

Insights for a modern animal health surveillance platform





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Summary

Background and purpose

Australia's animal health surveillance system is under increasing pressure from a growing number of threats, resource constraints, and fragmented information systems. With new and emerging challenges comes the need to ensure data and intelligence platforms are fit for purpose and future-focused. Recognising this need, Animal Health Australia (AHA) has identified the need to ensure the platform remains up-to-date, relevant, and adaptable to future demands.

To inform this process, AHA undertook an extensive stakeholder engagement process in 2025 to understand stakeholder needs and expectations for a next-generation platform (a 'Future CAHD') that could support more timely, coordinated, and evidence-based decisions across jurisdictions and sectors.

This report consolidates and summarises the key findings from across the stakeholder engagement processes, providing insights and added value to inform foundational principles, recommended actions, and considerations for the development of a modernised and future-ready platform.

About the Central Animal Health Database platform

The CAHD is Australia's national platform for managing animal health surveillance data, supporting key programs such as the National Animal Health Information Program (NAHIP), the National Arbovirus Monitoring Program (NAMP), and the National Sheep Health Monitoring Project (NSHMP). Managed by AHA, CAHD has evolved into a secure, cloud-based system that facilitates disease reporting for both domestic management and international obligations.

As demands on animal health surveillance have grown, there is a clear need to modernise the platform to improve national coordination, standardisation, and data sharing. A future-ready platform would enhance analytics, connectivity, usability, and security, while addressing stakeholder concerns around transparency, governance, and responsiveness to emerging threats.

Stakeholder consultation process and insights

From May to July 2025, AHA conducted an extensive stakeholder engagement process that included strategic one-on-one stakeholder consultations, a national survey, and three virtual stakeholder workshops. These activities collectively involved over 100 participants from government, industry, technical, and research sectors across all jurisdictions. The process gathered insights into shared challenges, priorities, needs, and aspirations for a more integrated and intelligent data platform, as well as highlighting clear opportunities to strengthen and modernise Australia's animal health surveillance system to meet emerging biosecurity challenges better.

Throughout the engagement, stakeholders strongly supported the development of an integrated, user-centred data platform that adds value across the network. Stakeholders called for improved interoperability, real-time and reliable data sharing, and a modular design to support adaptability. Staged delivery and pilot projects were proposed to build trust and demonstrate early value. Ongoing engagement throughout the process was desired, and clearly defined governance arrangements were highlighted as critical enablers of success.

Principles to guide platform development

Based on the discussions and insights gathered during the stakeholder engagement process, eight core principles to guide the platform's design were identified.

- 1 User-centred design:** Prioritise usability and stakeholder relevance.
- 2 Modular design for future adaptability:** Allow for new functions and tools as needs and resources evolve.
- 3 Staged platform delivery:** Use a phased rollout approach based on targeted pilot projects to test and refine functionality, demonstrate value, and build stakeholder confidence.
- 4 Enable real-time, consistent, and reliable data access:** Support fast and consistent data access using automation and artificial intelligence (AI).
- 5 Ensure interoperability and integration with existing data systems:** Link and integrate with existing trusted platforms to reduce duplication.
- 6 Strengthen governance and trust through transparency:** Establish clear data-sharing protocols and governance structures.
- 7 Improve communication and coordination:** Embed tools that support timely, consistent messaging.
- 8 Support strategic foresight and planning:** Leverage new technologies, such as AI, to enable proactive responses and decision-making. Implement long-term analysis and design that can evolve in response to emerging risks and technologies.

AHA is well-positioned to lead the development of a next-generation platform to support Australia's animal health ecosystem. Building on its longstanding role managing CAHD since 2005, the organisation also brings decades of operational experience and deep sector involvement.

This combination of technical capability, trusted relationships, and strategic insight positions AHA to lead the development of a modernised and future-ready platform that will benefit the animal health surveillance system.

Next steps

AHA will use the insights from its 2025 stakeholder engagement process to develop a Future CAHD roadmap. These stakeholder insights will help shape platform priorities, design choices, and stakeholder engagement strategies to ensure the platform reflects the real-world needs of the sector.

While broader sector-wide actions and recommendations were captured during the engagement (see Appendix A), they sit outside the current scope of this platform initiative. However, they remain valuable for informing other reforms and decision-making processes across the sector.

The next steps for AHA are to define the platform vision, key phases, and milestones to ensure they align with the AHA Strategic Plan 2025–2030. This involves mapping constraints, identifying priority use cases, and validating design features with key stakeholders.

Once the roadmap is in place, AHA will engage technical experts and vendors to explore options such as a platform uplift or new build, delivery models and begin staged implementation using pilot testing where appropriate. The platform's development will be guided by clear design principles such as modularity, interoperability, and user-centred design. These foundations will help ensure a future-ready platform that delivers stronger, more connected animal health surveillance for Australia.



Introduction

Background

AHA is developing a modernised, future-ready animal health surveillance platform – one that is interoperable and adaptable to new and emerging challenges.

Australia's animal health surveillance system is facing growing pressure from escalating threats, limited resources, and disconnected data systems. As new challenges emerge, there is a need for data and intelligence platforms that are forward-looking and responsive.

Reflecting on these challenges, AHA has identified the need to ensure that the future Central Animal Health Database (CAHD) or successor platform is modern, relevant, and equipped to support decision-making and actions into the future. This work responds directly to a key priority identified in the

National Animal Health Surveillance Plan 2022–2027 (Objective 3), which recognises the urgent need to modernise surveillance in the face of increasing biosecurity threats, growing data complexity, and fragmented oversight across jurisdictions. It also aligns with the AHA Strategic Plan 2025–30 (Strategic Priority 3) and the National Biosecurity Strategy, which highlights the important role of technology, research, and data in enabling the development of a risk-based biosecurity system underpinned by science.

About the Central Animal Health Database

The CAHD is Australia's national platform for managing animal health surveillance and monitoring data. It supports key programs, including the National Animal Health Information Program (NAHIP), the National Arbovirus Monitoring Program (NAMP), and the National Sheep Health Monitoring Project (NSHMP).

Managed by AHA since 1996, CAHD has evolved into a secure, cloud-based data aggregation system. It provides a flexible, highly configurable infrastructure that supports both standalone data projects and integrated reporting across program components.

The CAHD enables the collation and reporting of Australian animal health data to meet Australia's international obligations for disease status, trade, and market access. It also plays a role in informing domestic surveillance and guiding national animal health management.

Project vision

To build on the Central Animal Health Database by delivering a secure, cloud-based future platform that supports national animal health surveillance and monitoring programs, now and into the future. The platform will enhance data collation, analysis, and sharing through modern technology and trusted partnerships with AHA and its members.

Why is an improved platform needed?

There is a need for strong national coordination, consistent data standardisation, and inclusive platform design. A future platform will better support this through leveraging modern technological advancements. Key areas of uplift required include improving data analytics, enhancing data system connectivity with source systems, and implementing enhancements to provide a contemporary user interface and automatic processes. Sound practice will also require continued security and code updates to ensure system longevity and cybersecurity into the future.

Stakeholders noted that the current animal health surveillance system could be uplifted, giving consideration to:

- differing governance systems and jurisdictional priorities
- less reactive approaches to emerging threats, which affect preparedness and prevention
- obstacles to data visibility and sharing
- potential duplicated effort and varying data standards
- reduced stakeholder trust due to historical governance issues and low transparency

Stakeholder engagement process

To ensure the platform reflects the diverse needs across the animal health surveillance landscape, AHA led a comprehensive stakeholder engagement process from May to July 2025. This involved working closely with a diverse range of participants, including veterinarians, producers, government agencies, livestock industry bodies, researchers, and technical experts, to capture insights, identify challenges, and explore opportunities for improvement.

These collaborative discussions will inform the development of a roadmap that outlines the key steps, principles, priorities and technical requirements for designing and implementing a modernised animal health surveillance platform tailored to Australia's future needs.

The inclusive stakeholder engagement process was undertaken over approximately 10 weeks. It targeted a broad geographic and role-based cross-section to ensure diverse representation. The stakeholder engagement process included:

- 1. Strategic consultations:** One-on-one deep dive interviews with 11 senior stakeholders across the ecosystem, including Chief Veterinary Officers from all states and territories, senior policymakers, research leaders, and other sector representatives.
- 2. Nationwide survey:** Broader input gathered via an online survey, providing quantitative insights into shared challenges and priorities. Forty-eight participants completed the survey.
- 3. Stakeholder workshops:** In July 2025, three national virtual workshops were attended by approximately 75 participants. The workshops aimed to gather stakeholder insights on shared challenges, priorities and opportunities, data needs, and platform design principles.

Purpose of this report

This report provides stakeholder insights, strategic guidance and design principles to support the development of a roadmap for the Future CAHD platform.

This report consolidates and summarises the key findings from across the stakeholder engagement processes, providing insights and added value to inform foundational principles, recommended actions, and considerations for the development of a modernised and future-ready platform.

This report is intended to:

- summarise the high-level key findings from the stakeholder engagement process
- present insights, principles and recommendations to inform the design and development of a modernised platform
- support AHA in developing a Future CAHD roadmap aligned with national and jurisdictional needs





Stakeholder insights

The stakeholder engagement process generated rich insights into the current and future state of animal health surveillance in Australia. While a primary focus of this engagement was to inform the development of a modernised data platform, many participants shared broader views on the challenges, opportunities, and strategic needs facing the animal health surveillance system as a whole.

While these insights often extended beyond the scope of AHA's Future CAHD initiative, they offer valuable reflections on animal health surveillance system priorities around workforce capacity, governance, data sharing, and collaboration. These

insights and priorities may help guide future planning, investment, and decision-making across jurisdictions and organisations. The following section captures these system-wide stakeholder insights to support continued dialogue and reform efforts.



Current challenges

The stakeholder engagement process revealed broader recurring challenges across Australia's animal health surveillance system that threaten its long-term effectiveness.



Workforce limitations

A shortage of veterinarians, biosecurity personnel, and data analysts is placing strain on the animal health system. At the same time, limited training pathways and rigid recruitment processes are failing to attract or retain the diverse skill sets now required.

technical barriers, along with differing access protocols, slow the flow of critical information. A coordinated approach with transparent data agreements, improved communication, and investment in foresight capabilities is necessary to build a more resilient and future-ready animal health surveillance system.



Data and technology barriers

This workforce shortfall is exacerbated by dated, fragmented, and poorly integrated data systems. These systems lack real-time data collation, analysis, and sharing capabilities, relying on manual processes and operating without consistent data standards across organisations, which can create duplication and inefficiencies.

Trust in data sharing has been weakened by historical incidents of misuse and a lack of feedback to those who contribute data. Legal, privacy, and



Governance complexity

Australia's federated approach presents additional challenges for coordination, particularly in governance and communication. These challenges can often contribute to a lack of clarity in roles and responsibilities in response to cross-border events. Fragmented investment across the system also contributes to short-term, reactive responses, limiting national collaboration and alignment. Current data systems remain focused on past threats rather than anticipating emerging risks.

For further stakeholder insights on the current sector challenges, see [Appendix A](#).



Towards a future-ready animal health surveillance system

Stakeholders converged on a consistent vision for an optimal future-ready animal health surveillance system that is integrated, user-centred, and trustworthy.

Stakeholders emphasised the need for real-time, standardised, integrated and interoperable data systems that support proactive planning. A strong call was made for national leadership and strategic foresight, backed by consistent governance, clear communication protocols, and shared investment.

Stakeholders also highlighted the importance of collaboration, recommending the development of a national, sector-wide community of practice, the strengthening of trust frameworks, and the co-design of pilot projects to demonstrate the benefits of data sharing and modern surveillance systems.



Animal health surveillance system-wide reform

Stakeholders across the animal health surveillance system expressed a strong appetite for reform, highlighting several practical and strategic needs to guide future improvements.

Trust and transparency emerged as foundational. Stakeholders want clear, consistent governance

frameworks that define how data will be used and shared. Transparent data sharing and access rules, along with regular feedback loops for data contributors, were identified as essential to rebuilding and maintaining trust across the broader ecosystem.

Building a skilled and connected workforce was another priority. Participants called for targeted investment in training, mentoring, job swaps, and secondments to foster a more flexible and capable workforce. There was particular interest in developing hybrid skill sets to meet the evolving demands.

Stakeholders also emphasised the importance of collaboration and coordination. A national community of practice, supported by consistent communication protocols and shared language and terminology, was viewed as a means to align efforts, minimise duplication, and enhance partnerships.

Data system interoperability was a recurring theme. Stakeholders want data systems that can connect and integrate across the broader animal health system, ensuring that valuable existing platforms,



such as MAX and Noggin, can continue to play a role in the broader ecosystem.

There was a strong desire to prioritise action over talk. Many expressed fatigue with past lengthy consultation processes. They called for bold, coordinated actions to establish modern, connected data systems that are adaptive, responsive, and future-ready.



Opportunities for a modernised platform

Stakeholders identified strong opportunities to transform the current CAHD through an integrated intelligence platform.

They emphasised the importance of treating data as a trusted asset. Aligning data standards and enabling interoperable systems would support the sharing of real-time, secure, and reliable information.

Stakeholders viewed the Future CAHD as a strategic enabler. By facilitating forward-looking planning

and early risk detection, the platform could assist in making better-informed decisions, helping the animal health surveillance system to manage emerging challenges effectively.

Leveraging technology was regarded as another significant opportunity. Automation and artificial intelligence could decrease manual workloads, streamline reporting processes, and facilitate the use of advanced surveillance tools.

To build momentum and confidence, stakeholders recommended launching pilot projects using priority datasets. These pilots would help demonstrate value, test functionality, and encourage adoption.

Stakeholders also supported a modular platform architecture and expressed consideration for a federated model. This design would enable staged development, respect jurisdictional autonomy, and allow integration with existing systems at the state and federal levels.



Data and information requirements to support critical decisions

Stakeholders identified six key considerations for data and information that should be included in a modernised platform to support critical decisions. These are represented below:



Surveillance and diagnostic data



Real-time and operational data



Cross-sector data and shared information



Standardised and interoperable data



Stakeholder-relevant and value-driven data

Further stakeholder insights on a future-ready animal health sector can be found in Appendix A.

Principles to support platform development

There is a clear opportunity to create a smarter, faster and more responsive platform that is better equipped to handle the challenges of the future.

A future platform should have the capacity to link animal, human, and environmental health data. It should be automated, user-friendly, and capable of transforming data into clear, actionable insights. AI and automation can accelerate information flow and reduce the need for manual tasks. By integrating trusted existing data systems and offering flexible, tailored access for different users, the platform will be able to support operations better.

Objectives of the platform

The future platform should:



Enable timely, data-informed decisions that protect animal health and biosecurity.



Integrate diverse data sources across sectors, jurisdictions, and systems.



Build trust, transparency, and user value into every design and governance feature.



Support long-term strategic foresight, not just short-term reporting.

A successful platform will not be judged solely by technical capability but by the value it delivers to the sector.

Stakeholders described success as:

- reducing the cognitive burden on people by automating manual processes
- supporting timely, evidence-based decisions
- encouraging a culture where data sharing is seen as 'business as usual'
- strengthening cross-sector coordination
- building a culture of transparency and shared learning

These benchmarks could be used to guide platform development.

Principles to guide platform development

The following principles emerged from stakeholder engagement and discussions and can be used to guide platform development.



Design for user needs and experience (user-centred design)

- A future platform should be user-friendly, intuitive, and useful for those on the ground. This includes tailored interfaces for different user groups (from local responders to national policymakers) and streamlined access to relevant information.
- Develop data systems and tools that support layered or tiered access, allowing users to view the level of data they need without unnecessary restrictions.
- Provide clear information on the data's purpose, use, and caveats to improve trust and ensure appropriate interpretation.
- Incorporate clear user guidance and feedback loops to maintain engagement and trust.
- Ensure that the information included on the platform is accessible, useful, and supports informed decision-making in real-world contexts.
- Avoid overengineering; focus on functionality and ease of use.



Modular design for future adaptability

- A modular platform structure would enable the addition of new features, data types, tools and technologies over time, ensuring the platform remains relevant and scalable as new priorities and funding emerge.
- Build the platform in components or modules that can be independently updated, replaced, or expanded, without requiring a complete platform overhaul.
- Plan for flexibility to enable the platform to respond to future biosecurity challenges, emerging technologies, and shifts in stakeholder priorities or funding availability.
- Design the platform to remain scalable and adaptable to both local and national needs.



Staged platform delivery approach

- A phased platform rollout, using targeted pilot projects, may help test functionality, demonstrate value, and build stakeholder confidence.
- Use pilots to validate assumptions, refine tools and interfaces, and ensure the platform meets real-world needs before broader implementation.
- Select pilot projects and partners that reflect a diversity of users, data types, and jurisdictional contexts to ensure broad applicability.
- Use pilot results to feed back into the platform design, stakeholder engagement, and communication strategies.



Enable real-time, consistent, and reliable data access

- The platform should support real-time data capture and access, as well as automated analytics, to enhance early warning capabilities and minimise reporting delays. Include automated data entry, validation, and alerting functions.
- Reduce manual workload and provide timely intelligence by replacing outdated spreadsheets and data systems with modern, streamlined platforms.
- Support standardised data inputs and consistent terminology across jurisdictions to allow reliable aggregation and interpretation.
- Enable faster data flow and decision-making.

Cont'd



Ensure interoperability and integration with existing data systems

- Design the platform to link or integrate with existing data systems and platforms across jurisdictions and sectors, thereby avoiding duplication and enhancing coordination and seamless data flow.
- The system should be scalable and adaptable, capable of integrating new sources of data and emerging technologies such as AI.
- Ensure compatibility with both public and private sector data sources.



Strengthen governance and trust through transparency

- Establish and communicate clear data governance structures, such as appropriate agreements and supporting policies, that define privacy, access rights, and responsibilities across jurisdictions.
- Create a 'circular' information flow that ensures data contributors can see how their data is used, improving transparency and encouraging engagement.
- Address concerns about data misuse by incorporating privacy protections and legal clarity into the platform.
- Build trust in the platform through transparency, clear data governance, and reliable performance.
- Clearly define ownership, roles, and responsibilities early in the development process to strengthen governance.



Improve communication and coordination

- Ensure tools are included that improve coordinated messaging and communication, especially in response to trade or public health incidents.
- Embed national talking points and stakeholder contact lists to streamline consistent and timely communication with partners.
- Include visualisation and analysis tools for trend identification and decision-making support.
- Highlight and share early wins and tangible improvements to build momentum and secure continued engagement and investment, including use cases that offer clear benefits and measurable outcomes.



Support strategic foresight and planning

- The platform must be able to evolve in response to emerging risks, technologies, and changing needs. This could include a modular design, with components that can be adapted or expanded over time.
- Enable the platform to analyse long-term trends and support anticipatory decision-making.
- Incorporate AI and machine learning tools to automate routine analysis, freeing up human expertise for complex interpretation and planning. Plan for the integration of future technologies and surveillance tools.
- Sustain ongoing engagement with stakeholders to ensure transparency and embed trust and knowledge-sharing throughout development.

Next steps

AHA will use the insights gathered from the stakeholder engagement process to develop a roadmap for a future-ready animal health surveillance platform.

The findings and insights from the stakeholder engagement process will help guide priority setting, shape design, and ensure that the platform reflects the needs, expectations, and expertise of those across the animal health surveillance system.

While wider challenges, insights, actions and recommendations were gathered during the stakeholder engagement process (see Appendix A), these are outside the scope of AHA and this platform initiative. However, these insights may be useful to inform other initiatives and decision-making processes.

Upcoming activities

AHA will carefully consider how best to progress the development of the modernised platform. The steps below outline a likely approach:

1

Map business requirements

Clarify AHA's core business needs by identifying the critical capabilities required to fulfil its role. This involves determining the key capabilities needed to achieve strategic goals and prioritising them as essential, desirable, or optional. These clearly defined requirements should inform system design, guide technical development, and serve as the basis for future evaluation and decision-making.

2

Develop a platform roadmap

Using insights gathered through the stakeholder engagement process AHA will develop a roadmap to:

- define the platform vision, including who it serves, how, and why
- establish available budget, resources and timeframes
- map policy and technical constraints
- understand current platform limitations
- align the roadmap with AHA's remit and desired outcomes
- outline a phased development process
- explore future-state concepts and testing them against real-world constraints
- validate priorities, use cases, and design principles through scheduled and strategic stakeholder engagement.

3

Engage vendors and technical experts

Once the roadmap is in place, AHA will begin exploratory discussions and/or Request for Information (RFI) processes with vendors and technical advisors. These engagements will help determine the best approach, suitable delivery models, cost implications, and governance arrangements.

4

Apply guiding principles

The platform will be underpinned by strong design principles (such as user-centred design, modularity, interoperability, as outlined in this report). These principles will guide decision-making at each step and help future-proof the platform.

Through these activities, AHA aims to support the delivery of a stronger, more connected platform that benefits Australia's animal health surveillance system.

Appendix A: System-wide stakeholder insights

Broader system-wide insights from stakeholder engagement

The 2025 AHA stakeholder engagement process provided a rich understanding of the animal health surveillance sector's current challenges and future needs. Stakeholders also shared practical ideas and priorities for strengthening the platform, highlighting the need for interoperability, real-time data access, strong governance, and user-centred design.

While the primary focus of the engagement process was to inform the development of a modern, fit-for-purpose Future CAHD, it also revealed important

perspectives on broader sector improvements, cross-cutting actions and structural considerations that extend beyond platform development. These insights reflect a collective appetite for reform, with opportunities to improve coordination, workforce capacity, data sharing, and strategic planning across the whole animal health surveillance system.

This Appendix presents those broader insights – perspectives that extend beyond the immediate scope of AHA's initiative to modernise the platform, but nonetheless offer valuable context. These insights may help inform other related reforms, investment decisions, and policy discussions across the Australian animal health surveillance system.

Current system-wide challenges

What is preventing the animal health surveillance system from becoming future-ready?

Conclusion: Australia's animal health surveillance system is under pressure from workforce limitations, barriers to information sharing, and fragmented governance arrangements. These factors may limit broader insights and hinder the timely use of surveillance data. Strengthening strategic planning, modernising data systems, and improving cross-jurisdictional collaboration will help build a more responsive and integrated animal health surveillance system.

Stakeholders discussed challenges and barriers that exist in the current animal health surveillance landscape.

Workforce capability and capacity

- High staff turnover, short-term contracts, and a lack of career progression and succession planning contribute to reduced workforce stability.
- Skill shortages and resource constraints limit sector responsiveness.
- Differing salaries and conditions across jurisdictions drive talent to leave.
- Workforce shortages and overreliance on narrow skill sets (e.g. veterinary qualifications) hinder capacity.
- Reliance on contractors results in the loss of knowledge from the sector.
- Technical staff are often promoted into managerial roles, leading to a loss of vital expertise.
- Training is often inaccessible or unaffordable, especially for volunteers or early-career staff.
- A lack of dedicated foresight resources and workforce overload limits strategic planning.

Information sharing barriers

- Trust issues from past examples of misuse, privacy concerns, and unclear data use restrict data sharing and create a reluctance to share.
- Data systems often lack interoperability and are not always user-friendly, which impedes overall usefulness.
- Uncertainty around ownership, interpretation, and legal/policy constraints reduces effective sharing.
- Delays to approval processes and multiple intersections of governance can create obstructions to timely access to data.
- Surveillance data is underused and undervalued by some stakeholders.
- Lack of standardised data formats and real-time data capability.
- Differing privacy safeguards and data access protocols across jurisdictions limit trust and participation.
- A lack of transparency and a clear, shared value proposition reduces the willingness to share information.
- Reduced trust between different surveillance participants hinders collaboration.

Different data systems and governance

- Siloed decision-making and differing data processes across jurisdictions can affect national coordination and can result in duplication and inefficiency.
- Incompatible data systems across jurisdictions hinder integration and timely access to information.
- Dated technologies and a lack of common data standards reduce efficiency.
- Siloed information and variations in data standards between organisations limit system-wide insights.
- Differences in data standards and a lack of clarity around program support and funding exacerbate inefficiencies.

- Legacy data systems often require manual data transcription, which increases the workload and the risk of error.
- Ambiguity around program support, funding, and data ownership restricts integration and coordination.
- Data system upgrades often prioritise immediate needs over long-term adaptability.

Strategic planning and national guidance

- Strategic foresight is under-prioritised, with funding and attention focused on past threats.
- Communication is often risk-averse and siloed, which can delay action and create confusion.
- National coordination is underdeveloped, with unclear roles and responsibilities limiting accountability.

Towards a future-ready animal health surveillance system

What does a future-ready animal health surveillance system look like?

Conclusion: A future-ready animal health system is connected, collaborative, and capable of adapting to emerging challenges. It is built on trusted data and data sharing, skilled people, collaboration, and reliable infrastructure.

Stakeholders discussed the requirements for transitioning to an optimal future-ready animal health surveillance system. Themes and insights discussed include:

A sustainable, skilled workforce

- Workforce development occurs strategically, rather than through reactive hiring.
- The workforce is stable, valued and well-trained, with clear progression pathways.
- Training, mentoring, and career development are embedded across agencies.
- Career mobility is supported and valued within a connected workforce.
- Employment conditions (salary, benefits, etc.) are more consistent across jurisdictions.
- Clear career pathways attract diverse expertise, including those outside of the traditional veterinarian sector, with investment in capability and education reform.

Integrated, modern data systems and technology

- Data systems are connected and interoperable, and are user-centred.
- The platform links biosecurity, public health and environmental sectors.
- Novel surveillance methods (e.g. smart tags) and emerging technologies, such as AI, are adopted to enhance surveillance and free up human expertise.
- Data systems are automated, collect real-time data and are capable of real-time data analysis. They are underpinned by ongoing investment.
- Interoperability across jurisdictions and sectors is considered essential for visibility and effective response coordination.
- Systems support granular, future-proofed data that is adaptable to emerging technologies and changing needs.

Data as a trusted asset

- Data is consistently collected, securely and willingly shared, and routinely used across jurisdictions and sectors.
- There are clear, agreed-upon data standards, and access to data is layered.
- MOUs and data governance agreements clarify data use, access rights, and responsibilities. Pre-approved data standards are used to fast-track access.
- There are clear governance structures that ensure both privacy protection and data utility.
- Producers, jurisdictions, and agencies share a common purpose, supported by national standards.
- Case studies demonstrate successful, secure, and valuable sharing, further driving the willingness and culture of open data sharing.
- Data sources are properly credited, and feedback loops are in place to ensure that data providers understand the use and impact of their data.

Collaboration and communication

- A national community of practice strengthens collaboration and reduces duplication.
- Collaborative communication frameworks enhance trust and support the timely dissemination of information.
- Collaboration is based on enduring, process-driven approaches that support continuity despite personnel changes, rather than relying on individual relationships.
- Liaison roles, shared terminology, and coordinated communication protocols (such as national talking points) strengthen cross-sector communication and collaboration.
- Successful case studies, impact stories and examples are shared to encourage and promote collaboration and build trust.

Strategic planning

- Strategic foresight is embedded in planning through dedicated resources, shared priorities, continuous evaluation, and future-focused investment.
- Surveillance investment aligns with trade, climate, and emerging risks.
- System design shifts from a reactive response to strategic, anticipatory action, guided by horizon scanning.

What data are needed to support critical decisions?

Based on the discussions at the workshops, the following types of data and data considerations were identified as essential for inclusion in next-generation platforms:

Surveillance and diagnostic data

- early disease indicators
- abattoir surveillance data
- laboratory results, including those from private laboratories
- epidemiological data, including scale, affected locations, and animal movements
- trends and historical data to identify changes or anomalies

Real-time and operational data

- real-time data
- data that supports early warning, monitoring and foresight
- timely, granular data that is useful to different end users

Cross-sector data and shared information

- information from across jurisdictions, the Commonwealth, and industry
- integrated datasets that connect livestock, wildlife, and feral pest surveillance
- data from other sectors, such as human health and the environment
- emerging surveillance data from tools such as smart tags and mobility monitors

Standardised and interoperable data

- standardised definitions and consistent formats and reporting fields
- metadata to support QA/QC and interpretation
- data fields aligned with agreed governance and access levels

Stakeholder-relevant and value-driven data

- data linked to market access and trade
- de-identified data that protects privacy but enables sharing
- data that is useful for producers and decision-makers and demonstrates value

Data to support strategic foresight and innovation

- long-term datasets for trend analysis
- data that supports investment decisions and strategic planning
- intelligence for emerging threats and 'unknown unknowns'

Actions to enable animal health surveillance system-wide change

What actions are needed to improve the system?

Conclusion: Improving Australia's animal health surveillance system requires coordinated action across workforce development, system reform, data governance, and leadership. Key strategies include national skills audits, investment in interoperable technologies, adoption of standardised data practices, fostering a future-focused culture, and using pilot projects to demonstrate value and build momentum. Strengthening existing networks, collaborations, and proven initiatives will be critical to ensure the sector is responsive, strategic, and ready for future challenges.

Stakeholders identified actions that would help to enable change towards an optimal future-ready sector. They include:

Workforce

- Conduct a national skills audit to align current capabilities with future needs and training pathways.
- Launch cross-jurisdictional job swap programs and secondments to build sector-wide experience.
- Embed structured succession planning and targeted skills development.
- Create secure, meaningful roles that recognise and reward specialist expertise.
- Revamp training and education to promote hybrid skill sets aligned with emerging workforce demands.
- Broaden recruitment criteria beyond veterinary qualifications to attract diverse, high-value talent.

Data systems

- Appoint and support reform champions within jurisdictions and industry to lead data system improvements.
- Audit and analyse existing data systems to identify overlaps, gaps, inefficiencies, lessons, and IT and legal barriers; then act on the findings.
- Decommission dated systems and roll out interoperable, user-centred technologies.
- Integrate data processing automation and AI tools to enhance data analysis and streamline reporting.
- Activate key actions from the National Biosecurity Strategy to modernise surveillance and data systems.
- Establish a national IT expert pool to support jurisdictions with upgrades, system integration, and innovation.

Data governance

- Publish and promote nationally agreed data-sharing standards to clarify expectations for access and use.
- Develop and implement MOUs with clear and defined data-sharing protocols and governance frameworks.
- Adopt standardised data formats and definitions across all jurisdictions and partners.
- Establish centralised data repositories and portals with transparent data lineage and user permissions.
- Promote and share successful data-sharing case studies to build trust, demonstrate value, and accelerate uptake.

Culture and leadership

- Foster shared goals and priorities across industry and government.
- Deliver consistent national leadership and guidance to drive coordinated action.
- Enable staff to test new tools and partnerships by embedding innovation into routine processes.
- Promote a future-focused mindset that encourages early adoption and shared learning to overcome institutional inertia.
- Integrate strategic foresight into planning to prepare for emerging threats and trade demands.
- Build and maintain a national community of practice that links government, industry, academia, and the ICT sector.
- Invest in communication and trust-building skills to strengthen collaboration and leadership across the system.

Pilots and evaluation

- Design and launch pilot projects with clear objectives, measurable outcomes, and pathways for scaling.
- Evaluate data systems rigorously and embed learnings into continuous improvement processes.
- Test real-time data-sharing solutions using high-priority datasets to demonstrate value and identify enablers.

Identified blockers

Stakeholders identified actions that need to stop now to improve the sector.

- Using confidentiality or data ownership issues as reasons to avoid conversations about how we can share data.
- Withholding data between jurisdictions and agencies due to fear of misuse or past issues.
- Cultural protectionism around data, fearing judgment or reputational damage.
- Fear of negative repercussions for those who test or report issues.
- Legacy governance structures that hinder the timely use and sharing of data.
- Failing to act on reports and research, leaving insights unused on the shelf.
- Short-term funding cycles that limit strategic reform and innovation.
- Fragmented funding that isn't aligned with strategic priorities.
- Fear-based risk aversion that limits bold ideas and early adoption of new tools.
- Data systems that are built in silos without national oversight.
- Focusing on yesterday's problems rather than investing in future threats.
- Duplicating research across institutions rather than coordinating efforts.
- Overstretching limited resources undermines the ability to enact system-wide change.

Things to be continued and strengthened

Stakeholders also identified existing actions that should be continued and strengthened in future.

- Established networks, relationships, and collaborations, such as existing partnerships between government and industry.
- Some strategic oversight groups, such as the Animal Health Committee.
- Development of resources for early detection and preparedness.
- Technical advisory groups and continuous training.
- The trusted role of AHA.
- Some good existing data systems.
- Pilot projects and case studies that are working (i.e. Northern Australian Biosecurity Surveillance (NABS)-funded vet graduate positions, data sharing success stories).
- Early warning collaborations between Chief Veterinary Officers.
- Existing mentorships and student placements.
- Successful lab and technical networks, which could be expanded to include surveillance.



Appendix B: Stakeholder workshop agenda and attendees



Agenda of stakeholder workshops

June 2025

Time	Session	Lead
20 mins	Introduction and scene setting	Nick Rakis, Accelio
		Samantha Allan, CEO, AHA
15 mins	Project background and content	Nick Rakis, Accelio
60 mins	Exploring system blockers Activity 1: What is blocking us and what needs to shift to be future ready (2-4 breakout rooms)	Nick Rakis, Accelio
		Room facilitators: • Emily Sears, AHA • Sonia Bluhm, Scientell • Bronwyn Hendry, AHA • Geraldine Wickham/Sally Cook, AHA • Cintya Dharmayanti, Scientell
15 mins	Break	
55 mins	Uplifting our system effectiveness Activity 2: Uplifting our systems effectiveness (2-4 breakout rooms)	Nick Rakis, Accelio
		Room facilitators: • Emily Sears, AHA • Sonia Bluhm, Scientell • Bronwyn Hendry, AHA • Geraldine Wickham/Sally Cook, AHA • Cintya Dharmayanti, Scientell
15 mins	Break	
65 mins	Unlocking collaboration and visibility Activity 3: Maximising collaboration and information sharing (2-4 breakout rooms)	Nick Rakis, Accelio
		Room facilitators: • Emily Sears, AHA • Sonia Bluhm, Scientell • Bronwyn Hendry, AHA • Geraldine Wickham/Sally Cook, AHA • Cintya Dharmayanti, Scientell
5 mins	Close out	Nick Rakis, Accelio

Organisations represented at the workshops

Agriculture Victoria
Animal Health Australia
Australian Alpaca Association
ACT Government
Australian Dairy Farmers
Australian Centre for Disease Control
Australian Centre for Disease Preparedness
Australian Chicken Meat Federation
Australian Duck Meat Association
Australian Eggs
Australian Horse Industry Council
Australian Lot Feeders Association
Australian Meat Industry Council
Australian Meat Processor Corporation
Australian Pork Limited
Cattle Australia
Cooperative Research Centre for Solving Antimicrobial Resistance in Agribusiness, Food and Environment
Department of Agriculture, Fisheries and Forestry
Equestrian Australia
Goat Industry Council of Australia
Harness Racing Australia
LiveCorp
Murdoch University
New South Wales Department of Primary Industries and Regional Development
Northern Territory Department of Agriculture and Fisheries
Queensland Department of Primary Industries
Sheep Producers Australia
South Australian Department of Primary Industries and Regions
Tasmanian Department of Natural Resources and Environment
University of Melbourne
Western Australian Department of Primary Industries and Regional Development
Wildlife Health Australia
Wool Producers Australia

