & FAUNA APP

INTERACTIVE KIOSKS

Interactive kiosks at key locations promote the City's history, tourist destinations, public transport options and other information.

SMART LIGHTING

Energy efficient smart lighting provides reduced public lighting maintenance needs and costs, contributing to Council's commitment to an improved Climate Emergency response.

INTEGRATED SMART CITY DATA PLATFORM

In collaboration with Victoria University an integrated Smart City Data Platform was developed. This Platform makes information gathered from the sensor network readily available for the community, including real-time parking availability, pedestrian, cyclist and vehicle movement counters, air quality readings, and free public Wi-Fi network information.

FOOTSCRAY PARK APP

An app featuring environmental education functions listing flora and fauna found in the Park and the Edwardian gardens, giving users the opportunity to learn more about the Park's history and habitats.

LoRAWAN NETWORK

A gateway to connecting Internet of Things (IoT) devices and the sharing of data.

Key initiatives for this project include:

SMART ENVIRONMENTAL MONITORING SENSORS

Sensors measure the air quality in and around Footscray to help Council advocate for improved health outcomes for the City.

EXPANDED FREE PUBLIC WIFI

Free public WiFi in Footscray's business district and Footscray Park, enabling better access to educational, tourism and business information at no cost.

PEDESTRIAN, CYCLIST, AND VEHICLE COUNTERS

Counting technology, and the non-identifiable data it produces, improves mobility and transport connections across Footscray's business district and other areas.

Key Transformative Projects & Opportunities

The City of Maribyrnong, and in particular the Footscray CBD area is set to have a number of significant infrastructure projects delivered over the next decade.

These projects are an opportunity to integrate smart city technologies, introduce new innovations that align with the Smart City Vision, and leverage existing partnerships as part of our Smart City Program.

These projects highlight how technology is improving the liveability, functionality, and resilience of our city. This Framework will guide us as we continue to build, innovate, and improve our City into the future.



Footscray Town Hall and Civic Centre Redevelopment Project

The planned redevelopment of the Footscray Town Hall – Civic Centre will see the addition of a number of new community spaces, including a 200 seat multi-use space and an environmentally friendly public park/plaza.

It will have minimum five-star green star standards, EV charging, LED lighting, solar and rainwater harvesting. Work on this project is due to commence in 2022 with construction expected to take 18 months.



NeXT Project

NeXT is an ambitious \$129 million project being led by Council to create a Library, Community and Cultural Arts Space that will provide our growing and diverse community with:

- a library of the future
- flexible community meeting rooms and spaces
- a large, purpose-built, flexible performing arts space
- exhibition and gallery spaces
- office and commercial/not-for-profit opportunities
- open green space.



Footscray University Town

Footscray University Town (FUT) is a joint initiative between Maribyrnong City Council and Victoria University. This partnership aims to open new opportunities for employment, enterprise and investment throughout the West by harnessing of the knowledge, networks and resources of the University, Council and the community.

PROJECTS

SMART CITY OPPORTUNITIES

- Integrating smart technologies into the building from the ground up to support connectivity, sustainability and amenity for staff and visitors.
- Embedding technologies into the broader precinct and establishing a site for testing and trialing innovative technologies in the public realm.
- Experimenting with innovative working practices, to support increased collaboration and productivity.

- Incorporating a Smart City Innovation Lab in the NeXT facility.
- Creating opportunities for all community members to upskill their digital literacy.
- Providing spaces that support the start-up and entrepreneur ecosystem.
- Establishing synergies for the NeXT project & Footscray Learning Precinct & Footscray University Town.
- Using NeXT as a physical manifestation of the Smart City Vision.

- Exploring the development of a 'Smart City Testbed' for VU students to gain practical skills and knowledge about the application of Smart City principles.
- Sharing smart city data to support the development of new courses and study projects at VU.
- Investigating the expansion of existing 'Smart City' MOU.

Electric Vehicles Charging Infrastructure Policy 2020

Council has also endorsed an Electric Vehicle Infrastructure Policy. The Policy addresses the opportunities for EV charging infrastructure, encouraging, enabling, and guiding the installation of EV infrastructure across our City.

Council has begun preparing for EVs to form part of the Council’s fleet vehicles by installing additional EV chargers at the operations centre.

Council recognises the benefit of encouraging the uptake of EVs within the community to enhance health and environmental outcomes across Maribyrnong. We have begun exploring opportunities to expand our EV charging capability to the community to support this.

Parking sensors

Since 2017, Council have been using IoT devices to successfully gather data on parking trends across the municipality. This data has helped to manage parking conditions, develop plans to create efficient turnover of spaces and help increase parking availability for residents, businesses, shoppers and visitors.



Footscray Learning Precinct

Development of the Footscray Learning precinct began in 2015, with a focus on championing excellence in learning and teaching and opportunities for every student at every stage of education. This precinct will provide seamless transition from early learning to adult education, and incorporates the Footscray High School, Footscray City Primary School, Footscray Primary School and the Footscray Integrated Early Learning Centre.



Footscray Hospital

The \$1.5 billion Footscray Hospital development project is the largest health infrastructure investment ever in Victoria. Construction is expected to be completed by 2025, and the new facility will help meet the changing and growing health needs of Melbourne’s West.



West Gate Tunnel Project

The West Gate Tunnel Project will deliver a vital alternative to the West Gate Bridge, providing a much needed second river crossing, quicker and safer journeys and remove thousands of trucks from residential streets, particularly around the Footscray and Yarraville areas.

PROJECTS

SMART CITY OPPORTUNITIES

- Encouraging smart city related data and technology projects that can be taught in the schools as part of the STEAM education streams.
- Sharing smart city data for the delivery of projects such as ‘Hackathons’.

- There may be the opportunity to integrate technologies into the Hospital precinct to help understand pedestrian/ cyclist / vehicle flows and improve amenity and vibrancy.

- The removal of heavy vehicles from local roads will provide an opportunity to reimagine how our suburbs are used, and the use of data and technology will help maximise the benefits.

Collaboration Smart Communities Ecosystem

Our City boasts an array of talented and influential businesses, educators, and community members across a diverse range of fields.

Smart cities are about tapping into our unique expertise to lead and affect better community outcomes.

While Council plays a strong role in smart cities, we encourage our community, partners (existing and future) and other members of our ecosystem to be involved and drive change in their sphere of influence – creating an environment for shared leadership and action.

Learning from the best

The City of Maribyrnong will continue to leverage and expand on our connections and partnerships with smart cities and communities from across Australia and around the world to learn from the best and inspire our smart city thinking.

Within Maribyrnong we have already been working closely with several key partners including:



Victoria University

Council has been working in partnership with Victoria University on the SC² project. A key component of this project is the data dashboard which encourages students and educators to leverage the data available to develop innovative solutions.



Nippon Telegraph & Telephone

Council has signed an Innovation Charter with NTT. As a leading telecommunications company, with its own research and development team and initiatives across smart cities, 5G, and technological development, NTT is a key knowledge partner for Council.



Bike West

Council worked with Bike West to better understand the mountain bike park in Quarry Park. Bike West is a cycling advocacy in Melbourne's west. Moving forward, Council will continue to work with Bike West and other community groups to drive benefits in our community.



The roles we play

The potential for smart city benefit reaches further than Council. Our aim is to support the Maribyrnong ecosystem to make the most of these benefits and drive the outcomes they believe in.

How can you help? Just a few of the ways you can be involved in smart cities are outlined in the diagram below.



Other players in our smart city ecosystem include:

Government | Health | Professional Services | Hospitality & Retail | Tech Companies | Manufacturing | Creatives

Engagement Insights

This *Smart City for Smart Communities Strategic Framework* is founded in community insights. It aims to directly address community challenges and leverage only those opportunities that are most beneficial to our communities.

As such, ongoing collaboration with our community is essential for the successful implementation and enactment of the Framework.

Engagement process

To support the development of this Framework, Council conducted engagement activities with a range of stakeholders.

The engagement process enabled Council to identify key stakeholder insights and priorities and gauge community understanding of the benefits of smart cities.

Community insights

Although many in our community were unfamiliar with smart cities, after defining and discussion, our community believe Council should be:

a leader and explore cutting edge technology in our approach to smart cities

(46%)

In describing our vision for Maribyrnong as a smart city, our community focused on:

Showcase our progress and wins

Walk the Walk! Let's be a leader

Create opportunities for local business

Build on our diverse arts and cultural offerings

Continue to engage with the community

Highlight our rich and diverse history

Learn from other smart city leaders

Ensure smart cities is accessible and inclusive for all members of our community



Your big ideas

Our community identified some fantastic ideas for smart city initiatives that focus on the unique traits of Maribyrnong. These included:

Culture & History

"Using the system of QR codes we could dive into the history of Footscray and surrounding suburbs while walking around. Getting some historical information on landmarks, and photography of what was once there."

Arts, Place Activation & Night-time Economy

"Themed lighting up of various architectural buildings in and around Footscray, ideally walking distance from one another."

Waste Management & Information

"Based on Maribyrnong City Council recycling types, scanning a barcode on a product could tell you if it is able to be fully or partially recycled."

As a community, we prioritised:

Transport, mobility & parking
(15%)

Asset management
(14%)

Public health & wellbeing
(8%)

Environmental management & protection
(8%)

as services that could be most improved using smart technology in Maribyrnong

And we saw:

Public buy-in and perceptions of value
(16%)

Immature smart city culture
(14%)

Ineffective collection, management & sharing of data
(13%)

Red tape
(13%)

as potential barriers to our smart city success



Building our Smart City maturity

The City of Maribyrnong is at the beginning of its smart city journey.

In these early stages Council is focused on laying the foundations for progress:

- Building a team with the skills to deliver smart projects;
- Developing and continually improving the processes required to make smart city thinking business as usual;
- Leveraging partnerships with business, community groups and other government agencies.

Where are we going?

Council is working hard to build up the complexity and coverage of smart city capability across the City and our organisation.

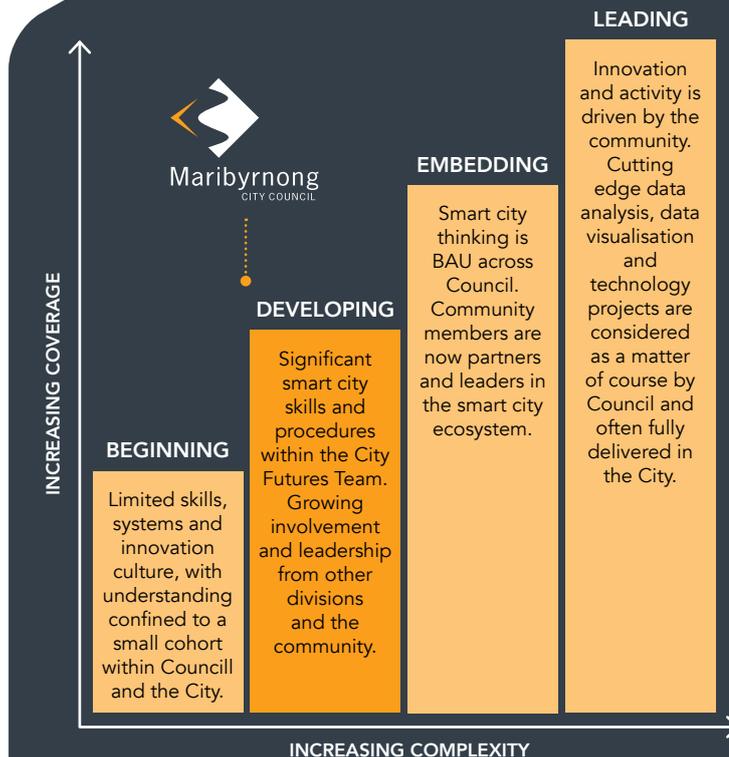
How will we get there?

Within the organisation, we plan to:

- Increase training to boost the skills of our organisation
- Improve smart city processes and pathways
- Boost cross-council collaboration and understanding of smart city integrations
- Continue engagement and collaboration with our community

In the community we are aiming to:

- Build community trust – exploring opportunities, developing relationships, ongoing dialogue with community
- Expand our digital and smart city skills and understanding – improving digital literacy in our community
- Build an innovation culture – integrating smart technology and data as fundamental tools in modern life
- Drive collaboration among neighbours – building a dynamic innovation ecosystem.





Smart City Principles

Smart principles align ongoing smart city activity with community priorities and values.

These principles are taken into account when considering any Smart City initiative or project. They help ensure that investment in future improvements and smart city initiatives always focusses on the overall objectives of our community.



Community-First

We will focus first and foremost on achieving community benefit, then on realising technology-based solutions. Smart initiatives will be convenient, simple, and inclusive. We will empower our community by encouraging participation and growing digital capacity.



Collaborative

Smart city design and delivery will be grounded in community consultation and collaborative development. Shared action will drive buy-in and community ownership of smart initiatives. Partnerships with other smart organisations will increase reach and lead to further success.



Innovative

Curiosity, optimism, and innovation will drive transformation. Dynamic and creative thinking will support new ideas that are more efficient and effective. The City of Maribyrnong will develop skills and processes to apply innovation and smart thinking to all facets of our City.



Outcome Focused Planning

Our smart city approach will consider community-led outcomes, rather than technology for its own sake. We will deliver project, programs and policies that meet the needs and objectives of our community.



Transparent & Accountable

Council will remain transparent, accountable and focused on protecting the privacy of our community by only capturing non-identifiable data. Key decisions will be developed in collaboration and based on data. Open data and clear performance metrics and targets will ensure Council's progress is assessable by the community.



Inclusive

The City of Maribyrnong is a place for people of all cultures, backgrounds, and abilities. No one will be left behind by smart cities as inclusivity, accessibility and equity is built into smart initiatives and projects.



Sustainable

We will use smart technology to improve environmental protection and resource management. The City of Maribyrnong will be future ready, implementing sustainable planning that accounts for city growth and invests in long-term solutions.

Strategic Themes

Strategic themes guide the planning and delivery of smart city projects and initiatives. They help connect this Framework to other plans and strategies across Council.

They are informed by in-depth research, community engagement, and international best practice.

These strategic themes are designed to ensure a balanced approach is taken to smart city activity by considering place, environmental, social, cultural and organisational outcomes.



A Place of Vibrancy & Activity

The City of Maribyrnong will create spaces which are vibrant hubs for our community. Spaces will be green, safe, and clean, with smart technology driving pedestrianisation and encouraging cycling. Smart planning will drive ongoing city growth that develops these community centric spaces and uses them to encourage an active, inclusive, connected community.

Priority action areas could include:

- ⑤ Facilitating investment in Electric Vehicle infrastructure to support environmental objectives
- ⑤ Leveraging real-time data and partnerships to better manage and maintain key transport routes including congestion, noise, and freight and active travel routes
- ⑤ Expanding movement monitoring to key community hubs to understand how people move around our City and promote active and micro-mobility
- ⑤ Integrating data analytics into planning processes for proactive and informed city planning
- ⑤ Partnering with Digital Twin Victoria to deliver 3D planning models to support stakeholder engagement and innovative planning
- ⑤ Working with local development and construction industries to integrate smart city, innovation and smart building management considerations into building guidelines
- ⑤ Developing a smart asset management system to monitor and manage Council assets including maintenance, usage trends and remote access
- ⑤ Exploring street-pole access and expanding smart lighting rollout to high-priority areas



A Resilient & Sustainable Future

The City of Maribyrnong will reduce our carbon footprint, waste, and environmental impact. We will explore smart and innovative ways to support climate resilience and mitigation and our Zero Carbon Maribyrnong commitment. Smart sensors will drive sustainable management of our limited resources and enable efficient and timely environmental monitoring. Strategic resource allocation and infrastructure management will be improved by efficient smart waste, lighting, and water technologies.

Priority action areas could include:

- ⑤ Investigating the expansion of our smart bin network to high-priority public spaces
- ⑤ Using a smart irrigation system to optimise the watering and maintenance of green spaces
- ⑤ Exploring the benefit of smart energy meters on Council assets
- ⑤ Integrating smart city benefits and technologies in to Council's sustainable building guidelines
- ⑤ Investigating digital tools to help residents live a circular lifestyle, including promoting the appropriate disposal of waste and the sharing economy
- ⑤ Conducting a review of the green space and urban heat footprint across the City to promote green space protection and mitigate the heat effects of climate change
- ⑤ Leveraging and expanding environmental data collection to analyse and adapt to the changing environment and support our climate commitments



An Economy for the Digital Age

The City of Maribyrnong will leverage the growing digital economy to create jobs, attract businesses and drive investment. By improving education outcomes and digital learning, the community will be equipped with competitive skills that improve worker productivity. Investment in smart infrastructure will build on our strategic location to become a hub for innovation and smart businesses.

Priority action areas could include:

- ④ Expanding our smart city data dashboard to provide access to additional real-time Council data sets
- ④ Working with our partners to develop a smart city collaboration framework to support proactive smart city partnerships
- ④ Developing a smart city prospectus to attract investment and stimulate economic development
- ④ Expanding our digital literacy programs to enhance the skills and opportunities of businesses and targeted community cohorts
- ④ Establishing a local smart city procurement network to encourage local collaboration and solution generation
- ④ Investigating opportunities to establish a testbed in partnership with VU to hack and research smart city opportunities
- ④ Expanding our Internet of Things network to encourage local innovation and enhancing Council's ability to collect relevant data
- ④ Enhancing our connectivity network including exploring fibre enhancements and advocating for 5G connectivity





An Empowered & Connected Community

The City of Maribyrnong will connect our community in the physical and online world. Smart transport options will improve mobility, freight logistics, and accessibility. Digital infrastructure will enable digital accessibility for all, while smart online programs encourage community collaboration and learning in the online space. Digitally enabled events and activations will be used to celebrate multiculturalism and help foster community inclusivity.

Priority action areas could include:

- ⑤ Utilising smart technology and crowd-sourced data to help improve perceptions of public safety and encourage use and activation of public spaces by all members of our community.
- ⑤ Partnering with the education sector to promote data literacy, smart city thinking and innovation to target community cohorts and the education sector.
- ⑤ Delivering a digital inclusion framework that promotes the inclusive application of digital technologies and capability building across the City
- ⑤ Leveraging smart tech to enhance availability of information/services in a diverse range of languages
- ⑤ Expanding free public Wi-Fi in high-priority areas
- ⑤ Investigating innovative approaches to democratic participation and community engagement
- ⑤ Utilising technology and data to help facilitate and measure community health recovery initiatives
- ⑤ Updating our smart city webpage and establishing a smart city communications channel to help inform residents, visitors and investors of the smart city activity and performance within Council and the community

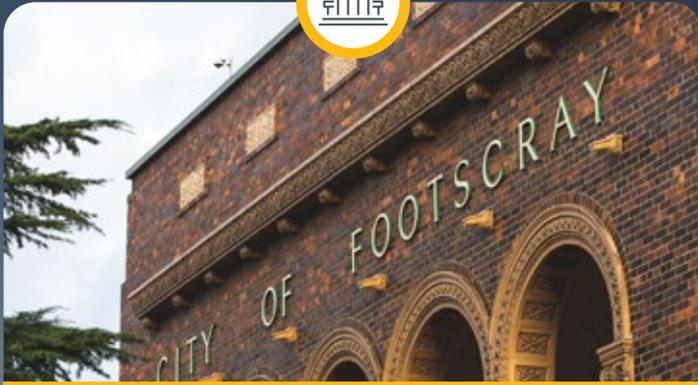


A Celebration of Culture & Creativity

Council will enhance Maribyrnong's unique identity as a creative and innovative City. Art and cultural offerings will be showcased across our City, highlighting our diverse and vibrant community. Council will leverage digital technology to celebrate and capture the rich history and future of Maribyrnong. Council will seek to embed innovation as a key element of Maribyrnong's identity.

Priority action areas could include:

- Promoting digital, innovative or data-driven art both physically and digitally across our City
- Exploring opportunities to digitise cultural assets
- Showcasing our diverse cultural heritage and the art, culture and stories of the Traditional Owners through interactive mediums such as Virtual Reality or Augmented Reality
- Exploring smart technologies to support the management of Council events and festivals
- Leveraging smart city networks to host a series of smart city events/ conferences that encourage collaboration and knowledge sharing, and build the City's smart city reputation
- Partnering with Victoria University and VU Innovations to facilitate a city-wide innovation network
- Exploring opportunities to host a smart city challenge or hackathon to collaboratively develop smart city solutions



A Future-Ready Council

Council will drive internal change by implementing smart technology, processes and decision making, including smart data management. Council will remain transparent and accountable to our community through open data and explicit smart city goal setting and performance measurement. Once Council establishes itself as a smart organisation, it will reach out to the community and partners to deliver community benefit and grow our digital economy.

Priority action areas could include:

- Identifying a pathway to proactively modernise key services and regulation
- Delivering a data management framework to support the coordinated uptake and collection of data across Council
- Developing an open data platform to support improved information and service delivery
- Investing in digital literacy and data training for Council staff to ensure they have the skills and confidence to support smart city outcomes
- Establishing communities of practice within Council and promoting cross-Council collaboration on projects, policies, and programs
- Establishing a clear smart city governance, resourcing and project delivery pathway within Council
- Embedding smart thinking into Council operations to identify and realise efficiencies in processes and resourcing among other areas
- Developing a digital innovation advocacy framework to leverage the lessons discovered and partnerships established during the delivery of the Smart Cities for Social Cohesion Project
- Delivering a privacy and security roadmap to ensure policies and systems are regularly updated and refined in line with new technologies and community expectations
- Improving Council's capacity to plan for and respond to emergency situations including the ongoing response to the COVID-19 pandemic

Implementation

Council has developed an accompanying *Implementation Plan* to support the strategic and coordinated implementation of this Framework.

Our Implementation Plan will be updated on a 12 month cycle, and will be aligned to Council's annual budget and planning cycle.

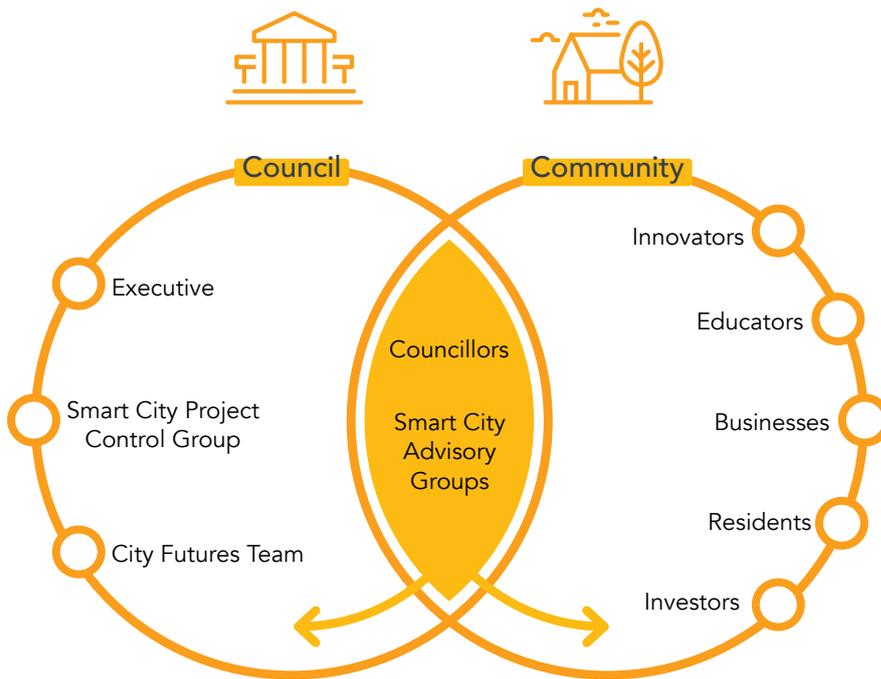
The strategic themes and principles of this Framework will be considered when developing the annual Implementation Plan and it will balance the following priorities:

- Leveraging existing projects and infrastructure
- Delivering new high-priority projects
- Continuing to engage with the community
- Developing smart policies and guidelines
- Building the smart capacity of Council

CURRENT 2021–2022	FUTURE 2022–2025	EXTENDED 2025–2030	LEADING 2030+
Building on our strong foundation and scaling up our commitment	Leveraging new opportunities to deliver enhanced value to our community	Making 'smart' business as usual for Council and the community	Setting new benchmarks with prioritised, agile, and targeted smart city initiatives
<ul style="list-style-type: none"> • Engaging directly with the community on smart city issues and risks • Identifying current gaps and opportunities for improvement • Assessing and prioritising Council and community skills development • Progressing key projects and initiatives • Supporting new partnerships and co-design 	<ul style="list-style-type: none"> • Leveraging new partnerships to deliver enhanced public value • Scaling-up successful smart projects and trials • Unpacking and enacting key lessons from project monitoring and evaluation • Integrate smart tech considerations into all planning and development action • Lobbying and advocating for smart legislation reforms 	<ul style="list-style-type: none"> • Refresh <i>A Smart City for Smart Communities Strategic Framework</i> and vision/objectives • Modernise regulations to accelerate smart technology implementation • Develop smart city innovation capacity through targeted programs, training, and events • Developing and leveraging a distinct 'Smart' brand for Maribyrnong 	<ul style="list-style-type: none"> • Leverage smart city expertise and ecosystem to attract new investment and business to Maribyrnong • Trial and test new technologies and innovative Council services • Create a best practice framework for using smart city solutions to directly address local challenges

Smart City Collaboration

Within Council there is a clear pathway for considering, designing, and implementing smart city initiatives. Working with our community the following collaboration pathways exist. The diagram below outlines the touchpoints our community have to express their smart city and innovation ideas, requests and projects. The diagram also depicts the process within Council for considering smart city initiatives.



Managing Privacy & Technology Risks

The City of Maribyrnong is committed to managing and mitigating the current and emerging risks of technology integration and innovation.

We acknowledge the importance of security and privacy as we increase the connectivity and digital presence of our community.

The uptake of digital technology can provide new and innovative ways of keeping our community safe and improving security, however, it can also be viewed as intrusive or unsafe.

This Framework ensures smart initiatives follow global best practices for privacy and security and enables Council to proactively safeguard the privacy and safety of our citizens.

Key principles to ensure privacy and security in Maribyrnong



Smart Governance

Council will proactively incorporate privacy and security best practices within our organisation and across our City. These include a set of agreed protocols to ensure effective and robust management and a clear understanding of appropriate privacy settings when collecting data.



Innovation

New technology can assist Council to provide improved services and security to our community. Making the most of technology to improve the liveability of our City is fundamental in providing a modern and resilient solution to privacy and security.



Community Involvement

Council is committed to working with our community to drive the best and safest outcomes from smart initiatives. This means the community can have insight and guide smart initiatives in a way that ensures their privacy and security.

This Framework and its underlying smart city principles ensure that Council's deployment of smart technology considers and appreciates the privacy and security concerns of our community.

To leverage the benefits of smart devices, while protecting the City's privacy and security, smart city projects only record non-identifiable data.

For example, this means that devices such as smart movement counters can understand the difference between a cyclist, car or pedestrian, but cannot determine gender, race, age, vehicle and bicycle details or any other identifiable information.



Smart Trials

Before deploying large-scale systems and initiatives, we will run trials and engagement to ensure they are feasible and safe for our community.



Data Management

A Data Management Framework will provide strict guidelines for how data is collected, stored, managed, and shared that ensures the privacy of our citizens.

Best practice is constantly evolving and adapting with advances in technology and changes in policies. Council will regularly review and update our privacy and security management to ensure we are aligned with current best practices.

Measuring Our Progress

To ensure Maribyrnong remains on track to achieve our smart city goals and objectives, Council will regularly and methodically measure our smart city progress.

Key objectives and potential outcome indicators

The table below outlines the key objectives and potential outcome measures, categorised by strategic theme.

	OBJECTIVES	OUTCOME MEASURES
 A Place of Vibrancy & Activity	<ul style="list-style-type: none"> • Increase the implementation, usage, and data collection from smart technologies • Expand the coverage of free public Wi-Fi in high-priority areas • Enhance the liveability, amenity, and activation of public spaces 	<ul style="list-style-type: none"> • Number of smart sensors installed across region • Geographical coverage of free public Wi-Fi • Community feedback on open space amenity
 A Resilient & Sustainable Future	<ul style="list-style-type: none"> • Enhance the monitoring and management of our environment • Increase the amount of environmental data collected across the region • Improve the sustainability and resource-use efficiency of local parks and green spaces 	<ul style="list-style-type: none"> • Breadth of environmental data collected across region • Resources used to maintain public and green spaces
 An Economy for the Digital Age	<ul style="list-style-type: none"> • Enhance the digital capacity and maturity of our local businesses • Increasing partnerships with local providers to deliver smart projects • Expand the region's digital economy 	<ul style="list-style-type: none"> • Digital capacity of local businesses (self-reported) • Number of smart partnerships with local providers • Amount of online/digital economic activity
 An Empowered & Connected Community	<ul style="list-style-type: none"> • Enhance the physical and online accessibility of Maribyrnong (and Council services) • Increase collaboration and engagement with community through smart/agile means • Increasing community safety and digital security/privacy 	<ul style="list-style-type: none"> • User-experience with online Council services (self-reported) • Number of community members engaged through smart programs and events
 A Celebration of Culture & Creativity	<ul style="list-style-type: none"> • Improve the performance of arts and cultural sector by leveraging digital technology • Expand the arts and cultural sector by integrating digitally enabled projects • Enhance smart city projects by including arts and cultural expression in development and implementation 	<ul style="list-style-type: none"> • Growth of the arts and cultural sector in Maribyrnong • Number of City projects develop with arts and cultural elements
 A Future Ready Council	<ul style="list-style-type: none"> • Increase the innovation capacity of Council staff and processes • Expand the delivery of smart Council services • Increase data-driven decision making through enhanced data management skills of Council 	<ul style="list-style-type: none"> • Smart city skills and capacity of Council staff (self-reported) • Number of Council services offered online or through agile means • Amount of data to inform Council decision-making

More specific outcome measures and indicators are identified in the Implementation Plan. Any smart city related project will have its own set of objectives and measures which will be reported back as part of the Implementation Plan reporting process.



The Next Steps

The City of Maribyrnong will lead by example as we gear-up for our smart city journey. We will catalyse innovation, facilitate smart technology deployment, and actively support research, collaboration and investment in smart initiatives and projects.

To lead the way, Council must ensure it is continually learning, improving, and increasing capacity as an organisation. We will continue to develop our smart city skills, capacity, and maturity to ensure all projects are delivered successfully.

This table outlines the next steps for Council as we strengthen our commitment and action towards smart city development.

NEXT STEP	OUTLINE
Project Implementation	This <i>Smart City for Smart Communities Strategic Framework</i> will be supported by a dedicated Implementation Plan. The Plan will guide the specific action and investment in smart city projects, programs, and initiatives over the next few years. It will also ensure smart city action remains closely aligned with community needs and objectives.
Smart City Maturity	As Council gears-up for future smart city action, we will continue to investigate ways to improve our smart city knowledge and capacity. We will measure our progress as an organisation and conduct regular reviews to ensure we maintain momentum.
Partnerships & Collaboration	Council is not the only stakeholder in the smart city ecosystem. We will have to work closely with multiple partners to deliver projects for our community. As such, we will continue to facilitate agile and innovative partnerships in the future.
Community Engagement	The community will remain at the centre of everything we do at Council. We will prioritise engagement and transparency with our citizens, and in turn, ensure all policies and projects are agile and aligned with community expectations.
Funding & Sustainability	Council will ensure all smart city projects have a clear and robust business case. This will enable the rapid deployment of high-priority and high-impact projects that will contribute to sustainable smart city development in Maribyrnong.

Glossary

Smart City: A city that applies digital technology, data, and innovative practices to improve liveability, sustainability, collaboration, and economic opportunities

Big Data	The use of technology (especially sensors and networks) to collect, manage, analyse, and utilise large volumes of data.	Liveability	The general perceptions of the quality of life living in a particular area. Consider accessibility, safety, inclusion, local services, and the environment.
Artificial Intelligence	AI or machine learning is the programming of technology to analyse information and take 'human-like' action such as problem-solving or pattern identification.	Local Services	Public services provided by the local government (e.g., Parks, parking, planning, rubbish collection).
Circular Economy/Lifestyle	A system of production and consumption designed to eliminate waste through recycling, re-use, and reduction.	Non-Identifiable Data	Data that can not be used to identify an individual or breach best-practice privacy and security standards.
Citizen-centric	Approaching Council service delivery from the perspective of the community to ensure their needs and expectations are met.	Open Data	Making data more accessible and useable to enhance transparency, innovation, and community outcomes. <i>Note: sensitive, confidential, and private data will remain secure.</i>
Co-Creation/Co-Design	Working with clients, communities, and customers to design and create services/solutions that meet user expectations and needs.	Place Activation	Integrating new and innovative enterprises and projects to attract and retain people to underutilised public spaces.
Connectivity	The breadth depth and quality of telecommunications and internet infrastructure, networks, and services.	Principles	Underlying values that inform decision making to ensure they align with community sentiment.
Co-working	The mode of working where a mix of individuals, innovators and organisations work in the same physical location, sharing space, ideas, technology, and motivation.	Red Tape	Inefficient legislation, regulation or business processes that inhibit innovation and place undue cost on the economy.
Digital Democracy	The use of digital technology to modernise democratic processes and institutions and facilitating participation in debate and decision-making.	Smart Infrastructure	The cross-over between physical and digital assets. For example, a building that has integrated sensors, connectivity networks and other smart technologies for enhanced outcomes.
Digital Literacy	The skills and capabilities to use digital technology effectively and confidently.	Smart Technology	Digital networks, sensors, devices and systems that support the delivery of smart services and assets.
Entrepreneur	A person who creates, innovates, invests, and takes on risk aiming to make commercial profit.	Strategic Framework	A strategic document that helps link existing strategies and plans together to work towards a collective goal or vision.
Innovation	Doing something different with the aim of improving processes and outcomes.	Strategic Themes	High-level focus areas that direct delivery of the Strategic Framework.
Innovation Ecosystem	The network of people, institutions, programs, regulations, culture, and resources that work to promote innovation.	Sustainability	Balancing social, environmental and economic outcomes and benefits.
Internet of Things	The millions of physical devices around us connected online, sharing data - from tiny weather gauges up to super computers – this is the fabric of the digital world around us.	Testbed	A space either within the community or a controlled environment to test and trial new technologies and solutions to defined community problems.



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