

ArcGIS for Food Security

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You are GIS. You gain knowledge, share expertise, and help us understand our world; the science of where.

A System for Managing and Applying Geographic Information



- On-Premises
- In your chosen Cloud
- Online / SaaS
- Hybrid

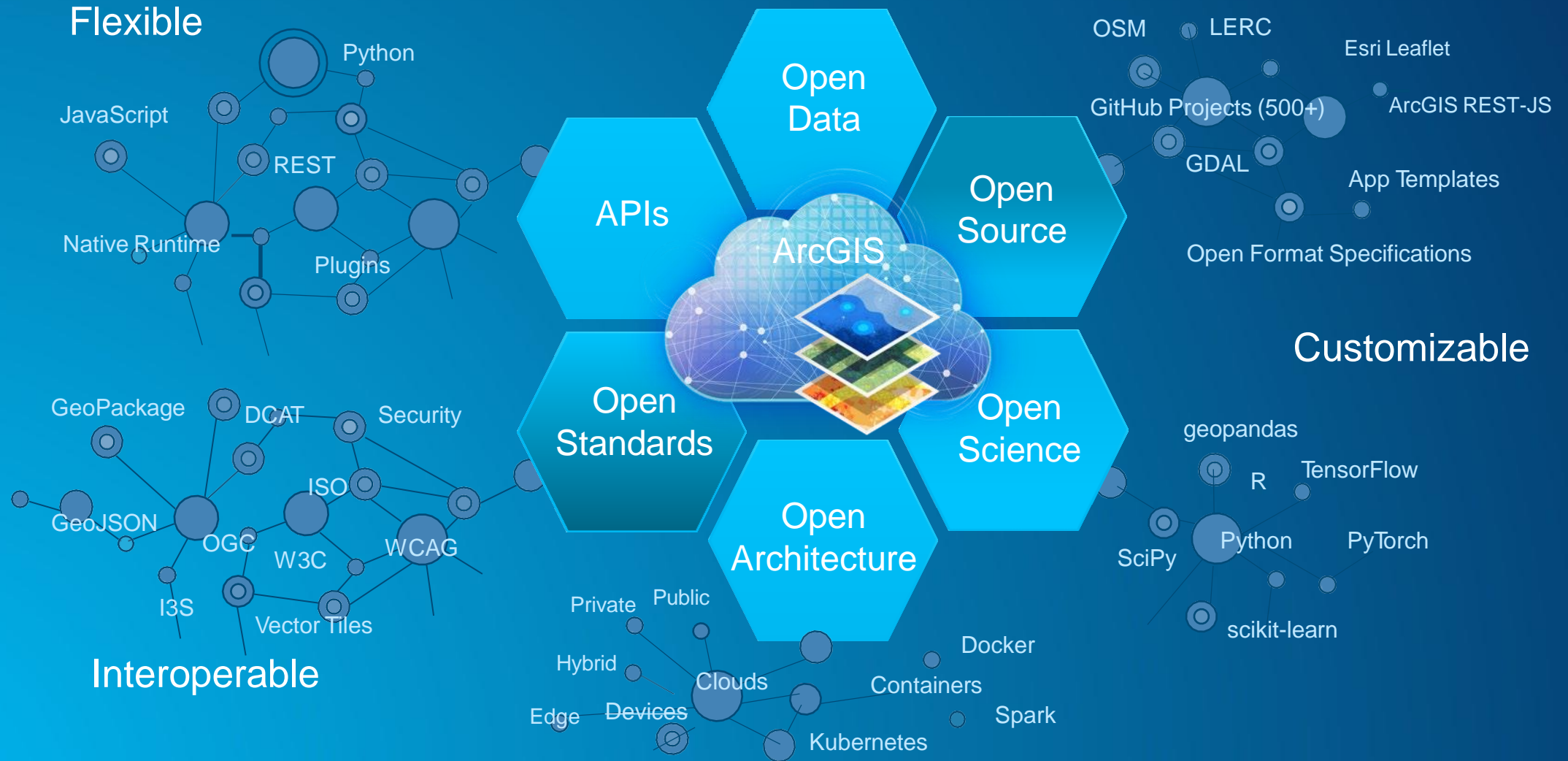
ArcGIS Enterprise

ArcGIS Online

Open

Distributed

ArcGIS is an Open Platform



ArcGIS Integrated GIS system

Connecting People, Processes, Things and Data About Them

Improving Efficiency,
Collaboration and
Communication

*System of
Engagement*

Helping Organizations
Understand . . .

*System of
Record*

*System of
Insight*

Web GIS

Supports Multiple
Types of Systems

- . . . And Be Aware, Alert,
and Responsive

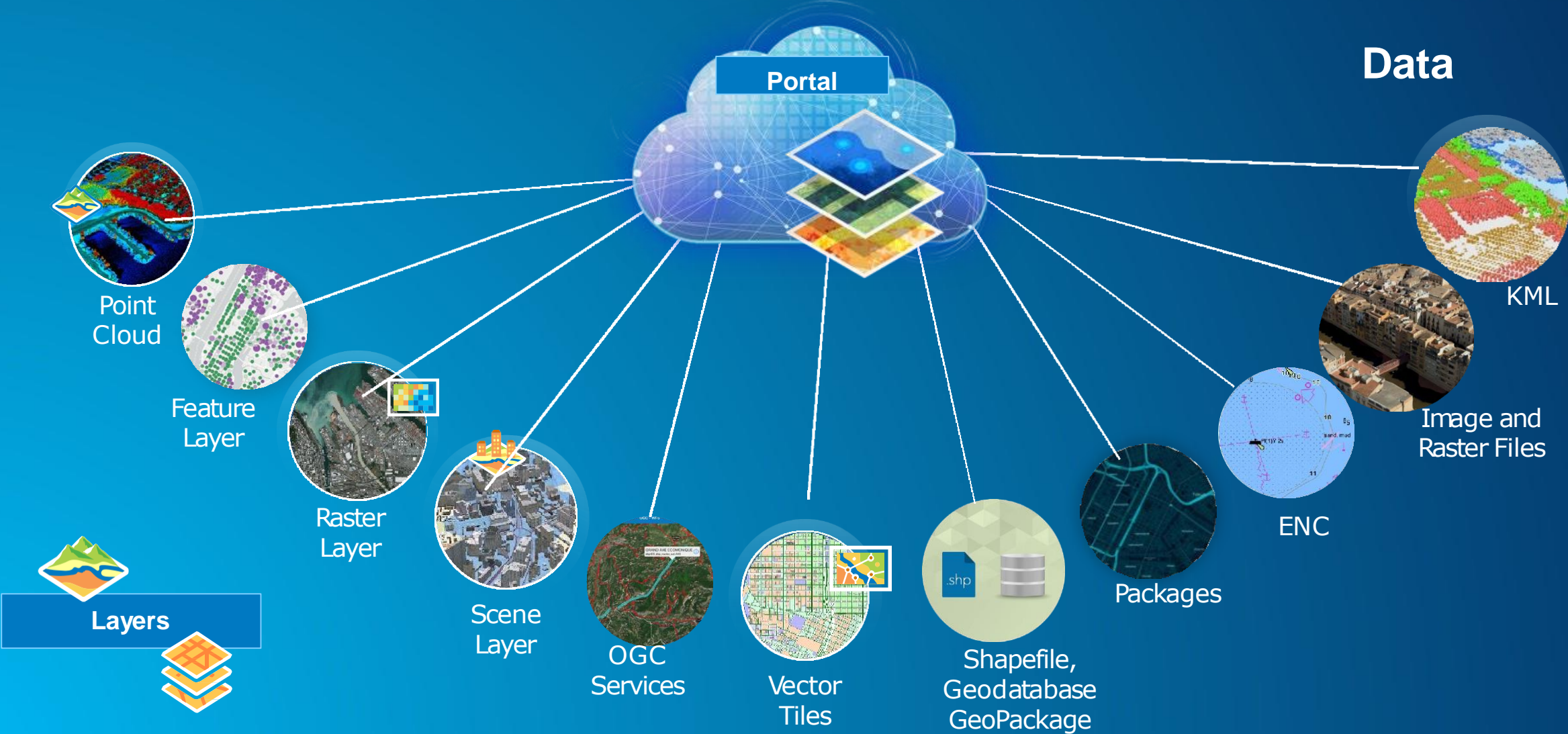


Geoinformation System

*A Framework
and Process*



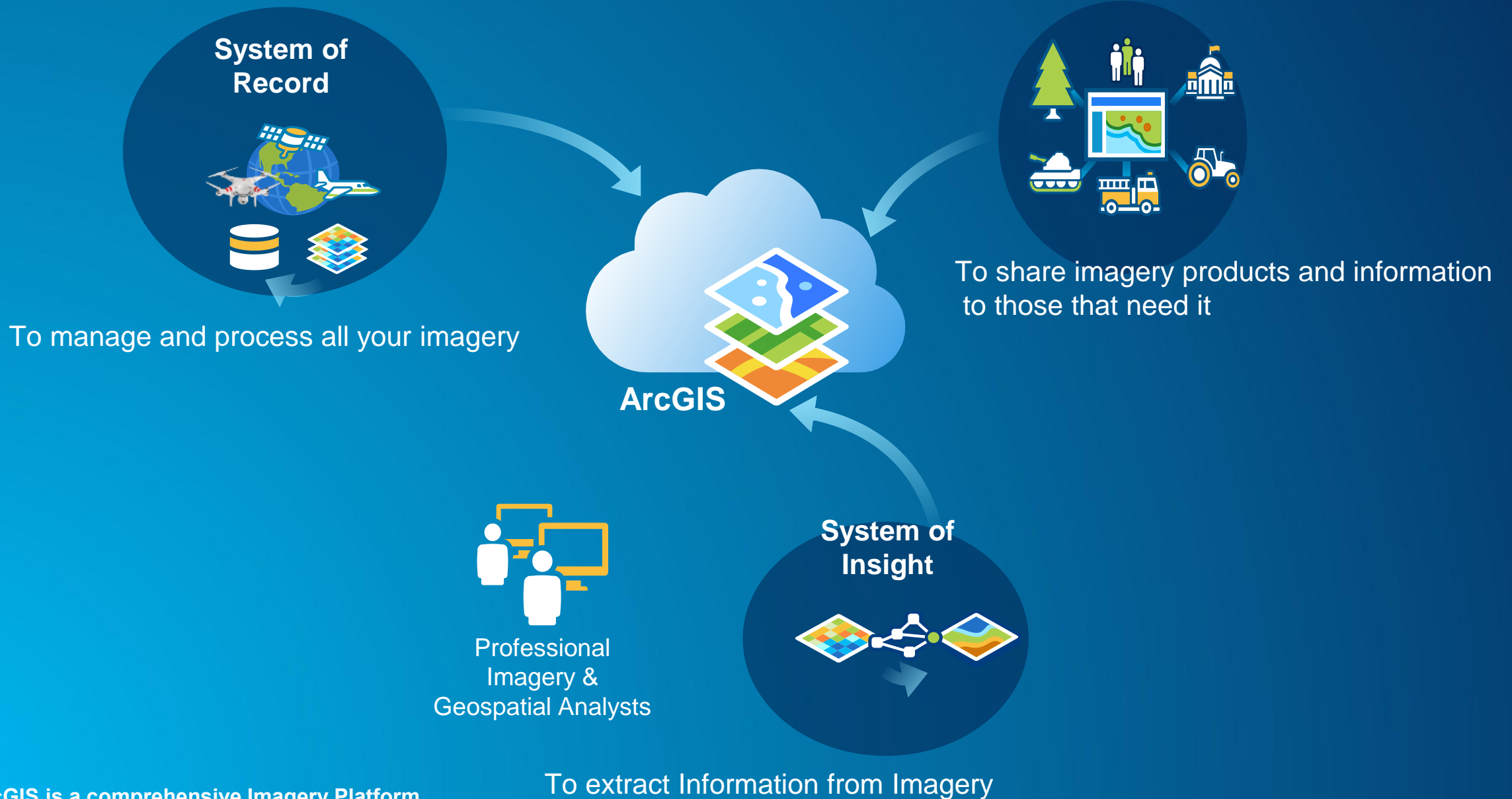
Layers



ArcGIS for Agriculture



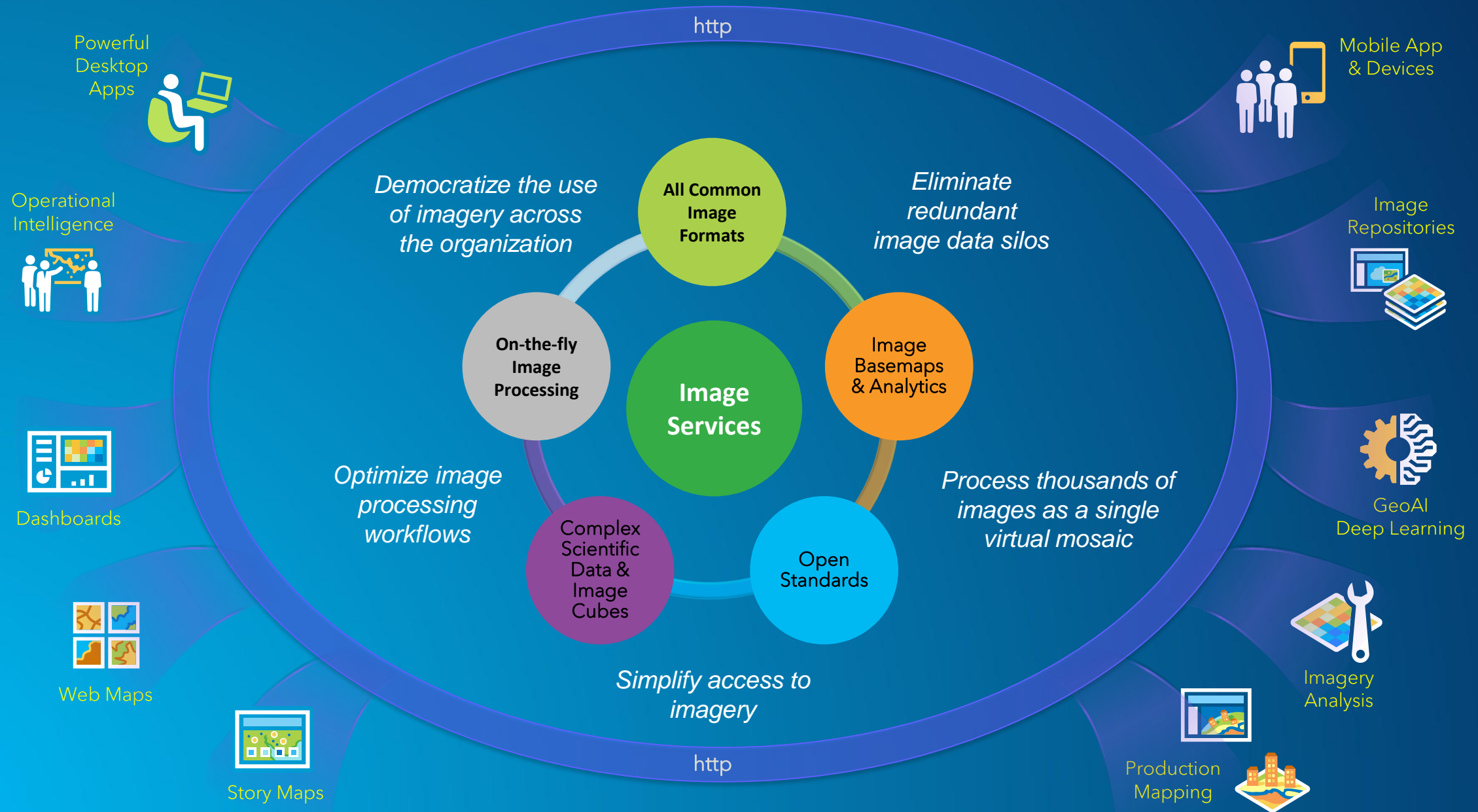
Imagery for Agriculture



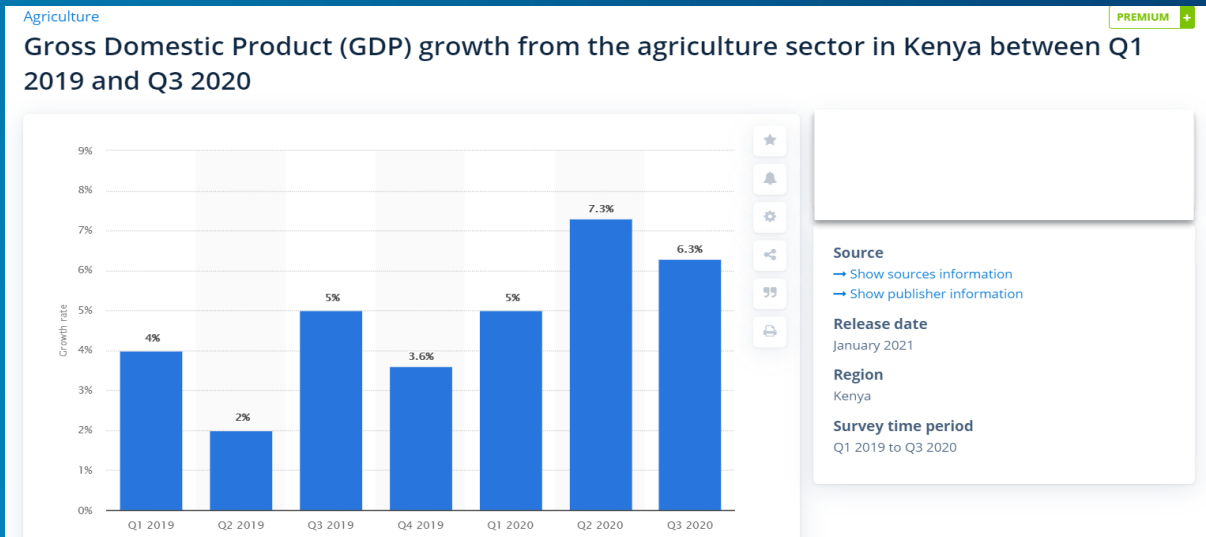
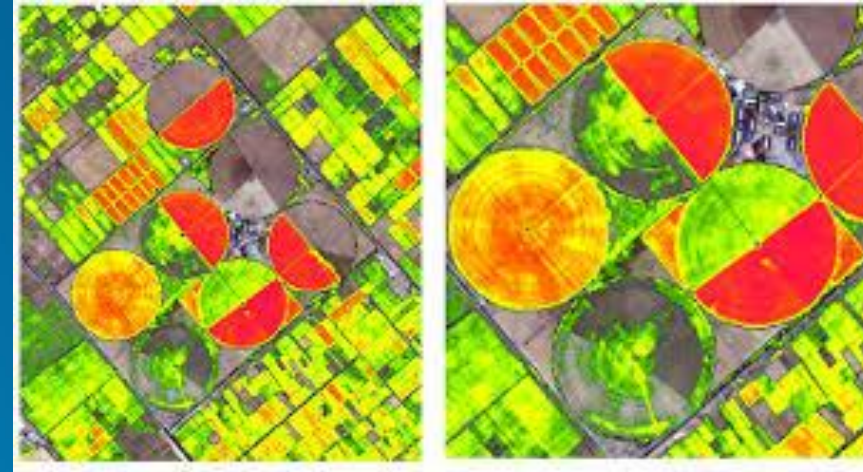
Imagery is a Foundational Source of Information



Image Services Empower the Use of Imagery



ArcGIS and Agriculture



Source

Sensor Support

ArcGIS Supports a Wide Range of Sensors

- SPOT , IKONOS
- Pleiades (Updated to support DIMAP 1.1)
- Landsat surface reflectance products
- Sentinel surface reflectance products
- WV-3 (SWIR support)
- GF1, GF2, H1J, ZY3 SASMAC, TH1

Multidimensional data:

Irregular NetCDF and HDF EOS swath data
Simplified experience to handle multiple variables

NITF:

Legacy commercial NITF format (don't meet current NCDRD standards)
Eg. IKONOS, Quickbird, Geoeye-1, WV-1, WV-2

These and many more.....

New Sensors

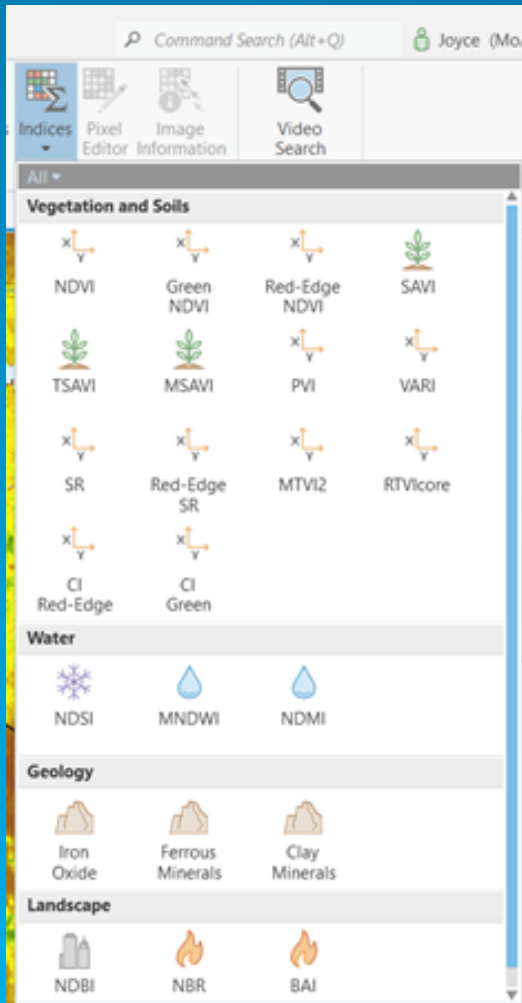
Satellite

Improvements

Aerial



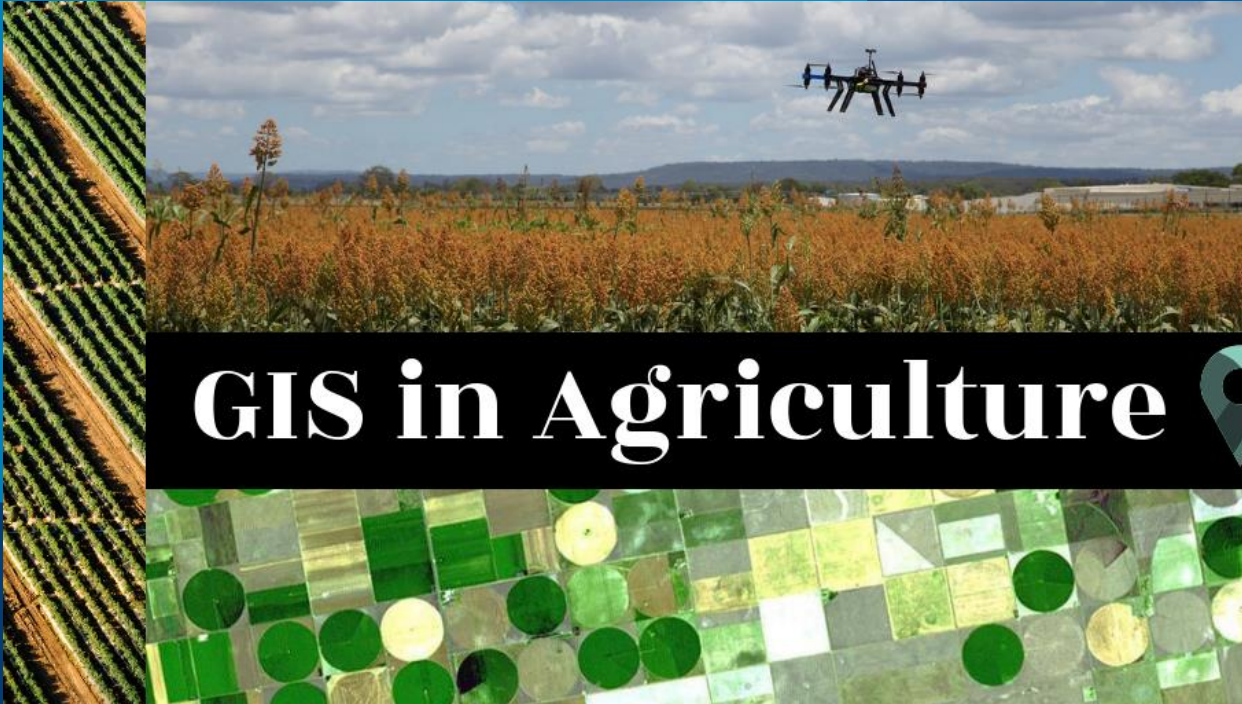
Raster Analytics | Selected Vegetation Indices



❑ Normalized vegetation Index
 $(\text{NIR} - \text{R}) / (\text{NIR} + \text{R})$

❑ Enhanced Vegetation index
$$\text{EVI} = G * ((\text{NIR} - \text{R}) / (\text{NIR} + C1 * \text{R} - C2 * \text{B} + L))$$

❑ Soil Adjusted Vegetation Index
$$((\text{NIR} - \text{R}) / (\text{NIR} + \text{R} + \text{L})) * (1 + \text{L})$$



GIS in Agriculture

Demo

