

surround

USE CASE

Plant Health Surveillance Ontology using
Linked Data to empower Data
Standardisation and Interoperability



PLANT HEALTH SURVEILLANCE ONTOLOGY USING LINKED DATA TO EMPOWER DATA STANDARDISATION AND INTEROPERABILITY.

Client Success Story: Commonwealth Government Department of Agriculture, Water and the Environment

DAWE develops and supports strong and resilient Australian agricultural industries and trade. The Department wished to deliver plant health and pest surveillance (PHS) data as Best Practice interoperable data, a “linked data” methodology, that is flexible and integrates with existing enterprise data systems, and provides trustworthy high quality data.

DAWE leveraged SURROUND’s services to develop and advise on methodologies to implement a PHS Ontology that allowed DAWE to plan for future interoperability and higher quality data. The project focused on fruit fly field surveillance and trapping data using consistent terminology for critical data.

Improved data capture, data integration, and data quality was proven, along with increased traceability of data throughout the steps.



Australian Government
Department of Agriculture,
Water and the Environment



TO DEVELOP AND DEMONSTRATE THE PHS ONTOLOGY WITH **INTEROPERABLE MULTI-STAKEHOLDER DATA**, ASSISTING FUTURE PLANNING FOR DAWE'S INTEROPERABILITY AND VOCABULARY STANDARDISATION GOALS.

CRITICAL REQUIREMENTS

The Department's priorities included:

- Common extensible data model for managing PHS data between different stakeholders without losing information along the way – “lossless metadata and data”
- Methodology that works with existing systems, data and stakeholders
- Data, vocabularies and reference data must be able to be developed collaboratively, and shared in both human and machine-readable form
- Enable data validation and quality checking
- Future interoperability with a number of National and Departmental systems

HOW SURROUND HELPED

SURROUND experts:

- Developed and facilitated the Plant Health Surveillance Ontology
- Stakeholder engagement to gain Departmental alignment
- Workshops to convey value and promote usage
- ~•~ Cross-references with experts in external agencies such as CSIRO to align with contextual data models at a National level of impact and use
- Development and advice on methodologies for future implementations and extensions

SOLUTION DELIVERED

With SURROUND support, DAWE was able to:

- Develop a working data model and vocabulary that met operational and policy requirements
- Implement a vocabulary management service and tools used by personnel for:
 - Plant Health Vocabulary Server
 - A single authoritative data reference and collaboration source
- Link all the data values and terms used by other stakeholders to the Plant Health Surveillance Ontology
- Demonstrate how future data architectures and services can exchange data, validate the instance data against the Ontology and the Vocabularies, and share data for reuse



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