

# **Patria** DOME

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Real-time situational awareness



**Battlefield & Critical Systems**

Protected Mobility and Defence Systems



Through Life Capability



Battlefield and Critical Systems



## EXTREME SURVIVABILITY

Finland is known for high technology and extreme resilience. The harsh nature and limited resources have pushed us to learn and innovate efficiently. Thorough preparation for the future is the backbone of our culture.

Patria has grown from its Finnish heritage to a modern and international defence and technology company with over 100 years of experience. We use resources wisely, create innovative solutions and build intelligent systems that provide extreme survivability in any condition. We work with our customers throughout the entire lifecycle to ensure maximum value. Honest and straightforward co-operation is at the core of our work.

We build exceptional partnerships that last through critical operations. That's what it takes when you stand for your sovereignty.

Trust us, we have been there.

## ULTIMATE AVAILABILITY

Optimize and extend your fleet availability with our digital solutions and new advanced capabilities. We have the widest experience of the market from different platforms in all domains.

Our commitment to your fleet on land, in the air and at sea means that we are with you throughout the entire lifecycle. We lead platform-independent, large-scale integration and upgrade programmes.

Your personnel are always well prepared with our systematic training. Seamless collaboration with your organization and partners creates the best price and quality ratio and ultimate fleet availability for you.

We know what is needed to keep your fleets fully optimized and operational.

**Patria - Extreme conditions embedded.**



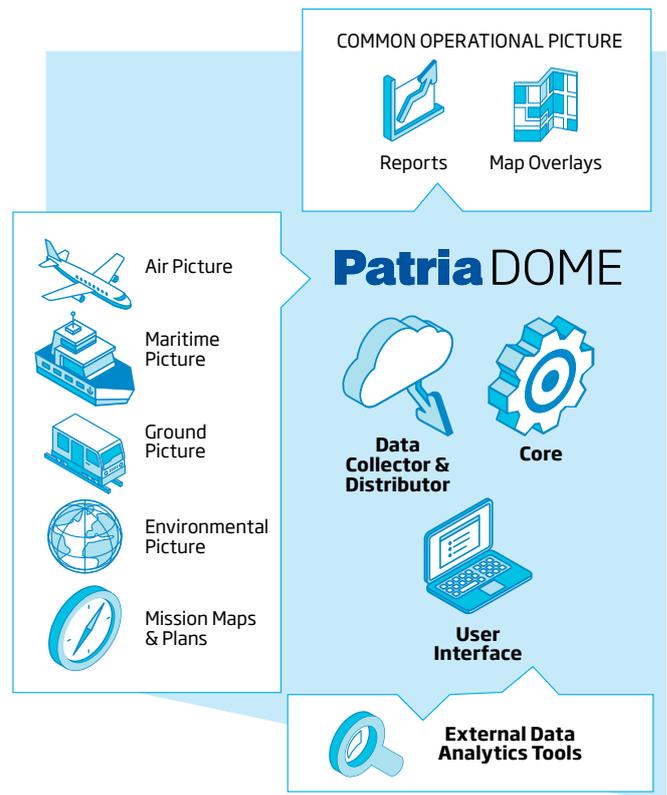
**Patria DOME** provides real-time situational awareness by receiving data from other systems through standardized APIs. DOME has been built to handle even the most unconventional location data formats and bring everything together for easier interpretation. The information is presented in map layers, so your command can see the situation developing on several different levels and make the right decisions for the mission.

## The hub for mission critical location data

Efficient user management ensures the right people get the right intel. You can interact with the objects on the map by commenting on them and assigning them to other users. Data visibility to different user groups can be restricted diversely, including geographic restrictions. DOME also includes automated publishing service, which allows the user to upload a file (e.g., NATO Vector Graphics image) to the servers, which becomes available as a map layer to other users.

## Automated data processing and security

Data Collector & Distributor (DCD) collects the data from external sources and saves it to CORE database. This data is again automatically processed into reports, that have both static and dynamic map layers. It also supports time series map layers, so that the user can run through both past events and future forecasts.

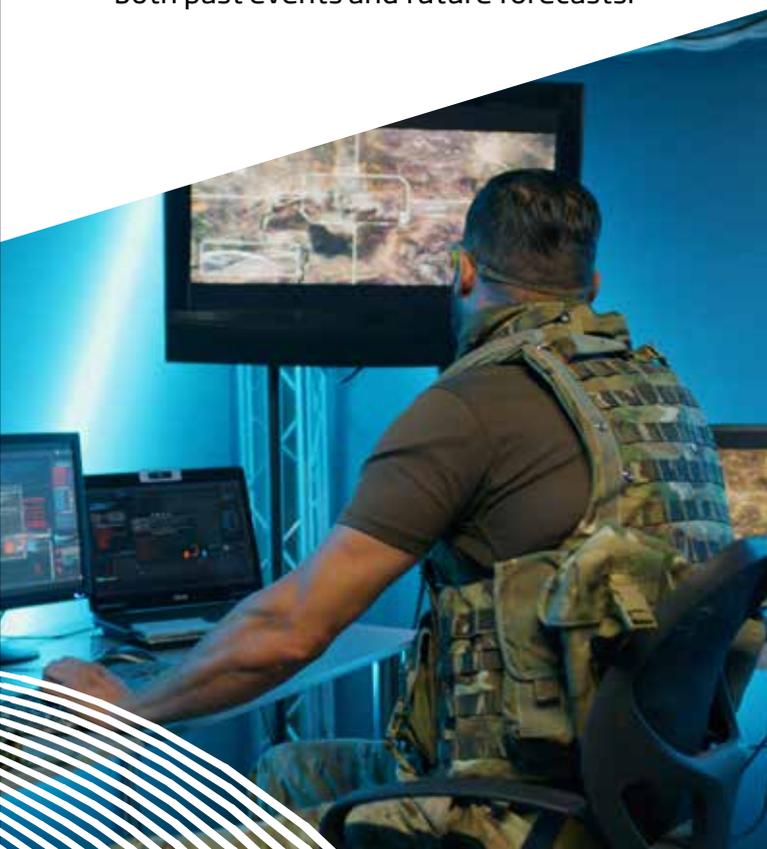


In addition, DOME provides data access for AI data analytics tools to enrich reported information. The system is designed to be flexible. DOME is based on Docker container microservice architecture. Thanks to its structure, DOME can run a stripped version for a single portable device, or for hundreds of people in a dedicated data center.

Understand and communicate the developments in your battlefield. Both time and space.

## Interoperability

FMN (Federated Mission Networking, [act.nato.int/activities/fmn](http://act.nato.int/activities/fmn)) framework creates a baseline for military GIS interoperability issues. DOME fulfills FMN Spiral 3 requirements set for geospatial data exchange. There are several other services recognized in NATO C3 Technical Services Taxonomy where DOME can be used as an implementation.



## Technical specifications

### Supported Standardized APIs

- WFS - Web Feature 1.0.0 | 1.1.0 | 2.0.0
- WMS - Web Map Service 1.1.1 | 1.3.0
- WMTS - Web Map Tile Service 1.0.0
- WMS-C - Web Map Service Cached 1.1.1
- CSW - Catalog Service 2.0.2
- WCS - Web Coverage Service 1.0.0 | 2.0.1 | 1.1.0 | 1.1.1 | 1.1
- WPS - Web Processing Service 1.0.0
- TMS - Tiled Map Service 1.0.0

### Static data

#### Vector-based data sources:

- CSV-files
- ESRI-shapefiles
- GeoPackage

#### Databases:

H2 | Microsoft SQL Server  
MongoDB | Oracle | PostGIS

#### Raster-based data sources:

- AIG - Arc/Info Binary Grid
- ArcGrid - ARC/INFO ASCII GRID
- DTED -elevation model
- ECW
- EHdr
- ENVIHdr
- ERDASImg
- GeoPackage

### Dynamic data

#### Weather data:

- GRIB/GRIB2
- GeoTIFF
- METAR and TAF messages

#### Plans:

- NVG 1.4 | 1.5 | 2.0
- KML/GML/XML
- GPX-route data

#### Situational awareness data:

- Asterix CAT62 -surveillance messages
- JREAPC
- GeoJSON
- GeoTIFF
- GRIB
- ImageMosaic
- ImagePyramid
- JP2ECW, JP2K
- JP2MrSID
- MrSID
- NITF
- NetCDF

## C3 Technical Services Taxonomy

### Environmental Functional Services

- Recognized Environmental Picture Services

### Situational Awareness Services

- Recognized Picture Services
- Symbology Services
- Overlay Services

### Data Science Services

- Reporting Services

### Geospatial Services

- Geospatial Catalog Services
- Geospatial Web Feature Services
- Geospatial Web Map Services
- Geospatial Web Map Tile Services
- Geospatial Web Coverage Services

### Message-Oriented Middleware Services

- Message Brokering Services
- Message Routing Services
- Message Queueing Services

Gather mission critical data and create automated reports with valid and updated data.

Use real time situational picture and forecasts to support decision making.

Share situational data, maps, plans and reports for other units through FMN interfaces.

# Patria

When if is not an option.

[www.patriagroup.com](http://www.patriagroup.com)