



# Change Detection

A versatile analytic to increase your organization's speed to insight

Change Detection is a coveted SAR analytic due to the consistent illumination and geographic precision of SAR imaging. Precisely stacking and comparing successive images in time is a versatile analysis approach that reveals many types of large and small changes caused by construction, vehicle movements, changes in material stockpiles, and much more. In the past, change detection required expertise and specialized software for image acquisition, selection, and processing. With Capella's Change Detection solution, users can easily monitor sites with compatible imagery and rapidly receive an analysis of identified changes.

#### Seamless image acquisition

Easily schedule repeat Capella image tasking campaigns with optimized acquisition parameters for location and mission needs.

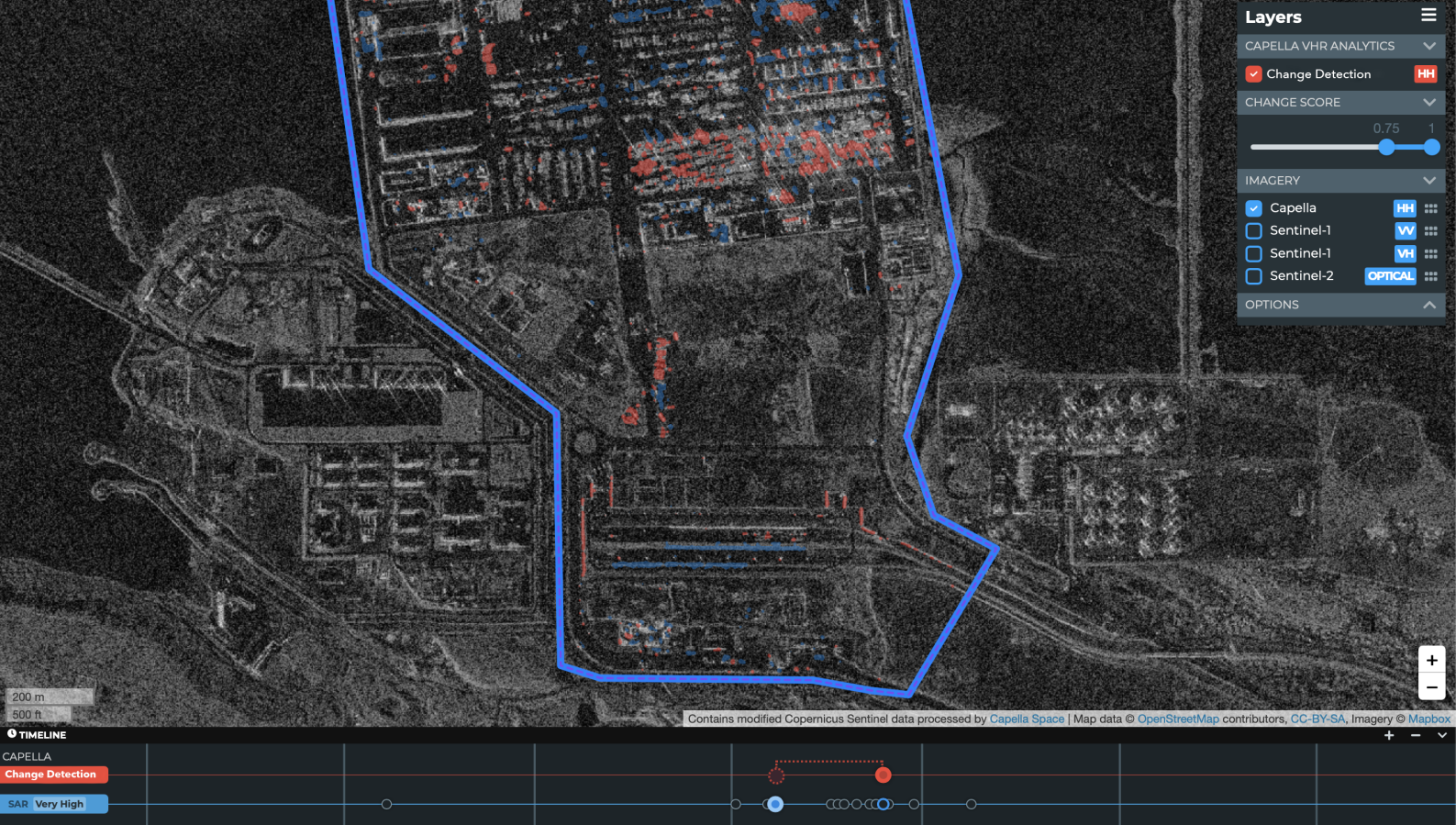
#### Automated analytics

The change detection analytic layer is viewable and usable as soon as imagery is available. There is no need to download imagery and run processing workflows.

#### Intuitive web application

A dedicated Analytics App empowers users to view their time series of Capella SAR imagery, change detection analytics, and contextual optical imagery in multiple resolutions and time periods. Change detection is helpfully displayed according to the "red fled, blue new" mnemonic for rapid interpretation.

The Change Detection analytic, shown in red and blue on this page, highlights significant arrivals and departures of submarines and naval vessels at a military port imaged in Capella Strip mode between March 6, 2021, and March 13, 2021. The following page shows a screenshot of Change Detection within the Analytics App and overlaid on a Capella Stripmap image. Here, the bustling operations of the container port are evident with the movement of containers, trailers, vehicles, and trains clearly identifiable.



**Product Description**

Change Detection combines efficient tasking with automated analytics to reveal activity and patterns of life.

**Analytic Product**

Change Detection is a thresholded raster layer of differences in amplitude between image pairs.

**Ordering**

A simple monitoring workflow enables the acquisition of repetitive imagery compatible for Change Detection. The analytic will be automatically applied to successive images in a series after image availability.

**Delivery**

View analytics, source imagery, and contextual imagery in the dedicated Analytics App. Change Detection is displayed via the familiar “red fled, blue new” analyst mnemonic. Alternatively, Change Detection can be downloaded from the Capella Console, API, or customer-owned Amazon S3 bucket.

**Source Imagery**

- Capella Spotlight (0.50 meter resolution)
- Capella Sliding Spotlight (1.0 meter resolution)
- Capella Stripmap (1.2 meter resolution)

**About Capella Space**

Capella Space is an American space tech company with data and satellite solutions for government and commercial use. A pioneer in the Earth observation industry, Capella is the first U.S. company with a constellation of Synthetic Aperture Radar (SAR) satellites, delivering the best quality, highest resolution SAR imagery commercially available. Capella provides easy access to frequent and timely information affecting dozens of industries worldwide, including defense and intelligence, supply chain, insurance, maritime and others. Its market-leading SAR satellites are matched with unparalleled data infrastructure to quickly deliver reliable global insights that sharpen our understanding of the changing world - improving decisions about commerce, conservation, and security on Earth. Headquartered in San Francisco, California with additional locations in Denver, Colorado and Washington, D.C., Capella's satellites are operated, designed and manufactured in the USA. Learn more at [www.capellaspace.com](http://www.capellaspace.com).

