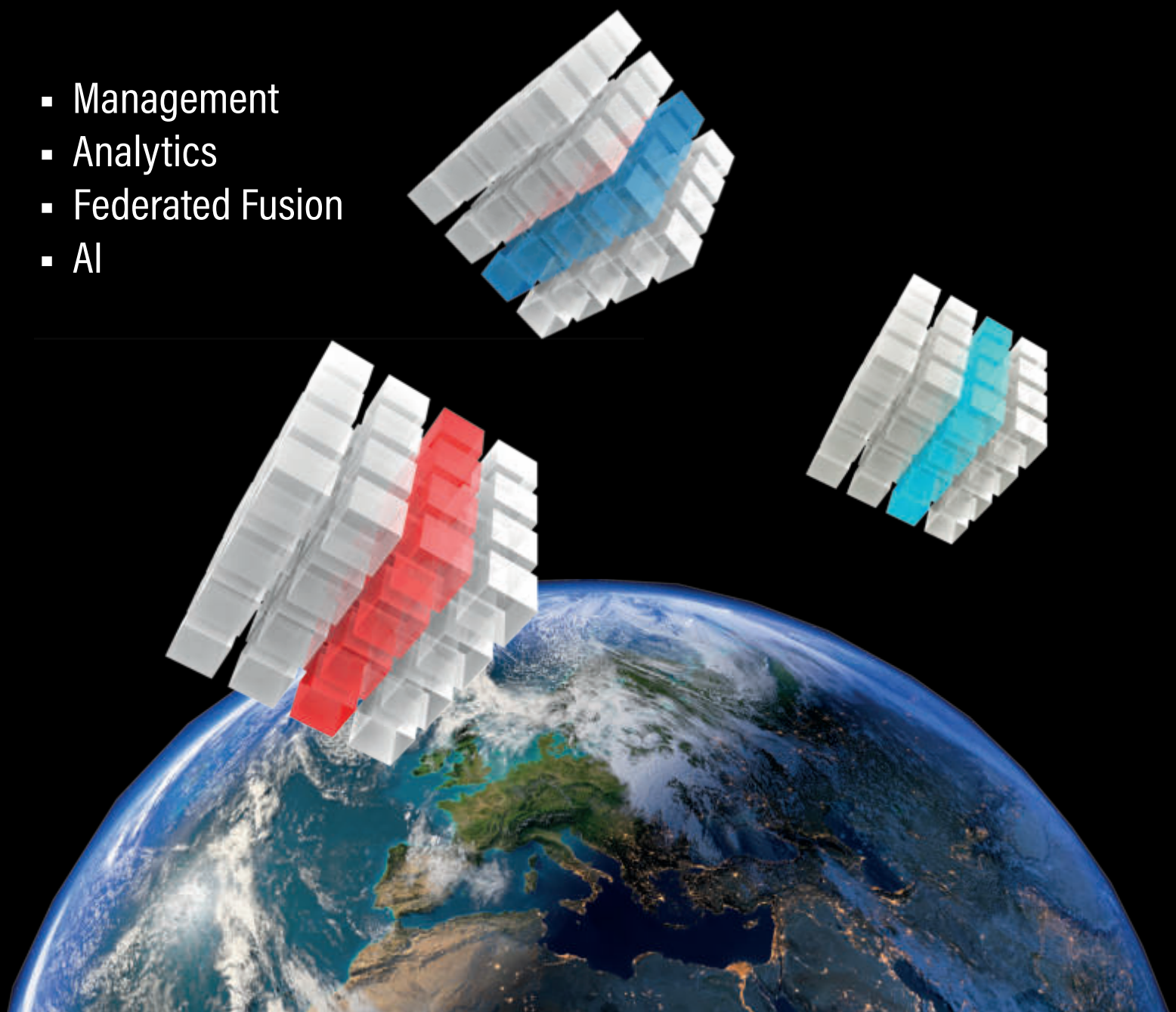
rasdaman

raster data manager

Your Big Earth Datacube Expert

- Management
- Analytics
- Federated Fusion
- AI



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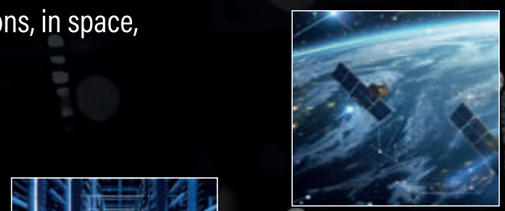
rasdaman offers flexible, scalable at the high semantic level of AI-enabled Actionable Datacubes. As an integrated, distributed platform for the management and analytics of spatio-temporal Big Data, rasdaman enables any query, anytime, on any size. From large analyst desktops to moving edge devices, they all get what they need, ready for consumption. Not as a fresh lab prototype, but mature and proven operationally in global federations, in space, and on Multi-Petabytes.



Location-transparent federation

Mature, PB-proven

Interoperable

Security by design

Green computing

Open source & open standards

Unlimited scalability

Zero-coding

AI-Cubes

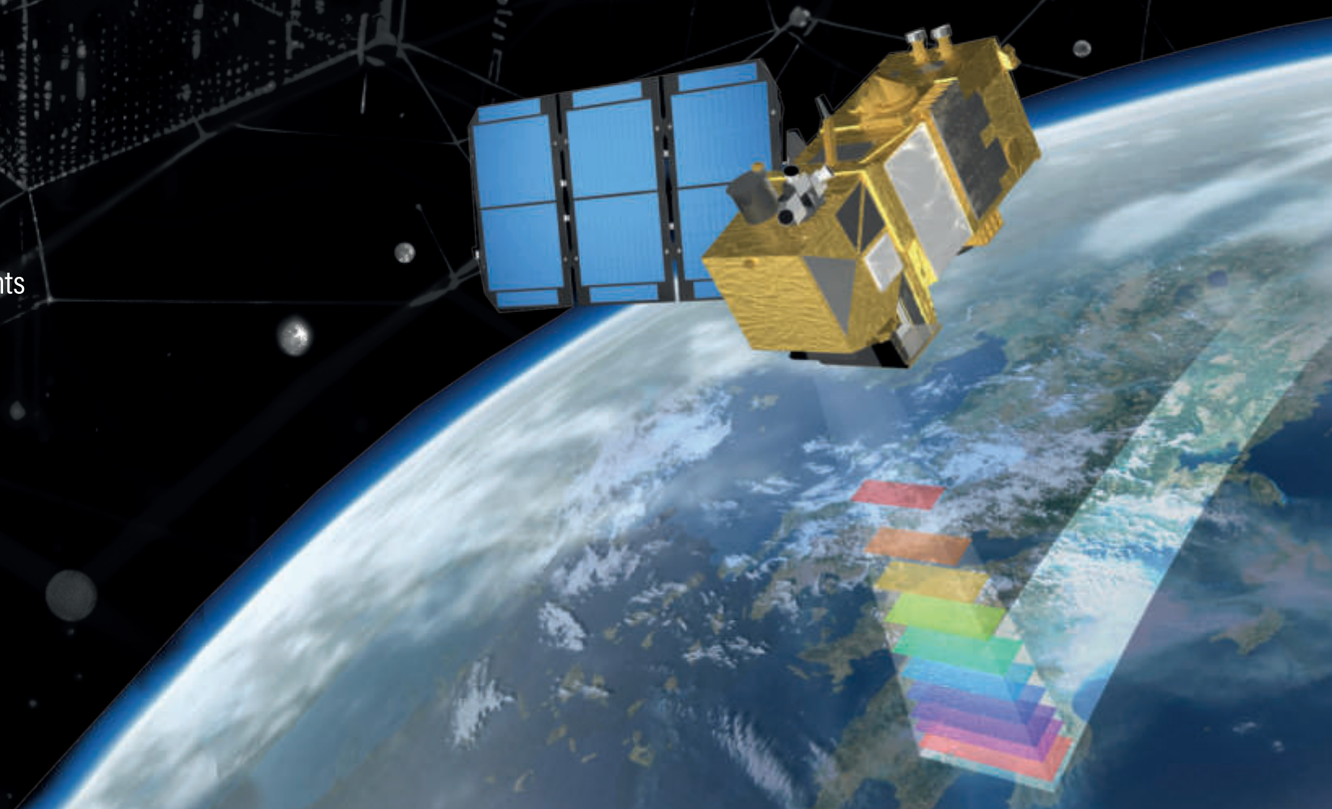
Fastest in market

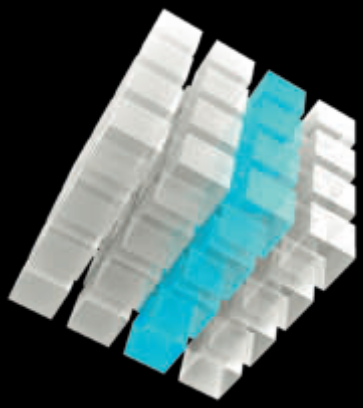
Benefits for data providers:

- Service quality → attract new users
- Mature, easy to setup & scale-up → concentrate resources on business
- Right-sizing, Greencube® → massive cost savings
- Open standards → seamless IT integration
- Security-by-design, quota, billing → asset protection

Benefits for data users:

- Open standards → comfort zone of well-known clients
- Performance → realtime, explorative analytics
- Flexible → any query, any time, any size
- Federation → global mix & match
- Visual dashboard → appealing, flexible



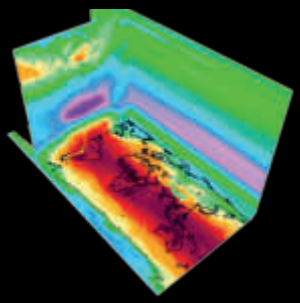


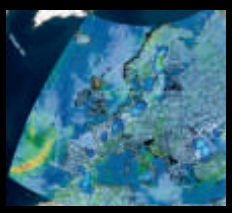
AI-Cubes in Earth & Space

Datacubes scale. AI understands.

Continuous Big Data Innovation.

The rasdaman team has originally pioneered Actionable Datacubes: one cube instead of zillions of files - natural and human-centric for spatio-temporal data. Innovation is ongoing: location-transparent federation, AI-Cubes, AI-supported query writing, space cubes, ...





Project Cube4EnvSec

In the NATO SPS flagship project, an intercontinental consortium demonstrates the value of federated AI-Cubes for use cases Aviation Safety and Arctic Environmental Monitoring, integrating fixed and moving data sources and consumers in serverless fog computing.

Project ORBiDANSe

First-ever datacube engine in space, with realtime analytics of datacubes on board an ESA nanosat. Nex t step is federation in space.

Project AI-Cube

Deep integration of ML models and datacubes, for enhanced insight. Additionally, OpenAI chatbot for datacube query writing support: For non-experts, self-paced intro to datacube queries; **f**or experts: convenient productivity tool.
Research is continued in EU FAIRiCUBE.

Driving Standardization.

Since decades, the rasdaman team is critically shaping the relevant standards: The ISO SQL datacube extension SQL/MDA; the OGC/ISO coverage datacubes; EU INSPIRE. Rasdaman is official Reference Implementation and Good Practice for standards-compliant datacubes.

EarthServer

A single Geo Dataspace.

EarthServer is a global federation of datacube providers in a free, open, transparent, democratic governance. Multi-Petabytes of public and commercial offerings are available completely location-transparent, which is worldwide unique.

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