

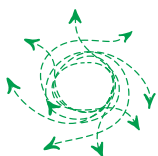


MERSEY LEVEN FOOD HUB

Network Mapping Report

The objective of this component of the Mersey-Leven Food Hub (MLFH) project was to develop and test a methodology to 'map' the 'local food economy' as a tool to understand the mechanisms through which local fresh fruit and vegetables enter regional communities. The particular focus of this work, consistent with the aims of the MLFH project, was to explore how fresh fruit and vegetables enter 'food desert' areas and how accessible it is to people in lower socio-economic suburbs and areas.

Final Report
16 May 2016



CO-DESIGN LAB
TASMANIA



CENTRAL COAST
COUNCIL

The Mersey Leven Food Hub Project was funded through the Heart Foundation's Healthy Food Access Tasmania Project



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Background

As part of the ‘Healthy Food Access Tasmania’ (HFAT) project, the Heart Foundation is working with state and local governments and other stakeholders to improve access to information about how consumers can gain access to healthy, affordable food. The project is also working with stakeholders to inform the design of programs, systems and infrastructure to facilitate better access to healthy foods for people in ‘food desert’ areas in particular.

The Healthy Foods Access Tasmania ‘Interactive Map¹’ website provides information and resources for local governments, their partners in the community and interested individuals involved in the food system. It maps the physical location of and provides summary information about the key players in the food system, categorised into the following types:

- City Farms
- Community Gardens
- Community Meals
- Fruit & Vegetable Shops
- Growers/Producers Farm Gate Sales
- Heart Foundation Funded Projects
- Healthy Schools
- Hub, Co-ops & Box Schemes
- Markets
- Neighbourhood Houses
- Social Determinants of Health Projects
- Supermarkets & General Stores

The Heart Foundation has invested in this Mersey-Leven Food Hub (MLFH) Project to contribute to the broader HFAT work, but also to contribute to knowledge about how local food systems currently work and how they can be improved.

This ‘local food economy mapping project’ is one component of a broader Mersey-Leven Food Hub (MLFH) Project. Specifically, it focusses on understanding the interconnectedness between players in the food system and informs the development of methodologies to document and analyse those networks (see Objectives below).

Landscape & Social Research Pty Ltd was commissioned to undertake this component of the project. This report outlines the methodology and findings of the ‘local food economy mapping’ project.

Objectives

The objective of this component of the Mersey-Leven Food Hub project was to develop and test a methodology to ‘map’ the ‘local food economy’ as a tool to understand the mechanisms through which local fresh fruit and vegetables enter regional communities.

The particular focus of this work, consistent with the aims of the MLFH project, was to explore how fresh fruit and vegetables enter ‘food desert’ areas and how accessible it is to people in lower socio-economic suburbs and areas.

Methodology

The methodology for this project is based on a snowballing recruitment of key people within the local food economy to collect data about the transactions between agents or nodes within the network.

Recruitment of interviewees was targeted between producers and retailers, box-schemes, food-hubs, canteens/commercial processors and/or community houses. We did not go the next step of mapping the ‘final’ consumer (households). As well as resource considerations, this decision was also based on the fact that there are many factors that influence the demand for fresh fruit and vegetables and it was not the role of this project to explore those issues.

As the primary objective of this component of the project was to develop and test a methodology for mapping a local food economy, and determine if this approach is feasible and reliable, we did not attempt a ‘census’ of all actors in the food economy. Rather, we attempted to cover as many different types of actors as possible and be as comprehensive in our scope as resources allowed.

Specifically, the following tasks were undertaken:

1. Identify software packages appropriate for the analysis and presentation of network data. ‘Gephi’, and open source social network analysis software package was selected.
2. Scope data requirements to enable the construction of a ‘map’ of the regional food economy.
3. Develop a semi-structured interview guide to facilitate the collection of data about transactions between actors in the local food economy.
4. Develop data entry and collation capacity (using Filemaker Pro – a relational database platform).

¹ <http://www.healthyfoodaccesstasmania.org.au/interactive-map/>

5. Identify 'food deserts' within the Mersey-Leven region as starting points for a 'snowballing' recruitment method (as an 'outward' recruitment process)
6. Identify producers and processors to interview as starting points for 'snowballing' recruitment method (as an 'inwards' recruitment process).
7. Send an email and/or telephone potential interviewees to seek their participation in an interview. Most interviews were set up with a combination of email and telephone follow-ups. Some 'cold calling' of producers were successful but only for shorter telephone-based interviews. No producers were willing to meet face-to-face for a longer interview.
8. Organise and conduct a face-to-face or telephone interview (of about 30 minutes duration) with willing parties.
9. Enter data into the 'transactions' database.
10. Export coded data into 'Gephi' social network analysis software to produce a 'map' outlining the characteristics of the local food economy.
11. Undertake analysis of the implications of the findings to inform policies and programs relating to improving access to fresh fruit and vegetables into local communities.

Some key decisions had to be made in designing the methodology for this project relating to how to manage the issues of:

- Time-scales
- Volumes of produce transacted
- Seasonality, particularly as it impacts on changes in transactions between nodes in the network

Limitations in the capacity of Gephi to weight transactional data in accordance with seasonal variation and volume meant that we decided not to pursue the option of creating seasonally adjusted or volume-weighted maps. To take account of different time-scales and seasonal variations in transactions would have meant producing time-series snapshots of transactions with each interviewee. Given the difficulty in recruiting participants, and the complexity that would have introduced into the data collection process, we decided that it was feasible to only collect data about the 'typical transactions' between actors within the network "typically, over the year." During the interviews, issues of seasonality were discussed in the context of how seasonality

changed purchasing patterns. These issues were recorded and are discussed later in this report.

The 'starting points' for the snowballing recruitment process were:

- 'Community houses', which are generally located in the target communities of interest to this project (namely, Devonport Community House; Eastern Shores Community House; Ulverstone Community House; East Devonport Child & Family Centre).
- Selected small retailers close to 'food desert' areas as determined by SEIFA index of disadvantage, based on data within the Cradle Coast 'Social Atlas'² (IGA Express East Devonport; Fourways Fruit and Veg; The Nut House Ulverstone; IGA Express Latrobe; Eastside Fruit Market, etc.) to identify where they purchased their fresh produce.
- Producers. The starting point for producers was the stallholder lists of local farmers' markets and through recommendations from members of the advisory committee.

As interviews proceeded, producers, retailers, processors and distributors who were mentioned in the interviews were followed up to see if they would be willing to participate in an interview. This is the basis of the snowballing method. By starting at different levels in the food network, we maximised the opportunities for the different networks to either merge if that was their natural tendency or to not merge, in which case we would be able to identify that some nodes in the network were not connected.

This project has shed light on both the opportunities and constraints of attempting this kind of research. Our key observations relating to the success or otherwise of various aspects of the methodology are provided in the conclusions section of report.



² <http://atlas.id.com.au/cradle-coast> accessed 3/2/16

Results

The snowballing method of recruitment, working from both the ‘supply’ and ‘demand’ ends proved to be a successful method for enabling the identification of gaps and ‘breaks’ in the network. However, the reluctance of many actors within the network to discuss their business transactions was frustrating. We under-estimated the amount of time that was consumed in approaching and following up people to interview and had a high proportion of refusals. The most common reason for not wanting to be interviewed was ‘too busy’, while others said that they would rather not disclose their business transactions.

One retailer took exception to the premise of the approach and assumptions underpinning the whole MLFH Project and refused to participate in an interview. The issues raised by this retailer are discussed later in this ‘needs and gaps analysis’ report because they encompass many of the issues that were foreseen early in the design of the project and have influenced the outcomes of it.

The high refusal rate and additional time spent chasing potential participants resulted in fewer interviews being undertaken than we planned. However, we successfully interviewed a sample of ‘actors’ from across the local food economy. The number of interviews and the breadth of data collected is sufficient to enable an assessment of the suitability of this methodology for the purpose of understanding gaps and needs in the local food economy.

The resultant network maps provide useful insights into the factors influencing the availability of fresh fruit and vegetables into the local community.

Node Type	No. of Nodes	No. of Interviews
Aged Care Facility	3	1
Community Groups	4	3
Community Houses	4	4
Distributors/Distribution Centres	5	1
Farmers Markets	6	2
Not for Profit/Community Services	8	2
Processors	2	0
Producers	28	9
Retailers (small supermarkets/fruit and veg shops)	14	3
Large Supermarkets	2	0
Wholesalers	7	1
Totals	83	26

Table 1: Local Food Economy Network Nodes by Type

Network Maps

The resultant ‘network’ maps plotting the transactions between 83 ‘nodes’, are presented using different metrics to illustrate characteristics of the local food economy.

Map 1 (Figure 1) illustrates the ‘connectivity’ between nodes within the network, which is a function of the number of transactions between nodes. This metric highlights that some nodes within the mapped network interact with a large number of other players within the local food economy in terms of the breadth of their transactions (remembering this map does not reflect the volumes of produce transacted or the frequency of transactions over the course of a year).

Map 2 (Figure 2) represents the ‘modularity’ of the network – or the degree to which ‘clusters’ of nodes ‘belong’ together.

Other maps can be produced for specific purposes and components of the network can be filtered out of the network to investigate their influence on the network. We have not spent a lot of time analysing the data in this way because it is more effective to have specific research questions framed against which to respond rather than ‘fishing’ for answers.

Discussion

Map 1 highlights that Second Bite (SB) are a significant player in the local food economy in terms of their ‘saturation’ into the Emergency Food Relief (EFR) sector. This is largely a function of the high number of nodes that they supply and that they source food from.

Elphin Grove Farm (EGF), whilst not a large scale producer in volume terms, is displaying as a significant node within the network map

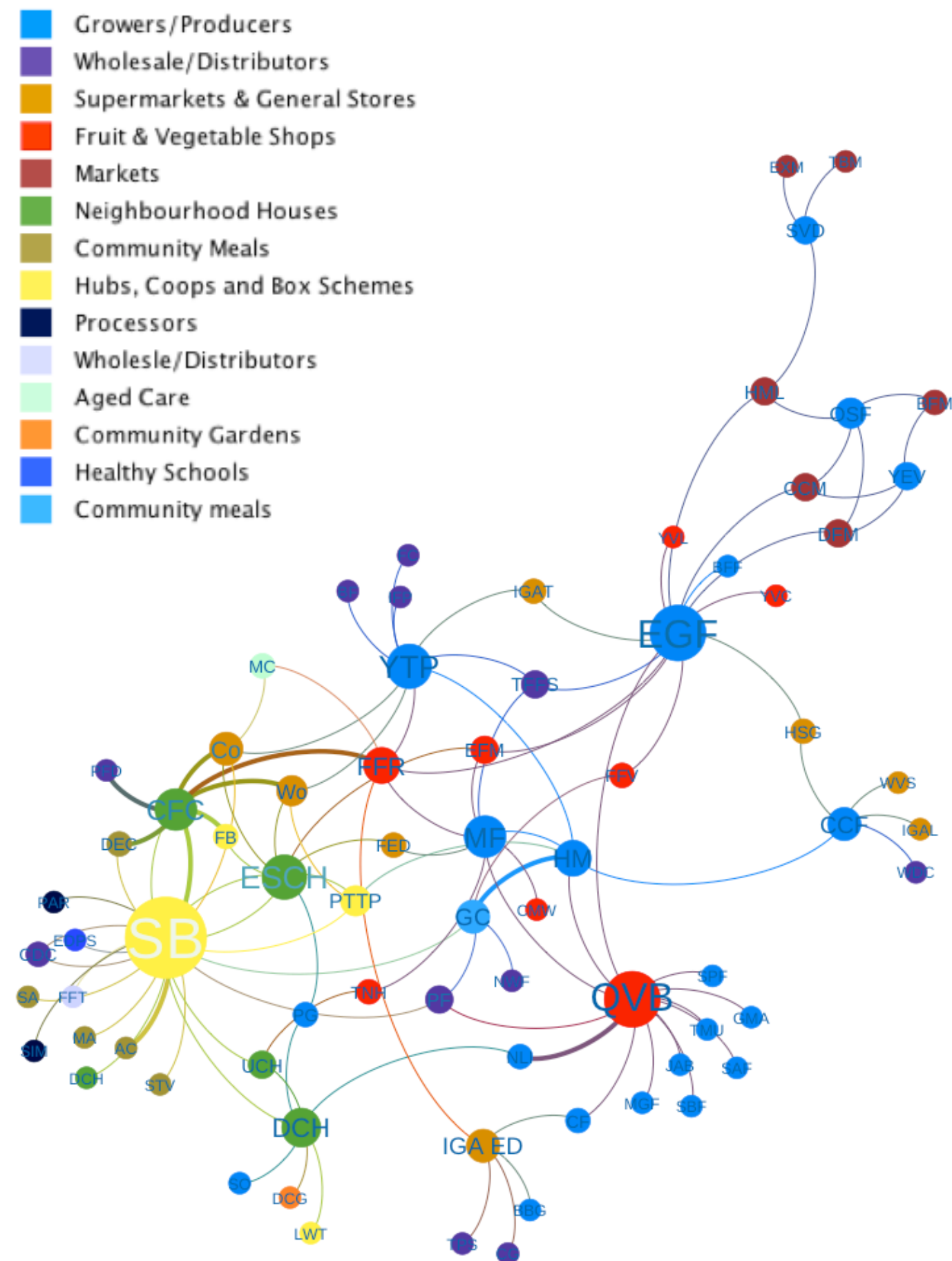


Figure 1: Connectivity between nodes in the local food economy

Note: Node size represent the 'degree' of connectedness. Nodes are colour-coded in accordance with the HFAT Interactive Map colour codes.

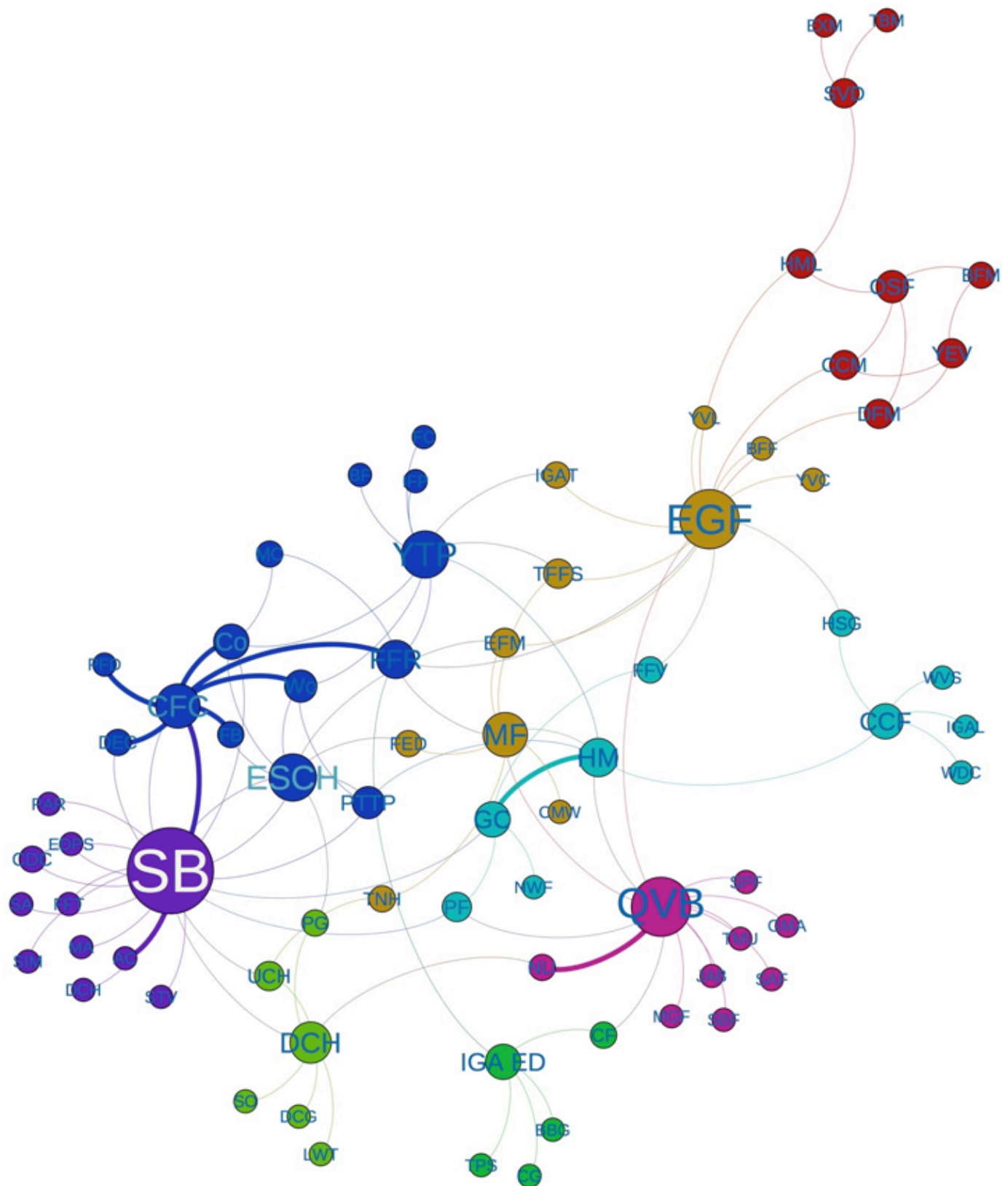


Figure 2: 'Modularity' of nodes within the local food economy

Note: Colours represent the modularity (i.e. relative connectedness of 'families' or 'clusters'). Node size represent the 'degree' of connectedness (larger circles have more connectedness).

AC	Anglicare	JAB	J & A Brandsema
BBG	Bos Berry Garden	LWT	Live Well Tasmania
BF	Best Fresh	MA	Mission Australia
BFF	Bulk Frozen Foods	MC	Meercroft Care Inc
BFM	Burnie Farmer's Market	MF	Milton Farms
CCF	Colin Chapman	MGF	M G Farm Produce
CCM	Cradle Coast Farmers Market	NLI	New Life Industries Pty Ltd
CDC	Coles DC (Costa Group)	NWF	North West Fresh (Tas) Pty Ltd
CF	Charlton Farm Produce	OSF	Old School Farm
CFC	Child And Family Centre - East Devonport	PAR	Paracto
CG	Costa Group	PF	Premium Fresh
CMW	Country Market Wynyard	PFD	PFD Food Service P/L
Co	Coles	PG	Private Gardens
DCG	Devonport Community Gardens	PTTP	Produce to the People
DCH	Devonport Community House	QVB	Quality Veggie Boxes
DEC	Devonport Chaplaincy	SA	Salvation Army
DFM	Devonport Farmer's Market	SAF	Sassafras Farms
EDPS	East Devonport Primary School	SB	Second Bite
EFM	Eastside Fruit Market	SBF	Sheffield Berry Gardens
EGF	Elphin Grove Farm	SIM	Simplot
ESCH	Eastern Shore Community House	SO	Squibbs Orchard
EXM	Exeter Market	SPF	Spreyton Fresh
FB	Food Bank	STV	St Vincent de Paul Society Devonport Region
FC	Fresh Cut	SVD	Steve's Veggies
FED	Foodworks East Devonport	TBM	Turner's Beach Twilight Market
FFR	Feelin Fruity	TFFS	Tas Fresh Food Service
FFT	Fresh Freight	TMU	Tasmanian Mushrooms
FFV	Four Ways Fruit And Vegetables	TNH	The Nut House Fruit Barn
GC	Gateway Church Tasmania (Heaven's Kitchen)	TPS	Tony Producer from Spreyton
GMA	Ayers G P & M W Pty Ltd	UCH	Ulverstone Neighbourhood House
HM	Harvest Moon	WDC	Woolworths DC
HML	Harvest Launceston Market	Wo	Woolworths
HSG	Hill Street Grocer (Hobart)	WVS	Wesley Vale Store
IFP	Island Fresh Produce	YEV	Yee's Veggies
IGA ED	Iga Xpress East Devonport	YTP	Yum Tasmanian Gourmet Potatoes
IGAL	IGA Xpress latrobe	YVC	Young's Veggie Shed (Camdale)
IGAT	IGA Supermarkets Tasmania	YVL	Young's Veggie Shed (Launceston)

Table 2: Network Map To Nodes

because they supply to a large number of outlets locally. Milton Farms (MF) is another node that shows up as a relatively large node because of the number of transactions it has with other nodes within the network map. Yum Tasmanian Gourmet Potatoes (YTP) are producers and packers of potatoes that operate in the region as well as having farms in the North of the state. They show as a relatively large node in the network map because they supply a large number of local retailers and wholesalers. Quality Veggie Boxes (QVB) a privately operated commercial 'box scheme' operating across the North West and West, is showing as a large node because of the large number of producers it sources fresh fruit and vegetables from in the local area. These larger node sizes are reflecting the fact that these businesses were very willing to share their transactional data and reveal who they supplied. However, it also reflects their concentration on the local markets. Other producers interviewed were larger commercial enterprises focussing on the commodity and export markets. The smaller node sizes of these farmers (e.g. Colin Chapman [CCF]) reflect this production system.

Harvest Moon (HM) are a more significant player in the local food economy than the results of the network map suggests. Harvest Moon were not interviewed (to date) and so the map reflects the number of references made by other nodes to them as a supplier.

Map 2 represents the 'modularity' of the network – or the degree to which 'clusters' of nodes 'belong' together. Some trends exposed by this metric are that producers supplying the farmers' markets tend to be more focussed on that production/sales model and are not as active in supplying local retail and wholesalers. They are also not supplying at all into the Emergency Food Relief (EFR) network. Interviews with producers revealed that the production, packing and distribution requirements for different sales methods are very different and it is more efficient to 'play in one space' to achieve efficiencies.

Map 2 also illustrates the close collaboration between the Child and Family Centre, East Devonport Primary School and Community House in East Devonport. Whilst these organisations collaborate across a number of programs, they also tend to have similar purchasing habits and share many of the same suppliers.

Map 2 reveals that there are some distinct, almost closed networks operating independently of each other. It reveals that the Emergency Food Relief (EFR) food supplied into community houses and other community groups/not for profit organisations is almost a totally separate network to the networks operating between 'commercial' producers and retailers/wholesalers.

This is largely a function of the fact that Second Bite and other 'not for

profit' groups rely on donated food from the major supermarkets and wholesalers to supply into their programs.

On the other hand, retailers are supplying produce from a combination of local producers (of all scales) and larger wholesalers. Harvest Moon is a significant player in the region as a producer, processor and wholesaler. They are generous in their support of EFR schemes. They are therefore one of the key nodes within the overall network that link the two apparent 'sides' of the network distinguished by 'commercial' or EFR characteristics.

Some of the smaller independent retailers (e.g. the East Devonport IGA and Quality Veggie Boxes) have their own networks of suppliers. These networks do not 'touch' the EFR networks centred around the community houses and community service provider sectors.

THE NETWORK MAPS HAVE REVEALED THAT A DICHOTOMY DOES EXIST WITHIN THE LOCAL FOOD ECONOMY.

The network maps have revealed that a dichotomy does exist within the local food economy. There is a structural problem that whilst good quality local food does enter the local economy through existing retail outlets, that food is not always being purchased by the people the MLFH Project and other local initiatives are targeting.

The proliferation of free 'EFR' food is both a necessity because it enables the people who cannot afford fresh food to consume it; but also threatens the viability of the commercial sector to provide locally produced fresh produce on a sustainable economic basis.

This dichotomy was acknowledged and elaborated upon during interviews with actors within the region. Interviewees across the network, whether producers, retailers or community groups, acknowledge that the combination of low demand for fresh produce, very low incomes and the fact that it is often expensive to pack and distribute local food into 'food desert' communities means that the EFR economy is becoming not only a necessity, but is itself making the commercial sector less viable in these communities.

For the MLFH eCommerce platform to be effective in improving access to affordable fresh produce to 'food desert' areas, it must 'bridge the gap' between the 'commercial' and EFR sectors.

The following section of the report (Gaps and Needs) focuses on how this might be achieved.

Gaps and Needs

The research undertaken through this component of the MLFH Project has revealed a number of ‘gaps and needs’ that need to be addressed in order to increase the consumption of fresh fruit and vegetables in the region and to bridge the gap between the ‘commercial’ food network and the EFR network. This section of the report draws on information revealed within interviews with actors within the local food economy conducted during this project.

Demand-side issues

The MLFH project, as evolved, has made the assumption that low consumption of fresh fruit and vegetables in low socio-economic areas (which, in and of itself is a well documented fact³) is due to a lack of supply. However, many of the small and medium retailers close to ‘food deserts’ report that they do currently provide affordable fresh fruit and vegetables – but the majority of locals still don’t purchase it.

Community house and NGO interviewees report that many of the people that aren’t eating enough fresh fruit and vegetables and/or require emergency food relief do so because they have no other choice. It’s not necessarily that they make poor food purchasing decisions. For many, it’s simply a choice between buying essentials like medicine or food. This is consistent with the findings of various pieces of research into cost of living in Tasmania such as: A Cost of Living Strategy for Tasmania⁴, Hard Times: Tasmanians in financial crisis.⁵

Most of the ‘EFR food’ currently being made available into Community Houses and similar centres is supplied essentially free of charge. It is obviously unreasonable to expect commercial producers to supply into that ‘market’.

Some ‘waste’ or second-grade product is finding its way into the ‘social food’ network where the suppliers don’t have to wear the cost of any specific packaging, freight or logistics costs. However, Community Houses and similar service providers are ill-equipped (in time and facilities) to manage volumes of fresh produce that is at or near its shelf life.

Much of the fresh food being donated to Second Bite, which is then distributed widely through the local food network (into the ‘social food’ sub-network) is coming from large supermarkets and is therefore not necessarily ‘local’ product. Harvest Moon and some of the other larger wholesalers do donate food into the ‘social food’ network via Second Bite and others.

The only opportunity therefore for commercial producers to supply into the ‘social food’ sector is therefore to replace what the community

houses etc. purchase from the supermarkets and other retailers to supplement their ‘free’ food. If the eCommerce platform is simply replacing one retail purchase with another ‘online’ retail purchase, all it is doing is acting as another player in the market. Therefore, to ensure the eCommerce platform is not anti-competitive, the MLFH needs to ‘grow the market’.

To ‘grow the market’ it is necessary to increase local demand for fresh produce. This task is not within the scope of the MLFH project and will remain the remit of other organisations. However, it is important that MLFH remains part of the overall conversation about local food supply.

The key things that the eCommerce platform, supported by an active MLFH network, could do to help resolve some of these gaps and needs would be to:

1. Enhance awareness of availability of fresh local produce, particularly seasonal abundances when prices of produce are lower.
2. Facilitate access to that local produce through the eCommerce platform.
3. Enable local producers to promote their produce and make it available to local customers.

A separate (i.e. outside the scope of the eCommerce trial) but related need is to facilitate more efficient logistic support (particularly transport and warehousing) to maximise opportunities for producers and processors to achieve economies of scale, therefore enhancing the economic viability of local food businesses. There are opportunities for entrepreneurship and/or social enterprises to move into this area once the networks between producers and consumers have been strengthened. It is likely that the eCommerce platform will strengthen that interconnectedness and sense of shared vision over time.

³ see Tasmanian Food Security Council, 2012 Food for all Tasmanians: a food security strategy.

⁴ Adams, D, 2011 A Cost of Living Strategy for Tasmania, Department of Premier and Cabinet: Hobart.

⁵ Flanagan K, 2009, Hard Times: Tasmanians in financial crisis. Anglicare Tasmania, Hobart.

Legislative Considerations

Landscape & Social Research undertook a scan of the legislation growers and processors in the fresh fruit and vegetable sector have to conform to in 2015 as part of a research project for Food Innovation Australia Limited. That work was based on a scan of the 'Business Licence Information System,' and identified a list of around 20 pieces of legislation and codes of practice were identified. This information was updated and is re-presented herein because it is critical that producers and processors, in particular, are aware of their obligations when supplying through the proposed eCommerce platform. This summary is presented as Table 3.

More than 20 horticulture commodities attract a levy and/or an export charge, which provide funding for marketing, research and development, plant health and residue testing programs for the horticulture industry. Most small producers are liable to pay levies themselves if they sell a commodity directly. If they use their produce to prepare a processed product, they must also pay the levy and submit all return forms directly to the Department of Agriculture, Fisheries and Forestry.

If producers sell through an intermediary, or agent, then the intermediary will usually calculate the levies payable and charge the producer for any levies payable.

Another significant area in which compliance costs (and time) apply is in the initial application for, and ongoing compliance with, accreditation schemes such as Organic/Biodynamic certification, Australian Standards, HACCP Food Safety Management Programmes, and/or

the various quality assurance systems required by many of the larger purchasers (e.g. Coles and Woolworths).

The key implications of the scan of legislation on the MLFH project relates to how the eCommerce platform and the administration thereof takes into consideration two key issues; payment of industry levies and whether there is any capacity to specify the status of vendors on the system in respect of their compliance with food safety standards.

Payment of industry levies

An issue raised by some potential 'customers' interviewed as part of this project is that they would want to be assured that the appropriate industry levies are being paid by producers selling into any eCommerce hub. If producers are not paying their levies, it puts them at a competitive advantage to other producers, impacting on the MLFH Project policy of not being anti-competitive.

Food Safety

Supplying 'institutional' customers (especially aged care facilities, school canteens, etc) requires producers to have food safety accreditation (through their local Council). This is not a difficult process but may be a barrier to some producers who are reluctant to pay the ongoing fees and charges and undertake the initial application and ongoing administration tasks.



Business Stage	Regulation	Type	Jurisdiction
Operating	Certificate of Competency - Agricultural Chemical Products	Licence	State
Operating	Food Standards Code	Code of Practice	National (Local)
Operating	Horticulture Code of Conduct	Code of Practice	National
Operating	Annual Maintenance Statement - Building Compliance Certificate	Licence	State
Operating	Approval to Import Restricted Plants and Plant Products	Licence	State
Operating	Crop Protection Permit	Licence	State
Operating	Fair Work Information Statement	Licence	National
Operating	Workplace Health and Safety Act 1995 Workplace Health and Safety Regulations 1998	Various	State
Operating	Horticulture Export Licence	Licence	National
Establishment	Planning Permit	Licence	Local
Establishment	Urban Farm Land Declaration	Licence	Local
Operating	Acceptable Daily Intakes for Agricultural and Veterinary Chemicals	Code of practice	National
Operating	First Aid in the Workplace	Code of Practice	State
Operating	Hazardous Manual Tasks	Code of Practice	State
Operating	Labelling of Workplace Hazardous Chemicals	Code of Practice	State
Operating	Load Restraint Guide	Code of Practice	State
Operating	Privacy Legislation	Code of Practice	National
Establishment	Building Code of Australia	Code of Practice	National
Establishment	National Trade Measurement Regulations 2009, National Measurement Act 1960	Code of Practice	National
Operating	Department of Immigration and Border Protection - various acts and regulations relating to migration, visa-holder requirements, etc.	Various	National
Operating	Primary Industries (Excise) Levies Act 1999 Primary Industries Levies and Charges Collection Act 1991 Primary Industries (Customs) Charges Act 1999	Levies	National
Establishment	Australian Taxation Office (administers various Acts pertaining to personal income tax, Company tax, Fringe Benefits tax, GST collection and reporting, Superannuation Guarantee, Diesel Fuel Rebate, etc. which all have significant compliance implications for growers and processors	Taxes and Levies	National
Operating	Tasmanian Freight Equalisation Scheme, administered by the Department of Human Services in Tasmania.	Taxes and Levies	State
Operating, Establishment	General Fire Regulations Act 2010	Permit	State
Operating	Export Control Act 1982	Permit	National
Operating	Competition and Consumer Act 2010	Code of practice	National
Operating	Civil Liability Amendment Bill 2008 (sometimes referred to as the 'Good Samaritan Act')	Permit/Waiver ⁷	State

Table 3: Summary of Key Regulations relating to fresh fruit and vegetable businesses in Tasmania⁶

⁶ Modified and updated from: Thomson, D 2015 Legislative barriers to innovation and development in the fresh fruit and vegetable sector in Tasmania: perception or reality? Sprout Tasmania and Food Innovation Australia Limited.

⁷ The Civil Liability Amendment Bill 2008 enables donors to provide food to good Samaritans without liability for civil actions arising from food hazards where the food was handled and provided in good faith where the purpose of the provision of food is to provide assistance or in emergency or accident circumstances.

Tasmanian Food Security Strategic Directions

The Food For All Tasmanians – A Food Security Strategy⁸ suggests four strategies to enhance food security:

1. Increasing food access and affordability
2. Building community food solutions
3. Regional development and supporting social enterprises
4. Planning for local food systems. These strategies are well aligned and targeted towards enhancing the capacity of local food systems that occur 'outside' the commercial network. That is, they support well the 'social food' and EFR side of the local food network.

However, they do not necessarily facilitate the transition of food produced in the commercial sector **across to** the EFR side of the network, except through seconds and 'waste' lines. This is fundamentally because larger commercial producers are continuously battling with ever-shrinking margins. For example, farm cash incomes of vegetable producers in the North West and

Western Regions of Tasmania fell between 2012-13 and 2013-14 by 8% (from \$135,000 to \$107,000).⁹ This is on the back of a declining trend in cash incomes for the period 2009/10 to 2013/14, as illustrated in Figure 3 below.

Note for Figure 3: p=preliminary estimate; y=provisional estimate

One EFR provider reported during an interview that even farmers within this region are having to access emergency food relief.

It is clearly unsustainable to expect that producers should wear the cost of supplying 'affordable' food to those most needing it in our local community.

However, there is the possibility that producers operating at a different scale and focussing their production and business systems only at the local market, may be able to fill this gap in the local food economy between the EFR or 'social food' and the 'commercial' sectors. Scale is the critical issue here.

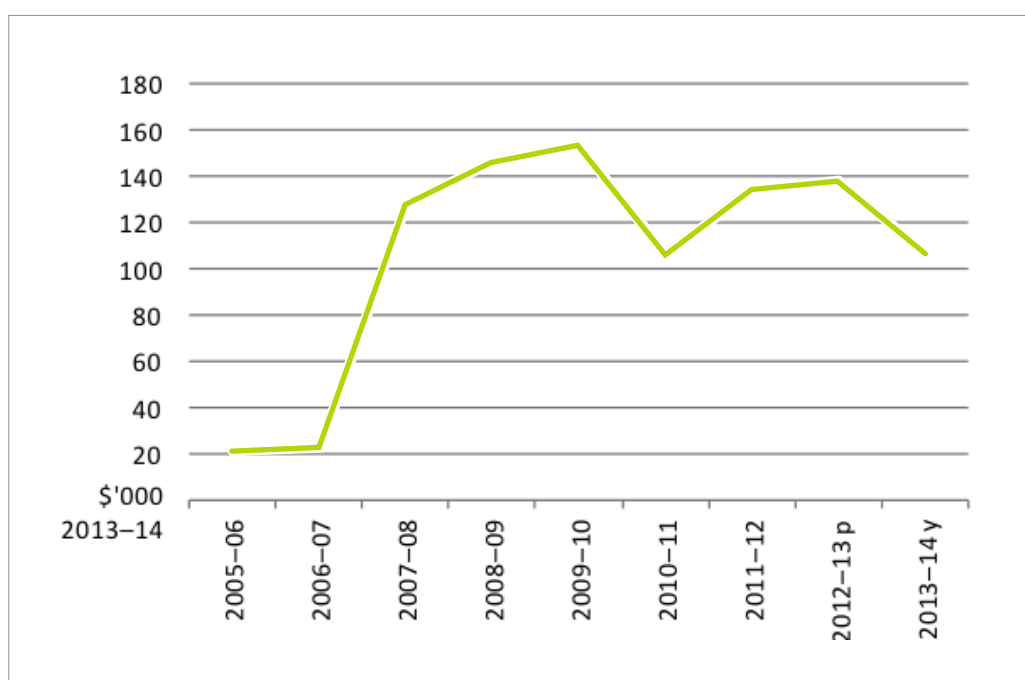


Figure 3: Real farm cash income, vegetable growing farm businesses, Tasmania, 2005-06 to 2013-14

⁸ http://www.dpac.tas.gov.au/__data/assets/pdf_file/0005/159476/Food_for_all_Tasmanians_-_A_food_Security_Strategy.PDF

⁹ ABARES 2015: p11: http://data.daff.gov.au/data/warehouse/9aa/regionalReports/201504/pb_regnd9aa__2015046TasWest_v4.1.0.docx

Scale of producers

Some of the small/medium producers, who operate at a scale more appropriate to supplying the local market provided some interesting insights into the barriers to them supplying direct to individuals and/or community group ‘customers.’

Figure 4 illustrates that there are a large proportion of vegetable producers in this region with small production values (i.e. small farms) and a small number of large farms that produce the vast majority of produce. That produce is largely exported to the mainland or internationally. However, many of the medium producers are growing the majority of their crops under contract to processors, or as part of mixed-enterprise farming operations. Their capacity to supply ‘direct’ is limited, mainly due to staff/time limitations.

Lack of producers orientated towards the local market

Table 4 illustrates the influence of scale of production on the suitability of producers to supply into the local food system. The network maps produced for the MLFH project to date illustrate how some of these factors influence the supply chain.

Apart from the well established vegetable producers that are oriented towards selling at Markets (e.g. Laos Fresh Farm, Steve’s Veggies, Yee’s

Veggies, Old School Farm and the like) there is a lack of local small-medium businesses producing at a scale that might ‘match’ the demand within food deserts in the Mersey-Leven region. The network maps clearly illustrate that producers at this scale have limited saturation through the whole food economy network – they are quite distinct in their clustering around farmers’ markets.

Some of the ‘farmers market’ oriented producers said that supplying direct to households and smaller businesses was not viable due to the individualised orders, irregular size of orders and, particularly, transport/logistic considerations. It is more efficient for them to attend farmers’ markets where consumers can select from their range and ‘come to us’. Producers of this scale cited transport and logistic barriers in supplying into the retail sector. The prices paid by wholesalers were often not viable at their scale of production either. For producers at this scale and focussing their production and business systems only at the local market, may be able to fill this gap in the local food economy between the EFR or ‘social food’ and the ‘commercial’ sectors. Scale is the critical issue here.

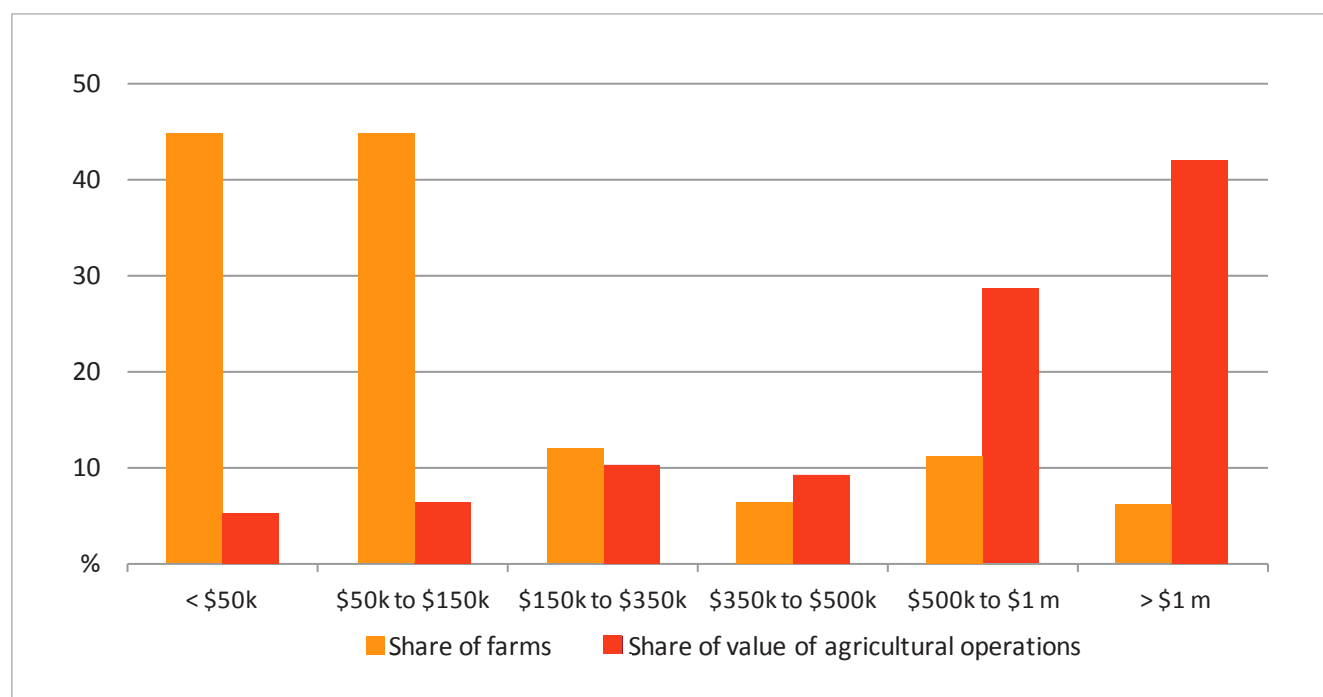


Figure 4: Distribution of farms by estimated value of agricultural operations, West and North West region, Tasmania, 2012–13¹⁰

¹⁰ ABARES 2015, Agriculture, Fisheries and Forestry in the West and North West region of Tasmania, 2015, About my region 15.46, Canberra, April. CC BY 3.0.

Producer type:	Small 'backyard' or small lot owners & community gardens (Not captured by ABARES/ABS statistics)	Medium 'full-time' producers (EVAO \$50,000 to \$350,000)	Large Commercial Producers (EVAO > \$350,000)
Nature of production	<ul style="list-style-type: none"> small-scale, opportunistic 	<ul style="list-style-type: none"> Medium scale producers who may currently grow all or the majority of their crops under contract to processors. 	<ul style="list-style-type: none"> Large-scale commercial production reliant on volumes to achieve economies of scale
Opportunities	<ul style="list-style-type: none"> Very local Volunteer labour 	<ul style="list-style-type: none"> Consistency of supply Ability to 'grow to order' 	<ul style="list-style-type: none"> Large volumes of product Packing/logistics support
Issues	<ul style="list-style-type: none"> Very seasonal and small-volume production would make this form of production relatively unattractive to 'commercial' customers. May be more likely to accept lower prices if produce grown largely as a hobby. 	<ul style="list-style-type: none"> Production, packaging and distribution systems well aligned with supplying at the volumes/ intervals likely to be in demand through an eCommerce platform. Would benefit from cooperative packing/logistic support. 	<ul style="list-style-type: none"> Likely to be large volumes of produce. Supply into EFR currently (excess or downgraded product).
Likely supply options	<ul style="list-style-type: none"> Small crops of diverse product; very seasonal. Larger quantities of very seasonal produce (e.g. Zucchini). 	<ul style="list-style-type: none"> Good diversity of product. Seasonally available, but likely a longer season due to higher expertise in production. 	<ul style="list-style-type: none"> Excellent product diversity. Seasonal variation but less variation than smaller producers. Source of downgraded or excess product lines for EFR and 'social' food.
Sector	<ul style="list-style-type: none"> EFR and Social Food 	<ul style="list-style-type: none"> Commercial Sector 	<ul style="list-style-type: none"> All: See above

Table 4: Types of 'producers' that could potentially supply into the MLFH eCommerce platform



Conclusions

Gaps and Needs in the Supply of 'local food' to 'food deserts'

Whilst this investigation has not mapped the entire local food network, it does represent a sample of the networks that operate in the region, particularly around the Emergency Food Relief (EFR) or 'social food' sector. The network analysis has illustrated apparent distinct sub-networks are operating in the region, with a few of the key players (larger wholesalers and/or supermarkets) interconnecting these networks.

This illustrates an apparent dichotomy between the 'social food' sector and the 'commercial' food sector. The economic realities of both struggling consumers and struggling producers mean that there is little chance that these two sectors within the food network will come together except through 'waste' or 'seconds' streams.

The Emergency Food Relief (EFR) or 'social food' sector relies on volunteers, subsidised transport and logistics and a constant supply of donated food from some of the larger retailers and wholesalers. Whilst it makes sense to use this food that might otherwise be wasted, the impact of this 'free' food on the commercial sector cannot be ignored.

That dichotomy is embedded in the fact that people who are currently accessing fresh fruit and vegetables through Community Houses and other community group programs cannot afford to buy fresh fruit and vegetables and other foods. Producers struggling with ever-decreasing margins are being squeezed out of the smaller local markets and forced to aggregate and supply into the commodity market where economies of scale might provide a more economically viable business model.

Whilst not in itself mapped within this project, interviews with producers and retailers suggest that there are few structural reasons

why more local food is not supplied into the local market (apart from the duopoly of the big supermarkets). However, demand for fruit and vegetables, whether local or imported, is low, particularly in the lower socio-economic localities simply because householders are struggling to make ends meet.

Methodology

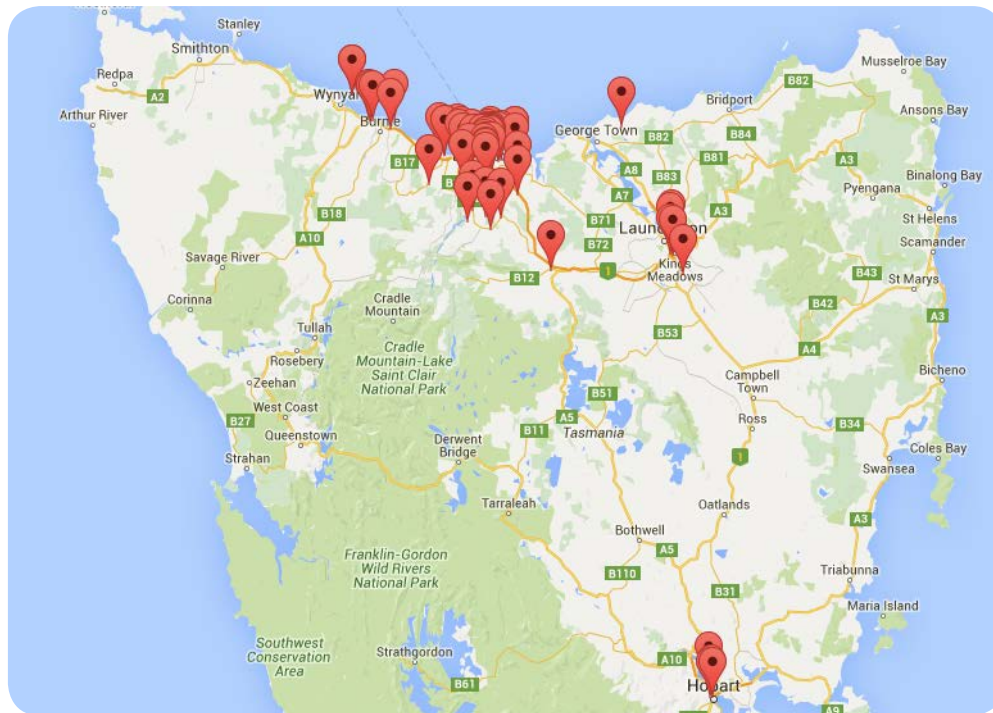
The methodology developed and tested for this component of the MLFH project has been successful in revealing the characteristics of the local food economy, particularly in respect to the apparent dichotomy between the 'social food' and 'commercial food' sectors.

The social network mapping method, specifically, has significant merit. The limitations of this study relate to the capacity to collect transactional data from nodes in the network. This is largely a function of the very resource-intensive process of interviewing actors in the network.

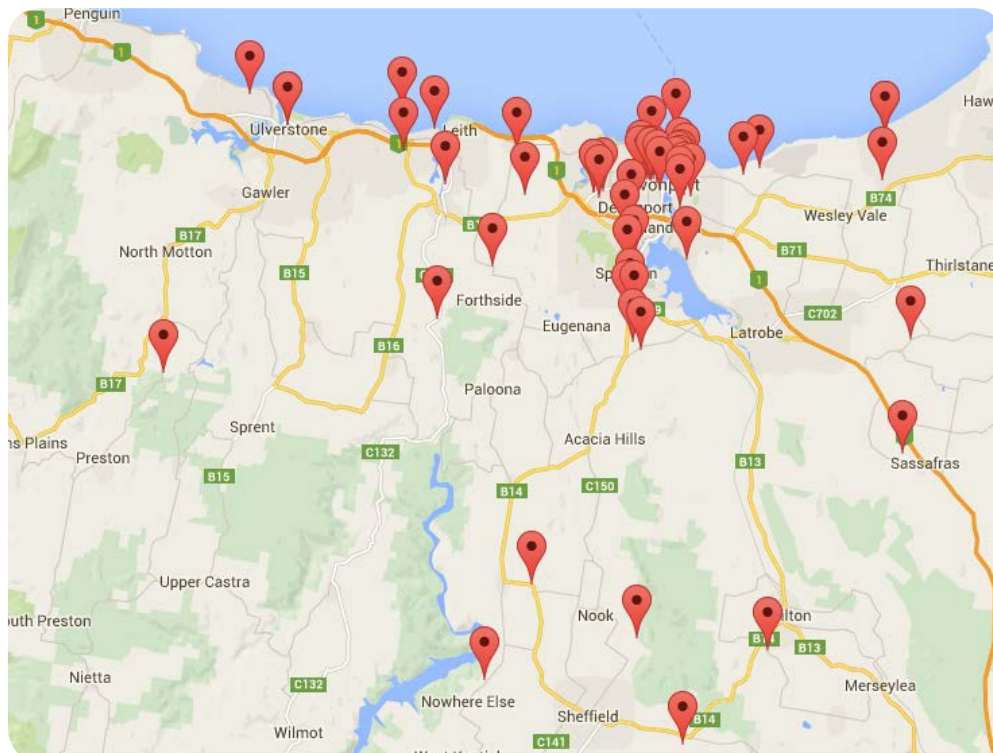
The eCommerce platform to be trialled under the MLFH Project provides an ideal opportunity to collect transactional data from a secondary source. This data would be more specific and therefore more reliable than the data collected under this initial study. It would also enable time-series data to be collected, which would enable changes in the breadth and depth of the network to be analysed.

It would be possible to establish efficient data capture processes through the eCommerce platform that ensures all transactional data is logged and stored for later analysis.

Appendix 1: Geographic Distribution of 'Nodes' mapped



Map 1



Map 2

Appendix 2: Interview Guide - ‘Consumers’

MLFH Data Collection – Local Food Network Mapping

(For ‘consumers’)

NODE TYPE:	<input type="checkbox"/> Individual:	<input type="checkbox"/> Organisation:
Name:		
Organisation:		
Date of Interview:		
Interviewed by:		

1. Your CURRENT ‘programs’ and activities

In what ways do you service the local community in terms of food/food service?

Program or Function Ref.	Type	Name / Description
P/F 1:		
P/F 2:		
P/F 3:		
P/F 4:		

What volumes/values of fresh fruit and vegetables would you produce each year to deliver those services? And are these seasonal?

Program Ref.	Volume	Seasonality
Program 1:		
Program 2:		
Program 3:		
Program 4:		

Where do you purchase your fresh fruit and vegetables from for each of those Programs?
AND in what proportion? (i.e. within each Program or function, what % is purchased from each source/supplier)

Supplier or source Name	P/F 1	P/F 2	P/F 3	P/F 4	P/F 5

In what ways do you add value to fresh produce through your programs?

Do you know where the fresh produce your purchase comes from (i.e. where it is grown)?

How important are each of the following factors in determining where you purchase your fresh produce?:

	Not important					Critically important				
<input type="checkbox"/> Locally grown:	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/> Convenience of ordering:	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/> Price:	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/> Delivery to door:	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/> Reliability of delivery:	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/> Quality of the produce:	1	2	3	4	5	6	7	8	9	10

If you could readily and conveniently buy local produce would you use it in preference to other produce?

☐ Yes ☐ No

Why or why not?

Do you have any plans for new programs/initiatives and/or expansion of existing programs/functions?

☐ Yes ☐ No

If yes, what would the implications be for your demand for fresh produce in the future?

Is there much food 'waste' from your programs/functions?

☐ Yes ☐ No

If yes, what do you do with your waste produce now?

Are there opportunities to further add value to this 'waste'?

What would you need to do to realise that opportunity to utilise that 'waste' product better?

Just finally, do you personally have any connections with local producers or value-adders, that have influenced your purchasing decisions within the organisation? Can you name some of them for me?

Supplier or Producer Name

Thank you for your time!

Appendix 3: Interview Guide - 'Producers'

MLFH Data Collection – Local Food Network Mapping

NODE TYPE:	<input type="checkbox"/> Individual:	<input type="checkbox"/> Organisation:
Name:		
Organisation:		
Date of Interview:		
Interviewed by:		

1. Your business and its CURRENT production/services.

In what ways do you service the local community in terms of food/food service?

Function Ref.	Type	Name / Description
Function 1:		
Function 2:		
Function 3:		
Function 4:		

What volumes/values of fresh fruit and vegetables would you produce each year to deliver those services? And are these seasonal?

Type	Volume	Seasonality
1:		
2:		
3:		
4:		
5:		
6:		
7:		

Where do you usually sell your fresh fruit and vegetables? AND in what proportion (i.e. within each Program or function, what % is purchased from each source/supplier)

Customer Name	T 1	T 2	T 3	T 4	T 5	T 6	T 7

What total proportion of the produce you grow each year do you estimate would end up in the local market?

_____ %

Do you add value to your produce on the property or elsewhere? ☐ Yes ☐ No
In what ways do you add value to fresh produce?

How important do you think each of the following factors are in determining how your 'customers' decide what produce to buy?

	Not important					Critically important				
<input type="checkbox"/> Locally grown:	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/> Convenience of ordering:	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/> Price:	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/> Delivery to door:	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/> Reliability of delivery:	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/> Quality of the produce:	1	2	3	4	5	6	7	8	9	10

If you could readily and conveniently sell into the local market would you?

☐ Yes ☐ No

Why or why not?

Do you have any plans to change production in the future (upwards or downwards)?

☐ Yes ☐ No

If yes, what would the implications be for your ability to supply the local fresh produce in the future?

Is there much food 'waste' from your production systems?

☐ Yes ☐ No

If yes, what types of waste are produced?

What do you do with your waste produce now?

Are there opportunities to further add value to this 'waste'?

What would you need to do to realise that opportunity to utilise that 'waste' product better?

Just finally, do you personally have any connections with local retailers, wholesalers or other customers or value-adders, that have influenced your sales into the local market? Can you name some of them for me?

Supplier or Producer Name

Thank you for your time!

Appendix 4: Project Background sent to interviewees prior to interview



Our Ref: hw
Doc. ID: 226883

MERSEY-LEVEN FOOD HUB PROJECT

There are people and families in our community who are not eating enough fruit and vegetables. This can be linked to chronic health issues, which in turn can be linked to social isolation and an inability to fully participate in community life. Given the fact that we live in an area with a reputation for producing some of Australia's best food, this is a situation that should be relatively easily remedied.

The Mersey-Leven Food Hub project is funded by The Heart Foundation and auspiced by Central Coast Council. The project is supported by the councils of Devonport City, Kentish and Latrobe, the University of Tasmania and SPROUT Tasmania. We want to work out whether it is a food access issue or whether there are gaps in the supply chain that is causing people to experience food insecurity in the Mersey-Leven region. It builds from work already completed and will add to the emerging picture.

The project aims to understand how our local food economy works so that we can address the gaps in the food chain that impact on the people and communities that need that food most. Part of the project is trialling an e-commerce platform that directly connects local producers and local customers. The reason we are focusing on customers (retailers and/or community groups that purchase produce to sell/ provide directly to consumers) and not consumers directly, is that there are many interrelated reasons as to why consumption of fruit and vegetables are so low.

We are trying to assess to what extent we can improve the availability of affordable fruit and vegetables in the areas that need that food. This is not about being in competition with the existing system, but adding value to it and making it more efficient. Specifically, we want to target those areas with the greatest need and lack of access opportunities.

Your contribution to this important project is valued.

Yours sincerely

Heidi Willard
ON BEHALF OF THE PROJECT TEAM



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