

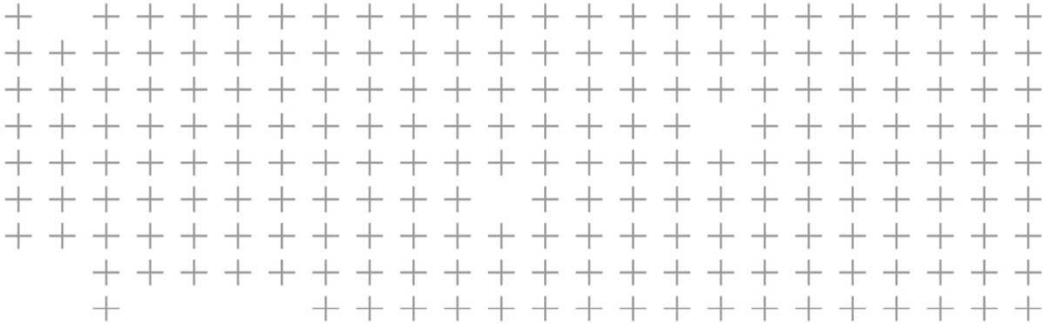
Christian Weise | Product Manager

APRIL 2016



# eCognition Essentials





# Introduction

# Overview



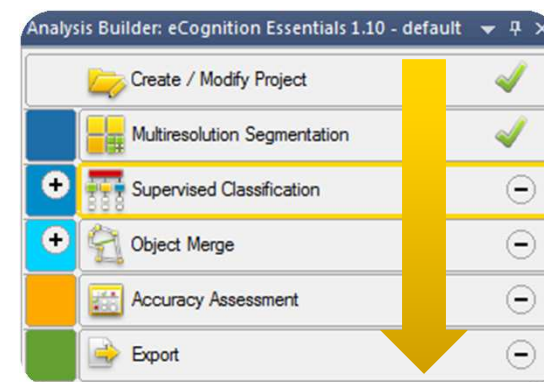
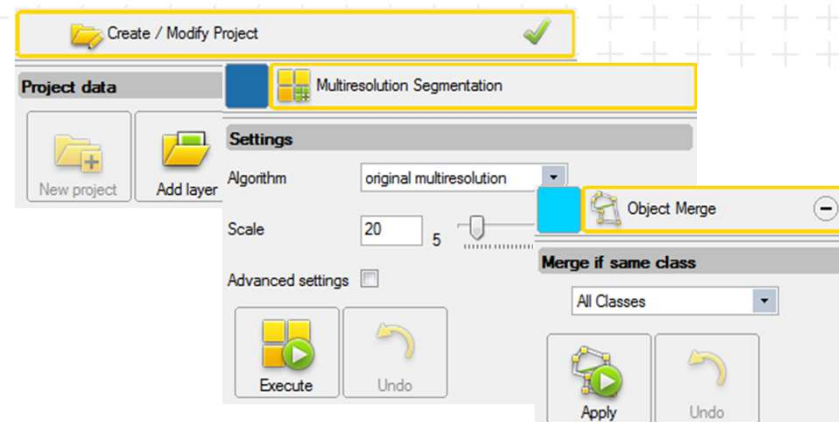
## eCognition® Essentials

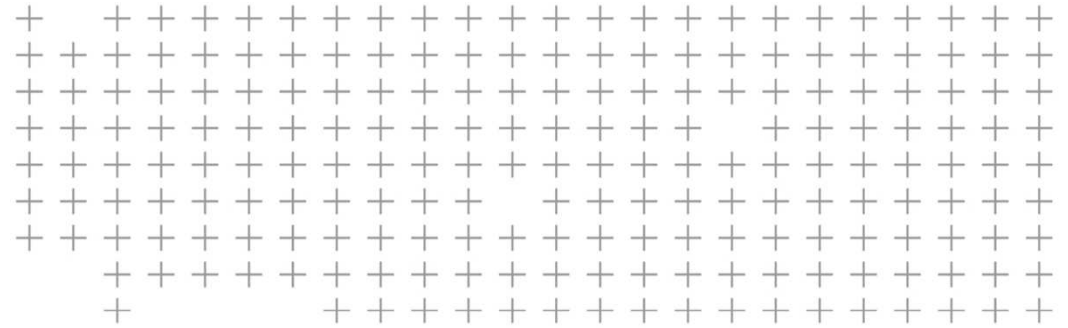
- Powerful out-of-the-box Land Cover and Change Detection Mapping solution
- Allows users at any skill level to quickly produce high-quality, GIS-ready deliverables from imagery



# Customer Benefits

- **Low Ramp-up Time** → Intuitive graphical user interface to perform land cover mapping on imagery
- **Get work done faster** → Guided and automated workflows for effectively transforming image data into actionable intelligence
- **Trimble Data Marketplace** → Rapid discovery and easy access to geospatial data





# Use Case Examples



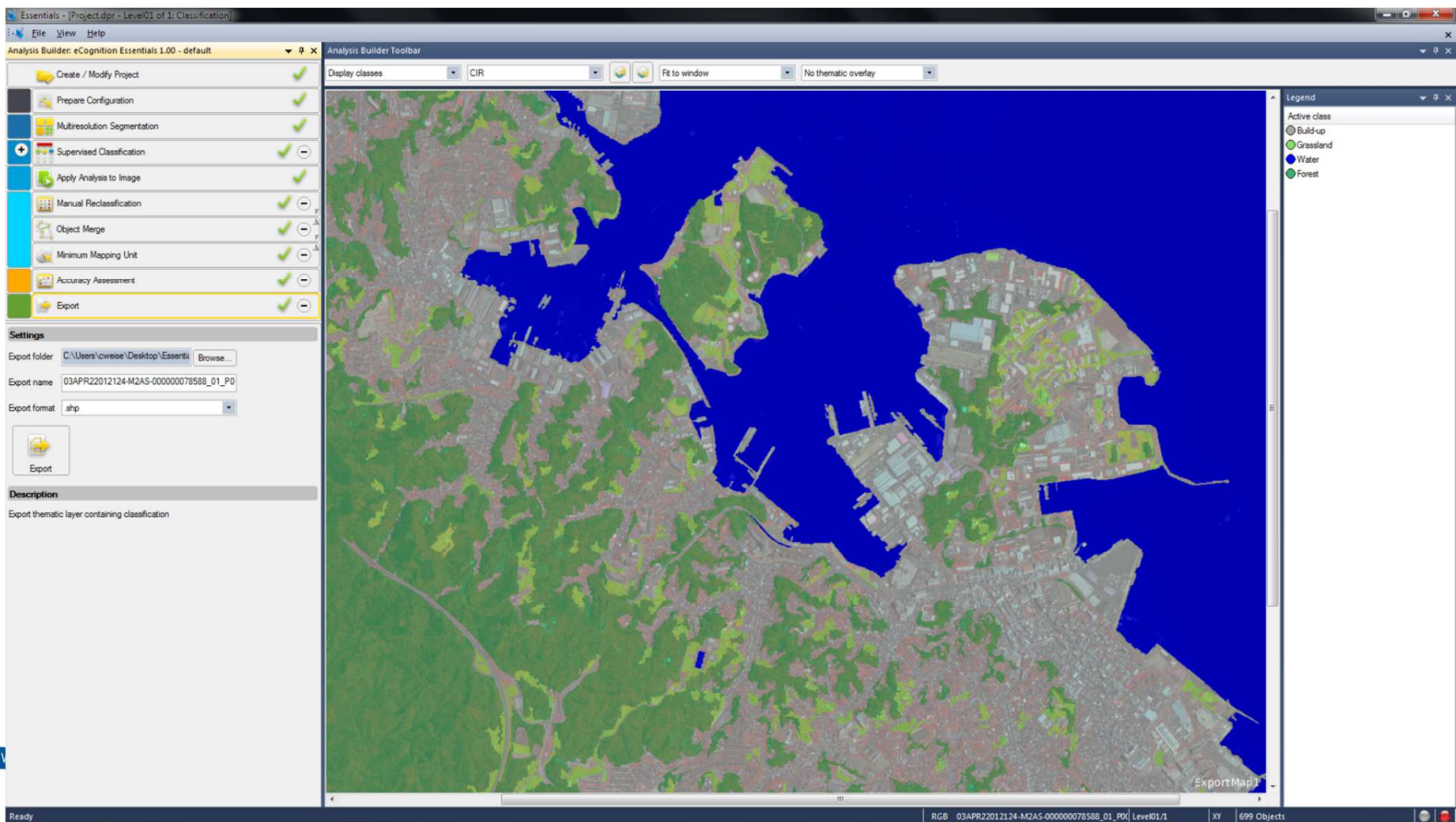
# Basic Land Cover Mapping

Import Data

Create & Classify  
Objects

Edit & Check  
Results

Export Results



# Thematic Change Detection (i.e. Buildings)

Load Image and GIS layers

Classify Image Data

Compare Classification with GIS Layer

Export Results

The screenshot displays the eCognition Essentials software interface. The central window shows an aerial image of a residential area with buildings segmented into different classes: red for existing buildings, green for forests, yellow for new buildings, and purple for missed buildings. The left sidebar contains a workflow of processing steps, with 'Create Report' highlighted. The bottom right panel shows a 'Result Report' table with the following data:

Class	No. of objects	Area	relative Area
unclassified	105	106.007825 ha	84.49%
Building	144	5.84501875 ha	4.66%
Forest	355	10.14203125 ha	8.08%
New Building	293	2.460725 ha	1.96%
Missed Building	477	1.0197 ha	0.81%

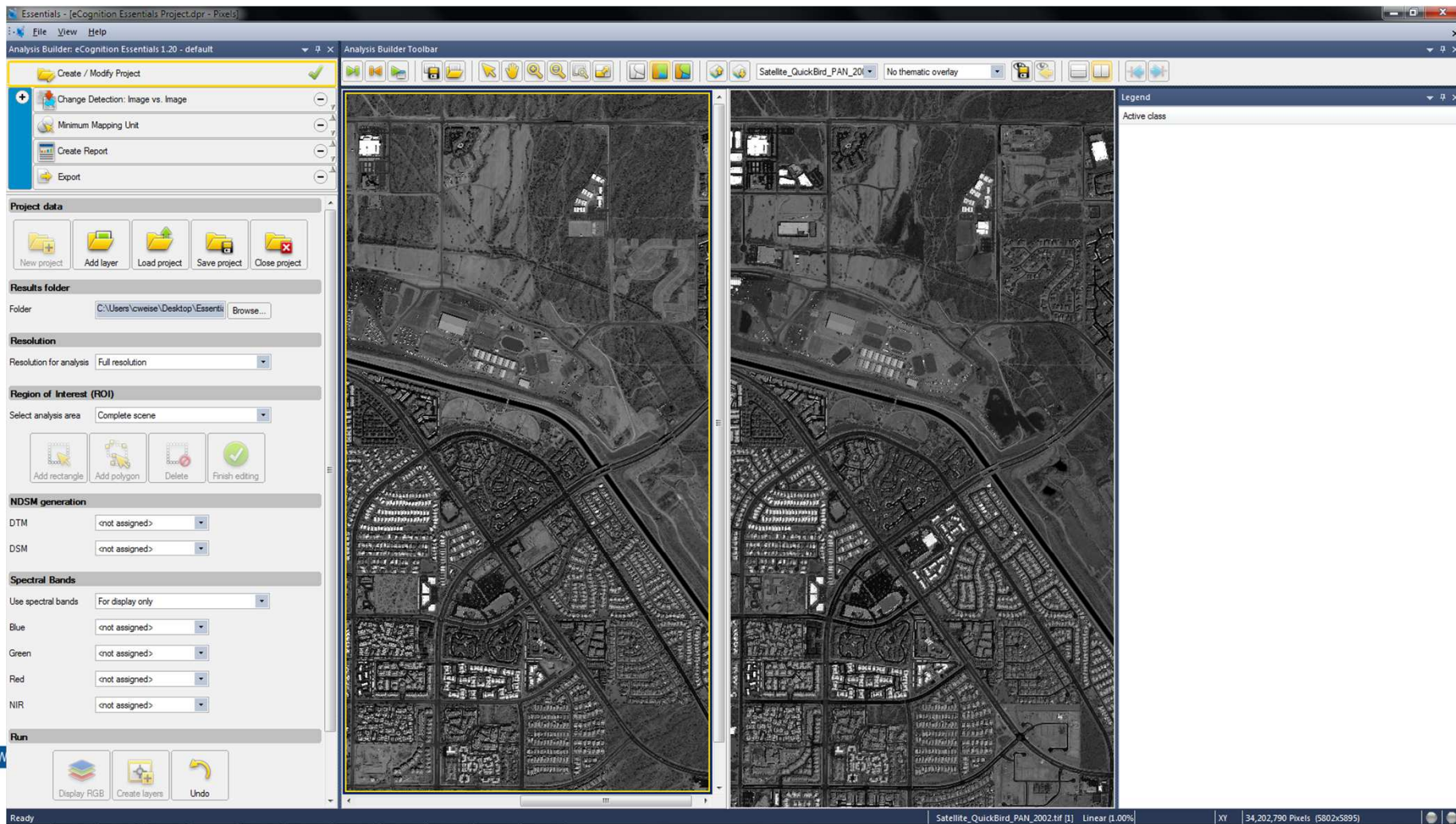
# Image Change Detection

Load Images

Create Difference Layer(s)

Classify Changes

Export Results





# Rapid discovery and easy access to geospatial data via Trimble Data Marketplace

Search & Download Images

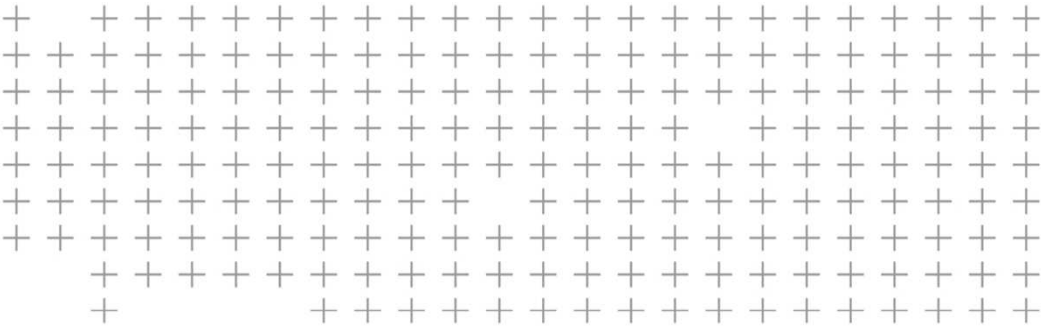
Load Data

Create and Classify Objects

Export Results



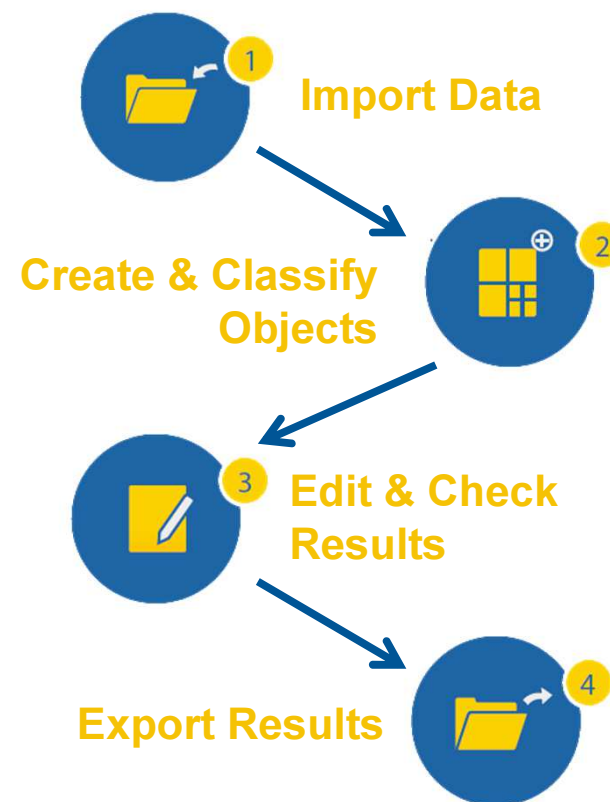
A screenshot of the eCognition Essentials 1.00 software interface. The main window displays a satellite-style map with a large blue area representing water. The interface includes a menu bar (File, View, Help), a toolbar with various analysis tools, and a legend on the right side showing 'Water' as the active class. The status bar at the bottom indicates 'Ready' and '20 Objects'.



# Highlights

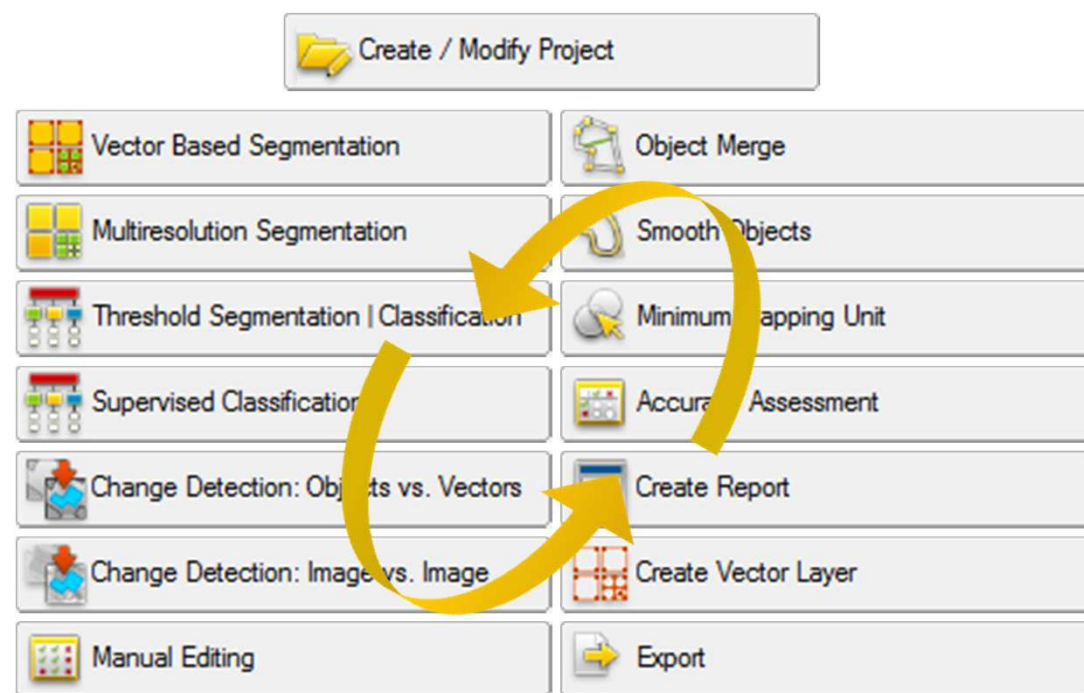
# Less Complexity, more Capability

- Easy-to-use User Interface
- Access to automated analysis tasks
- Predefined and structured workflows steps guides users through the analysis
- Covers all steps of a supervised classification in the remote sensing market
- Enables Image and Thematic Change detection workflows



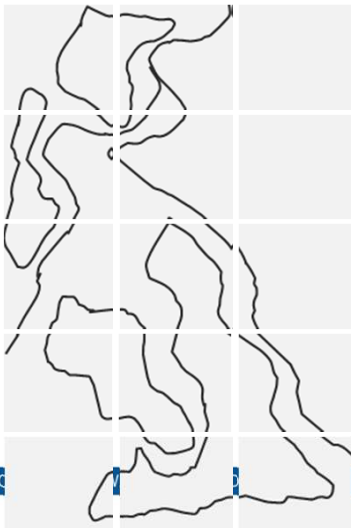
# Save Time with Automated Functions

- UI controls allow GIS analysts and Remote specialists to quickly create high quality deliverables
- Functions:
  - Create Projects
  - Create Objects based on GIS Data
  - Create Objects based on Image Data
  - Execute Supervised Classification (Threshold based, SVM, CART, Random Forest, Nearest Neighbor)
  - Execute Thematic Change Detection
  - Execute Image Change Detection
  - Edit Results
  - Reshape Results
  - Check Accuracy
  - Create Report
  - Create GIS Layer
  - Export Results



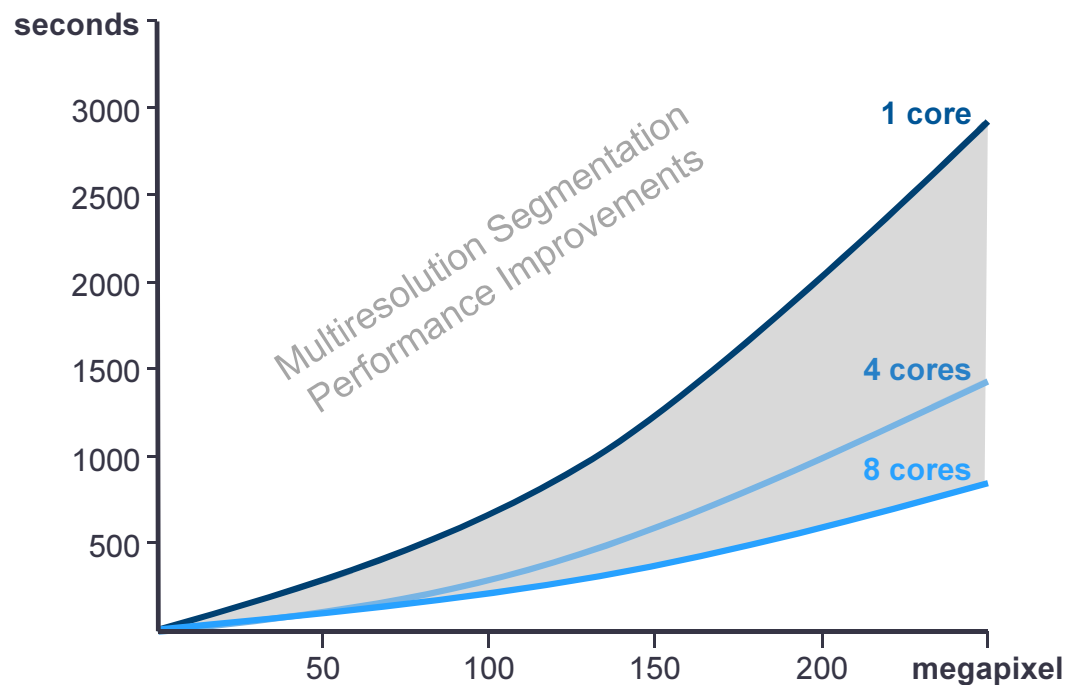
# eCognition Server Support

- Submit configured workflow to eCognition Server environment
- Benefits:
  - Allows analysis without manual interventions in batch mode and on dedicated server hardware
  - Increase throughput utilizing batch and parallel processing with the optional eCognition Server environment
  - Saves time that occur if one user performs a manual quality control activity inside eCognition Essentials while other scenes are processed in batch mode
  - Allows customers to efficiently generate more accurate landcover or change information by combining automatic processing steps in parallel with manual interaction



# Multi-Core Processing

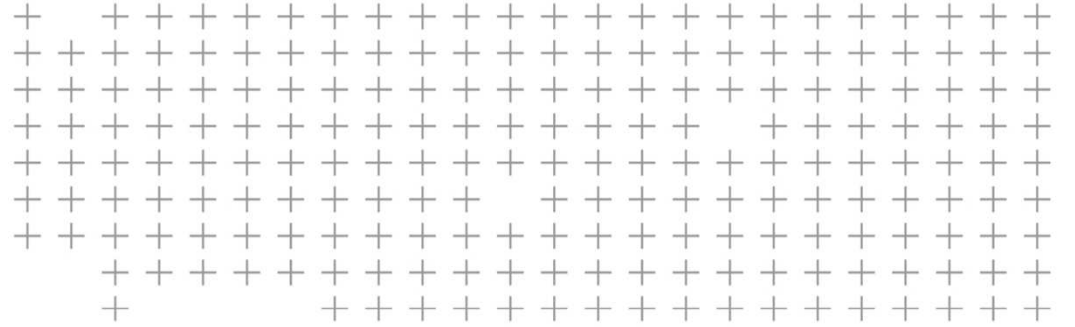
- **Multi-core** enhancements in version 1.3 allow users to utilize **up to 8 CPU cores** for multiresolution segmentation and for index layer generation like the NDVI
- ➔ The new multi-core capabilities maximize the power of computing hardware, reduce processing bottlenecks and allow users to complete projects in up to a third of the time taken with prior versions



## Summary

- Considered to be an entry-level product for Remote Sensing Professionals and GIS Experts
- Intuitive standalone application for straightforward analysis workflows
- “Click-and-classify Tool”
- Deliverable is a GIS-ready layer





# Ordering, Availability, and Resources



# Ordering, Availability, and Resources

## eCognition Essentials 1.3

- **Release Date:** 13 April 2016
- **Who's eligible?**  
All users with a valid maintenance contract as of April 13<sup>th</sup>, 2016
- The software is available in the **Customer Download Area:**  
<http://www.trimble.com/imaging/downloads>
- Get the **Free Trial** and learn more about Trimble eCognition on  
<http://www.eCognition.com>
- Visit the **eCognition Community** (more than 12.000 users) to ask questions, follow discussions, download guided tours, and give feedback on <http://www.eCognition.com/community>



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