

Victorian Food Supply Scenarios: Impacts on Availability of a Nutritious Diet



Workshop 1 >

Structure & objectives

Workshop 1 (23rd November) is NOT intended to arrive at a complete set of scenarios or defined scenario outlines. It WILL generate information and thinking that will inform an iterative scenario development process by the project team.

The overarching aim of the Workshop is to generate material that informs the development of the exploratory scenarios.

Ideally, sufficient food for a nutritious diet should be securely available regardless of population growth, changing land uses, water availability and climate etc. The range of dynamics affecting this secure availability is massive and complex.

The key question for the workshop is:

“What factors, or combinations of factors, could affect secure and sustainable provision of the IGPD for the Victorian community?”

This workshop has been deliberately designed to approach the topic of food supply in Victoria from very different perspectives. It is hoped that these approaches may uncover:

- * A breadth of different considerations and factors needed to create a holistic understanding of the future of food supply.
- * An understanding of interconnected factors and relationships involved in the future of food supply.
- * Potentially unconsidered “bi-products” or “knock on” effects coming from other areas that may impact food supply.
- * Gaps in knowledge or data.
- * Potential risks and opportunities lying in the periphery of our own “world views”.
- * A systems perspective of how key dynamics may interact.



Workshop 1>

Exercise One

Exercise one: 30 minutes

A “societal”
implication

Driver 1 &
Driver 2

More people
over 60
staying in
the
workforce

A food
supply
related
implication

Diet
increasingly
important to
keep aged
active

Work & Income
Household & family unit
Socialising & recreation
Commuting and transport
Technology & infrastructure
Health & well-being
Environment & resources
Government & legislation

Your group will be given two drivers of change that you will use to generate as many potential future implications as possible in the time allocated. The group may ask “how could these two factors combine to generate an outcome in the future... and what are some associated implications for food supply?”

The exercise seeks thinking about how these two factors could potentially combine to change various broader societal elements. As stimulus, the group may consider how these two drivers may impact such things as “Work & income”, the “household & family unit” etc. For every broad societal impact the group will be asked to come up with an associated “food supply” implication.

This exercise is designed to create ideas and understanding around the cross impact of different drivers or dynamics of change. It enables us to approach topics from very different perspectives and potentially uncover ideas we may not have considered.

The “drivers of change” used here are very broad and incorporate a number of more specific factors. These drivers are not intended to be definitive or limiting but used simply as a tool to stimulate different thinking. These drivers follow on the next pages

2.0 Key drivers > & Dynamics of change

Climate change:

The climate and environmental conditions are changing and these shifts will cause repercussions through our economy and society. Considerations include:

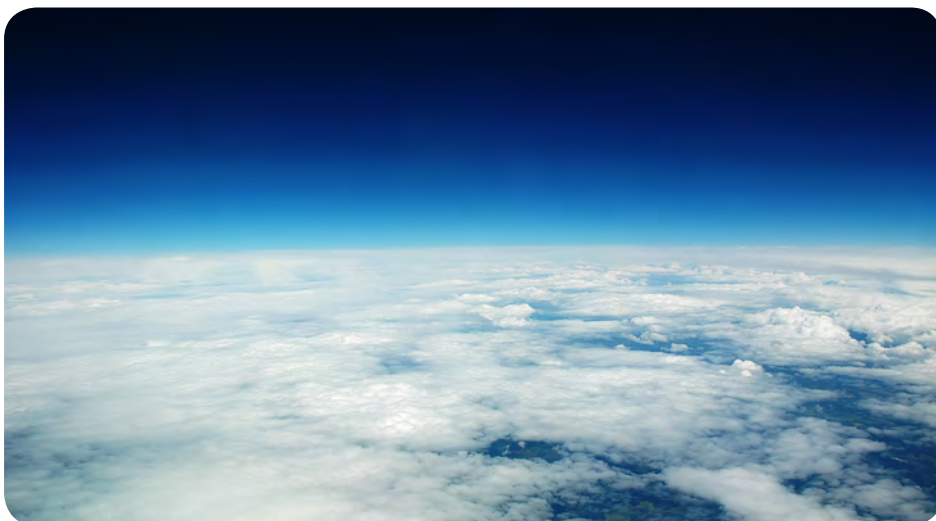
- Extreme weather events (drought, flood, storms, fires)
- Changes to weather patterns including unpredictable seasonal conditions
- Changes in temperature during key growth times
- Reduced water reliability and increased cost

'Disruption or loss of processing capability' – workshop participant

Food for thought - "While residents in Queensland yesterday defended their homes from a bushfire that raged north of Brisbane, people in the southern Flinders Ranges, the Mid North and Mt Lofty Ranges are being urged to prepare for possible flooding with rainfall of up to 60mm." - News.com.au

"For Victoria, this is now the lowest rainfall period in the historic record. This is a greater reduction than predicted under medium to high climate change in 2055." – DSE (2008)

"Heatwave losses - Jan / Feb 09 (Port Phillip region only): 50-90% of raspberry, blackberry and blueberry crops; 20-25% in orchard crops (apples and late season apricots); 60-80% of the strawberry crop that would have been picked during March"
DPI (2009)





Energy:

Energy is at the centre of our society and the way it operates. It drives our economy and underpins our quality of life. It comes with challenges and issues however and is undergoing fundamental change as we strive to overcome associated environmental, economic and resource costs. Drivers associated with this dynamic include:

- Increasing demand for energy
- Increasing, and increasingly unstable prices
- Availability and access to traditional energy sources
- Emerging energy sources

'Electricity distribution system upon which refrigeration depends subject to overload or fire damage' - workshop participant

Food for thought - "Around the world, dozens of wave-energy systems are under development. Some are fastened to vast cliffs at the water's edge and harness the power of enormous waves pounding against the land . . . these designs are slowly moving from prototype to commercial stages." Popsi.com

"Continued growth of greenhouse gas emissions, for just another decade, practically eliminates the possibility of near-term return of atmospheric composition beneath the tipping level for catastrophic effects." - James Hansen, NASA

Key drivers>

& Dynamics of change

Transport:

Linking resources, people and places under new constraints and pressures will continue to be a hefty challenge. How might transport solutions and systems evolve with changing requirements? Transport considerations may include:

Congestion

Cross border/international trade and business

Supply chain management

Evolving personal and freight transport requirements

Transport capacity & risks (eg. fuel supply system)

Urban design in cities

'Rising supply chain costs get pushed back on to farmers too' – workshop participant

Food for thought - "The UK's transport infrastructure will be radically changed over the next 50 years by RFID tracking tags, embedded sensors and an artificial intelligence network that will reduce congestion and pollution, according to scientists from the government's Foresight think tank." - Silicon.com

"the public and many governments appear to be oblivious to the fact that the oil on which modern civilisation depends is running out far faster than previously predicted" – Fatih Birol, Chief Economist, International Energy Agency





Resources and materials:

The production or mining, processing, distribution, waste, collection and disposal of the products present in every element of our day to day lives has massive impacts on the way society operates. Many of these intersect with food supply – could small changes have big impacts? Some elements include:

Food waste along the supply chain

Materials for packaging

'Embodied' water and carbon in food products

Resource availability - competing usage drives up costs

New value and sources of water, materials

Food for thought - "Though corn-based plastic is compostable, it will not degrade naturally in a landfill for 100 to 1000 years, roughly the same amount of time as conventional plastics." - www.smithsonianmag.com

"In 2006-07, approximately 852,000 tonnes of food waste from industrial sources was sent to landfill, representing 21% of material sent to landfill in Victoria. Over 40% of household residual waste is food organics" – DSE (2009)

"The packaging for a microwavable "microwave" dinner is programmed for a shelf life of maybe six months, a cook time of two minutes, and a landfill dead-time of centuries" – David Wann

Key drivers> & Dynamics of change

Land and Biodiversity:

The historical, current and future use of land both in Victoria and elsewhere will have a major influence on food supply in Victoria. Biodiversity and biological systems offer both opportunities and threats. Choices and issues regarding land planning and ecosystem management are critical considerations when looking at the broad future implications for Victorians. Some of these dynamics include:

- Soil health and nutrient availability
- Land capability and competing uses
- Declining biodiversity & eco-system breakdown
- Disease and biohazard
- Agricultural systems and management
- Reducing greenhouse emissions

"Global dependence for a high % of food on just 4 grains . . . and increasing dependence on GMO single strain varieties all lead to lack of resilience in the food supply chain. This makes food-shocks in supply all the more likely and drastic" – workshop participant

Food for thought - "SOAK uses sensors around a farm that measure soil moisture, rainfall, wind, dam depth, temperature and water flow. It adds external data such as weather forecasts and combines it with crop lifecycle information to create a sophisticated watering system." swinburne.edu.au

"One quarter of the world's farm land is affected by serious degradation, up from 15% two decades ago" – UN FAO





Economic factors:

The changing operating conditions regarding the economy, industry and trade will continue to influence all structures including food supply. Increasingly local, national and international considerations need to be addressed in scoping potential outcomes. Some elements may include:

Reliance on Australian resource based industries

Regional economies under threat

Interconnected international markets, tightly bound to China

International competition for resources and business – and food

Trade agreements and currency

Economic meltdown – all better now or just beginning?

'International food security fears and potential import restrictions to protect own interests (here or overseas)' – workshop participant

Food for thought - "Australia's future is tied up in big, world-class projects where the likes of the huge Gorgon LNG development will be a guideline (but possibly the largest). These projects are going to change Australia; add to our problems controlling climate change and carbon footprints, and turn us into the only energy major in the world's 30 biggest economies." - ibtimes.com.au

"So no I don't believe we have dodged the iceberg—we've merely pushed it below the surface . . while the neoclassical economists who didn't realise they were in an ice field in the first place are busily rearranging the deckchairs on the Titanic" – Steve Keen (Nov 09)

Key drivers> & Dynamics of change

Demographics:

Changes in the shape, distribution and makeup of local, national and international populations promises to be a key determinant of change. It will influence every aspect of society propelling new outcomes, challenges and opportunities. Various inputs include:

Aging populations

Immigration and planned population increase

Urbanisation and high density living

Coastal development and growth

Changing family sizes and structures

"Clearly it is possible to sustain the current population but if, through major food crises in southern and eastern Asia, Australia were to receive say 25m refugee immigrants (out of many hundreds of millions displaced) then the picture in Victoria, whose population might suddenly double, would be transformed" – workshop participant

Food for thought - "The combined increase for non-metropolitan areas was greater than population growth in capital cities, Mr. Stokes said. The rate of migration and population growth to coastal areas would be the equivalent to adding 11 more Gold Coasts to the population of these communities." - Brisbanetimes.com.au

"The urban footprint is now half the size of China or the US. By 2050 it will be larger than either country" – Julian Cribb





Governance and regulation:

Unprecedented challenges and increasing requirements may signal new levels of governance and regulation. Emerging connectivity between various areas of policy is creating the need for increased collaboration and input, while international concerns are requiring local involvement. Some elements include:

- Increasing social/public requirements
- Access and exposure to information
- Adaptive management of complex problems
- International agreements
- Changing role of government in market intervention
- Political platforms

"Government measures to make food more available can result in decreased incentives to farmers" – workshop participant

Food for thought - "...the Government is now preparing to expand staff numbers to meet a growing workload, according to a report in Fairfax papers today..."It appears that the Federal Government is starting to recognise that more staff are needed to get its massive job done," - news.com

"The government's failure to intervene in a market failure that would result in a socially preferable mix of output is referred to as passive Government failure" - Weimer and Vining, 2004

Key drivers> & Dynamics of change

Changing values and attitudes:

Signals of changing values and attitudes are all around us and will be a change agent in facilitating different lifestyles, behaviors and aspirations. These sometimes unnoticed shifts are a huge determinant in the way our society operates and the decisions populations will make in the future. Certain considerations may include:

- Corporate and citizen social responsibility
- Increasing requirements for visibility and flexibility
- Political involvement
- Consumption patterns and choices

Food for thought - "(The) review shows young Australians are anything but apathetic . . They are strongly engaged with political issues and social causes, however they feel alienated and marginalised by old, formal, institutionalised politics . . They prefer to engage in grassroots campaigns and cause-based activities, where they feel like they can make a difference." theage.com

"More expensive food could challenge 'feel-good' purchasing decisions" – workshop participant



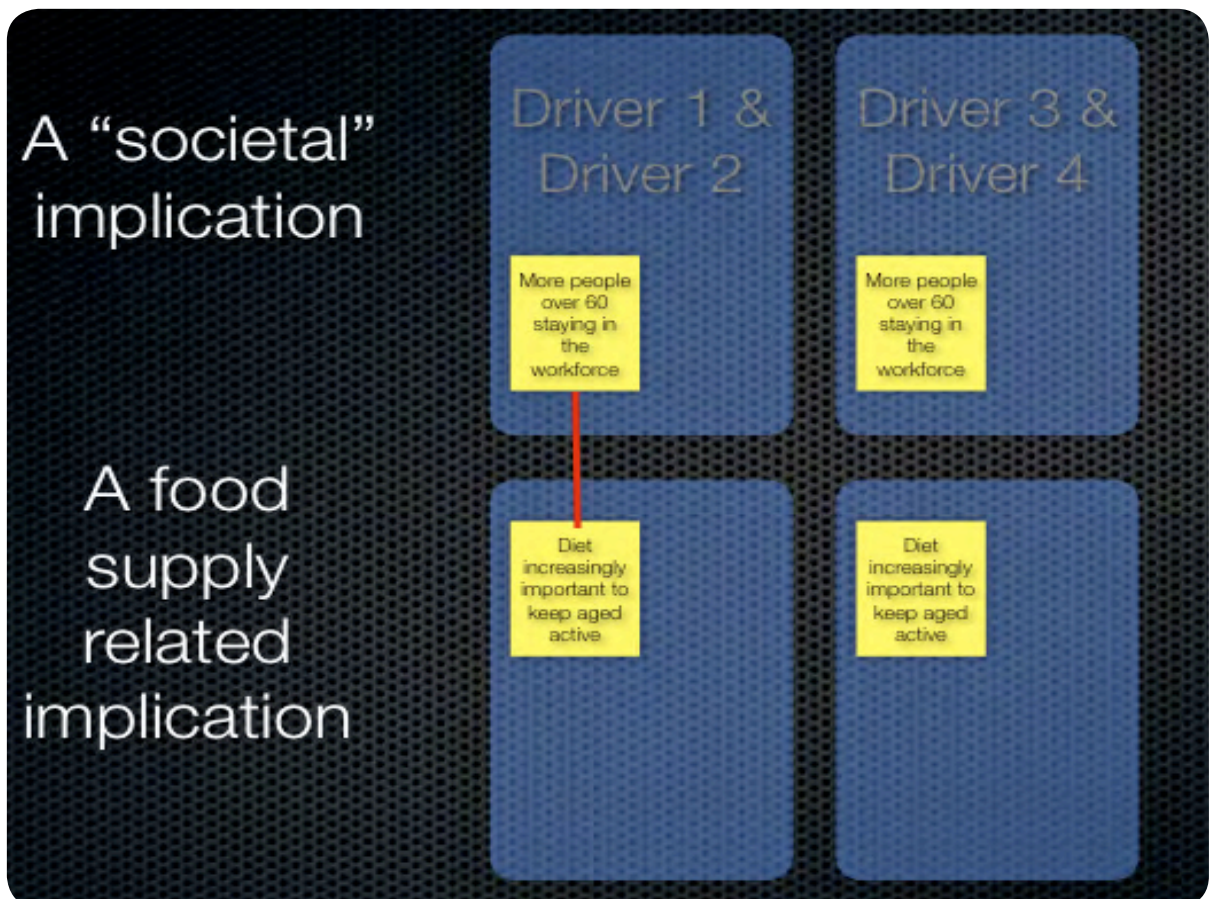
Exercise 2>

The group will now be given two new drivers of change and will be asked to repeat the exercise in generating potential future implications at a societal level and then the associated food supply impacts. Again, the group has 30 minutes to come up with as many factors as possible.

If there are food supply implications that “jump out” at you when considering the combination of these two drivers, please note them down and then generate associated impacts at the more macro level.

Some of the outcomes generated from the combination of these two new drivers may seem inconsistent with some of the outcomes from the first exercise and this is OK. The objective is to produce a RANGE of potential outcomes that we may consider in the afternoon sessions.

The sheets on the wall should have the different outcomes and potential implications attached separately.



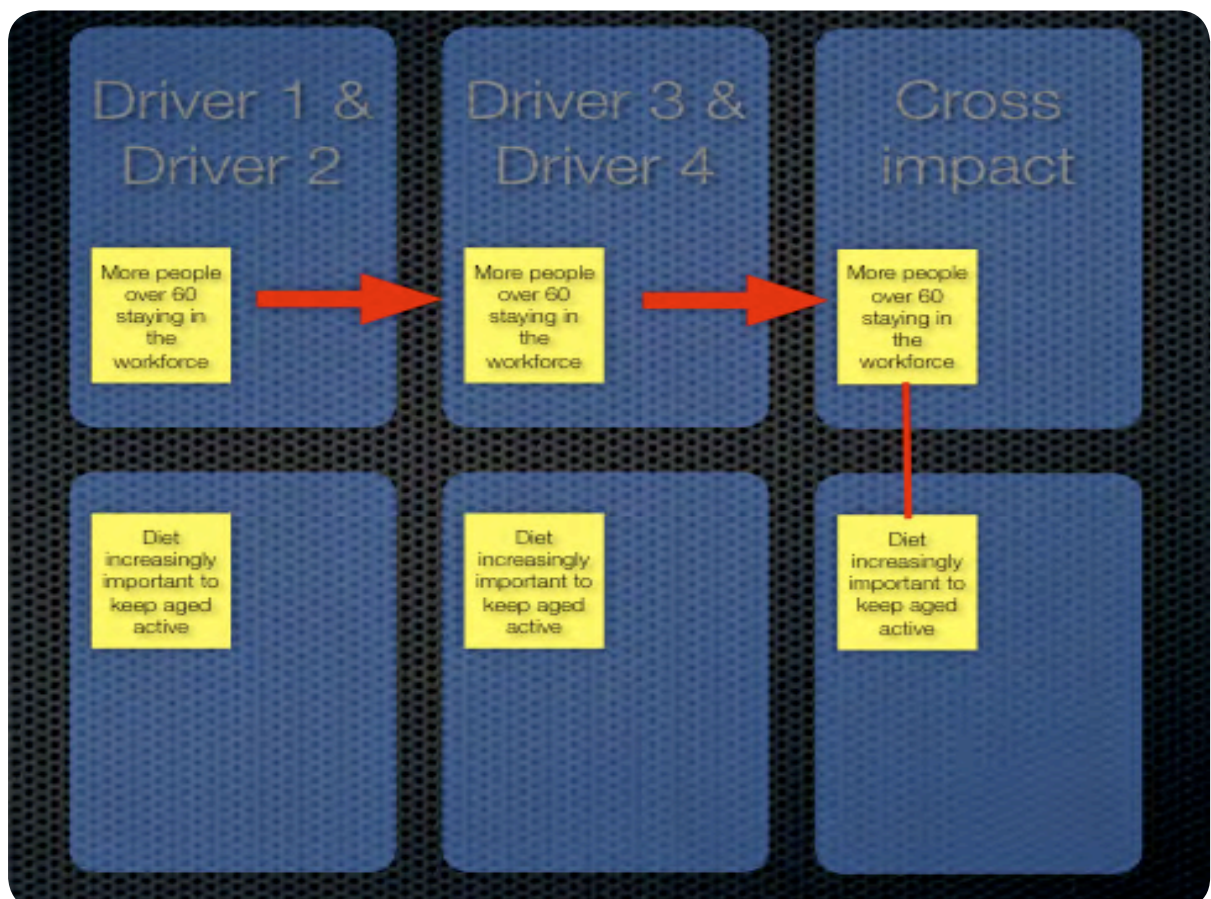
Exercise 3>

Cross impact

We have started to layer different considerations and change dynamics into the groups thinking by looking at how combinations of factors may result in very different outcomes.

We will now look at how various elements and outcomes could interact to produce knock on effects and new outcomes. The group has 40 minutes to come up with as many potential implications from combining the output from exercise 1 & exercise 2. Take any of the "post its" from the first sheet and combine it with any of the "post its" from the second sheet to generate a new implication or outcome. We might ask "how could these two factors combine to create a new outcome... and what are the associated implications for food supply?"

The exercise is seeking to make connections between areas that may seem unrelated and can require participants to STRETCH their thinking or entertain future events they find unlikely or even ridiculous. The aim is to approach our current thinking from different angles and uncover "blindspots" or connections that may not be seen by traditional examination.



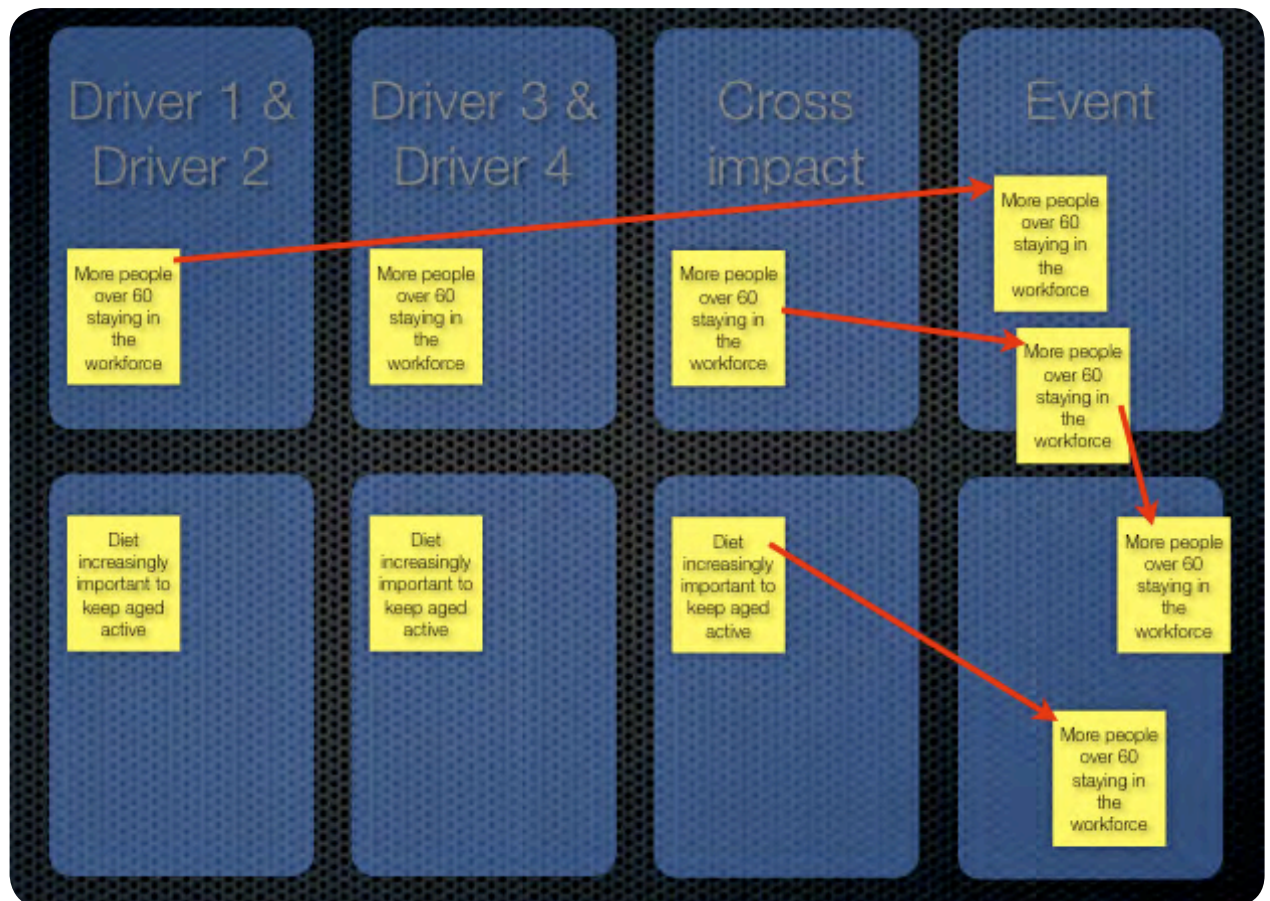
Exercise 4>

Events & wild cards

The facilitators will now give each group an event or a wildcard to consider in light of the outcomes they have generated in the last three exercises.

The group may ask “how could this event or wildcard impact or change the outcomes we have listed.... and what are the connected implications for food supply?” The exercise again seeks to uncover connections and blindspots but can also indicate which drivers of change would be more prevalent if certain outcomes were to occur.

The group will take as many “post its” as time allows from the previous three exercises and generate new implications given the event on a new post it as seen below:



Again, if there are impacts or outcomes that immediately spring to mind for food supply from this event the group can record these directly.

Exercise 5>

Key themes

Each group will now have 35 minutes to examine the outputs and implications from the "food supply" section (the bottom four pages) and identify any THEMES or recurring factors that may be present.

It is important that we are not too selective in defining themes and are able to incorporate associated implications under broad "headings". This exercise aims to identify common implications for food supply coming from a breadth of societal outcomes while also highlighting elements that fall in the periphery. Record the key theme on pink "post its" and label each one "T1", "T2" or "T3" ..etc to correspond with the number of themes generated.

The focus for the rest of the day is now switching to food supply and as we work through the rest of the exercises we could start considering the following questions:

What strategic responses could we initiate to mitigate risk or leverage opportunities for this potential implication?

Does the capability to do this currently exist in Victoria?

Which organisations or groups should/could be involved in these initiatives?

Are there other entities that would be impacted if this initiative was carried out? How?



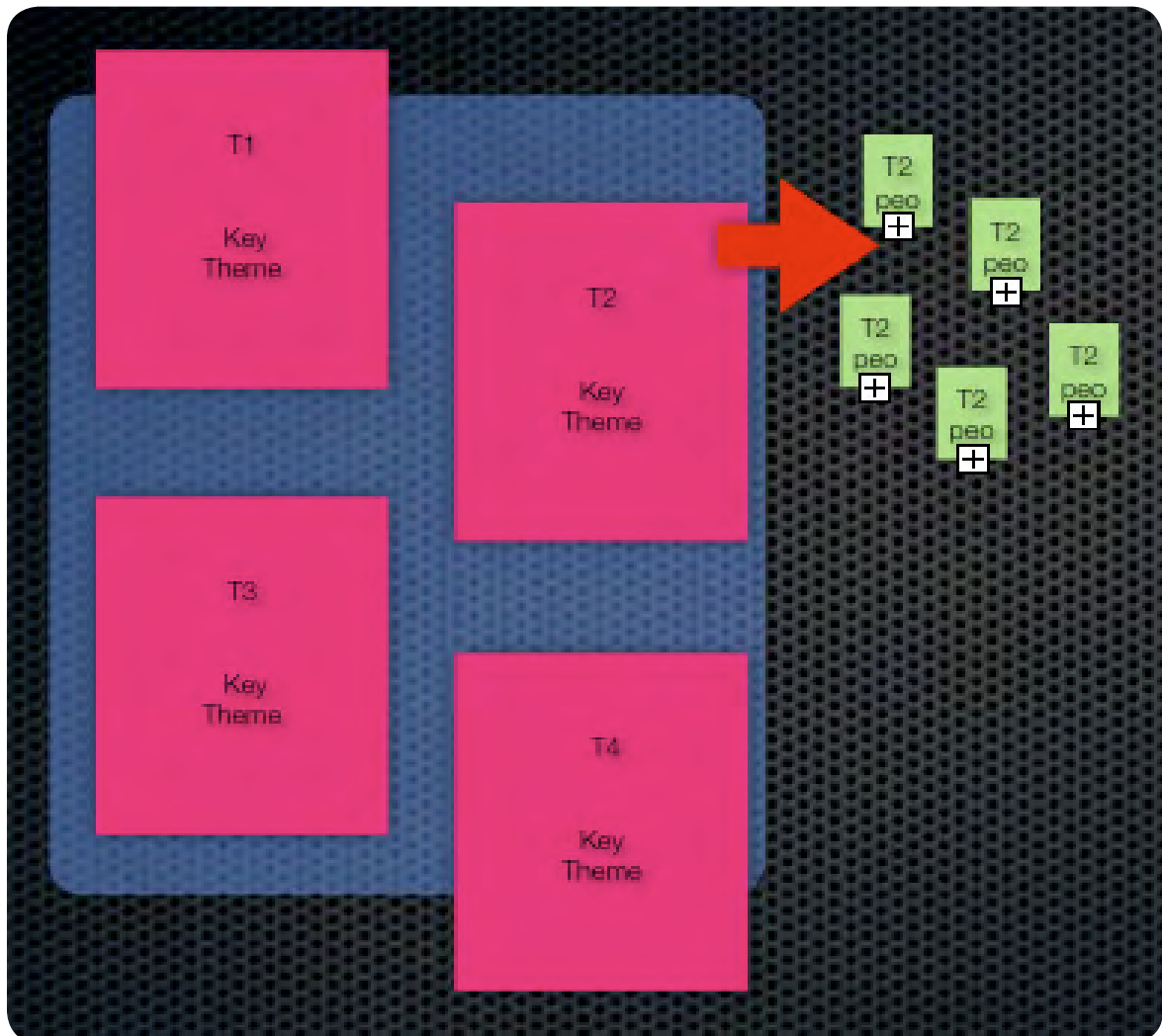
Exercise 6>

Strategic responses

Each group will now split into pairs (or a group of 3 if odd numbers) and take one key theme each. If there are no key themes or less than 4, groups can take a food supply implication and use that for the exercise.

Each pair or group is to find a space and discuss the food supply theme. They are to come up with no more than 5 potential responses arising from that theme that they believe would be in the best interest of food supply in Victoria for the future. These responses are to be recorded on GREEN "post its" and have "T1" or the corresponding label on it so we can identify the theme or implication it is associated with when recording.

Pairs have 30 minutes to complete this exercise and should be ready to explain their responses and answer questions from the rest of the group.



Exercise 7>

Present back

Go back into your groups and put your responses up on the wall around the key themes.



The group now has 60 minutes to read, discuss and decide upon the main insights, messages and elements of interest arising from all the exercises. At the end of this time each group will have 10 minutes MAX to present back to the broader group in any way they want.

A potential formula to use when presenting back could be:

- * An explanation of the key drivers used.
- * Some of the outcomes arising from the drivers and their food supply implications.
- * An explanation of the event given to the group and its impacts.
- * The key food supply themes and some of the recommended strategic responses.

Drivers of change

Potential implications

Event&outcomes

Food supply themes>responses

Notes

Notes

