

Mornington Peninsula Shire Manages Assets Through a Centralised, Integrated, and Interoperable Information System

Located in Victoria near the City of Melbourne, the bootshaped Mornington Peninsula is a 720 square kilometer promontory separating two contrasting bays, Port Phillip and Western Port. Locally called 'the Peninsula,' it contains a diversity of scenic landscapes and is almost completely surrounded by the sea.

Boasting coastal boundaries of more than 190 kilometers, it makes up approximately 10 per cent of Victoria's coastline supporting a combination of urban areas, resort towns, tourist development, and rural land.





Identifying Challenges

When Mornington Peninsula Shire held a major review of its existing asset management solution, they found that its processes for asset collection and inspection and overall management workflows were in need of a considerable overhaul. Issues ranged from incomplete to non-existent asset collection during audit periods, reliance on paper-based inspection records, and outdated technology that prevented the customer from managing information effectively. These inefficient methods were preventing the Shire from adhering to its five core data collection requirements of gathering and recording quality data that is accurate, complete, consistent, timely, and compliant.

The Council also works with external contractors (service providers) who need access to asset information in the field for planning and updates. To facilitate consistent and accurate data collection, these contractors would derive remarkable benefit from semi-automated data collection forms with built-in validation functionalities. The customer recognised the need for a centralised asset collection and inspection system that would visually display data, and ultimately could be made available both within and outside of the Shire offices on a real-time basis.

Goals

- Provide a unified, central database for assets that holds and displays information from all departments within the Shire
- Make this central database securely available across departments as well as to external contractors where each team has access to only relevant data
- Provide real-time updates of the central database
- Enable mobile access, editing, and updates for staff and contractors
- Eliminate data redundancies by enabling real-time updates that are reflected to internal and external staff
- Build workflows for online and offline modes, as the Council spreads to areas where 3G coverage does not exist yet.
- Create simple and easy-to-use workflows for non-GIS personnel.



Using GeoMedia Smart Client's workflow system, Mornington Peninsula Shire can record new assets in the field, as well as inspect and verify assets and record their condition. This provides a great deal of information about the assets' maintenance costs, thus allowing for maintenance and renewal forecasting.

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Davey Smith,

Project Manager of Renewal Planning at Mornington Peninsula Shire

Realising Results

Mornington Peninsula Shire has leveraged Hexagon Geospatial's products and services within its GIS department for more than a decade. When the need for a geo-enabled, front-end asset data collection and validation system arose, the Council looked to Hexagon Geospatial to provide a solution. Hexagon Geospatial deployed a smart solution based on GeoMedia® Smart Client that enables the Council to collect, manage, and share data securely within and outside its departments.

Hexagon Geospatial's GeoMedia Smart Client solution provides the functionality in a relational database, holding all asset information in a centralised location. The new system manages tens of thousands of records of all Council assets, such as buildings and their internal components, as well as outdoor assets such as signs, barbeques, bins, sporting fields, courts, and trails. All assets are associated with geometric information and attribute data collected in the field by service providers.

GeoMedia Smart Client is now the single tool for users collecting data in the field. Information is made available to internal personnel and external contractors alike. The application's ease of use enables even inexperienced GIS users to exploit the wealth of information contained in the database. As a result, daily work has become more efficient, with time saved during data updates that can now be done on the fly. The data is validated upon entry, thereby ensuring error-free datasets. Custom workflows have been built to meet the Council's requirements for collection, inspection, and management of all assets. These workflows are now deployed to internal personnel and service providers.

Davey Smith, project manager of Renewal Planning at Mornington Peninsula Shire, states, "Hexagon Geospatial's solution has eliminated the cumbersome process of extracting data from the GIS/asset management system, translating this data to a format suitable for the maintenance contractors; and then, after they have processed the data, translating the data back into our GIS format and extracting the attribute data for uploading into the asset management system. GeoMedia Smart Client uses workflows to connect directly into the appropriate databases, saving a great amount of time and effort."

Service providers use GeoMedia Smart Client's online and offline forms and integrated workflows on Microsoft® Windows®-based mobile devices (tablets) in the field to access and update the asset management system.



Using a photo plugin developed for Mornington Peninsula Shire in GeoMedia Smart Client, the device's native camera capabilities can be used, taking photos of the assets in the field, and attaching them to their respective assets or asset categories.

Custom forms were developed for the field crew to edit attribute information and geometry, and an image capture functionality was designed to facilitate attaching related photographs from the field to their respective assets. Once field data is updated to the central asset management database, the Council uses it for analysis and reporting.

GeoMedia Smart Client has also eliminated the use of paper-based recording of inspections that would typically require the inspector to record the information on paper and then manually transfer the information into a database in the office.

The Council has adopted an open-data approach where interoperability forms the basis of the entire infrastructure. Hexagon Geospatial technology supports this strategy by providing secure direct and native access to data without the use of proprietary formats or middleware.

Davey Smith says, "GeoMedia Smart Client having direct access to our asset database is a great example of interoperability thinking. Centralised data management with no real distinction between GIS and other departments, and common sharing of the data across the organisation without any data translation or conversion is the future path for IT globally; and at Mornington Peninsula Shire, we have adopted this approach and are already enjoying the benefits.

We expect the time savings associated with users in the field to significantly increase productivity. Since the workflows and forms are developed to attend each individual purpose, we expect every user to create or edit a greater number of assets per day given the smarter user interface of GeoMedia Smart Client.”

Key Benefits

- Centralized and unified asset information
- Integrated and interoperable system accessible to internal staff and external contractors
- Mobile/remote system access
- Non-GIS users can access, edit, and update information.

Moving Forward

Mornington Peninsula Shire is moving forward to adopt modern technologies and an integrated IT environment to create an efficient workforce and provide better overall public services. Implementing Hexagon Geospatial’s technology today allows for an open and shared data infrastructure, and guarantees a fast and low-cost integration in the future.

The asset management system itself is expected to evolve, and will include the development and management of more workflows within GeoMedia Smart Client. Other Council departments are also expected to make use of the established solution within their areas of interest, such as bush land management, historic heritage sites, and others.

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Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous - ensuring a scalable, sustainable future.

Hexagon's Geospatial division creates solutions that deliver a 5D smart digital reality with insight into what was, what is, what could be, what should be, and ultimately, what will be.

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