CYIENT

REVAMPING AGRICULTURE WITH GEOSPATIAL SERVICES

A holistic approach to bridging the supply and demand gap in the agro industry

The world's population is expected to grow to about 9.5 billion by 2050, boosting agricultural demand by 50% compared to 2013. The required acceleration in productivity to meet this demand is significantly hampered by the continuing degradation of natural resources such as land and water, increased greenhouse gas emissions, deforestation, and loss of biodiversity.

As a leading provider of geospatial services and solutions, Cyient is driving stakeholder satisfaction by combining the power of information and communication technology (ICT) with geospatial data. We support organizations engaged in agriculture by acquiring geospatial data, processing, analyzing, delivering reports and advisories, and developing bespoke applications.
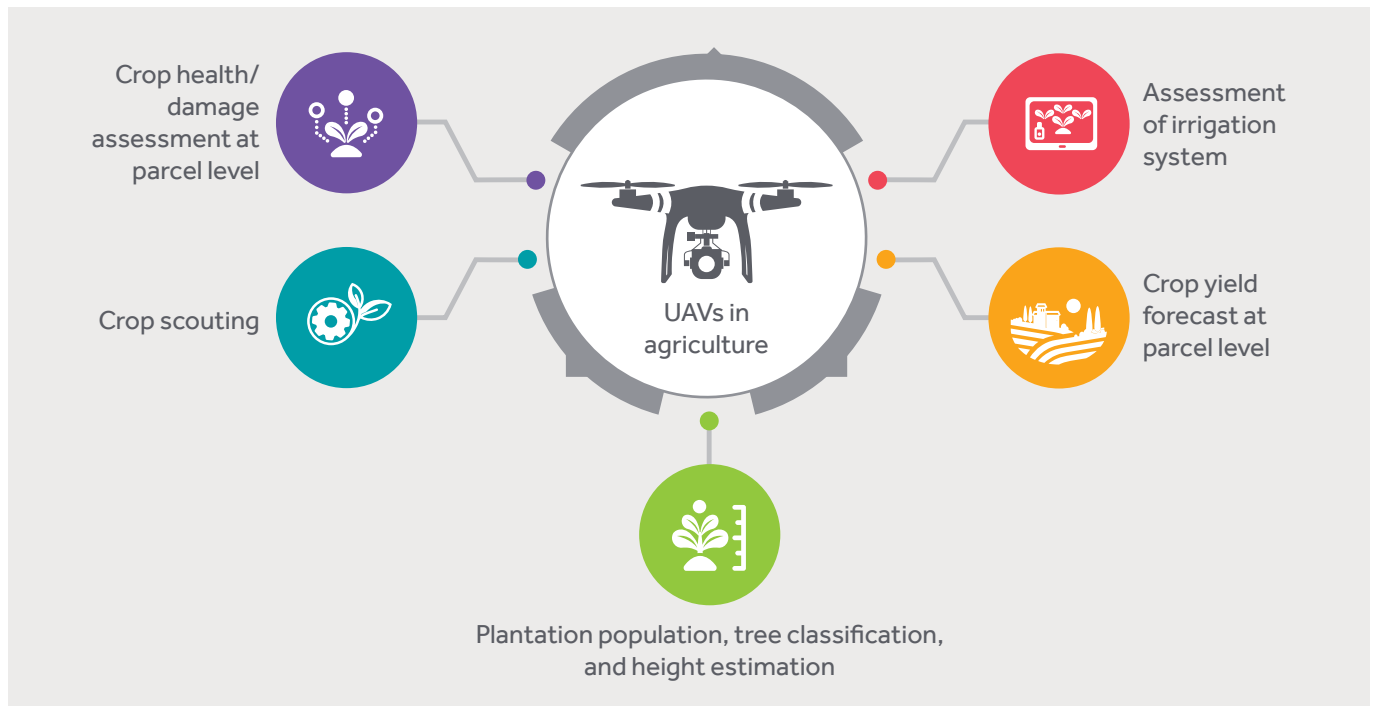
Benefits: Cyient Geospatial Services can Boost Agriculture Sector

- Improved planning with timely information on crop acreage, health, and yield forecast
- Optimized utilization of natural resources
- Improved tracking and monitoring of agriculture farms
- Reduced costs and improved productivity with well-timed interventions
- Enhanced land management practices
- Increased accuracy in crop insurance and subsidy assessments
- Streamlined crop growth/damage assessment due to floods, drought, pests, and disease

Services and Solutions for the Agriculture Sector

Crop and plantation mapping, health monitoring, and yield forecast

Development of mobile and web applications

LU/LC mapping change detection

Development of land information system

Crop/site suitability and land capability study

Satellite imagery, aerial imagery, GPS field survey, ancillary info (soil, terrain, land records), weather data

Agri insurance and risk assessment

Land planning and monitoring

Watershed planning, assessment, and monitoring

Soil mapping and quality assessment

UAVs or Drone-Based Services and Solutions

Crop health/ damage assessment at parcel level

Crop scouting

UAVs in agriculture

Assessment of irrigation system

Crop yield forecast at parcel level

Plantation population, tree classification, and height estimation

Unmanned aerial vehicles (UAVs) or drones are opening up a new frontier in agricultural innovation and are increasingly being used to collect imagery. Drones offer far greater flexibility, enhance operational ease, and produce imagery at much lower costs vis-à-vis satellite or aerial imagery. UAVs can be flown well below the clouds to collect high-resolution imagery to capture plot-level information and drive greater value.

Cyient offers UAV-based services and solutions for the agriculture industry. Our UAV capabilities include optimal flight path generation, helping drone operators fly UAVs using reliable, compliance-driven, repeatable, safe, and process-driven methodology as well as generating insights from the data.

Benefits: UAVs can Bring Cutting-Edge Tech Capabilities to Agriculture

- Enhanced accuracy with low-cost, high-ground-resolution (5-10 cm) imagery even in cloudy weather
- Optimized usage of inputs like seeds, fertilizer, agro chemicals, and irrigation water
- Improved frequency of index reporting
- Increased turnaround of crop insurance payouts

Growing investments and shifting focus on adopting holistic approaches for sustainable agriculture are bringing a sharp focus on the use of geospatial technology and information systems for planning, field survey, improving farming techniques, subsidy and policy monitoring, and control. The need for timely and relevant information on soil condition, crop area, crop monitoring and yield estimates, crop insurance claims, and subsidy schemes is encouraging agriculture stakeholders to utilize geospatial data and technology in greater measure.

The Cyient Advantage

For more than two decades, Cyient has been a leader in the geospatial space delivering end-to-end capabilities and solutions. We help to plan, acquire, transform, manage, and deliver geospatial data across industries including agriculture, transportation, telecom, utilities, aerospace, energy, oil & gas, and mining.

Our service portfolio includes photogrammetry, GIS, LiDAR, and remote sensing. We provide technology-agnostic services and solutions in partnership with leading platform providers including ESRI, Hexagon, GE, Bentley, Oracle, and Terrasolid.

We Offer:

- Skilled associates with deep domain knowledge
- Experience in providing full lifecycle geospatial solutions on Intergraph platforms
- Partnerships with value-adding domain-based service organizations
- Ability to ramp-up quickly to meet time-to-market and ensure faster decisions
- State-of-the-art units to develop data with accuracy ranging from 5 cm to 50 cm
- Time-tested process for generating large scale maps at 1:50 scale
- One-stop solution for all your geospatial and data management needs

About Cyient

Cyient (Estd: 1991, NSE: CYIENT) provides engineering, manufacturing, geospatial, networks, and operations management services to global industry leaders. We leverage the power of digital technology and advanced analytics capabilities, along with domain knowledge and technical expertise, to solve complex business problems. As a Design, Build, and Maintain partner, we take solution ownership across the value chain to help our clients focus on their core, innovate, and stay ahead of the curve.

Relationships lie at the heart of how we work. With more than 15,000 employees in 22 countries, we partner with clients to operate as part of their extended team, in ways that best suit their organization's culture and requirements. Our industry focus spans aerospace and defense, medical, telecommunications, rail transportation, semiconductor, utilities, industrial, energy and natural resources.

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