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VINEHEALTH AUSTRALIA

**DIGITAL
BIOSECURITY
PLATFORM**

VALUE PROPOSITION
JANUARY 2022



Vinehealth Australia's Digital Biosecurity Platform

Vinehealth Australia is proposing a new Digital Biosecurity Platform. This will be a powerful tool for the management of South Australia's grape and wine biosecurity landscape.

Vinehealth Australia is a statutory authority governed by the *Phylloxera and Grape Industry Act 1995* (PGI Act), with functions spanning the four phases of biosecurity, preparedness, prevention, response and recovery. We work alongside and support PIRSA.

Strong vineyard biosecurity is integral to safeguarding our vines and achieving the South Australian wine industry's 2030 growth ambitions. But the risk of a biosecurity incursion has never been greater.

The transformation of Vinehealth Australia's Register into a world-class Digital Biosecurity Platform will enable a profitable, productive and sustainable industry.

This Digital Biosecurity Platform represents Vinehealth Australia's carefully considered response to three critical factors:

1. A changing, higher-risk biosecurity landscape
2. The needs and expectations of industry and the South Australian Government in the face of rising threats
3. Rapid technology modernisation, which is enabling new approaches and has diminished the value of our existing Register

This Value Proposition describes why the Digital Biosecurity Platform is needed, what it will offer the grape and wine industry and government, and the investment required to bring it to life.



An industry worth safeguarding

The South Australian wine industry is a powerhouse, supported by more than 76,000 hectares of grapevines. The State has 3,271 registered vineyard owners.

In 2020, the industry achieved an annual crush of more than 650,000 tonnes, supporting the direct employment of more than 8,400 people. Many more are employed indirectly.

Before COVID restrictions came into force, the South Australian wine sector attracted \$2.6 billion in regional visitor expenditure for the State. And in 2019, South Australian wine exports were worth \$1.92 billion.

This is a critical industry in South Australia that must be protected.



**76,008 HECTARES
OF GRAPEVINES**

8,440 PEOPLE
directly employed in
grapegrowing and
winemaking, and
many more indirectly
employed



3,271
registered
vineyard owners



651,195 TONNES
of winegrapes crushed
in 2020 vintage



\$1.92 billion in
wine exports (2019)



**More than
680 wineries**



\$2.28 billion in
wine production
(2019)

550 million litres of
wine produced in
2019 (equivalent to
734 million bottles)



**More than
340 cellar
doors**

\$3.6 BILLION IN REGIONAL
VISITOR EXPENDITURE (2019)



Grapevine biosecurity is at a critical juncture

Vineyards and wine businesses face many threats to their sustainability, including:

- Greater movement of destructive pests, including phylloxera, fruit fly and *Xylella fastidiosa*
- A changing climate, including droughts and rising temperatures
- Bushfires and other natural disasters
- Global pandemics
- International trade disputes
- Changes to regulations that govern import and movement rules
- Changing consumer preferences and trends

Our biosecurity exposure is increasing. This is due to increased trade and tourism, agricultural expansion and intensification, and wine industry specific dynamics including increased footprint consolidation, specialisation of management activities and international ownership.

Margins for grapegrowers continue to be tight, resulting in sub-standard investment in farm-gate hygiene activities.

The phylloxera threat

Phylloxera kills vines within five years and is a significant pest threat to South Australian's vines. It continues to spread in Victoria and there is no cure.



\$60,000 PER HECTARE

The cost of replanting infested vineyards on phylloxera tolerant rootstock

In South Australia, more than 70% of vineyards are on own roots and susceptible to phylloxera attack. We have some of the oldest vines in the world, which are irreplaceable and are a unique part of our wine story. The cost of a phylloxera incursion in South Australia has the potential to be immense, and for some grape and wine businesses, catastrophic.

The threat of phylloxera is real with the closest infested zone only 300 km from the state border.

The Xylella fastidiosa threat

The spread of Pierce's Disease (caused by *Xylella fastidiosa*) in vineyards globally demonstrates the extent and severity of impacts.

The cost of a Pierce's Disease incursion on the Australian wine industry is predicted to be up to \$7.9 billion over a 50-year period. In California, this disease causes more than \$100 million in yearly losses to the grape industry.

\$7.9 BILLION

THE PREDICTED COST OF A PIERCE'S DISEASE INCURSION OVER 50 YEARS



The Register is outdated

Since 1899, Vinehealth Australia has maintained a Register of every vineyard in South Australia. Today, the Register encompasses 76,008 hectares of vineyards owned by more than 3,200 growers. It is the source of truth of South Australia's vineyard genetics and planting information, integrated with location, owner and operator details. And in the future, it will also contain winery ownership and locations across the state.

This Register is a key enabler in the protection of vines from pests and diseases and is the envy of plant industries around Australia.

However, the technology and architecture used for this Register is outdated and lacks the required functionality and flexibility to combat the current biosecurity landscape.

Without improving our Register, we cannot meet the evolving biosecurity needs of industry and government. The impact of standing still is an increased risk of pest incursions and an inability to effectively manage them.

The Solution

Vinehealth Australia proposes a new Digital Biosecurity Platform that will enable the grape and wine industry and government to share responsibility for biosecurity, through enhanced access to and sharing of information.

The Platform will be powered by geospatial data to drive a relationship-rich digital biosecurity ecosystem. It has been designed following extensive industry consultation to ensure a strong value proposition and outstanding user experience.

Key features of Vinehealth Australia's Digital Biosecurity Platform that will improve South Australia's capability and capacity to prepare for, prevent and respond to biosecurity threats, include:

1. High resolution geospatial data visualisation of vineyards, scalable to winery and foundation propagation material assets
2. Creation of digital partnerships with customers (growers, nurseries, wineries, contractors and conveyancers), including personalised functionality, for example, through tools and dashboarding of key metrics, to enhance behaviour change and business insights
3. Cloud storage and cloud computing to ensure elasticity and reliability
4. A flexible data model enabling integration with external data sources (for example, via APIs)
5. Data exchange capabilities (for example, via apps) enabling data gathering, surveillance and analytics
6. Industry facing tools and data to support the development of value-adding third party AgTech solutions
7. Analytics and reporting at a property, regional and state level (for example, to enhance business insights and for incursion management)
8. Advanced search-enabled communication and integration with Vinehealth Australia's website
9. Aesthetically pleasing, simple, iterative interface, suitable for viewing across multiple devices to meet users' needs

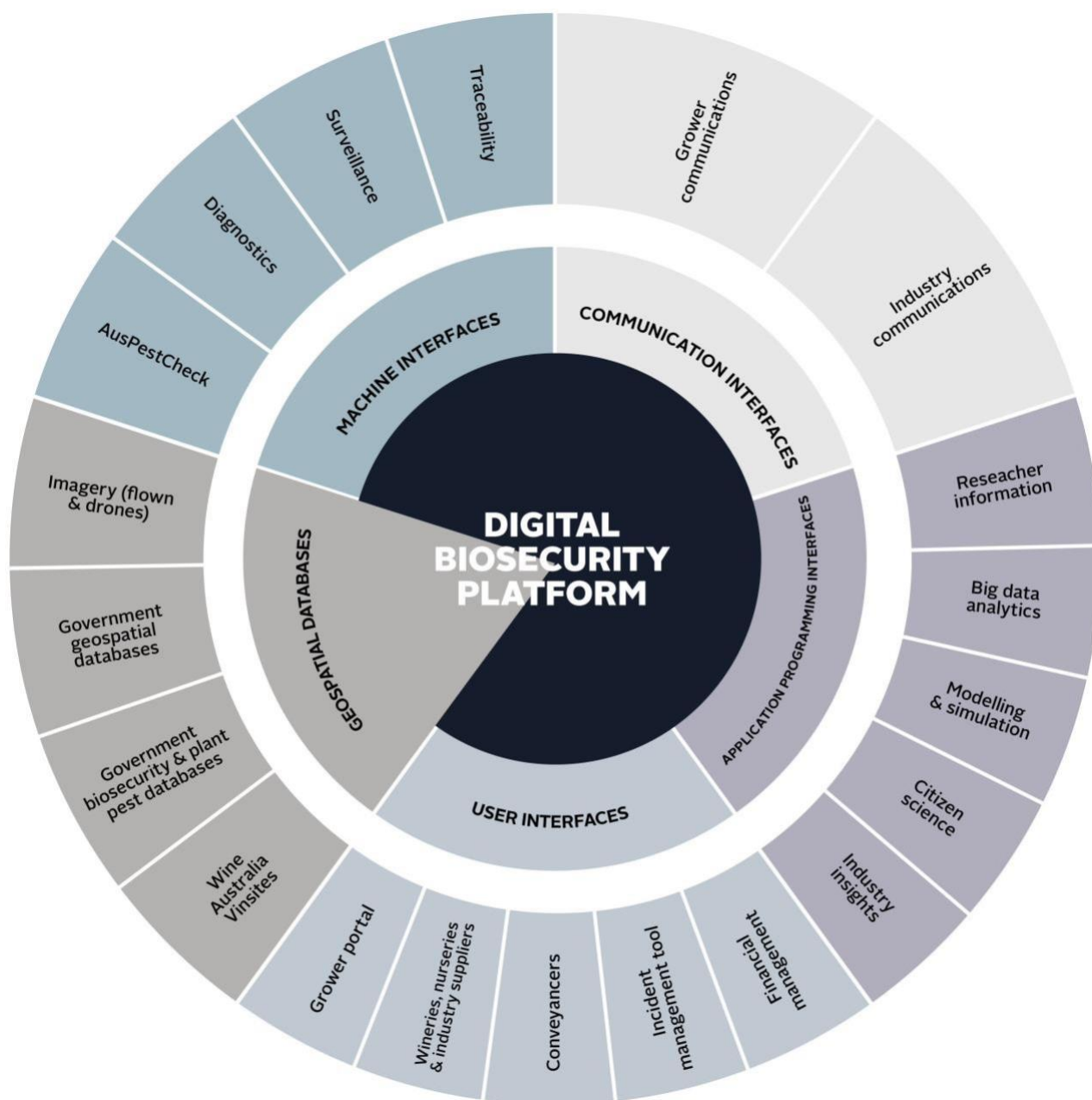
The Digital Biosecurity Platform will be the third iteration of Vinehealth Australia's Register since 1900, representing a truly transformational step. From a paper-based system to a spreadsheet, then a simple database, to this powerful integrated solution.

It will propel South Australia's grape and wine industry into next generation technology to enable the required agility to protect the industry's foundational asset, our vines.

The platform is also scalable and can be customised to other plant industries in the state.

DIGITAL BIOSECURITY PLATFORM
VALUE PROPOSITION

Vinehealth Australia's Digital Biosecurity Platform





Value Proposition

Vinehealth Australia's new Digital Biosecurity Platform will drive a profitable, productive and sustainable grape and wine industry, with enhanced emergency response capabilities.

It will accelerate the adoption of AgTech solutions by growers, winemakers and the entire grape and wine supply chain in South Australia through:

- Connecting end-users (growers and winemakers) with AgTech entrepreneurs
- Enabling growers to easily permission their foundational vineyard information to trusted AgTech providers to improve vineyard management (for example, irrigation, fertigation, harvest logistics)

It will streamline the connectivity of growers and winemakers by enabling one-to-one, one-to-many and many-to-many networks and forums, including the permissioning of their data to other parties (for example, state or regional wine industry associations).

It will support vastly improved asset management by the grapevine propagation sector in South Australia thus improving the production of high health planting material.

It will enhance the ability of Vinehealth Australia to:

- Rapidly communicate based on sophisticated search-and-send capability using multiple channels
- Store and interrogate surveillance and diagnostics data for vineyards
- Improve capacity to model, simulate and post-analyse incursions
- Undertake big data analytics and landscape-oriented assessment of vine disease trends and impacts
- Adopt technology to enhance supply chain traceability and real-time movement tracking
- Streamline levy management for growers and winemakers
- Inform research and development priorities
- Efficiently maintain currency of data held in the Platform
- Securely share data in an efficient and timely manner
- Monitor the uptake of farm-gate hygiene activities by industry
- Feed required information directly into any future plant Property Identification Code system, thus reducing red tape for property owners

It will enhance the ability of Vinehealth Australia to provide more timely and tailored support to other South Australian government agencies to effectively perform their critical functions, such as:

- The Department of Environment and Water balancing the risk of smoke taint to grapes with the imperative to reduce fuel loads when conducting prescribed burns
- SA Police investigations
- The Department of Primary Industries and Regions (PIRSA) when managing bushfire and storm response and recovery activities

Investment required

The Register is a foundational asset protecting South Australia's grape and wine industry, as recognised under the *Phylloxera and Grape Industry Act 1995*.

The Register is akin to the Dog Fence which protects the sheep industry in South Australia. Like the Dog Fence which has degraded over the past 100 years, the Register too is degraded and urgently needs to be upgraded.

Together, Vinehealth Australia and PIRSA have invested more than \$200,000 to develop the concept of the Digital Biosecurity Platform, refine the operating model, select a preferred supplier, design the solution architecture, and confirm data migration and transition requirements.

We are now ready to build the new Digital Biosecurity Platform.

Vinehealth Australia is ready to invest \$250,000 of industry contributions in the build of the Digital Biosecurity Platform and will use an estimated \$250,000 of its industry contributions each year to ensure the ongoing functionality and management of the Platform.

Vinehealth Australia is seeking an investment of \$1.5 million from the South Australian government for the build of the Platform.

This investment presents an important leadership opportunity for the South Australian government, and is integral to achieving the ambitions and priorities of the state's 'Food, Wine and Agribusiness Sector Plan' and the 'South Australian AgTech Strategic Plan'.

Investment by the South Australian Government and industry, through Vinehealth Australia, will guarantee that this core asset can safeguard our \$2.28 billion wine industry against rising biosecurity threats.

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Government
of South Australia