

Project overview



eNVD User Research

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Brief summary

Integrity Systems Company (ISC), a wholly owned subsidiary of Meat & Livestock Australia (MLA) is concerned with meeting three key objectives for the Australian red meat industry: biosecurity, food safety, and food security. ISC delivers red meat traceability and assurance through the National Livestock Identification System (NLIS), Livestock Production Assurance (LPA) and National Vendor Declaration (NVD) integrity programs to meet these objectives. NVDs and the electronic version (eNVD) is a key underpinning of the integrity system, monitoring the movement of livestock through the supply chain. This project aimed to provide insight into the eNVD ecosystem and landscape which results in discussion, ideas and designs for improved integrity and user experience.

This research focused on understanding three key challenges for the eNVD system including offline use, consignment receipt, and access for enforcers (police, state departments and auditors). Building on previous work (V.NLI.1763), the study drew insights from 51 supply chain participant interviews and 740 individual units of feedback from current eNVD users. From this, researchers collated several resources that MLA/ISC can use to improve eNVD and integrity systems more broadly, these include:

- Discussion paper
- Journey map
- Supply chain components (people and activities)
- User experience principles
- Summary presentation

Objectives

1. Plan and conduct research: requirements gathering, interviews, and usability testing.
2. Analyse data: transcribe and synthesise research to build affinity including tasks, pain points and opportunities.
3. Summarise findings: update design tools, build and test concepts and prototypes and provide written reports and resources.

Project outcomes

Due to the nature of the user-centric approach taken for this body of work, the insights delivered are valuable for overcoming the immediate challenges faced by the eNVD system as well as improving the user experience and data accuracy of other industry and integrity systems. Firstly, the discussion paper unpacks several big and complex industry challenges on the journey of digital transformation, particularly around the collection of data and the compliance and accuracy of that data including:

- Much of industry's integrity systems are not yet digital and are disconnected from one another.
- Current solutions don't cover all common scenarios (e.g. saleyards, multi-vehicle transport, cross-loading, studs), and may have incorrect underlying assumptions (e.g. Part B of the LPA NVD, PICs).
- Paper solutions are preferred because of the perception of flexibility and lack of validation.

- The supply chain is inefficiently checking and correcting paperwork and is investing in solutions in isolation where a global solution is required.

To take a deep dive into these pain points, researchers developed a journey map and supply chain components that provide data-driven insights into each element (people and activities) within the livestock movement ecosystem. Throughout these resources, researchers have highlighted various opportunities and potential solutions that provide a pragmatic approach to digitally transforming integrity systems and processes that meet the needs of users and MLA/ISC's remit to the Australian red meat industry. Some examples follow:

- User experience principles to be used to guide the design and development of system changes and enhancements.
- Several quick wins for the development of the eNVD system to better the experience and prepare for future improvements.
- Concepts for end-to-end integrity systems that allow for all scenarios in the supply chain.
- Designs for an eNVD mobile app with offline capabilities for consignment creation, receipt, and monitoring.
- Identification of logical opportunities for integration of other integrity systems and third-party solutions to improve data accuracy and use.
- Concepts for decreasing duplicative investment in isolated problems experienced by supply chain participants like transport scheduling and post-sale movement.
- Where possible, recommendations for a national approach to governing business rules and requirements like PICs and transport legislation.

From this, MLA/ISC can make several changes that will improve integrity systems user experience and meet industry's remit. Should this approach be taken, MLA/ISC will significantly accelerate eNVD and integrity systems adoption and compliance. Ultimately, this project demonstrates the potential value MLA/ISC can capture by focusing on digitally transforming and integrating core programs using an insights driven approach.

Benefits to industry

The key benefits to industry from this project include:

- Delivery of integrity systems and services that provide a better, more suitable, and consistent user experience.
- Detailed analysis of livestock movement ecosystem which can be used for design, onboarding, adoption pathways, and general understanding of industry practices.
- Concepts and prototypes that overcome key challenges for eNVD including offline use, consignment receipt and enforcer access.
- Recommendations for removing pain points and duplication in compliance-based activities and processes.
- Increased integrity data accuracy and availability to improve biosecurity, food safety and security of Australian red meat industry.

Future research and recommendations

This research provides the opportunity immediately implement insights that will incrementally improve the eNVD system like providing offline access through native mobile apps and using QR code technology to transfer consignment information to supply chain participants. Doing this positions the eNVD system as the logical

platform for an end-to-end integrated integrity system bringing together key compliance tasks like NLIS transfers and on-farm assurance record keeping. This also allows for greater supply chain efficiencies through cost saving and information flow. To achieve this recommendation, the requirement for printed documentation needs to be removed from all points in the supply chain. This triggers the need for MLA/ISC to update integrity program rules and standards, and work with Government to ensure legislation supports consistent change to digitally transform the integrity systems in a user-centric way.

Furthermore, adoption could be made more efficient by mirroring known supply chains, through the utilisation of the tools and insights delivered from this study. Taking this approach encourages integrating with supply chain partners early allowing for better identification, capture, and connection of livestock movement production data that suffers the same issues as integrity data. This leverages the opportunity to improve the user experience and deliver value while completing compliance activities by streamlining information sharing and simultaneously decentralising compliance tasks and automating validation.

The introduction of real-time validation (made possible with no reliance on a paper-based system) will begin to minimise errors in integrity data and allow for commonly disputed issues, such as headcount, to be resolved. Acting upon this recommendation will also provide efficiencies in risk management and non-compliance resolution whereby automatic corrective actions can be enforced, for instance outstanding NLIS transfers. Concurrently, the opportunity then exists to focus costly activities like auditing on non-compliance through insight-driven risk management.

Actioning these recommendations means tackling some of the big, complex industry challenges which requires focused investment in progressing the eNVD system into an integrated integrity system. There will be further research, analysis and design required for specific challenges like legislative changes, however there is no further requirement for stand-a-lone user research to deliver a better experience and more value to supply chain participants. Finally, with such significant transformation required, it was also recommended that a strong change management protocol is followed to ensure the best outcome is met.