

Reliable, climate-independent water

The Northern Adelaide Irrigation Scheme

ICE WaRM webinar

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The opportunity

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The Northern Adelaide Irrigation Scheme is a **once in a generation opportunity** for advanced agribusinesses to secure a long-term supply of reliable, climate-independent water.

NAIS is a superb platform for businesses wishing to supply booming food export markets in Asia and across the globe efficiently and profitably.

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Global trends

- Rapid population growth
- Rising incomes
- Growing affluence
- Changing expectations in developing countries

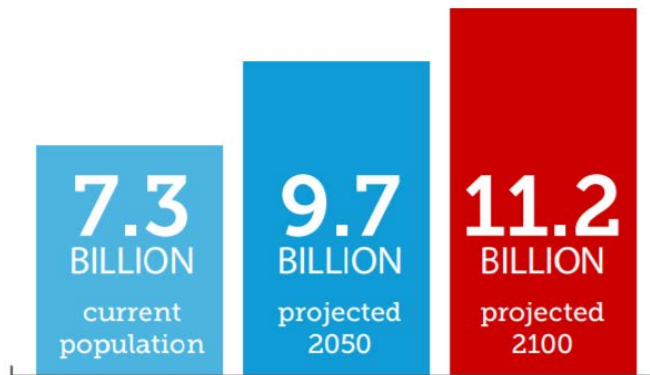
creating extraordinary opportunities
for global agribusinesses

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Rising populations, growing demand

A United Nations report in 2015 estimates:



with **2.4** billion more people on earth, **60 to 70%** more food will be required than what is currently available.

- Global food demand up 59%-98% by 2050
- \$1.7 trillion (estimated) in agricultural export opportunities
- Transforming the global food industry

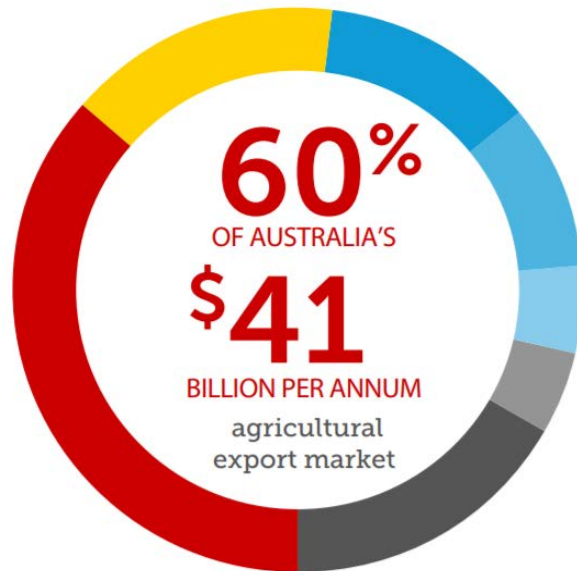
Source: United Nations, *World Population Prospects 2015*; H. Valin *et al*, "The Future of Food Demand: Understanding Differences in Global Economic Models." *Agricultural Economics* 45 (2014), pp. 51–67; Minter Ellison

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Driven by Asia's growing middle class

Currently, the emerging middle class in Asia accounts for:



with **22%** of sales to China, **9.4%** to Japan, **7.3%** to Indonesia, **5.8%** to Korea, **3%** to Malaysia and **2.8%** to Singapore, and **10%** to other Asian countries.

- Asian demand will double by 2050
 - China +43%
 - India +13%
- Focus on clean, healthy, high quality food imports

Source: Australian Bureau of Agricultural and Resource Economics and Sciences; Minter Ellison

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Significant production challenges

- Climate change-driven water scarcity
- Rising global temperatures
- Extreme weather
- Land repurposing to support bioenergy crops

putting pressure on
the global food balance

Source: E. Elferink and F. Schierhorn, "Global Demand for Food is Rising: Can We Meet It?" *Harvard Business Review* 7 April 2016

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Northern Adelaide Irrigation Scheme

- A sophisticated, world-class, high-technology agrifood precinct on the Northern Adelaide Plains
- Supported by the Australian, South Australian, and local governments

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Why South Australia?

- An ideal launching pad for a push into Asia
- Biosecure region with a Mediterranean climate
- Wide range of soil types and terrains
- Largest cluster of agrifood R&D in the southern hemisphere
- More greenhouse production acreage than any other Australian state
- Perfection Fresh, Sundrop have demonstrated proof of concept

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Major opportunities on the Northern Adelaide Plains

Potential for up to **3,000 ha** of globally competitive, high-technology horticulture, including advanced greenhouse production






- Horticulture
- Floriculture
- Fruit and nut orchards
- Table and wine grapes
- Poultry and feed-lotting
- Aquaculture
- High value broad-acre cropping

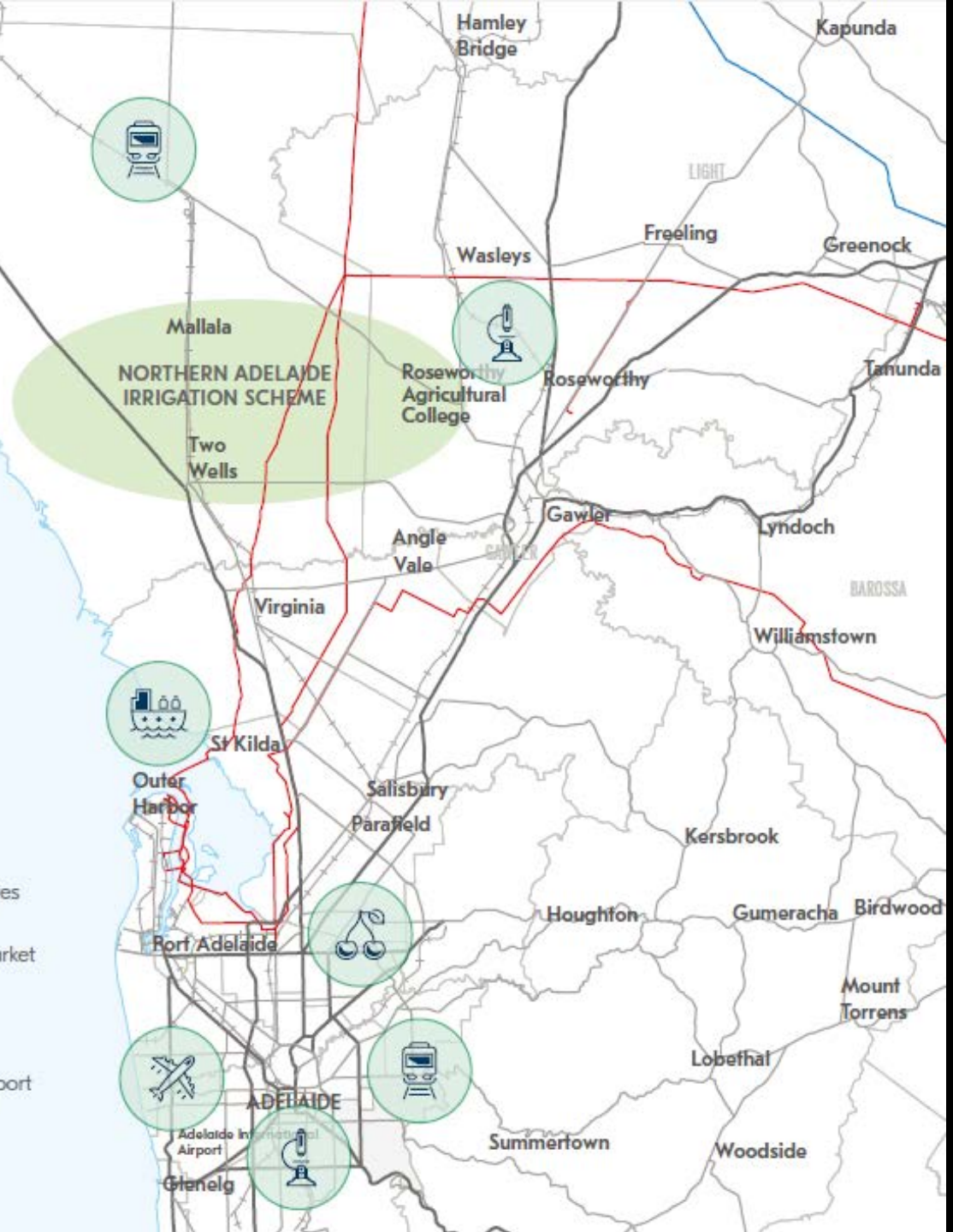
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NORTHERN ADELAIDE IRRIGATION SCHEME:

-  National rail links
-  60 minutes to SA's world leading R&D centres
-  30 minutes to South Australian Produce Market
-  45 minutes to Adelaide's major seaport
-  50 minutes from Adelaide International Airport



Perfection Fresh, Two Wells



Sundrop Farms, Port Augusta



The larger context

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Northern Economic Plan

Achieve regional transformation and deliver leading industries by:

- transformative ideas and innovation
- maximising opportunities
- building the brand for Northern Adelaide and the Plains

Agriculture, food and beverage is a key growth sector

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Strategic directions

1. **Industry Growth:** generating jobs and investment
2. **Thriving Communities:** aligning and focusing community and services for better work and life skills
3. **Responsive Governments:** driving action where government can better facilitate private investment for economic and community growth

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Strategic focus



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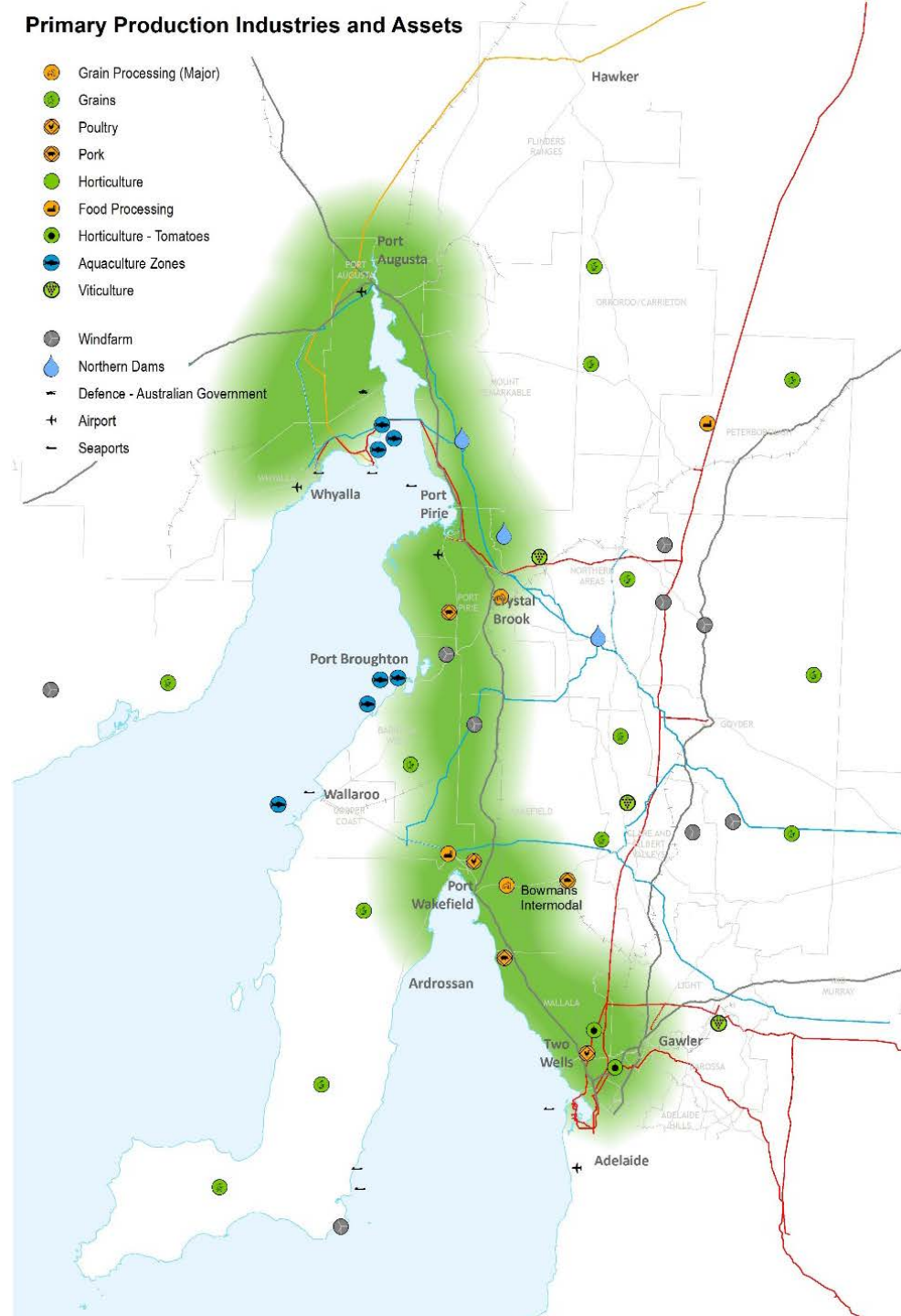
Northern Economic Corridor

Two Wells to Whyalla

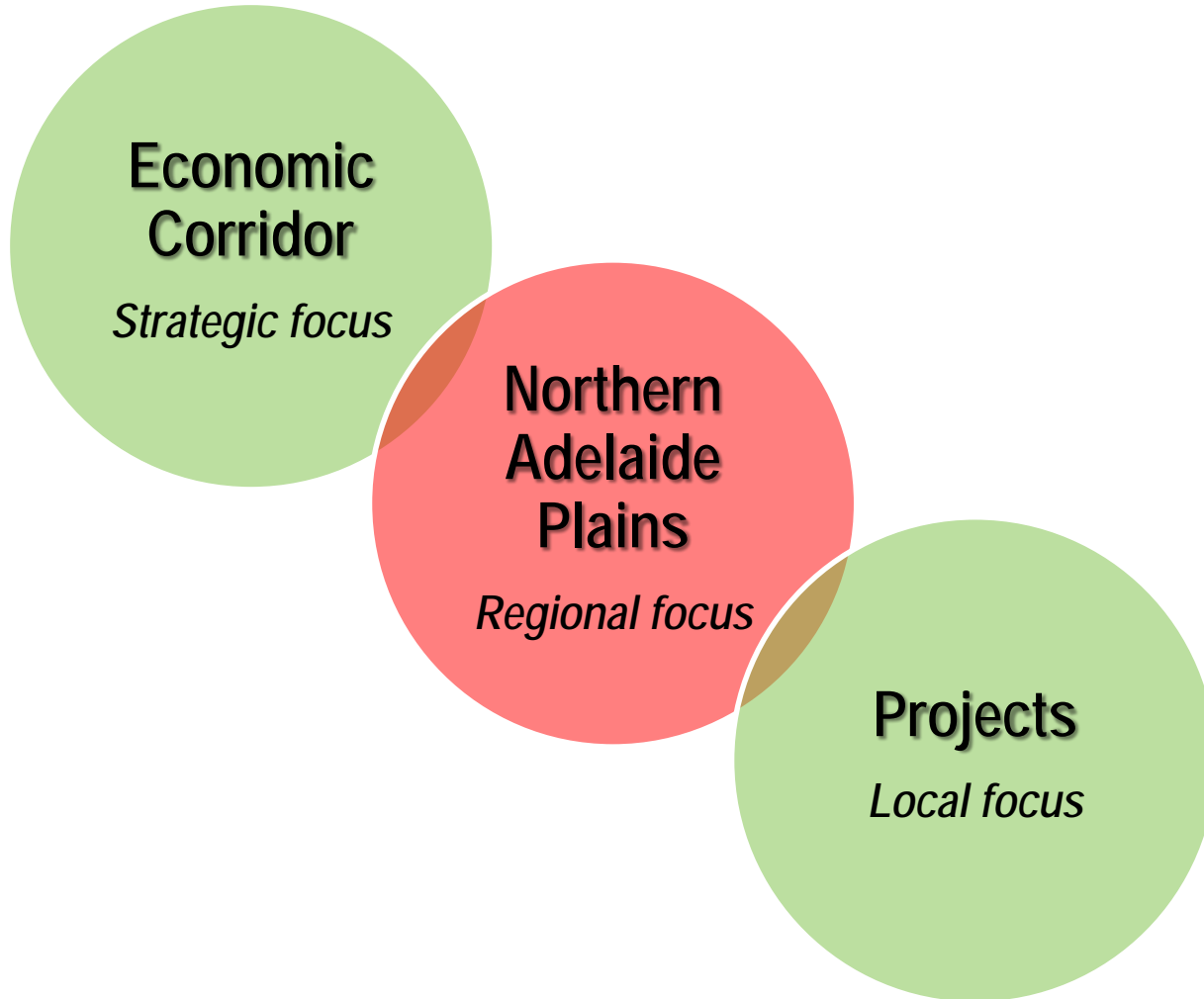
The Corridor includes some of SA's most productive farmland, grain, livestock, and food processing facilities servicing surrounding regions.

Aims:

- Increase gross value of production
- Provide additional employment opportunities



Regional focus



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Northern Adelaide Plains

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Northern Adelaide Plains Agribusiness Initiative

A suite of projects and initiatives that deliver common agriculture objectives:

- increase production and productivity
- increase access to infrastructure that supports growth
- support growers to access and connect to international markets
- support creation of new jobs, new investment and economic growth
- develop industry capability and skills

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Local focus



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Example agribusiness projects and initiatives

- Northern Adelaide Irrigation Scheme (NAIS)

Other examples:

- OneBiosecurity Plant Health Project (Pest-Free Area)
- Northern Adelaide Food Park
- Food manufacturing industries – Singapore MoU

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The infrastructure

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Funding package

\$110 million South Australian Government through SA Water
\$45.6 million Australian Government NWIDF Capital Component

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Significant economic benefits

\$1.1 billion private sector investment

3,700 jobs

\$578 million annual increase in Gross State Product

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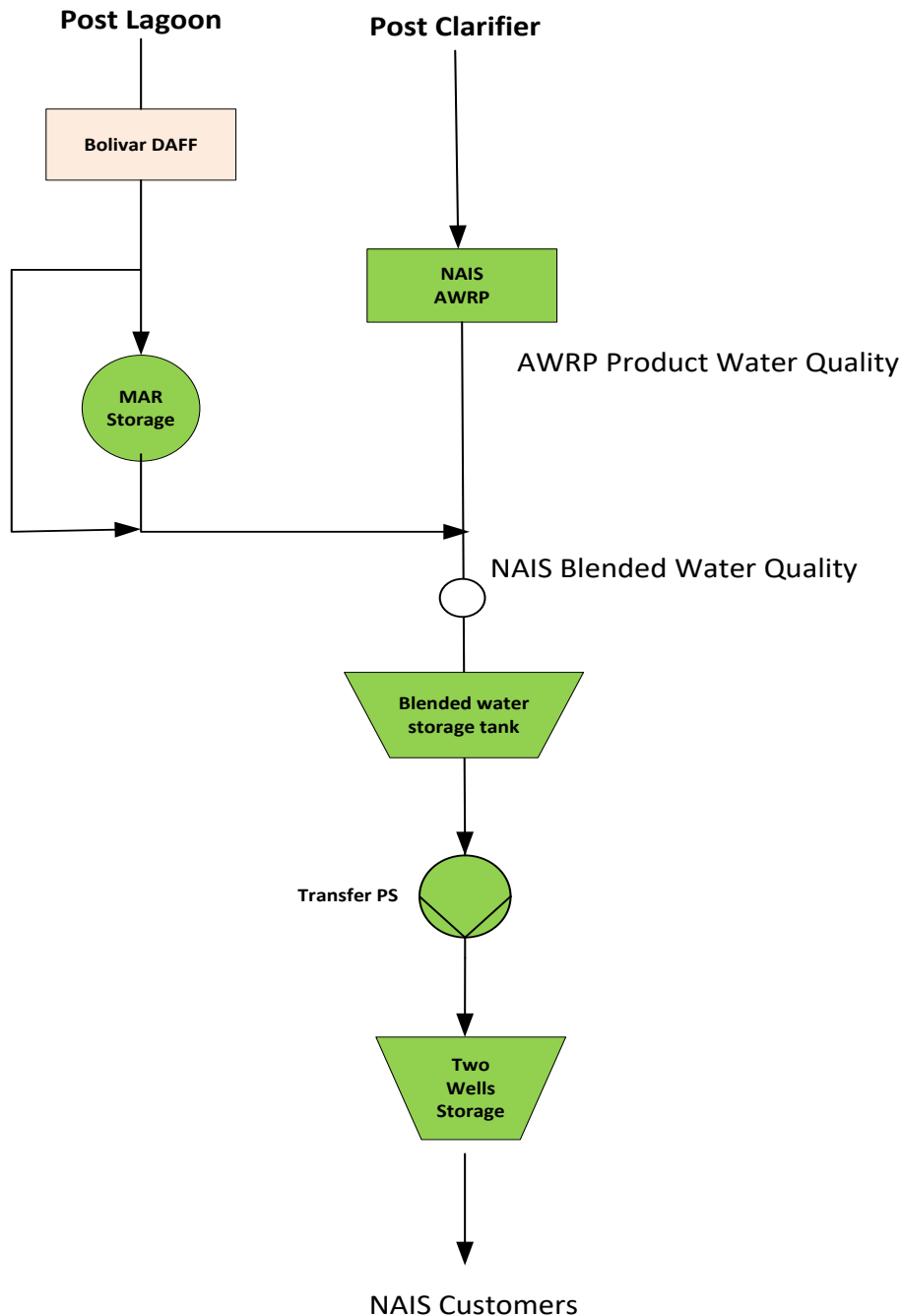


Secure, climate-independent water

- 12 GL in Stage 1, more to follow
- Pressurised pipeline, delivered to the farm gate
- Climate-independent, season-independent
- Ultra-filtered, salinity-limited
- Department of Health standard for commercial food production
- Secure, long-term contracts tradeable within the Scheme
- Stable, indexed price path

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Scheme design

- New advanced water recycling plant (AWRP)
- Blending with DAFF water
- Surplus DAFF winter water stored in MAR
- Transfer pump station and pipeline to Two Wells area
- 2 x 200 ML above ground storage at Two Wells (lined and covered)

Treatment infrastructure



Pre-treatment



Dual media
filters



Reverse
osmosis



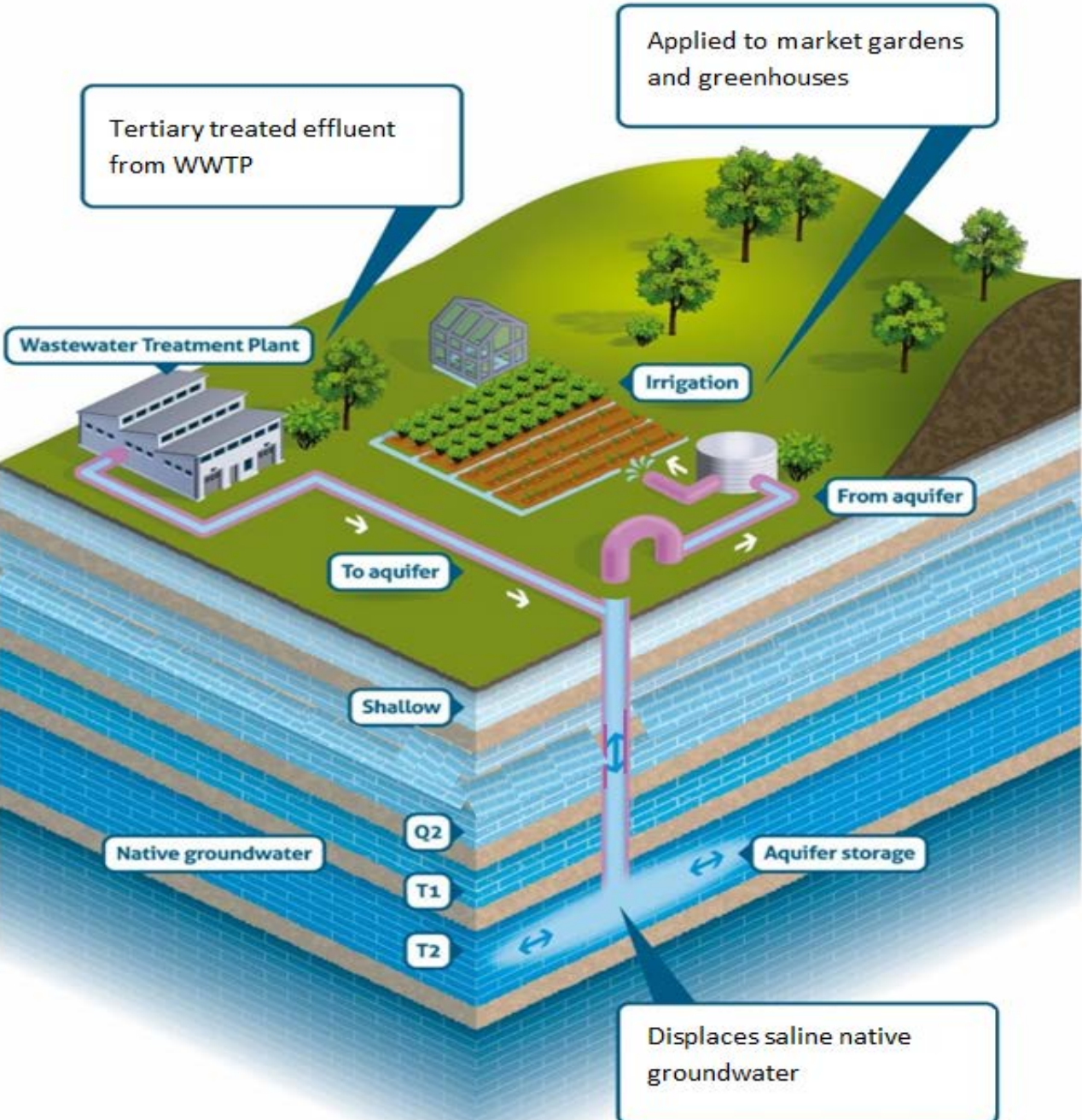
UV



Chlorination

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Aquifer storage

Diagram is indicative only. Not to scale.

Regulatory oversight

- Department for Environment, Water, and Natural Resources (borefield construction and operation)
- Environment Protection Authority (Code of Practice for Aquifer Storage and Recovery)
- Department of Health (Australian Guidelines for Water Recycling)
- Essential Services Commission of South Australia (pricing)

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Water prices

1. A once-only capital contribution (\$2.90/KL)
2. An availability charge (\$0.24/KL)
3. A metered usage charge – three options:
 - \$0.75/KL for 600 TDS
 - \$0.25/KL for 1000 TDS
 - Proponent proposes preferred water quality and price

Pricing is indicative – SA Water will negotiate contractual arrangements with short-listed applicants.

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Timelines

Call for Project Proposals issued **6 September 2017**

Round 1 closes **15 November 2017**

Round 2 closes **28 February 2018**

Project proposals reviewed by whole-of-government panel

Proponents offering significant economic benefits shortlisted

Water contracts negotiated with shortlisted proponents

Construction to begin **early 2018**

First water to flow **early 2019**

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Opportunities

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Construction opportunities

www.naissuppliers.com.au

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Business opportunities

- Agrifood production
- Greenhouse construction
- Insurance
- Technology and service providers
- Transport and logistics

Van der Hoeven, Kubo, Bom, Royal Brinkman, Hoogendoorn, and Achmea all exhibited at Protected Cropping Australia, Adelaide, July 2017

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Collaboration opportunities

- Roles of industries, local government, State / Federal agencies
- Land use planning e.g., Development Plans
- Preparing for water, markets, investments, jobs
- Engagement with service providers, businesses, community
- Capturing existing services, programs, facilities and infrastructure
- Challenges in delivery on the ground
- How information is shared
- What does success look like?

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