milestone report

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eNVD software development and field trials with eLynx

Milestone 7 – Develop StockMate application

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Abstract

The purpose of Milestone 7 within the project P.PSH.0789 was to develop forms within eLynx's flagship animal management product, StockMate, to collect, save, process and send NVD consignment forms (and their sub-forms Cattle NVD Waybill form and Cattle Health Declaration form) for regulatory purposes. These forms would be sent to and received from MLA via their eNVD API.
eLynx has successfully completed this milestone and is moving towards Milestone 8 – live client trials of the eNVD sections of StockMate.

Integration of eNVD into eLynx software will substantially improve workflows between suppliers, transport operators and feedlots.

Table of Contents

1 Milestone description 4
1.1 Develop StockMate application. 4
1.1.1 Port StockaID code for eNVD communications into StockMate web. 4
1.1.2 Re-wrote original StockaID code for eNvd communications to fit StockMate architecture. 4
1.1.3 Reporting on integration into StockMate. 4
1.1.4 Complete Milestone report and submit to MLA for review and approval. 4
2 Project objectives 4
3 Methodology 5
3.1 Integration of reusable communications component 5
3.2 Design of modifications to StockMate 5
3.2.1 Web screens 5
3.2.1.1 Figure A – Consignment form 6
3.2.1.2 Figure B – Cattle NVD Waybill form 6
3.2.1.3 Figure C – Cattle Health Declaration form 7
3.2.1.4 Figure D – Consignment listing 8
3.2.2 App screens 8
3.2.2.1 Figure A - eNVD Consignment Link (Mobile App) 8
3.2.2.2 Figure B - eNVD Consignment List viewed on Mobile Device 9
3.2.2.3 Figure C - eNVD Consignment Form viewed on Mobile Device 9
4 Success in meeting the milestone 11
4.1 Design and development of eNVD into StockMate 11
4.2 Testing 11
5 Overall progress of the project 11
6 Conclusions 11

1 Milestone description

1.1 Develop StockMate application.

1.1.1 Port StockaID code for eNVD communications into StockMate web.

Upon achievement of this milestone criteria, the StockMate web app will enable collection and saving of consignment data (as well as Cattle NVD Waybill and Cattle Health Declaration form data), and sending of that consignment data to the eNvd API.

1.1.2 Re-write original StockaID code for eNvd communications to fit StockMate architecture.

Upon achievement of this milestone criteria, users of the StockMate mobile app will be able to send consignment data through to the eNvd API.

1.1.3 Reporting on integration into StockMate.

1.1.4 Complete Milestone report and submit to MLA for review and approval.

This milestone report will be submitted to MLA on or before 20 August, 2020 in the format prescribed by the MLA Donar Company through the P.PSH Milestone Report template.

2 Project objectives

The purpose of this project is to develop Electronic National Vendor Declaration (eNVD) capabilities within eLynx software and participate in the eNVD field trials currently being conducted by MLA.

This project is being undertaken to determine the feasibility of implementing the eNVD system within the red meat industry. Lessons learned and gaps identified during this period would be analysed to further improve the eNVD system, and would assist MLA in determining a recommended way forward for system roll-out.

This development is significant for industry as the eNVD system is anticipated to bring the following benefits:

- Reduce the cost of having to re-process inaccurate or incomplete NVDs received directly from consignors/sellers or indirectly from saleyards and feedlots.
- Reduce the cost of having to re-enter NVD information into receiving computer systems and databases.
- Reduce the cost to store and retrieve historical NVDs for auditing, reporting and administrative purposes.
- Provide the buyer with greater visibility of the incoming livestock's declaration details before the stock arrives, enabling more efficient management of incoming animals.

- Ensure the latest versions of vendor declarations are being used by consignors/sellers (using licensed eNVD software), thereby always meeting market requirements.
- Potential to leverage the NLIS platform to further extend improvements to industry integrity and traceability of vendor declarations and animal movements (e.g. MSA, NFAS, PCAS, commodity declarations, health statements, RFID traceability). This will have the potential to further reduce costs, as well as supporting and lifting the brand equity of Australian red meat locally and abroad.

eLynx Pty Ltd will achieve the following objectives to MLA's reasonable satisfaction:

- Create an external .NET library and COM component to communicate with eNVD web services.
- Revise eNVD capabilities within StockaID desktop application in accordance with latest eNVD requirements and data standards. (Note: eLynx had previously developed early proof of concept eNVD capabilities within StockaID.)
- Develop eNVD capabilities within StockMate (eLynx's mobile grazing and backgrounding application) in accordance with latest eNVD requirements and data standards.
- Finalise details of the trial/UAT plan in collaboration with MLA (e.g. trial sites, trial users).
- Conduct live trials/user acceptance testing (UAT) at client sites (within their respective supply chains), and provide support to trial participants using eLynx's trial-licensed software.

3 Methodology

3.1 Integration of reusable communications component

As mentioned in previous milestone reports, when planning the integration of eLynx products with the MLA's eNVD system, the decision was made to develop a reusable component that could be directly integrated into software systems as a library that would handle to communications directly with the eNVD and NLIS API's. This component was integrated, in previous milestones, into eLynx's original individual animal management software, StockaID, which is based in MS Access.

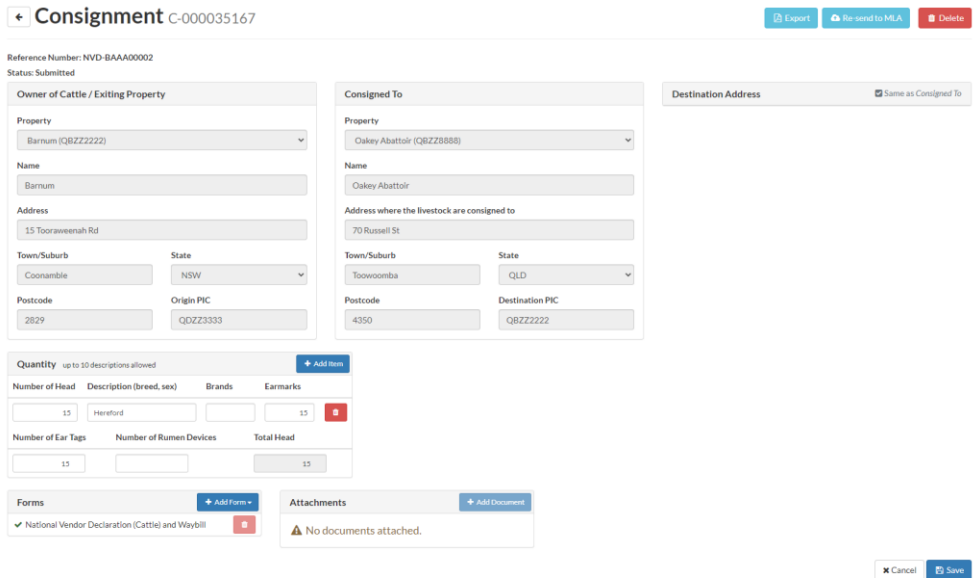
In this milestone, this component was integrated into eLynx's extensive production product, StockMate, which is based in MS .Net technologies.

3.2 Design of modifications to StockMate

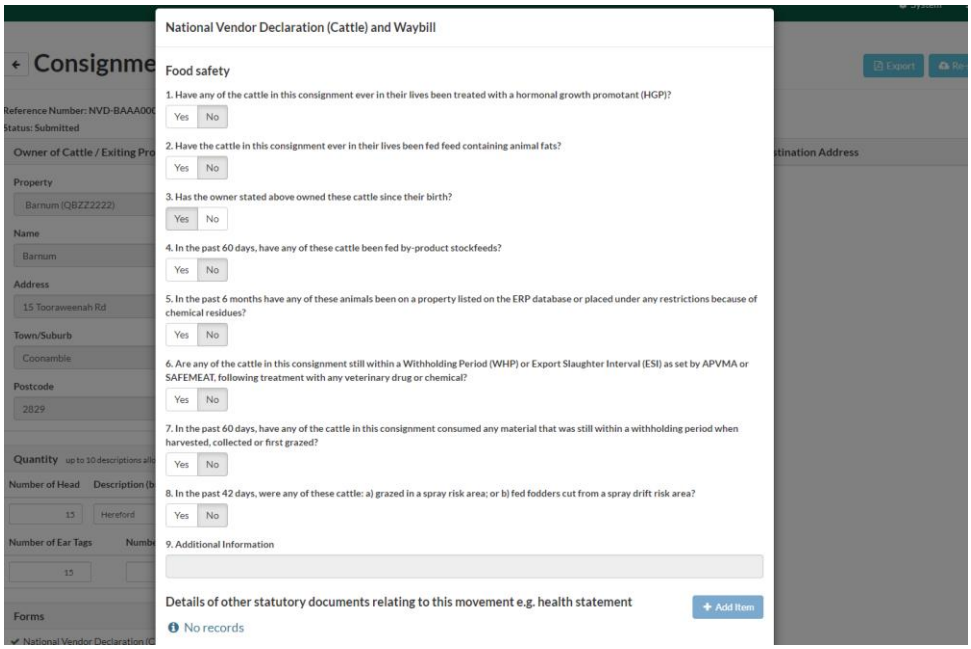
3.2.1 Web screens

The layout and structure of the NVD forms within StockMate were designed to look and behave in a similar manner to the NVD forms on the LPA website, including similar field validation.

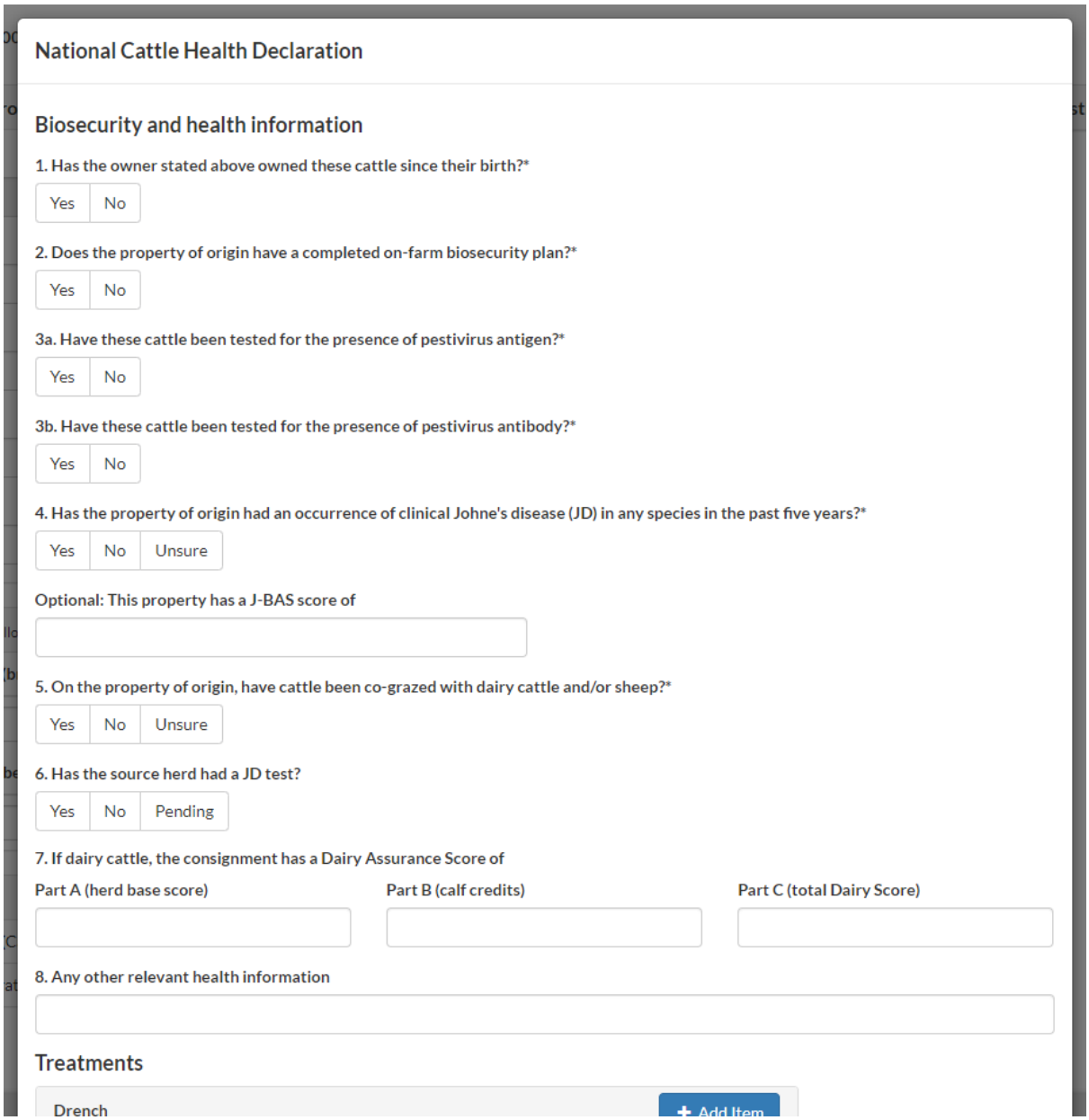
3.2.1.1 *Figure A – Consignment form*



3.2.1.2 *Figure B – Cattle NVD Waybill form*



3.2.1.3 *Figure C – Cattle Health Declaration form*



National Cattle Health Declaration

Biosecurity and health information

1. Has the owner stated above owned these cattle since their birth?*

Yes | No

2. Does the property of origin have a completed on-farm biosecurity plan?*

Yes | No

3a. Have these cattle been tested for the presence of pestivirus antigen?*

Yes | No

3b. Have these cattle been tested for the presence of pestivirus antibody?*

Yes | No

4. Has the property of origin had an occurrence of clinical Johne's disease (JD) in any species in the past five years?*

Yes | No | Unsure

Optional: This property has a J-BAS score of

5. On the property of origin, have cattle been co-grazed with dairy cattle and/or sheep?*

Yes | No | Unsure

6. Has the source herd had a JD test?

Yes | No | Pending

7. If dairy cattle, the consignment has a Dairy Assurance Score of

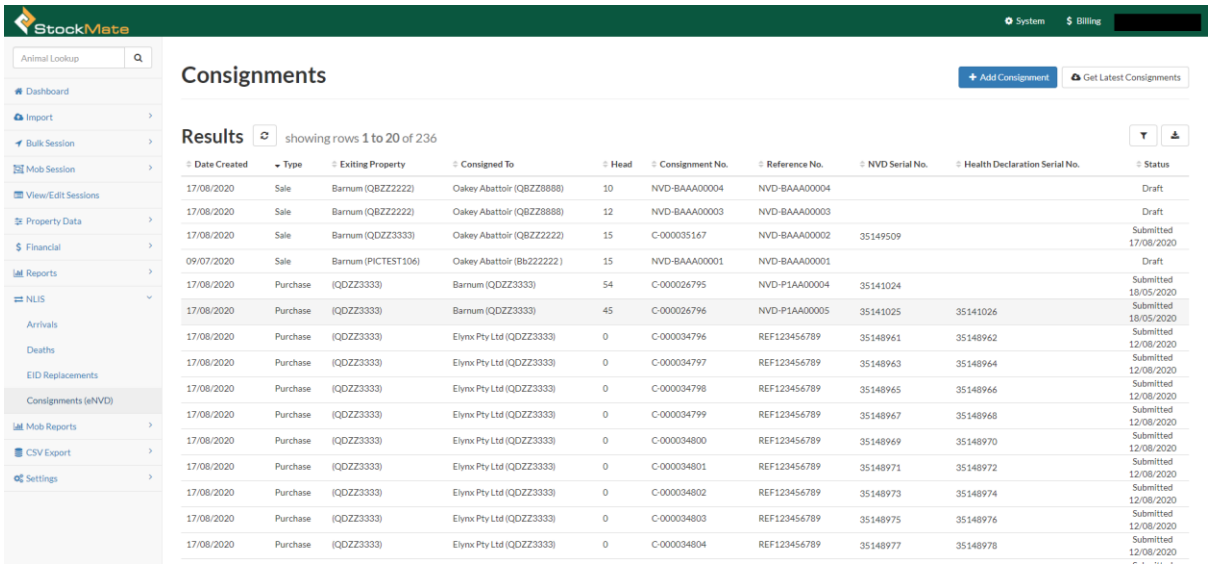
Part A (herd base score) | Part B (calf credits) | Part C (total Dairy Score)

8. Any other relevant health information

Treatments

Drench + Add Item

3.2.1.4 *Figure D – Consignment listing*

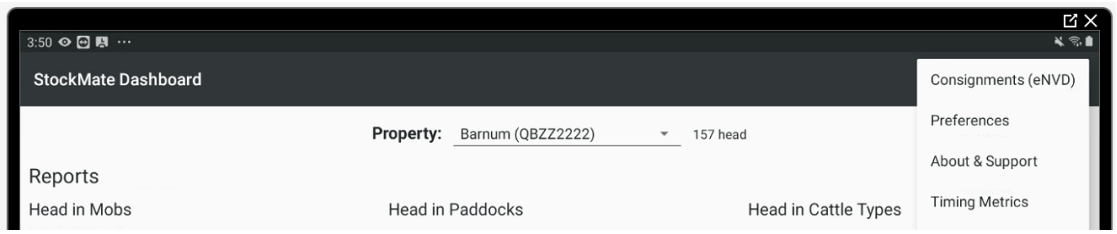


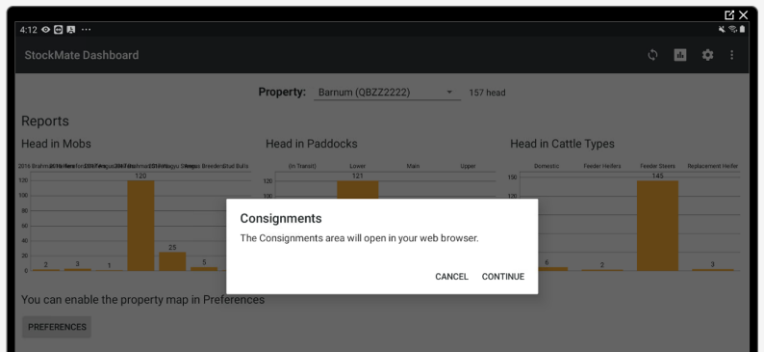
The backend structure was designed with the intention that all consignment details entered by the user would be saved within the StockMate system and sent through to the eNVD API once all details had been completed and verified (via user action, not automatically).

3.2.2 App screens

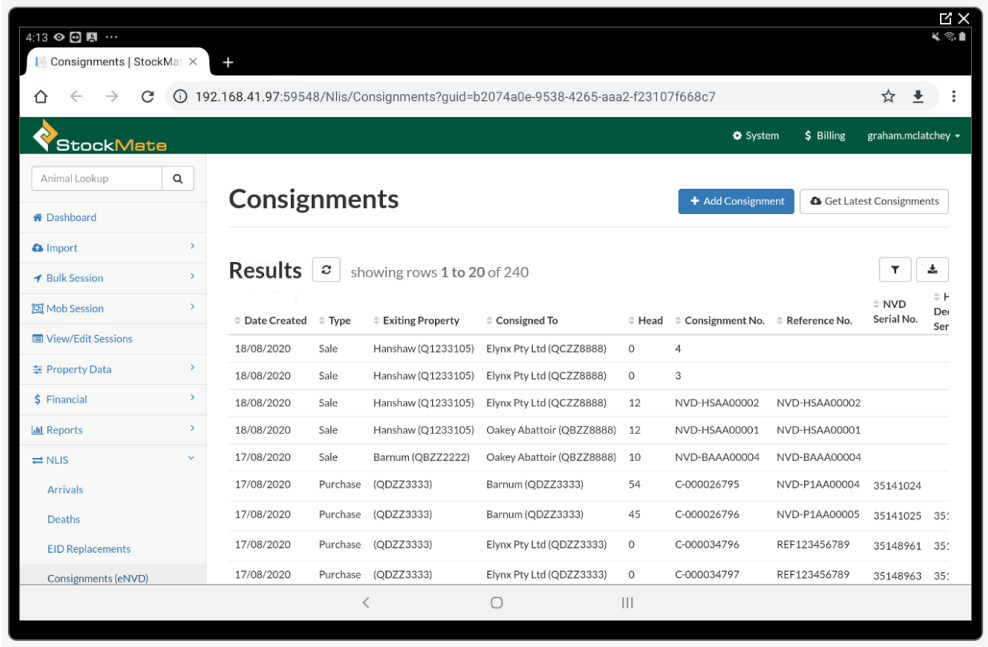
The eNVD link in on the StockMate app opens a mobile version of the StockMate Web App in a separate window as per the screenshots below. Note that an internet connection is required for the eNVD consignments to load on the tablet.

3.2.2.1 *Figure A - eNVD Consignment Link (Mobile App)*

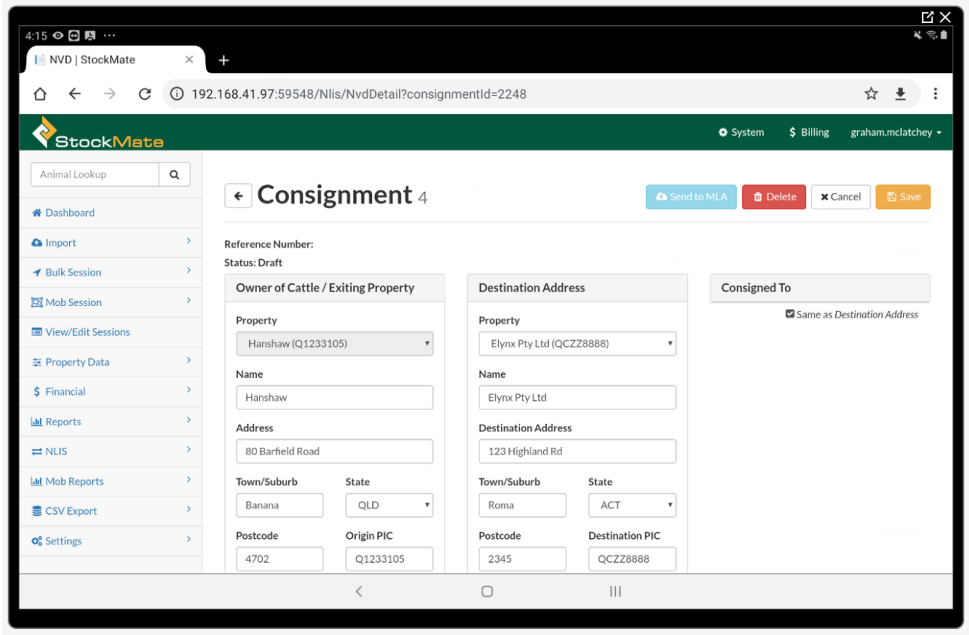


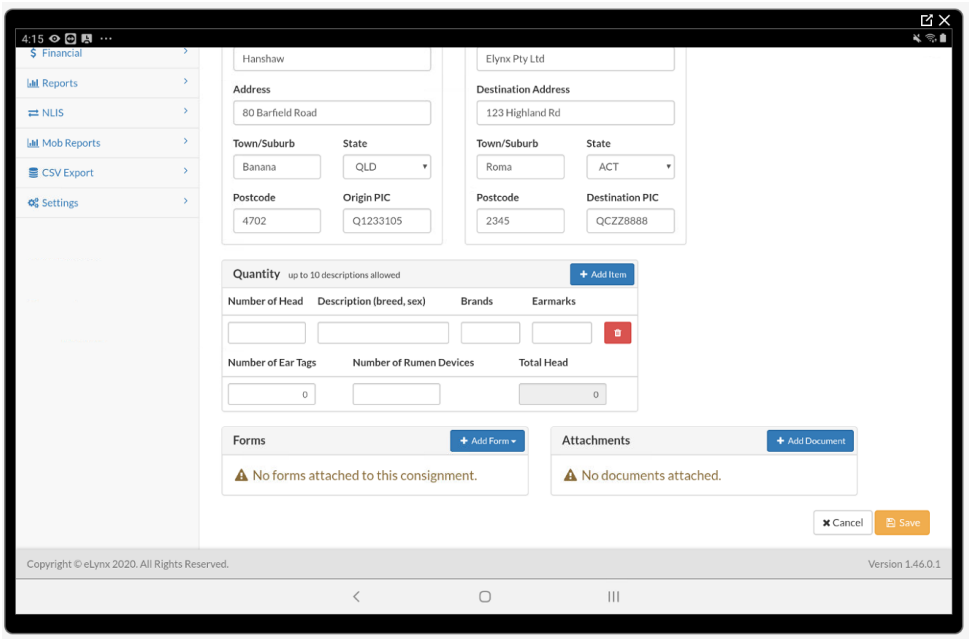


3.2.2.2 Figure B - eNVD Consignment List viewed on Mobile Device



3.2.2.3 Figure C - eNVD Consignment Form viewed on Mobile Device

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Financial
Reports
NLIS
Mob Reports
CSV Export
Settings
Hanshaw
Address
80 Barfield Road
Town/Suburb
Banana
State
QLD
Postcode
4702
Origin PIC
Q1233105
Elynx Pty Ltd
Destination Address
123 Highland Rd
Town/Suburb
Roma
State
ACT
Postcode
2345
Destination PIC
QCZZ8888
Quantity
up to 10 descriptions allowed
+ Add Item
Number of Head
Description (breed, sex)
Brands
Earmarks
Number of Ear Tags
Number of Rumen Devices
Total Head
Forms
+ Add Form
No forms attached to this consignment.
Attachments
+ Add Document
No documents attached.
Cancel
Save
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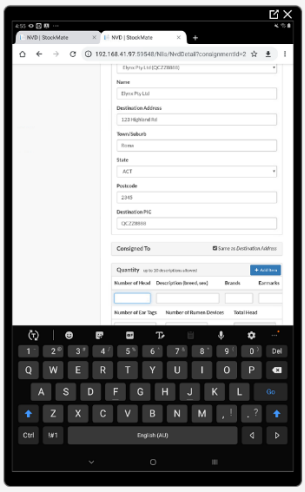

4 Success in meeting the milestone

4.1 Design and development of eNVD into StockMate

The design of the eNVD sections within StockMate were outlined in the previous section, Methodology.

As per the milestone description, development of a consignment form, a cattle NVD Waybill form, and a cattle Health Declaration form was completed for StockMate, as per the Figures in the previous section. A consignment list area was also developed, to be located within the NLIS section of StockMate, as per Figure D.

4.2 Testing

Testing of the eNVD sections within StockMate apps has been completed by internal eLynx staff.

Using StockMate, consignments were able to be created with both Cattle NVD Waybill and Cattle Health Declaration forms and attachments. Consignments were able to be sent to MLA successfully and the final PDF printed form was also successfully generated from the API, through StockMate. A list of consignments was able to be successfully retrieved from the API for the test login details that were provided by MLA.

Client trials of the StockaID software (using production URLs) have been lined up on Mort & Co and Australian Country Choice sites. It is anticipated that StockMate trials will occur concurrently.

5 Overall progress of the project

Progress of the project in general has been considerably delayed in 2020 as a result of conflicting priorities and the Covid-19 pandemic which significantly affected our development team. Once client testing has finished, we are confident that eNvd can finally be implemented into our live systems.

6 Conclusions

All requirements associated with Milestone 7 have been met and testing trials as part of milestone 8 will begin soon with a number of clients.

Design, development and testing were conducted to integrate electronic NVDs into eLynx's StockMate web and mobile apps.