

THE OPEN SOURCE SOLUTION FOR

Asset Management

CMDBuild is an open source web enterprise environment, to configure custom applications for asset management.

CMDBuild allows the management of database of assets, like assets and business resources, equipment leased to customers, technological infrastructure and systems.

It has native mechanisms to model the database, to design workflow, to configure reports and dashboards, to build connectors with external systems, to geo-refer assets, and to administer the system.

Through these features, it allows the client to keep under control the situation of assets, knowing at all times the composition, dislocation, functional

relations, rules for updating over time, and managing the complete life-cycle.

The core code is kept separated from the business logic, to ensure maximum flexibility and to allow the use of CMDBuild as a base system to create custom and configurable vertical applications.

Starting from CMDBuild, Tecnoteca has implemented the standard solutions CMDBuild READY2USE and *openMAINT*, and many other custom solutions for the specific needs of individual customers.

openMAINT

openMAINT is a complete solution for Property & Facility Management, dedicated to the management of buildings, facilities, and related maintenance (scheduled, meter-based and breakdown), economic and logistic activities.

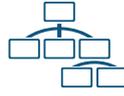
CMDBuild READY2USE

CMDBuild READY2USE is a configuration based on ITIL best practices and comprehensive of all functionality needed to manage IT Governance in medium and large organizations.

CMDBuild

With CMDBuild, it has been configured many other custom solutions for the management of data bases, in which there were high demands of flexibility and customization.

Data Model Configuration



The administration module allows to model the database from scratch to a fully customized one, in terms of:

- *classes (entities)*
- *attributes*
- *domains (types of reports)*
- *hierarchies of inherited classes*

Email



CMDBuild includes a notification system through emails, used by the scheduler, by the system workflow, or directly from the data management interface. In the Administration Module, it is possible to activate the forward service and to configure the email template.

GIS & BIM



CMDBuild includes a 2D viewer to manage geo-referenced assets on territorial maps or on floor plans of buildings, imported from common formats. CMDBuild includes also a display of 3D models synchronizable with BIM tools through the open interchange format IFC.

Relation Graph



The Relationship Graph is a dedicated tool to visualise and analyse the correlations between the data cards. It allows the user to:

- *expand the graph to the desired number of levels*
- *apply filters*
- *make zoom and rotations*
- *see the details of the current card*

GUI Framework



The GUI Framework is a native solution for facilitating the design of simplified user interfaces. It can be activated on external portals, it includes default features to operate on the CMDB and allows the maximum freedom in the layout design.

Workflow Engine



A visual editor allows drawing collaborative processes in XPDL standard format, with data entry forms and scripts for performing automatic operations (CMDB change, email sending, etc.)

Document Management



At each data card, it is possible to attach any type of documents: technical documentation, contracts, forms, images, videos, etc. CMDBuild used as embedded document archive the open source DMS Alfresco, or other products compatible with the CMIS standard protocol.

User Profiling



CMDBuild manages the access rights to its objects in a consistent and granular way on each single object. Permissions are assigned to groups of users; each user can belong to one or more groups. Authentication can be done locally, on LDAP Systems or on Single Sign On mode.

Report Engine



A visual editor allows drawing and configuring reports with formatting, grouping, sorting, summing, sub-reports, images, graphics, Barcodes, etc.

Data Management Module



The Data Management module is the standard user interface for the operators, and allows to:

- *consult and update data cards*
- *perform workflow*
- *view reports and dashboards*
- *use the Relation Graph*
- *use GIS and BIM viewers*

Administration Module



The Administration Module, reserved for the enabled administrator users, allows to the user to configure:

- *the data model*
- *workflow*
- *report & dashboard*
- *filters and views*
- *permissions*
- *menu*
- *automatic tasks*
- *other basic settings*

Dashboard



It is possible to configure dashboard, containing one or more graphs, to consult immediately the trends of some important indicators (KPI - Key Performance Indicator).

Correlations



Understanding the relationships between objects is as important as knowing the objects themselves. CMDBuild allows the user to navigate through the relationships immediately, to control dependencies and impacts and other links, providing additional information of great importance.

Scheduler



The CMDBuild scheduler allows to:

- *control and manage receiving email*
- *perform predefined operations as a result of database changes*
- *perform predefined operations when a data condition occurs*
- *start a workflow*
- *start a connector*
- *send an email with an attachment*

APP Mobile



Many of the operations performed in the Asset Life-Cycle Management take place "on field" and records them directly during their development, which is particularly useful to avoid delays and mistakes. The APP Mobile provides the main functionalities of the CMDBuild desktop interface, and allows the user to add photos and read Barcode and QR Code.

Interoperability & Connectors



Interoperability is important to use, control and synchronize information residing in different systems. CMDBuild has two native web-services in standard REST and SOAP protocols.

Barcode & QR Code



With CMDBuild it is possible to print:

- *Barcode, through the standard reporting system*
- *QR Code, through a dedicated support workflow*

The assignment of unique identification codes for the assets is useful for handling operations and inventory.

History



CMDBuild allows the user to completely track the operations performed over time by a full and automatic historic cataloguing of data cards and modified relationships, with the date and the user who made the change. In this way, it is possible to analyse any anomaly or obtain a report at any given day and time.

Localization



CMDBuild is a multilingual application.

Two levels of localization are available:

- *localization of the basic elements of the interface, provided by Tecnoteca and available in about twenty languages*
- *full localization of a specific vertical solution, configurable directly in the Administration Module.*

Technology

CMDBuild is a web enterprise application, designed according to SOA guidelines (Service Oriented Architecture), implemented with server components written in Java and with Ajax user interface.

An architecture organized into components and services is the best solution to create scalable and maintainable applications, as well as interoperable. Scalability is guaranteed by the ability to deploy services on different servers, and to configure in cluster the Tomcat server on which CMDBuild is running. Interoperability is ensured by the native SOAP and REST web-services, through which CMDBuild makes available, in read and write mode, the data stored in its database.

The project includes two frameworks for the implementation of connectors for synchronization with external data sources and for the design of custom user interfaces, reserved for non-technical users.

The software components integrated or inter-operating with CMDBuild, all open source, include:

- *Java language, for the server components*
- *Tomcat Servlet Container*
- *Ext JS library, for client components based on Ajax technology*
- *PostgreSQL database, with PostGIS extension*
- *JasperReports reporting engine, with visual editor JasperSoft Studio*
- *Enhydra TWS workflow engine, with visual editor TWE*
- *Alfresco or other CMIS-compliant DMS, for document management*
- *The Liferay portal, to accommodate the simplified interface for non-IT users*
- *OCS Inventory, for automatic inventory of IT assets*
- *GeoServer and OpenLayers, for GIS functionalities*
- *BIMServer for BIM functionalities*
- *Apache AXIS, for web-service implementation*

Dissemination and Resources

CMDBuild is a project "made in Italy" and spread internationally.

CMDBuild is helped by a community of users, which contributes to localization activities, to test new versions, to some software implementations, to support the dissemination of the project.

CMDBuild provides several public resources:

- *binary code*
- *source code*
- *complete manuals*
- *newsletter*
- *technical forum*
- *user references*
- *Linkedin discussion group*



License

CMDBuild is released with AGPL-3 open source license. The application can be downloaded from the download page of the project site or directly from SourceForge, the source code is hosted on Bitbucket platform. These are released under not open source license,

and made available to those who subscribe to the Maintenance Service:

- *APP Mobile*
- *the CMDBuild Advanced Connector framework, useful to implement sync connectors*

Maintainer

CMDBuild was designed and built by the Italian company Tecnoteca srl, specialized in open source solutions, which is now the Official Maintainer. Tecnoteca offers support services, certified with guaranteed SLA, for the CMDBuild configuration and maintenance. The project started in 2005, the first public

release was in 2006. Every year, several new public versions, both lower and major versions are released. CMDBuild is a registered trademark of Tecnoteca srl.



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