

**SMARTER
BENDIGO**

A City Deal for Bendigo

www.smarterbendigo.com.au

“Our seven pathways to prosperity set the strategic path our city will take, from where we are today to where we want to be in ten years. Each pathway aims to turn our weaknesses into strengths, to attract investment, talent and technology, discovering new solutions in our living laboratory.”

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Alliance for a Smarter Bendigo

A summary of Smarter Bendigo, its vision, purpose, values, challenges, investment proposition, and seven pathways to prosperity.

Our Vision

A prosperous Bendigo, globally known as one of the great small cities of the world for our self-determined focus on growth and inclusive approach to prosperity. Australia's most vibrant and vitalised regional city.

Our Purpose

To harness technology and capital through a city deal, to build momentum for growth and to create new value for our city and citizens.

To position Bendigo as one of the great small cities of the world through our values led approach.

Our Values

Inclusive Prosperity – We can only be truly great if we all benefit. We focus on value creation and building wealth in our community. Every aspect of our approach is informed by our desire to ensure all citizens benefit and can participate in a Smarter Bendigo. We are committed to realising inclusive prosperity through generational investment in connectedness, digital innovation, social cohesion and sustainability.

Value Creation & Capture – We leverage existing strengths, assets, resources, and relationships to create value. We extend beyond our community's existing strengths and natural assets. We fully leverage the new world of connected people, objects, devices and sensors. We draw connections between advanced manufacturing, STEM education and a Smarter City. We amplify relationships between health, informatics,

private sector innovation and opportunities for value creation.

Self Determination – We set a bold vision for our city and its place in the world. We are courageous, committed and creative. Our self-determination makes our small city the most investable community inland Australia and delivers strong returns for our partners.

Our people – We value people as the ultimate drivers and end users of technology and capital. Our work is guided by our commitment to optimise the health, wellbeing, productivity and happiness of our people.

Our Commitment

We have secured agreements with our Smarter Bendigo Alliance members and raised \$100,000 in seed capital to commence early demonstration projects. Our bid is formally supported by the City of Greater Bendigo and Victorian State Government.

Our Challenges

Greater Bendigo faces a set of challenges common to comparable regional Australian cities. These systemic challenges present the greatest barriers to growth and inclusive prosperity and they are:

- Underinvestment in human capital.
- Poor population health. The Loddon Mallee region has the highest prevalence of obesity in Australia.
- A desire to maintain youthful populations and retain their intellectual property.
- Transition from a local to a global village.
- The need for smarter use of natural resources such as land, water and renewable sources of energy.
- The need to access new markets with transformative investment.
- Interoperability and sharing of open data.
- Barriers to attracting institutional investment, (majority of investments made by superannuation funds are concentrated in metropolitan areas.)

These core challenges were identified during our two day Smarter Bendigo Symposium held on October 13 & 14. Our challenges are all interconnected through a web of existing infrastructure and stakeholders who share a desire to turn those challenges into strengths, through the activity proposed for a Bendigo City Deal.



Our Investment Proposition

Seed capital to unlock private investment

The Smarter Bendigo Alliance seeks an initial investment from the Australian Government to initiate our seven pathways to prosperity to a stage where cooperative private sector investment can be obtained. These early works will include establishing an innovative, nodal governance model, investment in the capability of leaders involved, delivery of a series of demonstration tech-interventions, establishment of the independent evaluation model with La Trobe and Deakin Universities. It will also include the completion of a series of detailed business case documents for medium term infrastructure requirements in water, energy, affordable housing, data-analytics and health. Those detailed business cases will inform the early prospectus for transformative investment incorporating new financial delivery models.

Informed by extensive research, tested through engagement and review

The central themes in this prospectus are of self-determination and inclusive prosperity. As leaders of a regional city we have developed a timetable for investment through comprehensive engagement and analysis. These seven pathways are informed by extensive research on the part of individual and organisational members of our Alliance and tested through formal consultation and review. Importantly, our Alliance includes La Trobe and Deakin Universities and Bendigo Kangan Institute as formal members that can deliver an independent platform to quantify further investment.

Nodal governance model offers superior security, continuity, invest ability

The nodal governance structure proposed by Smarter Bendigo is informed by the model often used by public private partnerships to deliver large

infrastructure projects. The Alliance for a Smarter Bendigo will adopt this consortium based approach to leverage commercial acumen, talent and resource across our local pillar organisations and corporate supporters. Our approach to the governance framework for a city deal will deliver a set of conditions to attract public and private sector investment and allow:

- Greater continuity of the involvement of trusted local leaders through successive terms of government.
- Greater investor confidence when considering medium to long term opportunities.
- Higher exposure and accountability of local organisations and individuals involved in the delivery of the city deal- high motivation to see each project under the deal successfully completed.
- Use of private sector talent and commercial acumen at the leadership table.
- Leveraging the resources of consortium partners to enhance prospective projects under a city deal.

Our Foundations & Strategic Advantages

Partnering with Bendigo

Living Laboratory Bendigo – Smarter City Bendigo is the perfect living laboratory for tech companies to test and perfect solutions in a welcoming, cooperative environment. Bendigo has key features of a living laboratory including: A population of 105,000, proximity from a major capital city of 2hours. Sustained, 'wicked problems' in health, resources, transport, educational attainment and social inequity. A desire to collaborate with private sector parties in sensor technology, wearable devices, software applications and more to discover new solutions. We have engaged global tech giants Huawei, Nokia and Ericsson during the development of our strategy and each will attest our approach will attract investment and engagement from global vendors.

Aligned leadership and appetite for collaboration

– Bendigo is known for the collaborative culture of our leaders, in realising Smarter Bendigo this is our greatest strength and core value proposition for governments and private investors to invest and partner with us. We have a proven track record for realising complex, innovative projects because of this collaborative culture and mindset. including Lighting the Regions (\$44million) Central Victoria Solar City (\$42million) Ulumbarra Theatre (\$20million). Our Smart Local Government is a key pillar in shaping mindsets and strategy, in design and delivery.

Hub for financial services

– A strategic advantage for Smarter Bendigo is that Bendigo is home to Bendigo and Adelaide Bank, the global leader in leveraging capital for the common good through its transformational service Community Bank™.

Value creation as a mindset

– Significant opportunities exist in Bendigo to look at new models for capturing value from the current asset base across the city, particularly in the public realm. We will build a collective mindset focused on value creation through the entire supply chain/service chain.

World class healthcare – We will leverage the ICT enabled nature of the new Bendigo Hospital to attract private sector technology partners to build and test solutions to improve health outcomes and patient care. We will return value to Bendigo Health by engaging our stakeholders in Bendigo Health's vision for Healthy Communities and World Class Healthcare. city deal.

Value creation as a mindset – Significant opportunities exist in Bendigo to look at new models for capturing value from the current asset base across the city, particularly in the public realm. We will build a collective mindset focused on value creation through the entire supply chain/service chain.

Internationally recognised creativity, arts and culture

– In shaping the future arts and culture has a critical role in revitalising Bendigo. The construction of Ulumbarra Theatre (1000 seats) and profile of the Bendigo Galley are significant advantages in our ability to continue to position Bendigo as the cultural capital of regional Victoria.

Our Seven Pathways to Prosperity

Smarter Bendigo has developed seven pathways as part of its Smart City Ecosystem these include Smarter Governance, Smarter Connectivity, Smarter People, Smarter Resources, Smarter Financing, Smarter Health, and Smarter Measurement and Evaluation.

The Alliance has also developed a series of three horizons to implement each of these pathways.

Horizon 1 – Projects run over 1–2 years and includes the development of a communications platform (network) to enable Alliance members to share big data securely. It also includes demonstration projects in each pathway to build community awareness and trust in Smarter Bendigo and detailed feasibility studies to inform Horizon 2 initiatives.

Horizon 2 – Projects are typically enabling infrastructure required to achieve the end goal for each major area of focus. For example, in smarter connectivity the Horizon 2 project is a bespoke private network to deliver LTE to Greater Bendigo, leveraging the carriers existing infrastructure. In smarter resources a Horizon 2 project will include deployment of a whole of water cycle management strategy, network upgrades and new assets.

Horizon 3 – Projects build on the detailed business cases developed in Horizon 1, together with the new fixed infrastructure in Horizon 2 (networks and assets) to leverage new value across multiple sectors. For example, a Horizon 3 project may see superannuation funds investing through a Bendigo Bond to deploy utility scale renewable energy assets in the region. It may also see an energy retailer develop an electricity offer where part of the profit is returned to the community, via the innovative investment stream, to support ongoing innovation.

Smarter Governance

The end goal (Horizon 3):

- To have demonstrated a set of enabling conditions for self-determination and inclusive prosperity. To have secured at least 50% co investment in the Bendigo City Deal from the private sector.

Benefits from acting:

- Strengthen the capability and capacity of regions to determine their own future. Lower the cost of administration of a city deal. Reduce risk of volatility from electoral cycles. Identify red tape stifling innovation and provide a controlled test environment to challenge the current validity of some regulatory requirements to inform a rule change, or to defend the preservation of the rule.

Deliverables in Horizon 1

- Establish a consortium including agreements to manage data sharing, privacy and security.
- Document a cooperative model for local government and communities to deliver a City Deal.

Smarter Connectivity

The end goal (Horizon 3):

- To deploy a (LTE) platform/network to attract investment.
- To enable our city to create new economic and social value from anchor organisations data, smart sensor networks and connected devices.
- To position LivingLab Bendigo as the preferred eco-system in which to test new IOT technologies.
- To provide a longitudinal research project on a regional city's transition into the fourth industrial revolution; mass automation and connectivity of devices. To have well regarded university's follow the strategy, the impact on people, business and the community and to evaluate the extent to which the city deal eased that economic transition.

Benefits from acting:

- Provide a secure platform to connect big data sets from local pillar organisations.
- Provide a framework and format to make di-identified data available through open source, to reveal connections between data and generate models using the data.
- Attract world class informaticians and tech start-ups to work with us.
- Formalise and brand the unique eco-system as LivingLab Bendigo.

Deliverables

- A best value LTE network which leverages off carriers existing network infrastructure to 'light up' Bendigo for the Internet of Things and Smart City demonstration projects.

- Robust evaluation of the performance of the platform/network independent of vendors.
- A set of agreements between anchor organisations that deal with data sharing, privacy and security and could form the basis for other such cooperative models across Australia.
- A world class Living IOT Laboratory connected with our world class \$1billion Bendigo Hospital, the most ICT enabled hospital in regional Australia.
- A platform to enable transformational economic and social change. Cities that have access to such a platform have greater influence in navigating their way through the fourth industrial revolution. Others will be impacted by that transformational change with little ability to tap into or leverage opportunities to create new value.
- Formal participation in the GS3 with the Netherlands.
- Five defined demonstration projects across our seven areas of focus.
- Global vendor engagement in Smarter Bendigo's Living Laboratory.

Our Seven Pathways to Prosperity

Smarter People

The end goal (Horizon 3):

- Attract a diverse and skilled population to maintain Bendigo's international relevance as a Smart City.
- Unlock the latent human capital that exists within our anchor organisations and community at large.
- Reduce youth unemployment by 10%.
- Reduce overall unemployment by 2%.

Benefits from acting:

- Capture value from people whose talents are not yet optimally employed.
- Create value from people by investing in education, skills and personal development.
- Provide a framework for a whole of community effort to improve thinking skills.

Deliverables – Horizon 1

- Demonstrate the impact of a whole of community approach to improving thinking skills, in partnership with The School of Thinking by delivering the X10 Thinking Program through social media channels and an application for mobile devices.
- Demonstrate the prospective value to be captured by addressing the economics of mental health. We will deploy SochaBlue- a bespoke health informatics project to unlock latent human capital already engaged in the workforce.
- Establish a co-working space for tech start-ups developing applications to create new value from our data. The co-working space will be physically located with Smarter Bendigo and will foster a supportive, entrepreneurial culture to encourage innovation and commercialization.

- Deliver a major hackathon in partnership with the Victorian Department of Environment, Land, Water and Planning to be held on April 10,11 &12 in Bendigo.

Smarter Use of Resources

The end goal (Horizon 3):

- For Bendigo to become a net-exporter of electricity by 2030.
- To reduce the consumption of potable water for non-drinking use by 80% by 2030.
- To achieve \$200million in in value capture through innovative investment in public land.

Benefits from acting:

- Deliver a set of conditions (regulatory ring fence) to attract private investment in innovative solutions.
- Make the most of our natural resources.
- Demonstrate value capture for alternative financing models for investment in public land.
- Provide leadership to optimise water recycling.
- Help retain our advanced manufacturing sector in Bendigo by providing a hedge against the rising cost of electricity.
- To leverage Alliance member's data to better understand energy and water requirements of our future city.

Deliverables

- Create a dashboard to allow our community to monitor real time consumption of electricity, gas and water for the city and for each ten-minute neighborhood.

- Demonstrate innovation that is realized within a regulatory ring fence.
- Deliver a competition for technology vendors to redesign the electricity and water distribution networks, to facilitate the end goals.
- Complete a detailed business case on the winning design.
- Quantify the social outcomes inherent utilizing Infrastructure Victoria's modelling.

Smarter Financing

The end goal (Horizon 3):

- To leverage the government's credit rating and existing banking system to liberate public capital for cooperative funding of critical infrastructure.

Benefits from acting:

- The Smarter Bendigo Alliance will deliver a series of detailed business case studies for tech-interventions and enabling infrastructure in each pathway to prosperity. These detailed business cases will be rolled up to create a series of place based investments that will be partially financed through an innovative investment model which may include a bond issue.
- The bond may be developed by Bendigo and Adelaide Bank.
- A financial services product such as a bond to co-invest in infrastructure projects within City Deals may be scalable and could be deployed to expedite the completion of deals in other areas.

Deliverables

- An innovative investment model, tried and tested in Bendigo.

Smarter Health

The end goal (Horizon 3):

- Living Laboratory Bendigo will include an international hub for health technology based at the new \$1billion Bendigo Hospital.
- The health technology hub will engage vendors and application developers from around Australia and the world in leveraging data from devices, wearables and (where consenting) patients electronic medical record to alleviate suffering and promote wellness.

Benefits from acting:

- Exemplar Health opened the new Bendigo Hospital in January 2017. Bendigo Hospital is the most ICT enabled hospital in regional Australia. Supplied by tech (and equity) partner Siemens, the Bendigo Hospital has the potential to attract investment and engagement from vendors in health technology.
- The Loddon Mallee Region has the highest prevalence of obesity of any region in Australia.
- Bendigo's defined geographic boundaries and poor population health make for good conditions for vendors to test solutions.

Deliverables

- Establish health technology hub as part of Living Laboratory Bendigo.
- Demonstration project- Leverage alliance partner's data to investigate options for ageing in place.

Our Seven Pathways to Prosperity

Smarter Evaluation

The end goal (Horizon 3):

- Provide a series of metrics for measuring the impact of a city deal including:
 - Value for the tax payer
 - The extent to which a city can leverage their human, financial, technological, environmental and social capital to achieve the outcomes of a City Deal.
 - A series of lessons learnt and recommendations that may be instructive in the development of other regional city deals.

Benefits from acting:

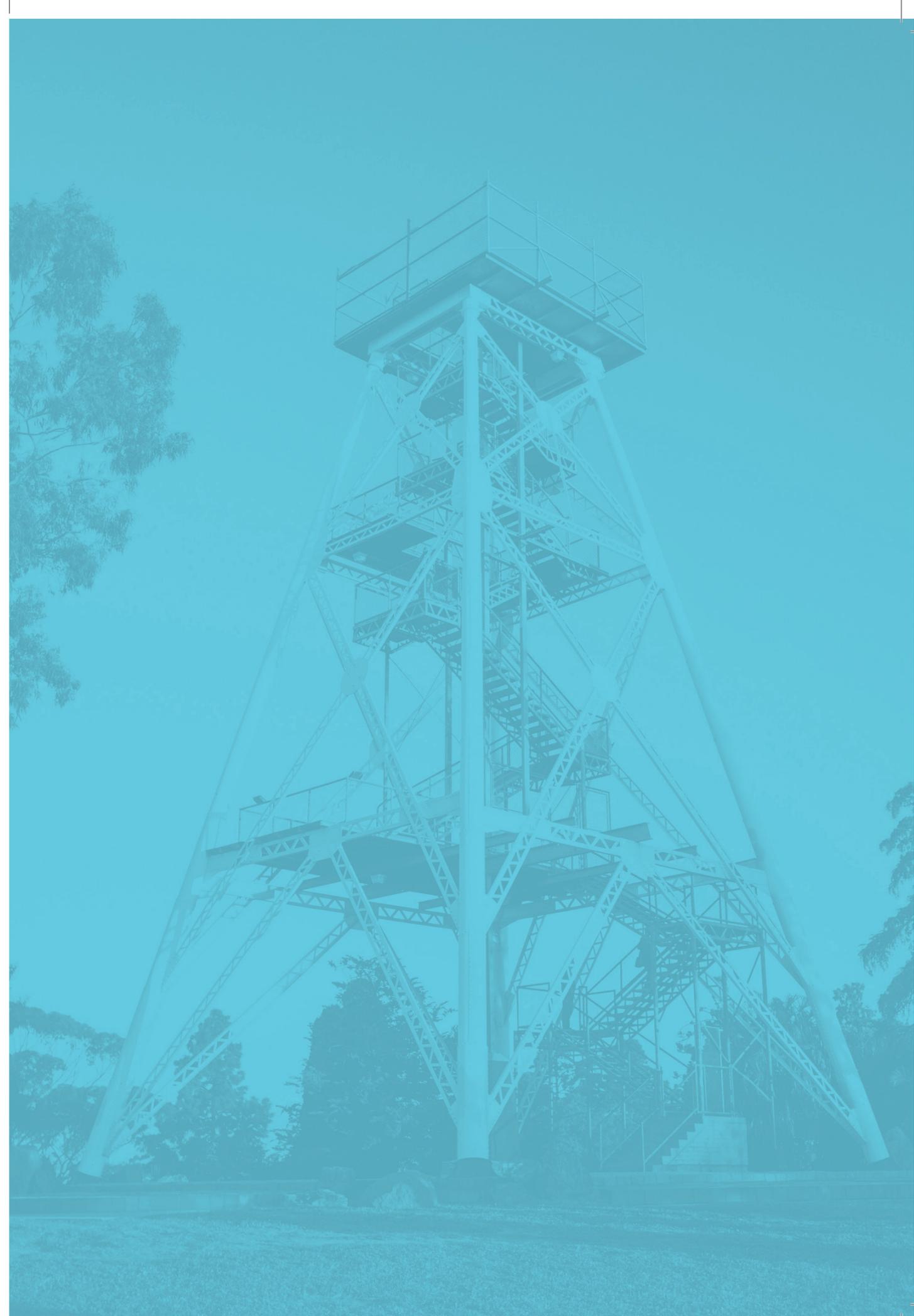
- Enhanced community trust in the process and in individual interventions put forward, if branded as a research trial.
- High quality, independent feedback to policy makers on the impact of strategy and actions implemented under the city deal. The opportunity to learn in the LivingLab of Bendigo before replicating features of the strategy at scale.
- Fostering a culture of research and development across city deals as a mechanism for innovation.

Deliverables – Horizon 1

- Intendent research findings on each demonstration project.
- Evaluation of the performance of the city- wide network/platform.
- New format for organisations to report on results- the balance sheet of the future.

This document is prepared by the Alliance for a Smarter Bendigo to realise our seven pathways to prosperity. These seven pathways will grow to become seven pillars of our future city deal. The document is informed by input from pillar organisations including the City of Greater Bendigo, Bendigo and Adelaide Bank, Bendigo Business Council, Bendigo Health, Bendigo Community Health, Vic Roads, Coliban Water, Telstra, Bendigo Telco, La Trobe University, Deakin University, Engineers Australia, Nokia, Lendlease the Victorian Department of Land, Water, Environment and Planning.

The Alliance for a Smarter Bendigo also engaged local tech start-ups and local companies to leverage their expertise in relation to deployment of sensor technology, data sharing and informatics and optimisation. We are so fortunate to be joined by Daiodo, BDI Health, Maxsum Solutions, ODIS Technologies, Localised, Pomeroy Consulting, and Airov8 in preparing this strategy. These pillar organisations and local tech start-ups have invested four months in the development of this strategy, toward a city deal for Greater Bendigo.



SMARTER BENDIGO

Our Supporters:

