



City of Newcastle Localising Supply Chains Project 2022 *Final Report (abridged version)*

A local and *impact supply chains* approach to
facilitating growth, sustainability and resilience
in the local economy



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Executive summary

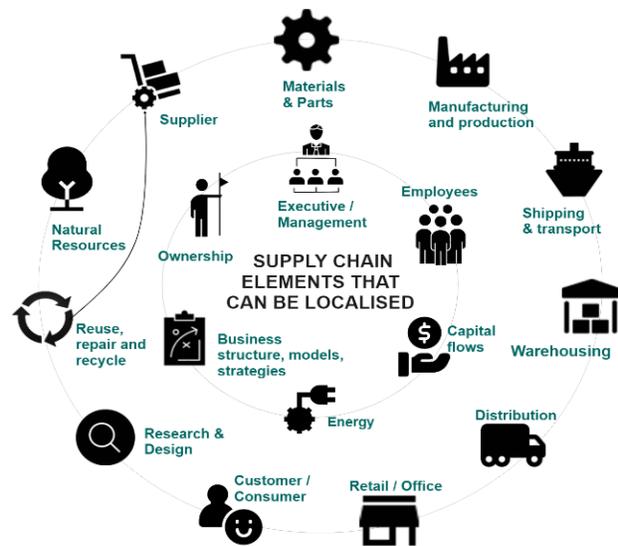
The City of Newcastle (CN) aims for Newcastle to be a liveable, sustainable and inclusive global city by 2040.

Harnessing supply chains for impact

Supply chains are a critical market mechanism that CN and wider Newcastle stakeholders can activate to support the delivery of policy objectives that underpin this aim. Recent significant events, such as the COVID-19 pandemic and extreme weather incidents, have highlighted vulnerabilities and disadvantages in complex global markets and consequently there is growing interest in (and understanding of) how supply chains are currently configured and the opportunities that could be generated through alternative configurations.

What does ‘localising supply chains’ mean?

CN’s existing policies and strategies demonstrate a commitment to facilitating increased localisation in the economy and its local supply chain networks. **Localisation** is the process of building economic and market structures that allow the goods and services a community needs to be produced locally and regionally, whenever possible. **Localising supply chains** means expanding and strengthening supply chain elements that are physically based in and/or are closer to (in this case) Newcastle. As shown in **Figure 3**, there are many elements of a supply chain network that can be localised separately and



See Figure 3. Supply chain elements that can be localised
Source: Ethical Fields & The Yunus Centre Griffith University, 2022

in combination. When combined, they offer the greatest potential for delivering improved outcomes across multiple policy objectives.

Why local and *impact supply chains*?

Through its Economic Development Strategy, CN is committed to: *strengthening existing and creating new economic opportunities for all in the 2020s*, whilst also increasing sustainability and resilience in the local economy. As shown in **Figure 4**, local supply chains can become powerful contributors to achieving these outcomes. Global and national trends and drivers are enabling the market conditions needed to increase supply

Highlights - benefits of localising supply chains

- Superior local economic performance
- Growth in new and existing local industries
- New and expanded business and employment opportunities
- Increased local ownership and control over assets and capital
- Increased transparency, influence and adaptability of economic and supply chain management and performance
- Reduced supply chain related emissions and environmental impacts
- Strengthened relationships between local government, business, consumers and communities

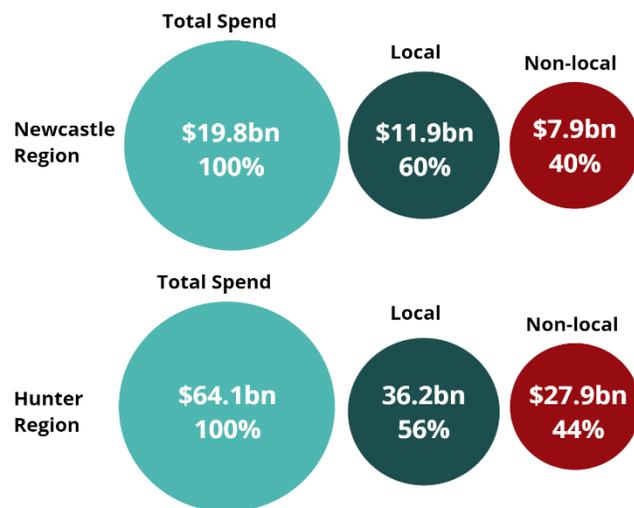
See Figure 4. Highlights – benefits of localising supply chains, Source: Ethical Fields & The Yunus Centre Griffith University, 2022

chain localisation, sustainability and resilience. These drivers and trends can be leveraged, in multiple and diverse ways, to incentivise and motivate local action across Newcastle and in collaboration with a broad range of stakeholders.

Beyond localising, supply chains are increasingly being leveraged to achieve a broad range of policy outcomes across economic, social and environmental objectives and this is paving the way for a new era in supply chain policy and management. The framework presented in this report draws together and extends on existing activity and takes this a step further to introduce the concept of *impact supply chains*. **Impact supply chains** intentionally and systematically utilise supply chains to achieve specified impacts. An impact supply chain is created when an entity (or collaboration of entities) design supply chain management policies and practices to systematically foster, maintain and grow supply networks that are intentionally designed to contribute to improving specific social, environmental, cultural and/or local economic development and resilience objectives. They elevate the focus to a supply chain systems level through establishing a more holistic and multi-faceted perspective on impact. This focus then provides a structure for: working within and across diverse policy objectives (such as the localisation, sustainability, and resilience goals); flexibility to introduce new goals over time; and offers practical mechanisms to support implementation initiatives. *Impact supply chains* can be applied at the organisational level, and importantly, provides a framework to organise city-wide supply chain systems transitions.

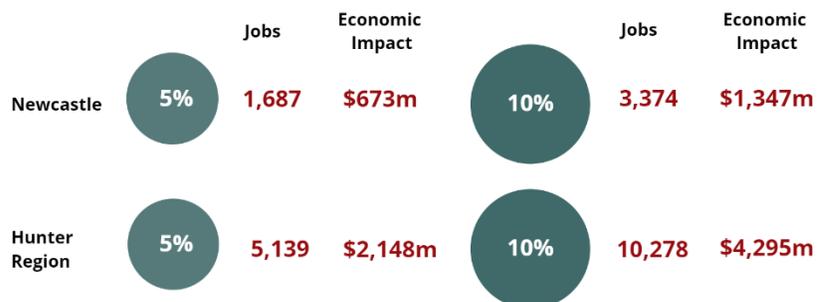
What is the opportunity for Newcastle and the Hunter Region?

As shown in **Figure 8**, the spend analysis performed, using 2021 data from the REMPLAN Economy Tool, found that of total city-wide spending activity, 60% (\$11.9bn) is spent locally in Newcastle and 56% (\$36.2bn) is spent in the Hunter Region. This indicates there is already a strong local supply chain foundation that can be leveraged and expanded. 40% (\$7.9bn) of total city-wide spending activity is leaking out of the Newcastle economy and 44% (\$27.9bn) is leaking out of the Hunter Region economy.



See Figure 8. Total, local and non-local spend in Newcastle. Source:

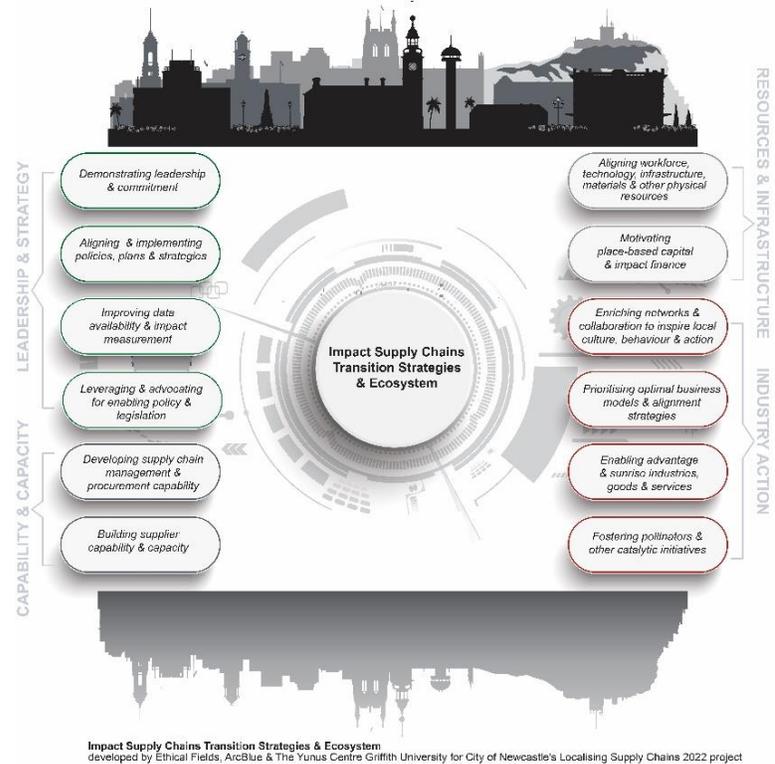
Demonstrating the potential in one policy domain, the local economic and employment outcomes that could result from a 5% and from a 10% shift in local city-wide spend in Newcastle and the Hunter are shown in **Figure 9**.



See Figure 9. Impact of Local Spend Shift. Source: ArcBlue & Ethical Fields, 2022

Transition Strategies

Intentionally designed supply chain interventions, that integrate an *impact supply chains* focus, can support progress towards Newcastle’s policy objectives. This report demonstrates that CN and other local organisations can play an effective leadership role in coordinating collaborative approaches designed to achieve both organisational and city-wide supply chain transitions through engaging with the twelve core ‘transition strategies’ shown in **Figure 11**. These were synthesised from a global best-practice scan, focused on identifying initiatives that would support and promote an impact supply chain agenda in Newcastle.



See **Figure 11. Strategies to transition towards an impact supply chain**
Developed by Ethical Fields, ArcBlue & The Yunus Centre Griffith University, 2022

Recommended pathway forward

The recommended pathway forward provides a framework designed to support CN and its Economic Development team in realising the inspirational and bold vision for the city and its Region. Whilst there is much that can be achieved through aligning internal policies and practices, the full potential of the vision will rely on effective and ongoing collaboration with a wide range of stakeholders and on establishing enabling market conditions to facilitate a city-wide supply chains transition. The recommended pathway forward interprets *existing building blocks* into the *impact supply chains* agenda, to make best use of what is already available and ensuring the introduction of additional layers of strategic planning are unnecessary. That is, this work is in effect already underway and the recommended extensions and strengthening can start immediately.

Working towards CN’s overall goal, our overarching recommendation is to adopt and design an **Impact Supply Chains Challenge** approach to create a coherent framework through which to engage internal and external stakeholders and to catalyse collaborative action and deliver city-wide impact. This *Challenge* includes two initial specific Portfolios-of-action designed to support the implementation approach - *Fostering and Anchors Culture* and *Improving Circularity Outcomes*. To this end, a suggested ‘**next steps action plan**’ is offered. This provides CN with a set of prioritised practical actions to support initial action on the significant opportunity outlined in this report. In support of the ambitions defined in CN’s *Community Plan* and *Economic Development Strategy*, the plan incorporates actions from each of the transition strategy themes, including a combination of foundational ‘system starters’, more challenging but impactful ‘system multipliers’, and ‘front running innovation’ actions.

1. Introduction

KEY TAKEAWAYS

- The City of Newcastle (CN) aims for Newcastle to be a liveable, sustainable and inclusive global city by 2040.
- The Economic Development Strategy (EDS) 2021 is led by the mission: *Strengthen existing and create new economic opportunities for all in the 2020s.*
- Recognising the key role that supply chain practices can play in supporting CN's economic development goals the objectives of this project were to:
 - Understand the Local Supply Chain Network in the local economy, including leakages and sectors with limited localised supply chains
 - Identify best practice principles for encouraging increased localisation within the local economy, including prioritising industries and sectors where incentivisation may be most effective
 - Provide practical recommendations for CN to increase localisation of the supply chains within the local economy, so as to increase resilience and sustainability, including related to procurement policy.

By 2040, the City of Newcastle (CN) aims for Newcastle to be a liveable, sustainable and inclusive global city. As outlined in its 2040 draft *City Strategic plan*,¹ commitments in pursuit of this aim include: inclusion, Aboriginal and Torres Strait Islander peoples and culture, supporting local, our planet, innovation and social justice principles.

CN has also committed to contributing to progress towards the Sustainable Development Goals (SDGs), and to this end, has integrated these objectives into its strategic plans. This includes its Economic Development Strategy (EDS) 2021², which is led by the mission: **Strengthen existing and create new economic opportunities for all in the 2020s.** The EDS outlines four priorities: Skilled People, Innovative People, City Shaping, and Vibrant City. Two of these priorities focus on investing in people to ensure the population of Newcastle is skilled and innovative; and two concentrate on enhancing the enabling

¹ Newcastle 2040, Draft Community Strategic Plan, Available at: https://newcastle.nsw.gov.au/getattachment/Have-Your-Say/Projects/Newcastle-2040/Newcastle-2040-Community-Strategic-Plan-Final-Draft-for-Public-Exhibition-NCC801_v22si-19-1-22-2.pdf?lang=en-AU (Accessed 13 April 2022)

² Newcastle Economic Development Strategy 2021. Available at: <https://www.newcastle.nsw.gov.au/getmedia/245f5225-7259-465f-930f-b1f77198f0b7/1927-economic-development-strategy-final-digital.aspx> (Accessed: 10 October 2021)

conditions that will support people to create opportunities in Newcastle. The approach adopted by CN is premised on the understanding that the success of the local and regional economy is built on the talent, skills and ingenuity of its local people; and that these qualities will generate innovation, creativity and, ultimately, new jobs and investment. The EDS states that:

*“A people-centred approach to economic development builds in flexibility and promotes resilience to structural changes in the economy, such as those prompted by the COVID-19 pandemic and the long-term shift away from carbon-based energy. This Strategy is proposing key skills opportunities to respond and protect against existing challenges, including localisation of industry supply chains: How can we work on encouraging local industries and the local workforce to effectively deliver the goods and services required?”.*³

Recognising the key role that supply chain practices can play in supporting ED goals, CN engaged [Ethical Fields](#) as the lead partner in a collaboration with [The Yunus Centre Griffith University](#), and [ArcBlue](#) to:

- Understand the Local Supply Chain Network in the local economy, including leakages and sectors with limited localised supply chains.
- Identify best practice principles for encouraging increased localisation within the local economy, including prioritising industries and sectors where incentivisation may be most effective.
- Provide practical recommendations for CN to increase localisation of the supply chains within the local economy, so as to increase resilience and sustainability, including related to procurement policy.

The project approach is summarised in **Figure 1** below. See Appendix A for more detail on the overall project scope; and Appendix B for an outline of our approach to delivering the project. This includes some background information on the *Three Horizons* method that was drawn on in designing and implementing the project, and which is mentioned throughout the report.



Figure 1: Overview of Project Approach
Ethical Fields & The Yunus Centre Griffith University, 2022

This report brings together the findings generated through each stage of the project and is designed to:

- Provide a framework for understanding localisation, sustainability and resilience in the context of supply chains
- Explore the opportunity available, including the potential benefits, of adopting an *Impact Supply Chains* framework to support the delivery of multi-faceted and diverse policy objectives

³ Newcastle 2040 Draft, p38 (Ref 1)

- Analyse existing spending behaviour across the Local Supply Chain Network and CN Procurement, including leakages and industry opportunities
- Provide a set of transition strategies to support the implementation of an *Impact Supply Chains Challenge* for Newcastle
- Showcase best practice case studies to provide real-world examples of how these transitions strategies have been employed and the resulting impact
- Provide an initial action plan with a set of prioritised practical actions to support initial action on the significant opportunity outlined in this report.

Throughout this report we use the following terms: CN for City of Newcastle (Council); Newcastle for the Newcastle Local Government Area; and the Hunter for the Hunter Region. Please refer to Appendix C for a full glossary of key terms and definitions used.

2. Localisation, sustainability and resilience in the context of supply chains

KEY TAKEAWAYS

- Localising supply chains can contribute to a range of local economic development, sustainability and resilience outcomes, and there's a growing body of evidence that regions with greater economic localisation demonstrate superior local economic performance.
- Global and national trends and drivers are enabling favourable market conditions for increasing supply chain localisation, sustainability and resilience. These advantages, drivers and trends can be leveraged to incentivise and motivate local action across Newcastle.
- The concepts of local, localisation, sustainability and resilience can be interpreted in different ways. Understanding and defining what these concepts mean for CN in the context of supply chains, as well as the relationships between them, will be critical to the design of effective policies and initiatives.

This project supports CN's existing work that seeks to 'strengthen existing and create new economic opportunities for all in the 2020s'⁴ through examining how localisation in supply chains can be increased (both by CN and by other key stakeholders), so as to improve economic resilience and sustainability outcomes.

The concepts of localisation, sustainability and resilience can be interpreted and applied in different ways. Unclear or unintended meaning, intent or interpretation can be a barrier to supply chain policy success.⁵ Our research indicates that ensuring clarity around key concepts and terms should be carefully considered as part of CN's next steps. For example, *does 'local' mean Newcastle or also include the Hunter Region?* Newcastle's procurement policy defines local as 'holding a local office' *but does a local*

⁴ Newcastle Economic Development Strategy 2021 (Ref 2)

⁵ Morgan, K. Morley, A. (2002) Relocalising the good chain: The Role of Creative Public Procurement. Cardiff: The Regeneration Institute

office alone deliver the benefits of localisation? To develop clear objectives and effective strategies for success, it is important to unpack and understand the nuances of these concepts in the context of supply chains. There are also tensions between them. A simple example of these tensions at the supply chain level is: *Do we prefer a sustainable product produced further afield, or a less sustainable one made locally?* How to balance and navigate these kinds of tensions has been a key consideration in how we approached the project, as discussed throughout this report.

To provide useful insights to CN, and ensure clarity around how each term has been interpreted and approached in the context of this project, below we firstly provide a short definition, explanation and also note some specific considerations when approached through a supply chains lens. We also note some of the key benefits and opportunities which CN can leverage to incentivise support and action for this initiative, as well as key tensions that will need to be balanced.

2.1 Localisation

Localisation is the process of building the full range of market infrastructure needed to support the goods and services a community needs being produced and owned locally and regionally, whenever possible.⁶ Increasing **localisation in the supply chain** means to increase supply chain elements that are physically locally-based and/or are closer to the point of focus/place- in this case, Newcastle. There does not appear to be a universal definition of local in relation to supply chains, in terms of distance or other geographical terms. What constitutes 'local' most strongly correlates with varying interpretations of 'place'. These included micro-local areas such as highstreets, neighbourhoods and suburbs; town and city areas; and wider regional areas. Regardless of the specific definition of place, it is important to factor in that the benefits of localisation and localising supply chains discussed in this report, are likely to dissipate with regards to accrual for any specific place, such as Newcastle, the wider the interpretation of 'local'. Therefore, it is our recommendation that the definition of local should be limited to the point of focus/place where you intend the benefits and impact to flow. Within this, recognising that at times a local option may not be available or ideal, it may be helpful to determine a locally relevant approach to a graduated definition for 'local' – as shown in **Figure 2**.

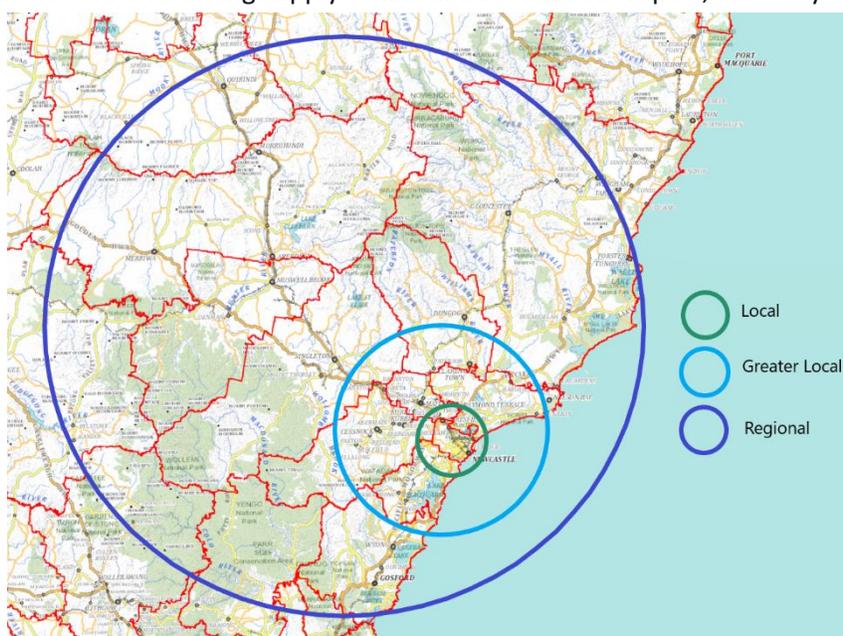


Figure 2: Defining local in the context of supply chains
Source: Ethical Fields & The Yunus Centre Griffith University, 2022

⁶ World Localization Day, Available at: <https://worldlocalizationday.org/localization/> (Accessed on 12 January 2022)

We have applied this approach for this project and have taken **local** to mean Newcastle as defined by the Newcastle LGA boundary.⁷ **Greater local** as defined by the Greater Newcastle Metropolitan area which includes the five surrounding LGAs and **regional** as the Hunter Region. This could be expanded further, to include state and/or national interpretations should this be considered useful at later stages.

Regardless of the interpretation of local and where the boundaries are drawn for wider areas, it is important to clearly define what you intend to constitute local, and under what circumstances you expand beyond local, to ensure clarity and consistency in approach and to optimise the desired impacts.

The entry-level consideration when applying a ‘local lens’ is the location of the entity (business, supplier etc.). That is, does it have a local office, or local headquarters, or is it locally owned. Following from this, a simple interpretation of ‘localising supply chains’ generally results in support for programs such as ‘buy local’ campaigns, which are appealing to consumers who want to support local businesses.

Whether an entity is ‘locally-based’ is just the first layer of consideration. Increasing localisation also applies a ‘local lens’ to other structural issues, such as the supply chain elements shown in **Figure 3**. When what constitutes ‘local’ is considered in this way, the approach starts to optimise the multiplier-effect potential⁸, which is premised on the understanding that locally owned and operated businesses will generally recirculate a more significant percentage of revenue back into the local economy than non-local businesses.

This approach to localisation involves building the full range of market infrastructure needed to support the goods and services a community needs being produced locally and regionally, whenever possible. Being clear about the range of elements through which localisation objectives could be intentionally fostered is important for strategic planning, engagement and action. CNs vision of localisation already reflects a broader localisation approach, including from across the range of elements shown in **Figure 3**.

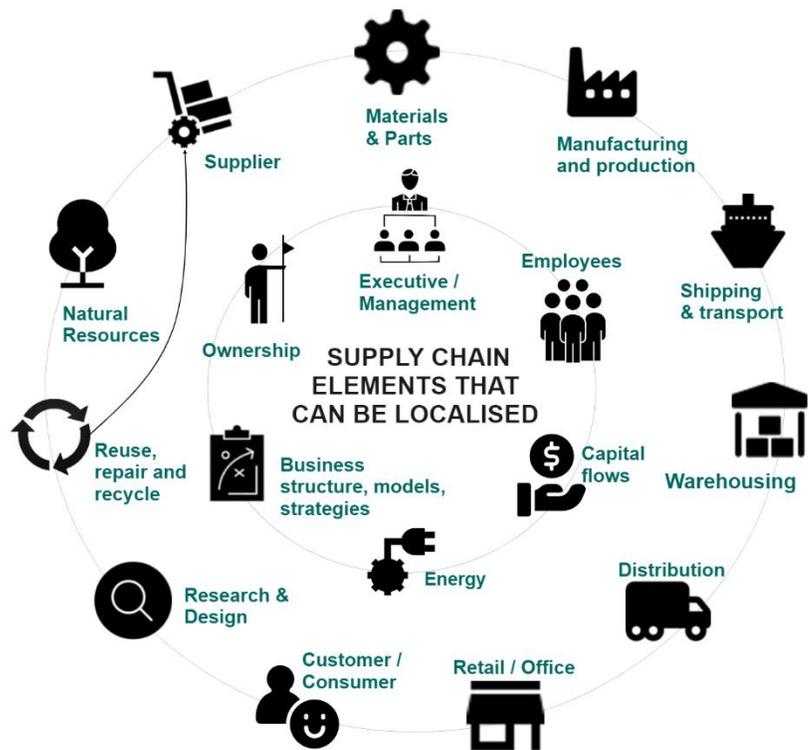


Figure 3: Supply chain elements that can be localised
Developed by Ethical Fields & The Yunus Centre Griffith University for City of Newcastle’s Localising Supply Chains Project, 2022

⁷ Newcastle City Council Ward Map. Available at: <https://newcastle.nsw.gov.au/council/about-council/ward-maps>. Accessed (10 February 2022)

⁸ Shuman. M (2015) The Local Economy Solution: How Innovative, Self-Financing “Pollinator” Enterprises Can Grow Jobs and Prosperity (Chelsea Green)

Regardless of the combination of elements selected, effective application requires a common understanding of what is meant by local - in order to develop effective strategies, orient engagement and action towards the same goals, monitor progress and evaluate impact.

Opportunities and challenges in the Newcastle context - Localisation

There is a growing body of evidence that regions with greater economic localisation (such as a higher density of local supply chain elements) demonstrate more superior local economic performance.⁹ Fostering the establishment of new industries, replacing imports with local options, and strengthening existing local supply capacities would all create additional economic opportunities. There is also growing consumer sentiment towards preference for locally produced goods, prompted by a desire to support Australia’s local economy and community.¹⁰ Further to that, an Ernst and Young report exploring post COVID-19 consumer behaviour showed that 34% of respondents would be willing to pay more for local products, 25% for trusted brands, and 23% for ethical products.¹¹



Figure 4. Highlights – benefits of localising supply chains
Source: Ethical Fields & The Yunus Centre Griffith University, 2022

However, localising supply chains will not automatically lead to these outcomes. For example, without ongoing monitoring and ‘nudging’, new supply chain and business opportunities will most often accrue to those already dominant in the market – missing opportunities to foster new entrants and diversify the local economy. The *Three Horizons Framework* used as a key method in this project (see Appendix B for more information) captures this tendency well in its Horizon 1 (business-as-usual) analysis. To avoid this trend towards privileging the status quo, supply chain strategies need to be intentionally designed to foster local economic diversity and other specified equity outcomes. Key challenges to realising the benefits of a comprehensive localisation agenda for the City and its region relate to cost, skills, labour and production capacity. However, trends in supply chain performance indicate local supply chains can be more cost effective under the right conditions, and that strategic and resource planning can address capacity issues.¹²

⁹ Examples include: Edward L. Glaeser and William R. Kerr, “The Secret to Job Growth: Think Small,” *Harvard Business Review*, July-August 2010. David A. Fleming and Stephan J. Goetz, “Does Local Firm Ownership Matter?,” *Economic Development Quarterly*, 2011. Anil Rupasingha, “Locally Owned: Do Local Business Ownership and Size Matter for Local Economic Well-Being?,” monograph, August 2013

¹⁰ Commbank Consumer Sentiment & BCG Consumer Survey: Available at [Aussie shoppers prefer Aussie made \(commbank.com.au\) & Australian Consumer Sentiment Snapshot #4 | BCG](https://www.commbank.com.au/insights/consumer-sentiment-snapshot-4) (Accessed 15 February 2022)

¹¹ Ernst & Young, *Consumer Behaviour Trends*. Available at: https://www.ey.com/en_gl/news/2020/04/four-consumer-behavior-trends-emerge-during-the-covid-19-pandemic-the-first-ey-future-consumer-index-finds (Accessed: 2 December 2021)

¹² *Optimising opportunities for local suppliers*, State of Queensland (Department of Housing and Public Works) 2019

2.2 Sustainability

CN has wide ranging sustainability objectives which are positioned in relation to the Sustainable Development Goals (SDGs)¹³. CN's environmental sustainability related programs include interests in how supply chains can support its *Climate Action Plan* objectives, such as *Net Zero Emissions City* and *Building a Low Carbon Circular Economy*. At the time of writing, CN is developing a *Newcastle Environment Strategy* and a related *Circular Economy Plan*, as well as a new *Local Social Strategy*, *Social Infrastructure Strategy* and other social related strategies and plans. All of which are likely to include a number of strategic directions that interact with and could be supported by the recommendations included in this report. For this project we have taken sustainability in the context of supply chains to mean environmental and societal values, including addressing issues such as climate change, deforestation, human rights, fair labour practices and social equity more broadly.

Local and shorter supply chains provide organisations, procurement staff and consumers with more visibility and awareness over supply chain performance in relation to sustainability. Greater visibility makes it more feasible to hold supply chains to account, and better-quality data can support collaboration efforts towards improved local outcomes. Shortening supply chains also reduces energy use, emissions and other environmental impacts generated through transport-related activity; and a local supply chain focus can also support the increasing demand for more sustainable product choices (such as growing consumer interest in reducing 'food miles').¹⁴

Sustainable supply chains offer financial savings through greater efficiencies in energy, waste, water, raw materials etc.; best value for money and efficient use of resources; increasing the availability of cost-effective effective sustainable products; expanding the market of sustainable products and services; increasing opportunities for smaller, innovative suppliers with strong product differentiation and reducing adverse environmental impacts. In their 2021 Sustainable Procurement Barometer, Ecovadis and HEC determined that sustainability is becoming even more important to companies around the world and sustainability contributes to resilience, with 63% of buyers and 71% of suppliers stating that it helped them endure the COVID-19 crisis.

There are also a range of synergies between localisation and circular economy interests. Circular economy initiatives focus on redirecting materials back into the economy, so that (waste) materials from one supply chain can become direct resource inputs to another supply chain. When this is done locally, it keeps the value of these materials in the local economy, providing new local industry and business opportunities, all of which contribute to the local multiplier effect. Close physical location offers other advantages including co-locating operations, industrial symbiosis, reduced transport and storage needs. In addition to designing out

When a circular economy is created locally, it keeps the value of these materials in the local economy, providing new local industry and business opportunities, all of which contribute to the local multiplier effect.

¹³ Newcastle 2040, p38 (Ref 1); Newcastle Economic Development Strategy 2021 (Ref 2)

¹⁴ The Centre for Food Integrity. Available at <https://foodintegrity.org/> (Accessed 10 April 2022)

waste, circular economy business models are also disruptive of existing (business-as-usual) economic activity dependent on planned obsolescence models - such as product-as-service, sharing economy, reusable packaging etc. Local management, research and design and operations provide more direct control and influence over these activities.

Opportunities and challenges in the Newcastle context - sustainability

A focus on localising supply chains offers CN an opportunity to develop a finer grain in its understanding of its current performance in relation to sustainability objectives, and to use this knowledge to design processes that will support improvements. As discussed however, there is not a straightforward positive correlation between increasing localisation in supply chains and improving sustainability performance, so the balance between objectives – including consideration of time horizons – will be critical. For example, localising supply chain elements can increase local greenhouse gas emissions in the short-term; but this could be countered through introducing a renewable and de-carbonisation policy in parallel, so as to reduce emissions overall across local supply chains in the medium-long term. These kinds of tensions need to be considered and managed on a case-by-case basis.

2.3 Resilience

In addition to the objectives discussed above, CN is also interested in how localising its supply chains can increase resilience in the local economy. The draft *2040 Community Strategic Plan* states that CN will: will optimise opportunities and build resilience in the face of future challenges, act on climate change to achieve net zero emissions and build resilience in our community, infrastructure and natural areas and foster resilience and sustainability through procurement, resource-sharing and construction activities that preference local suppliers and supply chains¹⁵; and the EDS is grounded in an economic development approach that ‘builds in flexibility and promotes resilience to structural changes in the economy’.¹⁶

Resilience is a broad concept, and when applied in different contexts takes on different emphases. Economic resilience is defined as the ability of the economy to recover quickly from a shock, the ability to withstand a shock, and the ability to avoid the shock altogether.¹⁷ Economic resilience and supply chain resilience are related, but not equivalent. Supply chain resilience is still emerging as a concept, but generally refers to the ability to maintain operations (and therefore supply) during a crisis. Supply chain resilience capabilities include: readiness – including elements of supply chain visibility, awareness of potential issues, and redundancy (e.g., holding inventory); response – including agility, flexibility, access to inputs / productive resources and partnership relationships that can help mitigate supply chain fluctuations; recovery – the ability to plan for contingencies and implement financial measures to

¹⁵ Draft Newcastle Community Strategic Plan 2040 (Ref 1)

¹⁶ Newcastle Economic Development Strategy 2021 (Ref 2)

¹⁷ Comprehensive Economic Development Strategy (CEDS) Content Guidelines: Recommendations for Creating an Impactful CEDS, U.S. Economic Development Administration (eda.gov). Available at <https://www.eda.gov/files/ceds/CEDS-Content-Guidelines-full.pdf> (Accessed 10 February 2022)

facilitate effective recovery.¹⁸ Localising supply chains can contribute to improving all of these capabilities.

The Productivity Commission's *Vulnerable Supply Chains* report¹⁹ states that 'regardless of the response, managing the risks of supply chain disruptions . . . inescapably entails costs on businesses, consumers and governments. These costs vary substantially and depend on the choice of strategy and on the state of preparedness of firms and governments.' Large business entities may be able to absorb shocks experienced through complex global supply chains, however small and medium enterprises are less able to buffer operations against these, particularly over any sustained time period. A localising strategy would contribute to improving local economic resilience through offering larger and more regular supplier opportunities that would support the stability and growth of local businesses. However, another tension point is evident here as hyper-localisation can also increase risks to the local economy, due to more localised disruptions such as flooding or bushfires. Again, these kinds of tensions need to be considered and managed on a case-by-case basis.

Opportunities and challenges in the Newcastle context - Resilience

With increasing attention on improving local economic and supply chain resilience, there are a number of initiatives available that CN could draw on in deepening its own efforts – such as the Federal Government's policy to increase domestic capability through the *Modern Manufacturing Strategy*²⁰ and supply chain resilience through the *Supply Chain Resilience Initiative*²¹. Leveraging these high-profile initiatives would assist with engaging and incentivising market actors around collaboration opportunities. Other approaches that will deliver economic and supply chain resilience outcomes include: leading collaborative planning initiatives; intentionally seeking to diversify the supplier base through adapting business retention and expansion programs; supporting the development of resilient workforces that can shift between jobs or industries; and promoting business continuity and preparedness.²²

A localising strategy would contribute to improving local economic resilience through offering larger and more regular supplier opportunities that would support the stability and growth of local businesses.

¹⁸ Koberg, E. & Longoni, A. (2019). A systematic review of sustainable supply chain management in global supply chains. *Journal of Cleaner Production*, Volume 207, 10 January 2019, Pages 1084-1098.

¹⁹ Productivity Commission, *Vulnerable Supply Chains*, Study Report, Australian Government Productivity Commission. p1. Available at: <https://www.pc.gov.au/inquiries/completed/supply-chains/report/supply-chains.pdf> (Accessed: 3 October 2021)

²⁰ Australian Government's *Modern Manufacturing Strategy*. Available at: <https://www.industry.gov.au/sites/default/files/October%202020/document/make-it-happen-modern-manufacturing-strategy.pdf>. (Accessed: 5 January 2022)

²¹ Australian Government's *Modern Manufacturing Strategy* (Ref 21)

²² Economist Intelligence Unit. (2020). *The Great Unwinding Covid-19 and the regionalisation of global supply chains*. Available at: [The Great Unwinding: Covid-19 and the regionalisation of global supply chains - The Economist Intelligence Unit \(eiu.com\)](https://www.eiu.com/en/insights/analysis/industry/2020/the-great-unwinding-covid-19-and-the-regionalisation-of-global-supply-chains)

2.4 Leveraging drivers and trends to enable favourable market conditions

The opportunities presented in this section are made possible by a number of global issues, drivers and trends in supply chains that are enabling the market conditions that will shift the trajectory of change in the direction of Horizon 3 *Preferred Futures* - where the potential for localisation, sustainability and resilience outcomes are possible and considered together, as listed in **Figure 5**.



Figure 5: Issues, trends and opportunities enabling whole of system transitions
Ethical Fields & The Yunus Centre Griffith University, 2022

Taken as a whole these trends are laying the groundwork for new industrial and supply chain opportunities and whole of system transitions that can create and promote local, sustainable, circular and resilient industries and supply chains. These are:

- **Locally beneficial and generative industries** – regenerative industries that operate within local and global ecological limits and benefit local people, places and ecosystems.
- **Inclusive growth and community wealth building** – economies, industries and supply chains that enhance communities, distribute wealth and ownership, and build local empowerment.
- **Distributed and small-scale operations** – cottage industries that can compete in the market using new digital tools and platforms, and technologies that allow for targeted and effective local production.²³

Understanding and monitoring drivers and trends relevant to CN and Newcastle will assist with policy design, strategy selection and broader decision-making. Next steps should include testing the relevance and significance of these factors in the local market, as input to refining CN’s approach.

²³ Ramos, J & Burkett, M. (2020). A Generative industrial Mobilisation. Available at: <https://www.ethicalfields.com/2020/09/22/a-generative-industrial-mobilisation/> (Accessed 20 December 2021)

3. Harnessing Supply Chains for Impact

KEY TAKEAWAYS

- Supply chains are a critical market mechanism that CN and wider Newcastle stakeholders can activate to achieve a range of local policy goals.
- Supply chains are more important than ever with issues such as the COVID-19 pandemic, extreme weather and geopolitical events highlighting vulnerabilities in complex global markets.
- Supply chains are increasingly being leveraged to achieve a broad range of policy outcomes across economic, social and environmental objectives which is paving the way for a new era in supply chain policy and management.
- We draw together and extend on existing activity (such as supply chain sustainability, and social procurement) and take this a step further to introduce the concept of *Impact Supply Chains*.
- *Impact Supply Chains* are evident when a purchasing entity (or collaboration of entities) configure their supply chain policies and practices so existing budgets are harnessed to grow supply networks that intentionally contribute to improving specific and multi-faceted policy objectives.
- We recommend the adoption of an *Impact Supply Chains Challenge* as the organising framework for implementing the recommendations outlined in this report.

At the time of writing in early 2022, two years into the global COVID-19 pandemic, disruptions to supply chains are regularly making news headlines. Supermarket shelves are empty - crops have withered for lack of workers to pick them, and vital supplies are not being delivered; prices for many essential goods are increasing – for example, building materials are in short supply, and a shortage of computer chips has caused the price of second-hand cars to rise. What seems evident is that the extent of these disruptions was largely unanticipated, due at least in part to the complicated nature of global and national supply chains.

More broadly, the increase in extreme weather events, geopolitical tensions, and competition for key resources will continue to impact global supply chains over the coming years. The balance between global and local supply chain reliance is also likely to be impacted by increasing shipping costs, wage rises in developing countries, and potential cost savings generated through automation. In this climate, CN's interest in exploring how its supply chains could be harnessed to strengthen localisation, sustainability and resilience outcomes could not be timelier.

Supply chains are an important and valuable lever for government policy implementation.

Supply chains are an important and valuable lever for government policy implementation. Depending on size and distribution, supply chains can have a local, regional or a global impact. As such, supply chains can have a significant influence and have the capacity to impact and transform communities, the economy and the environment. Historically, the focus of supply chain management has been

market and economic performance - cost optimisation, quality, reliability and efficiency. However, in recent decades there has been a shift towards achieving broader objectives and impacts across environmental, social, governance and cultural dimensions. There has also been a shift towards a more intentional and systematic use of supply chains to achieve these objectives. This has been led by both the private sector and government and is driven by several factors including but not limited to recognition of the growing reach and influence of supply chain systems, market demand, market regulation and leadership. This is paving the way for a new era of supply chain policy and management.

3.1 *Impact Supply Chains as an organising framework*

Drawing on the broad and local opportunities and tensions identified and discussed in Section 2, we have developed a framework for organising the approach outlined in the remainder of this report – *Impact Supply Chains*. The application of an *Impact Supply Chains* 'lens' creates a structure for working within and across the three 'goals' specified as the focus of this research project and this report – localisation, sustainability, resilience – and offers a practical approach for designing implementation initiatives.

In the discussion below, we suggest that through an impact lens, supply chain objectives and initiatives can be designed to more effectively contribute to a wide range of policy objectives for Newcastle and the Hunter Region.

Through an impact lens, supply chain objectives and initiatives can be designed to more effectively contribute to a wide range of policy objectives for Newcastle and the Hunter Region.

Supply chains can be conceived as complex systems that provide circulatory processes within and across economies. Consequently, supply chain practices influence a wide range of issues, including - resource use behaviours, environmental impacts, labour and human rights, and community economic development opportunities. How supply chains are configured can result in positive and negative

contributions to these issues at local, regional and global scales. Indeed, due to their complex nature, even a seemingly simple supply chain decision is likely to involve elements that interact with all these contexts in some form. As such, the value of supply chains as a strategic policy lever is now widely understood.

However, what is less well understood and translated into practice, is that strategic supply chain levers become particularly powerful when specific impact goals are clearly defined. In this report we begin to translate the broad understanding of supply chains as strategic policy levers into tangible practices and actions that can be drawn on to develop context-specific implementation plans. We do this through application to the three broad ‘impact goals’ - localisation, sustainability, and resilience – specified by CN as the starting point for this project.

3.1.1 What are *Impact Supply Chains*?

Impact supply chains intentionally and systematically utilise supply chains to achieve specified impacts, elevating the focus to a supply chain systems level through establishing a more holistic and multi-faceted perspective on impact. An impact supply chain is created when an entity (or collaboration of entities) design supply chain management policies and practices to systematically foster, maintain and grow supply networks that are intentionally designed to contribute to improving specific social, environmental, cultural and/or local economic development and resilience objectives. *Impact supply chains* can be applied at the organisational level, but importantly here, also provides a framework to organise city-wide supply chain systems transitions.

The notion of *impact supply chains* is not in essence new, and the framing we present here draws on a long history of using procurement and supply chain initiatives to deliver on a wide range of ‘public interest’ objectives. In the literature, these objectives can be found referred to by different names, such as collateral, secondary, or horizontal policies – defined as when outcomes ‘distinct from those achieved through the products, works or services themselves’ are taken into account in decision making.²⁴

Impact supply chains provide a framework to organise city-wide supply chain systems transitions.

Broader policy considerations must, of course, always be balanced with the traditional ‘value’ concerns of supply chain and procurement programs – such as cost optimisation, quality, reliability and efficiency. What is now clear is that there is a significant opportunity available to public sector actors to elevate the strategic potential of their procurement and supply chain programs (and all the existing budget allocations these encompass) through integrating a broader and more nuanced understanding of what constitutes ‘value’ in their ‘public service’ contexts.²⁵ Necessarily, this will include consideration of the combinations of social, environmental, cultural and local economic development objectives that public

²⁴ Arrowsmith, S. (2010). Horizontal policies in public procurement: A taxonomy. *Journal of Public Procurement*, 10 (2), 149-186

²⁵ McNeill, J. (2017). *Enabling social innovation assemblages: Strengthening public sector involvement*. (Unpublished Doctoral Thesis). Western Sydney University, Australia. Available at: <https://researchdirect.westernsydney.edu.au/islandora/object/uws%3A41460>

sector actors are concerned with. How supply chains and their related networks are configured is key to realising the potential of this approach. Our conceptualisation of an *Impact Supply Chains* ‘lens’ draws together and extends on existing strands of activity.

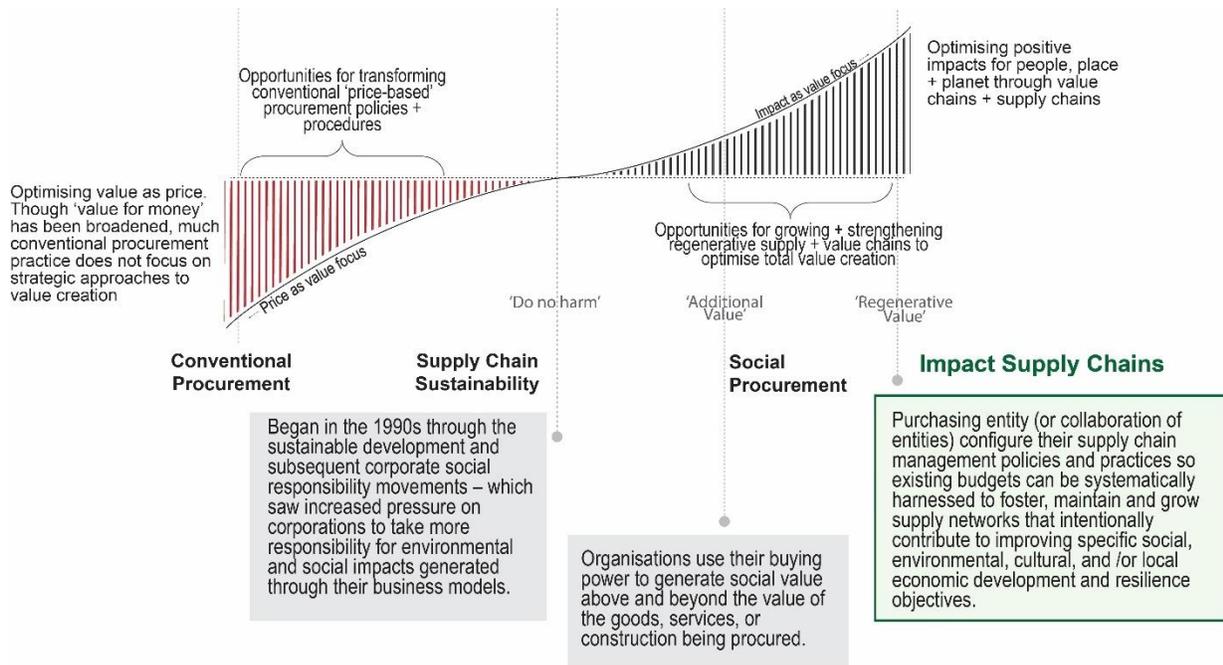


Figure 6: Impact spectrum for supply chain approaches
Developed by the Yunus Centre Griffith University & Ethical Fields for City of Newcastle’s Localising Supply Chains 2022 project

As shown in **Figure 6**, an *Impact Supply Chains* ‘lens’ integrates and extends on several overlapping approaches to supply chain management that incorporate a focus on impact.²⁶ In doing this, it finely tunes the impact focus and establishes a more horizontal relationship between the various types of impact (e.g., environmental, social, local economic) that could be achieved. This ‘impact first’ approach also establishes an implicit obligation to demonstrate progress towards the specified objectives in ways that go beyond traditional measures of business performance.

Any approach to integrating the three broad ‘goals’ of localisation, sustainability, and resilience will involve balancing the tensions that will always exist between them. The *Impact Supply Chains* lens outlined here, and developed further below, is an ‘organising framework’ particularly suited to this kind of public policy context - as the more ‘horizontal’ relationship between various types of policy objectives ensure none are automatically assigned a subservient position in a decision-making hierarchy (e.g., environmental over social, or economic over environmental, etc.). For CN itself, this furthering of the

²⁶ For example: Supply chain sustainability, on paper at least, has now become fairly mainstream business and government practice around the world; as evidenced through initiatives such as the United Nations Global Compact on Supply Chain Sustainability, various European Union Trade Policies encouraging sustainable supply chain practices, and related government procurement and tendering policies. Social procurement has emerged more recently, as a means for government, the for-profit sector and nonprofits to leverage their existing purchasing power to achieve an added value outcome. It has become a key aspect of modern Government agendas the local, state and federal levels – with Australian examples including the Commonwealth Indigenous Procurement Policy and the Victorian Government’s Social Procurement Framework.

existing holistic approach to localisation will support its overall objectives for Newcastle and its Region. But it is worth noting that an *Impact Supply Chains* approach can be employed by any type of entity, across sectors; and could potentially be designed to influence supply chains at various scales of ‘system’ - whether that be at local (e.g., City-wide), regional, national, or global scale. This is particularly important in relation to the recommended initiatives discussed in the remainder of this report, as they involve strategic collaboration with others.

3.2 Adopt an *Impact Supply Chains Challenge*

Challenges are coherent fields of action and innovation that create momentum towards a Directional Goal. Challenge statements frame ambitious but achievable, action-focused fields of activity. They also act as stakeholder magnets – drawing key actors into the momentum that is created when people see ways to contribute to an ambitious and innovative, but also coherent, field of activity. A range of existing and future initiatives, strategies and ambitions – internal to CN and also external – will contribute to any given Challenge. As such, Challenges represent complex areas of activity, which can often feel overwhelming to engage with and organise around.

The *Challenge Map* approach used here is an adaptation of one of the *Theory of Change* tools discussed earlier in the report. It was developed by The Yunus Centre and is an adaptation based on the ‘Missions’ work of Marianna Mazzucato.²⁷

In **Figure 7**, we provide an early-stage version of a visual representation that demonstrates how the fields of action that underpin the transition strategies - discussed in detail in Section 5 - can be drawn together into a coherent framework and used to engage stakeholders and catalyse action.

Working towards CN’s overall **Directional Goal** (we used the organisational mission/vision in this case), our overarching recommendation developed through this project is to adopt and design an **Impact Supply Chains Challenge** approach. We have suggested some preliminary wording for the Challenge statement – as shown in Figure 7 below. But it is important to note that whilst Challenge statements can be created top-down, they are most effective if collaboratively developed with critical stakeholders who will be central to generating momentum in relation to each Challenge area. This is the cornerstone for establishing a solid foundation on which to build implementation strategies that will create the conditions for city-wide supply chain systems transition.

Using the Challenge Mapping process, it is possible to ‘cut through the noise’ of the multitude of related and often interdependent activities, so as to direct attention towards a specific field/s of activity that stakeholders have identified align with their own Directional Goals, and so are interested in contributing to through a collaborative process. These specific fields of activity are called Portfolios.

In the Challenge Mapping context, **Portfolios** are sets of interconnected innovation projects that together provide part of the learning needed to achieve a Challenge. They are characterised as: coherent combinations and orchestrations of actions and innovations; together forming a rich set of interconnected bottom-up and top-down learning projects; involving diverse participants who are often

²⁷ For further explanation see: <https://medium.com/y-impact/creating-intentional-futures-aaa4cd2571e9>

cross-sector and multi-level; and requiring some form of governing or convening to ensure coherence. It is important to note here, that this approach does not necessitate establishing a portfolio in the traditional sense, but rather provides an organising framework for understanding the relationships between what can otherwise appear – and so easily operate as – separate and disconnected domains of activity.

In Section 5 we present a set of twelve ‘transition strategies’, synthesised from a best-practice global scan, and designed to support the implementation of the recommended *Impact Supply Chains Challenge*. The interconnected innovation projects that could become the starting point for action around the two initial Portfolios are outlined, and case study examples provided to illustrate how similar initiatives have been implemented elsewhere. These are then further expanded in Section 6, the ‘next steps action plan’.

In the map below, we have included two key portfolios identified as critical to actioning the *Impact Supply Chains Challenge*. These are ***Fostering an Anchors Culture*** and ***Improving Circularity Outcomes***. In the map they are being used as examples for how a Challenge Mapping process can establish coherence, and be drawn on to facilitate discussions with stakeholders. That is, these are not the only Portfolios of *transition strategies* that are relevant to the *Impact Supply Chains Challenge*, but provide some detail to illustrate and bring to life the framework process described.

The nested set of **Anchor Approaches** that are implicated in *Fostering an Anchors Culture* are outlined in **Box 1** – with the common objective being to improve place-based wellbeing through delivering core business activities in ways that also address local challenges and/or leverage local strengths.²⁸

To further explore Challenge/Mission-led approaches, see **Appendix E** for an example from Valencia, Spain which shows how a similar process has been introduced by Valencia City Council, to catalyse multi-sector alliances and action towards building a ‘mission constellation’ of Research & Innovation (R&I) projects to support progress towards the City’s four Mission Areas – Healthy City, Sustainable City, Shared City, and Entrepreneurial City.

Before elaborating on the transition strategies further, we present the opportunities identified through our analysis of existing spend data for both CN (Council) spend, Newcastle city-wide spend and the Hunter Region spend.

Anchor Approaches:

- **Anchoring Strategies** – specific initiatives that leverage an organisation’s resources in ways that achieve local value (e.g., a Local Government ‘buy local’ target)
- **Anchor Missions** - comprising multiple, interconnected Anchoring Strategies; the process of deliberately deploying the institutions’ long-term, place based economic power to strengthen a local community.
- **Anchor Institutions** - large organisations that are based in, and have a long-term commitment to, a suburb, town, city or defined region, and that demonstrate their commitment by intentionally aligning their long-term, place-based economic power to strengthen their local communities.
- **Anchor Collaboratives** – when multiple Anchor Institutions join together to harness and align their resources and efforts, often through formalised alliances and strategies, around a specific Anchor Mission(s) within a defined community.

Box 1. Anchor Approaches. See Ref 28.

²⁸ For more information see: <https://lgiu.org/briefing/anchor-approaches-amplifying-the-positive-impacts-of-local-government/>

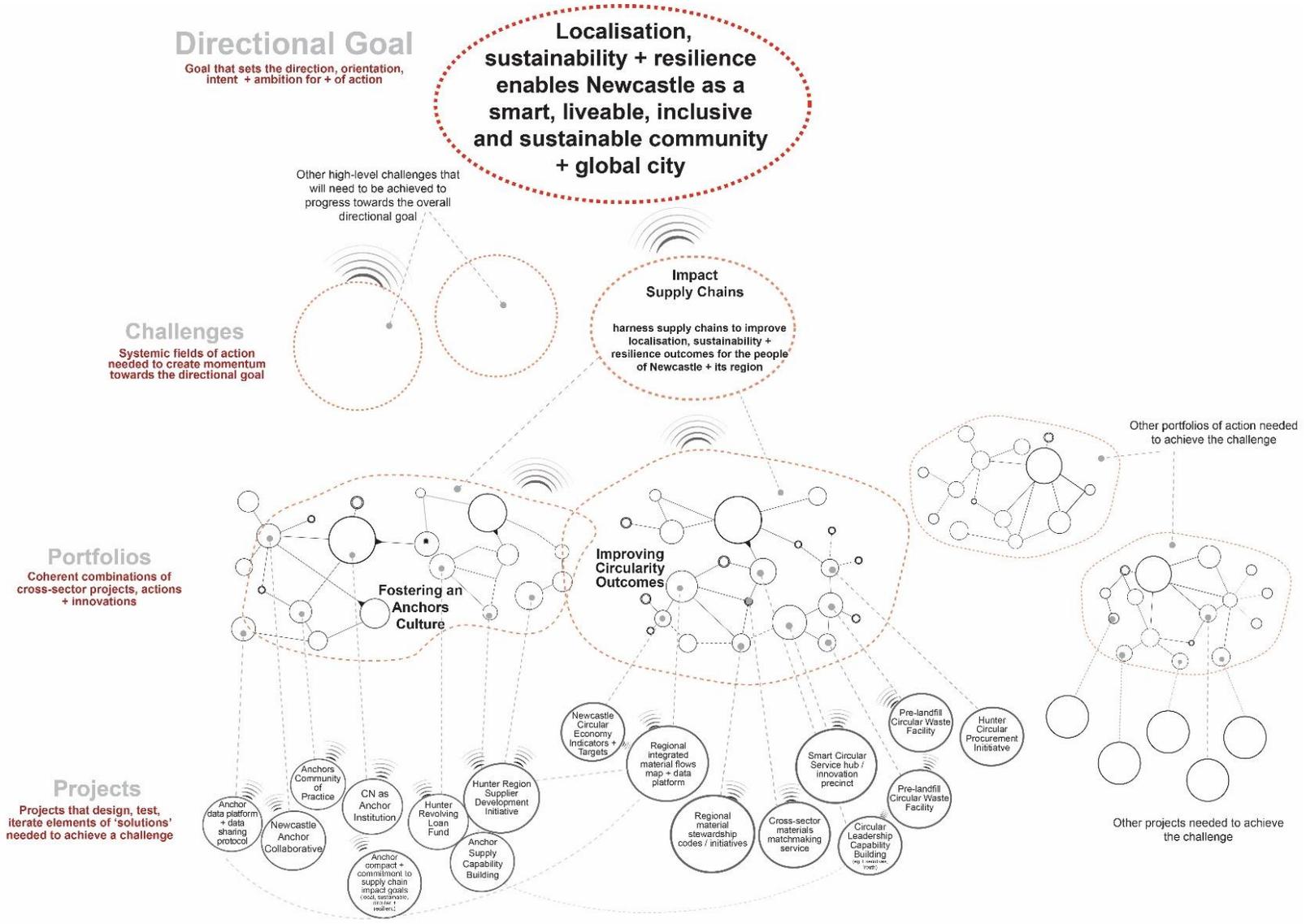


Figure 7: Example preliminary Newcastle Impact Supply Chains Challenge Map
Developed by The Yunus Centre Griffith University & Ethical Fields for City of Newcastle's Localising Supply Chains 2022 project

4. City of Newcastle and Hunter Region Supply Chain Analysis

KEY TAKE AWAYS

- 40% (\$7.9bn) of local city-wide spending activity is leaking out of the Newcastle economy and 44% (\$27.9bn) is leaking out of the Hunter Region economy.
- A 5% shift in local city-wide spend in Newcastle could lead to an additional 1687 jobs and a \$673m economic impact.
- A 5% shift in local spend in the Hunter Region could lead to an additional 5,139 jobs and a \$2,148m economic impact.
- There are opportunities to increase local supply chains across all industry areas.
- The top 5 industries that present significant opportunities for improving localisation, sustainability and resilience outcomes through supply chain interventions are: Manufacturing; Construction; Accommodation & Food Services; Health Care and Social Assistance and Professional, Scientific and Technical Services.
- CN's procurement policy uses an 'office-based' definition of local which results in organisations that are predominantly non-local being classified as local. This may over-represent local spending.

To develop effective strategies to achieve these objectives, we need to understand the current city-wide supply chain network, including leakages, and the potential impact of change, recognising that supply chains vary considerably depending on the industry and product or service being procured. Drawing on the REMPLAN Economic Analysis tool²⁹ and the preliminary research on the Newcastle and Hunter Regions we undertook, the following analysis seeks to model the scale, nature, and potential outcomes of change using scenarios based on shifts in local spending behaviours. The recommendations generated are based on an analysis that sought improved economic and employment outcomes, whilst also considering the broader objectives of sustainability and resilience.

²⁹ For more information see: <https://www.rempln.com.au/>

4.1 Summary of Local and Non-local Expenditure for Newcastle and the Hunter Region

Figure 8 presents city-wide local (inside the region) and non-local (outside of the region) Newcastle expenditure from a 2021 analysis that used the REMPLAN Economy Tool. As shown, this demonstrates both the scale of expenditure overall and the significance of both local and non-local spending. Local spending is 60% and 56% of total spending in Newcastle and the Hunter Region. This indicates there is already a strong local supply chain foundation that can be leveraged to expand local supply chains. Non-local spending is 40% in Newcastle and 44% across the Hunter Region as a whole. This spending activity, in addition to new industries, goods and services, offer opportunities to capitalise on supply chain localisation benefits and impacts.

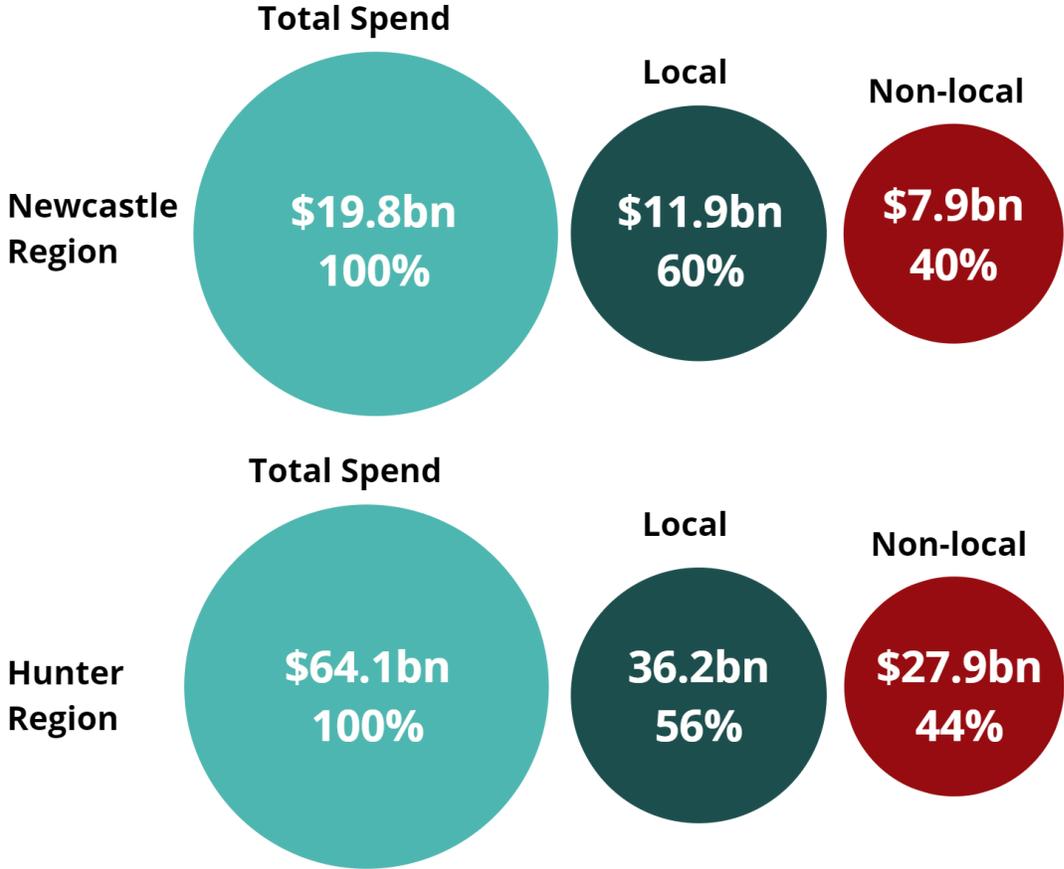


Figure 8: Newcastle and Hunter Region total, total, local and non-local expenditure
 Developed by ArcBlue & Ethical Fields for City of Newcastle’s Localising Supply Chains 2022 project

To then demonstrate the impact that increasing the percentage of local spend could have, REMPLAN data was used to generate a ‘scenario shift’. Figure 9 below highlights the potential scale of the impact on the Hunter and Newcastle Regions of shifting non-local expenditure. A 5% shift in Newcastle alone could create over 1,687 jobs and \$673m in economic impact per year.

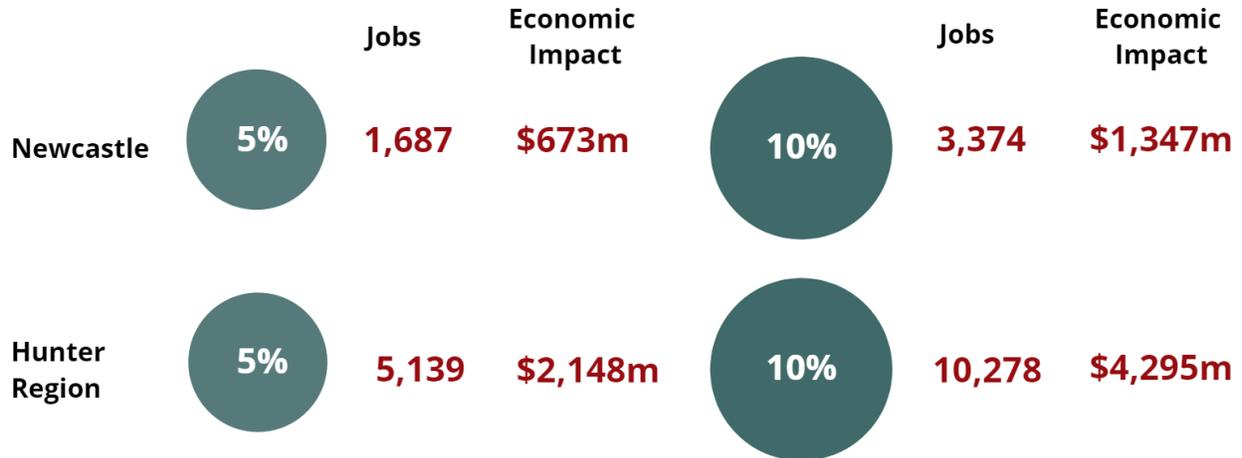


Figure 9: Economic impact of local spend 'shift scenario' on the Newcastle and the Hunter
 Developed by ArcBlue & Ethical Fields for City of Newcastle's Localising Supply Chains 2022 project

4.2 Supply Chain Analysis and Opportunities by Sector

To identify which industries, have the strongest potential for contributing to Newcastle-specific supply chain localisation objectives, an analysis of the 19 sector categories used by REMPLAN was undertaken. This included an analysis of total spend, local and non-local spend and the spend, local economic and job impact of a 5% shift in spend. These sectors were then ranked according to the combination of local economic and job impact of increased spend to support CN's overall economic and skills growth objectives as per **Table 1**.

It is important to note that increasing local spending will have different levels of impact in different sectors. In industries such as Healthcare and Social Assistance or Construction, for example, there will be a proportionately higher impact on employment than in industries such as Manufacturing, which is more capital intensive. The economic multiplier opportunities that could be generated through a focus on specific sectors can also vary considerably. For example, supply chains in the Construction sector tend to be more localised than, for example, in the Medical Technology and Pharmaceutical sector (which is highly dependent on external supply chains) – and therefore the impact of local spend shift in the Construction sector would be almost twice that of the Medical Technology and Pharmaceutical Sector.

REMPLAN SECTORS RANKED BY LOCAL ECONOMIC & JOB IMPACT (5% SHIFT TO LOCAL SPEND)							
Rank	Sector	Total Spend \$M	Current Spend outside of region \$M	Local spend shift (5% from outside of region) \$M	Current local jobs # current jobs	Local economic impact of 5% spend shift to the region \$m	Local jobs impact of 5% spend shift to the region # new jobs

1	Manufacturing	4,972.51	3,565.57	178.28	6,234	278.38	435
2	Construction	3,045.15	744.72	37.24	8,230	84.36	193
3	Financial & Insurance Services	1,502.16	525.63	26.28	4,381	46.13	89
4	Transport, Postal & Warehousing	1,197.37	362.05	18.10	5,602	37.28	100
5	Professional, Scientific & Technical Services	1,210.95	326.57	16.33	7,636	35.83	111
6	Accommodation & Food Services	608.64	305.99	15.30	7,797	28.70	149
7	Health Care & Social Assistance	846.23	267.33	13.37	20,293	28.13	144
8	Education & Training	546.05	172.14	8.61	9,789	18.50	81
9	Information Media & Telecommunications	604.50	222.60	11.13	1,351	22.20	44
10	Rental, Hiring & Real Estate Services	947.13	269.84	13.49	1,527	20.00	23
11	Public Administration & Safety	655.02	176.21	8.81	6,660	19.29	64
12	Electricity, Gas, Water & Waste Services	1,225.00	184.43	9.22	1,832	19.99	28
13	Mining	592.87	220.55	11.03	1,060	17.17	23
14	Wholesale Trade	489.20	144.06	7.20	2,411	14.90	39
15	Retail Trade	423.80	118.35	5.92	8,803	12.14	68
16	Administrative & Support Services	336.39	100.08	5.00	3,180	10.85	36
17	Other Services	326.12	91.98	4.60	4,009	9.58	42
18	Arts & Recreation Services	185.68	67.25	3.36	1,335	6.99	28
19	Agriculture, Forestry & Fishing	121.78	57.63	2.88	670	4.57	13

Table 1: REMPLAN Sectors ranked by local economic and jobs impact (2021 REMPLAN data)
Developed by ArcBlue & Ethical Fields for City of Newcastle's Localising Supply Chains 2022 project

The top eight sectors were then analysed to consider, in more depth, the economic, sustainability, resilience and other factors that may contribute to enabling favourable market conditions for localising supply chains. For example, growth in quality employment opportunities and the empowerment, retention and attraction of people with skills needed to foster the Advantage and Sunrise industries that are key to improving local sustainability and resilience, as discussed in Section 5.8. These include: Manufacturing; Construction; Accommodation & Food Services; Health Care and Social Assistance; Professional, Scientific and Technical Services; Transport, Postal and Warehousing; Financial and Insurance Services and Education & Training.

4.2.1 Manufacturing

The **Manufacturing** sector has been a significant employer and contributor to economic activity in the Hunter Region for over 150 years. While there are sub-sectors in decline, overall, the manufacturing sector has rebounded post COVID and is expected to expand³⁰, specifically in areas such as advanced manufacturing, aerospace, medical technologies and pharmaceutical etc. The local strong manufacturing base is predominantly made up of medium sized manufacturing, engineering, and technology companies - with SME's comprising 80% of regional manufacturing companies. At the Federal level manufacturing is now a priority for driving economic growth, sovereignty and resilience with the adoption of a whole-of-government strategy – the *Modern Manufacturing Strategy* - that will see Australian manufacturers scale-up, become more competitive and more resilient.

MANUFACTURING		
Region/ LGA	Newcastle	Hunter Region
Total Spend \$M	\$4,973	\$15,916
Current Spend outside of region \$M	\$3,566	\$11,390
Local spend shift (5% from outside of region) \$M	\$178.3	\$569.54
Current local jobs	6,234 jobs	19,366 jobs
Local economic impact 5% spend shift to the region \$M	\$278	\$865
Local employment impact of 5% spend shift to the region	435 new jobs	1,329 new jobs

The sector is key to increasing the availability of locally manufactured and produced parts, materials and goods, which are core elements that can be prioritised for localisation within a supply chain network (see Figure 3). The manufacturing sector is also one of the top creators of waste – at the national level, generating 12.8 million tonnes (16.9% of total waste generated) in the 2018-19 period.³¹ Adoption of carbon minimisation strategies, and other sustainability and resilience goals, by Hunter Region manufacturers has the potential to make a significant contribution to national targets and also to act as a catalyst for wider market action.

Aerospace & Defence is a critical sector for the Hunter Region's economy, injecting well over \$1 billion annually and employing thousands of skilled people. However, Aerospace spend in the region is relatively low at \$21M (Newcastle) and \$441M (Hunter), and with 67% of Hunter spend outside the region. In addition to the shift potential outlined in the table below, this offers further opportunities through a focus on localising supply chains.

Manufacturers are involved in supporting the equipment and technology needs of all three Defence services, including the Joint Strike Fighter program with a squadron to be housed at Williamtown RAAF Base. Boeing Defence Australia is proactively seeking to grow and build its local supply chain and –

³⁰ Australian Manufacturing (2022) The Australian manufacturing sector is approaching a new growth phase. Available at <https://www.australianmanufacturing.com.au/the-australian-manufacturing-sector-is-approaching-a-new-growth-phase/> (Accessed 15 February 2022) & AI Group (2022) Australian PMI: Manufacturing returns to expansion in February. Available at: <https://www.aigroup.com.au/news/media-centre/2022/australian-pmi-manufacturing-returns-to-expansion-in-february/> (Accessed 15 February 2022)

³¹ Waste Account, Australia, Experimental Estimates 2018-19 (2020). Available at: <https://www.abs.gov.au/statistics/environment/environmental-management/waste-account-australia-experimental-estimates/latest-release> (Accessed 15 February 2022)

providing an example of collaborative capacity building - Boeing recently ran an inaugural *Effective Bid Training* course to help improve local SME suppliers' responses to tender opportunities.

Global Defence prime contractors based in the Region include: Thales, BAE Systems, Boeing Defence, Lockheed Martin, Varley Group, Northrop Grumman, Airbus and Raytheon. With this level and quality of presence, a focus on localising supply chains would unearth opportunities to grow the number of locally owned businesses into the manufacturing supply chains.

In addition to Defence spending, Federal funding for Newcastle Airport to establish its international business is modelled to create 4,400 jobs regionally, deliver an additional 850,000 visitors to the region and add \$12.7 billion to the local economy over the next 20 years.³²

Advanced Manufacturing includes diverse manufacturing expertise in: Mining, Defence, Transport, Chemical Processing, Construction, Energy Generation and Distribution. We have identified some existing programs that could be built on as potential 'system starters', as described in Section 5.8, including initiatives like: *Home to Eighteen*, a co-working space for cleantech and smart city infrastructure start-ups; and HunterNet, a nationally recognised manufacturing network of over 200 manufacturing, engineering and specialist services.

A recent Regional Development Australia (RDA) report³³ on the national **Medical Technology & Pharmaceutical** sector identified 48 diverse firms supporting employment of 8,187 jobs and 53% growth in the last five years. Given the sovereign risk highlighted through the COVID-19 pandemic this sector is likely to receive ongoing government support, as Manufacturing is a priority for the Federal Government in improving supply chain resilience. With increasing interest in improving sustainability performance to help mitigate climate change risks, there are also a number of drivers influencing the Manufacturing sector, such as: lean manufacturing principles; carbon emission reductions through supply chain efficiency, local sourcing and use of renewable energy; collaboration to develop circular economy solutions; and new technology development to deliver environmental performance improvements. These drivers present opportunities for Newcastle and the Hunter Region.

4.2.2 Construction

For Newcastle and its Region, the **Construction** sector offers the second strongest economic and employment multiplier opportunities of any industry - due to the diversity of local supply

CONSTRUCTION		
Region/ LGA	Newcastle	Hunter Region
Total Spend \$M	\$3,045	\$19,837
Current Spend outside of region \$M	\$745	\$2,090
Local spend shift (5% from outside of region) \$M	\$37.2	\$104.52
Current local jobs	8,230 jobs	27,447 jobs
Local economic impact 5% spend shift to the region \$M	\$84	\$236
Local employment impact of 5% spend shift to the region	193 new jobs	544 new jobs

³² Newcastle Economic Development Strategy 2021 (Ref 2)

³³ O'Mara, K. & Flynn, M. (2021) Medical Technologies & Pharmaceuticals: A Growth Sector for the Hunter Central Coast Region, prepared for Regional Development Australia (RDA) Hunter. Newcastle, Australia

chains and the size of the labour component. Major capital investment projects have already been committed to by all levels of government on projects totaling just under \$4,200m - such as the Hunter Gas pipeline, John Hunter Health and Innovation Precinct, Hunter Park, Hunter Hydrogen Hub and the East End redevelopment of Newcastle’s CBD. The Construction sector could also be key to embedding CN’s sustainability agenda through commitments to circular economy and emissions reduction objectives. The construction sector is the second largest waste generator in Australia and in 2018-19 generated 12.7 million tonnes (16.8% of total waste generated from all sectors).³⁴ The configuration of procurement opportunities related to this sector could also generate social impact through targeting inclusive employment practices.³⁵

ACCOMMODATION & FOOD SERVICES		
Region/ LGA	Newcastle	Hunter Region
Total Spend \$M	\$609	\$2,145
Current Spend outside of region \$M	\$306	\$1,101
Local spend shift (5% from outside of region) \$M	\$15.3	\$55.08
Current local jobs	7,797 jobs	24,954 jobs
Local economic impact 5% spend shift to the region \$M	\$29	\$100
Local employment impact of 5% spend shift to the region	149 new jobs	504 new jobs

4.2.3 Accommodation and Food Services

The **Accommodation & Food Services** sector is a large employer in the Region, but has very high levels of non-local expenditure - approximately 50% overall expenditure in Newcastle and 51% in the Hunter Region is spent outside of the region. Strategies such as supporting the establishment of import replacement goods and businesses would assist with reducing non-local expenditure. With its direct contact with local constituents, this sector could also be effectively engaged in building a community culture that preferences local, sustainable, and social goods and services. For example, through promoting inclusive employment practices in private businesses, and supporting the establishment and growth of Indigenous-owned businesses and specialist impact (for-purpose) enterprises. Embedding a strong environmental commitment to how the on-going growth of this

sector could be supported could also drive the achievement of both carbon emission reduction and circular economy outcomes.

³⁴ Waste Account, Australia, Experimental Estimates 2018-19 (2020). Available at: <https://www.abs.gov.au/statistics/environment/environmental-management/waste-account-australia-experimental-estimates/latest-release> (Accessed 15 February 2022)

³⁵ See for example, the Victorian Government’s Social Procurement Framework: <https://www.buyingfor.vic.gov.au/fair-and-inclusive-employment-supplier-fact-sheet>

4.2.4 Health Care and Social Assistance

Health Care and Social Assistance is the largest employer, supporting over 20 000 jobs in the Region. This sector therefore presents a significant opportunity for improving inclusive employment outcomes.

For example, the Federal Government is working with local stakeholders to develop a Local Jobs Plan³⁶, through which it has been identified that there is a need to increase the availability of entry level workers to meet resourcing needs in the Aged Care & Disability and Health Services sectors (as well as Hospitality and Tourism, Grape and Wine production, Meat Processing and Cleaning). The plan identifies key inclusive employment priorities for the Hunter Region including: redeploying displaced workers; building skills and pathways for regional growth priorities; and supporting employment amongst cohorts experiencing marginalisation.

As has been highlighted through the COVID-19 pandemic, this sector is often characterised by casual and low paid work arrangements. The major provider of health services in the region, Hunter New England Health, already includes consideration of local, sustainable and social elements in its strategies and procurement policies³⁷ and would therefore be a leading candidate to engage in establishing the Anchor Collaborative discussed in Section 5.1. This sector could also contribute to stronger circular economy outcomes through partnering with research groups, local entrepreneurs and industry networks to identify and implement circular strategies around design, waste and re-use. Promoting some of these strategies would offer opportunities to explore, learn and demonstrate how tensions between jobs growth, living wages and stable employment can be balanced.

HEALTH CARE & SOCIAL ASSISTANCE		
Region/ LGA	Newcastle	Hunter Region
Total Spend \$M	\$846	\$1,900
Current Spend outside of region \$M	\$267	\$613
Local spend shift (5% from outside of region) \$M	\$13.4	\$30.66
Current local jobs	20,293 jobs	47,715 jobs
Local economic impact 5% spend shift to the region \$M	\$28	\$60
Local employment impact of 5% spend shift to the region	144 new jobs	322 new jobs

4.2.5 Professional, Scientific and Technical Services

The **Professional, Scientific and Technical Services** sector provides quality employment and strong earning opportunities, in 2020 offering the third highest average wage out of all Australian sectors.³⁸

³⁶ Australian Government Department of Education, Skills and Employment. Local Jobs Program. Available at: <https://www.dese.gov.au/local-jobs-program> (Accessed 1 April 2022)

³⁷ See Local Supply Chain Survey undertaken for this project, Ethical Fields 2021

³⁸ ANZSIC Industry Reports, IBIS WORLD, Professional, Scientific and Technical Services Sector in Australia. Available at: <https://www.ibisworld.com/au/professional-services-sector/#:~:text=The%20average%20wage%20in%20the%20Professional%2C%20Scientific%20and,out%20of%20all%20AU%20sectors%20in%202020.%20%24212.4bn> (Accessed 20 March 2022)

PROFESSIONAL, SCIENTIFIC & TECHNICAL SERVICES		
Region/ LGA	Newcastle	Hunter Region
Total Spend \$M	\$1,211	\$2,436
Current Spend outside of region \$M	\$327	\$864
Local spend shift (5% from outside of region) \$M	\$16.3	\$43.23
Current local jobs	7,636 jobs	15,367 jobs
Local economic impact 5% spend shift to the region \$M	\$36	\$86
Local employment impact of 5% spend shift to the region	111	270

This sector includes services such as: management consulting, legal, accounting, architecture, market research and statistics, advertising agencies, media buying agencies, and public relations.

Sectors that are predominantly reliant on human resources can be simpler to localise, in particular where those skills exist in the local market - in comparison to those with complex supply chains reliant on primary and secondary materials manufactured and produced outside the region. In addition to strengthening the direct contribution of this sector to CN's local sustainability and resilience objectives, there is also potential to engage firms to take on Pollinator-like roles (see Section 5.9), through advising and influencing their clients to also become involved.

Since the onset of COVID19, many Australians are working from home and remotely more than they were previously and many commentators expect this pattern to continue. This creates opportunities

for employees to migrate from larger cities such as Sydney, to places like Newcastle, whilst still retaining their existing employment. Whilst this trend has a slightly complicated (and as yet untested) relationship with indicators like employment numbers; it can be confidently predicted that it will have flow-on effects for local economies through increased local spending.

4.2.6 Transport, Postal and Warehousing

The **Transport, Postal and Warehousing** sector is ranked as having the highest business growth of any sector in Australia over the past five years.³⁹ Despite experiencing shifts related to automation and technology developments it offers moderate economic and employment opportunities for the Region, including but not limited opportunities for

TRANSPORT, POSTAL & WAREHOUSING		
Region/ LGA	Newcastle	Hunter Region
Total Spend \$M	\$1,197	\$2,595
Current Spend outside of region \$M	\$362	\$985
Local spend shift (5% from outside of region) \$M	\$18.1	\$49.26
Current local jobs	5,602 jobs	12,566 jobs
Local economic impact 5% spend shift to the region \$M	\$37	\$93
Local employment impact of 5% spend shift to the region	100 new jobs	263 new jobs

³⁹ ANZSIC Industry Reports, IBIS WORLD, Transport, Postal and Warehousing in Australia. Available at: <https://www.ibisworld.com/au/transportation-sector/> (Accessed 20 March 2022)

local growth in the domestic airline and airport operations sub-sector that will be generated through the expansion to Newcastle Airport.

Importantly, it is also an ‘enabler’ sector as alignment of freight, warehousing and processing capacity and capabilities is a key market condition for supporting the growth and directions (including sustainability and resilience priorities) of other local industries. For example, local warehousing and transport services contribute to circular economy and sustainability objectives as they reduce transport-related environmental impacts; and warehousing availability contributes to local economic resilience, through ensuring readiness and responsiveness to shocks. This sector should therefore be seen as a priority to engage in the approach outlined in this report.

FINANCIAL & INSURANCE SERVICES		
Region/ LGA	Newcastle	Hunter Region
Total Spend \$M	\$1,502	\$2,603
Current Spend outside of region \$M	\$526	\$1,167
Local spend shift (5% from outside of region) \$M	\$26.3	\$58.38
Current local jobs	4,381 jobs	7,910 jobs
Local economic impact 5% spend shift to the region \$M	\$46.13	\$94
Local employment impact of 5% spend shift to the region	89	178

4.2.7 Financial and Insurance Services

The **Financial and Insurance Services** sector also offers moderate economic and employment opportunities in general and as its supply chains are human resource focused, can make localisation simpler.

However, the focus on this sector in this report is on the central role it can play in enabling access to the place-based capital and impact finance that will be required to support the kinds of initiatives outlined in Section 5.10. Due to its strong multiplier potential, this sector is therefore identified as a priority to engage in the approach outlined in this report.

4.2.8 Education and Training

Education and Training is the fifth largest employing sector in the region and growing, but with a large percentage spend outside of Newcastle. In areas such as this, where significant leakage has been identified, more in-depth analysis to improve understanding of where and why this is occurring would be useful to investigate further, as part of implementation design. Key opportunities to support CN's objectives through localising supply chain spending in this sector centers on improving resilience through inclusive employment practices. Engaging stakeholders in this sector to support objectives around intentionally improving the diversity profile of employees would lead to the creation of tailored opportunities that support transitions into employment and pathways into career development for a range of cohorts.

EDUCATION & TRAINING		
Region/ LGA	Newcastle	Hunter Region
Total Spend \$M	\$546	\$1,125
Current Spend outside of region \$M	\$172	\$374
Local spend shift (5% from outside of region) \$M	\$8.6	\$18.73
Current local jobs	9,789 jobs	25,538 jobs
Local economic impact 5% spend shift to the region \$M	\$19	\$37
Local employment impact of 5% spend shift to the region	81	184

WASTE COLLECTION, TREATMENT & DISPOSAL		
Region/ LGA	Newcastle	Hunter Region
Total Spend \$M	\$90	\$353
Current Spend outside of region \$M	\$21	\$117
Local spend shift (5% from outside of region) \$M	\$1.1	\$5.89
Current local jobs	244 jobs	953 jobs
Local economic impact 5% spend shift to the region \$M	\$3	\$12
Local employment impact of 5% spend shift to the region	7 new jobs	30 new jobs

4.2.9 Waste Collection, Treatment and Disposal

The **Waste Collection, Treatment and Disposal** sector is a sub-sector of the Electricity, Gas, Water and Waste Services Sector. Whilst the impacts represented here are modest, this sub-sector offers significant opportunities around CN's sustainability objectives - through alignment with circular economy principles, and through supporting product and service innovation. Newcastle and Hunter Regions have a strong track record in supporting social enterprise development in this sub-sector waste sector, and intentionally increasing inclusive employment opportunities through these types of initiatives would also contribute to resilience objectives.

4.3 City of Newcastle Spend Data

In addition to the analysis of REMPLAN data outlined above, CN's spend data was also reviewed to identify where there may be opportunities to improve localisation outcomes for CN. Undertaking analysis of this nature is reliant on the availability of specific data points within the overall data set – at the most basic level this includes whether or not suppliers have been categorised as 'local' and if so, how 'local' has been defined and applied within the procurement system.

As shown below, the definition of 'local' in CN's Procurement Policy relies on a 'head office' style approach where:

*Local Business means a business that either has a branch or office physically located within the Newcastle Local Government Area or has its head office located within the Newcastle Local Government Area or an adjoining Council Local Government Area (for the avoidance of doubt, this means Lake Macquarie, Port Stephens, Cessnock or Maitland).*⁴⁰

We recommend that as a matter of priority CN develop a more nuanced definition for 'local' and integrate this into its policies, strategies and objectives. There are two key reasons for this: a) the current definition does not account for the full set of supply chain elements that can be localised (discussed in Section 2); and b) it enables the inclusion of businesses that are primarily 'non-local', in that whilst they may have an 'address' in the local area, their main areas of operation are outside the region. Using the current definition, businesses with a majority of non-local elements can be (and are) listed as 'local' through simply indicating they have an office or branch in the region. These businesses are unlikely to be delivering (or optimising) the mix of local supply chain elements discussed in Section 2. In section 5.3 we provide a recommended definition of local, that will maximise the local benefits generated through 'localising' initiatives.

As such we undertook two different analyses on CNs spend data. The first titled '*Original Supplier Location*' was using a set of data that classified local using the original post-codes supplied by suppliers, which were often the 'head-office' postcodes located outside of Newcastle. The second title '*Adjusted Supplier Location*' used a set of data that adjusted these same suppliers' postcodes to a local postcode if they had a branch or office physically located in Newcastle (regardless of the impact of the scale/impact of the office and local activities). As shown in **Figure 10** (and in **Chart 1** by sector), the difference in the results is significant. The first shows a local procurement level more reflective of the city-wide REMPLAN analysis and comparable councils. The second shows extremely high levels of local procurement in comparison to the city-wide REMPLAN analysis, and would make CN an outlier amongst comparable councils. This exercise reinforces the foundational role a sufficiently nuanced definition of 'local' plays in shaping an effective localising approach.

⁴⁰ Procurement March 2020 - Amended September 2021, Available at <https://www.newcastle.nsw.gov.au/getmedia/7ac2b4ae-f8ae-47b1-af7a-c9c14ea74ec6/Procurement-Policy.aspx> (Accessed 15 March 2022)

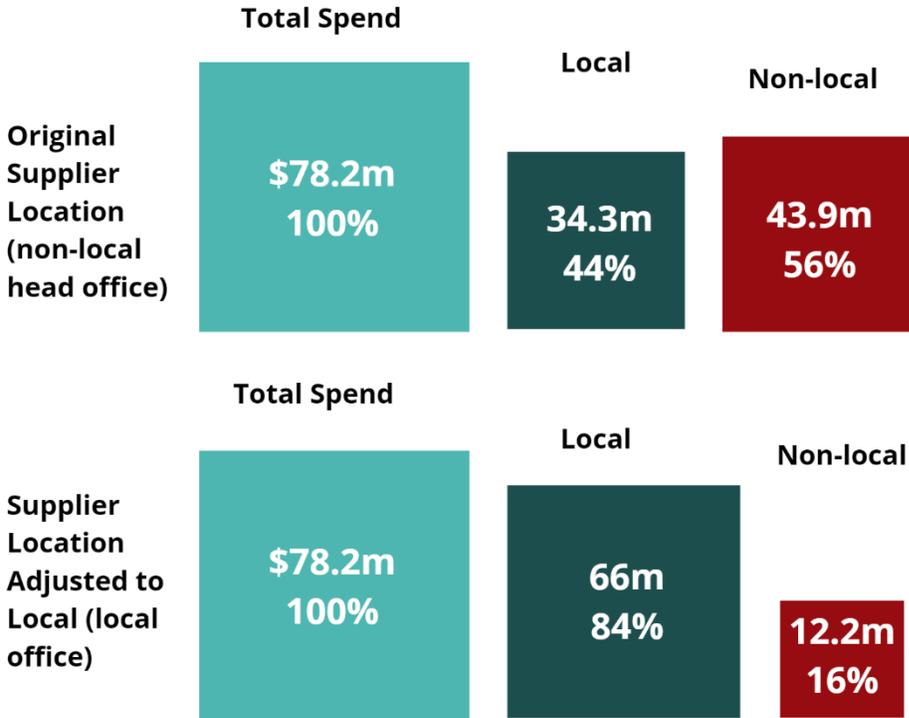


Figure 10: CN's spend by original supplier location (non-local head office) and adjusted supplier location (adjusted to local if a local office exists) Source: ArcBlue & Ethical Fields 2022

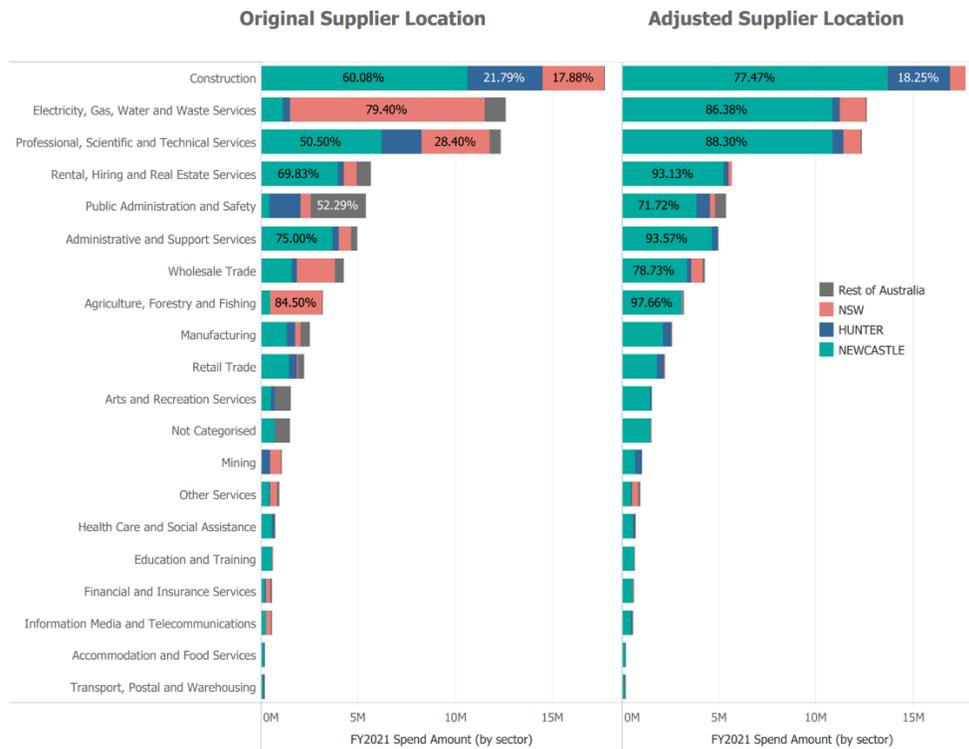


Chart 1: CN's spend by SECTOR original supplier location (non-local head office) and adjusted supplier location (adjusted to local if a local office exists) Source: ArcBlue 2022

If the original supplier location is taken to be a better reflection of local, opportunities for CN to increase local procurement exist for the following sectors: Professional, Scientific & Technical Services; Construction; Electricity, Gas, Water & Waste Services; Manufacturing; Wholesale Trade; Rental, Hiring & Real Estate Services; Public Administration & Safety, Agriculture, Forestry & Fishing and Arts & Recreation Services.

4.4 Stakeholder Survey Insights

“Accessing greater local suppliers would help [us] to deliver our strategic objectives, which include all of these themes. Local suppliers often seem more willing to partner to achieve shared objectives in contrast to being a customer number with more remote suppliers.”

A cross-section of local organisational stakeholders were invited to share their perspectives through a short survey. The survey was distributed to select organisations via direct invitation by CN and Ethical Fields (see Appendix D for the questions). Two key stakeholders responded to the survey. Both identified that localising supply chains would have a positive impact on local economic, environmental, social, cultural and resilience outcomes. Both respondent organisations reported being interested in joining a collaboration aimed at increasing local, social, sustainable and/or resilience objectives in their supply chains. This

indicates there are solid foundations on which to establish the Anchor Collaborative initiative recommended in the Section 5.

The most significant opportunities identified were: supporting growth in local supplier capacities; innovation and social, environmental and cultural benefits; shared prosperity; possible lower prices in some areas; local engagement and supply. The greatest challenges identified included: supplier access to appropriate infrastructure and suitable local expertise; possible conflicts or constrictions related to government contracting processes; availability of local supply of the goods and services required; and perceptions that product quality may vary from that of larger national or international suppliers.

Respondents identified the following as tools that would make it easier to purchase from suppliers aligned with the localisation, sustainability and resilience objectives:

- Supplier listings, e.g., through a web portal, to improve accessibility of options for consideration
- Supplier brokerage, i.e., specialist assistance to find the right supplier to match the opportunity
- Opportunities to meet suppliers, view products and services
- Guidance materials and templates to support the design of procurement processes
- Use of incentives for procurers and/or suppliers
- Promotion or creation of accreditation/s for relevant supplier characteristics, to improve visibility and streamline verification.

4.5 Foundational data-related recommendations

Our analysis of the above data sources revealed valuable initial insights into understanding economic leakages and the potential impact of localising supply chains. The findings can be immediately used to engage stakeholders, develop an evidence-led business case, and inform decision-making and strategy development – and to this end have been integrated into our recommended approach.

The findings can be immediately used to engage stakeholders, develop an evidence-led business case, and inform decision-making and strategy development.

However, the insights generated through this project should be positioned as preliminary. Most of the best practice case studies we identified (included in Section 5) featured some form of comprehensive data collection, analysis, baseline setting and impact measurement to inform design and ensure strategies progress towards agreed objectives. As improving the quality of data management, analysis and impact measurement is

foundational to and will play an ongoing central role in understanding effectiveness, we recommend CN prioritise this area of activity as discussed further in Section 5.3.

To realise the full potential of its localisation objectives, as an early step in the process it will be imperative that CN develop a more rigorous definition for ‘local’ and other impact goals and adopt this across its operations. To be most effective, in support of objectives, the definition should:

- Drive performance across the full range of supply chain elements that can be localised (i.e., beyond a ‘head office’ style approach)
- Reflect more fully what local means in the context of CN’s policy objectives – including around localisation, sustainability and resilience
- Consider the views and perspectives of key local stakeholders, including alignment with partners (as discussed in the Section 5)

Measurement and reporting should include regular surveying of suppliers to understand barriers and opportunities related to the holistic localisation approach, so that these can be integrated into planning on an ongoing basis.

Consideration of the full range of elements that can be localised (as shown in **Figure 3**), combined with further analysis of potential multiplier effects, would provide a more holistic picture of localising supply chain opportunities. In our analysis, we used a standard 5% spend shift to provide an initial illustration of the potential. CN may like to explore, with or without other stakeholders, other percentile shifts to finesse strategies related to specific sectors, and to establish initial and/or stretch targets.

The pilot stakeholder survey revealed valuable insights from two key potential collaborating Anchor Institutions, but it is recommended that further input is sought from a wider range of stakeholders as input to the design of next steps. A number of activities and initiatives that would help with deepening understandings of stakeholder perspectives and preferences are outlined in Section 5. These activities would also be useful in engaging a greater number of stakeholders to respond to a second survey. This could be a repeat of the pilot survey, or an expansion (for example, exploring local business motivators around supply chain shifts, and/or the appetite for customised procurement tools or portals, which

were not part of the scope for this project). If well designed this could provide useful information about how to engage, inspire and motivate stakeholders and establish enabling market conditions for this initiative. The survey could also be expanded to include supply chain issues, trends and drivers to validate and/or understand these matters at a local level.

As discussed throughout, in the context of this project alone the specified supply chain objectives were multifaceted – encompassing localisation, sustainability and resilience. And in future, opportunities to align supply chain practices to most effectively contribute to other policy objectives may also be identified. This lends itself to using a multi-criteria approach to identifying sectors that achieve strong scores across the combined impact areas, so as to ensure a balance across optimal impact scenarios. A framework such as this could also be drawn on to develop procurement and other decision-making guidance.

5. Strategies for transitioning towards an *Impact Supply Chains Challenge*

KEY TAKEAWAY

- Intentionally designed supply chain interventions can significantly support progress towards diverse policy objectives.
- Local Councils and other Anchor Institutions can play a leading role to achieve both organisational and city-wide supply chain transitions.
- City-wide supply chain transitions require effective and ongoing collaboration with a broad range of stakeholders and creating the right conditions.
- Strategies and principles used to good effect across best practice case studies that CN can employ, have been grouped into the following themes:
 - Leadership & Strategy
 - Demonstrating leadership and commitment
 - Aligning & implementing policies, plans and strategies
 - Improving data availability and impact measurement
 - Leveraging and advocating for enabling policy and legislation within the wider system
 - Capability & Capacity
 - Developing supply chain management and procurement capabilities
 - Building supplier capability and capacity
 - Resources & Infrastructure
 - Motivating place-based capital and impact finance
 - Aligning workforce, technology, materials and other physical infrastructure
 - Industry Action
 - Enriching networks, collaborations and inspiring local action
 - Prioritising optimal business models and aligned strategies
 - Enabling advantage and sunrise industries, goods and services
 - Fostering pollinators and other catalytic initiatives
- CN can leverage existing building blocks and adopt additional strategies to further embed and accelerate an *impact supply chains* agenda.

The ‘transition strategies’ presented in this section were developed through exploration of international and national supply chain transition initiatives, and synthesis of the essential and best practice characteristics identified. Supply chain transitions with objectives relating to economic localisation, supply chain localisation, sustainable supply chains, impact procurement, and economic and supply chain resilience were included in the review. As shown in **Figure 11**, drawing on the best-practice research we have distilled twelve transition strategies, that integrate the impact supply chains ‘lens’ and together support the development of the robust transition ecosystem that will underpin the realisation of the potential outlined in this report.

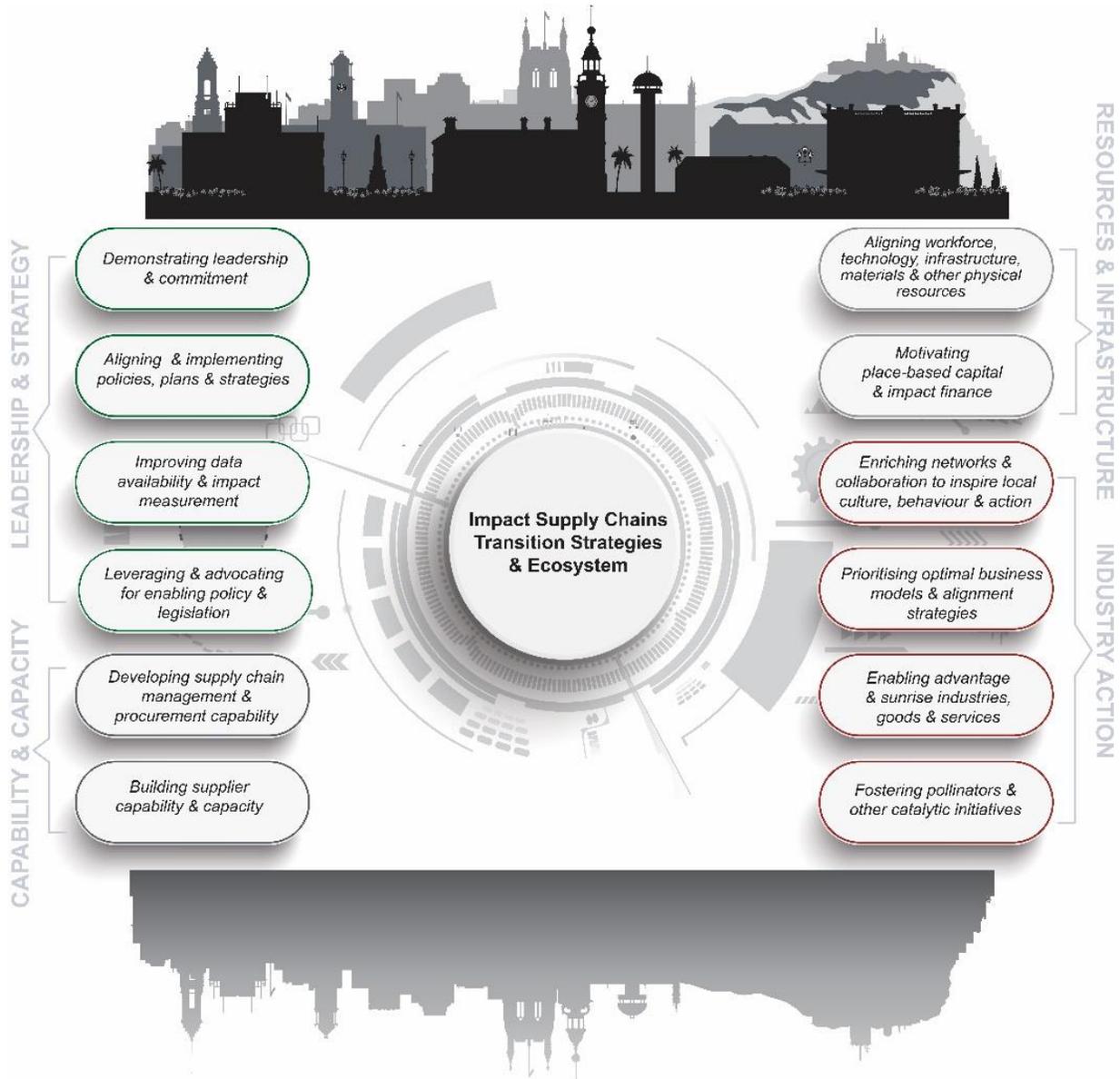


Figure 11. Impact Supply Chains Transition Strategies & Ecosystem
 Developed by Ethical Fields & The Yunus Centre Griffith University for City of Newcastle’s Localising Supply Chains 2022 project

Our initial focus was on initiatives led by Government entities. However, we quickly identified that many leading case studies also revealed the importance of industry-led strategies. Therefore, we have included ‘transition strategies’ that involve a range of different role types for CN. This builds on the approach taken in the Newcastle Economic Development Strategy, that recognises the range of direct and indirect roles CN can take to effect economic development outcomes. As a result, we have included strategies that can be led and implemented by other stakeholders (usually as system multipliers and/or front-running innovations), to provide strong building blocks for the collaborative approaches discussed. Our approach is also designed to support learning and development across the city and amongst its key stakeholders, to catalyse a ‘systems thinking’ approach to building capability and improving understanding of supply chain dynamics when seeking to generate multi-faceted outcomes.

For each of the twelve transition strategies we have provided:

- Descriptions and discussion on each transition strategy
- Leading examples of this strategy in practice
- Examples of what CN is already doing
- Suggestions for potential initiatives, drawing on our ‘best practice’ review and organised according to the groupings outlined below
- Recommended next steps.

Within each category of ‘transition strategy’, we have grouped the range of possible options along a continuum that provides an indication of where ‘scaling up’ opportunities would be possible. As shown in **Figure 12**, this has resulted in five groupings that provide an additional layer of sense-making: **Existing Building Blocks; System Starters; System Multipliers; System Multipliers (Advanced); and Front Running Innovation**. This ‘parent’ Figure is used as a navigation device throughout the remainder of this section, within the discussion about each of the Transition Strategies - to illustrate the range of actions available across each of the scale layers.

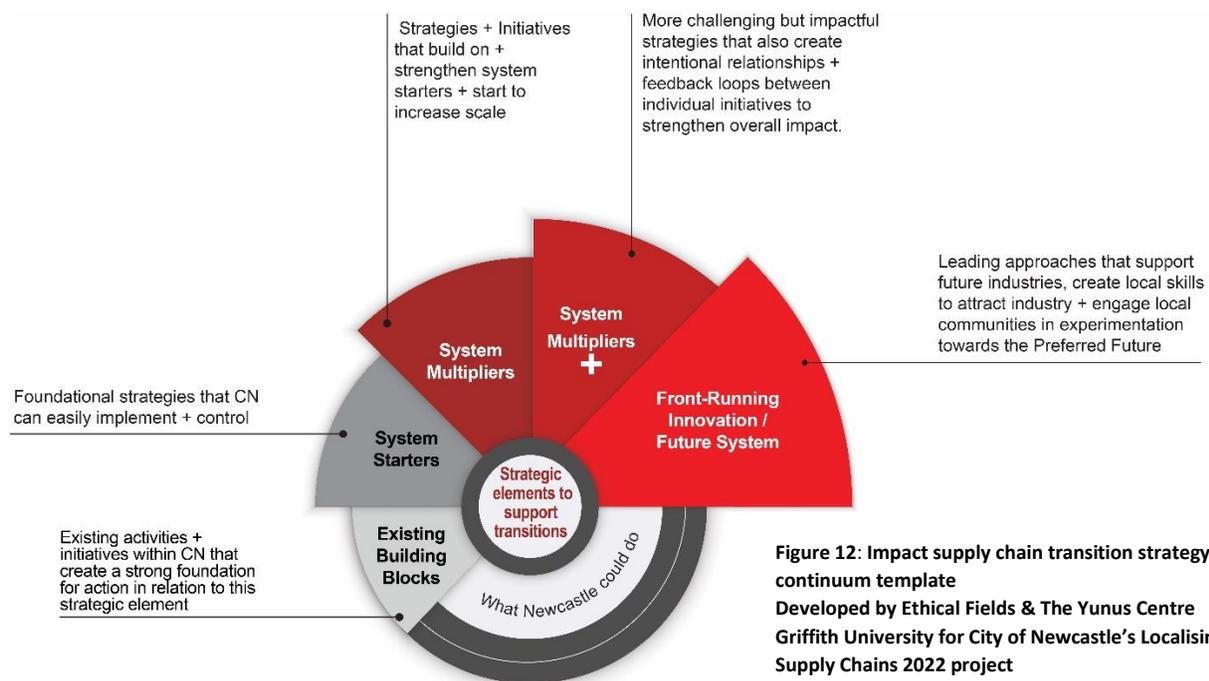


Figure 12: Impact supply chain transition strategy continuum template
 Developed by Ethical Fields & The Yunus Centre
 Griffith University for City of Newcastle’s Localising
 Supply Chains 2022 project

This approach reflects our use of the *Three Horizons* method, with each grouping stepping further towards Horizon 3 *Preferred Futures* opportunities and aspirations. Whilst some of these strategies build on each other, they do not require sequential implementation – allowing for maximum flexibility in designing separable initiatives. We note that there is overlap between some transition strategies and scaling groups, and some actions could be listed in more than one area. This is common a systems approach, as it highlights where there are ‘value-adding’ opportunities (such as strategies that contribute to multiple objectives) and also draws out a range of possibilities for place-based application.

Immediate interest in specific strategies within each grouping will depend in large part on CN’s appetite and ambition for change. System starter and multiplier strategies support shorter time frame and/or smaller scale and incremental opportunities. Realising the potential outlined in this report, in support of the ambitions defined in CN’s *Community Plan* and *Economic Development Strategy*, will be best supported through engagement with the more challenging but impactful system multipliers and front running innovation strategies. These strategies also provide opportunities to further develop CN’s capabilities in progressive local economic development, and to reinforce its reputation for leadership in local government innovation.

The transition strategies outlined in the following Sections 5.1 - 5.12, provide a broad range of possible actions and initiatives that CN could engage in to further its localisation, sustainability and resilience objectives. Decisions will need to be made as to which pursue, now or later. Whilst many of the transition strategies could be undertaken separately, the greatest impact will be achieved when the inter-relationships between them – that is, they are part of a system - are considered as part of the decision-making process. As an emerging system it is also important to have measures in place that can detect unintended consequences. To build a coherent set of effective actions CN will also need to actively engage a multitude of stakeholders, develop clear mechanisms for communication and coordination, and present a narrative that invites broad and deep participation from across the Region. Trade-offs will need to be negotiated, tensions managed, and emergence navigated – all to support lifting the gaze towards ambitious goals that support the CN’s vision for Newcastle to be ‘a smart, liveable, inclusive and sustainable global city’.

5.1 Demonstrating leadership and commitment

As discussed, the effectiveness of impact supply chain transitions will be best supported through collaborative approaches that go well beyond the operational remit of any one organisation. Acting alone, CN can directly affect some elements of local supply chain dynamics. But if CN is able to demonstrate visible leadership and genuine commitment to the impact supply chain agenda, an overarching city-level vision and direction for a transition approach can be established. This will be a critical foundation for defining and implementing an effective collaboration agenda and will act as an attractor for other stakeholders – including other government entities, industry actors, local businesses, and impact enterprises – to align goals and resources. These collaborators will be central to realising the full potential of an impact supply chain agenda, as outlined in this report.

To this end, at the overarching level, we recommend establishing and leading coordination of an Anchor Collaborative initiative for Newcastle. As shown through the case study example, Anchor Models⁴¹ are proving an effective leadership approach, offering a powerful mechanism for transformative local economic and supply chain transitions. Anchor Institutions are large organisations characterised by a mission or purpose that is tightly connected to and strongly grounded in the current and future wellbeing of a specified place – whether a suburb, town, city, or region. Anchor Institutions can have a significant influence on the local economy and supply chains through leadership, procurement practices, funding and use of land and resources owned by the Anchor. Anchor Collaboratives harness the efforts of multiple Anchor Institutions around a specific mission or missions within a defined place by harnessing the existing and collective resources of the group. The implementation of this recommendation is discussed further in Section 6.

Case Study 1. Local Government leads on strengthening and rebuilding its local economy through collaboration with other Anchor Institutions; Preston UK

In Preston (United Kingdom), the Local Council and other Anchor Institutions led a transformative agenda for local economic change with the aim of building the region's capacity for development, creating a more inclusive local economy as the foundation for transformation and rebuilding, and ensuring the benefits of local growth were invested in the local area and used to support productive economic activities. This involved Council and Anchor leadership in strategically and intentionally directing their own spending and supply chain activity to local suppliers, whilst also leading city-level change through programs that aimed to build the capacity of existing suppliers, connect local businesses with anchor institutions and develop their capacity to bid for contracts and support local start-ups to fill procurement gaps and community bank institutions to fund local start-ups. The Council and collaboration used this opportunity to also encourage the growth of more democratic forms of business ownership, as another way to increase local economic and social benefits. The Council worked with local academics to advance the cooperative sector, in particular worker owned cooperatives. They established the Guild Cooperative Network and Preston Cooperative Development Network. This change resulted: in £200m being redirected back into the Wider Preston economy and spent on existing and new local suppliers; 4000 extra employees receiving the Real Living Wage and a reduction in unemployment of 3% over three years and a positive multiplier effect on local jobs, wellbeing, health and economic growth.

⁴¹ This summary explanation is drawn from the following resources, where further information can also be found: <https://lgiu.org/briefing/anchor-approaches-amplifying-the-positive-impacts-of-local-government/> and https://www.griffith.edu.au/_data/assets/pdf_file/0024/1259205/Australian-Universities-as-Anchors-in-Place.pdf

Case Study 2. A Compact-based approach to establishing an employment-focused Anchor Collaborative; Geelong, Victoria

GROW is an initiative of Give Where You Live Foundation and G21 – Geelong Region Alliance. Formally established in 2014, it aims to change the way local organisations buy and employ locally, so as to improve the economic and social prosperity of the whole G21 region. GROW is organised around four key strands of activity: Spend Local - buy from local businesses to help the local economy and create jobs; Spend Social - buy from businesses who employ from GROW communities; Be Inclusive - create safe and supportive workplaces for all our community; Advocate and Collaborate - for region wide change, and to strengthen the GROW network. GROW uses a collective impact framework, bringing together philanthropic, business, government and community organisations and making inclusive jobs growth in targeted areas of disadvantage a priority for everyone in the G21 region. GROW is a long-term strategy to generate local sustainable jobs, and support job seekers from areas with high rates of unemployment to have equitable access to these opportunities. GROW asks partners to develop new business practices or change existing ones to benefit community members living in targeted areas. The organisations who have joined the GROW Compact are now considering the social value of their purchasing decisions, identifying potential training and employment opportunities for job seekers from target areas, and investigating the allocation of their routine operational and project spends to local suppliers and products, in line with their business objectives. Other networks and groups are aligning their activities with GROW, to achieve shared outcomes for the region.¹ Over 50 companies including private businesses and government bodies with a combined procurement spend exceeding \$5 billion per annum made a commitment to move 7% more of their procurement to local suppliers as well as increase their employment of local disadvantaged groups.

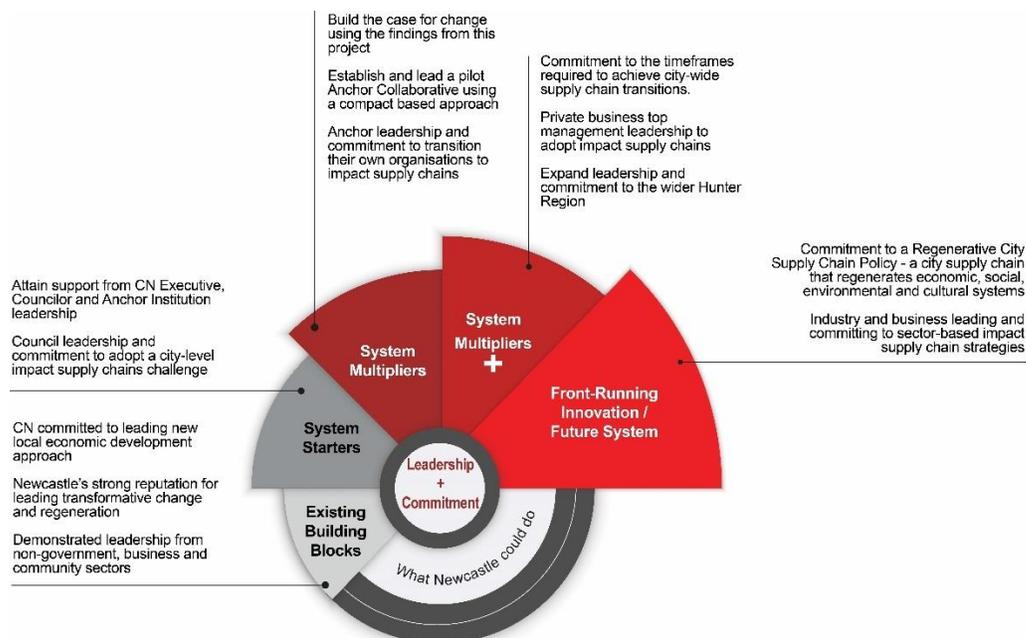


Figure 13: Demonstrating leadership & commitment impact supply chains strategies
Developed by Ethical Fields & The Yunus Centre Griffith University for City of Newcastle's Localising Supply Chains 2022 project

Recommended next steps

- Engage CN Executive, Councillors and key Anchor Institution stakeholders, initially using the summary project presentation to introduce and build support for this agenda and opportunity
- Attain endorsement from CN Executive and Councillors to adopt an impact supply chain agenda for CN and Newcastle City, including the agenda action plan; and set up a cross-departmental leadership group within CN to drive its implementation
- Establish and lead a pilot Anchor Collaborative initiative for Newcastle, using a Compact-based approach (see case study above) to generate implementation commitments and resourcing contribution. Work with CN's Strategy & Innovation Advisory Committee to engage other potential Anchor Collaborative partners in co-designing the Challenge approach. Integrate the Inclusive Newcastle Procurement Charter and the Hunter Circular Procurement Initiative into this broader and overarching approach.

5.2 Aligning and implementing policies, plans and strategies

At the broadest level, the role of policies, plans and strategies is to establish a 'direction of travel' that relevant actors can come together around, whilst also sending a clear signal to the market. Ambitious targets are also synonymous with leading effective localisation and supply chain strategies, and aligning these with international and national frameworks provides a coherence attractive to many stakeholders. Participatory approaches - such as collective visioning and goal-setting, and the co-design of roadmaps with strategic supply chain partners – are useful tools for generating the collaborative effort needed to deliver on ambitious targets.

Case Study 3. Federal strategy to build onshore domestic capability and supply chain resilience; Australia

The Federal Government's *Modern Manufacturing Strategy* (MMS) is a whole-of-government strategy to help Australian manufacturing scale-up, become more competitive and resilient. The strategy includes four pillars: getting the economic conditions right for business, making science and technology work for industry, focusing on advantage areas, and building national resilience for a strong economy. The Federal Government *Supply Chain Resilience Initiative* (SCRI) is part of the MMS and aims to strengthen Australia against supply chain vulnerabilities and improve abilities to respond to future supply chain disruptions. The SCRI proposes working with industry and other key stakeholders, and provides funding for initiatives that aim to address identified supply chain vulnerabilities.

Case Study 4. Co-creation of strategic goals and roadmaps to engage supply partners; Helsinki, Finland

In Helsinki, Finland, the local government has increased supply chain cooperation and participation through the co-creation of strategic goals and a road map for sustainable and innovative procurement. This was undertaken with municipalities, joint authorities and other public sector stakeholders in setting the parameters for sustainable public procurement.

Case Study 5. Innovative and ambitious supply chain targets; Oslo, Norway

In Oslo, Norway the local government set wide-ranging public procurement goals, requiring transparency and innovation in its supply chains. Targets included: creating the world’s first zero emission construction site (realised with a central city project completed in 2020); zero emission technology policy for all municipal vehicles; requirements for sustainable production and an increased share of plant-based and seasonal products; ambitious material recycling, reuse and sharing targets.

Case Study 6. Strategic alignment with national and international goals, such as SDGs; Zeeland, Netherlands

In Zeeland, Netherlands the region aligned its procurement objectives with the SDGs. Following the implementation of internal awareness raising and training sessions to lift SDG literacy, Zeeland monitored progress against the SDGs via its sustainable procurement platform. In 2020, the local government coordinated external dialogue with NGOs, policy officers, buyers, suppliers, experts and students to discuss how purchasing and contracting could contribute to the SDGs. As a result, for the 2021-2024 period Zeeland is committed to achieving impact on the SDGs through each instance of purchasing.

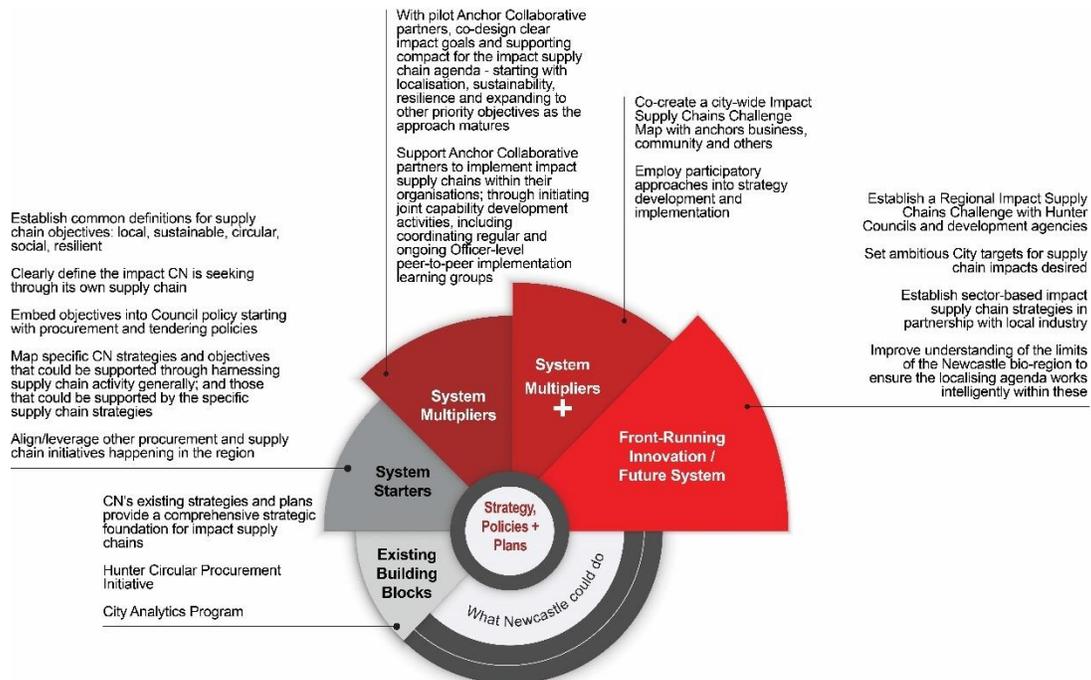


Figure 14: Aligning and implementing strategy, policy and plan impact supply chains strategies
 Developed by Ethical Fields & The Yunus Centre Griffith University for City of Newcastle’s Localising Supply Chains 2022 project

Recommended next steps

- Co-design clear impact goals for Newcastle’s impact supply chain agenda - starting with localisation, sustainability, resilience and expanding to other priority objectives as the approach matures. Adopt a broad meaning of local including the local elements in **Figure 3**. Involve Anchor Institutions and wider stakeholders.
- Internally, establish ambitious CN-specific targets around the impact goals, including adopting new metrics for success and developing decision-making criteria to guide the handling of tensions between objectives
- Audit existing strategies and plans to identify any additional or new ‘existing building blocks’ that could be added to those we have identified. Map CN strategies and actions that could be supported through harnessing supply chain activity generally; and those that could be supported by the specific supply chain strategies identified in Section 5.1 - 5.12 – starting with the *existing building* blocks offered through current and in-development strategies and plans.
- Support Anchor Collaborative partners to implement these same steps internally within their organisations; through initiating joint capability development activities, including coordinating regular and ongoing officer-level peer-to-peer implementation learning groups

5.3 Improving data availability and impact measurement

The need for a clear focus on data collection and impact measurement cuts through all the transition strategies. Locally relevant data and information is critical for building the case for impact supply chains, engaging and inspiring action, and for developing evidence-led policy and decision-making. Proactive and ongoing collection, analysis and reporting of key data will provide the foundations for understanding the effectiveness of the ‘cluster’ of initiatives drawn together under the umbrella of the impact supply chains agenda. In turn, this process will generate the information needed to learn and evolve the overall approach across the Anchor Collaborative pilot group (and eventually beyond) as it progresses through implementation phases. As discussed in section 3.5, this research provides valuable insights that CN can immediately use to move forward with this initiative. To achieve the policy success of the case studies analysed, CN should continue to build data management, analysis, visualisation and impact measurement capability. In addition to developing comprehensive monitoring and accounting systems around their supply chain transitions, as shown in the case studies many leading Cities have also focused on increasing information symmetry between stakeholders so as to improve the usefulness of data and market insights across collaborative endeavours, inform joint decision-making, and inspire further action. The recommended pilot Anchor Collaborative provides a vehicle for implementing this.

Case Study 7. Data to inform, monitor and demonstrate strategic success; Preston, UK

In Preston, UK the Council and other local Anchors worked on ways to increase the local economic and social benefits generated by their supply chains. The idea was not to simply to increase local spend but to identify areas where money was leaking out of the Lancashire economy or being used in socially unproductive ways, and to find ways to recapture this spend to better benefit local workers, employers, and businesses. This involved using data to inform their strategic direction, justify the strategy to Executive and stakeholders, monitor progress and demonstrate impact. They started with a comprehensive analysis of Anchor spend and found that of £750m spent, only 5% was spent in Preston, and 39% in the wider Lancashire Region, meaning a £450m leakage out of the Lancashire economy. They then conducted a more detailed analysis of the procurement spend of each Anchor Institution partner and mapped the financial value and geographical location of their top 300 suppliers. This place-based, locally specific data enabled the Anchor Collaborative to make clear decisions about the direction of its activities. The analysis was reproduced multiple times over the duration of the strategy implementation period, to monitor impact and build the case with the wider community. Refer to 5.1 for more information about the overall approach.

Case Study 8. Comprehensive monitoring and accounting systems; Flanders, Belgium

The Government of Flanders, Belgium had a target to achieve 100% sustainable public procurement by 2020. To track its progress towards this target, the Environment, Nature & Energy Department developed a new method for monitoring the sustainability performance of its procurement activity, and integrated it into the existing accounting system which now in. For the most important elements of SPP, the Government of Flanders is now able to report through its contract management system (eDelta) on the extent to which objectives have been achieved. The information on sustainability is gathered through nine mandatory questions on environmental aspects, social and ethical aspects, and innovative procurement. Data is now collected easily, in a format which generates useful, comparable results, and which can be used to guide future improvements.

Case Study 9. Facilitating learning and iterative implementation cycles; Northern Territory Australia

Data and impact measurement have also proved vital when the desired impact is not being achieved. Annual compliance reports, required as part of the Northern Territory Governments *Buy Local Plan* revealed significant implementation challenges. Identification of the challenges was made possible through the inclusion in the program of an independent *Buy Local Industry Advocate*, with responsibility for monitoring and reporting on government activities and performance against the plan.

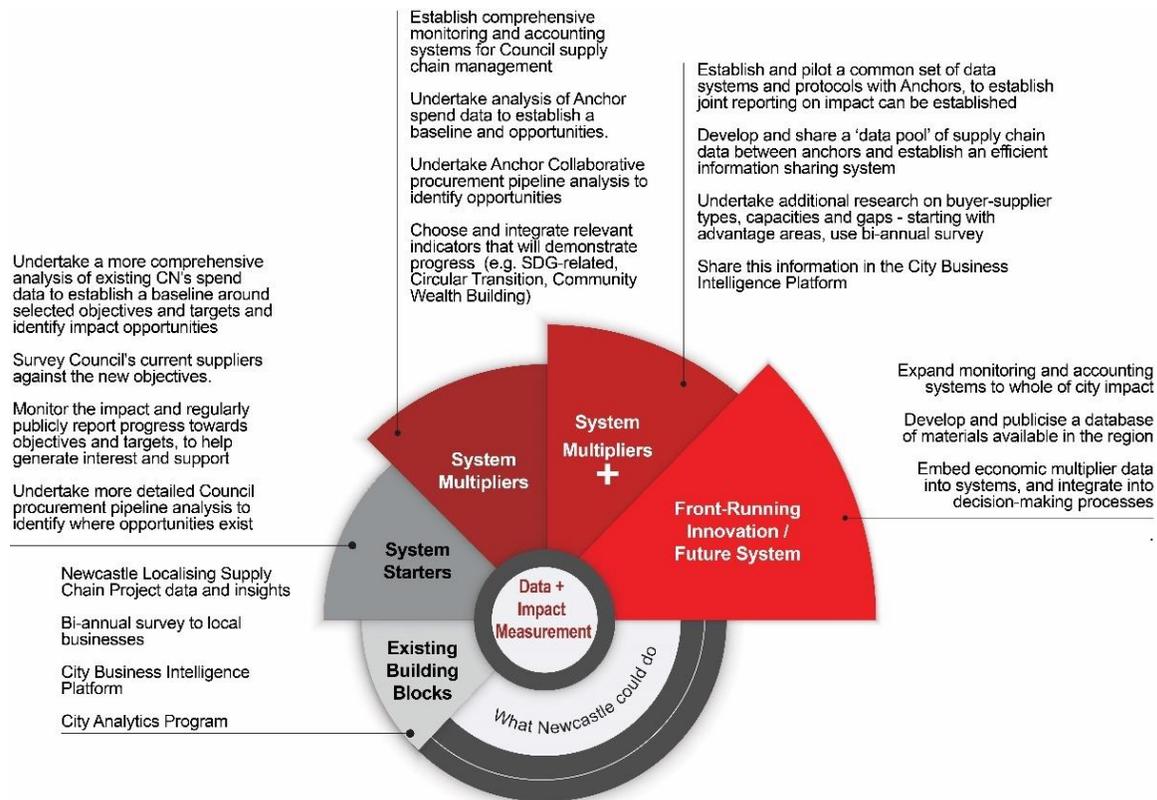


Figure 15: Improving data availability and impact measurement impact supply chains strategies
 Developed by Ethical Fields & The Yunus Centre Griffith University for City of Newcastle's Localising Supply Chains 2022 project

Recommended next steps

- Undertake a more comprehensive analysis of existing CN's, and Anchor Institution partners', spend data to identify opportunities to increase localisation, sustainability and resilience⁴²
- In the bi-annual survey to business, include questions relating to impact supply chains transitions, such as those used in the stakeholder survey undertaken for this project.
- Co-design front-running methods for data management, analysis, visualisation, monitoring and impact measurement around the new categories of supply chain activity at the City-level with pilot Anchor Collaborative partners (including through potentially adding Local Supply Chains as a future dashboard within the City Intelligence Platform); and through the leadership group establish and interpret these for CN's internal application
- Map gaps and opportunities in local supplier capabilities and capacities against the CN and Anchor Institution spend analysis, to inform choice of transition strategies.
- Share this information via the *City Business Intelligence Platform*

⁴² Through this project a preliminary analysis of CN spend has been undertaken, providing an example of what would be possible with a more complete data set, including a more nuanced definition of 'local'. A more complete data set would both be informed by and inform the development of objectives and criteria for the localising supply chain agenda, demonstrating an iterative learning approach to building capabilities.

5.4 Enriching networks, collaborations and inspiring local action

Whilst CN can transition its own supply chain and provide strategic and policy support to others, the heavy lifting for City-level economic and supply chain transitions will necessarily include significant action by a broad range of local actors. Engaging other Anchor Institutions and local industry through participatory approaches will be critical, and should include collaboration on the development of industry supply chain transition strategies and experimenting with new procurement processes and piloting product and service innovations. Our recommendation to establish and lead a pilot Anchor Collaborative initiative for Newcastle provides a defined coordinating vehicle for this activity.

In addition to the Anchor-related activities recommended, other collaborations that can be harnessed to inspire local action identified through our review include: local entrepreneur networks – upskilling and connect; small business partnerships – upskilling and support to compete with non-local suppliers; supply chain management professionals’ networks – upskilling and development support; local business and local industry networks – promote connections, share information, explore joint activities; strategic supply chain partnerships – coordinate innovation opportunities.

Case Study 10. System change requires a movement, and a movement requires deep collaboration; Seattle, USA

In Seattle, USA the government recognised that system change requires a movement, and a movement requires lots of collaboration and being open to new ways of getting things done. In response they created the *Seattle Good Business Network* to connect and inspire people to buy, produce, and invest locally, so that everyone has a meaningful stake in the local economy. The network valued local ownership and opportunity, local place and nature, using the ‘right’ measures of success, and local relationships. To create the network, movement, and system change they focused on three elements:

- **Connect and Inspire:** the network builds collective strength and connectedness. Cheerleading, storytelling, and partnering whenever possible are key to growing and strengthening the network.
- **Empower and Promote:** the network is made up of local entrepreneurs, innovators, farmers, investors, and citizens. A critical function is to empower each member with resources, information, and ideas; connections to customers, suppliers and investors; and shortcuts to quicker success. Promotion and recognition—through local media partners, events and educational campaigns—makes the whole network shine more brightly, energizing members and attracting newcomers.
- **Replicate and Innovate:** The network recognises there are amazing local economy innovations and success stories happening all over the country and world. They borrow good ideas from other places, then innovate to make them work for Seattle.

The network now includes over six hundred and fifty local producers and manufacturers, and dozens of partners including residents, non-profits and municipal organisations. Programs include: Seattle Made; Good Food Economy; Northwest Sewn; Sustainability & Circular Economy; People’s Economy Lab; Community Capital; Youth Program.

Case Study 11. Industry-led collaborations supporting progress towards National policy objectives; Auckland NZ

To demonstrate the contribution of its local steel industry to the Sustainable Development Goals and New Zealand's *Living Standards Framework*, the NZ Sustainable Steel Council and its Members produced a series of case studies featuring innovative pilot projects. The aim was to educate and inspire potential buyers and the industry as a whole, and also to demonstrate possible roles for business more broadly. One of the projects featured was the construction of Air New Zealand's new logistics centre. Direct local economic achievements included: all but one supplier was located within 50 kms of the site; over 340 people were directly employed, and over 2000 through the supply chain network; for every \$1 spent on local steel products, 90c was estimated to return to the domestic economy (with imported beams, for example, returning only 5c per \$1 spent); and increased economic resilience due to reduced reliance on global supply chains. Environmental benefits included: over 79% of waste generated was diverted from landfill (to either clean fill or recycling); with environmental stewardship standards further demonstrated through commitments to using responsibly-sourced products, minimising energy and water use, and tracking of fuel usage and air travel. Achievements directly related to *Living Standards* - or wellbeing - outcomes included: evidence of local suppliers being actively engaged in their 'home' communities; demonstrated strong health and safety practices; high numbers of suppliers that prioritise wellbeing, mental health, diversity and inclusion; increased opportunities for upskilling and career development; and improved transparency in supply chain governance, including prioritisation of environmental health and labour rights.

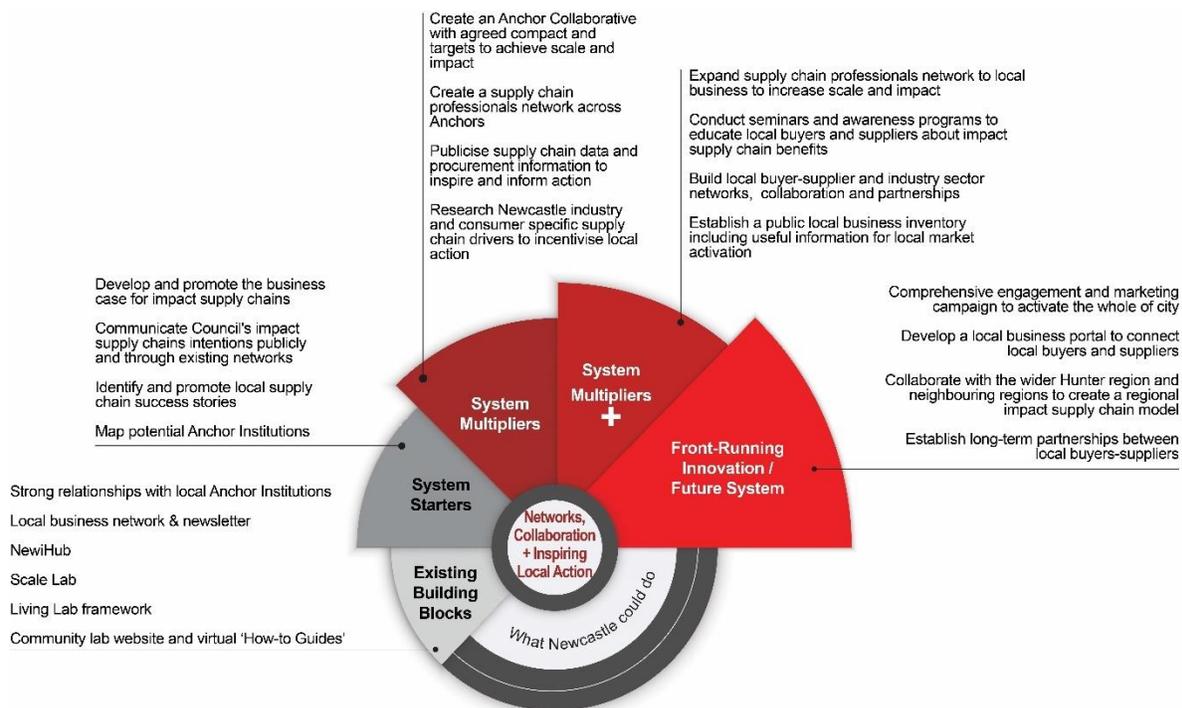


Figure 16: Enriching networks, collaboration and local action impact supply chains strategies
Developed by Ethical Fields & The Yunus Centre Griffith University for City of Newcastle's Localising Supply Chains 2022 project

Recommended next steps

- Undertake research to understand Newcastle specific local business and consumer trends, drivers and motivators in relation to supply chain localisation, sustainability, resilience and any other desired policy goals relating to supply chains. Recommendations 2.1, 2.2 and 3.2 could feed insights into this research.
- Develop a clear communications plan to engage the wider community (industry, businesses, consumers etc.) in impact supply chains
- Support local stakeholders initiating their own responses to the localising supply chains opportunity through sharing research findings, spend data analysis information, and coordinating targeted networking and other peer-to-peer collaboration and learning opportunities
- Use existing local business networks and information portals to raise awareness, promote the business case and share information about impact supply chain opportunities across Newcastle and its Region.

5.5 Developing supply chain management and procurement capabilities

Building on the foundations established through the strategies outlined above, key levers that need to be aligned to achieve supply chain transitions include procurement practices and supply chain management more broadly. As discussed in Section 2 and 3, public and private sector entities around the world are implementing organisation-wide processes to create new economic, environmental and social opportunities from their procurement activities; and there is a long history of harnessing supply chain management practices to support delivery of ‘horizontal’ public policy objectives. Depending on the focus, related initiatives can be described in different ways, including (but not limited to): progressive procurement, strategic procurement, social procurement, sustainable public procurement, and sustainable supply chain management. They involve broadly similar practices that revolve around defining specific objectives, and then embedding them into supply chain management and procurement policies and practices. For public, private, and not-for-profit organisations, expenditure with suppliers usually makes up between 40% and up to 70% of their overall budgets. Increasing the impact of this expenditure through strategic planning, decision-making and collaboration procurement can deliver real and sustainable change in our communities.

At the tender level, embedding usually takes the form of including clear outcome statements, with carefully designed criteria, and weighting for the desired outputs and behaviours. Whilst these foundational practices may appear straightforward at a surface level, a lot of nuance goes into the design of effective processes, and therefore attention to building the capabilities of procurement staff and others involved in strategic commissioning. Front running approaches include: supply chain management development programs, requirements that prospective suppliers sign guarantees or declarations; resourcing local supplier advocate roles; and co-development of tender criteria with strategic supply chain partners. This increased understanding is being reflected in new programs designed to encourage and mandate sustainable procurement practice in NSW, including for example, the proposed NSW Whole-of-Government Sustainable Procurement Model/Framework (NSW

Department of Treasury and Finance and Department of Planning, Industry & Environment). This and many other emerging programs provide opportunities for CN and the Newcastle and Hunter Region if they are ready and committed as a leader in this work. Key organisations in the Newcastle/ Hunter Regions are also strengthening their commitment to impact supply chains, such as the Hunter Joint Organisations (HJO), Hunter New England Health, the Port of Newcastle, and Newcastle University. There is a key opportunity for CN to take a leadership role in not only demonstrating leading practice, but also facilitating the establishment and ongoing activity of an Anchor Collaborative around impact procurement.

Case Study 12. A holistic plan to optimise local procurement; Northern Territory, Australia

The Northern Territory Government's *Buy Local Plans*¹ primary objective is to ensure that the largest possible proportion of every dollar spent by the NT Government is retained within and delivers benefits for the Territory economy and community. The Buy Local Plan's key initiatives target every stage of the procurement and contract management lifecycle to deliver these benefits. Some of the key actions underpinning the plan include amend NT Government policies, procedures and practices to strengthen the consideration of local benefit factors, a local content test in all government quotes and tenders, improve consistency and quality in the assessment of local content, enhance the consideration of local benefits across all tender evaluation criteria, not just the standalone local content test, inviting at least one quote from a Territory enterprise, a Buy Local Industry Advocate to provide an independent advocacy function to government on behalf of local industry and focus on NT Government capability development across the end-to-end procurement process, including to industry where relevant.

Case Study 13. Establishing clear, targeted criteria to assure implementation of localisation objectives; Philadelphia, United States

The City of Philadelphia is committed to advancing inclusive economic growth and is embedding this into its culture through equitable procurement policies and practices. One initiative is its *Local Business Entity Certification* program. A company must be headquartered in Philadelphia to qualify for certification; or it must meet two of the following requirements and provide supporting documentation:

- More than 60 percent of the business' full-time employees live in Philadelphia; defined as having a Philadelphia address on the City of Philadelphia Annual Reconciliation of Employer Wage Tax
- More than half of the business' full-time employees work in the city at least 60 percent of the time
- More than 75 percent of the business' gross receipts reported on their Business and Income Receipts Tax come from Philadelphia

The clear criteria support procurement managers and suppliers to more easily determine local eligibility and the certification program streamlines the process and provides assurance to executive.

Case Study 14. Environmental product declaration improves transparency around production 'externality' costs, Rotterdam, Netherlands

In Rotterdam, Netherlands the city government endorses the use of environmental product declarations (EPDs) to support sustainable procurement practices. Individual suppliers are required to provide an environmental life cycle assessment (LCA) for their products – quantifying the overall environmental impact from cradle to grave, including its production, transportation and waste disposal. Since 2015, LCAs have been successfully applied in framework agreements for construction projects and materials, such as pavement tiles, sewerage piping, light poles and street furniture, leading to significant environmental savings along the value chain. Suppliers are also required to demonstrate movement towards 100% locally-sourced renewable energy, with Guarantees of Origin required from suppliers to prove energy sourcing.

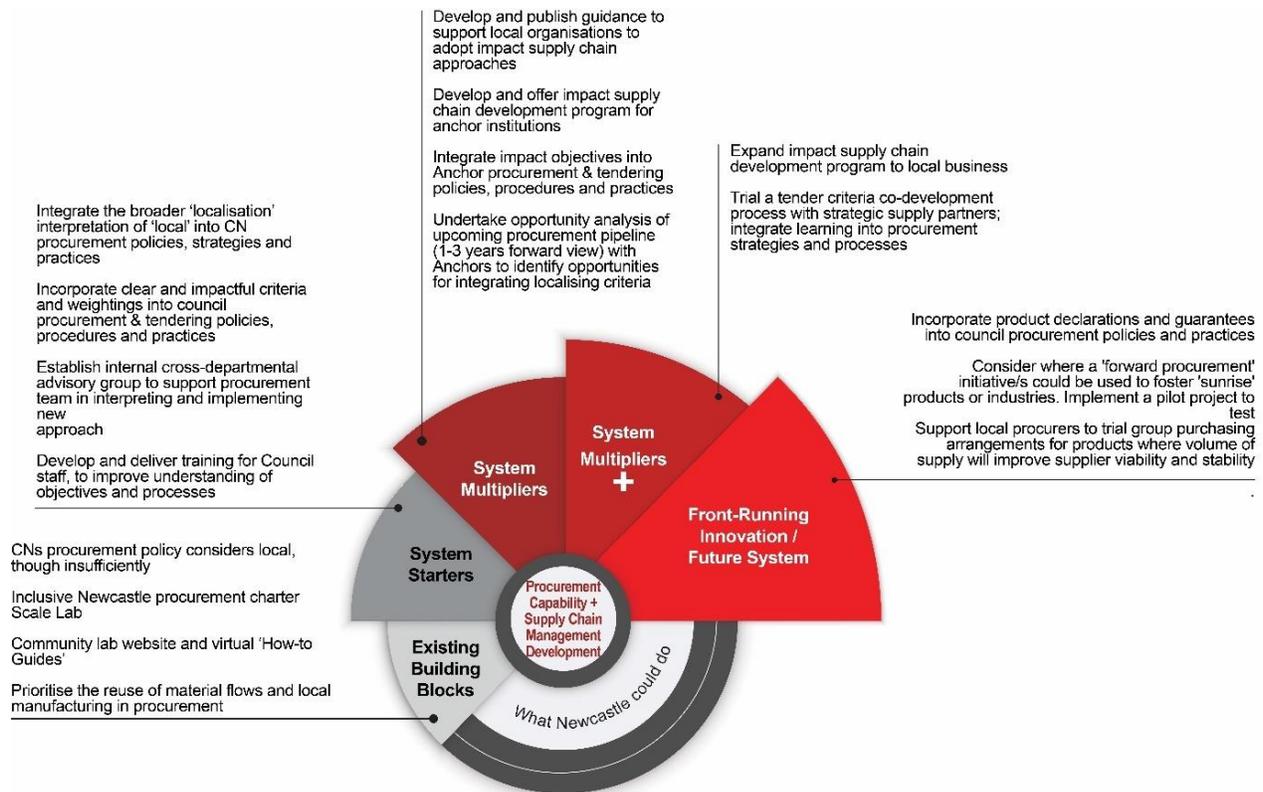


Figure 17: Developing supply chain management and procurement capability development impact supply chains strategies
 Developed by Ethical Fields & The Yunus Centre Griffith University for City of Newcastle's Localising Supply Chains 2022 project

Recommended Next Steps

- Integrate the broader 'localisation' interpretation of 'local', as outlined in Section 2 and **Figure 3**, into CN procurement policies, strategies and practices
- Develop procurement-specific criteria, weightings and guarantees to be used in relevant tendering and contracting processes; and establish tender evaluation methods and contract performance monitoring mechanisms (e.g., cross-departmental panels) to support practical implementation of the impact supply chains agenda
- Undertake an Opportunity Analysis on the forward procurement pipeline to identify a mixture of relevant tender opportunities that could be used to pilot integration of the new impact supply chains objectives, targets, criteria and processes
- Commission the development of an ongoing learning program to support capability development amongst CN staff who will need to be involved in the above activities, including offering regular training to support implementation of new practices
- Support the related activities of pilot Anchor Collaborative partners, and eventually interested parties from the wider community, through expanding access to procurement-related learning programs - including by communicating to locally based training suppliers (for example: local Pollinators – see Section 5.9; CN's Living Lab, Business Improvement Associations, TAFE, Business Institute of Australia, and other private RTOs) the business opportunity available.

5.6 Building supplier capability and capacity

Effectively harnessing supply chains to improve localisation, sustainability and resilience outcomes in large part relies on alignment between purchaser objectives and supplier capabilities, and in some areas multiple suppliers may need to be involved to fully realise the opportunity. It's important to note however, that suppliers can both lead and respond to opportunities generated through an impact supply chain agenda and therefore the role for public sector entities is a nuanced one. Key to this is establishing supply chain management and procurement practices that encourage supplier-led innovation, in processes and products.

Leading cities have achieved innovative supply chain transitions by focusing on capability and capacity building with strategic supply chain partners to drive medium-long term changes across supply chain networks and the achievement of mutually beneficial outcomes. Approaches that will support this approach, and supplier capability and capacity development more broadly, include:

- increasing information symmetry - to improve efficiencies and offer realistic timeframes to suppliers in responding to opportunities
- fostering and supporting consortiums of local suppliers - to improve access to larger and more complex opportunities
- providing practical support (such as resourcing, administration) - to activate targeted networking between local businesses with potential to become supply chain partners
- offering capability training and other learning opportunities to suppliers (for example, through extending the existing NewSkills program) - to improve the quality of tender responses.
- longer term / forward commitment contracts
- research to identify unintended bias in tendering and contracts

These types of initiatives will usually support Horizon 2 *Near Future* oriented transition behaviours. At the Horizon 3 *Preferred Futures* end of the transition's spectrum, it becomes important to also offer approaches that at least partially 'de-risk' opportunities to market test priority innovations – and illustrated in the case study below, and discussed further in Section 5.8.

Case Study 15. Supplier Skills Program to build capability and networks, and generate employment opportunities; London, United Kingdom

In London, UK public transport agency Transport for London (TfL) set up the *Supplier Skills Program* to train transport suppliers in equal opportunity employment, upskilling their employees, and in creating employment opportunities for disadvantaged Londoners. On top of offering training, TfL also connects suppliers to a network of NGOs that work with citizens experiencing disadvantage to increase their chances for employment. The *Supplier Skills Program* helps bidders meet the targets for social inclusion and employee skills training that for part of TfL's procurement criteria. By not just including these requirements in tenders, but also offering guidance and connections to support achieving them, TfL's initiative: created 5,500 apprenticeships; helped 5,000 unemployed citizens back to work; and integrated over 100 ex-offenders into the workforce. TfL has also successfully increased the routes into supply chain management employment, helping to create 5,400 supply chain apprenticeship starts.

Case Study 16. Free sustainability resources for Local Government, suppliers and other stakeholders; Australia & New Zealand

Through the provision of free educational resources across a diverse range of topics, The Supply Chain Sustainability School supports organisations across Australia and New Zealand. The school is an industry-wide collaboration, led by its Fellows and Members. It provides tailored learning resources to support capability building around socially, environmentally and economically sustainable supply chains – including improving the integration of sustainability requirements into procurement practices. The program began as a collaborative project between the Supply Chain Sustainability School, EY ECO-Buy, the City of Port Phillip, the City of Whittlesea and the City of Wyndham and was originally funded by a \$75,000 *Collaborative Councils Sustainability Fund Partnership Grant* from the Department of Environment, Land, Water and Planning, Victoria.

Case Study 17. An Anchor strategy in action: designing the contracting opportunity to proactively address local needs; Toowoomba, Queensland

St Vincent’s hospital, in Toowoomba QLD decided to outsource its linen service. The ‘traditional’ solution would have been to engage a Brisbane-based specialist supplier, resulting in local job losses and loss of an opportunity to strengthen local community and economic resilience. Instead, St Vincent’s worked with local not-for-profit Toowoomba Clubhouse to develop a social enterprise, with explicit objectives around employing people experiencing mental health issues. St Vincent’s committed to the provision of a nine-year contract to provide a realistic pathway for the development of a fit for purpose facility. With this underpinning, Toowoomba Clubhouse successfully attracted over \$6 million dollars to build and operate the facility. Vanguard Laundry opened in November 2016 and now employs over 60 people experiencing disadvantage in the labour market. By making a social investment through their contract commitment, St Vincent’s Hospital was able to generate strong social outcomes for the community in which it is ‘anchored’.⁵³

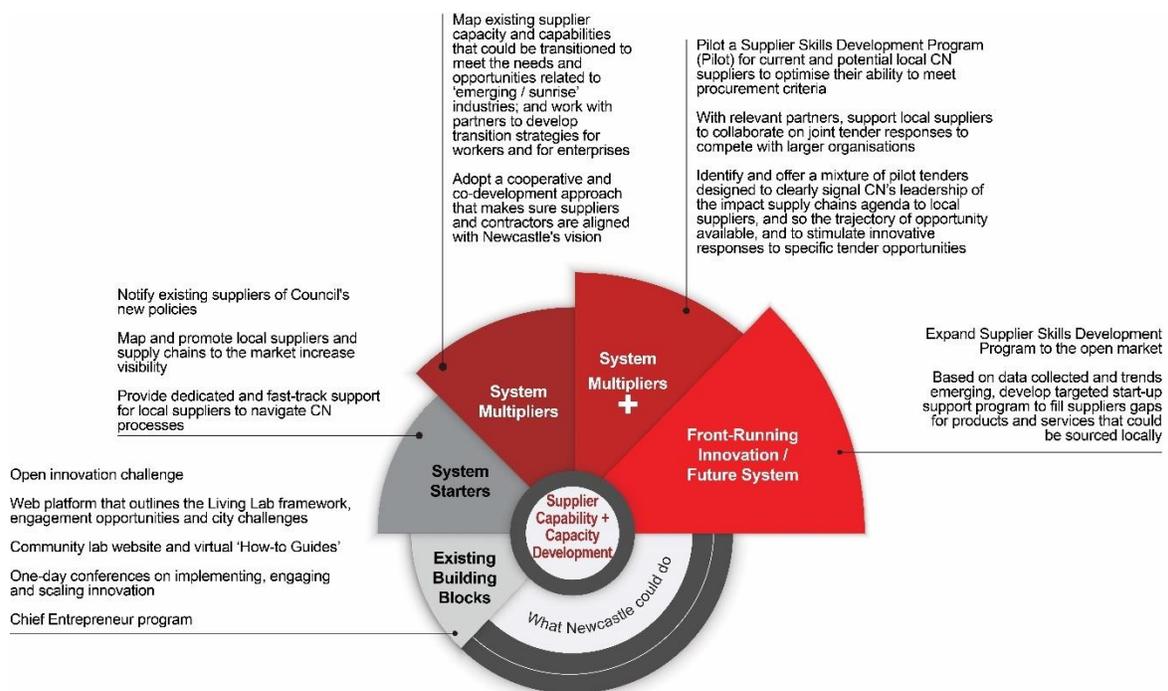


Figure 18: Building supplier capability and capacity impact supply chains strategies
 Developed by Ethical Fields & The Yunus Centre Griffith University for City of Newcastle’s Localising Supply Chains 2022 project

Recommended next steps

- Drawing on the forward procurement pipeline Opportunity Analysis (see Section 5.5), identify and offer a mixture of pilot tenders designed to clearly signal CN's leadership of the impact supply chains agenda to local suppliers, and so the trajectory of opportunity available, and to stimulate innovative responses to specific tender opportunities (where relevant)
- Develop and offer supplier information sessions to raise awareness of the impact supply chains agenda opportunity amongst local suppliers, and to begin to build capability amongst the local network through inclusion of specific training module elements around how to respond to new criteria and weightings in tenders
- Support supplier learning and cooperation opportunities - including the development of local Pollinator businesses (see Section 5.9), the establishment and ongoing activities of sector-specific collaborations, opportunity-targeted consortiums, and peer-to-peer networking more generally

5.7 Prioritising optimal business models and aligned strategies

Beyond its own operations, and the work it can do to directly support relevant local organising, CN can also foster an impact supply chain agenda through improving awareness of the kinds of business models and operational strategies that by their very nature contribute to localisation, sustainability and resilience objectives. The organisational cultures and operational models of these permeate through into their supply chain relationships and into community connections, thereby inherently working towards these objectives. Some of those identified through our review as having strong potential to offer these opportunities for Newcastle include:

- **Import substitution strategies** – intentional replacement of goods or services imported from elsewhere to localise demand, expand supply, increase efficiencies, increase local ownership⁴³ - including onshoring initiatives and the deliberate identification of 'substitute' materials or approaches that could be fostered locally; these strategies can also be led by suppliers, through new establishment or expansion initiatives designed to incentivise local consumer behaviour
- **Local and inclusive business structures**, such as – sole traders; small-medium sized locally owned businesses; cooperatives; impact (purpose-led) enterprises; private businesses with employee or community stock ownership schemes; local land trusts
- **Circular models** – business models and/or strategies that design-in circularity, including disrupting planned obsolescence, and championing product-as-a-service approaches and right-to-repair interests;⁴⁴ and the case studies provide local and regional government-initiated examples
- **Service economy and sharing economy initiatives** – to help reduce consumption levels overall
- **Exit-to-community strategies** – 'first right of refusal' opportunities for local residents, businesses and communities on the sale of land and other significant assets.

⁴³ Shuman, N. Mang, N. (2017) Pollinating Prosperity: A new approach to economic development in Santa Fe, New Mexico. Available at https://www.santafenm.gov/media/archive_center/INSFReportFinal_1215.pdf (Accessed 20 November 2022)

⁴⁴ See: <https://www.firmhouse.com/blog/what-is-product-as-a-service-paas> and <https://www.ifixit.com/Right-to-Repair/Intro>

Case Study 18. Investing in community-ownership models to catalyse regenerative tourism outcomes; Gippsland, Australia

Through a partnership with Destination Gippsland and the Latrobe Valley Authority, a six-month pilot of the innovative Wayfairer model was launched in Gippsland in January 2022. Wayfairer is a travel booking platform established as a social enterprise, and cooperatively owned by its employees and the local communities in which it operates (regional tourism organisations and associations, Councils etc.). Fifty percent of booking fees are reinvested back into the local community - to support environmental regeneration, foster localisation, and promote sustainable and smart community development. The other 50% goes into supporting the establishment of sustainable jobs across the Australian tourism sector. The Gippsland pilot is closely aligned to regional strategic priorities and in particular the Gippsland Smart Specialisation Strategy, and the aim is to test the model's potential for fostering co-operation and co-investment in the Region's tourism sector. Focusing initially on supporting a number of key events, Wayfairer is working with local media, Councils, event organisers, and community groups to explore the barriers and opportunities that the model brings for regenerative tourism. As a community-owned enterprise, Wayfairer is able to bring these stakeholders together in a unique way, with Destination Gippsland providing the local insights and connections that are guiding implementation.

Case Study 19. Strategies to increase business alignment with City vision; Netherlands

The *Green New Deal* on circular procurement was initiated by the Netherlands government in 2018. These approaches are now being used by cities across Europe. One such city that incorporates the *Green New Deal* and aspects of a *Community Wealth Building* approach is Haarlem in the Netherlands. Initiatives include:

- Integrating procurement strategies that favour circular economy initiatives
- Participating in a network of Councils and public businesses to share learning
- Providing spaces for circular economy small business and start-ups to showcase their products
- Including social return on investment clauses in larger contracts, where a goal is to support people moving into permanent work

This initiative within the wider context of the original Netherlands government policy demonstrates the ability for larger businesses, Councils and other Anchor Institutions to create significant change. At the local level the ability of a Council to influence a number of projects and shape the local business eco-system.

Case Study 20. Gearing contracts to support multi-faceted objectives; Brittany, France

In Brittany, France the regional government has begun placing circular economy objectives at the core of demolition and construction contracts. For one large development project, it assessed local demand for recycled concrete and measured the volume and quality of materials that could be recovered from the existing buildings, before searching for a supplier who could meet their ambitions. The winning tender recovered over 90% of materials through the deconstruction process and built a storage and processing platform on a nearby site. Through a social clause, the contract also secured 210 hours of work and tutoring for people excluded from the job market.

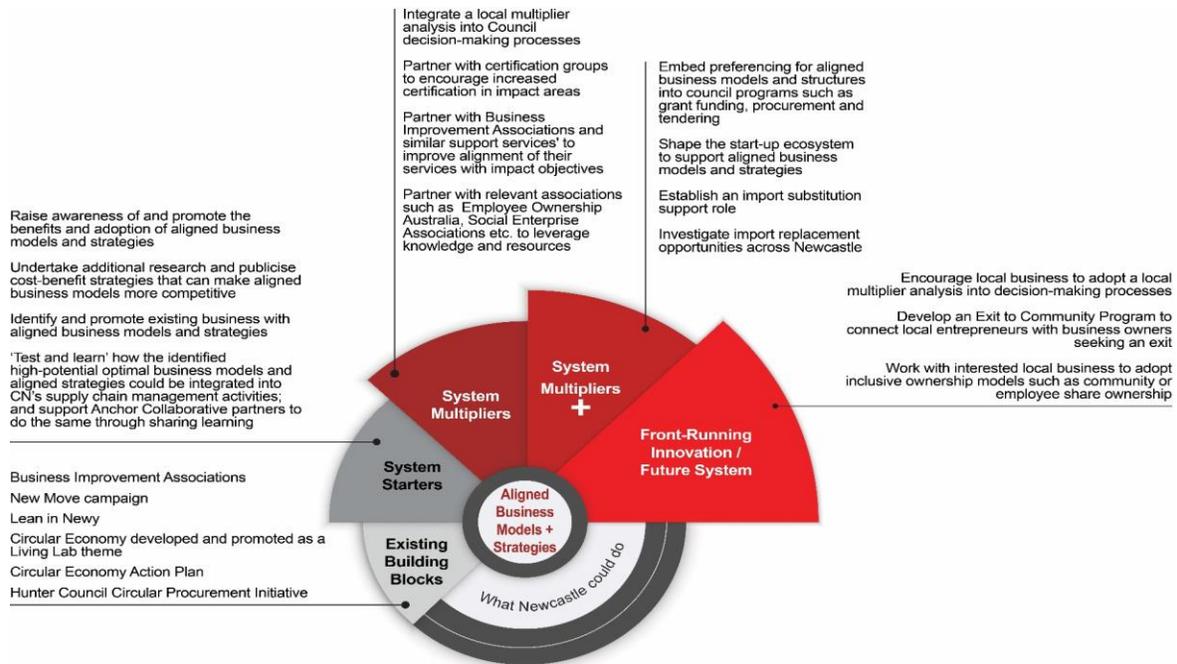


Figure 19: Prioritising optimal business models and aligned strategies impact supply chains strategies
 Developed by Ethical Fields & The Yunus Centre Griffith University for City of Newcastle's Localising Supply Chains 2022 project

Recommended next steps

- Develop guidance materials for the wider market about impact supply chains and aligned business models and strategies. Work with the business improvement associations and similar to embed guidance into the business support system
- Develop an Impact Supply Chains 'tab' within the Digital Prospectus that provides the suite of information available regarding localising supply chains
- Proactively look for opportunities to 'test and learn' how the identified high-potential optimal business models and aligned strategies could be integrated into CN's supply chain management activities; and support Anchor Collaborative partners to do the same through sharing learning
- Raise awareness of the identified optimal business models and aligned strategies amongst other local purchasers and suppliers, and offer practical support to related existing initiatives and activities (such as support to use the local multiplier analysis tool⁴⁵)

⁴⁵ See Local Multiplier Calculator. Available at <https://www.lm3online.com/>

5.8 Enabling advantage and sunrise industries, goods and services

Supply chain transitions often focus on advantage industries, goods and services – defined as offering a place-based or challenge-based ‘advantage’. Opportunities can be driven by the following factors: availability of existing resources, materials, infrastructure, skills; dependency with the desired objectives; establishes or encourages alignment across multiple objectives; stabilises local access to a fundamental or vulnerable good or service; offers import replacement opportunities to meet local demand; substantially improves conditions for existing aligned businesses or industries, or for those seeking to establish or transition into the Region.

Renewable energy is a prime example of an advantage and transition industry, with significant opportunities for the Hunter Region already identified. Through reducing reliance on mass centralised models to achieve the economies of scale needed to keep costs down, renewable energy initiatives are opening up new markets around smaller, more localised production initiatives that put into market innovations around battery storage systems and distributed grid technologies.⁴⁶ For purchasers like CN, this alternative supply opportunity could enhance performance against zero-carbon-use lifecycle targets, as well as creating the conditions to support local quality employment.

Other possible advantage industries identified that offer potential for the Newcastle Region in relation to the three goals include: service industries - as they often have relatively simple human resources dominated supply chains; manufacturing - to increase local control and influence, and reduce vulnerabilities; robotics and automation - to improve supply chain efficiencies, reduce costs, and create skilled work opportunities in the local area; warehousing and logistics - to meet increased demand created through localising initiatives; circular economy industries – in general, but particularly using local ‘waste’ as materials; and areas identified as priorities by Federal or State Governments, where funding or other support is available.

In relation to supply chain transitions, sunrise industries are key advantage industries. As relatively new entrants to the market, efforts that foster the conditions that will support their success and that incentivise their ‘stickiness’ to the place of origin are usually needed. In addition to generally advocating for and championing these businesses and industries, as shown in the case studies below, CN can also support through offering future-oriented contracts that support the design, development, testing and/or scaling of new aligned sunrise industries, products or services. The choice of those to prioritise, separately or in combination, will necessarily require a process of determining which are likely to make the most significant contributions to the policy objectives of highest priority at the time.

⁴⁶ As renewable energy is less restricted to existing power grids and networks it also offers more flexibility for establishing reliable energy supplies in remote locations, however this is less directly relevant to the Newcastle context.

Case Study 21. Community-owned technology innovation demonstrating a new and sustainable approach to energy provision; Manilla, NSW

Located north of Tamworth, NSW community-owned Manilla Community Renewable Energy Inc (MCRE) has the support of over 100 local residents and businesses, including Tamworth Regional Council and the Manilla Branch of the Country Women’s Association (CWA). MCRE aims to generate local economic, environmental and community building outcomes through the establishment of community-owned renewable energy, including demonstrating a model that contributes to sustainable regional development. Originally formed by local investors, the group partnered with Providence Asset Group, a clean energy-oriented investment firm. Leveraging the existing project, partnership and financing, the company was able to attract a \$3.5m investment of NSW Government grant funding to support development. The project will install around 4.95MW of solar PV electricity generation capacity and include a hybrid combination of lithium-ion battery storage (4.5MW/4.5MWh) and a hydrogen energy storage system (2MW/17MWh) – the first NSW hydrogen energy storage system, alongside a solar-battery system to store renewable energy.

Case Study 22. Supporting sunrise goods and innovation through ‘forward commitment’ procurement; Geelong, Victoria

City of Greater Geelong established a forward commitment to procure a product not yet available on the market, to meet a need with no existing solution. By making a forward commitment (up to three years in the future), suppliers were assured their investment in research and development would be met with a commitment to procure. The tender was the first in Australia to be offered using a *Procurement for Innovation* process (2017). The innovation process was purposefully designed to encourage: (a) the development of clean technology – economically viable products that harness renewable materials and energy sources while reducing emissions and waste; and (b) an innovative solution to solve the annual waste and cost problems caused by repairing and maintaining bridges in recreational spaces. In the United Kingdom, Her Majesty’s Prison Service spent a substantial portion of the annual budget on managing waste from routine mattress replacement. A forward commitment with a three-year deadline was made to procure zero waste mattresses; an innovation which was not yet available on the market. This gave the market the time to research and develop the manufacture of a zero-waste mattress. When HM Prison Service went to tender the market was able to respond; and a zero-waste to landfill mattress is now procured under contract.

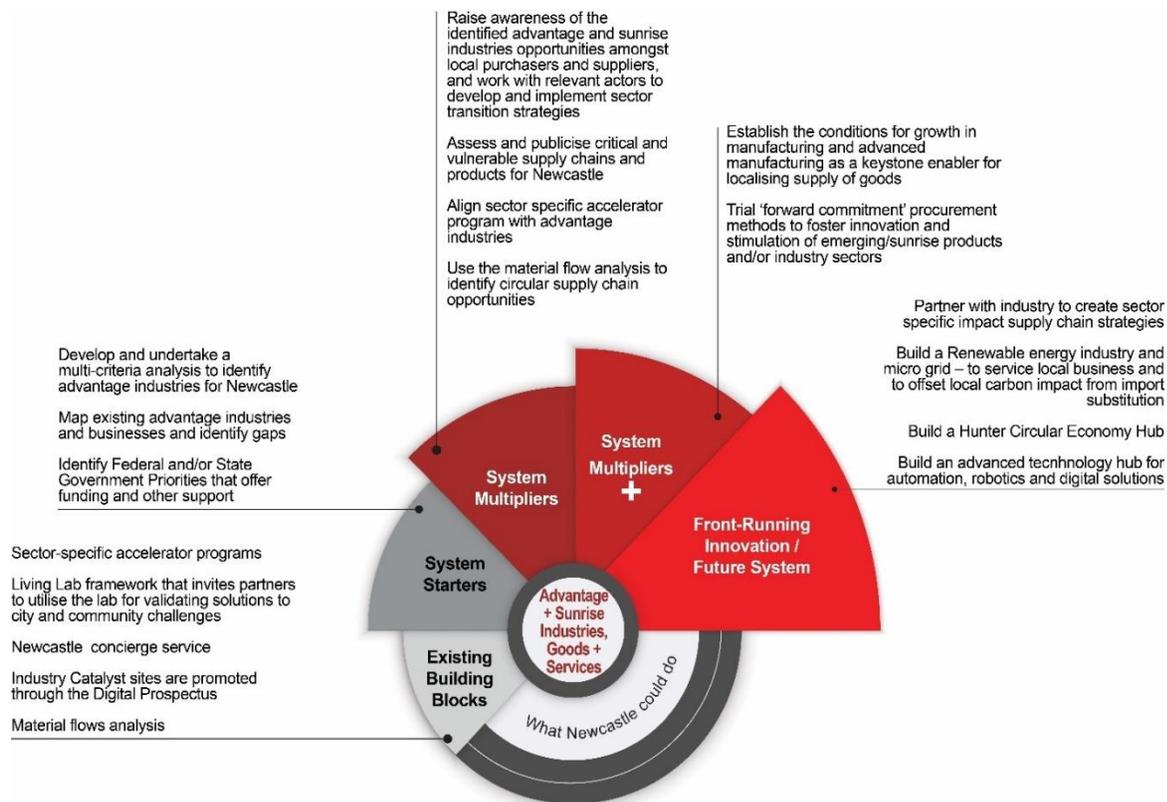


Figure 20: Enabling advantage and sunrise industry, good and service impact supply chains strategies
 Developed by Ethical Fields & The Yunus Centre Griffith University for City of Newcastle's Localising Supply Chains 2022 project

Recommended next steps

- Raise awareness of the identified advantage and sunrise industries opportunities amongst local purchasers and suppliers.
- Proactively look for opportunities to 'test and learn' how the identified high-potential advantage and sunrise industries opportunities could be supported through CN's supply chain management activities; and support Anchor Collaborative partners to do the same through sharing learning.
- Partner with one or more of the advantage industries to pilot the development and implementation of an Industry Transition Strategy. Use the learnings to scale to other advantage industries.

5.9 Fostering pollinators and other catalytic initiatives

Pollinators are catalytic initiatives that have potential to act as significant ‘amplifiers’ around contextually-specific local and regional economic development objectives.⁴⁷ In this case, contextually-specific is defined as contributing to the overall localising, sustainability and resilience objectives, and includes alignment with the optimal business models and advantage areas identified in Section 5.7.

Pollinators are self-financing businesses-that-support-other-businesses to ‘survive and thrive’ through delivering capability and/or capacity building services and programs. Pollinator business’ services and programs identified as having strong potential to support impact supply chains objectives include:

- access to low-cost high-quality co-working spaces - to support early-stage and/or micro-business establishment and functionality
- access to dedicated maker-spaces – including those offering high-cost technical equipment and tools to improve the design and production capacities of small-scale entrepreneurs
- access to commercial kitchen spaces - designed to incubate local food-related initiatives
- Living Labs initiatives - oriented to start-up and small-medium businesses.
- accelerator programs – that support business growth at different stages of development, including through improving access to appropriate capital (as discussed further in Section 5.10)
- learning and information sharing – such as entrepreneurship training, supplier capability development programs, and targeted networking opportunities
- place-making initiatives – such as improving street infrastructure, like lighting, to encourage community engagement with economic activation opportunities
- local buying initiatives – including through local vouchers, discount coupon books, local currencies, and dedicated promotion campaigns⁴⁸

Case Study 23. Business certification and connection Pollinators facilitating and fast-tracking supply chain transitions; Global

A common Pollinator models is acting as a ‘broker’ between various types of impact suppliers - local, sustainable, social or other - and procurers or other potential project partners. These services can include certifying businesses against specified impact areas, and facilitating connections through making the information available in a database. Australian examples include: Supply Nation, which provides a database of verified Indigenous-owned businesses; and Social Traders which connects certified social enterprises with its corporate and government Members. Another variation is Local Supply Chain in the UK, which also provides supply chain software for the construction industry. The software enables local businesses to access a directory of UK based businesses, advertise project pipelines and current work packages to local suppliers, and capture and showcase metrics of projects that reflect economic and social value generated.

⁴⁷ Shuman, N. Mang, N. (2017) Pollinating Prosperity: A new approach to economic development in Santa Fe, New Mexico. Available at https://www.santafenm.gov/media/archive_center/INSFReportFinal_1215.pdf (Accessed 20 November 2022)

⁴⁸ See also the *Seattle Good Business Network*, outlined in Section 5

Case Study 24. Member-based social enterprise model supporting local innovation and entrepreneurship capability; Geraldton, Western Australia

Pollinators Inc is a member-based social enterprise that aims to facilitate opportunities and networks to grow innovation and entrepreneurship capability for the benefit of the community in Geraldton, WA. It nurtures entrepreneurs, micro start-ups, established businesses, and local community groups to support them to thrive and succeed. Services include: co-working spaces; meeting rooms and office space; space subsidy funding; and community stages for local events. Members receive: discounts on selected events and workshop; access to networking opportunities and connections with other like-minded people; complimentary co-working space; and discounted printing services. As a social enterprise the Pollinators Inc model is based on mixed-revenue streams that underpin its financial stability and the delivery of its social mission – with over 60% generated through service-based income, and the remainder sourced through local government funding sources.

Case Study 25. Mutual Credit Network catalyses regional intra-network trading and supports operational stability; Sardinia, Italy

Mutual Credit provides a mechanism for businesses to trade with other local businesses without using cash money transactions, via a credit clearing system. A credit clearing system is an arrangement in which a group of traders, each of whom is both a buyer and a seller, agree to allocate each other sufficient credit to facilitate their transactions within the network. Mutual Credit Networks operate in a range of places including Switzerland, the United Kingdom and in Sardinia, Italy – where the network is called Sardex. The Sardex network has ~4,000 business members, handled ~€33 million of trades in 2016, and ~€40 million in 2017. Sardex allows members to buy and sell from each other even when cash flow is 'lumpy' and/or if they have difficulty gaining bank credit. As an added benefit, there is no interest charged or paid on Sardex account balances. Sardex facilitates connections between suppliers and prospective customers, through a searchable database and posting of trade opportunities; and also proactively, through employment of dedicated Deal Brokers, which also maximises use of idle capacity.

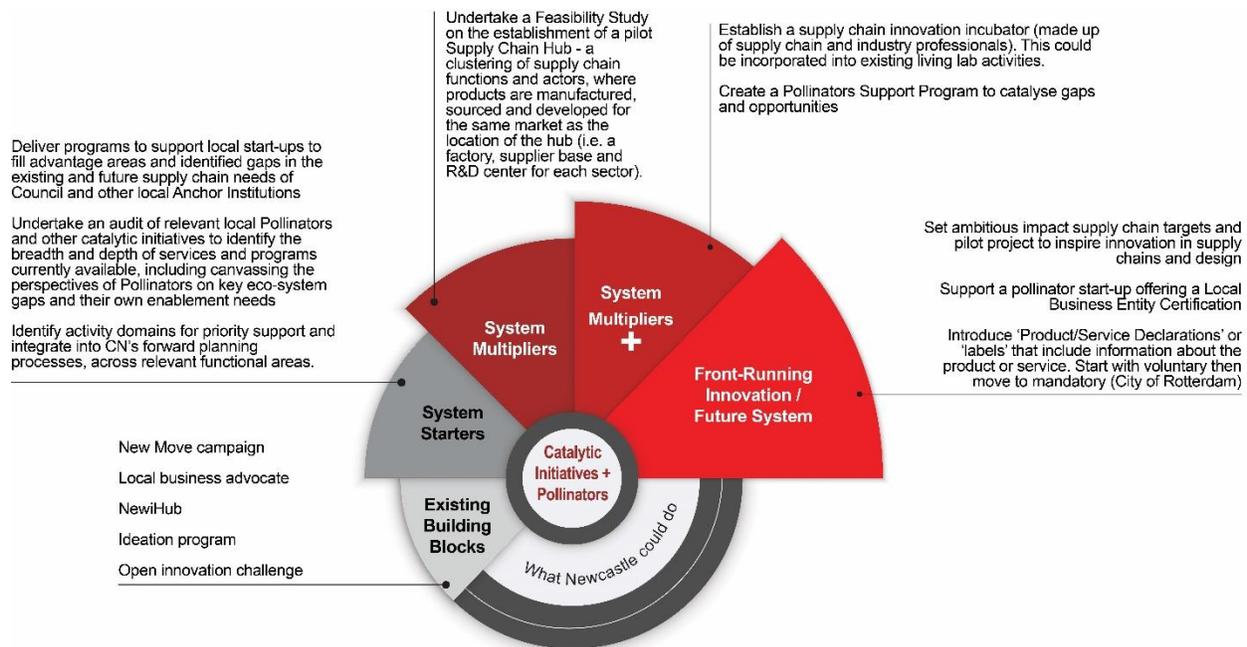


Figure 21: Fostering pollinators and catalytic initiative impact supply chains strategies
 Developed by Ethical Fields & The Yunus Centre Griffith University for City of Newcastle's Localising Supply Chains 2022 project

Recommended next steps

- Undertake a number of ambitious procurement projects at CN to inspire innovation in supply chains and design, such as net carbon construction or 100% local supply.
- Undertake an audit of relevant local Pollinators and other catalytic initiatives to identify the breadth and depth of services and programs currently available, including canvassing the perspectives of Pollinators on key eco-system gaps and their own enablement needs.
- Identify activity domains for priority support and integrate into CN's forward planning processes, across relevant functional areas.

5.10 Motivating place-based capital and impact finance

Economic transitions require impact aligned finance and capital and as illustrated through examples provided throughout this report, one-way Councils and other Anchor Institutions are supporting economic transitions is through seeding and underwriting impact supply chain related initiatives. They can also leverage other forms of capital such as infrastructure, land, and property to support supply chain transitions.

As discussed in Sections 5.7, 5.8 and 5.9, these initiatives will generate the greatest impact when combined with considerations and opportunities such as prioritising optimal business models, aligned strategies, and advantage and sunrise industries, and combining with the efforts of Pollinators and other catalytic initiatives. For example, this could include writing community and/or share ownership models

into local infrastructure projects establishing dedicated loan funds, and/or providing loan guarantee programs for worker buyouts of existing businesses. In this case, the focus is on Newcastle City and therefore the 'impact' includes a place-based element. To achieve a city-wide transition towards Horizon 3 *Preferred Futures* trajectories, a wide range of stakeholders will need to be motivated to engage in the design and establishment of financing vehicles suitable to the local context. A key initiative CN could lead is the development of a *Local Investment Prospectus* that clearly articulates the 'business case' for the kinds of initiatives outlined below:

- Improve the multiplier performance of the existing capital bases of CN, local Anchor Institutions and other businesses - through reducing leakages out of the local economy and improving recirculation of available finance (this objective is central to the procurement-related recommendations made throughout this report)
- Support the establishment of dedicated vehicles that foster investment into the local economy by local residents and entities, such as – donation and crowdfunding platforms; peer-to-peer lending brokerage; initiatives for individual 'angel investors'; and philanthropic grant funding channels (and build local financial management capabilities to this end)
- Support the establishment of new and strengthen existing local, inclusive and/or community-based financial institutions and locally aligned investment tools, such as - community banks; community development financial institutions; investment cooperatives and mutuals; community foundations; local land trusts; local superannuation funds; and micro-share schemes
- Attract co-investment from non-local individuals and entities, including from aligned impact investors, to support CN's localisation, sustainability and resilience objectives for the City

Case Study 26. Peer-to-peer business lending platform provides Place-based investment mechanism, supporting SMEs; Lancashire, United Kingdom

The Lancashire Funding Circle (LFC), established in 2010, is an online peer-to-peer business lending platform that provides access to finance independent of the mainstream banks. Sixty percent of The Funding Circle's SME borrowers had previously unsuccessfully attempted to secure a bank loan. The loan product is backed by institutional and individual 'angel' investors, with lenders bidding for small pieces of the overall amount sought by indicating the interest rate they are willing to offer. The borrower's final loan package is made up of a mixture of the offers with the lowest interest rate. Lancashire County Council (LCC) was the first Local Authority to engage with the product, investing an initial £100,000 in the establishment of the LFC. The fund provides local SMEs with improved access to loans, and lenders with a trusted mechanism through which to support the development of local businesses they are interested in. The program also connects the LCC with local businesses with growth capacity, opening up opportunities to influence the trajectory of that growth to also create social value outcomes for the region (including promoting their emphasis on quality jobs). LCC's role is as a financial backer and facilitator of local knowledge and connections.

Case Study 27. Community Banks embed local ownership in financial infrastructure; United Kingdom

The Community Savings Bank Association in the UK is working with community development corporations, community development finance institutions, local social investment funds, and others to create a network of 19 regionally focused, customer owned and mission driven banks. The Community Banks will offer savings and loan products to residents, community groups, and SMEs. One of these, Banc Cambria, has been established as a cooperative with financial support from the Welsh Government, with the aim of increasing local ownership of financial infrastructure to support its 'prosperous Welsh economy' objectives.

Case Study 28. Community-led peer-to-peer investment network that connects local investors; Washington, United States

In Washington, United States, the Association of Washington Cities (AWC) partnered with Washington State University (WSU) on a project to implement Local Investment Networks (LIN). A LIN is an innovative, community-led peer-to-peer investment network that connects local investors who have capital with local business owners who need capital - keeping local capital in the local economy. In its first couple of years one of the LINs, the Methow Investment Network, received over 100 enquiries from local businesses, accepted 13 formal applications for funding, added 47 local investors to its network, funded nine businesses for a total of \$1,500,000, and created 32 new jobs.

Case Study 29. Revolving loan fund used to support sustainable and inclusive start-ups; Cleveland, USA

In Cleveland, USA Anchors Institutions are using local development funds to catalyse local, inclusive and sustainable action. The *Evergreen Cooperative Development Fund* is a nonprofit revolving loan fund used to support the Evergreen model of sustainable community economic development. The fund invests in start-up worker-owned and sustainable cooperatives in the city, where this will meet the procurement needs of local Anchor Institutions. 10% of the profits generated by the new coops are recycled back into the Fund to catalyse further business opportunities and local community wealth creation. Seed funding from the fund led to the creation of the three worker cooperatives in the laundry, solar installation and food production sectors. It also created 120 new jobs, largely for disadvantaged members of the community.

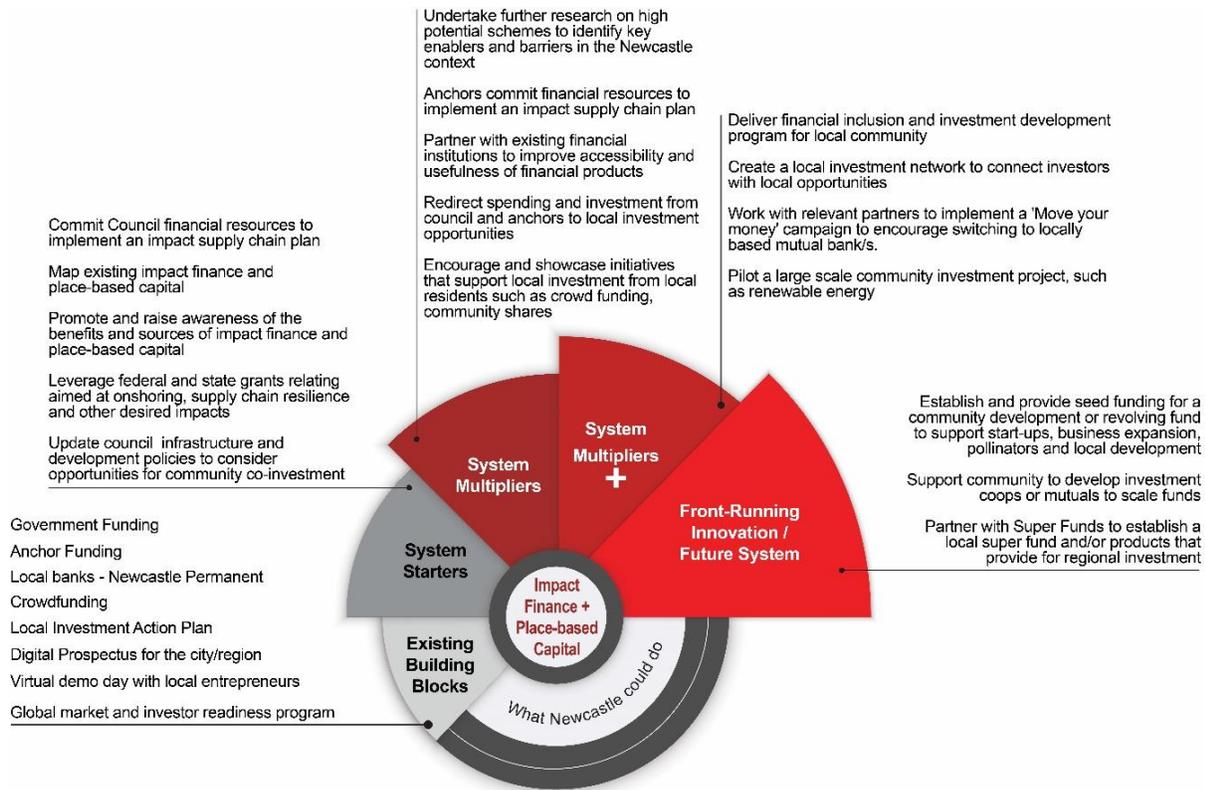


Figure 22: Motivating place-based capital and impact finance impact supply chains strategies
 Developed by Ethical Fields & The Yunus Centre Griffith University for City of Newcastle's Localising Supply Chains 2022 project

Recommended next steps

- Undertake further research to: understand enablers and barriers to increasing inclusive and place-based capital and impact finance systems and structures; and identify and evaluate optimal models and initiatives for Newcastle.
- Incorporate impact supply chain opportunities into the existing Local investment Prospectus
- Prepare a business case including options analysis for the establishment of a dedicated place-based and inclusive financing vehicle for Newcastle and options to achieve economies of scale through aggregation and mutualisation with other regions across Australia, including through exploring synergies with the Local Investment EOI already committed to.

5.11 Aligning workforce, technology, materials and other physical infrastructure and resources

Local workforces, technology, infrastructure and other physical infrastructure and resources are the engine-houses of local economies, and the dynamics between them are critical to the effective functioning of local supply chains. For this reason, at this preliminary stage of exploration, we have grouped this diverse collection of elements together. Further into the process, it may be useful to explore each more fully as a separate field of action. Transitioning towards an impact supply chain agenda will further highlight the already inter-related nature of supply chain relationships in the Newcastle Region. CN has some lever points available to influence these dynamics, but much of the actual activity required to support localising supply chains will need to be undertaken by others.

The following skills, technology, resources and infrastructure are commonly cited as supply chain localisation and onshoring enablers and accelerators:

- Advanced supply chain management skills and digital technology – to enhance supply chain effectiveness and resilience
- Automation skills, technology and infrastructure – to reduce local manufacturing, storage and distribution costs, thereby making local suppliers more competitive
- Local and/or regional renewable energy sources – to provide local cost energy and offset increased local emissions from increased industrial and commercial activity
- Warehousing and distribution skills and facilities – to account for increased local manufacturing, waste storage, processing and distribution
- Land zoning - to account for increased industrial and commercial activity, including hubs for local circular supply chains
- Digital skills, infrastructure and technology – to optimise smart design and operation
- Advance manufacturing skills and resources – to optimise local manufacturing quality and cost effectiveness thereby increasing competitiveness and to support the development of local quality work opportunities
- Physical spaces and hubs for reuse, recycling and design initiatives – to inspire innovation, support economies of scale and system connections.

The following strategies have been identified as offering new or strengthening existing levers available for enabling, accelerating and/or incentivising conducive conditions:

- Dedicated skills transitions programs and pathways, such as extending on and fine tuning the NewSkills program
- *Real Living Wage* style initiatives⁴⁹ - to champion quality work and strong employment standards, and promote community wealth building principles (see the Preston UK case study in Section 5.1, for example)
- Supporting local industries and businesses to apply for grants and / or debt financing to facilitate relevant technology upgrades and transitions, including through collaborative endeavours such as joint purchasing arrangements

⁴⁹ Link back to the Preston example here ...

- Working with key industry stakeholders to commission a detailed local resources and materials opportunity analysis - to identify those that may be latent, undergoing transition, and/or where other strategies adopted for the impact supply chains agenda will drive shifts that could be capitalised on
- Collaborating with other Councils in the Hunter Region to undertake a land zoning audit to identify and negotiate access to sites that will catalyse the development of industrial activity aligned with the localisation, sustainability and resilience objectives – including establishing Circular Supply Chain Hubs (large, and also smaller-scale – such as maker-spaces and the like) around specific sectors and materials, in appropriate locations

Case Study 30. Co-development of technology solutions with strategic supply partners to drive innovation; Malmö, Sweden

Co-development of local solutions with strategic supply partners has been an important driver of innovation in SPP practices. For example, the City of Malmö initiated a market dialogue procedure by inviting information and communications technology (ICT) resellers to propose a framework for ensuring any equipment purchased by the city met the highest sustainability standards. Bidders were also asked to propose solutions for the recycling of obsolete ICT and to commit to take part in regular discussions with the city through a dedicated Sustainability Forum. This approach has proved successful, with the city now consistently purchasing a majority of certified ICT products and having recycled over 7,500 obsolete ICT objects. Malmö also sits on its partner’s advisory board, coming together with other ICT users to discuss ways to push the industry towards greater sustainability.

Case Study 31. Providing resource recovery infrastructure to catalyse the local circular economy; Fairfield, NSW

Prior to 1992 Fairfield City Council, NSW sent all material from its construction and infrastructure upgrades to landfill at a significant cost to the Council. The opportunity to reduce costs, reuse materials, and retain value in the local community was recognised and the Sustainable Resource Centre was established. The SRC has since become a stand-alone business unit within Fairfield City Council, returning a dividend to the Council and the local community. SRC turns development and construction waste into new materials for the construction industry (example products include - crushed concrete, recycled asphalt, cement stabilised sands) and for use in Fairfield City Council projects. The SRC is currently undergoing an expansion to increase capacity to up to 550,000 tonnes of recyclable construction material per year to meet growing demand.

Case Study 32. Establishing and catalysing circular economy markets through strategic procurement and inclusive employment initiatives; Auckland, New Zealand

The Southern Initiative (TSI), part of Auckland Council in New Zealand, is a place-based innovation platform that stimulates, enables and champions social and community innovation. One of TSI’s key priorities is to see the socio-economic transformation of South and West Auckland through economic activity that is inclusive, just, circular and regenerative. To enable this, TSI works to a vision for Auckland’s prosperity to be more equitably shared and to ensure that South and West Aucklanders hold leadership roles across the economy, including as business leaders, entrepreneurs, designers and innovators. One of the key activity strands is TROW Group (TG), one of NZ’s largest deconstruction contractors, and leading specialist in recycling construction waste, civil contracting and machinery hire. TG finds innovative and sustainable ways to repurpose hundreds of tonnes of building materials by salvaging and diverting waste destined for landfill; including preparing salvaged and recycled materials for re-use in schools, housing, churches and community projects. For example, TG has provided over 1,000 tonnes of fixtures, fittings and furniture to community organisations in NZ that would have otherwise gone to landfill, and also exports good quality used furniture to schools and churches in the Pacific. Its hiring policy encourages more inclusive employment and provides career opportunities for people who could be lost in the system. It has trained, improved literacy skills and provided employment for over 1,000 people, creating job pathways for young Pasifika and Māori building self-confidence, tool skills and knowledge through training and employment. TG’s development was supported by TSI (through the Amotai program and by leveraging Auckland Council’s social procurement initiatives) as it was recognised sustainability and resilience policy outcomes, objectives and targets could not be achieved unless contracting opportunities could be matched with the right kind of suppliers. The Deconstruction and re-use sector has grown quickly and strongly in NZ, and TG is now centrally positioned as a supplier of choice in this much larger market.

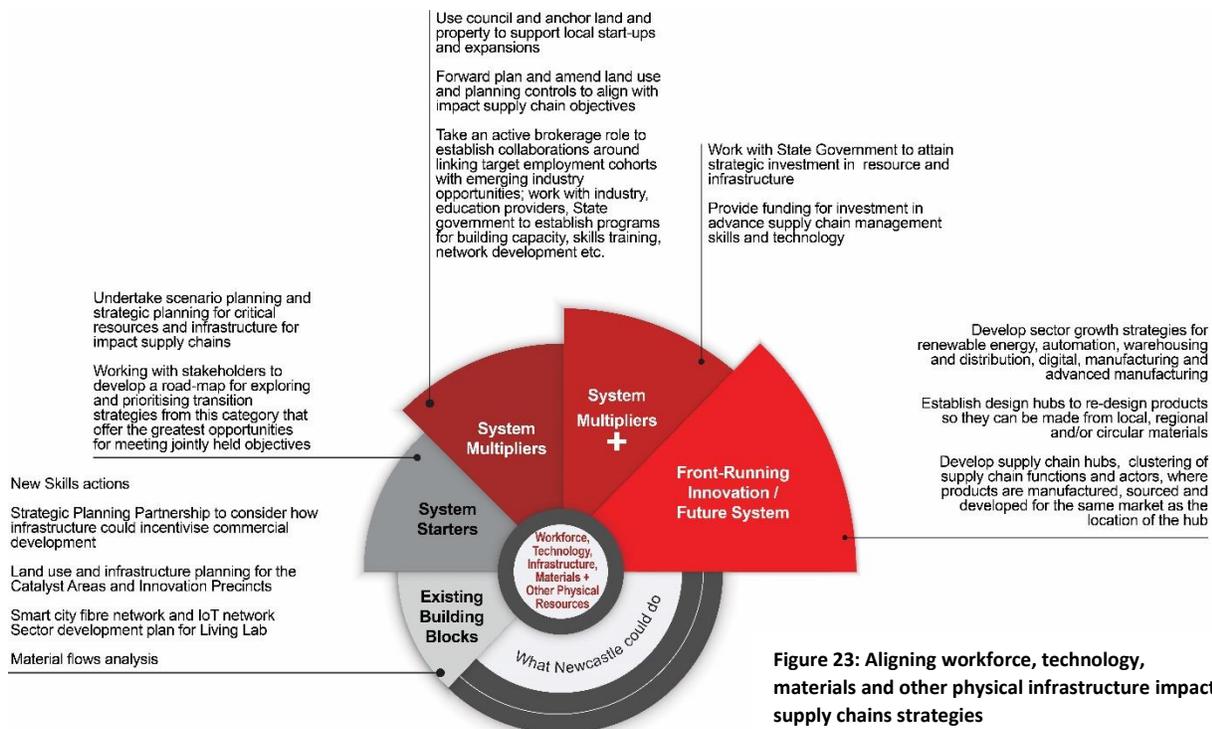


Figure 23: Aligning workforce, technology, materials and other physical infrastructure impact supply chains strategies
 Developed by Ethical Fields & The Yunus Centre
 Griffith University for City of Newcastle’s Localising Supply Chains 2022 project

Recommended next steps

- Work with potential Anchor Collaborative partners, industry and other key stakeholders to develop a road-map to define, prioritise and establish/enable the resources and infrastructure necessary to support local and impact supply chains.
- Actively influence and support State Government and major private sector investment in Newcastle to maximise local outcomes; initially through convening and hosting a Roundtable involving the Hunter Councils and representatives from relevant State Government agencies – to showcase existing work and progress, and to explore where entities and roles could work together.

5.12. Leveraging and advocating for enabling policy and legislation within the wider system

State, national and international policies and legislation can enable or constrain impact supply chain transitions. Alignment of local initiatives with related policy and legislation frameworks is also a key dynamic that can enable and accelerate supply chain transitions. For example, red tape, ‘green tape’, and trade agreements are commonly cited by industry advocates as a barrier to onshoring. Perceptions about local-level ‘green tape’ matters could be explored and potentially addressed as part of the impact supply chains agenda.

Case Study 33. Leveraging Federal policy programs to secure critical infrastructure; Australia

To position Australia to meet its emerging freight and supply chain challenges, the Federal Government is implementing the National Freight and Supply Chain Strategy and National Action Plan. The Strategy and Action Plan set an agenda for integrated national action across all freight modes over the next 20 years and beyond. Developed by all Australian governments with extensive input from industry, the Strategy commits to national action in four critical areas: smarter and targeted infrastructure; enable improved supply chain efficiency; better planning, coordination and regulation and better freight location and performance data.

Case Study 34. Legislating local land ownership underpins economic localisation agenda; Scotland

Access to land is critical for increasing local economic activity, and land ownership has implications for the broader economic localisation agenda. In Scotland, less than 500 people, many of whom live abroad, own half of all privately-owned land in Scotland – one of the highest concentrations of land ownership in the world. As part of the Scottish Government's policy to empower communities around land ownership, it introduced a range of ‘community right to buy land’ initiatives under the *Land Reform (Scotland) Act 2016*. Under this legislation, communities have the right to register an interest in land, giving them a ‘first-right-of-refusal’ to purchase the land when it comes up for sale. Figures published by the Scottish Government showed a 7% increase in assets in community ownership from 2017 to 2018.

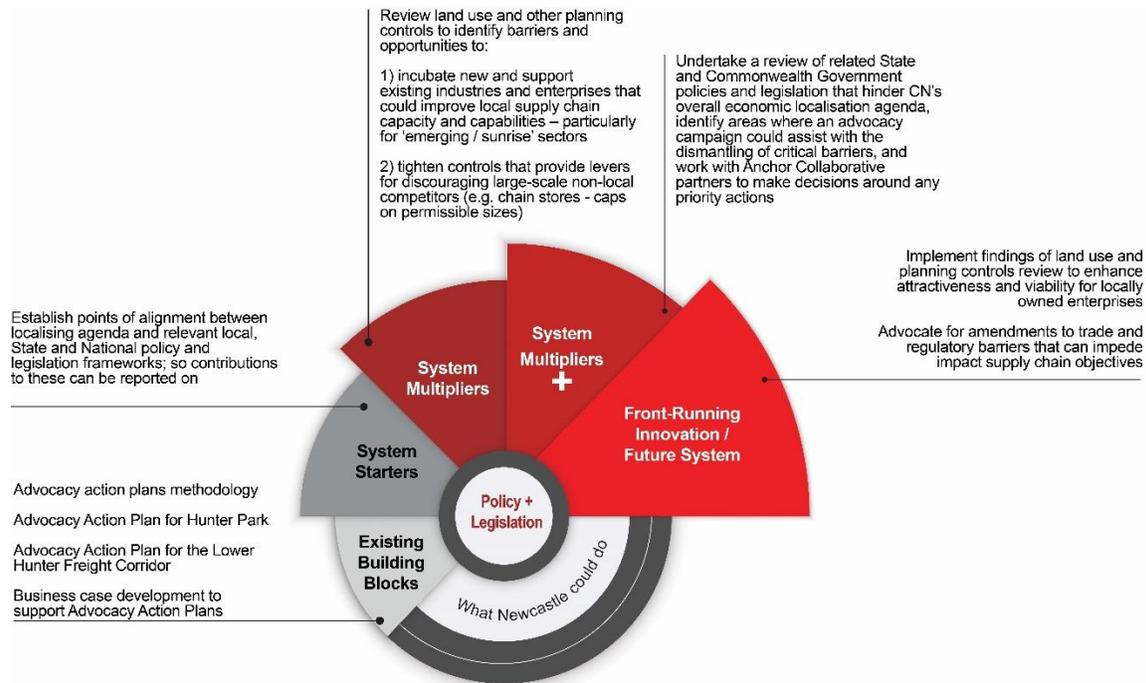


Figure 24: Enabling policy and legislation impact supply chains strategies
 Developed by Ethical Fields & The Yunus Centre Griffith University for City of Newcastle's Localising Supply Chains 2022 project

Recommended next steps

- Partner with Ethical Fields' Minister for Community Wealth Building campaign to promote and highlight the role that Federal government could play to promote inclusive economies.
- Identify State and Federal Government policies and legislation that can support *CN's impact supply chains challenge*, such as those related to growing local industries and supply chains, as well as supply chain sustainability and resilience.
- Undertake a review of related State and Federal Government policies and legislation that hinder CN's overall economic localisation agenda, identify areas where an advocacy campaign could assist with the dismantling of critical barriers, and work with Anchor Collaborative partners to make decisions around any priority actions

6.A pathway forward

KEY TAKEAWAYS

- In summary, our findings demonstrate that supply chains offer valuable ‘policy and practice’ levers that CN and wider Newcastle stakeholders can activate to support the localisation, sustainability and resilience goals designated as the focus for this project.
- Our overarching recommendation to realise this opportunity is that CN adopt and design an *Impact Supply Chains Challenge* approach. The ‘next steps plan’ presented in this section provides CN with practical actions to immediately begin acting on this opportunity.
- Realising the potential outlined in this report, in support of the ambitions defined in CN’s *Community Plan* and *Economic Development Strategy*, the plan includes foundational ‘system starters’, and more challenging but impactful ‘system multipliers’ and ‘front running innovation’ strategies.

This section draws together the key findings developed through this project to provide a suggested ‘next-steps’ pathway forward for CN. With its historical and current reputation for innovative leadership, CN is well positioned to lead this opportunity alongside local Anchor Institutions and industry.

As discussed throughout this report, formalising CN’s localisation, sustainability and resilience objectives around an explicit *Impact Supply Chains* agenda will provide a solid vehicle through which existing and future initiatives can be aligned, and critical local stakeholders can be engaged in co-designing a collaborative approach.

CN’s *Economic Development Strategy* (EDS) is in itself a progressive and holistic plan, and one that provides the groundwork for this approach. CN is also already leading and committed to increasing localisation, sustainability and resilience through several other strategies and plans such as *Newcastle 2030*, the *Climate Change Action Plan*, and the *Environment Strategy* and *Circular Economy Action Plan* that are both currently in development.

We therefore see the framework and steps outlined below as a logical next step that interprets its intentions into a broader implementation framework and supports internal and external discussions through which alignment opportunities can be identified. For example, the CN *Economic Development Strategy* and supporting plan have a strong emphasis on building local businesses and skills, and creating the conditions and infrastructure for the City and its people to thrive.

As such, we consider the introduction of additional layers of strategic planning unnecessary and so rather have developed a pathway forward that interprets *existing building blocks* into the *impact supply chains challenge*, to make best use of what is already available. The *system starters*, *impact multipliers*, *advanced impact multipliers*, and *front running innovations* included as possible transition strategies are designed to then push implementation further up the scaling spectrum.

6.1 *Impact Supply Chains Challenge* initial action plan

The following table presents the ‘recommended next steps’, within each transition strategy. Here we have focused on listing out those that could be actioned within the short-er term (up to three years), and with minimum additional budget expenditure required. Some of the actions are sequential, but most could be undertaken in tandem. The full set of possible transition strategies related to each category, including those requiring longer implementation timeframes, can be found in Sections 5.1 – 5.12.

The plan includes a range of strategies from across the scaling continuum, starting with CN’s operations and working up to City-wide activation. It positions CN to play a leading role through adopting *impact supply chains* within its own operations, inspiring and role-modelling the value of this approach to stakeholders and the community, and coordinating the overall development and implementation of the approach across Newcastle. As discussed throughout this report, Anchors Institutions and Anchor Collaboratives have proved to be a powerful way to start a movement and quickly scale impact. Newcastle is endowed with quality potential Anchor Institutions and CN already has strong relationships with a number of these organisations – such as Hunter New England Health, Hunter Water, Hunter Joint Organisation (HJO), University of Newcastle, Compass Housing and more. Realising the potential outlined in this report, in support of the ambitions defined in CN’s *Community Plan* and *Economic Development Strategy*, the plan includes foundational ‘system starters’, and more challenging but impactful ‘system multipliers’ and ‘front running innovation’ strategies.

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APPENDICES

Appendix A: Project Scope

Project Objectives

- Understand the Local Supply Chain Network in the local economy, including leakages and sectors with limited localised supply chains.
- Identify best practice principles for encouraging increased localisation within our local economy, including prioritisation of industries and sectors where incentivisation may be most effective.
- Provide practical recommendations for CN to implement to increase localisation of the supply chains within our local economy to increase resilience and sustainability, including related to procurement policy.

Scope of Work

The scope of work involves:

Applied research / scoping

- Provide a high-level overview of the current core supply chain trends for the local economy.
- Research current supply chain leakages by sector / industry enterprise structures.
- Research potential supply chain remedies to foster localisation.
- Identify labour market transitional requirements for increased localisation.
- Explore local labour supply issues in failing industry labour markets, for example, building trades and care / community service sectors.
- Explore structural inequities and / or market failures in labour market inclusion for marginalised social groups.
- Explore opportunities for local self-financing structures.
- Alignment of the research to both the SDGs, goals of the New Local Framework and Circular Economy principles.

Policy Development, Community Linkages and Promotion

- Provide recommendations to improve the local supply chain based on best practice and case studies.

Deliverables

The contracted provider will deliver:

- Research and Recommendations report.
- Regular reporting on the progress of the project and meeting with the CN PCG.
- Presentation to Council.
- Presentation to key internal stakeholders

Appendix B: Our Approach

The project approach is summarised in **Figure 1**. Specific activities undertaken at each stage are detailed below.

Data collection

In addition to reviewing relevant CN policy and strategy documents, four key sources of data were collected through Stages 1-3: CN procurement spend data and Newcastle industry spend data; supply chain localisation research, best-practice case studies; and local stakeholder perspectives. Our approach to each of these is outlined below.

CN procurement spend data and Newcastle industry spend data

This involved quantitative analysis to map the local supply chain network, analyse spend flows and leakages, and assess issues and inequities using existing data sets. This involved a detailed analysis using REMPLAN data and CN spend data. The data collected revealed a number of industries that present the greatest opportunity for local economic impact and employment as presented in Section 4.

The approach used to model the potential impacts from a spend shift is outlined below using the manufacturing sector as an example.

REMPLAN Output for the Manufacturing Sector

1. From a direct increase in output of \$153 million it is estimated that the demand for intermediate goods and services would rise by \$57.059 million. This represents a Type 1 Output multiplier of 1.373. These supply-chain effects include multiple rounds of flow-on effects, as servicing sectors increase their own output and demand for local goods and services in response to the direct change to the economy.
2. The increases in direct and indirect output would typically correspond to the creation of jobs in the economy. Corresponding to this change in employment would be an increase in the total of wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated at \$36.962 million.
3. Total output, including all direct, supply-chain and consumption effects is estimated to increase by up to \$247.021 million. This represents a Type 2 Output multiplier of 1.615.

REMPLAN Employment for the Manufacturing Sector

1. From a direct increase in output of \$153.000 million the corresponding creation of direct jobs is estimated at 177 jobs. From this direct expansion in the economy, flow-on supply-chain effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in the gain of a further 127 jobs. This represents a Type 1 Employment multiplier of 1.718.
2. The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A

proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under this scenario are estimated to further boost employment by 114 jobs.

3. Total employment, including all direct, supply-chain and consumption effects is estimated to increase by up to 418 jobs. This represents a Type 2 Employment multiplier of 2.362.

Supply chain and localisation research

We undertook a national and global level desk-top scan to explore the range of potential outcomes that can be generated through localising supply chains, trends influencing supply chain considerations, and to identify market conditions that enable localising supply chain agendas as discussed in Section 2. We were unable to identify any existing Newcastle-focused research or market analysis specifically relating to this topic.

Best-practice case studies

As part of the national and global level desk-top scan we also sought out best-practice case studies that could inform our recommendations for CN. Our focus was on case studies that detailed initiatives contributing to: economic localisation, supply chain localisation, sustainable supply chains, impact procurement, and economic and supply chain resilience. Through our analysis, we identified groupings of key strategies that can be employed to support localisation, resilience and sustainability as defined in Section 5.

Stakeholder perspectives

Two workshops with CN staff from strategic and operational teams were held, with input on existing initiatives and preferred directions generated (and discussed further below). A cross-section of local organisational stakeholders were also invited to share their perspectives on the project through a short survey. The survey was distributed to select organisations via direct invitation by CN and Ethical Fields (see Appendix D for the questions). Whilst the two responses received were rich and useful, as the response rate was very low a key recommendation is to undertake further research into stakeholder perspectives and priorities for the Region.

Analysis and synthesis

To analyse and apply the data inputs generated through Stages 1-3, the project team used two core 'sense-making' tools: the *Three Horizons of Change Model*, as developed by Curry and Hodgson⁵⁰; and a collection of tools related to *Theory of Change* methods.

The *Three Horizons of Change* model is a 'thinking tool' that assists with identifying preferred futures, so as to build an understanding of the broad 'pathways of change' available. It was selected as it is ideally suited to the Newcastle context - where opportunities and challenges relating to a rapidly changing environment are emerging, and therefore decisions and actions in the not-too-distant future will be required. It is commonly used to help identify the strategies that will most effectively support processes of transition.

⁵⁰ Curry A, Hodgson A. (2008). Seeing in Multiple Horizons: Connecting Futures to Strategy. *Journal of Future Studies*, 13:1–20

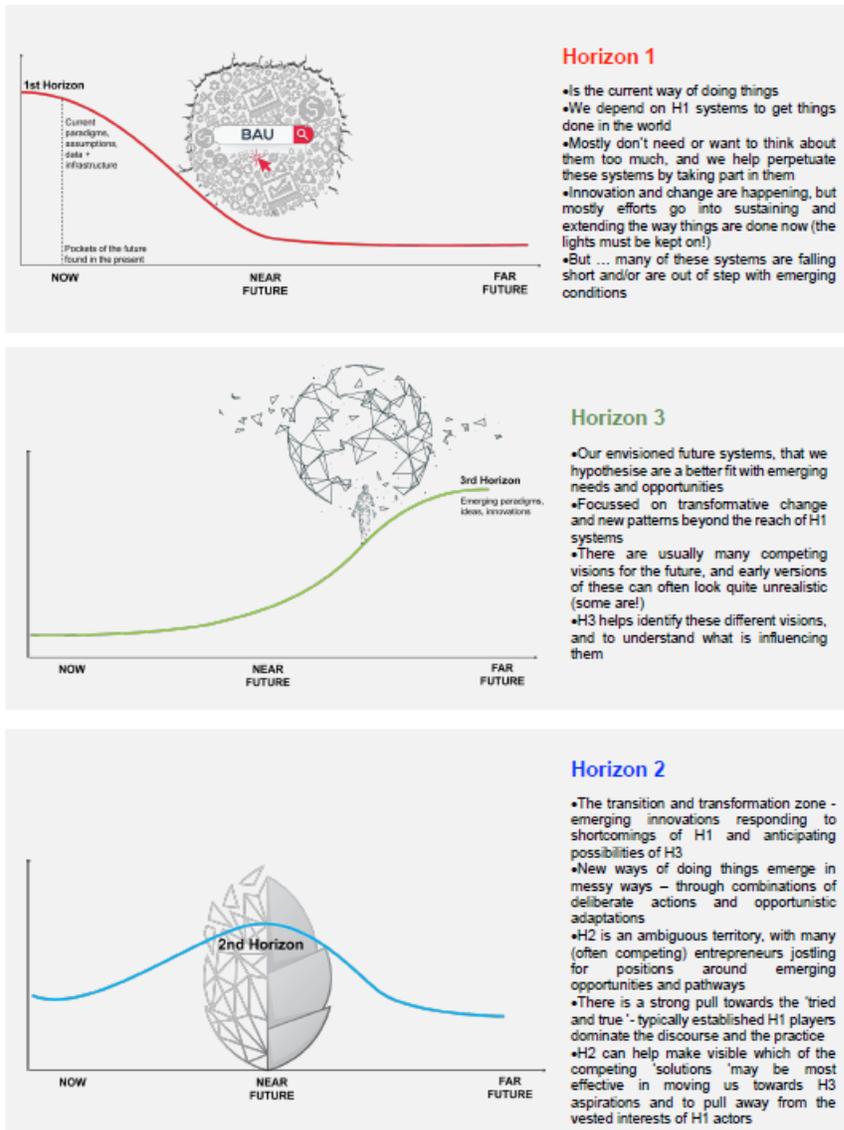


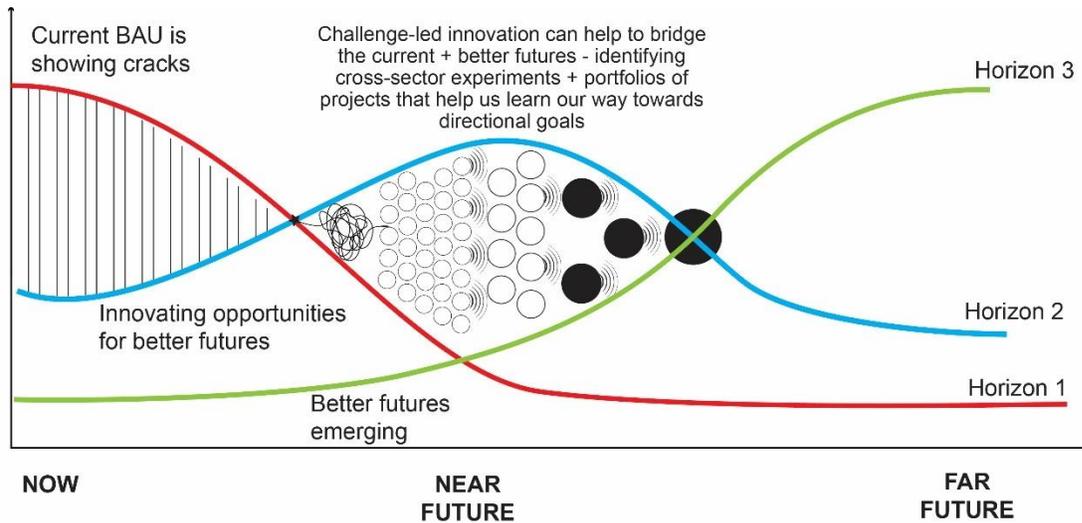
Figure 25: Excerpt from: <https://medium.com/y-impact/creating-intentional-futures-aaa4cd2571e9>

In parallel, we applied a *Theory of Change* lens to the analysis process. At its most simple, this tool defines the necessary and sufficient conditions required to bring about a specified long-term outcome, through mapping the broad goal to the intermediate and early-term changes that would be required. This defines a set of connected outcomes known as a 'pathway of change'. For this project, the 'goals' specified by CN were broadly framed as localisation, sustainability and resilience, with the primary change mechanism explored being its supply chain practices and opportunities. As this focus is multi-faceted and there are inherent tensions between the three elements, we drew on a *Theory of Transformation* approach to assist with sense-making and navigation through the 'probable', 'plausible' and 'possible' pathways to change⁵¹. A *Theory of Transformation* "incorporates and integrates multiple

⁵¹ Voros (2003, 2017)

theories of change operating at many levels that, knitted together, explain how major systems transformation occurs” (Quinn-Patton, 2019).⁵²

Figure 26 shows how the two sense-making tools were brought together in the analysis process to assist with navigating the range of possible pathways and strategies that could be engaged with when prioritising and balancing localisation, sustainability and resilience agendas.



Challenge Mapping within the Three Horizons Framework

Source: Drawing on Sharpe, Hodgson et al (2016) and Mazzucato, 2017. Created by Yunus Centre, Griffith University, 2021

Figure 26: Three Horizons combining challenge-led innovation⁵³

Through the staff workshops, participants unearthed a *Preferred Future* (or third horizon) that takes an evolutionary approach to balancing localisation, sustainability, and resilience objectives – building on existing foundations, whilst establishing clear directions towards opportunities and the overall potential. In summary, pathways towards this future identified by participants included:

- Harnessing CN purchasing power and influence to promote the three objectives
- Increased sourcing from local businesses
- Import replacement
- Promotion of businesses supporting waste reduction, sustainability, and circular economy initiatives
- Setting the conditions to seed, grow and attract businesses contributing to localisation, sustainability, and resilience
- Creating a sustained sense of community and community support beyond buying local campaigns

⁵² Quinn-Patton, M. (2019). *Blue Marble Evaluation: Premises and Principles*. London, The Guildford Press

⁵³ For more information see: <https://medium.com/y-impact/creating-intentional-futures-aaa4cd2571e9>

Drawing on the combined inputs, we developed four broad groupings to categorise the possible approaches, strategies and policies identified as having strong potential to contribute to and support intentional Transitions towards the *Preferred Futures*:

- **System Starters** - are foundational strategies that CN can easily implement and control
- **System multipliers** - build on and strengthen system starters and start to increase scale
- **System multipliers +** - these are more challenging but impactful strategies, that also create intentional relationships and feedback loops between individual initiatives to strengthen overall impact
- **Front running innovations** - leading approaches to support future industries, create local skills to attract industry, and engage local communities in experimentation towards the *Preferred Future*

Section 5 presents our recommendations, organised according to these categories.

To integrate and balance the three ‘goals’ of localisation, sustainability and resilience, and to interpret them into the supply chains domain specifically, we then drew on further desk-top research to develop our suggested *Impact Supply Chains Challenge* approach. This is introduced in Section 3. This process draws on the *Theory of Change* tools described earlier, and is described in more detail in Section 3 using an early-stage example of a Challenge Map.

This approach draws on the work of Mariana Mazzucato,⁵⁴ which includes a focus on improving coherency and understanding around how complex, outcome-oriented and multi-stakeholder ‘missions’ can be designed and achieved. The *Challenge Mapping* framework is therefore designed to assist with the communications, engagement and the governance of complex initiatives oriented towards particular goals. This approach also supports a shift in the focus of innovation support initiatives, from individualised to collaborative, as shown in **Figure 27**.

This figure is drawn from a recent article by the UK Design Council, and the accompanying article offers a useful example of how a Mission-led (or Challenge-led) approach can be applied within a city and to complex Challenges such as those discussed in this report.⁵⁵

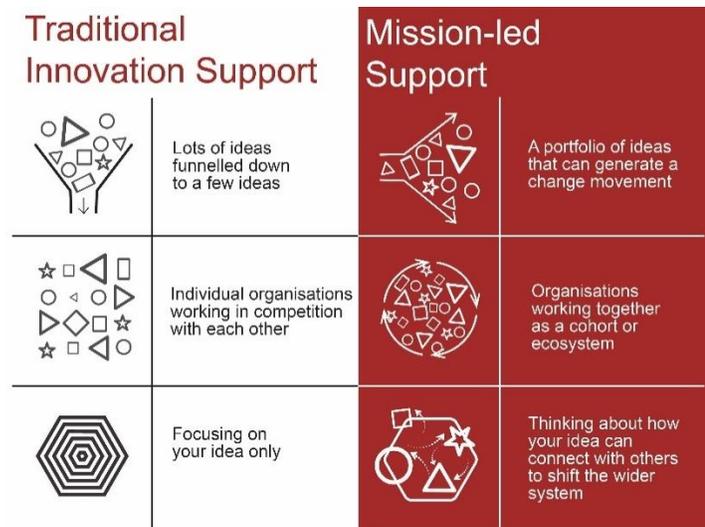


Figure 27: Traditional innovation support vs. mission-led innovation support

⁵⁴ Mazzucato, M. (2018) Mission, Mission-Oriented Research & Innovation in the European Union: A problem solving approach to fuel innovation-led growth. Available at: https://ec.europa.eu/info/sites/default/files/mazzucato_report_2018.pdf (Accessed 10 February 2022)

⁵⁵ To read the full article, see: <https://medium.com/design-council/a-design-led-approach-to-londons-recovery-missions-1cd2e28205b6>

Appendix C: Glossary of Definitions

Anchoring Strategies: specific initiatives that leverage an organisation’s resources in ways that achieve local value (e.g., a Local Government ‘buy local’ target)

Anchor Missions: comprising multiple, interconnected Anchoring Strategies; the process of deliberately deploying the institutions’ long-term, place based economic power to strengthen a local community.

Anchor Institutions: large organisations that are based in, and have a long-term commitment to, a suburb, town, city or defined region, and that demonstrate their commitment by intentionally aligning their long-term, place-based economic power to strengthen their local communities.

Anchor Collaboratives: when multiple Anchor Institutions join together to harness and align their resources and efforts, often through formalised alliances and strategies, around a specific Anchor Mission(s) within a defined community.

Greater local: as defined by the Greater Newcastle Metropolitan area which includes the five surrounding LGAs.

Hunter Region: as defined by the area which includes the following councils Cessnock City Council, Dungog Shire Council, Lake Macquarie City Council, Maitland City Council, MidCoast Council, Muswellbrook Shire Council, Newcastle City Council, Port Stephens Council, Singleton Council and Upper Hunter Shire Council.

Impact Supply Chains: intentionally and systematically utilise supply chains to achieve specified impacts, elevating the focus to a supply chain systems level through establishing a more holistic and multi-faceted perspective on impact. An impact supply chain is created when an entity (or collaboration of entities) design supply chain management policies and practices to systematically foster, maintain and grow supply networks that are intentionally designed to contribute to improving specific social, environmental, cultural and/or local economic development and resilience objectives. *Impact supply chains* can be applied at the organisational level, but most importantly, also provides a framework to organise city-wide supply chain systems transitions.

Local: correlates with varying interpretations of ‘place’. For this project local has been defined as Newcastle.

Local Elements (in the context of supply chains): Includes the range of supply chain elements that can be localising including natural resources, suppliers, materials & parts, manufacturing & production, shipping & transport, warehousing, distribution, retail & office, customer & consumer, research & design, reuse, repair & recycle, ownership, executive & management, employees, capital flows, energy, and business structures, models and strategies.

Local Economy: the economic system and range of economic activity in a local area, in this case Newcastle.

Localisation: the process of building the full range of market infrastructure needed to support the goods and services a community needs being produced and owned locally and regionally, whenever possible.

Local Government Area: the specific local area constituting a subdivision of local governance

Localising Supply Chains: to increase supply chain elements that are physically locally-based and/or are closer to the point of focus/place

Supply Chains: A supply chain is a system of organisations, people, activities, information and resources involved in supplying a product or service to a consumer. Supply chain activities involve the transformation of natural resources, raw materials and components (or in service supply chains the transformation of knowledge) into a finished product or service and delivery to the end customer.⁵⁶ In sophisticated supply chain systems (or a circular supply chain), used resources, materials and products are designed to re-enter the supply chain where value is recyclable. Under this model, the supply chain also includes the chain of networks, organisations and resources involved after first consumption or use (repair, re-use, recycle etc.). Supply chains can vary from simple and linear to complex and multifaceted. They can also vary from local to global.

Supply chains are important for business and exist across all industries. An *enterprise supply chain* is the supply chain for a specific business or enterprise. Efficient supply chains increase customer satisfaction through correct and efficient delivery of goods and services and effective design reduces costs, improves agility and competitiveness. With the rise of corporate social responsibility, environmental, social and cultural considerations within the supply chain are becoming increasingly important for business.

Supply chains are also important for cities, regions and its constituents. A *regional supply chain network* is the network of enterprise supply chains that operate across a region or city. This network of supply chains is critical for meeting society's day to day needs – commonly referred to as the engine or veins of the economy.

This project is interested in both the city-wide supply chain network - or Newcastle's supply chain network (network of enterprise supply chains operating across Newcastle), and the City of Newcastle's supply chain.

Newcastle: The Newcastle Region as defined by the Local Government Area boundary.

Regional: The wider area expanding from a local area, for this project defined as the Hunter Region.

Resilience: Resilience is a broad concept, and when applied in different contexts takes on different emphases. Economic resilience is defined as the ability of the economy to recover quickly from a shock, the ability to withstand a shock, and the ability to avoid the shock altogether. Economic resilience and supply chain resilience are related, but not equivalent. Supply chain resilience is still emerging as a concept, but generally refers to the ability to maintain operations (and therefore supply) during a crisis.

⁵⁶ As defined by Council of Supply Chain Management Professional (CSCMP) Available at: <https://cscmp.org/>

Appendix D: Stakeholder Survey Questions

Q1 Contact Details

- Name
- Phone
- Email
- Organisation Name

Localising Newcastle's supply chain

These questions relate to the supply chain of the Newcastle region

Q2 What does localising Newcastle's supply chain mean to you?

Q3 What impact do you think increasing the following characteristics would have on the Newcastle Region? Impacts may be economic, social, environmental, other.

	Impact	Comment
Increasing localisation of the supply chain	Positive/Negative/Unsure	
Increasing social benefit of the supply chain	Positive/Negative/Unsure	
Increasing sustainability of the supply chain	Positive/Negative/Unsure	
Increasing resilience of the supply chain	Positive/Negative/Unsure	

Q4 What do you think the greatest opportunities are to localise the supply chain of the Newcastle region?

Q5 What do you think the greatest barriers are to localise the supply chain of the Newcastle region?

Q6 Would you consider joining a collaboration of local organisations utilising the supply chain to increase local, social, sustainable and/or resilience objectives?

Yes / No

Localising your organisation's supply chain

These questions relate to your organisation's practices

Q7 Please indicate which category best describes the sector your organisation is part of

Use REMPLAN (19) categories, drop down list

Q8 How many people does your organisation employ?

- 1-19 people
- 20-199 people
- 200+ people
- Non-employing

Q9 Does your organisation have a strategic objective relating to any of the following?

- Localisation (such as supporting locally owned businesses)
- Social (such as supporting marginalised and disadvantaged people, gender equality, other inequalities)
- Sustainability (such as carbon action, circular economy)
- Resilience (such as supply chain resilience, workforce resilience)
- Other

Yes / No

Optional: Please provide details

Q10 Are any of the following a consideration in your approach to purchasing:

- Localisation (such as local ownership)
- Social (such as supporting marginalised and disadvantaged people, gender equality, other inequalities,
- Sustainability (such as preventing pollution, carbon action, material and resource use efficiency, waste and disposal of goods)
- Resilience (such as supply chain resilience)

Currently considered, Not currently considered but am interested, Not interested

Optional: please provide details

Q11 If you said yes to any of these areas, what are the main reasons they are considered? (*choose all that apply – if you answered ‘no’ at Q4, please choose ‘not applicable’*)

- Not applicable
- Get better service
- Financial efficiency
- Boosting supply chain competitiveness
- Public commitment and reputation
- Support local business owners and employment
- Support employment opportunities for disabled, marginalised and/or disadvantaged persons
- Contribute to sense of community
- Reduce environmental impact (e.g., travel miles)
- Driving innovation and market transformation

- Other _____

Q12 Do any of the following exist in your organisation? (Select all those that apply)

	Procurement expertise/capacity	Procurement Targets	Procurement Policy (that includes consideration or requirements for...)
Local	Nil/basic/moderate/expert	yes/no/unsure	yes/no/unsure
Social	Nil/basic/moderate/expert	yes/no/unsure	yes/no/unsure
Sustainability	Nil/basic/moderate/expert	yes/no/unsure	yes/no/unsure
Resilience	Nil/basic/moderate/expert	yes/no/unsure	yes/no/unsure

Optional: please provide details

Q13 For procurers, what would make it easier to purchase from suppliers that offer local, social, sustainable and/or resilience elements? (*choose all that apply*)

- Supplier listings / web portal for easy identification of options
- Supplier brokerage – i.e., assistance to find the right supplier for you
- Opportunities to meet suppliers with these characteristics
- Opportunities to view products / services, with no commitment
- Information about products and services
- Testimonials from other customers, about a supplier and their product / service
- Communicating the benefits to business
- Funding intermediaries to assist the development of suppliers with these characteristics
- Guidance materials and templates
- Policy and tendering requirement changes
- Training and education for procuring organisations
- Training and education for suppliers
- Incentives for business
- Demonstrating successful examples and case studies
- Accreditations for these characteristics
- Other _____

Q14 For procurers, what are the barriers or reasons for not choosing local suppliers? (*choose all that apply*)

- No local supplier
- Takes longer / more complicated process
- More expensive
- Concerned about quality of local supply

- Concerned about quantity of local supply
- Other _____

Q15 For local suppliers, what would make it easier to supply to local procurers / consumers (*choose all that apply*)

- Procurer listings / web portal for easy identification of options
- Procurer brokerage – i.e., assistance to find the right supplier for you
- Opportunities to meet procurers
- Opportunities to showcase products / services, with no commitment
- Communicating the benefits to business
- Funding intermediaries to assist the development of procurers seeking these characteristics
- Guidance materials and templates
- Policy and tendering requirement changes
- Training and education for procuring organisations
- Training and education for suppliers
- Incentives for business
- Demonstrating successful examples and case studies
- Accreditations for these characteristics
- Other (please provide details)

Q16 Please select the top 3 highest spend categories of products/services for your organisation

Use REMPLAN (19) categories, drop down list

Unsure

Q17 What percentage of your purchasing spend is with:

local suppliers %/unsure

NSW suppliers %/unsure

Australian suppliers %/unsure

International suppliers %/unsure

Q18 If you would like to know more about the project and to learn about ways you and your organisation could contribute to localising Newcastle’s supply chain, please indicate below. We will provide this information to the City of Newcastle. (*If you choose ‘yes’, please ensure you have provided your contact details at QX*).

Yes / No

Appendix E: Example - Missions Valencia 2030

Figure 28 is an excerpt from the Missions Valencia 2030 initiative (Spain), and provides an example of how a similar process has been introduced by Valencia City Council, to catalyse multi-sector alliances and action towards building a ‘mission constellation’ of Research & Innovation (R&I) projects to support progress towards the City’s four Mission Areas – Healthy City, Sustainable City, Shared City, and Entrepreneurial City.⁵⁷

Missions Valencia 2030: A mission constellation of R&I projects

A quintuple helix approach to missions

With the aim of mobilising innovation projects from the entire ecosystem to build a so-called mission constellation of R&I projects (see Figure 3), a membership programme, Missions València 2030 Ambassador Organisations, has been recently launched. More than 20 organisations (universities, private sector and civil society) have already joined the initiative. An active communications campaign has been designed to attract citizens, entrepreneurs and businesses to contribute to València's missions.

Missions València 2030 has focused heavily on involving all five helixes of the innovation ecosystem: private sector, public sector, universities, civil society and media. València's City Council recognises that these multi-sectoral alliances will help the government to better understand the needs of, and reach, citizens. València's mission ambassador programme, as well as frameworks to align the different missions, such as Public Innovation Grants (€1 million per year) and the Public Procurement of Innovation (commitment to reach €5 million annually in the period 2021-2024), are intended to facilitate the engagement of different stakeholders from throughout the city's innovation ecosystem.

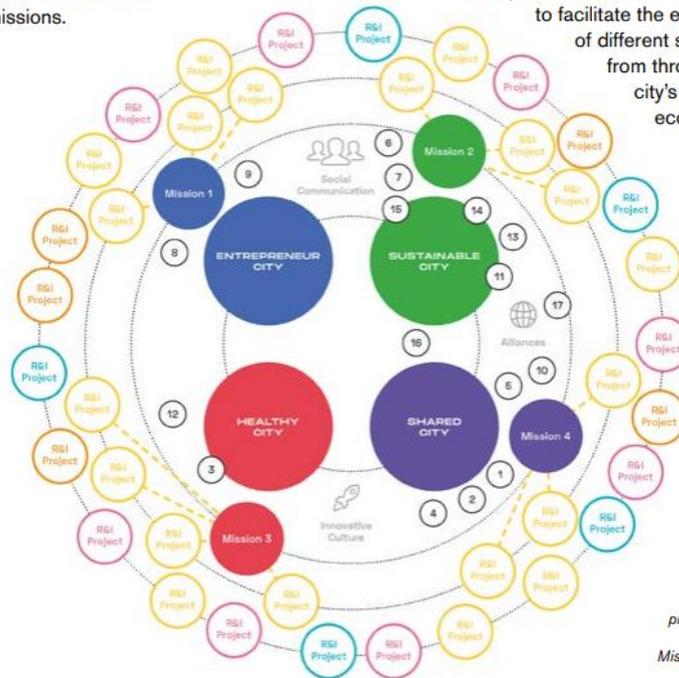


Figure 3: A mission constellation of R&I projects from the entire ecosystem. (Source: Missions València 2030)

Figure 28 Missions Valencia 2030 initiative (Spain)

⁵⁷ For more information see: <https://www.missionsvalencia.eu/?lang=en>

Appendix F: List of Case Studies

Ref	Case Study Name	Location	Primary Theme
1	Local Government leads on strengthening and rebuilding its local economy through collaboration with other Anchor Institutions	Preston, United Kingdom	Demonstrating leadership & commitment
2	A Compact-based approach to establishing an employment-focused Anchor Collaborative	Geelong, Victoria	Demonstrating leadership & commitment
3	Federal strategy to build onshore domestic capability and supply chain resilience	Australia	Aligning and implementing policies, plans and strategies
4	Co-creation of strategic goals and roadmaps to engage supply partners	Helsinki, Finland	Aligning and implementing policies, plans and strategies
5	Innovative and ambitious supply chain targets	Oslo, Norway	Aligning and implementing policies, plans and strategies
6	Strategic alignment with national and international goals, such as SDGs	Zeeland, Netherlands	Aligning and implementing policies, plans and strategies
7	Data to inform, monitor and demonstrate strategic success	Preston, United Kingdom	Improving data availability and impact measurement
8	Comprehensive monitoring and accounting systems	Flanders, Belgium	Improving data availability and impact measurement
9	Facilitating learning and iterative implementation cycles	Northern Territory, Australia	Improving data availability and impact measurement
10	System change requires a movement, and a movement requires deep collaboration	Seattle, United States	Enriching networks, collaborations and inspiring local action
11	Industry-led collaborations supporting progress towards National policy objectives	New Zealand	Enriching networks, collaborations and inspiring local action
12	A holistic plan to optimise local procurement	Norther Territory, Australia	Developing supply chain management and procurement capabilities
13	Establishing clear, targeted criteria to assure implementation of localisation objectives	Philadelphia, United States	Developing supply chain management and procurement capabilities

14	Environmental product declaration improves transparency around production 'externality' costs	Rotterdam, Netherlands	Developing supply chain management and procurement capabilities
15	Supplier Skills Program to build capability and networks, and generate employment opportunities	London, United Kingdom	Building supplier capability and capacity
16	Free sustainability resources for Local Government, suppliers and other stakeholders	Australia & New Zealand	Building supplier capability and capacity
17	An Anchor strategy in action: designing the contracting opportunity to proactively address local needs	Toowoomba, Queensland	Building supplier capability and capacity
18	Investing in community-ownership models to catalyse regenerative tourism outcomes	Gippsland, Victoria	Prioritising optimal business models and aligned strategies
19	Strategies to increase business alignment with City vision	Haarlem, Netherlands	Prioritising optimal business models and aligned strategies
20	Gearing contracts to support multi-faceted objectives	Brittany, France	Prioritising optimal business models and aligned strategies
21	Community-owned technology innovation demonstrating a new and sustainable approach to energy provision	Manilla, New South Wales	Enabling advantage and sunrise industries, goods and services
22	Supporting sunrise goods and innovation through 'forward commitment' procurement	Geelong, Victoria	Enabling advantage and sunrise industries, goods and services
23	Business certification and connection Pollinators facilitating and fast-tracking supply chain transitions	Various	Fostering pollinators and other catalytic initiatives
24	Member-based social enterprise model supporting local innovation and entrepreneurship capability	Geraldton, Western Australia	Fostering pollinators and other catalytic initiatives
25	Mutual Credit Network catalyses regional intra-network trading and supports operational stability	Sardinia, Italy	Fostering pollinators and other catalytic initiatives
26	Peer-to-peer business lending platform provides Place-based investment mechanism, supporting SMEs	Lancashire, United Kingdom	Motivating place-based capital and impact finance
27	Community Banks embed local ownership in financial infrastructure	United Kingdom	Motivating place-based capital and impact finance

28	Community-led peer-to-peer investment network that connects local investors	Washington, United States	Motivating place-based capital and impact finance
29	Revolving loan fund used to support sustainable and inclusive start-ups	Cleveland, United States	Motivating place-based capital and impact finance
30	Co-development of technology solutions with strategic supply partners to drive innovation	Malmö, Sweden	Aligning workforce, technology, materials and other physical infrastructure and resources
31	Providing resource recovery infrastructure to catalyse the local circular economy	Fairfield, NSW	Aligning workforce, technology, materials and other physical infrastructure and resources
32	Establishing and catalysing circular economy markets through strategic procurement and inclusive employment initiatives	Auckland, New Zealand	Aligning workforce, technology, materials and other physical infrastructure and resources
33	Leveraging Federal policy programs to secure critical infrastructure	Australia	Leveraging and advocating for enabling policy and legislation within the wider system
34	Legislating local land ownership underpins economic localisation agenda	Scotland	Leveraging and advocating for enabling policy and legislation within the wider system