National Livestock Identification System (NLIS) Database Uplift Project
TECHNOLOGY SOLUTION PROVIDERS and API INTEGRATORS

12 December 2024

Integrity Systems
red meat customer assurance

mla
MEAT & LIVESTOCK AUSTRALIA

NLIS

Agenda

- Introduction
- Project Overview
- Key Changes
- Timeline
- More Information and Support
- Wrap up

NLIS Uplift Project Overview

Why an uplifted NLIS Database is needed

- The NLIS underpins Australian red meat market access
- Key pillar of defence against disease and food safety issues
- Ageing - 24 years old
- Uplift is needed to ensure it is future-proofed and easy to use
- Tracking for a 30 June 2026 completion
- The project is supported by a $22.5 million funding grant by the Australian Government.

NLIS Database UPlift

	Current State	Project Activity	Future State
Traceability 	Cumbersome reporting and significant resourcing slows information turnaround.	Near real-time traceability and a highly automated fit-for-purpose livestock movement capture, storage and distribution system.	Provides the ability to comply with Livestock Traceability Performance Standards
User Experience 	The user interface is not aligned with modern design principles making navigation difficult and counter intuitive, particularly for first time users.	A vastly improved user interface that provides an intuitive, user friendly and simplified user experience.	Significant improvement in user satisfaction, engagement and efficiency, resulting in reduced human error and simplified compliance.
Interoperability 	Outdated API technology limits the ability for the current NLIS to exchange information with third party software providers or integration partners.	Seamless data integration with third party software providers.	Robust, scalable integrations and improved workflow efficiency to better support livestock traceability.
Reliability 	Back-end systems require high manual effort to resolve disruptions. System upgrades require downtime, causing operational challenges for users.	Highly available, reliable, secure and responsive websites and APIs.	Minimal downtime and rapid auto-recovery in the event of a service disruption or maintenance.
Future Needs 	It is slow and difficult to add new features and user types and implementing scalability options to manage growing data volumes is manual.	Increasing scalability and flexibility.	The ability to respond quickly to meet the future needs of the industry across a variety of use cases.
Role Based Access 	Role-based access is cumbersome to create and modify. It lacks self-service capability to allow organisations to manage their own user base.	A new role-based user management system with greater granular security.	Provide all users with granular access control, data and features depending on their business requirements with access protection over each user's own data.
Data Integrity 	Poor user experience and user interface, suboptimal system processes, and slow performance.	Implement automated mechanisms to identify issues and remove barriers that impact the complete and accurate capture of data.	Data accuracy, quality and integrity is maintained and enhanced.
Compliance 	NLIS meets biosecurity, traceability and data legislative requirements.	Consultation with each jurisdiction is planned to determine their future requirements and support required upon release.	Meets the legislative needs of government and supports industry to comply, through an updated and future fit NLIS Terms of Use.
Security 	A robust security framework.	Modernised enhancements to security and privacy, including the integration of privacy and security standards and data ownership.	The continuation of safeguarding sensitive data, prevention of unauthorised access and compliance with privacy and security standards.

Our 3-year Journey …

The RoadMap – When we will deliver

We are here

JUL – OCT 23

What does the uplifted NLIS database need?

Extensive stakeholder engagement to identify must have features

JUL 23 – MAY 24

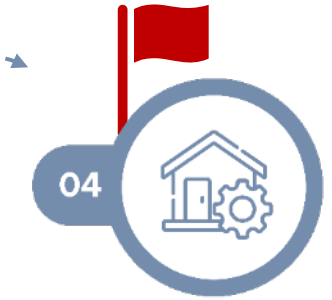
What will the uplifted NLIS database look like?

NLIS users engaged to ensure the new platform is easy to use

JUN 24 – SEP 24

Platform design begins

Software designers draw up plans for the new platform



OCT 24 – DEC 25

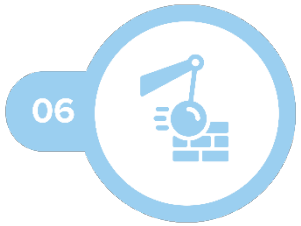
Time to build

Regular showcases held to gather feedback during build

JAN 25 – JUN 26

Staged transition

Data migrated to uplifted NLIS database and features progressively rolled out



JAN 26 – JUN 26

Closing the old NLIS database

Original NLIS database decommissioned in tandem with new platform release

JUL 26

Uplifted NLIS database fully operational

We made it. The uplifted NLIS database delivering vast efficiency and traceability benefits

Key Changes

NLIS 2.0 – the APIs

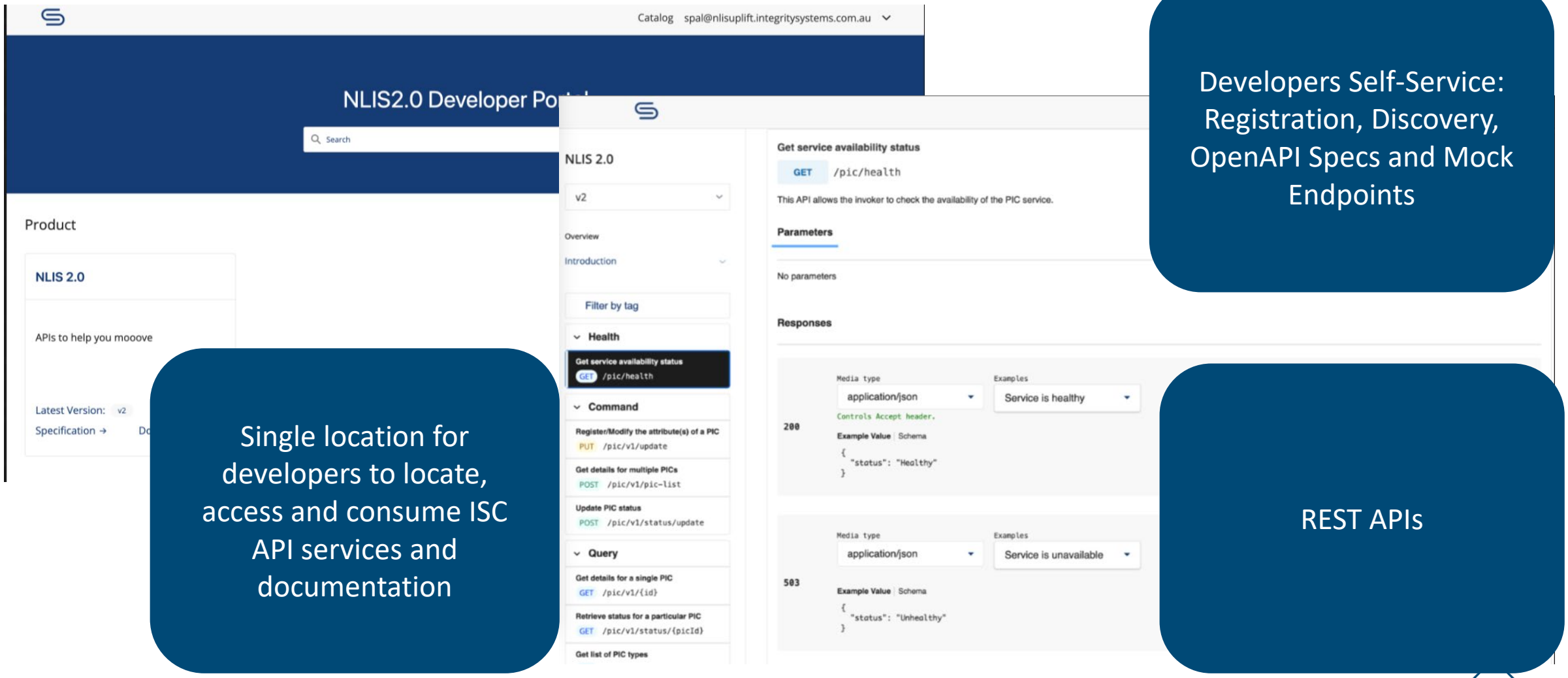
- Adopting an “API First” system where all interactions with the NLIS 2.0 are via Rest APIs (both NLIS 2.0 web app or 3rd party integrators)

- Each API interaction with NLIS 2.0 needs an authenticated access token to proceed.

- Supporting existing use cases, mostly human interactive for integrators to query NLIS and record data on users’ behalf with the ability to be extended to support emerging use cases.

- The introduction of “Service Account” implemented with the principle of least privilege to enable other use cases when human interaction is impractical or not possible.

A new Developer Portal

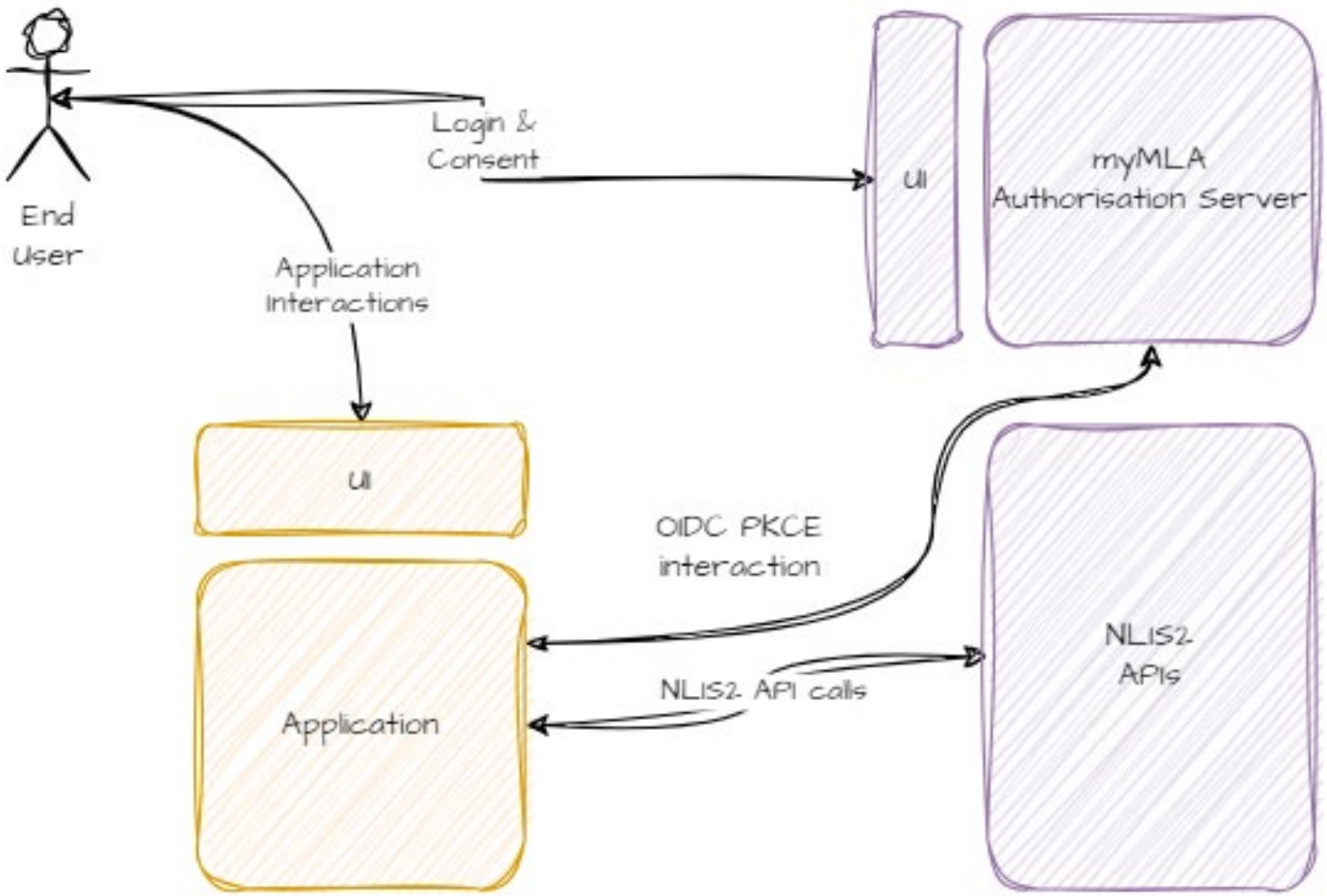


Developers Self-Service: Registration, Discovery, OpenAPI Specs and Mock Endpoints

Single location for developers to locate, access and consume ISC API services and documentation

REST APIs

Authentication Approach – Human Interactive



The “Application” will obtain via OIDC PKCE flow an ***ID*** token, which is used to then obtain one or both of the following tokens

- a ***Refresh*** token
- an ***Access*** token

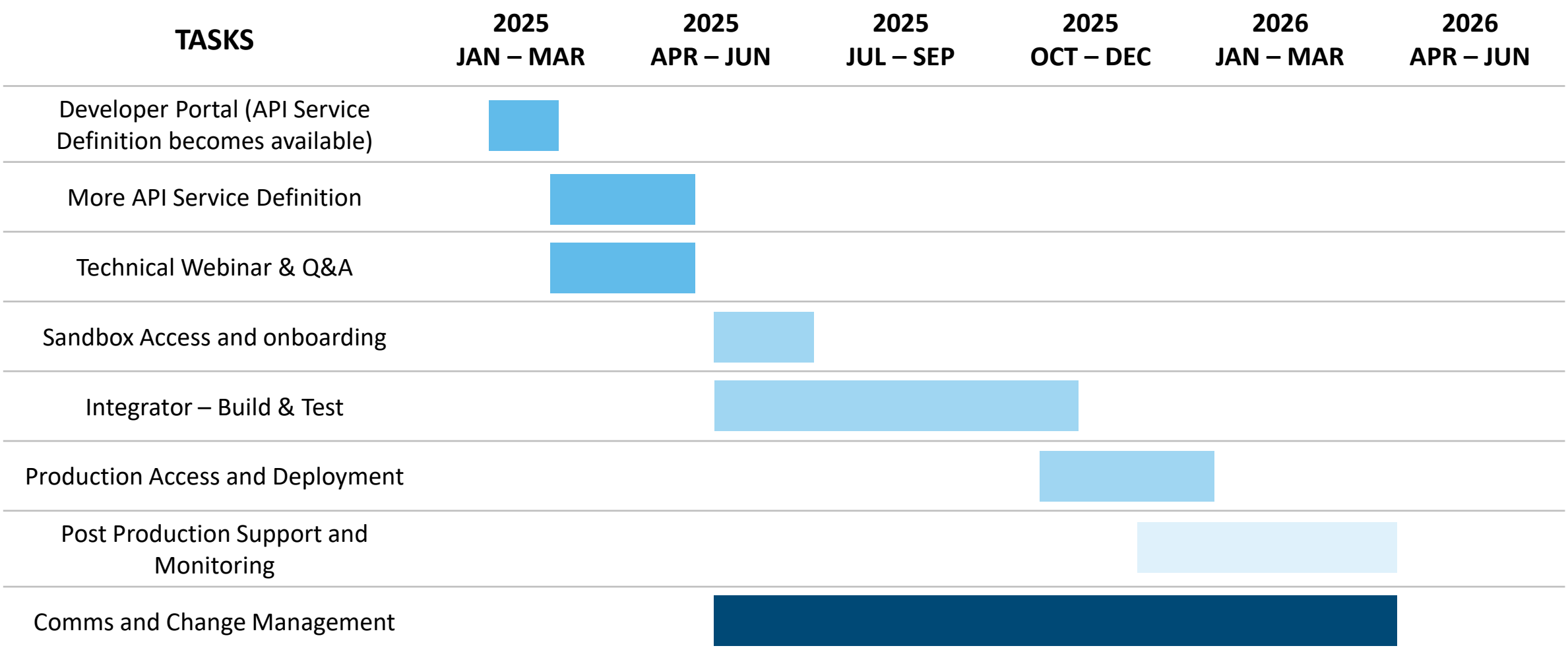
Authentication Approach – Other Use Cases

There are few cases where acting ‘as’ a specific NLIS user is not appropriate:

- When the service is a providing a B2B service to an NLIS organisation or entity: that is, when the third-party integration is providing a service to another business, as opposed to a specific or small set of users.
- When the service is recording data (movements, device status updates, etc) where it is difficult or impractical to originate as a specific user of NLIS.

In these cases, the third-party integrator will need to request ‘service-account’ credentials from ISC. The OAuth2 PKCE flow will result in an access token that can be used when sending API requests. Once an access token is received, the code can send NLIS API requests in exactly the same fashion as the human-interactive case.

Integration timeline

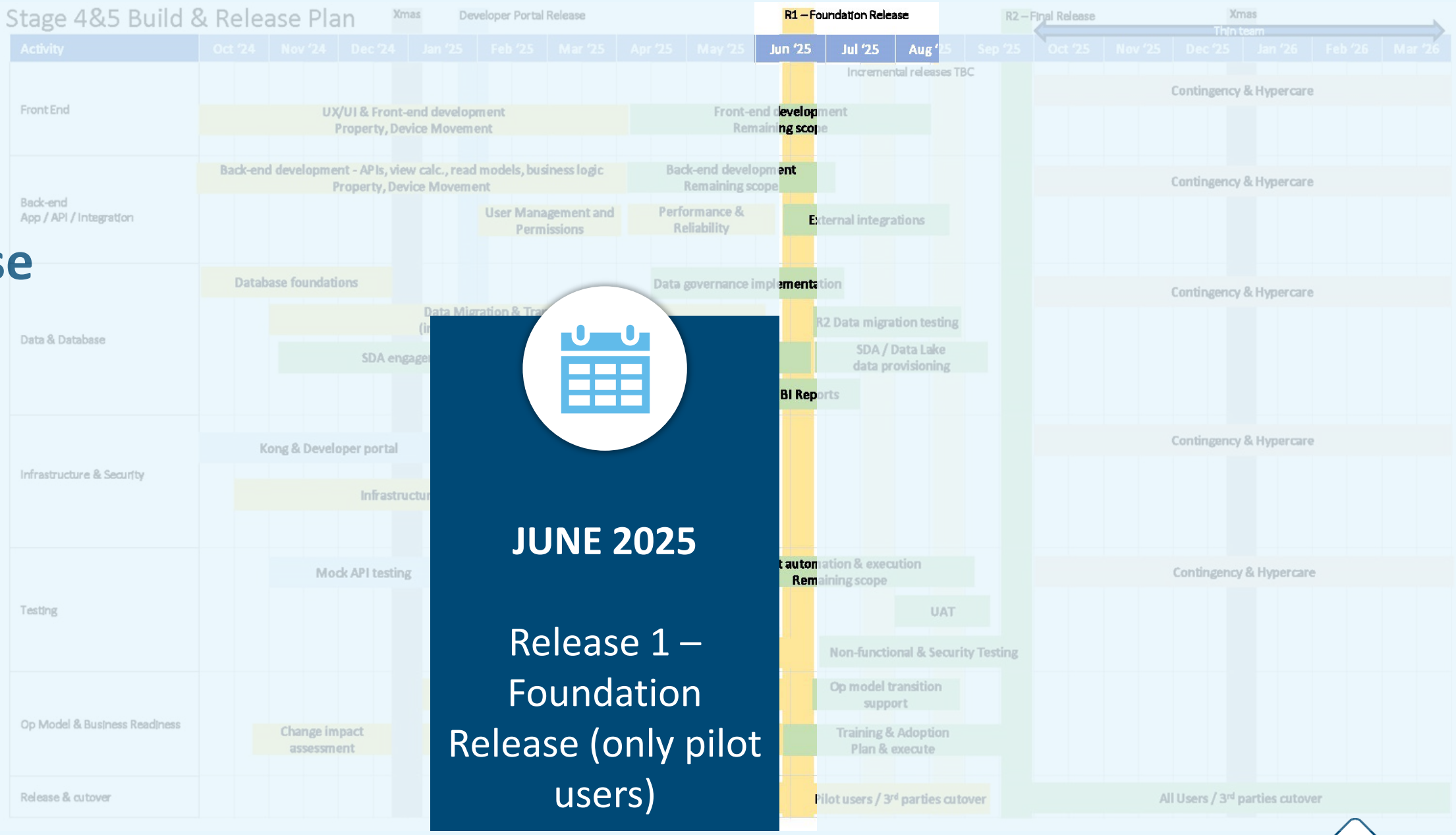


Build and release plan

JANUARY 2025

Developer portal release – only for third party integrators

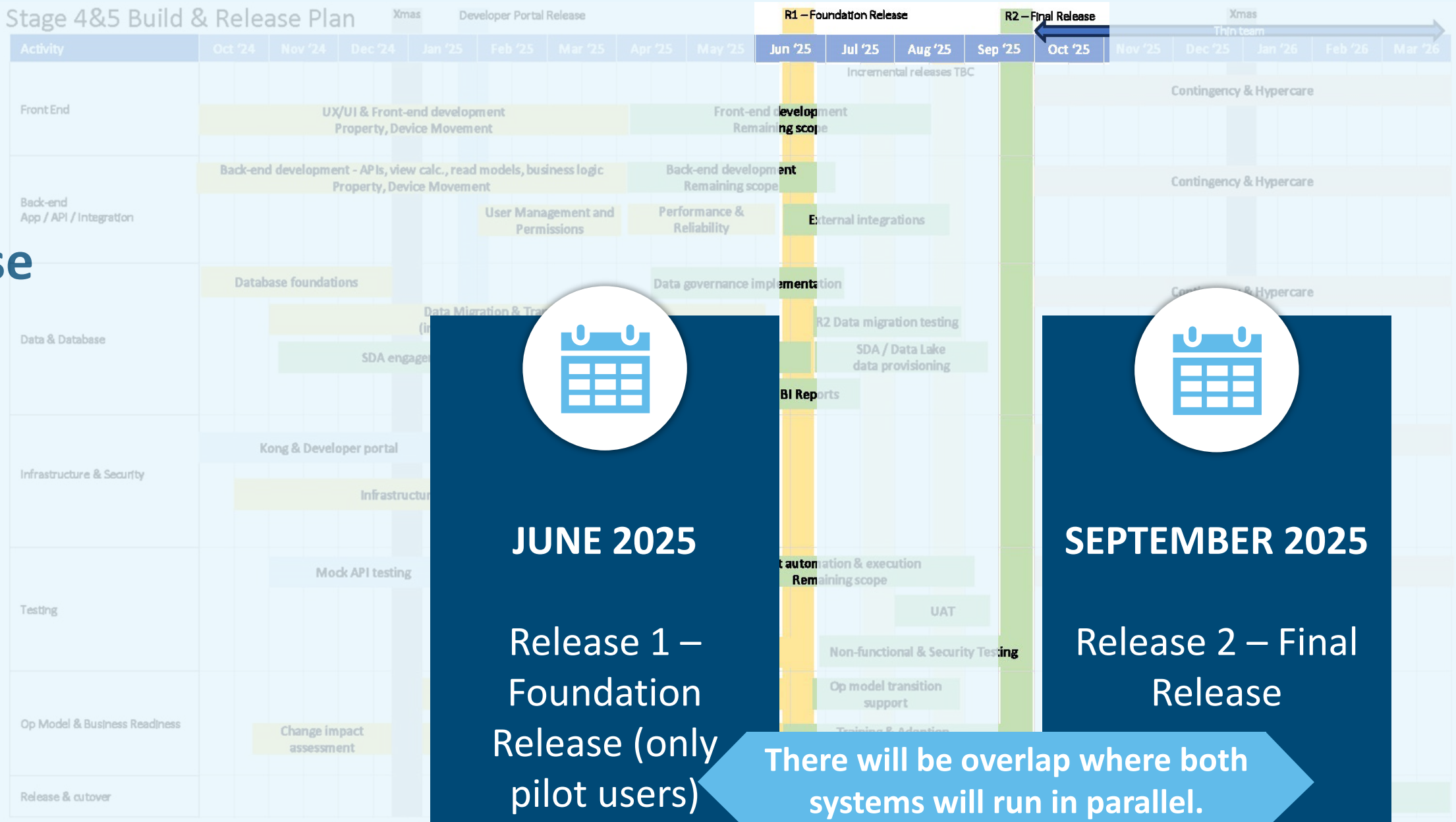
Build and release plan



JUNE 2025

Release 1 – Foundation Release (only pilot users)

Build and release plan



JUNE 2025

Release 1 – Foundation Release (only pilot users)

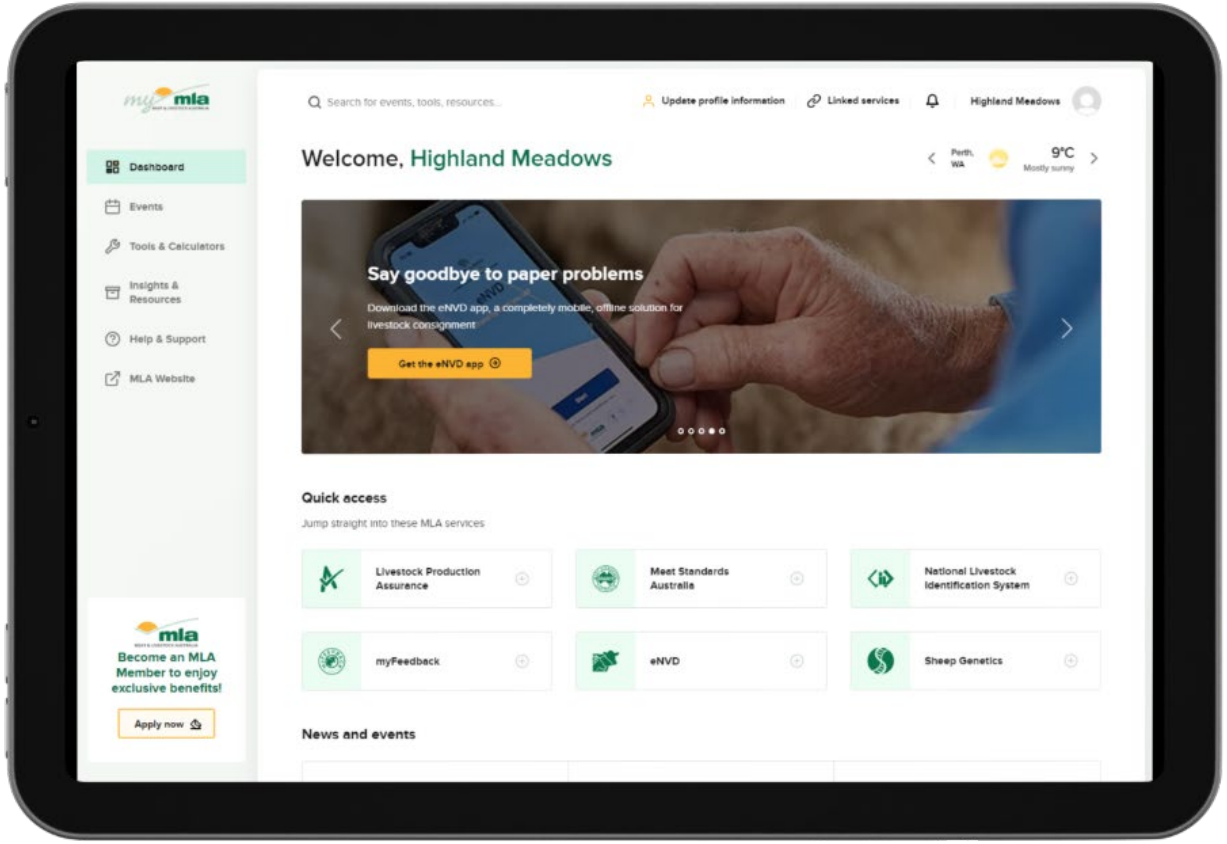
SEPTEMBER 2025

Release 2 – Final Release

There will be overlap where both systems will run in parallel.

myMLA integration

- Linked myMLA account needed to access uplifted system
- Comms campaign underway
- Single sign-on access – secure and convenient



National Livestock Identification System

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NLIS Uplift Transition Support for Integrators

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NLIS Uplift Transition Support

- ISC administering a $3.9m (ex GST) Commonwealth funding Grant
- To ensure API connections are in place with uplifted NLIS to limit service outages and maintain continuity for traceability and regulatory functions.
- For:
  - Integrators currently using the NLIS API for traceability purposes
  - State and Territory Departments of Agriculture
- Grant is to offset some of the costs of transitioning from the original API system to the new version.

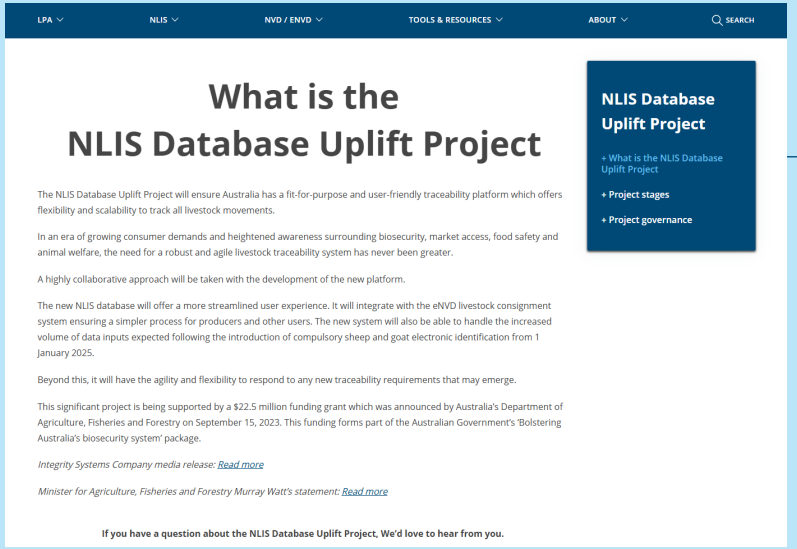
NLIS Uplift Integrator Funding Support Program

- Open application process
- Applications assessed by review panel – ISC staff, DAFF staff, Independent Chair and Probity Officer
- **Not eligible** for the program:
  - Recipients of other Commonwealth traceability grants
  - Integrators:
    - Not using NLIS in the past year
    - Not using NLIS API for biosecurity, traceability, and food safety purposes
  - NLIS users that upload data via the web

NLIS Uplift Integrator Funding Support Program - Timing

29 January	EDM to be sent with key information and link to developer portal
29 January (expected)	Dev portal and API definitions available
Mid-February (TBC)	Webinar on program details and application process
2 weeks after Dev portal launch	Funding Support Applications open *(Applications open for 3 to 4 weeks)*
Mid-March	Applications close
May 2025	Notification of outcome and funding agreements available for execution

More Information and Support



ISC website

NLIS Uplift [webpage]
(general info, FAQs & updates for all end users)

Integrators [webpage]
(being developed)
(FAQS)

If you have any questions, please email us

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