BUSINESS AREA: STRATEGIC CONSULTING

Case Study

Analysis of User Requirements & Spatial Strategy: Remote Sensing & Spatial Technologies in Water Management & Compliance

NSW Department of Planning, Industry and Environment (DPIE) supports several innovative spatial and remote sensing technologies to support water resource management and compliance-related functions.

NSW DPIE Water collaboratively develops and supports innovative spatial and remote sensing technologies to support water resource management and compliance functions with sector partners including: WaterNSW; NSW Natural Resources Access Regulator (NRAR) and the Murray Darling Basin Authority (MDBA).

Program focus areas include the use of remote sensing and spatial technologies to observe, analyse and report on:

- Presence / absence of water in on-farm storages, river reaches & canals, floodplains & refuge pools.
- Water use and application to irrigated areas.
- Identification of irrigated crop areas, crop type and rotation - to inform water resource modelling and compliance functions.
- Identification and characterisation of infrastructure including that in-channel, across floodplain or at farm scale.
- Calculating water balance (farm, river reach, catchment) supported by remote observations.
- Monitoring environmental/flood flows across large geographies.
- Supporting major programs and projects with spatial and remote sensing products and analysis.

Seeking additional advice, the Department engaged Spatial Vision to develop a series of reports capturing current state, gaps and user requirements in order to develop a strategic roadmap. The intent being to assist in meeting future business requirements and unifying processes and technologies between contributing stakeholders.

Customer Profile

www.dpie.nsw.gov.au

Company

NSW Department of Planning, Industry and Environment (DPIE) – Water

Location

NSW

Industry

Water and Government

Products

Analysis of User Requirements & Spatial Strategy: Remote Sensing & Spatial Technologies in Water Management & Compliance

Solution

The Department of Planning, Industry & Environment engaged Spatial Vision to analyse user requirements and formulate strategies to enhance the use of spatial and remote sensing technologies across the Water branch. This resulted in the development of a two-year plan outlining 15 unique initiatives, deliverables, risks and mitigation actions to assist the Department in meeting future business requirements.

Benefits

- Increased alignment of processes and technologies between business areas, including the NSW Natural Resources Access Regulator
- Clear insights regarding user requirements, gaps and opportunities to assist in meeting future business objectives

Maturity Assessment - High Level Business Requirements

The Issue

The New South Wales Department of Planning, Industry and Environment (NSW DPIE) is engaged in multiple research, pilot and funded development programs which aim to review, test and implement innovative spatial and remote sensing technologies to support water resource management and compliance related functions.

The engagement and project supports recommendations from the independent investigation into NSW Water Management and Compliance led by Ken Matthews AO, which examined a comprehensive set of reforms including the Water Management Compliance Improvement Package. The resulting agency initiative included the Remote Sensing Water Compliance Support Business Case for the 2018-2021 financial years.

The Solution

Spatial Vision were tasked with assisting the Department in harnessing remote sensing, geospatial data and technologies to support water compliance and resource management objectives via the development of a strategic road map.

Additionally, the project needed to facilitate and support an enhanced understanding of DPIE Water and NRAR requirements which promoted co-designed data and system improvements. Spatial Vision worked closely with the DPIE Water throughout the following stages:

1. Inception and Scoping – Reporting the "As-Is" geospatial capabilities
2. Business Requirements and Future-State Report - Findings from onsite consultation the future aspirations of stakeholders and their interdependencies in relation to geospatial information
3. Gaps and Options Assessment - Analysing gaps using a well-known maturity assessment framework
4. Delivery Specifications - Identifying 15 unique initiatives based on the gap assessment
5. Delivery of Roadmap – Documenting broad activities required to achieve the required outputs along with quick wins & resourcing dependencies.
6. Project Plan Delivery – Detailing and summarising the activities, deliverables along with timelines, risks, mitigation actions, success criteria's and depicted key inter-dependencies between initiatives.

The final report in Stage 6 was delivered to NSW DPIE Water accompanied by a presentation to all stakeholders, followed by a presentation to all stakeholders.

Our analysis and recommendations provided NSW DPIE Water with tangible insights to assist in meeting future business objectives. If you'd like to know more, please get in touch.

"Spatial Vision not only delivered on the desired project outcomes but identified through engagement and industry knowledge a number of initiatives we hadn't previously considered.

The teams practiced and methodical process together with qualitative assessment exposed insights which allow us to move forward developing solutions better focused at user needs in a fast paced and technology driven environment.

We were very pleased with the engagement and outcomes achieved."

Aaron Grimston
Principal Spatial Analyst
NSW Department of Planning and Environment | Water

The Benefits

The benefits to NSW DPIE Water include the following;

- Increased alignment of processes and technologies between the department business units
- Clear insights regarding user requirements, current gaps and opportunities to assist in meeting future business objectives
- Detailed, two-year strategic plan serves as an actionable framework to support implementation across stakeholders
- Continued support and co-designed approach with enhancements work to meet evolving needs of end users
- Introduced spatial product initiatives enable improvement of processes to visualise and extract insights and products for management / compliance functions

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