

DEFENCE AND SPACE  
Intelligence

# Retail Optimisation: Automated Monitoring of Supermarket Parking Lots

OneAtlas Use Case | Earth Monitor

## Challenge

A global supermarket chain needed an automated, reliable method for counting cars in its store parking lots that was less expensive than manual processes.

## Solution and Results

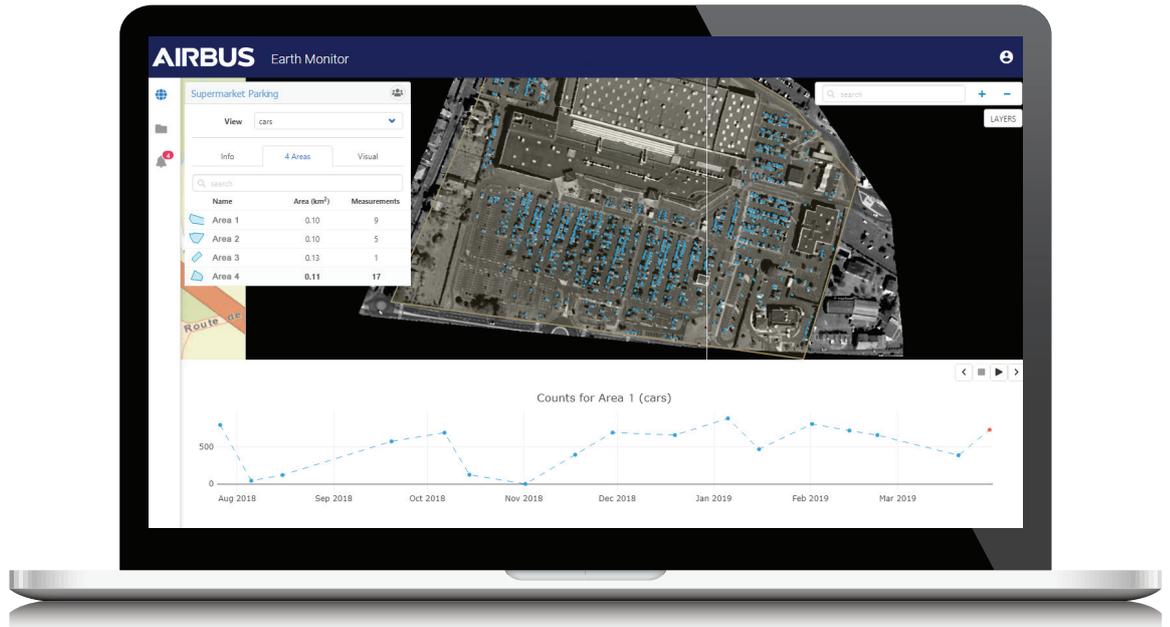
Earth Monitor provides automated counts of cars at specific parking lots on a periodic basis, including retro-active counts from archived data.

## Benefits

Car counts extracted from satellite imagery by the Earth Monitor service are more accurate and less expensive than relying on manual techniques.

**AIRBUS**

“A retail chain can derive numerous insights about its business at specific stores and across regions through accurate car count analysis.”



## Challenge

Retail chains collect an enormous volume of information about their stores and customers. They use advanced data mining analytics to derive insights that give them a advantage over the competition.

A favourite metric of retail chains, especially supermarkets, is the number of cars in the parking lots. If collected accurately and at the same time on specific days, automobile counts can be combined with other data to provide valuable snapshots of sales activity at individual stores or trends among retail locations.

However, assigning car counting duties to grocery store employees is expensive and subject to human error.

## Solution and Results

An international supermarket chain subscribed to the OneAtlas Earth Monitor service to automatically count vehicles in its store parking lots.

On the project start date, the Pléiades satellites captured optical images of four test stores at 0.5m resolution. Earth Monitor obtained monthly images for each store in the Pléiades archive dating back one year.

An automated workflow developed by Airbus and Orbital Insight leveraged machine learning and artificial intelligence to analyse the imagery and extract the car count information for the client with precision and accuracy.

Parking lot data is important information for supermarkets. Combined with internal spending details and local demographics, car counts may be analysed to evaluate spending trends by month, shopping differences between stores, and regional or global trends for an entire retail chain.

## Solution Description

Starting in the present and going back one year, Earth Monitor provided the client statistical reports on the number of vehicles parked at its stores.

## Organisation Involved

A global supermarket chain based in France.

## Benefits

The client improved the accuracy and cost effectiveness of its car counting process. Rather than assign employees to perform the counts manually, Earth Monitor extracted the desired information from satellite imagery on schedule and without error.