



CommunityLink Phase 1 Au Smart City Business Case

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Business Case – CommunityLink Phase 1 Smart City - Council IOT systems reengineering opportunity

Executive Summary



There are over 500 Councils in Australia who collectively spend over \$50bl per annum in delivering core physical infrastructure including lighting, waste management, water, power, parking, health, education, signage and more, where smart technology promises significant cost savings and improved service delivery to end users.

The Smart City Phase 1 – systems re-engineering business case has been built around the Smart city framework "template & projections" developed by the Sunshine Coast Council (SCC) in Australia in partnership with Telstra & Cisco. This template illustrates 14 underlying Smart city IOT solutions, a 5 Phased implementation plan and 6 execution steps each individual Council is encouraged to address to secure projected \$100ml+ savings over 10 years.

The smart city framework involves creating a “Smart Region Management platform (local industry platform)” to simplify management of municipal services, consolidate services into one place, facilitate integration of multi-vendor solutions and enable inter-regional data sharing and analytics that can enable data-driven decision making and planning. A key recognition is the need for an external governance operating model.

The initial objective of the Phase 1 Smart city project is to implement the CommunityLink business system to deliver to this need and capture working templates. From here we can to deploy this solution across 500 LGA's to progressively

re-engineer the current Australian Council physical infrastructure.

Cost savings are projected to grow to \$5bl p.a. over 10 years and we can create a national smart data network of communities and infrastructure that delivers projected \$bl ongoing revenues to facilitate inter regional & industry data sharing and fund next generation social and economic functionality to support sustainable community ecologies.

Where are we up to? ...the current smart city marketplace in Australia

Who are the key stakeholders in the current “smart city” marketplace that are key to the securing our national smart city outcome?

[Australian Smart Communities Association \(ASCA\)](#)

The ASCA, whose members are primarily local governments and Regional Development Australia committees, is the peak smart community body. The clarity

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provided by the [ASCA Smart communities – a future vision and](#) What is a smart community White Paper establishes the team as leading global thinkers. They are advocating a smart city framework and a multi- vendor local industry platform approach designed by the Sunshine Coast Council in conjunction with Telstra & Cisco.

They are playing a major national role in Australia with their approach to put citizens, local businesses and stakeholders at the core. Their smart city activities seek to assist local governments and communities with the development of smart city strategies and smart local council structures to assist the localised transition to a digital economy.

The IOT Alliance Australia

As the peak Australian IoT body the IOTAA vision is to empower industry to grow Australia's competitive advantage through IoT. IOTAA's purpose is to accelerate IoT innovation and adoption by i. activating and supporting collaboration across Industry, Government, Research and Communities ii. promoting & enabling evidence-based policy and regulation and iii. identifying strategic opportunities for economic growth and social benefit.

Working under the guidance of the Executive Council which consists of major Industry, government, Research and advocacy bodies, the IOTAA has established [six IOTAA workstreams](#). Contributions to the workstreams are voluntary and the IOTAA has indicated it is seeking a business model to enable it to self-fund and leverage its agenda without creating a conflict of interest.

Data 61/CSIRO

Data61 provide the focus and insight into the importance of data within any Smart Society, Community, Industry or Business solution. Data61 beautifully describe a world where "Data is the new currency of our world. Data driven insights change the way we live, work, invent and innovate. Data is the raw material that fuels new industries and disrupts existing one".

Data61/CSIRO's opportunity is to co-ordinate the ASCA smart city collaborative R & D requirement and engagement with 14 University members. In addition the CSIRO is an Executive Council member of the IOTAA to support the Industry requirement. Data61 is seeking to provide its services to smart city and data solutions which it generate sustainable systemic revenue streams.

HYPERCAT Australia

Hypercat is a UK-developed alliance and potential global standard that enables free communication from any connected IoT sensor or device being used to monitor an environment. Hypercat Australia has been launched with the aim "to unlock the benefits of Smart Cities by creating an interoperable IoT ecosystem that gives confidence to cities and local government".

Hypercat.io and Hypercat Australia are looking for a universal business model which supports its objective to be the global standard and a business case in Australia to deploy and generate sustainable revenue streams as the first step to support their mission "to play a role in fostering a global standard and unlock the power of the Internet of Things for everybody."

Knowledge Economy Institute (KEi)

The KEi objective is to create a knowledge infrastructure – shared with all – which will be the foundation for Australia's future well-being. As KEi states Australia's transition to a knowledge economy is being held back by fragmented and duplicated effort and has identified the IOT revolution as the key start point to support this transition.

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KEi has been established as an Internet of things (IOT) hub dedicated to harnessing the transformative power of technology and bring together business, researchers, government and civil society into one single focused effort. KEi provides administrative assistance for and is an IOTAA Executive Council member with Board representation. KEi is also providing the underlying administration for the Hypercat system.

ACCAN

The Australian Communications Consumer Action Network (ACCAN) is Australia's peak communications consumer organisation representing individuals, small businesses and not-for-profit groups as consumers of communications products and services. ACCAN focuses on goods and services encompassed by the converged areas of telecommunications, broadcasting, the internet and online services, including both current and emerging technologies. ACCAN has IOTAA board representation and has had discussion with the ASCA re consumer related issues relevant to the "local industry platform" objective.

Department of the PM and Cabinet – Smart Cities Plan

The *Smart Cities Plan* sets out the Australian Government's vision for our cities—metropolitan and regional—and its commitment to smart investment, smart policy and smart technology. \$50ml has been allocated for **Smart City & Suburbs Grant** grants to support the plan. The grant guidelines have recently been PM's Dept is looking to fund "ambitious and transformational projects which move local government services beyond business as usual". Eligible parties are encouraged to bring forward collaborative proposals involving multiple organisations through partnership or consortium arrangements

Why, how & on what basis would these stakeholders come together to deliver to their own agenda AND secure the Council smart city opportunity to create a national efficiency dividend growing to a projected \$5bl per annum and a dedicated smart city network and infrastructure with a \$bl p.a. t/o through the Phase 1 – Smart City systems re-engineering business case opportunity??

What is missing?

The Missing Link is a single unifying national data/IOT vision, strategy, business model, organisational methodology, legal & commercial structure, commercialisation strategy and implementation plan that can align, leverage delivery of and provide an ongoing systemic revenue stream for the range of national Knowledge infrastructure, smart community and smart industry initiatives underway in Australia highlighted above.

CommunityLink is the missing link which provides a "system" business model that organises, funds, integrates and provides the pathway for Regional , Industry, R & D , Charitable, Consumer & Government stakeholders to come together to transition us to a smart and locally based sustainable society.

The Smart City phase 1 systems reengineering opportunity provides a natural commercial start point for converging smart city stakeholders to come together as an Innovative & visionary development consortia in the form of a commercial partnership to re-engineer \$50bl p.a. of existing Council cash flows as follows.



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What will CommunityLink deliver to the Council defined need?

The CL system when completed will enable Council and local stakeholders to establish a locally based, owned and autonomously operated Community Development Centre (CDC) and low cost data hub infrastructure through the use of spare computing capacity.

This enables Councils to

- i. Access a **dedicated smart city peer to peer system within a national smart network** designed to address the security, governance, identity and liability issues
- ii. **Outsource functionality which is essential for data sharing within the LGA and other autonomously operated regional & industry hubs which requires new technology which cannot sit within a Council legacy system**
- iii. **Access specialist resources outside their current expertise** and establish its internal IOT governance & multi-vendor operating model with the CDC providing external governance
- iv. Customise and deploy the Smart Region Data hub & Management Platform for analytics that can enable data-driven decision making and planning
- v. Create a sustainable local digital platform to support further social & economic innovation focused on local ecosystem sustainability
- vi. Return locally generated CDC profits to the community.
- vii. Receive national smart society efficiency dividends created from profits generated by the national data infrastructure via a unique revolving fund approach and community loyalty model.

How do we achieve this?

In addition to the need for an operating system which addresses the security, identity, data ownership and liability issues, the smart city revolution need is for a “commercial and legal framework” to manage and provide ongoing governance for these fundamental issues and the digital representation of the real world we are in the process of creating.

The CommunityLink business model uses a Limited Partnership structure and organization methodology similar to Global Legal and Accounting firms which also operate decentralised autonomous networks managed by local partners within a global partnership governance framework. The [Unidroit](#) model for “global legal standardization” provides an excellent benchmark for a global “Unidata” entity and approach to data unification. **So we are using proven commercial structures and applying it to the digital revolution.**

The CL smart community system enables us to create a new interconnected partnership within the existing system to transition us from the old disconnected structures with minimum disruption and maximise the benefits for the community as a whole as follows.

In the CommunityLink model invited representative [Regional](#) , [Industry, R & D](#) , [Charitable](#), [Consumer](#) & [Government](#) stakeholder have the opportunity to establish an “Access” Limited Partnership with themselves as the General Partner and their members as Limited partners.

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For example the Australian Smart Communities Association would establish the Regional Access Limited partnership with Council members as Limited partners. Similarly the IOTAA could establish the Industry IOT partnership with themselves as the General partner with Industry members as Limited partners.

From here the Consumer, Region, Industry, R & D, Charitable and Government “Access” Limited Partnerships establish a national CommunityLink partnership and National Data Administrator (NDA) entity as general partner and themselves as the Limited partners. Each Limited partner forms a specific Board advisory committee to ensure operational alignment to their ongoing requirement by the NDA Board and operations.

The benefits of this approach to stakeholders are that it

- i. enabling existing players to engage with the CL consortium to build through to new smart city commercial system from within the existing system and without disturbing existing vehicles*
- ii. creates the smart city commercial & legal infrastructure necessary to underpin a smart integrated, interoperable world to more fully access the benefits of technology*
- iii. enables partners to maintain their current activities and engage in the general partner role as 1 additional activity... so all eggs not in one basket*
- iv. provides Not for Profit General Partners with a commercial & legal structure to receipt investment and grant dollars to establish the commercially neutral infrastructure and get paid for work without conflict of interest*
- v. provides the commercial partnership vehicle with ongoing % revenue streams from the CommunityLink network without interfering with the current stakeholder model operations. General partners get paid for CommunityLink specific work only.*



Our research indicates that we have reached an evolutionary convergence point in Australia to implement the business model and operating framework with only a slight refinement and alignment of the enormous efforts of existing national smart city stakeholders in partnership with core underlying ICT platforms partners. **This commercial partnership provides the methodology for national steering stakeholders to formally come together as a consortium in the form of a commercial partnership to support a collective investment approach and grant fund raising from Government who encourage applications from consortiums.**

How do we implement this?? CommunityLink Consortium Smart City Project Plan

The CL [Development roadmap](#) and [Project Plan](#) has been designed by ULB Holistic Capital Management using the patented organisational methodology and system design IP from the ULB Institute to deliver to the Council Smart City requirement described above.

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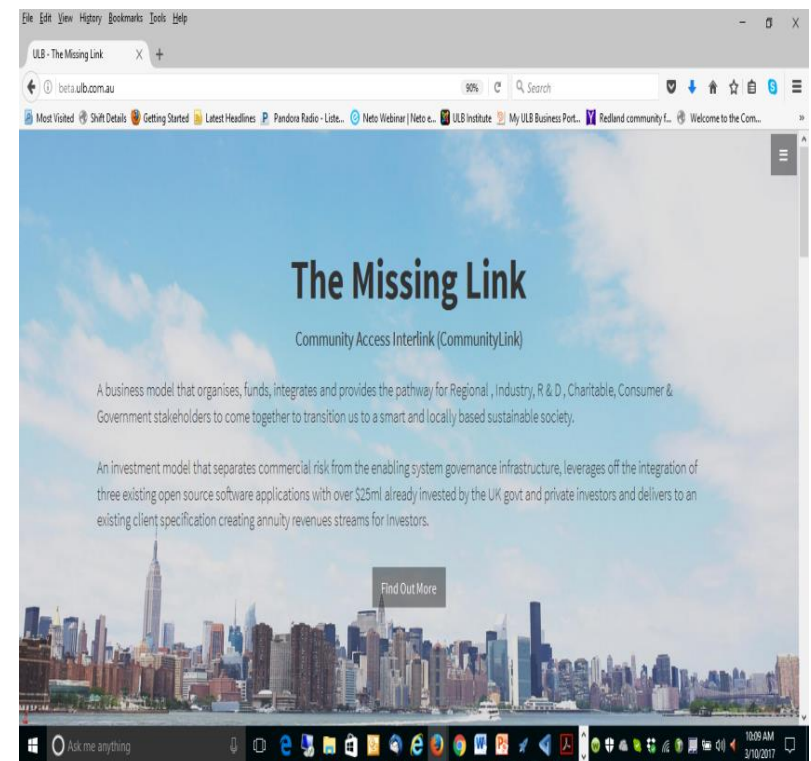
The CL model and project workstreams involves establishment of a **network of smart communities** and an **open commercially neutral national open data infrastructure and governance system funded through the system efficiencies it creates. Community Project workstream contributors, many who are currently making unpaid contributions to aligned smart city stakeholder projects, can now be paid without creating a conflict of interest.**

The CommunityLink Development roadmap and Project Plan has 3 project sections and contains 11 project workstreams, Section 1 Community Foundation (build the Foundations), Section 2 - Commercial (supply) & Section 3 – Community (demand).

Each workstream is part of the Phase 1 Smart City Commercialisation strategy/business case which comes with a project funding allocation, revenue margin and project chair role which leads to a defined commercialisation milestone start point being the Council smart city solution delivery.

The Integrated project plan will enable the Foundation and commercial project teams to deliver the smart city system to the community project team/national steering committee to achieve the commercial & operational start point milestone as follow:

- **The Foundation project section 1 – “Creating the Foundation building block”**
 - ◆ brings together values aligned global leaders who share the CommunityLink vision to establish a “Unidata Foundation close group consensus group” to create the initial “peer” utilising a unique decentralised peer to peer system, ULB Knowledge model and CL smart society model design.
 - ◆ defines & secures IP, Investment & operational contribution and focus to the smart city IOT messaging testnet" systemic leverage point.
- **The Commercial project section 2 – “Design & build the system”**
 - ◆ will receive \$12.5ml for the Product development team (e.g. SAFE, Hypercat & Blockchain partners & project team) to build the enabling system and work with Access stakeholders in situ starting with
 - ◆ establishment of a smart city IOT data messaging “SAFE testnet” between the respective RA, IA & NDA & pilot CDC masternodes with Hypercat and Blockchain smart contract to create a dedicated smart city peer to peer system to test within a Council smart application pilot environment
- **The Community project section 3 – “Deploy the system”**
 - ◆ will receive \$12.5ml with \$1-2 ml being allocated to each of the Access Limited partnerships to enable the General Partner to establish their own Decentralised Autonomous Organisation and data hub and build their requirement to deliver to the Council “local industry platform” smart city need as part of the dedicated CL peer to peer system.



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- ♦ secure a revenue model/margin for General partners e.g. ASCA through ongoing system revenue allocation
- ♦ **enable current contributors working to development the commercially neutral “interlinking system through Not for profit entities to be paid for current and future work without conflict of interest**

ULB is advocating moving the incubation of the CL model to a significant Research based Innovation Centre to bring converging Unidata Foundation parties together in *a continuous learning environment*. The objective is to bring the key commercial and community partners who will most benefit together in a rapid application development environment, using a minimum viable product approach to define and implement steps to delivery of the Council smart city solution.

Participation in the establishment of Unidata Foundation Close group “peer” will provide access to the knowledge, funding and experience for key operational stakeholders to create their own Access Close consensus groups amongst their stakeholders, establish their autonomous data hub and test the interactions to meet the Phase 1 smart city CDC/Council product requirement in a coordinated manner. This start with and IOT testnet with dummy interfaces. Following system commercialisation the self- organising communities and the enabling Social Capital Investment Fund will receive a system margin enabling them to operate autonomously within the smart decentralised network.

Who gets what? – [A new social contract – Exponentially more Social, Lean, Circular](#)

A Smart City Phase 1 systems reengineering feasibility has been developed to illustrate the business model as a whole to stakeholders. This is based on the assumptions created by the Sunshine Coast Council smart city framework.

In order to automate their smart city solution and secure the localised and national smart city benefits available Councils will have external governance via their locally owned, controlled and operated Community Development Centre/data hub. Core functionality which cannot be delivered from their legacy system will be outsourced to the **dedicated smart city IOT peer to peer system within a national smart network via the CDC.**

Based on the 6 phase process described in the smart city framework brochure we have defined a default “*progressive cost reduction and outsourcing*” model (e.g. EDS/Commonwealth Bank) to illustrate the benefits to *Council from phased smart service take up over 10 year via accessing the national smart network via their CDC. As a starting point we have assumed a 15% CDC outsourcing cost to Council from the reducing operating cost it enables.*

Using these assumptions the project feasibility can illustrate over 10 years an overall 1 page Smart City network P & L to demonstrate the system as a whole, Income assumptions and margin splits, example CDC, Council, Regional, Industry, Consumer, R & D & Charitable and NDA Access tabs with capital allocation & revenue assumptions, IP licensing & operational revenue projections for key system suppliers and Social Capital Investment Trust ROI’s for investors.

How are the benefits from the smart community revolution shared equitably?

The CL smart community system incorporates a new social contract where benefits of the efficiencies gained for continuous system improvement are systemically shared with community stakeholders via the unique CL “revolving fund and community loyalty methodology”. This is based on a “mutual philosophy where “the more the system makes the more it returns to the community stakeholders.

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Matter to note include

- ♦ CommunityLink provides the AU ecosystem partners with a single unifying national data/IOT vision, strategy, business model, organisational methodology, legal & commercial structure, commercialisation strategy and implementation plan that will
 - ♦ provide Councils with a path to a standardized smart city platform with integration ready components, inter regional data sharing and standards based real time outcomes i.e. closed loop automation
 - ♦ deliver a projected \$5bl p.a. efficiency dividend for LGA communities across au after 10 years
 - ♦ create a smart community network with a projected collective \$5.7bl T/O **with all system profits being returned to the community via the new CL internet social contract that “maximises profits via system efficiencies and share them equitably”**
 - ♦ creates the platform for significant additional income streams from future “community imarket” social and economic functionality
 - ♦ ensures the open system and governance infrastructure remain under community control and ownership in perpetuity
- ♦ CommunityLink is the next evolutionary step in the digital revolution to create a network of community communities that continuously learn from each other. This is via an open commercially neutral open data infrastructure and governance system as part of a national smart society solution following the establishment of the Australian (next gen auDA) and global data administration governance and infrastructure
 - ♦ Total CL au Phase 1 smart city Early stage commercialization project funds required are \$25ml
 - ♦ The project is broken into three sections:
 - ♦ Section 1 - Establish a Foundation shared ID close group masternode and create path to “Unidata” Foundation to own system IP, deploy the phase 1 au smart pilot and oversee global “data unification” deployment & governance
 - ♦ Section 3 - Commercial - \$12.5ml to fund the Product development team to secure the open source & commercial IP and deliver the system and strategic investments in key underlying system components
 - ♦ Section 2 - Community - \$12.5ml to establish representative Consumer, R & D, Charitable, Regional and Industry Access General Partners and national administration (\$2ml each and ongoing system revenue margin) to deliver to the CDC/Council smart city partners
 - ♦ The total investment funding required is expected to be leveraged by grant funds of up to 50% of investor capital
- ♦ CommunityLink will **generate recurrent revenue streams** for Australian communities, industry, R & D, Charitable, community organisations and consumers after 10 years of as much as;
 - ♦ \$350 ml p.a. available to regions via Regional Access system revenue share.
 - to improve CDC engagement and support community sustainability

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- ♦ \$1.4bl in CDC profits across 500 LGA's to create a LGA Local Development fund to support community sustainability via sustainable food, energy, housing, water and social programs
 - ♦ \$350 ml p.a. available to industry bodies via Industry Access
 - to develop industry by industry engagement e.g. Technology Access, Health Access, Wealth Access with the national smart community digital peer to peer data marketplace and prevent private data monopolies
 - ♦ \$280 ml p.a. returned as consumer/farmers thru Consumer access system margin allocation to develop ongoing consumer solutions and as consumer bonus to reward users who contribute the unused computing power to support the decentralized platform which provides low cost infrastructure to all communities
 - ♦ \$280 ml p.a. returned national Learning Institutions via R & D Access to ensure equality in education access
 - ♦ \$280 ml p.a. returned to charitable institutions
 - ♦ Annuity revenue stream to the Social capital Investment Trust for Investor ROI, IP licensing, ongoing system R & D and creation of an “internal social capital investment bank” of funds for smart city deployment globally
 - ♦ An annual au margin to support the [Unidata](#) Global Data Unification & Governance Foundation
- ♦ The commercial investment will generate above average investment returns via annuity revenue streams from a natural community monopoly

Where do we start?

To discuss the above or for more information please contact Ian Wilson Director, ULB Institute & ULB Holistic Capital Management P/L – 0417281327 or ianwilson@ulb.com.au