SMART CITY ROADMAP

Leveraging technology, data and innovation for a thriving, inclusive and sustainable future

gleneira.vic.gov.au

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Acknowledgement of Country

Glen Eira City Council acknowledges the Boonwurrung/Bunurong and Wurrundjeri Woi Wurrung peoples of the Eastern Kulin Nation as Traditional Owners and Custodians, and pays respect to their Elders past, present and emerging. We acknowledge and uphold Traditional Owners' continuing relationship to the land and waterways.

FOREWORD

Cr Jim Magee
Mayor

We are living through an exciting time for our City. Council recognises the enormous potential of digital technology, data and innovation, and we have developed this *Smart City Roadmap (Roadmap)* to make the most of these opportunities.

This *Roadmap* represents our commitment to delivering high quality services to our community. It will help us remain as one of the healthiest, safest, most liveable and accessible cities in Victoria.

This *Roadmap* is a huge step forward for our City and is a critical component of our strategic framework. It will help Council get the best out of technology and deliver improved outcomes for the community.

Rebecca McKenzie
Chief Executive Officer

The City of Glen Eira is working towards a digitally enabled future. We have developed this *Roadmap* to guide us as we leverage the benefits of technology and data to support our broader vision and purpose.

At the core of the *Roadmap* is a focus on liveability, sustainability, proactivity, collaboration and of course, our community.

A city does not become 'smart' just by rolling out technology. It does so by taking a considered approach to solving problems with the help of digital technology.

This *Roadmap* is our approach to getting the best results out of our technological investments, ensuring these investments deliver community outcomes and protecting the community and Council from smart city risks.

We are excited by the opportunities smart cities will bring to Council, our community and partners over the coming weeks, months, and years.

INTRODUCTION

Glen Eira City Council is getting ready for the future — to be sustainable, prosperous and empowered.

Smart city transformation at the City of Glen Eira is underway, with the use of data, enhanced connectivity and digital technology delivering improved, more efficient services for our community.

Developed in collaboration with the community and key local stakeholders, this *Smart City Roadmap* (*Roadmap*) provides a coordinated and prioritised approach to progressing our transformation agenda and integrating digital technology and innovation into our operations and services.

Adapting to new opportunities

Smart technologies, enhanced digital skills, and the use of data are opening new opportunities to organisations in both public and private spheres across the world.

This *Roadmap* leverages the effort and progress made at Glen Eira to date, to support Council adopt the emerging opportunities of the digital age and enhance our ability to respond to challenges proactively and efficiently.

Defining smart cities for Glen Eira

Key benefits and opportunities include the ability to use data for more informed decision-making, enhancing the ease and convenience of accessing Council services and improving organisational efficiencies to better focus our budgets on tangible community benefit.
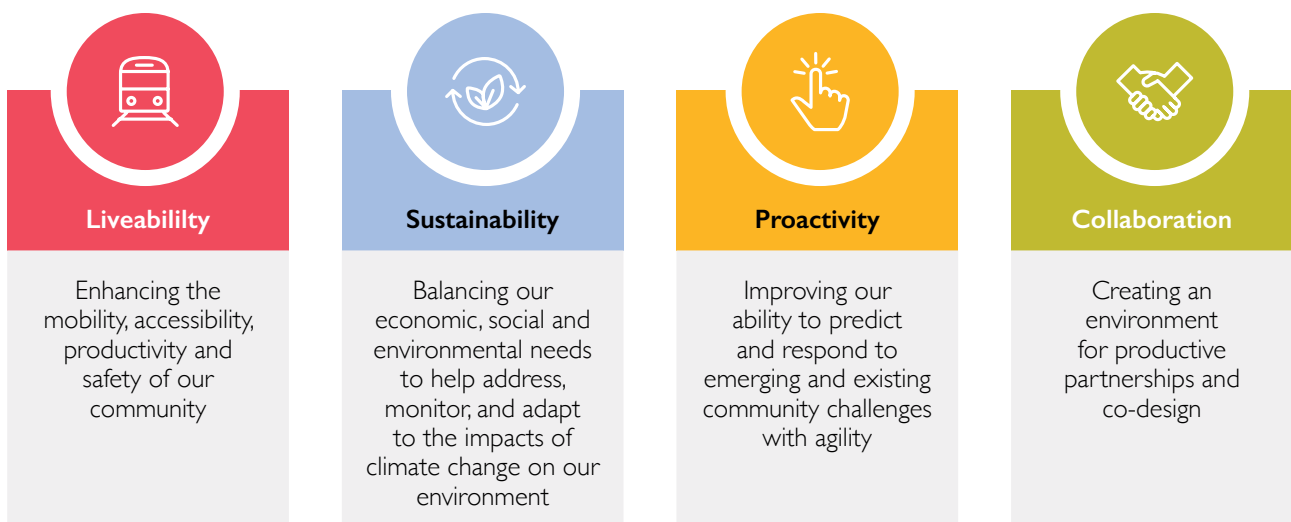
…and challenges

Digital technology does not come without its challenges. We are committed to the ethical, collaborative and transparent application of technology and data that focusses on protecting the privacy and security of Glen Eira residents, Council staff and the broader community.

Council's approach is inclusive. We want to expand the opportunities and convenience of services available in Glen Eira without limiting access or avenues for participation.

> **Ultimately, Council's aim is to continue to be one of the most liveable, accessible, healthy and safe cities in Victoria, and we will leverage the benefits and mitigate the risks of digital technology to better support these objectives and the broader aspirations of the community.**

Smart cities are generally defined as cities that use digital technology, data and innovation to deliver better outcomes to their communities. How we prioritise the use of these smart technologies and practices determines the outcomes and enhancements for our community. For Glen Eira, we will focus on using digital technologies for:

Liveabililty
Enhancing the mobility, accessibility, productivity and safety of our community

Sustainability
Balancing our economic, social and environmental needs to help address, monitor, and adapt to the impacts of climate change on our environment

Proactivity
Improving our ability to predict and respond to emerging and existing community challenges with agility

Collaboration
Creating an environment for productive partnerships and co-design

Our Smart City Roadmap

This *Smart City Roadmap* takes us on the journey of smart cities now and into the future of Glen Eira, covering:

1 The **global trends and opportunities** driving the need and desire for smart cities across the world and in Glen Eira

2 A **smart city vision** for Glen Eira

LIVEABILITY

3 Smart cities in the **Glen Eira context,** including national, state, regional and the local environment

5 An overview of the **smart city engagement insights**

4 A **smart city showcase** of the smart city projects and initiatives underway in Glen Eira

6 Council's approach to **smart city maturity**, where we are and where we aim to be in the future

SUSTAINABILITY

7 The *Smart City Roadmap* describes the actions and outcomes we are aiming to achieve

8 The Glen Eira **smart city ecosystem**, the key players and their role in Glen Eira's smart city

COLLABORATION

10 The **smart city enablers** and priority supporting initiatives that will lay the foundation for smart city success

PROACTIVITY

11 The **smart city outcomes** and key initiatives that guide our direction and investment in smart cities

9 The **smart city principles** that will guide the design, delivery and implementation of this *Roadmap*

12 An overview of our **implementation plan,** including ongoing monitoring and reporting

13 Additional information, including **glossary** and **key terms**

SMART CITY
G L E N E I R A

GLOBAL TRENDS AND OPPORTUNITIES

Digital technologies, data analytics and automation, among other emerging trends, are opening a world of opportunities.

Organisations across the world from banks to health providers are embracing new technology and data to create value and manage risk. As individuals experience improved digital services from business and community organisations, their expectations of government will rightly increase.

Why are governments trying to build smarter cities?

THE CHALLENGE

> Rapid urbanisation is a phenomenon around the world. In the 2019–2020 financial year, Melbourne had the largest growth of any city in Australia (80,100 people), putting pressure on environmental, social, and economic sustainability. Urbanisation is changing councils' capacity to adapt and deliver high quality services that meet community expectations.

> Impacts of climate change are also affecting community health and wellbeing and the way governments plan and deliver services and infrastructure.

Smart cities can help councils respond to these challenges.

THE OPPORTUNITY

> Smart cities are enabled by the latest technological advances. It is through these transformations that platforms can be created where large, diverse communities can organise, share knowledge and co-design policy and projects.

> In the last few decades alone the amount of data collected and the speed at which it can be analysed has increased exponentially. So too has the ability of technology and data to enable greater efficiency; connect, automate and transform traditional city elements; and empower innovation, creativity and new solutions.

THE GOAL

To succeed in the 21st Century cities need to be productive, accessible, liveable and sustainable, with clear focus on serving their citizens. Our *Council Plan 2021–2025* outlines our pathway to success, which is enhanced and supported by the integration of digital technology. Our Council Plan is working towards:

> **Well informed, transparent decisions and highly valued services**
Smart cities leverage digital platforms to share information about Council process and performance, and to facilitate community feedback and co-design.

> **Access to well designed and maintained open spaces and places**
Smart cities analyse spatial and temporal data to understand, optimise and expand public and open spaces; they leverage the latest technologies to help maintain our natural and built environments.

> **A liveable and well-planned City**
Smart cities support a more productive, accessible and sustainable city by collaborating with citizens to design policy, using data to inform decisions and by employing the latest solutions.

> **A green and sustainable community**
Smart cities support greater sustainability through the optimisation of processes that reduce resource consumption and support us in achieving net-zero emissions.

> **A healthy, inclusive and resilient community**
Smart cities support individual and community wellbeing and inclusion by helping to connect people to each other, community groups and services.

Overview of global trends and smart city opportunities

There are several global trends that interact closely with Glen Eira's smart city efforts. Through this *Roadmap*, Council is considering these trends and coordinating action to address the challenges and opportunites. A few of the opportunities associated with some of the most pertinent global trends are outlined below.

Urbanisation

The increase in the number of people living in towns and cities.

> Through smart planning and reform, Glen Eira's smart city efforts can increase housing innovation and ensure sustainable development across the City.

> Smart planning, using technology, such as GIS digital twins, and other e-planning reforms, can help improve the function of our City.

> Data-driven decision-making can help ensure outcomes are meeting and adapting to the changing needs of the community.

Computing advancements

Rapid increases in the quantity, speed and complexity of information computer processing over the last few decades.

> A smarter Glen Eira can build collaborative and innovative ecosystems to find solutions for local challenges.

> We can utilise new technologies to optimise and connect City process and create new opportunities.

> Data management, systems and technology will be increasingly vital to Glen Eira's smart city success as we use data to make better decisions.

Climate change

Human-induced global warming and its large-scale impacts on weather patterns.

> Glen Eira's smart city approach identifies and tackles sustainability challenges.

> Integrating smart and sustainable planning and building practices can ensure assets are efficiently maintained, natural resources are used effectively and a circular economy is promoted.

> Smart sustainability initiatives could include intelligent irrigation of our parks and green spaces, carbon emissions tracking and mitigation, combating urban heat islands, enhanced waste management systems and green transport solutions.

New models of working

The growth of remote and flexible work, co-working spaces and on-demand freelance contractor work.

> Through enhanced connectivity, Glen Eira can empower remote working and enable small scale operations to tap into global markets and supply chains.

> Likewise, Council can advocate and support the use of digital technology within local businesses to streamline processes to generate a more efficient local economy.

Mobility

The way we moving around our cities is changing — shared cars and bikes, e-scooters, real-time public transport data, computer optimised routes, electric vehicles, autonomous vehicles.

> Smart technology can support Glen Eira in understanding and managing mobility issues. Innovative approaches can also support alternative solutions, such as active travel, micro-mobility, autonomous vehicles and on-demand transport.

> Public transport can be enhanced by digital integrations, such as wayfinding, and innovative solutions to last/first kilometre challenges.

Social disconnection and misinformation

The rapid growth of online misinformation, social disconnection and polarisation.

> Smart technology can help combat disconnection and polarisation by improving connectivity and increasing collaboration.

> Tackling digital exclusion through initiatives, such as free public Wi-Fi, digital community training programs and additional collaboration opportunities.

> Council can also increase trust in government though online engagement platforms, innovation networks and greater transparency.

SMART CITY
VISION

A future-ready, data-smart, and tech-enabled Glen Eira…

→ Committed to climate action and making the most of our natural environment

→ Powered by local innovation, skills and collaboration opportunities

→ Focused on enhanced liveability, safety and mobility

→ Informed by real-time data and proactive decision-making

→ Dedicated to transparent and accountable action

GLEN EIRA
CONTEXT

The *Glen Eira 2040 Community Vision* — developed by Council and informed by wide community engagement — is 'Our Glen Eira: A thriving and empowered community working together for an inclusive and sustainable future.'

To help achieve this *Vision*, Council is working with the community, neighbouring councils and the Victorian and Australian Governments through several dedicated policies. We are based on the land of the Traditional Owners, the Boonwurrung/Bunurong and Wurrundjeri Woi Wurrung peoples of the Eastern Kulin Nation.

We are a prosperous and diverse city — with approximately 158,000 residents belonging to a range of cultures. We are also the proud home of Australia's largest Jewish population and have residents born in China, India, England, South Africa, Israel and other countries around the world.

10%
EMPLOYED IN PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES[1]

Employment by industry (total)

41%
BACHELOR DEGREE OR HIGHER[2]

37%
MEDIAN AGE[2]

31%
SPEAK A LANGUAGE OTHER THAN ENGLISH[2]

1. 2019/20 National Institute of Economic and Industry Research. Compiled by economy.id by .id (informed decisions)
2. 2016 Australian Bureau of Statistics, Census of Population and Housing

Strategic context

This *Roadmap* supports the existing plans, projects and policies of Glen Eira. In addition, the *Roadmap* aligns with the broader regional and national policy agenda.

National, state and regional context

Smart cities and the integration of digital technology in strategic planning has been on the policy agenda across Victoria and Australia for a number of years.

Key context include:

Australian Smart Cities Plan

The Australian Government's vision for smart city development and plan for maximising smart city success through smart investment, smart policy and smart technology

Plan Melbourne

The Victorian Government's long-term strategy to enable Melbourne's future growth and tackle key challenges, including digital connectivity, data-informed planning and remaining competitive in the digital economy

Regional alliances

> Inner South Metropolitan Mayor's Forum

> Municipal Association of Victoria

> Victorian Local Governance Association

> Inner South East Metro Partnership

> South Eastern Councils Climate Alliance

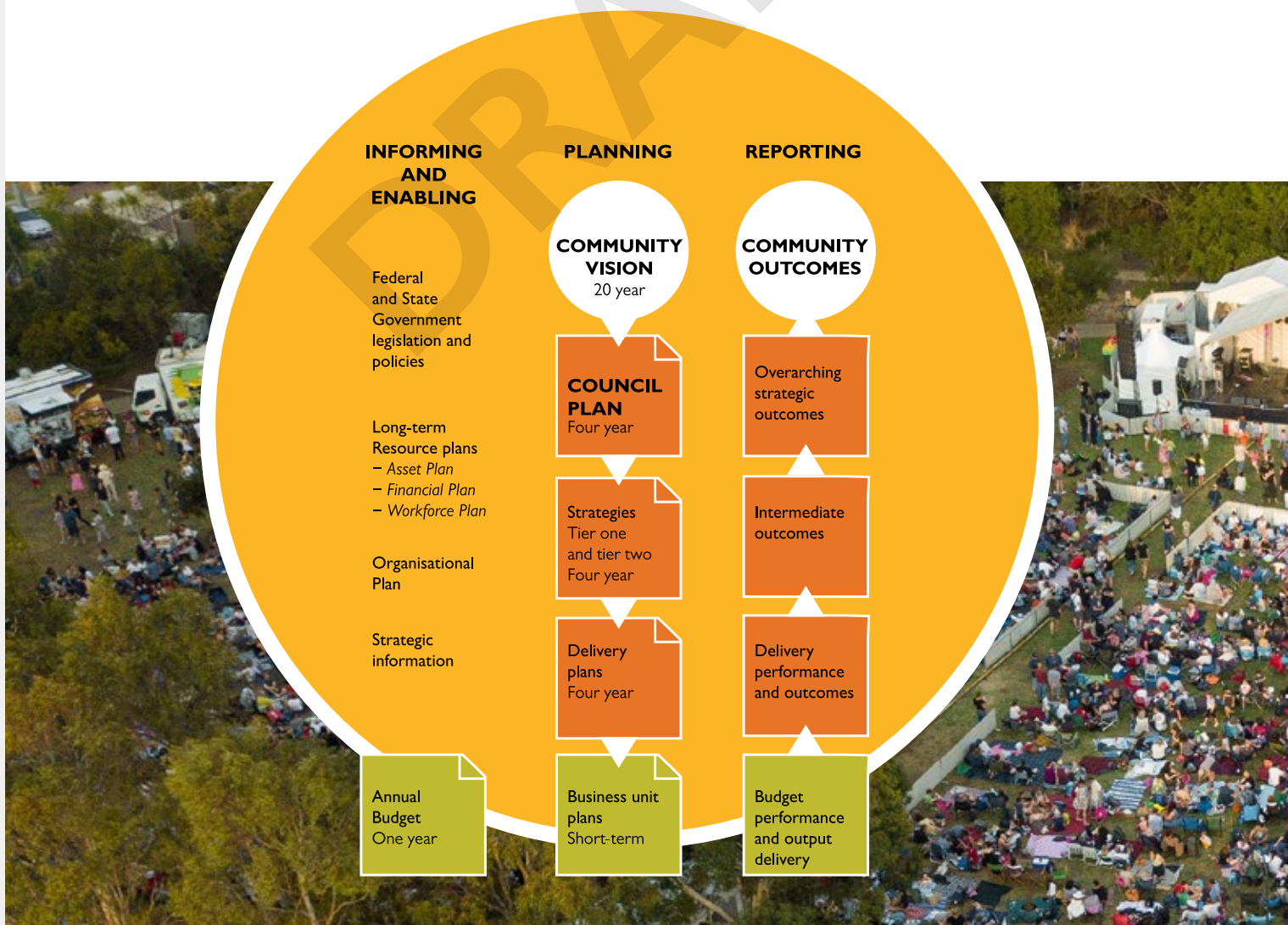> Eastern Alliance for Greenhouse Action
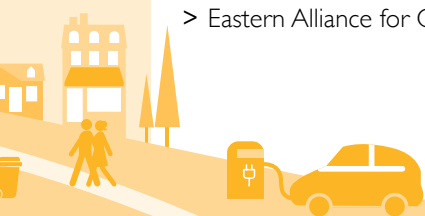
Glen Eira strategic framework

Along with the *2040 Community Vision* and the *Council Plan*, the *Smart City Roadmap* is an important component of Glen Eira's *Integrated Planning and Reporting Framework* (the *Framework*). The *Framework* describes how strategic planning and reporting will be developed and managed by Council to ensure it contributes to the goals and aspirations of the Glen Eira community.

The *Framework* outlines how Council will plan for the future across multiple functions, levels and locations to contribute to those aspirations. It also shows how the obligations from our regulators and relationships with our partners impact and contribute to the community's desired outcomes. From a reporting perspective, the *Framework* ensures there are mechanisms in place to monitor progress towards achieving those outcomes and report transparently to the community.

The *Smart City Roadmap* will contribute to the *Integrated Planning and Reporting Framework* as a key informing and enabling element, facilitating an integrated approach to all of Council's operational activities. This will in turn support the integrated strategic planning and reporting of all Council activities across the organisation.

INFORMING AND ENABLING

Federal and State Government legislation and policies

Long-term Resource plans
— *Asset Plan*
— *Financial Plan*
— *Workforce Plan*

Organisational Plan

Strategic information

Annual Budget
One year

PLANNING

COMMUNITY VISION
20 year

COUNCIL PLAN
Four year

Strategies
Tier one and tier two
Four year

Delivery plans
Four year

Business unit plans
Short-term

REPORTING

COMMUNITY OUTCOMES

Overarching strategic outcomes

Intermediate outcomes

Delivery performance and outcomes

Budget performance and output delivery

Other key strategies and plans include:

2040 COMMUNITY VISION

> We work together
> Planning for community resilience
> Inclusive and healthy community
> Maximise and diversify our green and natural spaces
> We are proactive in meeting challenges and innovate using evidence-based methods
> Promote and develop our creative potential

COUNCIL PLAN 2021–2025

> Well informed, transparent decisions and highly valued services
> Access to well designed and maintained open spaces and places
> A liveable and well planned city
> A green and sustainable community
> A healthy, inclusive and resilient community

GLEN EIRA TOGETHER — OUR ORGANISATION PLAN

> We have the culture, workforce and leadership to enable future success
> Our technology and digital capabilities support our strategic goals
> We are customer centric and deliver innovation that improves the customer experience
> We think strategically, evolving our organisation to position us for success
> We plan and manage our resources to ensure our long-term financial sustainability while proactively managing our risks
> We are committed to taking action on climate change

IT Strategy

> Under Development
> The IT Strategy will play a key role in supporting smart-enabled technology deployment and skill-building

Open Data Policy

> Open access
> Availability and licensing
> Publishing
> Standards, metadata and administration

Customer Experience Strategy

> Empathetic
> Accessible
> Timely
> Simple
> Consistent

Community Engagement Policy

> Inclusive and accessible
> Informed and meaningful
> Respectful and supportive
> Open and transparent
> Accountable
> Advocacy

Glen Eira City Plan

> Placemaking: Well-connected and distinctive neighbourhoods
> Local economy: Vibrant activity centres with a thriving local economy
> Housing: Quality housing and buildings for the future

Open Space Strategy

> Equitable
> Accessible
> Adaptable
> Networked
> Diverse
> Sustainable

Climate Emergency Response Strategy

> We embed climate change action in everything we do
> Our community is active and mobilised on climate action
> Council-owned buildings and infrastructure are resilient and safe for our staff and community
> Our community is protected from the worst impacts of climate change
> Net zero Council emissions by 2025
> Net zero community emissions by 2030

Integrated Transport Strategy

> Liveable and well designed
> Accessible and well connected
> Safe, healthy and inclusive

Smart city strengths

The Glen Eira smart city ecosystem has many strengths and points of difference that support and boost our smart city potential as noted in the diagram below:

SMART CITY ECOSYSTEM

Council

Council is a proactive, agile and engaged organisation. Through our *Transformation, Open Data, Customer Experience* and *Community Engagement Plans*, Council is taking advantage of modern solutions to deliver better services and seamless customer experiences.

Education and research

Glen Eira has numerous potential partners and local experts to fuel smart city success. As a major employment sector, home to Monash University's Caulfield campus as well as a range of other schools and training institutions, our education and research industry could play a key role in driving innovative, data-led solutions.

Infrastructure and location

Glen Eira is in the heart of Melbourne, serviced by great public transport, connected through the NBN, dotted with heritage buildings and a considerably high number of well-connected activity centres — the perfect destination to create a connected and innovative smart city.

Government

Local, state and the Australian Government are crucial partners in sharing knowledge, ideas and resources, and setting best practice policies. For example, Council is leveraging the Victorian Government's technology policies and standards to protect privacy, mitigate risk and drive success. Governments also support investment in smart technology and programs that enhance sustainability, connectivity and creativity through grants, partnerships and knowledge sharing.

Community and businesses

Glen Eira has a strong foundation on which to build a smart, vibrant, and connected city.

> We are diverse. The many different lived experiences, skill sets, education and households of our community will enrich co-design of smart projects. This enables our ecosystem to identify and solve challenges in an effective and inclusive way.

> We have technology know-how. Council engagement showed that we are confident in our digital skills. Across all Australian local government areas we rank in the top 10% for employment in technology-related industries and employment in ICT and electronics.[3]

> We have a vibrant arts and cultural scene. The artists, musicians, authors, galleries and more that live, share and perform in Glen Eira will inform, shape and be supported by smart city initiatives.

> We are a thriving commercial hub. In 2020 there were 16,677 businesses and 56 shopping strips in Glen Eira. This dynamic economy will support digital technology and data to leverage the benefits.

3. Regional Development Australia, 2019

SMART CITY
SHOWCASE

A number of smart city initiatives are already underway in Glen Eira. These initiatives will support the rollout of this *Roadmap* by forming a solid foundation upon which to achieve smart city success.

A selection of these projects include:

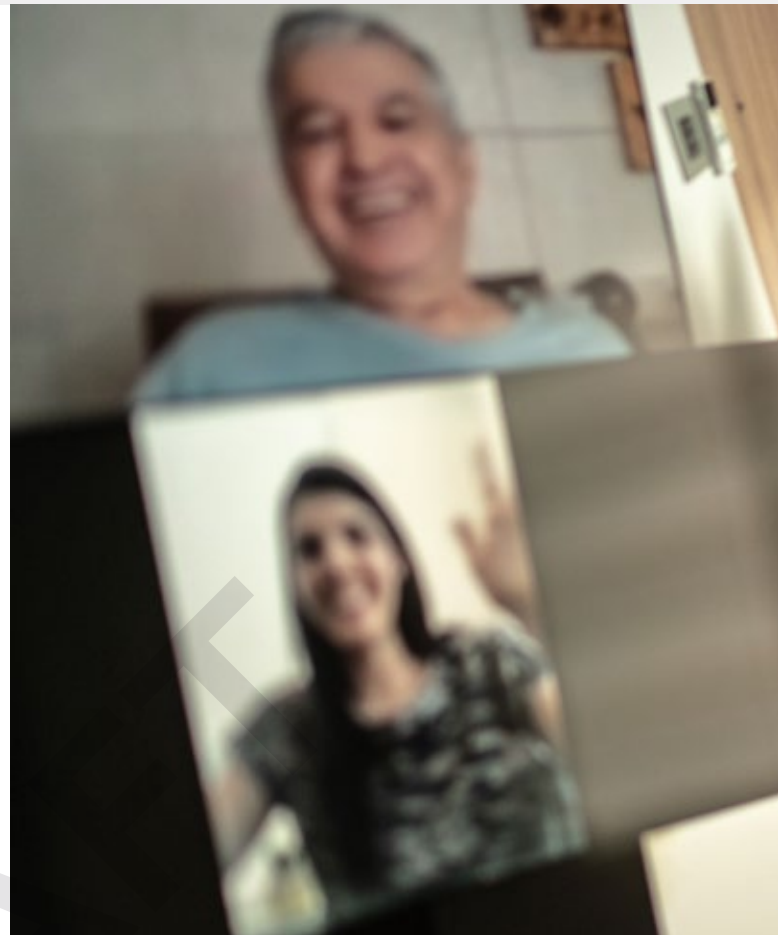| INITIATIVE	DESCRIPTION	OUTCOMES
People counting sensors	Council has implemented eight infrared people counters on Centre Road in Bentleigh. They are being used to deliver information about the use of this area before and after re-development. Council has also used people-counting technology at the Glen Eira City Council Gallery to monitor usage. This is currently being upgraded to artificial intelligence cameras with people counting capability. This technology is not used for the collection of personal data. People counting technology has also been used to measure visitation at the Glen Eira Sports and Aquatic Centre.	The people counters on Centre Road have been used to deliver 'base line' information about the traffic and usage of the area. They will be re-deployed to measure the impact of re-development on usage of the area. The evolving smart technology being used in the gallery is delivering accurate information to Council regarding attendance and use of the facility. Glen Eira Leisure uses 3D people counters at their facilities to track customer traffic flow. This information is used to better understand customer trends, influences rostering and cleaning schedules, and provides key auditable data for Council reporting.
Electric vehicles	Council has installed four electric vehicle charging stations at the Town Hall for use by Council and public vehicles. Council has also purchased four electric vehicles for staff use.	In the almost 12 months the four charging stations have been operational, they have seen well over 400 individual charging sessions instigated by both public and Council vehicles, which has resulted in a CO_2 abatement of more than 1.3 tonnes. The vehicles will assist Council be more accountable for climate change action in Glen Eira.
Internet of Things network	Glen Eira Council area is covered by three Internet of Things (IoT) gateways. These are located in the Town Hall, Duncan Mackinnon Reserve and Bentleigh Hodgson Reserve.	Council's IoT network enables connectivity to a wide range of devices. It ensures Council is able to deploy technology across Glen Eira in the most efficient manner.
Smart street lighting trial	Council installed 205 smart enabled street lights for the purpose of a trial and that were able to control lighting output and provide lighting status to Council.	The trial was a success showing that smart lighting technology can deliver real energy savings and asset management benefits.
Solar photovoltaics (PV) monitoring	Council developed an online portal which connects solar energy generation data from the growing PV fleet on Council buildings into one online location. Currently 36 out of a total of 46 systems are connected. Work is underway to connect new PV systems as they are installed on Council buildings.	Consolidated data from five separate online solar portals enable efficient remote monitoring and reporting of renewable energy generation and carbon emission savings.

INITIATIVE	DESCRIPTION	OUTCOMES
Digital literacy training programs	Council has run a series of digital literacy training programs for businesses to support digital skills, confidence and capability in the local economy.	Council's digital literacy initiatives have helped business owners develop knowledge and build confidence around online platforms and resources. Digital masterclasses that introduced business owners to digital marketing concepts and platforms like content marketing, social media, SEO and Google My Business; the creation of Council's dedicated business digital support hub 'Taking Care of Your Business' with an entire section dedicated to 'Taking Your Business Online' and a Council run Facebook page designed to boost the social media presence of businesses among the local community are just three of the ways Council has worked to equip business owners with the skills and digital resilience they need to succeed online.
Digital engagement tools	Council has begun the use of a series of digital engagement tools across a wide range of its operations. Digital tools and services include: > virtual group fitness programs > online events and programs > 3D videos and virtual reality tools for planning processes > digital walking tours > historical digitisation > QR codes for planning application notices and various other purposes	Digital engagement tools are efficient ways to distribute information and promote two-way communication with the community. Digital engagement tools have delivered huge benefits to communities world-wide during the COVID-19 pandemic. Well utilised digital engagement increased public participation and the reach of Council's messaging. It can also provide a convenient avenue for the delivery of services, both traditional and contemporary.
Walk quality	Council in partnership with Swinburne University is planning the development of an online tool that will assist the community in planning walking journeys. This tool will also assist our urban planners to make better decisions.	The goal is to help the community plan active journeys by identifying the five key barriers to active journeys: pedestrian accessibility, topography (steepness), pedestrian risk (such as dangerous street crossings), human thermal comfort (including shading), and pollution (both air and noise).
Glen Eira GIS modelling	A geographic information system (GIS) is used extensively throughout Glen Eira for property and asset location, identification and management. GIS displays and analyses information in relation to associated factors like planning overlays or environmental constraints. This is built from 2D data with the capacity to link to 3D.	GIS is themed into disciplines to focus on customer service, property, planning, essential services, infrastructure, transportation, environment and asset management. GIS links property, assets and other environmental constraints to databases and other data sources, retrieving location specific information.
Glen Eira 3D model	Council will investigate the build and delivery of a digital 3D model of the Glen Eira local government area. This would allow Council and the community to visualise future development and significant projects more accurately than ever before.	3D modelling would improve the accuracy, efficiency and transparency of Council's planning processes and support informed decision-making. It would allow stakeholders to see proposed, approved and constructed developments in an accurate digital visualisation. The technology that enables built form to be analysed from a variety of angles can be used to assess development proposals, including their impact on the surrounding area. It could also be used to inform structure plans and amendments to the Planning Scheme. Council will investigate how the project could improve transparency and communication with the community.

ENGAGEMENT
INSIGHTS

To establish a vision, aspirations and priorities for the uptake of smart technology that was fit for Glen Eira, Council engaged with community members, key stakeholders and staff.
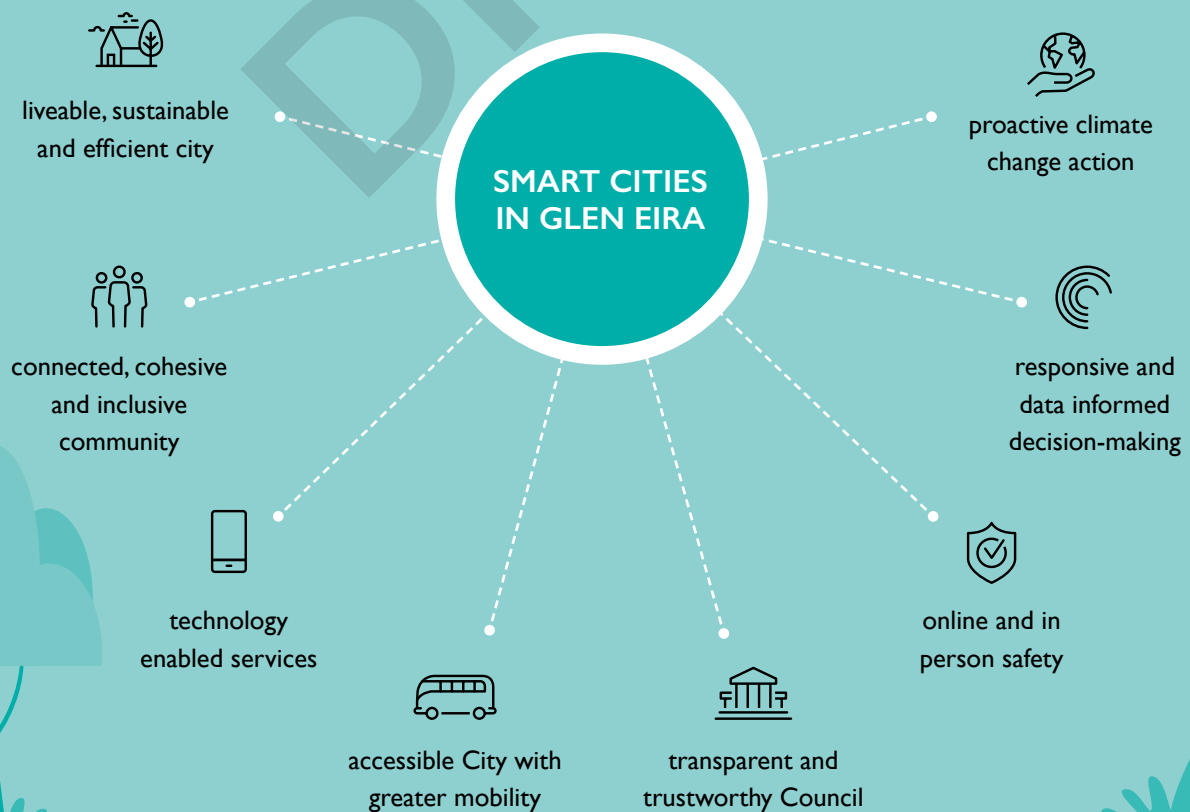
Through this process Council aimed to gain deeper insights into the challenges, opportunities and priorities of stakeholders, and build smart city understanding and awareness.
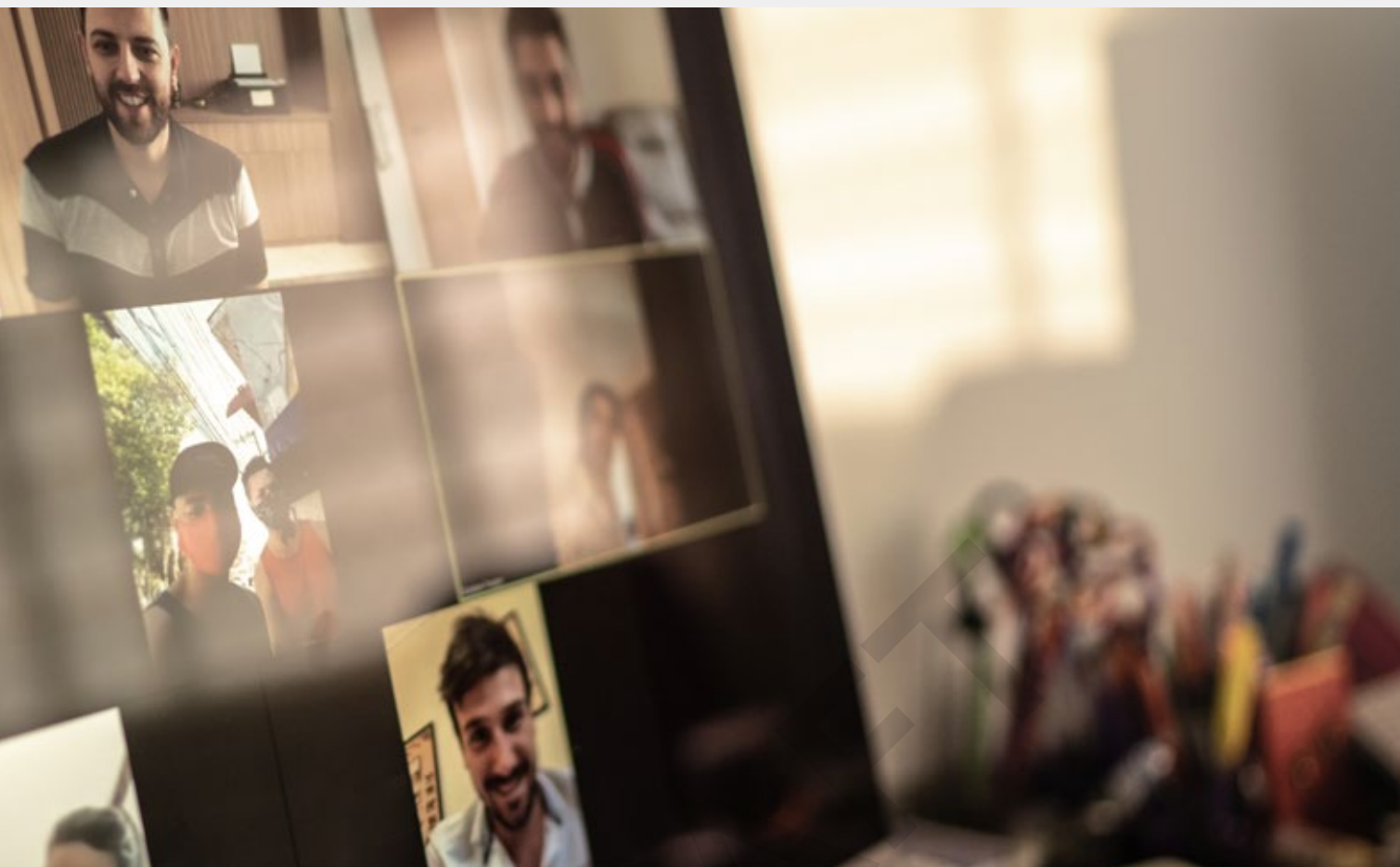
Stakeholders were engaged via online workshops and surveys in light of COVID-19 restrictions.

What the community said

A vision of a smart Glen Eira

SMART CITIES IN GLEN EIRA

liveable, sustainable and efficient city

proactive climate change action

connected, cohesive and inclusive community

responsive and data informed decision-making

technology enabled services

accessible City with greater mobility

transparent and trustworthy Council

online and in person safety

Community priorities for a smart Glen Eira

1 **Resource management**
> Waste
> Energy
> Environment
> Assets

2 **Mobility**
> Active and public transport
> Parking and congestion
> Information
> First/last kilometre transport challenge

3 **Safety and health**
> Community connection and support
> Safer public spaces
> Service accessibility
> Access to green/open spaces

4 **Council**
> Transparency
> Partnerships and investment
> Cyber-security and privacy
> Red-tape reduction

Community and Council staff survey participants agree that:

77%
COUNCIL SHOULD PROACTIVELY ADOPT NEW TECHNOLOGY AND SYSTEMS

Community survey participants are:

88%
LIKELY TO EMBRACE NEW DIGITAL TECHNOLOGIES

83%
CONFIDENT IN THEIR TECHNOLOGY SKILLS AND UNDERSTANDING

MATURITY — OUR APPROACH TO SMART CITY SUCCESS

Smart city success is a transformation and change process — moving from our standard routine to a technology and innovation enabled approach.

Like all change, smart cities take time to build into the everyday processes and operations of Council. It has taken smart cities across the world like Copenhagen and Barcelona upwards of 10 years to become leaders with numerous trials and errors along the way.

In terms of smart city maturity, Glen Eira is currently at the beginning, with key foundations to be laid to enable future success. With numerous smart city initiatives being undertaken by local governments of various levels of maturity, this is an opportunity to build our foundations, our maturity and lasting partnerships along the way.

SMART CITY
G L E N   E I R A

BEGINNING

DEVELOPING

EMBEDDING

LEADING
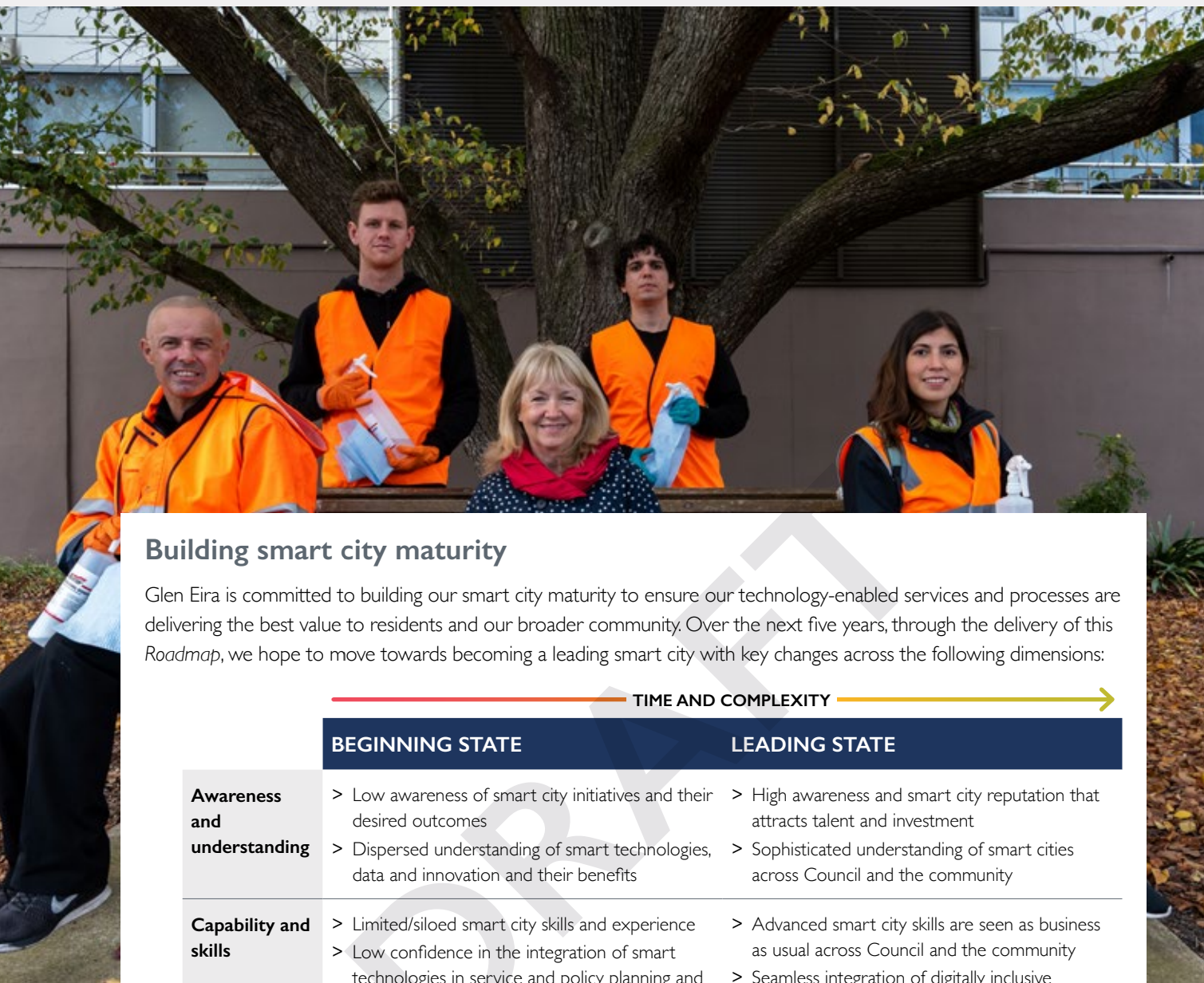
Building smart city maturity

Glen Eira is committed to building our smart city maturity to ensure our technology-enabled services and processes are delivering the best value to residents and our broader community. Over the next five years, through the delivery of this *Roadmap*, we hope to move towards becoming a leading smart city with key changes across the following dimensions:

TIME AND COMPLEXITY →

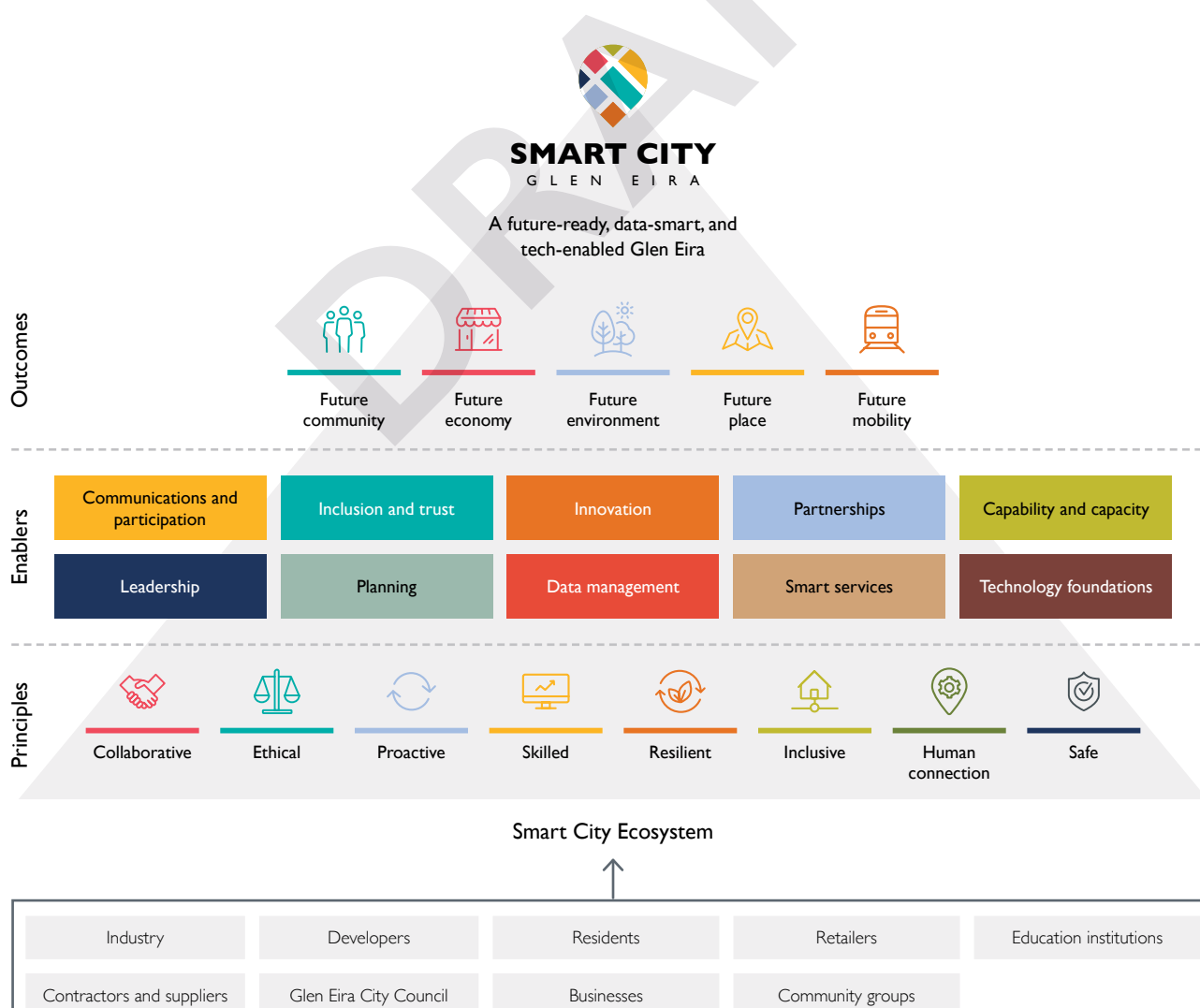| MATURITY DIMENSION		BEGINNING STATE	LEADING STATE
	Awareness and understanding	> Low awareness of smart city initiatives and their desired outcomes > Dispersed understanding of smart technologies, data and innovation and their benefits	> High awareness and smart city reputation that attracts talent and investment > Sophisticated understanding of smart cities across Council and the community
	Capability and skills	> Limited/siloed smart city skills and experience > Low confidence in the integration of smart technologies in service and policy planning and implementation	> Advanced smart city skills are seen as business as usual across Council and the community > Seamless integration of digitally inclusive practices in the delivery of services
	Smart city leadership	> Informal smart city leadership and basic governance pathways > Smart city action primarily driven by Council	> Clear multi-sector leadership, with agile and innovative governance models in place. > Shared action driven in partnership with community and local smart city ecosystem
	Smart city culture	> Ad hoc innovation with limited pathways to promote and encourage > Ad hoc use, collection and management of data	> Innovative culture, encouraged through frameworks, policies and processes with high levels of digital autonomy > Advanced data management and processes, with analytics used to help make decisions and drive innovation
	Partnerships and collaboration	> Limited partnerships or collaboration between communities, or between public and private organisations > Cross-department collaboration and communication is minimal and largely not innovative	> Universally recognised partnerships between various parties, helping to deliver innovative and creative solutions to community problems > Council-wide collaboration and communication between various directorates, assisting in the delivery of innovative solutions

SMART CITY
ROADMAP

This *Smart City Roadmap* describes the actions and outcomes we are aiming to achieve as we continue to deliver value to our community with the help of digital technology, data and innovation.

Underpinning our *Roadmap* is an understanding of our smart city ecosystem. We have a rich, talented network of community members, businesses, industries and academics who each play an important role in building our success as a smart city. We will continue to engage, collaborate on, co-design and expand our ecosystem through the delivery of this *Roadmap*.

In delivering this *Roadmap* and future projects we will be guided by our smart city principles that ensure we continue to meet best practice and community values and expectations.

We have taken a maturity-based approach to our *Roadmap*, laying a foundation of smart city enablers to focus and coordinate our smart city activity.
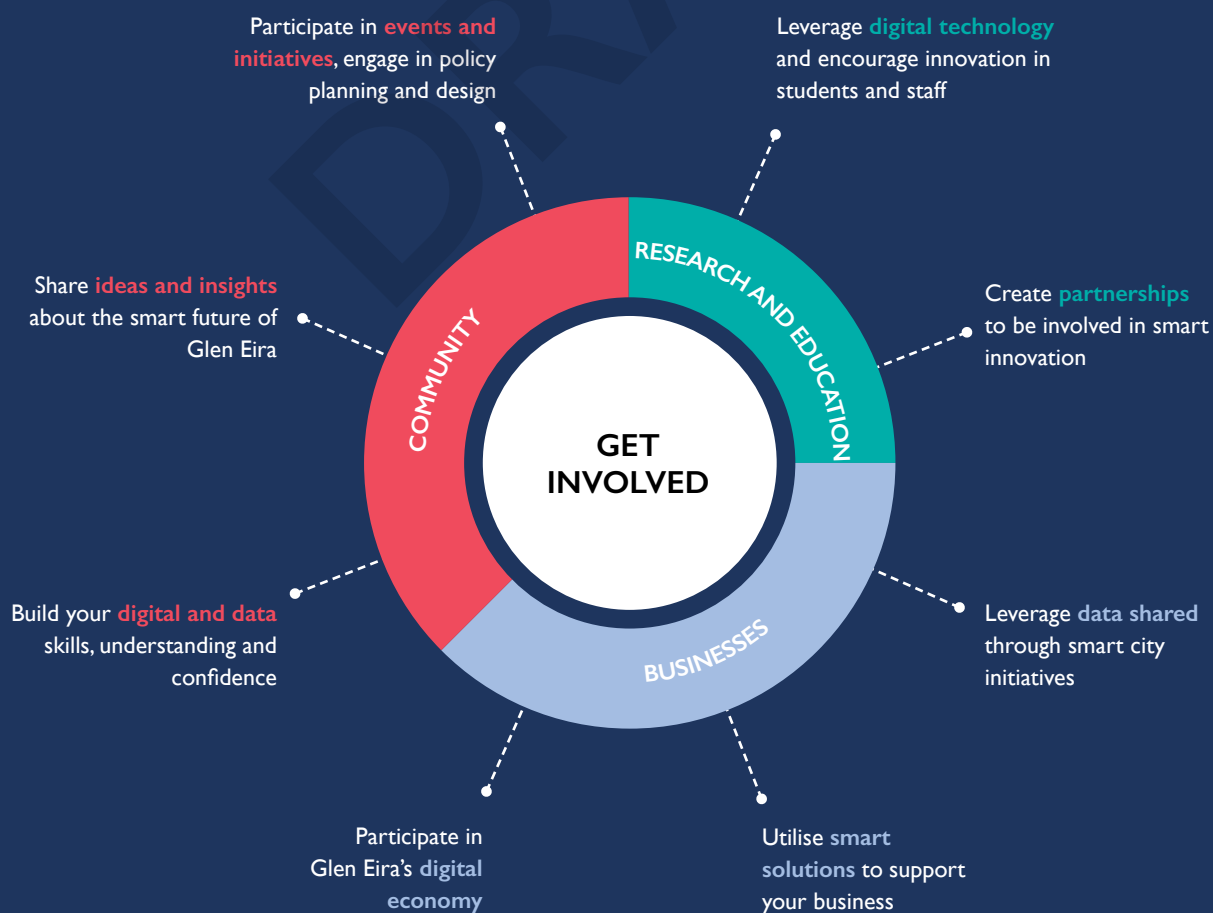
SMART CITY
GLEN EIRA

A future-ready, data-smart, and
tech-enabled Glen Eira

Outcomes

Future community	Future economy	Future environment	Future place	Future mobility

Enablers

Communications and participation	Inclusion and trust	Innovation	Partnerships	Capability and capacity
Leadership	Planning	Data management	Smart services	Technology foundations

Principles

Collaborative	Ethical	Proactive	Skilled	Resilient	Inclusive	Human connection	Safe

Smart City Ecosystem

Industry	Developers	Residents	Retailers	Education institutions
Contractors and suppliers	Glen Eira City Council	Businesses	Community groups	

OUR SMART CITY ECOSYSTEM —
HELPING CREATE A SMART GLEN EIRA

Smart cities depend on a dynamic and vibrant ecosystem, where individuals share, combine, and apply their unique insights to create better outcomes for the community.

Why?

> Innovation is complex. It requires local insights, experts and a willingness to test, review and adapt.

> Smart cities are interconnected. Smart cities are built on systems that connect opportunities to action, and challenges to solutions.

> Digital technology is everywhere. More and more, our lives are impacted by the benefits and challenges of the internet, connected technologies and data. Smart cities need an ecosystem of people to make sure they are inclusive and empowering.

Participate in **events and initiatives**, engage in policy planning and design

Leverage **digital technology** and encourage innovation in students and staff

Share **ideas and insights** about the smart future of Glen Eira

Create **partnerships** to be involved in smart innovation

RESEARCH AND EDUCATION

COMMUNITY

GET INVOLVED

BUSINESSES

Build your **digital and data** skills, understanding and confidence

Leverage **data shared** through smart city initiatives

Participate in Glen Eira's **digital economy**

Utilise **smart solutions** to support your business

SMART CITY
PRINCIPLES

Smart city principles reflect our values and guide the approach that Council, our community, partners and investors apply to smart city activities in Glen Eira.

All projects, policies and initiaitves will reflect and consider these principles in their design and implementation.

Collaborative

We will work with the community and our partners to co-design, share ideas and expertise and promote an environment to innovative thinking.

Ethical

We will consider the ethical expectations of our community before deploying smart technologies.

Proactive

We will take a proactive approach to planning for the future, leveraging data to support informed decision-making.

Skilled

We will enhance Council and our community's ability to engage and participate in the digital economy.

Resilient

We will explore opportunities to mitigate and address the impacts of climate change, consider climate resilient approaches and support sustainable economic growth.

Inclusive

We will actively engage in issues of digital inclusion and empowerment to ensure our community has the means to participate in our smart city initiatives.

Human connection

We will take a holistic approach to technology, ensuring our design and implementation are led by human need.

Safe

We will work to support the physical and digital safety of our community to encourage confidence in all aspects of life.

SMART CITY
ENABLERS

Glen Eira is at the beginning of its smart city journey. We are focussing on building our foundation to enable and accelerate future success.

These smart city enablers act as key facilitators to deliver valuable outcomes to our community.

Communications and participation

Smart cities are built on community participation and support. We will enhance our communications and improve awareness of smart cities to build a reputation as a destination for innovation, collaboration, and high-quality services.

Supporting initiatives include:

> developing a smart city communications and branding toolkit that builds smart city awareness and reputation; and

> encouraging smart city co-design and collaboration to build our smart city ecosystem.

Inclusion and trust

Smart cities enable safe and secure participation across diverse populations. We will take an inclusive approach to digital technology that builds community trust in Council and digital technology more broadly.

Supporting initiatives include:

> delivering a digital inclusion framework to support equitable participation in smart city transformation; and

> updating and communicating cyber security and privacy policies to ensure uptake of best practice and confidence in Council's digital assets.

Innovation

Smart cities are catalysts for innovation and entrepreneurial thinking. We will facilitate an environment ripe for innovation, knowledge sharing and smart city leadership to encourage new economic opportunities and business models.

Supporting initiatives include:

> facilitating the development of a Glen Eira Innovation Network to encourage new ideas, collaboration and community-led initiatives; and

> establishing an innovation framework in line with the broader transformation agenda to provide clear direction and pathways for innovation.

Partnerships

Smart cities encourage shared leadership and action across a community or broader region. We will partner up with others to leverage shared resources, knowledge, expertise and experience, and encourage broader participation in our smart city aspirations. Any partnerships that also contribute to delivering net zero carbon emissions by Council by 2025, and by the Community by 2030 are strongly supported.

Supporting initiatives include:

> establishing a smart city partnership framework to standardise expectations and attract investment, which could include steps to decarbonise our supply chain; and

> continuing to work with the South-East Melbourne Smart City Collaboration Councils to promote shared leadership and action across the region.

Capability and capacity

Smart cities require confidence and skills in designing, implementing and delivering appropriate projects, programs, policies and reforms. We will support Council staff in obtaining the skills and digital autonomy required to effect meaningful change and improvements through smart technologies.

Supporting initiatives include:

> developing a series of smart city training programs to build awareness, understanding and confidence in the use of data and digital technologies in Council initiatives; and

> establishing smart city communities of practice and knowledge sharing platform to promote cross-Council smart city action and break-down internal silos.

Leadership

Smart cities are successful when given direction and clear priorities. We will work with the community and key stakeholders to guide activity towards a coordinated approach with an appropriate platform to support action.

Supporting initiatives include:

> communicating smart city governance and touchpoints within Council and the community; and

> facilitating a network of smart city champions and ambassadors to promote the benefits and processes for smart cities in Glen Eira.

Planning

Smart cities support enhanced planning and operational outcomes. We will integrate smart technology in our processes and policies to support smart city uptake and deliver operational efficiencies that benefit our community.

Supporting initiatives include:

> exploring opportunities to implement a smart asset management system to support management, monitoring and maintenance of Council assets; and

> working with local developers to establish guidelines for smart development to encourage appropriate integration of smart technologies in new and existing developments.

Data management

Smart cities value the collection, utilisation and sharing of non-personalised data. We will appropriately manage, protect and share data to help inform decision-making and community data creativity.

Supporting initiatives include:

> strengthening our data management framework to support consistent and appropriate collection, use, storage and sharing of data; and

> exploring opportunities to integrate enhanced data analytics in decision-making and reporting.

Smart services

Smart cities are not driven by technology, but rather the desire to deliver better outcomes to communities. We will take a holistic approach to technology integrations, considering inclusion, accessibility, service modernisation and customer experience and value.

Supporting initiatives include:

> exploring the integration of smart technologies in high-priority services to improve service delivery; and

> integrating innovation in procurement processes to encourage contractor competition and seek enhanced efficiencies.

Technology foundations

Smart cities leverage technology to deliver solutions to community challenges. We will future-proof by delivering the foundational technology that enables smart city success.

Supporting initiatives include:

> conducting an audit of local digital connectivity/accessibility to support advocacy and prioritisation of connectivity resources; and

> expanding our IoT Network to encourage smart city activity across Glen Eira.

SMART CITY
OUTCOMES

Supported by our smart city enablers, the City of Glen Eira has identified the following priority smart city outcomes:

Future community

Future economy

Future environment

Future place

Future mobility

Future community

Our priority outcomes and key initiatives were shaped by community engagement and supported by in-depth research and analysis. They build on the base and direction set by our *2040 Community Vision, Council Plan 2021–2025* and *Glen Eira Together — Our Organisational Plan 2021–2025.*

Our community is at the heart of what we do. Our smart city approach is focused on the community's needs and priorities to deliver value and convenience. We will work with partners across Glen Eira to promote digital inclusion and participation and support greater engagement and access to community services.

We aim to:

→ Increase community participation in decision-making

→ Reduce digital exclusion and social isolation

→ Improve access to community health and wellbeing services

To achieve this, key initiatives we will explore include:

→ developing a digital democracy roadmap to identify opportunities to support enhanced community participation in decision-making;

→ working with local community groups and service providers to deliver targeted digital literacy and accessibility programs; and

→ investigating Council's role in supporting and advocating for smart community health and wellbeing related services that support accessibility in Glen Eira.

Future economy

We have a diverse, prosperous and highly skilled economic base. We are focussed on supporting economic development and innovation in Glen Eira to drive resilience and recovery. We will work with our local industries to ensure they have the skills and information they need to thrive in the digital economy.

We aim to:

→ Increase digital capability and confidence of our business sector

→ Increase access to open data

→ Support economic recovery and sustainability

To achieve this, key initiatives we will explore include:

→ establishing a series of digital economy programs to support business and entrepreneur participation in the digital economy;

→ exploring how Council can share, communicate and collect data with local businesses, innovators, education institutions and investors to encourage innovation and informed decision-making; and

→ working with local businesses and advisory groups to integrate smart technologies that support economic recovery and sustainability.

Future environment

The future of our planet and our local environment is a key concern of our community. Our smart city approach is focused on combating climate change, reducing climate emissions, and making our City more sustainable. We will work with partners across Glen Eira to mitigate the effects of climate change, increase resource efficiency, support environmental outcomes and work towards net zero corporate emissions by 2025.

We aim to:

→ Improve Council's ability to measure and respond to impacts of climate change

→ Increase efficiency of waste management

→ Reduce the effects of urban heat

To achieve this, key initiatives we will explore include:

→ delivering a network of smart monitoring sensors to measure and respond to the impacts of climate change and our associated policies;

→ exploring opportunities to enhance waste collection and management across Council, including smart bins in public spaces; and

→ investigating opportunities to mitigate the effect of urban heat through appropriate tree mapping and informed urban design.

Future place

Our City is where we work, live and play. Our smart city approach is focused on making the City more liveable. We will work with partners across Glen Eira to improve development and planning processes and outcomes and maintain and enliven public spaces.

We aim to:

→ Increase customer satisfaction in development application processes

→ Increase activation of public spaces

→ Increase irrigation efficiencies

To achieve this, key initiatives we will explore include:

→ developing a 3D city model to support efficiencies and engagement in development application processes;

→ exploring how smart technology and innovative urban design can improve the activation, amenity and safety of public spaces and places; and

→ improving water management and our understanding of water systems by expanding intelligent irrigation of public spaces to enhance resource efficiencies.
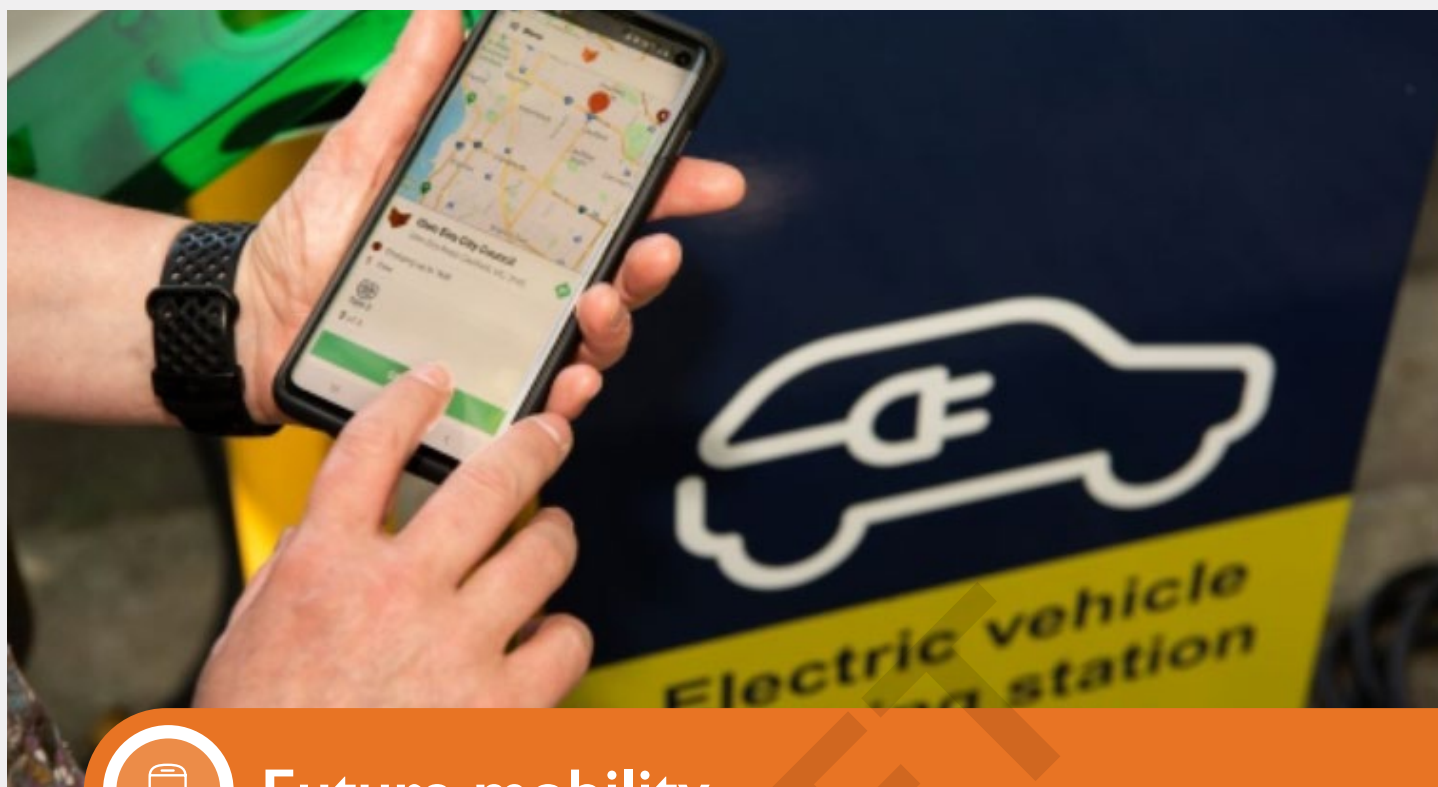
Future mobility

A convenient and safe City to move around is vital for our health, prosperity and wellbeing. Our smart city approach is focused on innovatively improving connection and sustainability. We will work with partners across Glen Eira to make your trip around the City accessible, easy and enjoyable.

We aim to:

→ Improve communication about Glen Eira walkability

→ Improving understanding about public space utilisation

→ Increase low-emission vehicle uptake

To achieve this, key initiatives we will explore include:

→ delivering a walkability project in collaboration with Swinburne University and the City of Maribyrnong to understand and communicate the walkability and accessibility of key paths and trails across Glen Eira;

→ expanding our people monitoring projects to better understand how people use and move around Glen Eira and inform better planning of public assets; and

→ exploring opportunities to support uptake of low-emission vehicles.

IMPLEMENTATION PLAN —
AN OVERVIEW

Council is taking a deliberate approach to the rollout of this *Smart City Roadmap*. Underpinning this *Roadmap*, Council has developed a *Smart City Implementation Plan*, which will guide us as we deliver, measure and adapt indivdual programs, and evaluate, review and build on the overall policy direction.

Throughout this process Council will work closely with key partners, such as the Victorian Government and local community groups, to coordinate effort. Going forward, implementation will continue to adapt to external forces to meet the priorities of the Glen Eira community.

Key elements of our *Implementation Plan* include:

Action schedule	A detailed 12-month action schedule that works to achieve the initiatives outlined in this *Roadmap*. This action schedule will be reviewed yearly in line with Council budget processes to ensure smart city activity supports Council and community priorities year to year.
Measurement Framework	A *Framework* to measure and monitor the success and progress of individual initiaitves. This *Framework* will be tailored and adapted on a project-by-project basis with key statistics and outcomes shared with the public.
Smart city project assessment criteria	A criteria assessment tool to support the prioritisation of future smart city initiaitves. This criteria promotes the delivery of projects that are aligned to the role, direction and capability of Council.
Partnership Framework	A *Framework* to support the development of smart city partnerships. Partnerships are a critical element to the success of smart cities, and this *Framework* will guide Council as it establishes and maintains key partnerships.
Ongoing Communications Plan	A *Plan* to encourage ongoing smart city communications within Council and in the broader community. The *Plan* supports regular communication of progress, updates and outcomes of smart city activity.
Change Management Plan	A *Plan* to direct and coordinate transformation activities within Council that support innovation and smart city outcomes. This *Plan* builds on key results from the engagement process to target change outcomes.
Governance Framework	A *Framework* to clearly communicate the roles and responsibilities of key smart city stakeholders. The *Framework* supports authority and mandate, communicates delivery pathways and encourages accountablity for smart city outcomes.

GLOSSARY AND KEY TERMS

Smart city: A city that uses digital technology, data and innovation to deliver better outcomes to its community.

Artificial intelligence (AI)	AI or machine learning is the programming of technology to analyse information and take 'human-like' action, such as problem-solving or pattern identification.	**Innovation**	Doing something different with the aim of improving processes and outcomes.
Big data	The use of technology (especially sensors and networks) to collect, manage, analyse, and utilise large volumes of data.	**Innovation ecosystem**	The network of people, institutions, programs, regulations, culture, and resources that work to promote innovation.
Circular economy/ lifestyle	A system of production and consumption designed to eliminate waste through recycling, re-use, and reduction.	**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.
Citizen-centric	Approaching Council service delivery from the perspective of the community to ensure their needs and expectations are met.	**Liveability**	The general perceptions of the quality of life living in a particular area. Consider accessibility, safety, inclusion, local services, and the environment.
Co-creation/ co-design	Working with clients, communities, and customers to design and create services/ solutions that meet user expectations and needs.	**Local services**	Public services provided by the local government (e.g. Parks, parking, planning, rubbish collection).
Connectivity	The breadth, depth and quality of telecommunications and internet infrastructure, networks, and services.	**Open data**	Making data more accessible and useable to enhance transparency, innovation, and community outcomes. Note sensitive, confidential, and private data will remain secure.
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.	**Place activation**	Integrating new and innovative enterprises and projects to attract and retain people to underutilised public spaces.
Digital democracy	The use of digital technology to modernise democratic processes and institutions and facilitating participation in debate and decision-making.	**Red tape**	Inefficient legislation, regulation or business processes that inhibit innovation and place undue cost on the economy.
Digital literacy	The skills and capabilities to use digital technology effectively and confidently.	**Smart technology**	Digital networks, sensors 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.	**Smart city transformation**	The act of strategically integrating and embedding digital technology, innovation and data into operations and service offerings within a community or organisation.
Geographic information system (GIS)	A system that analyses, collects, visualises, and maps data geographically.	**Sustainability**	Balancing social, environmental, and economic outcomes and benefits.

Source: Delos Delta

SMART CITY
GLEN EIRA

City of **GLEN EIRA**

GLEN EIRA CITY COUNCIL

gleneira.vic.gov.au

BENTLEIGH • BENTLEIGH EAST • BRIGHTON EAST • CARNEGIE • CAULFIELD • ELSTERNWICK

GARDENVALE • GLEN HUNTLY • MCKINNON • MURRUMBEENA • ORMOND • ST KILDA EAST