

:: Technology

openMAINT is implemented on the asset management system CMDBuild®, released by Tecnoteca, from which comes **technology** and **components**:

- Java language for server components
- client Ajax interface based on Ext JS
- PostgreSQL database with use of Object Oriented and PostGIS extensions
- servlet container Tomcat
- JasperReports report engine with IReport editor
- Enhydra workflow engine with TWE editor
- Quartz scheduler
- Alfresco for documents management
- GeoServer and OpenLayers for GIS functionalities
- BIMServer for BIM functionalities
- Liferay portal with the JRS Portlet
- SOAP and REST webservice

:: System configuration functions

Main functions for the **system configuration**:

- data model customization: new types of objects, new attributes, new relations
- filters definition and views configuration
- workflow engine, integrated with visual editor to design custom processes
- report engine, integrated with visual editor to design custom reports
- configuration of custom dashboards
- granular profiling for users, groups and permissions
- interoperability with other applications / external systems through webservices and connectors
- task manager for the configuration of automatic operations depending on system events

:: Activation and configuration services

Tecnoteca supplies the following services for the **system launch**:

- certified appliance supplying
- changes / integrations to the data model
- initial import of textual data and plans
- new custom workflows
- new reports and dashboards
- data synchronization with other computer systems / home control units



WEBSITE: WWW.OPENMAINT.ORG

openMAINT has been developed and is managed by Tecnoteca srl. You can use, distribute, edit openMAINT according to the GNU Affero GPL (AGPL).

:: BIM

openMAINT supports the **BIM methodology** (Building information modeling), based on an integrated process for the management of data associated to a building during its whole lifecycle:

- it allows to optimize aspects like maintenance, energy efficiency, accessibility, security, etc.
- it improves the quality and reduces the management costs
- it is widely adopted and required in many european and non-european countries
- it is supported by several CAD architectural products



:: Data management functions

Main functions for the **data configuration**:

- web based user interface
- mobile interface
- navigation among data by following the relations, both in a textual and in a graphical way
- complete history of the modifications on any data card (versioning)
- fast and/or specific search on any card attribute
- filters and views for a custom access to data
- functions based on collaborative workflows and on wizards supporting recurring activities
- document archive to combine every type of file with every type of card
- reports and dashboards

:: Maintenance and training services

Tecnoteca supplies the following services for the **system use**:

- custom remote support with advices and explanations
- resolution under warranty of any bugs
- remote updating covered by us when a new version is released
- training and certification of the customers technicians
- training of the customers operators



WEBSITE: WWW.TECNOTECA.COM



www.openmaint.org

The open source solution for the Property & Facility Management

openMAINT is an open source solution for the Property & Facility Management.

It manages movable assets (plants, technical elements, furniture, etc.), the real estate (buildings, infrastructures in the area, etc.), and the related maintaining (scheduled, meter-based and breakdown), logistic and economic activities.

It helps to know, organize and update all the information related to the real estate, to support managers in decision making and operational activities.

openMAINT is a ready-to-use solution, already configured with all necessary archives, workflows, reports and dashboards.

It is a complete and solid enterprise application (JAVA server environment, SOA architecture, web user interface), based on the best open source technologies.

openMAINT was designed to adapt to the organization environment of operations, which usually includes procedures, documents, roles and responsibilities, technical constraints, textual data and georeferences, data exchange with external systems, etc.

It is implemented on the CMDBuild® system - developed by Tecnoteca - whose flexibility and configurability allow the user to gradually and autonomously extend and develop his/her own Property & Facility Management system.

:: openMAINT is

- SPACE & ASSET INVENTORY
- FACILITY MAINTENANCE
- LOGISTIC MANAGEMENT
- ECONOMIC MANAGEMENT
- ENERGY & ENVIRONMENT
- GIS AND BIM SUPPORT

:: Who needs openMAINT

- LOCAL AND CENTRAL PUBLIC ADMINISTRATIONS
- BANKS AND INSURANCE COMPANIES
- PUBLIC AND PRIVATE HEALTHCARE SYSTEMS
- SCHOOLS AND UNIVERSITIES
- SERVICE COMPANIES
- INDUSTRIAL COMPANIES WITH PRODUCTION FACILITIES
- TRANSPORT INFRASTRUCTURES

:: Support

TECNOTECA SUPPLIES SUPPORT CERTIFIED SERVICES WITH GRANTED SLA FOR THE ACTIVATION, CONFIGURATION AND MAINTENANCE OF OPENMAINT

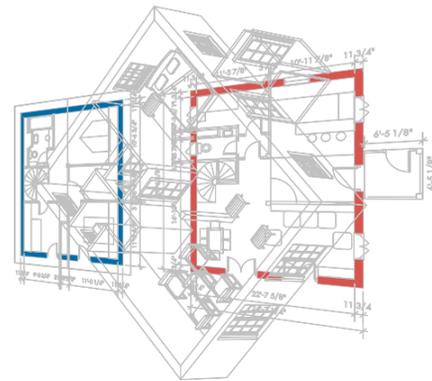


:: Space & Asset Inventory

Each Property and Facility Management activity is based on the **concrete and detailed knowledge** of the managed real estate.

openMAINT helps you to manage every kind of object, including:

- **real estates** (complexes, buildings, floors, rooms)
- **plants** (electrical, safety, plumbing / sanitation, HVAC, conveyor, telecommunications, IT)
- **technical asset** and furniture items
- **external infrastructures** (lighting, parking areas, road networks, bicycle lanes, etc)
- **green areas** (gardens, parks, etc)

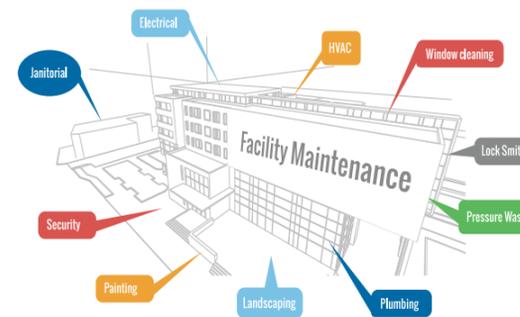


:: Facility Maintenance

openMAINT uses the **Maintenance Manual** as a knowledge base to manage the maintenance activities in a **customized way** for each organisation and in a differentiated way for every object typology.

openMAINT manages the **maintenance** in different ways:

- **preventive / scheduled** maintenance above those criteria written in the Maintenance Manual, generating the **calendar** and producing the **working orders**
- **meter-based** maintenance, above **those data recorded** into the system
- **breakdown maintenance**, upon request by internal operators or external users



:: GIS & BIM Support

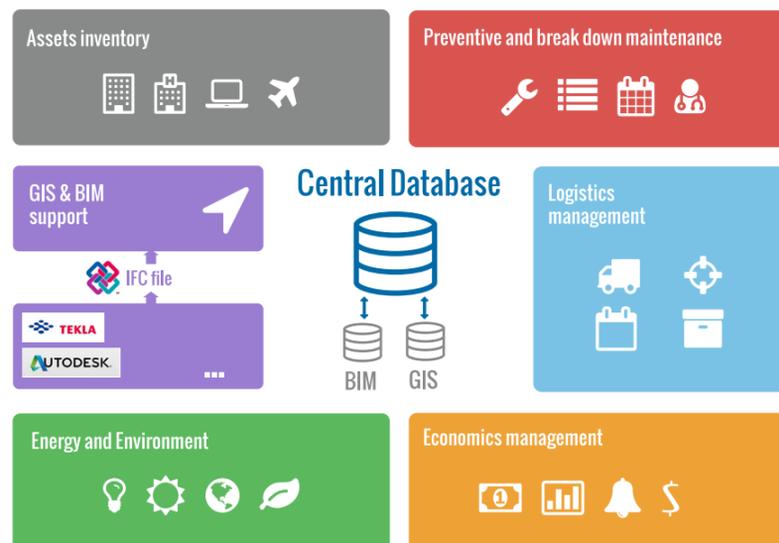
openMAINT allows to **georeference** real estates and territorial infrastructures on online **maps** such as OpenStreetMap and Google Maps.



You can georeference the assets onto the **plans of buildings**, produced by external tools (i.e. Autodesk AutoCAD) and manually imported into the application.

openMAINT also supports the BIM extensions (Building Information Modeling), already used in several of the most popular **3D CAD architectural softwares** for the management of the building lifecycle.

Through an interactive **viewer for 3D models**, integrated in **openMAINT**, you can view realistically the building rooms and the related assets.



:: Logistic Management

openMAINT provides a workflow for the **asset movement**, which manages its whole lifecycle (installation, repositioning, withdrawal), also with authorization steps and using mobile devices, in a single or massive mode.

openMAINT supports the operators in the **movement of spare parts and consumer products**.

Other **custom workflows** (room booking, orders / projects management, etc) can be analysed and configured in a custom way by using the proper visual editor.



:: Energy & Environment

openMAINT has been arranged to record the available environmental certifications (certification of energy performance, atmospheric dispersions, urban and special waste, other environmental impacts).

Datacards can be modified or improved so that they can adapt to the relevant national rules.

openMAINT allows to record the consumption readings and the related costs and associate them to the building or to the related property (referred to the target budget).

The gathered data can be analysed and compared with the previous series in order to produce corrective / improving actions.

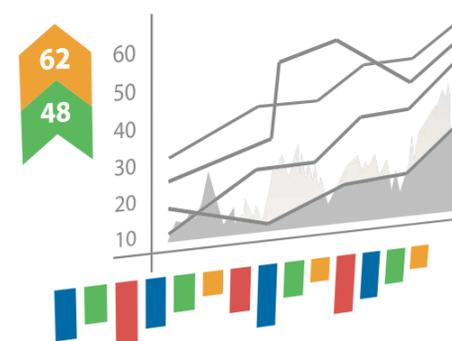
Custom connectors can be configured in order to gather information from home control units.



:: Economics Management

In **openMAINT** the economic management module includes the following main features:

- **basic files:** Departments, Suppliers with contact persons and maintenance teams, Customers, other data
- **annual budget management** on two levels: budget centers, budget items
- **contracts management:** utilities, rental, sale
- **purchase request (POR)**
- **purchase order** (related to POR)
- **purchase invoice** (related to the order)
- **scheduler with automatic notifications**
- **custom connectors with external ERP systems**



manages movable assets and the real estate, and the related maintaining, logistic and economic activities