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Octave Alto Data Management

Managing and delivering geospatial information across your enterprise





Manage and share your data

Do you have large volumes of geospatial information, regularly updated data stores and a distributed user base? Do you need an integrated enterprise-class, spatial data infrastructure?

Octave Alto Data Management (formerly ERDAS APOLLO) provides a comprehensive data management and delivery server solution to address these challenges. It helps identify, locate, secure and organize your geospatial and related business data into a searchable, secured repository and enables simple distribution of that data. Complete with a variety of interoperable delivery options, Alto Data Management consistently delivers geospatial data faster and with less hardware than competing server-based products.

Alto Data Management also alleviates pressures associated with optimizing spatial data archive storage requirements with Octave's industry-leading Enhanced Compression Wavelet (ECW) image compression and Octave's Smart Point Cloud storage technology. Wherever possible, Alto Data Management aims to read the data as-is with no conversion based on other best of breed industry format standards.



Automatic organization

Centralize your geospatial information metadata with scheduled crawling and harvesting of regularly updated data holdings. Alto Data Management enables workflows for describing, styling, securing, cataloging and publishing geospatial and non-spatial data into a central catalog.

User-empowered access to your geospatial assets

End users can perform in-depth searches of the catalog, providing federated search searches are constrained to data assets the user has access to, enabling user empowerment without compromising operational security needs.

Augmented catalog search client

The Catalog Explorer web client experience builds around the catalog search to provide other features such as a gazetteer, extensive OGC API Web Service support and integration of the new Alto Data Management Geoprocessing Server capability. It also integrates various 3D delivery options for seamless visualization regardless of the type – from elevation sources, point clouds, 3D mesh, OBJ / BIM or 360-degree panoramic imagery.

Host of delivery options

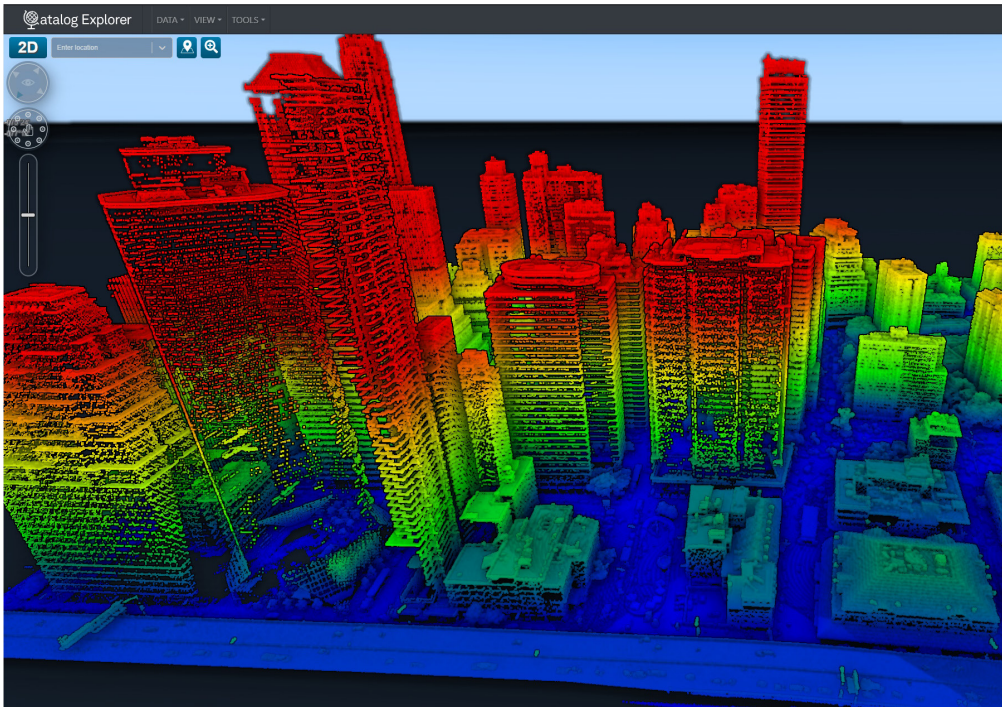
Alto Data Management provides a variety of access options to discovered data assets, from simply understanding what geospatial assets you currently have via catalog querying, to visualization of all types of geospatial content. If you are not quite ready to take direct service input, extract and go by downloading the original or a tailored export of the underlying data, the Geoprocessing Service also has you covered; you can generate completely new insights by injecting your data via spatial models to generate new derived output datasets.

Alto Data Management has you covered whether you remain a traditional 2D data organization, or you are seeking a solution to manage your newer 3D data holdings.

Rapid image delivery

Alto Data Management continues to provide the most optimal high-performance image streaming protocol, known as ECWP. ECWP allows you to serve thousands of concurrent clients from a single server via its ability to leverage Octave's advanced ECW format.

Regardless of the raster delivery method or service type, Alto Data Management will outperform any competitor solution through its ongoing optimization and server architecture. Alto Data Management continues to underpin many countrywide image delivery services due to its ability to deliver terapixel-sized mosaics with less overhead, less hardware and fewer pre-processing steps.



The Catalog Explorer web client integrates exhaustive 3D delivery options from the server for seamless visualization, regardless of the type of data.

Plug-and-play interoperability

Alto Data Management embraces OGC interoperable formats and services as its primary, native implementation for data access. Our services continue to interoperate with others, ensuring Alto Data Management can coexist with any existing platforms within your organization now and in the future.

Alto Data Management service APIs follow OpenAPI best practices that further enable integration across non-spatial platforms.

Server-side geoprocessing

Alto Data Management Geoprocessing Server empowers general users to create value-added data products leveraging spatial models created by experts within Octave GeoMedia (formerly GeoMedia) or Octave Imagine (formerly ERDAS IMAGINE) desktop authoring tools.

Enable any user to execute them with nothing more than a web browser and data sourced from the Alto Data Management catalog. Not only does this increase accessibility, but it will also mean in many cases the outputs are created faster by using more powerful server hardware deployed closer to the data sources. There's no need to ask your experts for help!

Leverages existing enterprise systems

Alto Data Management leverages existing business systems, such as Oracle, Microsoft SQL Server and PostgreSQL databases and can also be configured to use existing directory services for security integration. Beginning with Alto Data Management 2025, feature capabilities are supported on both Windows and Linux, offering streamlined deployment options on-premises or in the cloud.

Alto Data Management is based on technology used across Imagine, GeoMedia and Alto platforms. This allows us to rapidly respond to market demands, while benefiting from the vast history and building blocks provided by the foundational GIS and remote sensing software packages.

One connected solution

Alto Data Management connects Octave's geospatial product portfolio for a complete solution to geo-enable your enterprise.

Ensure your organization continues to meet the widening array of sensors and data types around the industry through expanded handling of point clouds, 3D meshes and terrestrial panoramic imagery support. These data types have the same challenges of traditional vector or raster formats: what do I have, where are they located, who can access and how can they be distributed to others? Alto Data Management keeps on solving these challenges.

Product and interaction

Use the Alto Data Management **Catalog Explorer** web client to seamlessly connect to all Alto Data Management service types and any other OGC-compliant, third-party service for augmented viewing of your assets, as well as others.

Catalog Explorer is built on and extends core **Octave Alto Browser** (formerly LuciadRIA) visualization technology to enable rapid adoption of new features and provides a robust general purpose user mapping application, out of the box.

Search, discover and view data from Alto Data Management directly in **Imagine** and **GeoMedia** map windows.

Spatial models created in **Imagine** and **GeoMedia** may be published to Alto Data Management Geoprocessing Server and executed server side (OGC API - Processes).

Serve **ECW**-compressed data lightning fast to thousands of users simultaneously from a standard server.

Stop dealing with headaches managing a cache of billions of tiles. Replace it with one file and shrink your data requirements, not expand them.

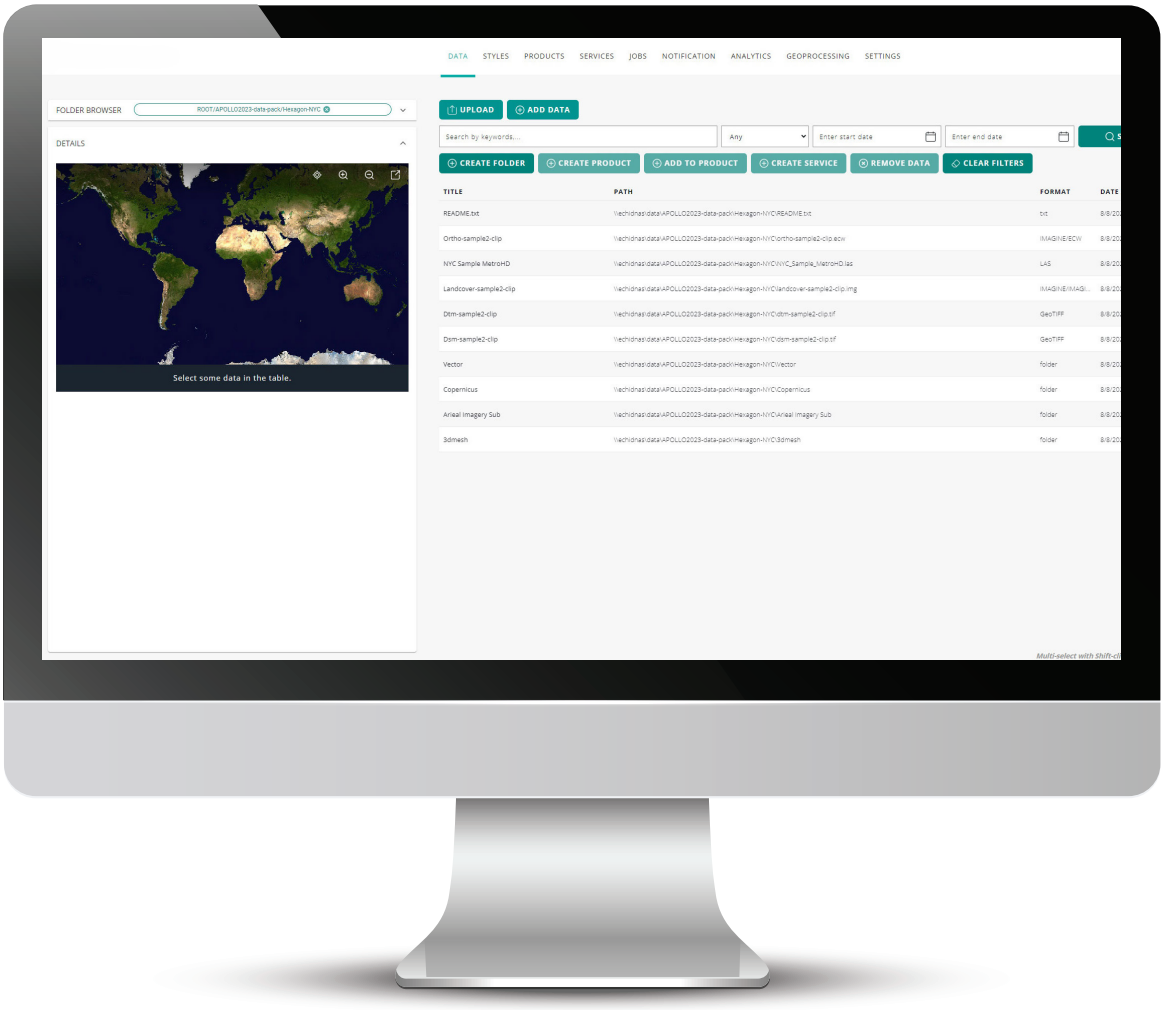
Alto Data Management Studio

Alto Data Management Studio is a reimagined web client administrator for Alto Data Management replacing the now legacy Data Manager desktop tool. Studio supports all major existing workflows with vastly improved user experience and more efficient configuration workflows. Delegate administration of your server or gain immediate access, all from within your web browser.

Flexible offering

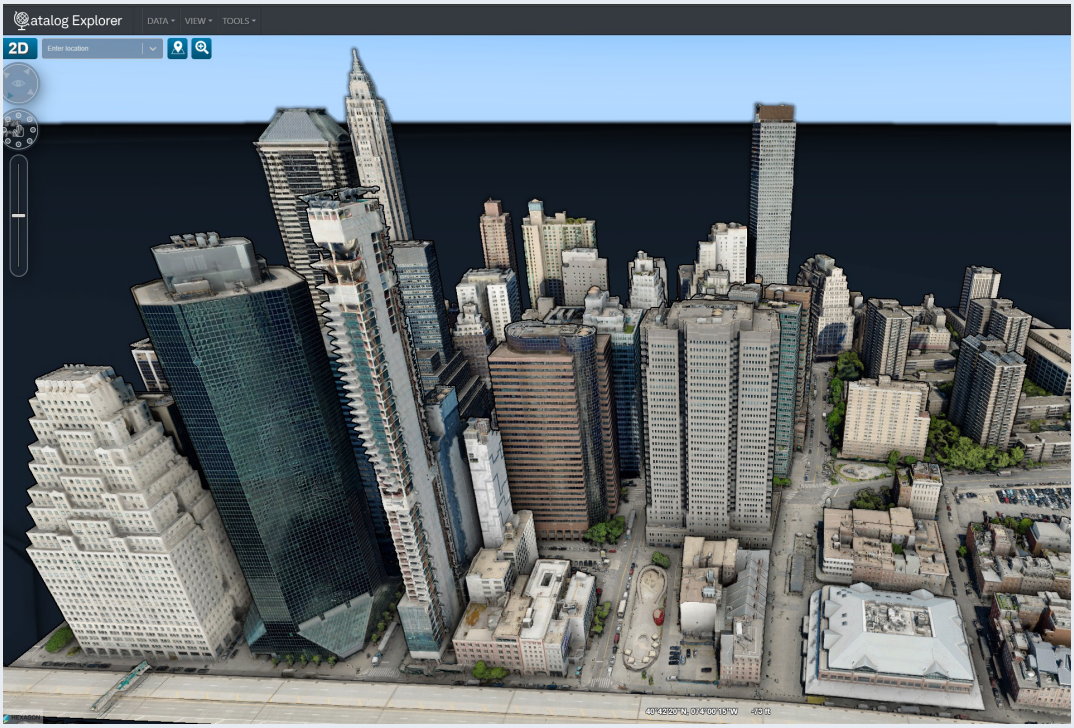
Available in three product tiers, Alto Data Management suits a wide spectrum of customer needs – from those only looking for a remarkably fast image server to those requiring a more comprehensive data management system.

Alto Data Management provides the greatest flexibility for geospatial data delivery, enabling dissemination into any client, on any device.

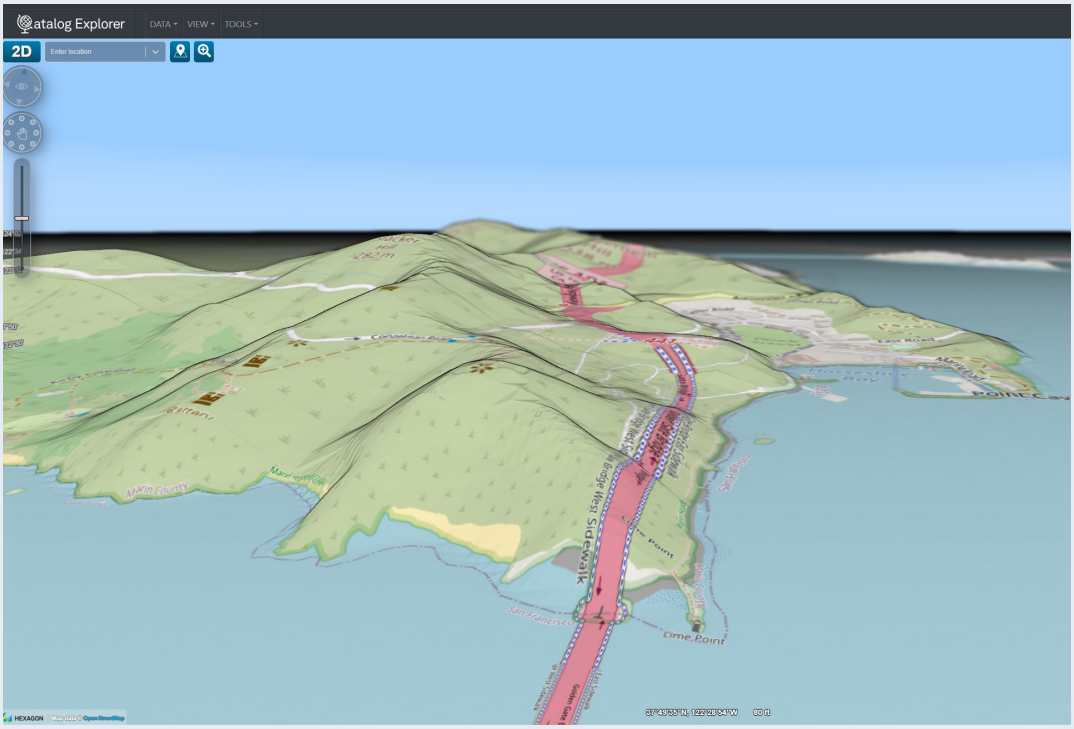


Alto Data Management comprehensively catalogs ALL your data – including vector (GML, shapefile and FGDB), point clouds, imagery and ancillary business data – all in a single crawler. Harvest, catalog, secure and publish all data types the same way.

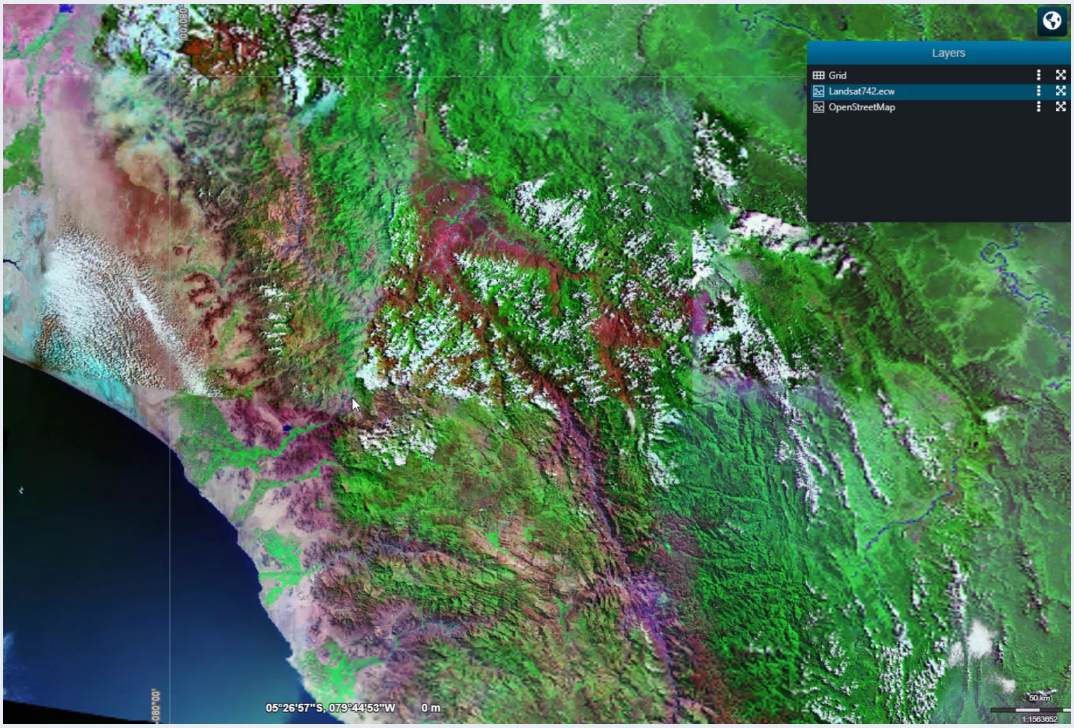
Alto Data Management suits a wide spectrum of customer needs – from those only looking for a low-cost, remarkably fast image server to those requiring a comprehensive data management system.



3D meshes are served with lightning speed in Alto Data Management.



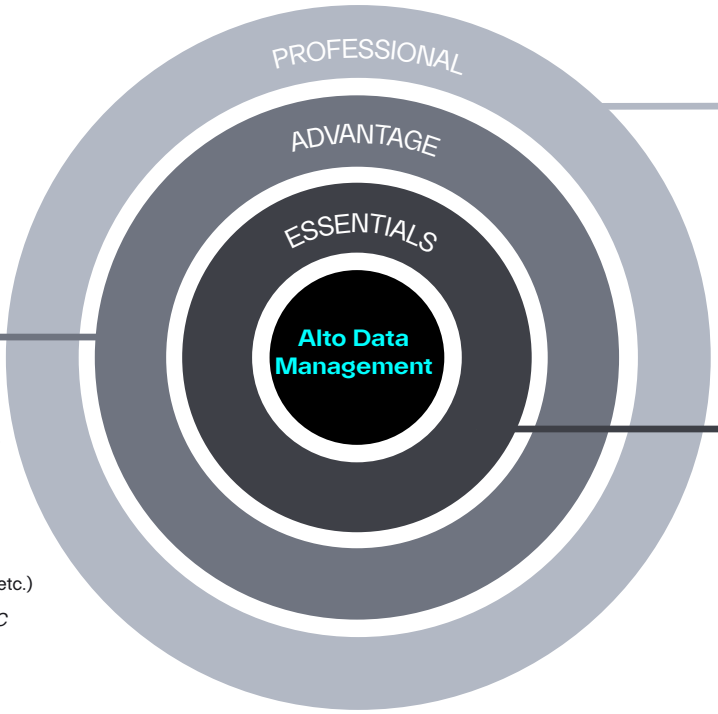
Publish high-resolution terrain services to provide further clarity and context to even your base 2D overlay sources.



Alto Data Management's high-performance image streaming protocol (ECWP) allows you to serve thousands of concurrent clients from a single server.



Create custom geospatial models and publish them to the Geoprocessing Server so other users can execute them immediately, on demand.



Advanced format decoders

Extend the foundation and go 3D!

Point cloud support (LAS, LAZ and HSPC)

3D mesh distribution (OBJ, OSGB, etc.)

Panoramic 360 imagery (E57, Pegasus)

Spatial database decoders (vector, raster)

Infrastructure decoders (DWG, DGN, IFC, etc.)

OGC API-3D tile, panoramic imagery, HSPC

Geoprocessing and data extraction

Server-side analysis engine to generate new data products on demand

Data extraction service for customized data needs

Professional maritime, aviation and weather standards

OGC API-Processes

Foundational spatial data infrastructure capability

Provides industry file format support for vector, raster, photogrammetry and business data types with robust catalog ingestion, security and metadata support systems.

OGC WMS, WFS, WCS, WMTS, CS-W, OGC API-Records, ECWP, LTS, ISO 19115/19139

Alto Data Management Essentials

Alto Data Management Essentials is the perfect solution for organizations requiring an enterprise solution to make sense of their traditional spatial data archive.

Building on Alto Data Management Essentials' history of rapid imagery services, beginning with v2023, the Essentials tier services an expanded target market covering all traditional spatial data types. It has a robust catalog model with expansive service support types, simple-to-use web administration and integrated security model for rapid, yet secure delivery to customers.

Alto Data Management Essentials is an ideal starter solution for customers seeking a catalog with distribution capabilities for traditional 2D raster or vector data sources.

Alto Data Management Advantage

Alto Data Management Advantage takes things to the third dimension by adding point clouds, 3D meshes and BIM / CAD data types to the catalog model.

It also expands support from traditional file-based data types to also cover spatial data residing in databases such as Microsoft SQL Server, PostgreSQL and Oracle, among others.

Defense industry users also gain support for VPF, MGCP and other defense-aligned formats and visualization standards.

360-degree panoramic imagery support is also now supported from E57 or Hexagon's Leica Pegasus sensors.

All these data types inherit the foundational workflow and security model introduced with Alto Data Management Essentials. These data formats are discovered seamlessly through automatic data crawlers to locate, insert and extract metadata. End users' discovery or visualization in many cases is instant and administration or data conversion optimized.

Alto Data Management Professional

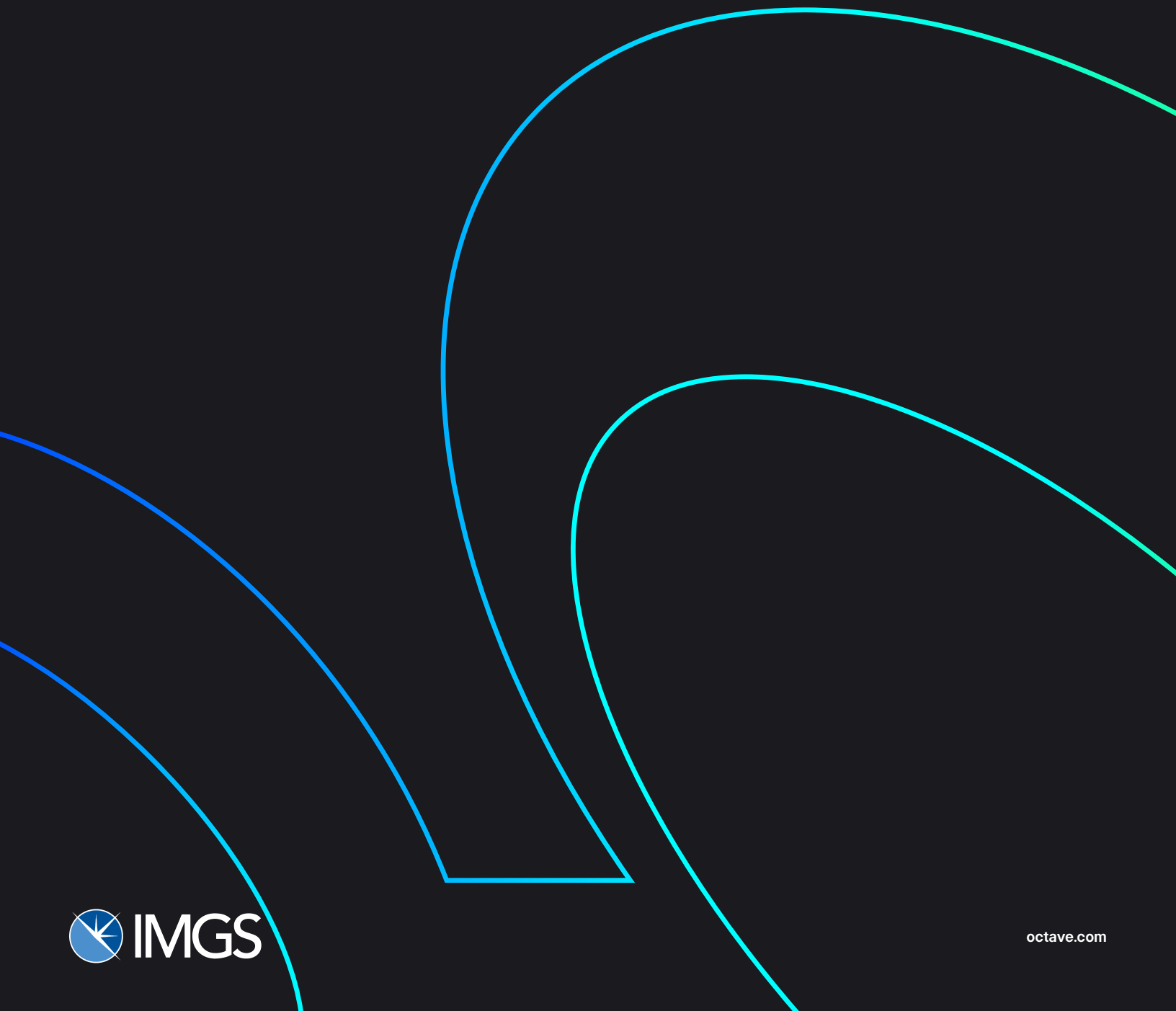
Alto Data Management Professional provides a powerful server-side geoprocessing solution for geospatial data, employing complex algorithms that underpin Imagine or GeoMedia. Geospatial analysts can create custom models using these desktop expert tools and publish them to the Geoprocessing Server so other users can execute them immediately, on demand.

As of v2023, the Data Extraction Service builds on the geoprocessing execution model to provide expanded capabilities, outside of just the raster domain.

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

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