

# milestone report

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Prepared by: Scott Ferguson  
eLynx Pty Ltd  
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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.

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# 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

← Consignment C-000035167 Export Re-issued to M&A Delete

Reference Number: NVD-BAAA00002  
Status: Submitted

**Owner of Cattle / Exiting Property**

Property: Barnum (QBZZ2222)

Name: Barnum

Address: 15 Tooraweenah Rd

Town/Suburb: Coonamble State: NSW

Postcode: 2829 Origin PIC: QDZ3333

**Consigned To**

Property: Oakley Abattoir (QBZZ3888)

Name: Oakley Abattoir

Address where the livestock are consigned to: 70 Russell St

Town/Suburb: Toowoomba State: QLD

Postcode: 4350 Destination PIC: QBZZ2222

**Destination Address**  Same as Consigned To

**Quantity** up to 10 descriptions allowed + Add Item

Number of Head	Description (breed, sex)	Brands	Earmarks
15	Hereford		15

Number of Ear Tags: 15 Number of Rumens Devices: Total Head: 15

**Forms** + Add Form

National Vendor Declaration (Cattle) and Waybill

**Attachments** + Add Document

⚠ No documents attached.

Cancel Save

### 3.2.1.2 Figure B – Cattle NVD Waybill form

← Consignment

Reference Number: NVD-BAAA00002  
Status: Submitted

**Owner of Cattle / Exiting Property**

Property: Barnum (QBZZ2222)

Name: Barnum

Address: 15 Tooraweenah Rd

Town/Suburb: Coonamble

Postcode: 2829

**Quantity** up to 10 descriptions allowed

Number of Head: 15 Description: Hereford

Number of Ear Tags: 15

**Forms**

National Vendor Declaration (Cattle) and Waybill

**National Vendor Declaration (Cattle) and Waybill**

**Food safety**

1. Have any of the cattle in this consignment ever in their lives been treated with a hormonal growth promotant (HGP)?  
Yes No
2. Have the cattle in this consignment ever in their lives been fed feed containing animal fats?  
Yes No
3. Has the owner stated above owned these cattle since their birth?  
Yes No
4. In the past 60 days, have any of these cattle been fed by-product stockfeeds?  
Yes No
5. In the past 6 months have any of these animals been on a property listed on the ERP database or placed under any restrictions because of chemical residues?  
Yes No
6. Are any of the cattle in this consignment still within a Withholding Period (WHP) or Export Slaughter Interval (ESI) as set by APVMA or SAFEMEAT, following treatment with any veterinary drug or chemical?  
Yes No
7. In the past 60 days, have any of the cattle in this consignment consumed any material that was still within a withholding period when harvested, collected or first grazed?  
Yes No
8. In the past 42 days, were any of these cattle: a) grazed in a spray risk area; or b) fed fodders cut from a spray drift risk area?  
Yes No

9. Additional Information

Details of other statutory documents relating to this movement e.g. health statement + Add Item

i No records

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?\*

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

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

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

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

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?\*

6. Has the source herd had a JD test?

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)
<input type="text"/>	<input type="text"/>	<input type="text"/>

8. Any other relevant health information

#### Treatments

Drench	<input type="button" value="+ Add Item"/>
--------	---

### 3.2.1.4 Figure D – Consignment listing

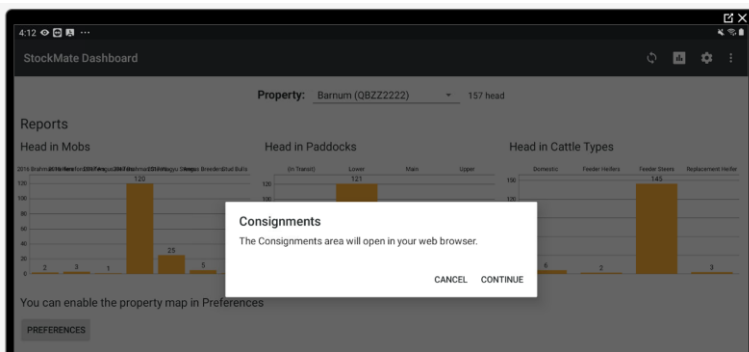
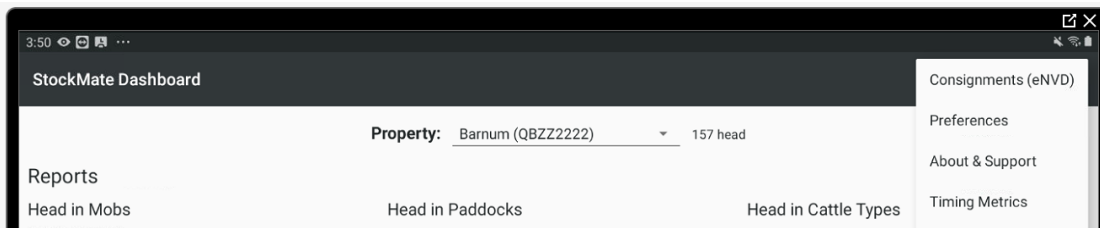
Date Created	Type	Existing Property	Consigned To	Head	Consignment No.	Reference No.	NVD Serial No.	Health Declaration Serial No.	Status
17/08/2020	Sale	Barnum (QBZZ2222)	Oakey Abattoir (QBZZ28888)	10	NVD-BAAA00004	NVD-BAAA00004			Draft
17/08/2020	Sale	Barnum (QBZZ2222)	Oakey Abattoir (QBZZ28888)	12	NVD-BAAA00003	NVD-BAAA00003			Draft
17/08/2020	Sale	Barnum (QDZZ3333)	Oakey Abattoir (QBZZ2222)	15	C-000035167	NVD-BAAA00002	35149509		Submitted 17/08/2020
09/07/2020	Sale	Barnum (PICTEST106)	Oakey Abattoir (BtZZ2222)	15	NVD-BAAA00001	NVD-BAAA00001			Draft
17/08/2020	Purchase	(QDZZ3333)	Barnum (QDZZ3333)	54	C-000026795	NVD-P1AA00004	35141024		Submitted 18/05/2020
17/08/2020	Purchase	(QDZZ3333)	Barnum (QDZZ3333)	45	C-000026796	NVD-P1AA00005	35141025	35141026	Submitted 18/05/2020
17/08/2020	Purchase	(QDZZ3333)	Elynx Pty Ltd (QDZZ3333)	0	C-000034796	REF123456789	35148961	35148962	Submitted 12/08/2020
17/08/2020	Purchase	(QDZZ3333)	Elynx Pty Ltd (QDZZ3333)	0	C-000034797	REF123456789	35148963	35148964	Submitted 12/08/2020
17/08/2020	Purchase	(QDZZ3333)	Elynx Pty Ltd (QDZZ3333)	0	C-000034798	REF123456789	35148965	35148966	Submitted 12/08/2020
17/08/2020	Purchase	(QDZZ3333)	Elynx Pty Ltd (QDZZ3333)	0	C-000034799	REF123456789	35148967	35148968	Submitted 12/08/2020
17/08/2020	Purchase	(QDZZ3333)	Elynx Pty Ltd (QDZZ3333)	0	C-000034800	REF123456789	35148969	35148970	Submitted 12/08/2020
17/08/2020	Purchase	(QDZZ3333)	Elynx Pty Ltd (QDZZ3333)	0	C-000034801	REF123456789	35148971	35148972	Submitted 12/08/2020
17/08/2020	Purchase	(QDZZ3333)	Elynx Pty Ltd (QDZZ3333)	0	C-000034802	REF123456789	35148973	35148974	Submitted 12/08/2020
17/08/2020	Purchase	(QDZZ3333)	Elynx Pty Ltd (QDZZ3333)	0	C-000034803	REF123456789	35148975	35148976	Submitted 12/08/2020
17/08/2020	Purchase	(QDZZ3333)	Elynx Pty Ltd (QDZZ3333)	0	C-000034804	REF123456789	35148977	35148978	Submitted 12/08/2020

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

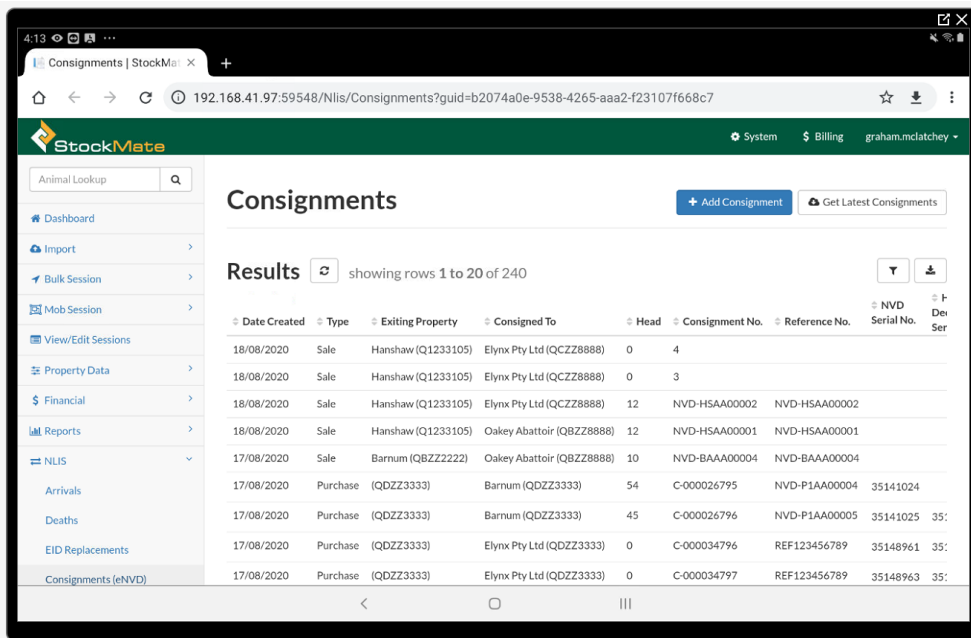
The eNVD link in on the StockMate app opens a mobile version of the StockMate Web App in a separate window as per the screenshots below. Note that an internet connection is required for the eNVD consignments to load on the tablet.

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

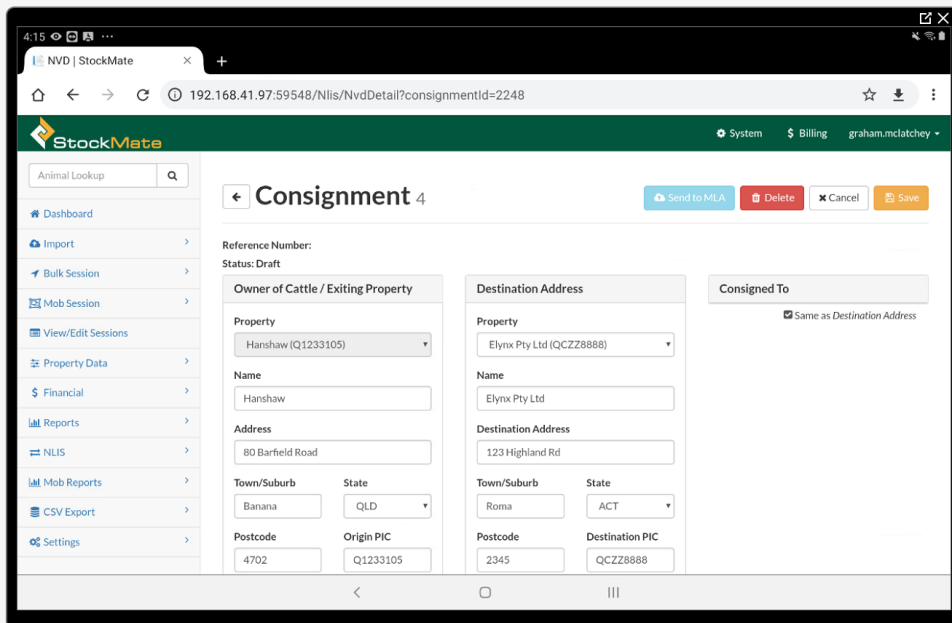




3.2.2.2 Figure B - eNVD Consignment List viewed on Mobile Device



3.2.2.3 Figure C - eNVD Consignment Form viewed on Mobile Device



4:15 Financial

Hanshaw Elynx Pty Ltd

Address: 80 Barfield Road Destination Address: 123 Highland Rd

Town/Suburb: Banana State: QLD Town/Suburb: Roma State: ACT

Postcode: 4702 Origin PIC: Q1233105 Postcode: 2345 Destination PIC: QCZ28888

Quantity up to 10 descriptions allowed + Add Item

Number of Head	Description (breed, sex)	Brands	Earmarks
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Number of Ear Tags:  Number of Rumen Devices:  Total Head:

Forms + Add Form Attachments + Add Document

No forms attached to this consignment. No documents attached.

Cancel Save

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152.168.41.57:51548/NLIS/NeutralPoolConsignmentId-2

Name: Elynx Pty Ltd

Destination Address: 123 Highland Rd

Town/Suburb: Roma State: ACT

Postcode: 2345 Destination PIC: QCZ28888

Consign To: Elynx in Destination Address

Quantity up to 10 descriptions allowed + Add Item

Number of Head	Description (breed, sex)	Brands	Earmarks
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Number of Ear Tags:  Number of Rumen Devices:  Total Head:

Virtual Keyboard: QWERTYUIOP, ASDFGHJKL, ZXCVBNM, etc.

## **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.