Deniliquin Airport Project

Feasibility report

The Edward River Council engaged KPMG to assist it in preparing this document

It is likely that the construction of an extended runway will be the catalyst to drive investment and jobs in the region

Vision

- Regional Australia and it's farm sector are transitioning to a new period of trade that will be led by customers seeking fresh high quality food and other services such as training and tourism
- Regions that have vision and provide the enablers to service new markets in Australia, China, Southeast Asia and the Middle East are likely to attract investment
- A modern regional airport can act as a catalyst for services that we can identify today – but also prepare a region for services of the future

Background

- Deniliquin airport is a critical piece of infrastructure for the Southern Riverina town and surrounding regions. The airport covers 327 hectares and is located on the outskirts of Deniliquin
- Built in the second world war the runway is reaching the end of its effective life and the Edward River Council (ERC) is reviewing the options for its renewal
- The current runway is 1,214 metres long and replacing it will cost approximately $7.0 million. If a new extended runway of 1,960 metres was built, it would cost an estimated $15.1 million, but provide more options in regards to the size of planes that could use the airport (e.g. freight-dedicated B737's) and consequently the type of commerce that could transact in the precinct
- Landing a B747 requires a runway of approximately 3,000 metres and this option is less likely to be justified
- This report assessed the feasibility and business options of investing the additional funds to build a new runway 1,960m and 3000m length

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The Edward River Council should execute these next steps in order to progress the planned construction of an extended runway

Conclusions

- Analysis indicates that extending the Deniliquin run way to 1,906m could have a positive pay back period over 30 years
- The financial benefit of this investment would be subject to attracting key investment to the region. Specifically:
  - Enhance the chilled lamb supply chain and further develop other complementary food supply chains
  - Attract investment and develop indoor farming capability for key horticultural crops
  - Enhance income through attracting the delivery of training and education into the airport precinct
  - Develop and implement safe and simple management protocols
- There are also several commercial risks that must be addressed to support successful delivery
- Analysis indicates the 3,000m runway is unlikely to be justifiable given the upfront capital spend to satisfy infrastructure requirements for international export with the use of B747 aircraft

Next Steps

- On the basis of the analysis performed and discussions held, it is likely that the construction of an extended runway will be the catalyst to drive investment and jobs in the region. The effective annual cost of servicing the debt from that investment is relatively low (at approximately $591k per annum). As such, the Edward River Council should:
- Form a working group/steering committee combining a number of different skill sets to manage the following approach
- Commence discussions with the State and Federal Governments to assist with funding the construction of the extended runway.
- Firm up the commercial relationship with a partner airport to better establish transport costs between Deniliquin Airport. This cost must be contained at the lower end to ensure project viability.
- Continue discussions with potential commercial partners which should be held in parallel to other funding discussions.
- Seek formal letters of support from commercial partners and investors.
- Formalise the phased approach regarding the construction of a business park in the airport precinct. This should include site planning for a large scale indoor farming operation.
- Address or plan to mitigate the commercial risks that have been identified

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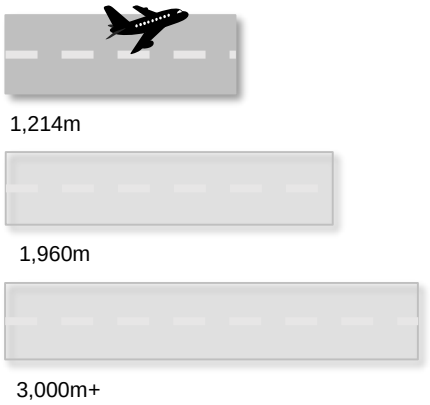
Analysis indicates Option 2(a)[1] is the preferred option to develop the Deniliquin Airport

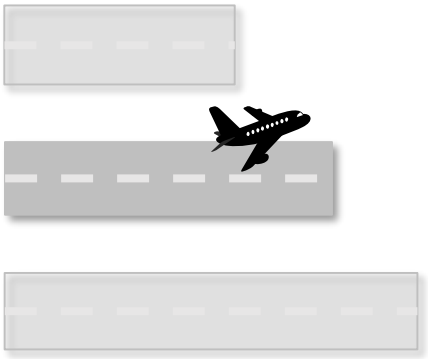
Option 1



Option 1

- Upgrade of the existing runway (1,214m)
- Approximate spend $7.0m
- Continues current operations with no opportunity for export of fresh product from the Deniliquin region
- No additional revenue avenues for the airport precinct

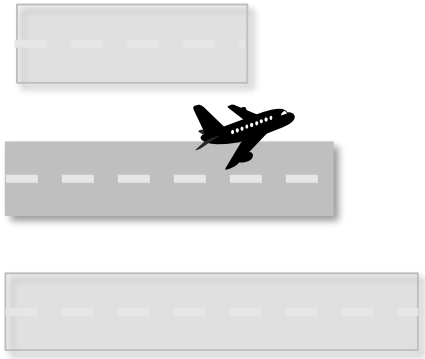
Option 2(a)



Option 2(a)

- Construction of new runway (1,960m)
- Approximate spend $15.1m
- Enables export via a partner airport
- Develop key partnerships to enable consolidation of supply from the meat and horticulture suppliers
- Ensures consistent, regular supply of fresh export produce

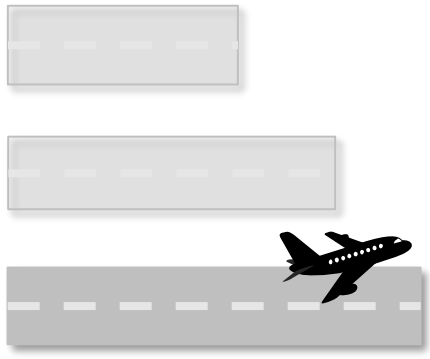
Option 2(b)



Option 2(b)

- Construction of new runway (1,960m)
- Approximate spend $15.1m
- Enables export via a partner airport
- Develop supply contracts with individual producers / suppliers
- Short term contracts with multiple suppliers is too unreliable to ensure critical mass

Option 3



Option 3

- Construction of new runway (3000m+)
- Approximate spend not yet determined
- Enables export directly from Deniliquin
- Initial capital spend not realistic to support the infrastructure required for direct export

Notes: (1) Construction of a new extended runway combined with long-term strategic partnerships with large cornerstone producers

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With a focus on fresh, export-ready produce and strategic partnerships, the Denilquin Airport can be developed into a commercial hub

1 Meat/ livestock

- Due to it's size and density, meat should be the key sector considered
- Fresh chilled lamb carcass exports to China and the Middle East are most likely to be successful

2 Dairy

- The fresh-produce and quick to market nature of dairy produce lends itself to an export product
- Topping up export flights with dairy product adds value to each charter

3 Horticulture

- Underpin the export flights with fresh fruit and vegetables
- Partnering with fresh food/indoor farming supply chains would allow high volume production with year round produce

4 Training and Education

- Partnering with a pilot training school could enable airport and runway utilisation, along with rental and other associated income

5 Initial charter flights

- Introducing charter flights initially could enable catering per demand, despite the initial increased cost
- Direct flights from Deniliquin to a partner airport
- Develop into two freight 737 flights a week

Develop the Deniliquin Airport into a commercial hub with commercial partners that will operate out of the airport precinct

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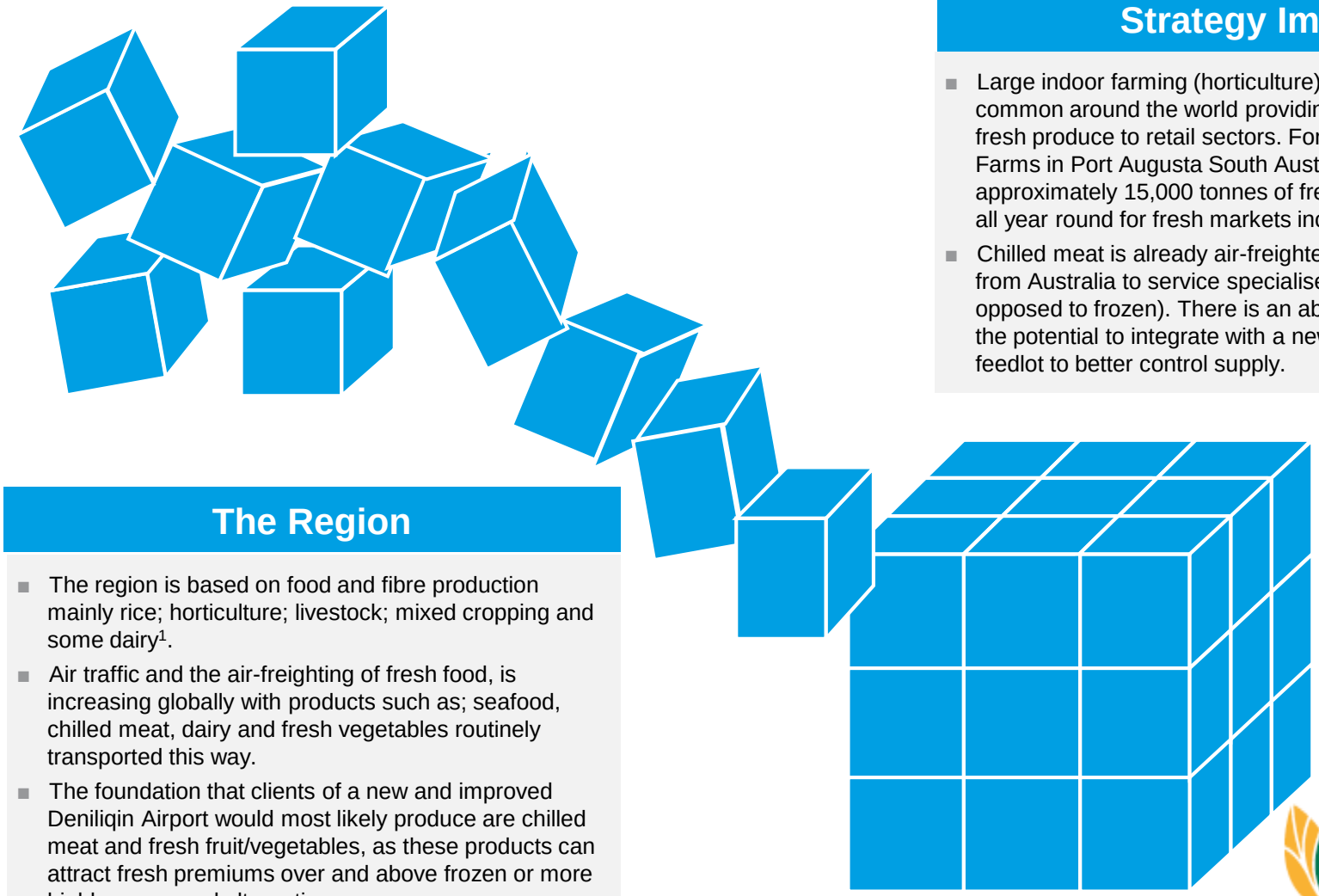
The region and future demand for food and other services presents a unique export opportunity for the Deniliquin region



Strategy Impact

- Large indoor farming (horticulture) investments are now common around the world providing large volumes of fresh produce to retail sectors. For example Sundrop Farms in Port Augusta South Australia can produce approximately 15,000 tonnes of fresh cherry tomatoes – all year round for fresh markets including Coles.
- Chilled meat is already air-freighted on a regular basis from Australia to service specialised chilled markets (as opposed to frozen). There is an abattoir in the region and the potential to integrate with a newly developed lamb feedlot to better control supply.

The Region

- The region is based on food and fibre production mainly rice; horticulture; livestock; mixed cropping and some dairy[1].
- Air traffic and the air-freighting of fresh food, is increasing globally with products such as; seafood, chilled meat, dairy and fresh vegetables routinely transported this way.
- The foundation that clients of a new and improved Deniliqin Airport would most likely produce are chilled meat and fresh fruit/vegetables, as these products can attract fresh premiums over and above frozen or more highly processed alternatives.

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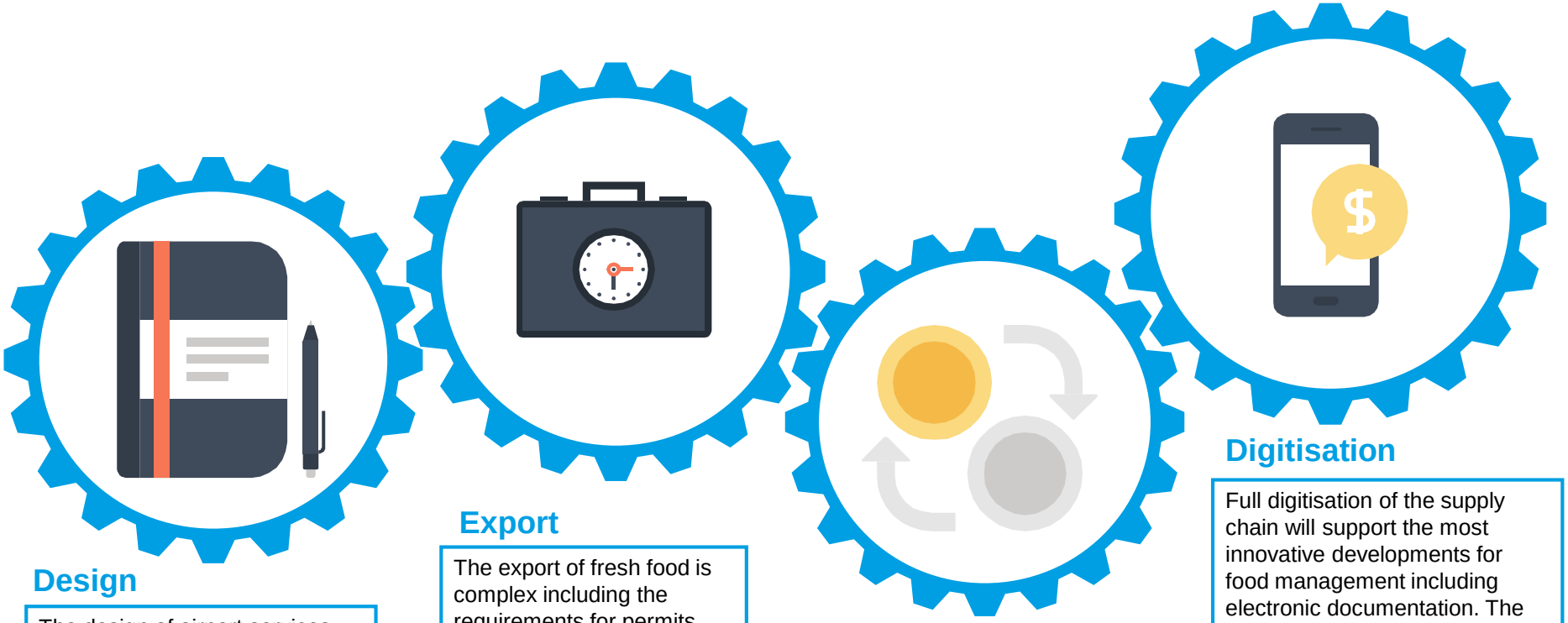
Sources: (1) ABS, (2) ABARES

Successful operation of the Deniliquin Airport requires the development and implementation of safe and simple management protocols



Design

The design of airport services must be carefully considered to manage costs and take into account the likely small number of flights (at least in the start-up phase) that will utilise the airport. For example solutions for aircraft maintenance; support crew; fuel management and emergency services must all be in place.

Export

The export of fresh food is complex including the requirements for permits (export certification) of facilities; ongoing maintenance of qualifications and document management. A qualified freight forwarder is likely to be a key partner in the development of fresh food exports from Deniliquin.

Logistics

Fit for purpose logistics infrastructure is required from farmgate to aircraft. For example food grade containers and warehousing for chilled goods must be in place to underpin fresh food exports.

Digitisation

Full digitisation of the supply chain will support the most innovative developments for food management including electronic documentation. The Internet of Things (IoT) is integral to a regional growth strategy and council should consider partnerships with network providers to install connection gateways.

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Option 2(a) is likely to generate a return for the region and tax payer dollars given the numerous revenue avenues available

Financial Outcomes

Annualised Cost

An additional investment of $4.3m ($7.0m for Option 1 resurface, $15.1m Option 2(a)) would have an effective annualised cost of approximately $1.5million per annum. If it were tax payer funded, this report assessed the investment as debt-funded over 40 years to provide a base line cost. Annual maintenance costs have also been added.

Economic Growth

Given the future direction of food production, creating a longer runway at Deniliquin Airport may lead to increased commercial activity that is attracted to the prospect of fresh air freight.

For every 22 tonnes of additional fresh food production (one 737 flight) – there is an estimated $132k added to the local economy – or approximately 80-120 jobs on an annualized basis based on one flight a week.

Landing Fees and Rents

Furthermore it is estimated that each aircraft landing at the site would create >$1,000 in airport usage revenue.

If commercial development proceeded then rental income could be generated through commercial agreements to access the land in the airport precinct.

Other Benefits

The longer runway in Option 2(a) will also provide other commercial and public good opportunities such as pilot training; passenger services and emergency services.

The report assumes that other developments on the airport site will be commercially funded and will deliver rental revenues.

Notes: (a) These estimates are based on the assumption that all output is net growth to the region through new markets and new production

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With the correct strategy applied, each key risk must be adequately addressed to ensure the vision is achieved

RISK

Lack of current supply of fresh produce in the immediate area

MITIGANT

- Support the development of a more reliable supply chains and introduction of large indoor farming. It is critical to have stable offtake agreements

RISK

Potential food processing partners may not proceed without a government funding commitment

MITIGANT

- The capital at risk is low to extend the runway and business case is strong
- Commercial discussions with potential partners should continue in parallel as a contingency

RISK

Perceived better options in the region to develop an airport and fresh food precinct

MITIGANT

- Seek first mover advantage via Government funding
- A few large commercial partners would keep negotiation simple and aim to underpin volumes for air freight services

RISK

Inability to attract State or Commonwealth funding without commercial partners being signed-up

MITIGANT

- The capital at risk is low to extend the runway and business case is strong
- Commercial discussions with potential partners should continue in parallel as a contingency

RISK

Lack of available water for fresh food developments

MITIGANT

- The types of developments outlined are not large water users and should be able to obtain the necessary water from rainfall and/or irrigation

RISK

Lack of skilled labour and/or accommodation in the region

MITIGANT

- ERC would need to consider labour attraction strategies in conjunction with commercial partners
- Accommodation for a new workforce may also be required

RISK

Lack of technical expertise in airport management and fresh food management

MITIGANT

- Continue to develop a partnership with a partner airport and work with commercial partners and freight-forwarders to deliver services

RISK

There are potentially high costs to link to a partner airport

MITIGANT

- Establishment of careful commercial terms is vital to ensure costs are kept lower

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The airport precinct

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The Deniliquin Airport is a 327 hectare site located in the southern Riverina district of New South Wales

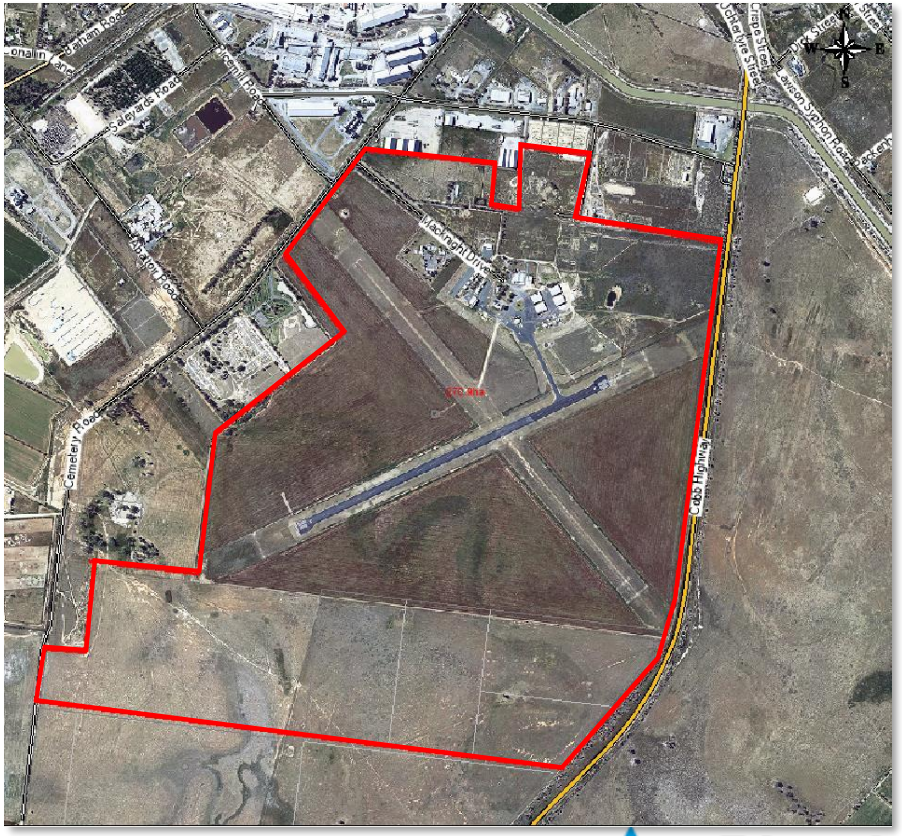
Site overview

The Deniliquin Airport (the subject site) is located approximately three kilometres south of the Deniliquin town centre, in the southern Riverina district of New South Wales as shown in the location map below.

The site covers an area of approximately 327 hectares and is bound by the Cobb Highway to the east, parts of Cemetery Road to the west, and adjoining land parcels to the north and south, as outlined in red in the aerial photograph opposite.

The subject site is located in the Edward River Council Local Government Area (LGA), which was proclaimed on the 12th of May 2016, following the amalgamation of the former Deniliquin Council and Conargo Shire Council.

Outline of the Deniliquin Airport site



Sources: (1) Google Maps, (2) Edward River Council

Phasing of the Business Park

Project phasing

The phasing of the Business Park is a critical part of the success of the project due to the need to manage large capital expenditure on the initial phases until the concept has been proven and supply agreements and off take agreements have been negotiated. Once the concept has been proven and supply agreements have been negotiated then the investment risks of the business park will have been identified and reduced and the investment opportunity will be attractive to a lager array of investors. Proof of concept will also help to generate investor interest and competition amongst the investment community to participate in the opportunity.

The following phasing plan has been assumed:

Phase 1A – bordered to the North by Sales Yard Road and to the East by Wright Brothers Drive the site is rectangular in shape and is an efficient space for a warehouse with good access to the Cobb Highway. Given the site is bordered on two sides by an existing road and is likely to be close to existing services the cost to develop the site will be lower compared to the south side of the airport. The site has a large impact on the arrival experience to the airport so signage and presentation will be important to ensure a positive arrival experience. The site area is approximately 30,000sqm in size and can accommodate warehouses with a Net Internal Area (NIA) of approximately 16,500sqm (assuming a 55% site coverage) which is sufficient to accommodate four warehouses which can each store between 60 – 100 tonne of produce packed in AKG units ready for loading onto a 737 freighter. Assuming that stock is stored for a maximum of 48 hours the four X 4,125sqm warehouses can potentially cater to 14 737 flights a week. Phase 1A is zoned “General Industrial” IN1 and would not have any rezoning complications to manage.

Phase 1B – can be accessed from McKnight drive. The site is rectangular in shape and lends itself to being developed as a warehouse with good access and close proximity to services which should limit the upfront capital expenditure in developing the site. The site is approximately 40,000 sqm in size which could yield five warehouses of approximately 4,400sqm in size each being sufficient to hold 60-100 tonne of produce or the equivalent of a 737 freighter. Assuming that stock is stored for a maximum of 48 hours the five X 4,400sqm warehouses can potentially accommodate 18 737 flights a week. Phase 1B is zoned “General Industrial” IN1 and would not have any rezoning complications to manage.

Phase 1A and 1B irregular land on the Southern side has good road access and visibility to passing traffic both internal to the airport and externally and could be attractive land to be developed as strip retail, bulky goods space to service the airport trade or local industry. Possible tenants could be car rental, mechanical services, Farmers Warehouse or CRT Warehouse or airport related retailers.

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Developing the Northern boundary has the lowest capital cost while the Southern quadrant is capital intensive

Project phasing

Phase 2 – Land to the East of the cemetery on the Western boundary of the existing runway is proposed to be developed as phase 2 after phase 1A and 1B. The rational for phase two is that it has direct road access onto cemetery road and the site can potentially be developed with a limited amount of internal road and services being built which will help to minimise the estate development costs while servicing a large amount of industrial space which can be monetised. Given phase two's proximity to town and the airport the cost of connecting to services such as water, sewer, telecoms and data is assumed to be lower than the south side of the airport.

Phase 3 – South side of the airport is a large englobo site which is the longest distance from Deniliquin town boundary and potentially has the highest upfront capital expenditure cost to service the land in preparation for construction of a business park. Phase 3 benefits from direct access onto the Cobb Highway and possible drive through access to Cemetery Road on the Western boundary of the site enabling a better flow of truck traffic on and through the site and a separate point of ingress and egress which will support a higher level of safety on site in the event of emergency evacuation and restricted access at one of the entrances to the business park. Phase three offers the opportunity to master plan a large business park, industrial estate into regular sized plots which are well suited to light industrial, logistics and food processing and manufacturing. Phase three is well suited to cater to food processing operations which could require a minimum set back from other industrial uses considered "dirty industry" such as fuel and chemical storage and distribution. Phase 3 will probably be developed in further sub-phases. This allows for an increase in the rental revenue as the business park increases in viability and exposure.

Potential location of an indoor farming operation

A potential location for an indoor farming operation is in the South Western corner of Phase 3 which access to Cemetery Road and is marked in blue on the Phases 3 site layout.

The proposed location is removed from the daily aviation activities and storage of aviation fuels and chemicals which could assist in managing buffer zones required between different industrial and farming uses. The location benefits from convenient access to the Southern side of the airport and local road infrastructure

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Food production

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International demand, current production and enabling factors in the catchment region will drive the future production of fresh produce

The catchment area

- The catchment area covers approximately 129,764 square kms, encompassing 24 Local Government Areas
- The defined area is based on an approximate radius of 200km, and 2-2.5 hours travel time from Deniliquin
- The region currently produces approximately 9% of Australia's agricultural products

Current production in the region

- Farms within the region fit into four primary categories: rice based, dairy, livestock and horticulture
- The catchment region has a typically hot, dry climate with low rainfall and a high reliance on irrigation
- These enabling factors drive the current production mix in the region

International demand for fresh produce

- International demand for fresh Australian meat and dairy remains steady, with majority of exports destined for China
- International demand for fresh Australian horticulture, and subsequently Australian exports have increased due to the Free Trade Agreements with China, Japan and South Korea

Outcomes

Recommended fresh production mix and services


Livestock and meat


Nuts


Dairy


Fresh fruit and veg


Citrus


Other services

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The value represented within the catchment area, coupled with the international demand gives an opportunity for export

- The defined catchment area is based on an approximate 200km radius around Deniliquin
- The area falls directly within the southern part of Murray Darling Basin, where 39% of Australia's total value of agricultural production lies
- Currently, approximately 9% of Australia's agricultural products are produced within the catchment area

- China, India, Indonesia, and Japan together account for ~50% of all the agricultural exports from Australia to Asia
- Among the top agricultural products exported to Asia, nuts represents the highest value-to-volume ratio (~$6,000/ton) across the years, making it one of the more lucrative products to focus on
- Exports of grapes to Asia have grown more than 170% from 2012 to 2016, facilitated by the increase in airborne freight services

- Given the uptake of technology, current rainfall, the region's climate and access to irrigation, 5 products have been selected for the region to focus on, introducing high value products into the current production mix
    1. Livestock
    2. Dairy
    3. Citrus
    4. Nuts
    5. Fresh fruit and vegetables

Sources: (1) Horticulture Innovation Annual Report 2016/17, (2) Horticulture Innovation Australia Statistics Handbook 2015/16 (3) ABARES

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ERC should consider five fresh export products based on conditions, growth factors of the catchment area, and international demand

Enabling factors

Technology

- Update of technology allows automated processes and a smaller requirement for labour

Climate

- The hot dry climate of the catchment area limits the suitability of the production of certain products in the region

Rainfall

- A varied and inconsistent rainfall pattern in the catchment area can provide uncertainty of water without a reliance on irrigation

Irrigation

- Access to irrigation is available but comes at a cost depending on the level of security of the water

Most likely fresh produce mix

1 Livestock

Australia is among the world's largest and most successful/efficient producers of commercial livestock and a leader in the export of red meat and livestock

2 Dairy

The dairy industry accounted for approximately 8% ($4.3 billion) of the gross value of agricultural production in Australia in 2016

3 Citrus

The Australian citrus industry is the largest fresh fruit exporter in Australia worth in excess of AUD $200 million annually

4 Nuts

Australian tree nut crops delivered AUD $1 billion to the Australian economy in export earnings for 2015, becoming the country's most lucrative horticultural export

5 Fresh fruit and vegetables

Australia has an international reputation as a reliable supplier of some of the best fresh, high quality, horticultural produce in the world. However some categories require new protocols to facilitate trade

Sources: (1) ABS, (2) AEGIC, (3) Dairy Australia, (4) Agriculture VIC, (5) Agriculture NSW

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Air freighting logistics

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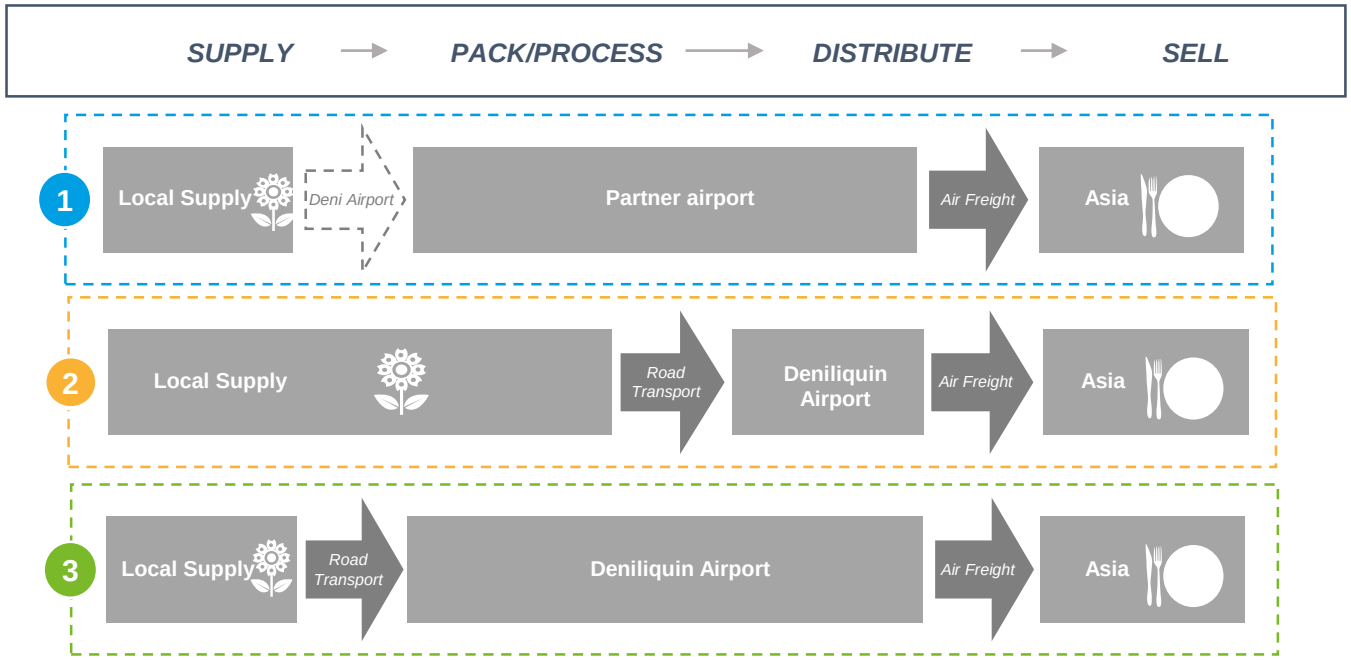
Three distribution models have been modelled to analyse the required drivers in order to successfully implement the operating model

Value chain flow



Business Case Implications

- New runway 1960m in length
- Minimal storage requirements
- Deniliquin Airport transport facility only

- New extended runway
- Minimal storage requirements
- Export requirement facilities

- New extended runway
- On-site processing plant
- Greater storage requirements
- Export requirement facilities

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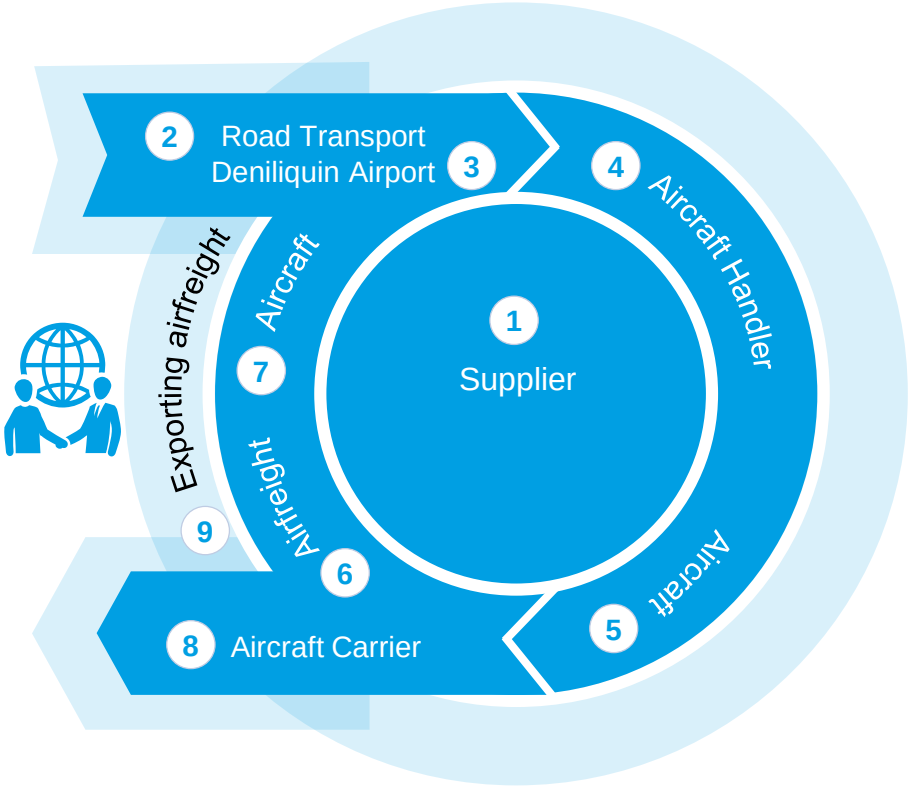
Detailed end to end process



1. **Supplier -** Prepare products and provide export documentation and information
2. **Road Transport –** Load, transport and unload goods
3. **Freight Forwarder –** Views/checks product integrity and hold items within appropriate storage location.
4. **Aircraft Handler -** Maintaining the integrity of the product and load items into the ULD. Load ULD onto the aircraft.
5. **Aircraft -** Supply of Pilots and other staff is required by the Aircraft. Costs associated to the aircraft include landing, refuel (if needed) and take-off charges.
6. **Airfreight –** Domestic airfreight (Deniliquin to partner airport)
7. **Aircraft -** Supply of Pilots and other staff is required by the Aircraft. Costs associated to the aircraft include landing, refuel (if needed) and take-off charges
8. **Aircraft Carrier –** re-handling of produce
9. **Exporting airfreight**

Unit Load Device (ULD) – Once the product arrives at the airport it is loaded into a ULD, which is then loaded on to the aircraft. These ULDs are shaped to maximise freight capacity within the aircraft, as such different aircraft models have different ULDs. For a 737 freighter, a ULD-7 is suitable for ambient dry product (gross weight 4.6 tonne)

Common Designated Demi (CDD) – suitable ULD to carry chilled product (i.e. lamb). It is advised that dry ice be placed within ULD.

Notes (a) All costs are estimated and approximates only
Sources: (1) Discussions with Sara Hale and Ben Lyons

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Internet of things

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The Internet of Things is reimagining the world around us right now, creating a borderless and demand driven economy

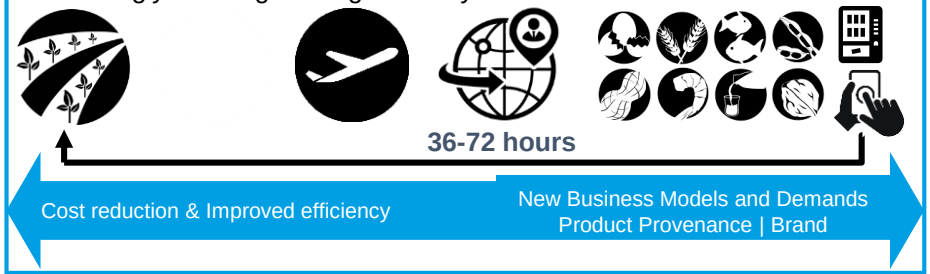
Internet of Things

The Internet of Things (IoT) can be defined as **connecting the physical world to the digital world** via sensors, actuators and network connectivity which enables these objects to exchange data. This can allow better, faster decisions, automation of processes and prediction of future events.

IoT is becoming increasingly **integral to our daily lives**. From Smart Cities, Farms, connected homes to cars to fitness wearables, virtually anything can be connected from almost anywhere.

It is having a transformative impact on business and that pace will only **continue to accelerate**. IoT is improving manufacturing processes, streamlining supply chains, initiating more frequent and in-depth customer interactions and providing insightful new data as business leaders look to make more **informed, data-driven decisions**.

Organisations around the world are turning to IoT solutions to help accelerate how they **operate, innovate and compete**. In order to attract large scale investors, the region needs to **plan for digital infrastructure** that provides investors with a competitive advantage in a world that is increasingly evolving into digital ecosystems.



Market leaders

There are precursors in the market with transport & logistics companies leveraging the latest advances in technology to lay the foundations of the demand driven supply chain.

IBM and Maersk build a solution that will help manage and track the paper trail of tens of millions of shipping containers across the world by **digitising the supply chain process from end-to-end to enhance transparency** and the highly secure sharing of information among trading partners. The solution has the potential to save the industry billions of dollars

Walmart plans to use technology that is designed to provide the retailer with a way to indelibly record a list of transactions indicating **how meat has flowed through a commercial network, from producers to processors to distributors to grocers—and finally, to consumers**.

"Consumers today want more transparency about where and how a product came to be"

The opportunity

It is not a stretch of the imagination that in 5-10 years technology advances will lead to a supply-side advantage, with long-term gains in efficiency and productivity.

- Transportation and communication costs will drop
- Logistics and global supply chains will become more effective
- The cost of trade will diminish

All of which will **open new markets**, **drive economic growth** and **reduce waste.**

Sources: (1) IDC, (2) Fortune, (3) IBM

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Next steps

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Ongoing planning for the Deniliquin Airport and Business Park will develop the opportunity, define the operations, reduce risks and attract investment and funding

Define the airport and project vision and strategy → Create a governance and management framework. Procure a development management firm. → Business plan – Airside & Landside; Project description; Design and development; Operations; Revenue; Financial performance; Funding - debt and equity → Investor procurement strategy & process. → Secure supplier agreements, off-take agreements and pre-commitments Investment documentation

Industry Relationships, Data Sources and Networking

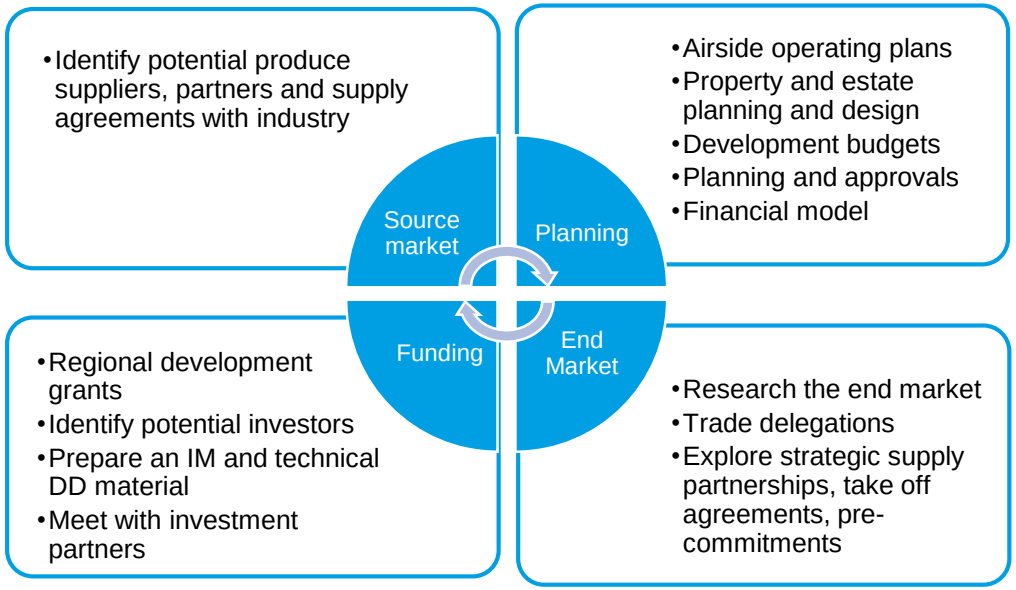
Initial Management of the process:

The opportunity to develop Deniliquin Airport into an Agri-Hub business requires the integration of both agricultural products and infrastructure to support the supply chain (storage, logistics, handling etc).

The skills required to manage this integration are rare and require a careful procurement process to ensure council stakeholder risks are understood and mitigated, and the project is delivered to a stage where investors are reaching financial close and preparing for construction/production.

Most examples of the development of business parks adjacent airports such as Canberra (Snow), Bankstown (Altis), and Wellcamp (Wagner) show the private sector taking the lead. In some circumstances single-use food producers (such as AMG) are driving their own products to market via ports etc.

It is recommended ERC conduct a governance and management framework to initially assist with the early development of the enterprise and to develop a strategy to move from business case to staged construction.



- While the planning, funding, supply and end market relationships develop there is no specific order to the opportunity eventuating. One aspect will most likely develop quickly and the other activities will follow.
- Each activity will typically run in parallel to other activities while complementing each other as the opportunity matures

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