

SURVEILLANCE AND INTELLIGENCE

MDA Change Monitoring





MDA's Change Monitoring service provides mapping organizations with a consistent feed of customer-defined change alerts to increase map accuracy and simplify workflows.

The Challenge

Growing industries such as location-based services are driving increased demand for up-to-date, accurate, and reliable maps. Understanding where, when, and how the world is changing and being able to rapidly capture it all is a challenging task.

The Solution

MDA has developed a systematic, scalable, multi-source approach to detect changes and generate alerts to notify map makers of where change activities are occurring. By leveraging extensive stacks of archived optical and radar satellite imagery, utilizing innovative algorithms, and employing land information products, MDA delivers highly accurate change alerts that targets only relevant changes. MDA's solution saves mapping organizations time and money by highlighting where to focus image updates.



Custom Solutions to Suit Customer Needs

With access to a variety of Earth Observation inputs, MDA creates tailored solutions to address customers specific change detection needs. MDA provides a range of high resolution imaging options and broad area monitoring capabilities, enabling mapping organizations to build a monitoring program on a local, regional, or national scale.

MDA's Change Monitoring solution utilizes radar imagery for the accurate collection of change information over any area of the world, regardless of cloud cover or poor light conditions. MDA's service offers multiple filtering options based on target type, environment, change intensity, size, and density. These filtering parameters give customers better discrimination of change activities such as road construction, housing developments, and retail/industrial growth.

Simplified Workflows to Optimize Map Updates

Using MDA's automated, broad area, high resolution change product, customers can simplify their workflows by minimizing the data collection and handling required for the map updating process. MDA's Change Monitoring service enables companies to focus mapping resources and update their maps with increased efficiency.



New housing

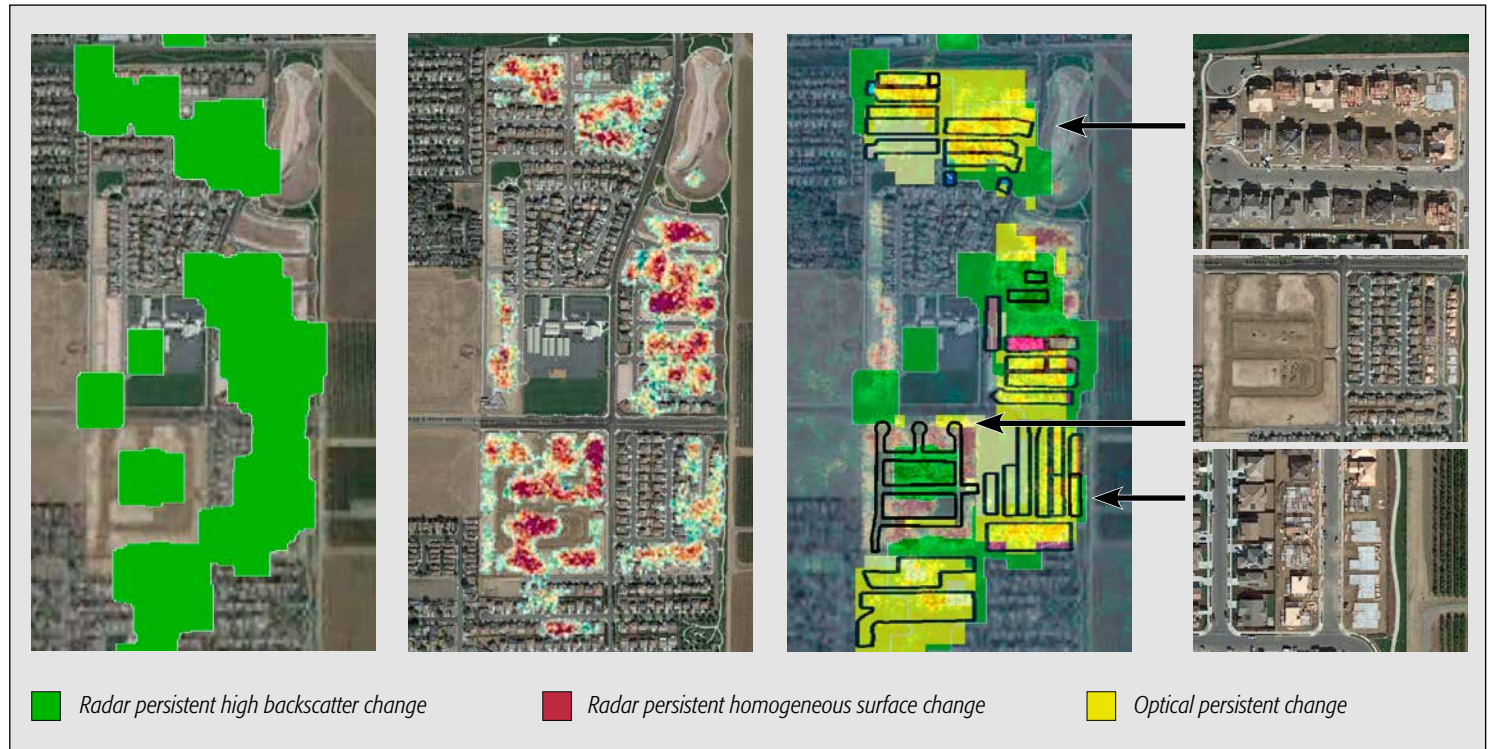


Bridge and road construction



Optical and radar sensors combined with innovative change algorithms enable routine capture of changes occurring in urban environments. New subdivisions, roads, housing developments, and/or new industrial plants are just a few of the change activities our solution is capable of detecting.

Multi-Sourced Solution for Increased Map Accuracy



MDA's solution uses a stack based, multi-sensor approach to monitoring urban change. By fusing optical and SAR datasets, MDA ensures continuity of temporal and spatial coverage around the globe.

The solution incorporates data from a multitude of optical satellites, such as Sentinel-2, Worldview, RapidEye, and Planet. SAR imagery is primarily supplied by RADARSAT-2 due to its large imaging capacity, range of resolutions, and flexible and consistent tasking that enables new high accuracy change detection capabilities. Other supported SAR satellites include Sentinel 1A/1B.

MDA's solution applies multiple change algorithms to deep stacks of image archives to extract changes that persist over time. Having access to a long time series of imagery allows seasonal and agricultural changes to be filtered and removed leaving only relevant persistent change alerts.

By employing these algorithms in combination with multi-source land information products like RADARSAT-2's SAR texture maps and MDA's Global BaseVue product, changes are detected and filtered in different land types.

Key Benefits

Scalable - Range of imaging options to capture change events on a local, regional and national scale around the globe

Multi-Sensor - Improved spatial and temporal coverage provides robust discrimination and validation of change events and results in highly accurate change alerts

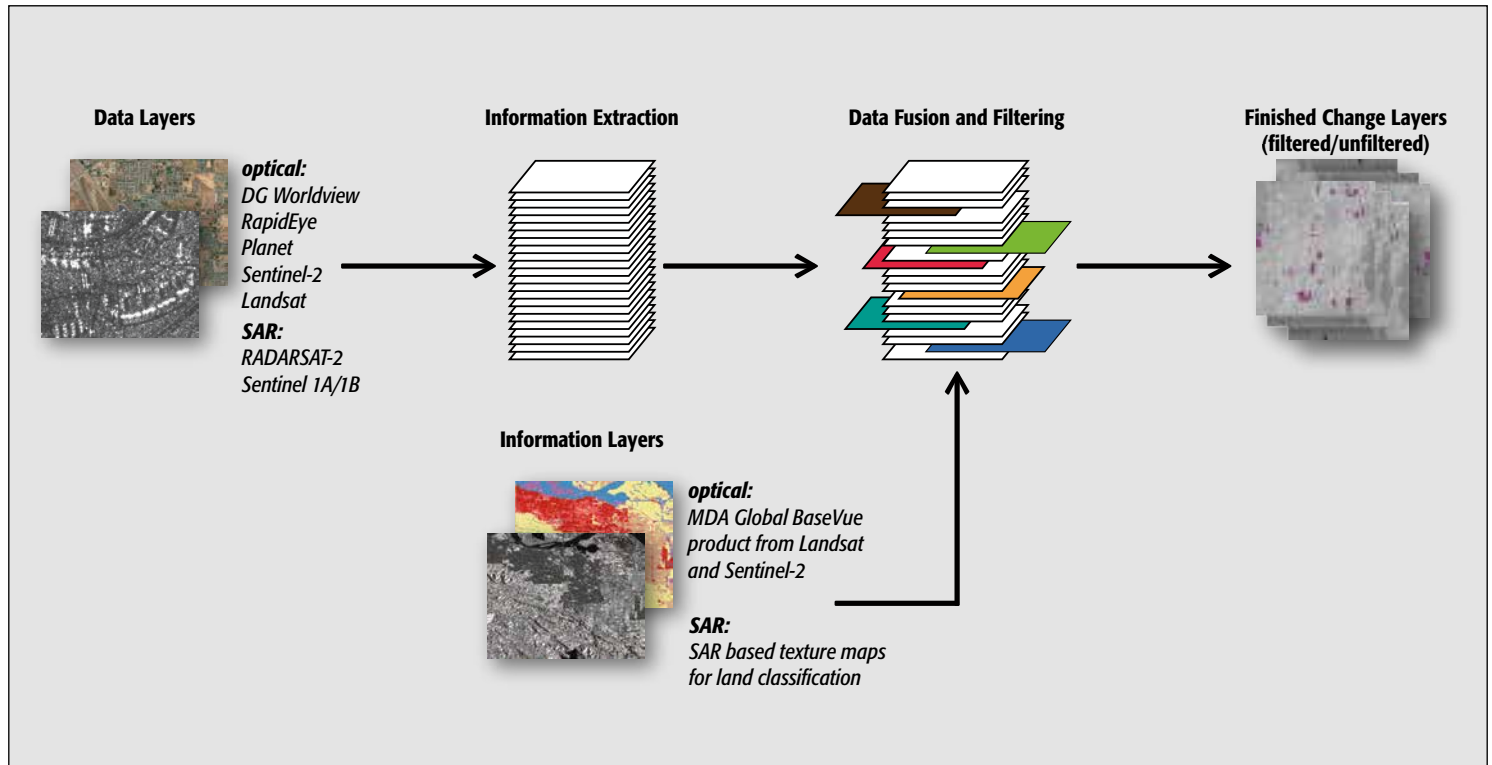
Easy Integration - All outputs utilize industry standard file formats and are ready to integrate into an enterprise GIS, cloud environment, and/or Common Operating Picture (COP)

Multi-Source - Land cover products to help target environments where only meaningful change is occurring

Proven Solution - Change detection service is currently employed by the US Government and other international customers

Cost Effective - Focused change alerts saves mapping organizations time and money by targeting image updates only on areas where change is occurring

Change Methodology



CUSTOMER SATISFACTION

For more than four decades, MDA has worked with its worldwide customer base to provide information solutions that leverage advanced technologies and improve business efficiency.

For more information, contact us at:

MacDonald, Dettwiler and Associates Ltd.
 13800 Commerce Parkway,
 Richmond, BC, Canada V6V 2J3
 Telephone 604-278-3411
 info@mdacorporation.com | www.mdacorporation.com

MDA Information Systems, LLC
 Suite 300 - 820 West Diamond Avenue,
 Gaithersburg, MD, USA, 20878
 Telephone 240-833-8200
 info@mdaus.com | www.mdaus.com

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