



# GeoSpectrum Consulting

## Imagery Analysis Services

### *Critical National Infrastructure Studies*

**G**eospectrum Consulting has developed a range of imagery based products and services to meet an increasing demand in the security and risk management market for imagery intelligence from high resolution commercial satellite imagery and aerial photography.

**Critical National Infrastructure** is a term used by governments to describe assets that are essential for the functioning of a society and economy.

Critical National Infrastructure (CNI) imagery studies provide detailed imagery analysis on a range of nationally significant industries, facilities and systems to allow an independent assessment of a nation's industrial capability to be made. Databases of CNI related facilities can be created and provided with or without imagery, ready to be used in a GIS as the basis for further study and analysis.

A CNI study can form the basis for understanding and managing risk, intelligence gathering, security, disaster recovery and business continuity planning.

The threat of terrorism and other extremist actions in an international context of heightened security calls for a full understanding of your infrastructure, its location, surroundings, security and vulnerabilities.

By using the latest high resolution satellite imagery or aerial photography a detailed study can be carried out before, or even without, setting foot in a location, this is particularly useful when looking at industries where facilities are often large and in remote or inhospitable locations.

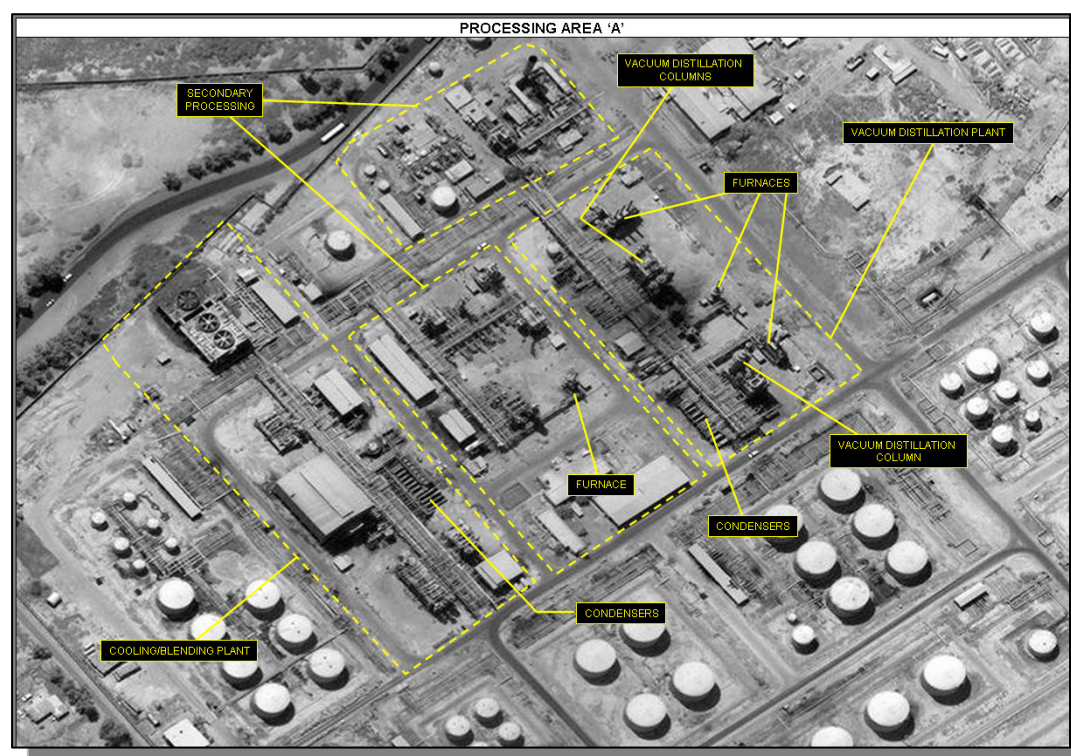
Typical subjects for a CNI study are:

- Airports**
- Ports and Harbors**
- Rail and Road Networks**
- Oil and Gas Industry**
- Chemical Industry**
- Power Generation**
- Water Supply**
- Military Establishments**



A CNI study typically incorporates a detailed written analysis of a facility identifying the key areas, vulnerable points, physical security measures, dimensions and construction of buildings, location data such as latitude and longitude and a wealth of other information that can be identified using imagery. Each CNI is accompanied by detailed annotated images illustrating the written report, providing a level of situational awareness and reach that only imagery can provide.

Imagery based CNI studies can be provided in traditional print, MS Office, Google Earth™ KML, PDF or GeoPDF™ format.



## Location Intelligence Database Development

Having a robust understanding of CNI begins with understanding where and what infrastructure is critical to a nation and building a catalogue of data.

Understanding the 'where' and 'what' is often the first step in the process of assessing a nation's capability and then devising ways of protecting and securing those facilities.

Geographic Information Systems (GIS) are fundamental in building an understanding of CNI capability but where does the basic location data come from? This is a particular problem in remote and potentially hostile regions where access to information is limited or even impossible to obtain.

By using imagery and other sources of data to identify facilities GeoSpectrum is able to develop GIS ready datasets of CNI related facilities in remote and often inaccessible locations.

Databases are created to order and typically capture basic information about dozens of facilities and their status. Data such as location, function, description and usage are assessed and captured as attributes in a GIS database.

Data can be provided in a variety of GIS ready formats such as ESRI shape, KML or delimited data formats.

**GeoSpectrum Consulting** offers a range of geo-spatial data services including imagery analysis and imagery intelligence products, provision and management of imagery and geospatial data requirements, training and consultancy.

For more information on the products outlined here and our other services please contact GeoSpectrum.

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