



Open Source configuration  
and management database

# CMDBuild: Open Source and ITIL for asset management (and much more)

[www.cmdbuild.org](http://www.cmdbuild.org)

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# The CMDBuild project

- **was born in 2005** as a software for the Municipality of Udine
- it has been immediately released with **GPL license**
- It's designed and developed by Tecnoteca Srl, which is the official **maintainer** and has registered the CMDBuild trademark
- includes more than 15 “man-years” of core development
- it's used by many important public and private companies in Italy and abroad
- has over 300 downloads per month



Municipality of  
Udine



open source



# What's CMDBuild

- It's a **information system** for "Information Systems"
- supports **ITGovernance** management
- helps answer questions about IT **configuration**

Who uses an IT object? Where? What are the object details? Who is responsible? How does it interact with other IT objects? What happened in its life-cycle?

- helps control over IT **processes**

Who is responsible for an activity? Who authorized it? Are service SLA met? Are users satisfied?

- helps **reuse informations** available in other components of the IT system

# What's Open Source

The most famous **definition**:

- you can **use** the software for any purpose
- you can **examine** the software and apply changes
- you can **redistribute** versions/copies of the software
- you can **improve** the software and release new versions to the community

Not only source code:

**open source + open data + open standard**

# Benefits of Open Source

- **protect** consumers
  - transparency and security (code can be inspected)
  - vendor neutrality
- **cost** savings
  - for the customer: savings on license costs
  - for the supplier: use of standard development environments and components
  - for the territory: more services (local), fewer licenses (multinational companies)
- **ecological** and social choice
  - reuse of available solutions (less waste of resources)
  - stimulate collaboration between customers and suppliers (ecosystem)

# Open Source benefits for CMDBuild

Stimulate a **virtuous cycle** (typical in the “open” world):

- ⇒ **easy to use** (eased by "pro-open" laws in the PA and by economic benefits in the private sector)
- ⇒ **promote software** (demo / testimonial)
- ⇒ **invest on new features**
- ⇒ *[work in progress] define **user groups** (that share development requests and costs)*
- ⇒ *[pending] community (contributions to **code development**)*

# Scope of work: IT Governance

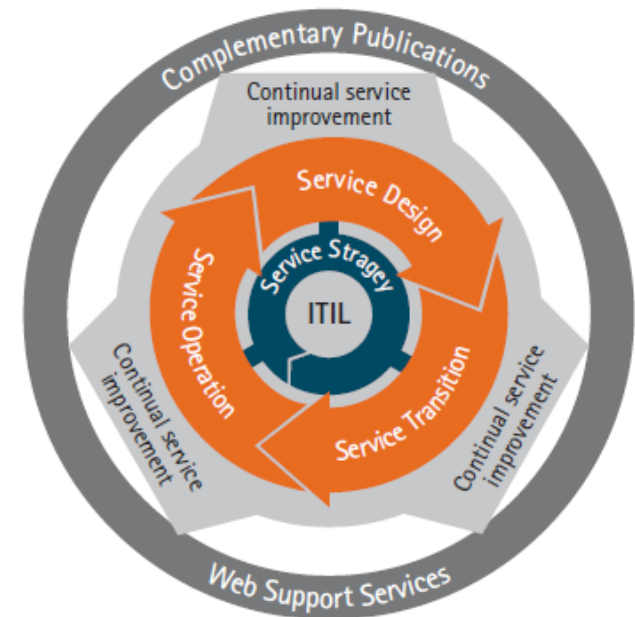
Manage IT governance means:

- define **strategies** to guide the ICT to achieve business objectives
- refer to "**Best Practices**", standards, frameworks (ITIL, Cobit, CMM, TOGAF, etc.) and adapt them to your organization
- acquire **tools** that describe your knowledge and support processes to measure and monitor results
- be aware that IT governance is a **continuous work** and not an end point

# Best practice ITIL (1)

Example - The "best practices" ITIL V3 cover these areas:

- **Service Design:** design Service Management services
- **Service Transition:** manage change / production start
- **Service Operations:** manage operational processes
- **Continual Service Improvement:** continuous service improvement



CMDBuild is "ITIL compliant" thanks to the support of ITIL consultants

# Best practice ITIL (2)

Example - The ITIL V3 "best practices" include **processes** of:

SERVICE STRATEGY	SERVICE DESIGN	SERVICE TRANSITION	SERVICE OPERATION	CONTINUAL SERVICE IMPROVEMENT
Financial Management	Service Catalogue Management	<b>Change Management</b>	<b>Event Management</b>	7-Step Improvement
Service Portfolio Management	Service Level Management	<b>Service Asset and Configuration Management</b>	<b>Incident Management</b>	Service Measurement
Demand Management	Capacity Management	<b>Knowledge Management</b>	Request Fulfillment	Service Reporting
	Availability Management	Transition Planning and Support	Access Management	
	IT Service Continuity Management	Release and Deployment Management	<b>Problem Management</b>	
	Information Security Management	Service Validation and Testing	Common Service Operation Activities	
	Supplier Management	Evaluation	<b>Service Desk</b>	
		Service Transition Stage Operational Activities	Technical Management	
			Application Management	
			IT Operations Management	

# Support Tools

CMDBuild provides an **integrated software environment** to realize an **IT Governance** system :

- is a configurable web application to model and manage a database containing assets (**CMDB**) and handle related **workflow** operations, paying attention to ITIL directives.
- is a **configurable** framework: data model, processes, reports, external connectors and web services
- uses "**state of the art**" technology (SOA, Ajax user interface, Java)
- uses **standards and open formats**

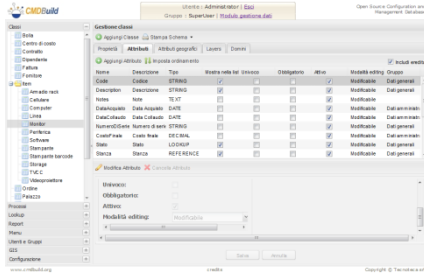
# How CMDBuild works (1)

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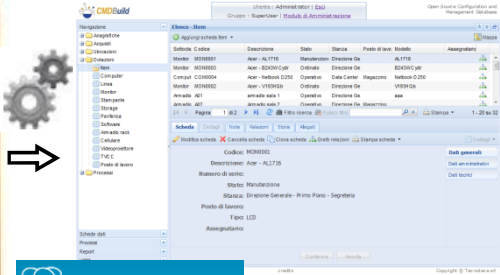
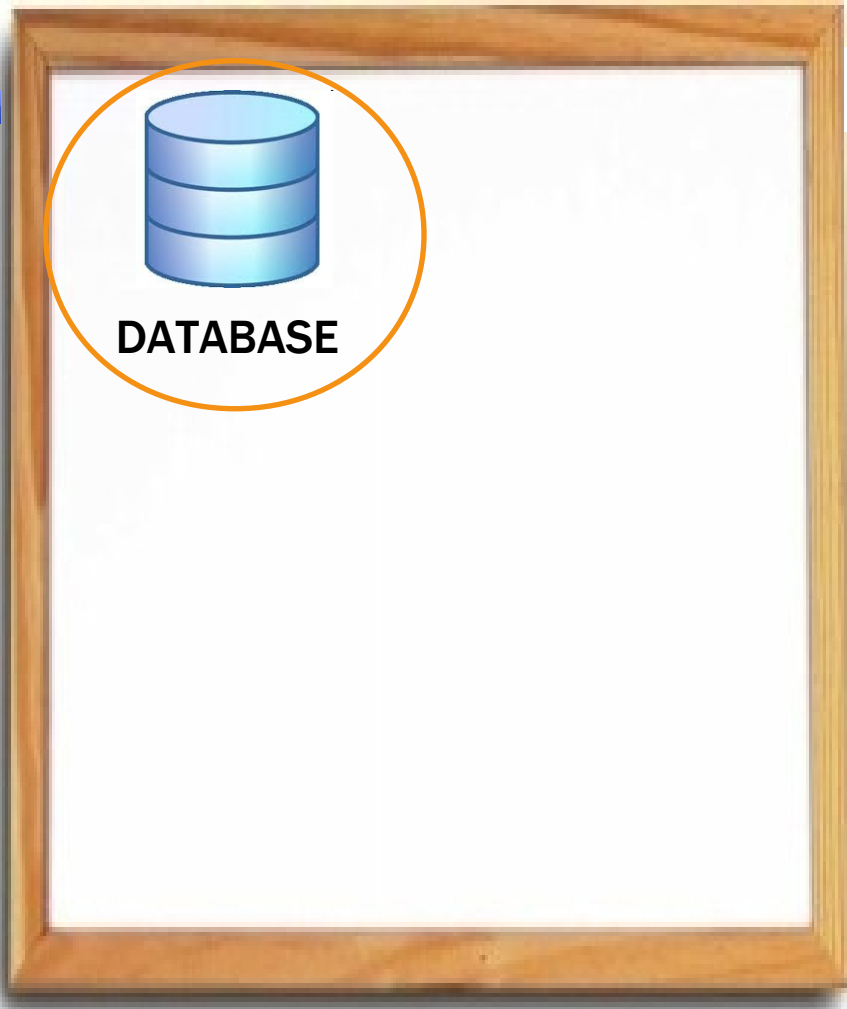


**... you can  
fill using  
predefined  
tools and  
wizards**

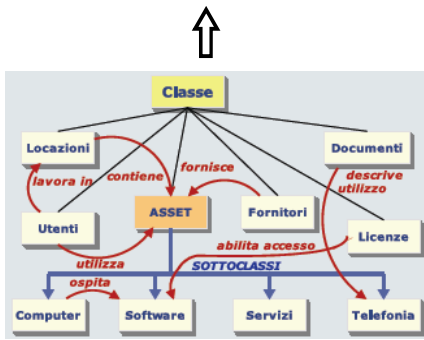
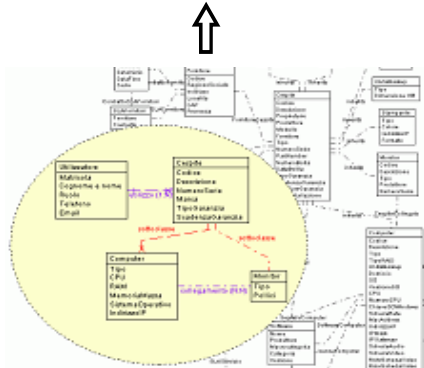
# How CMDBuild works (2)



SQL  
→



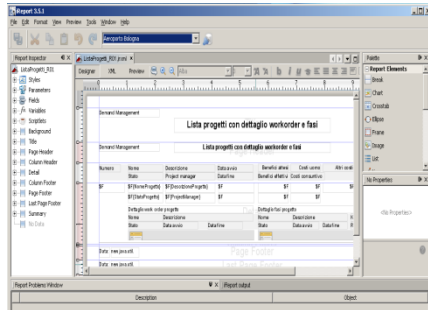
PostgreSQL



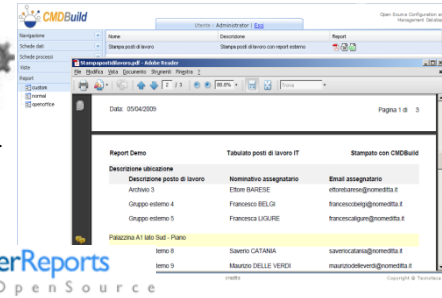
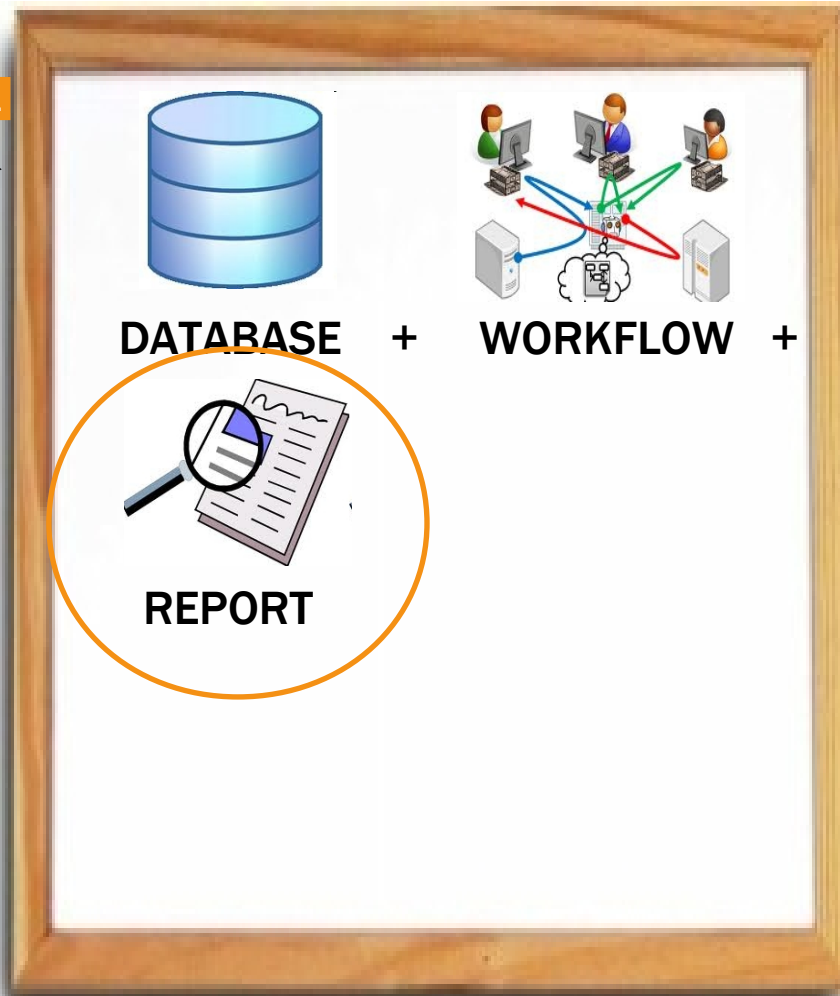
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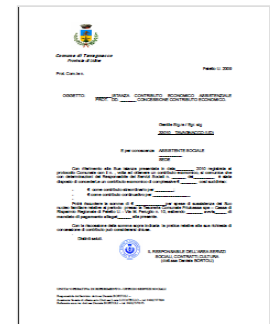
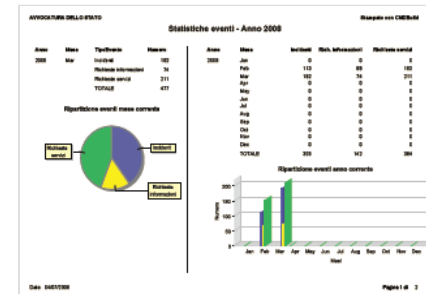
# How CMDBuild works (4)



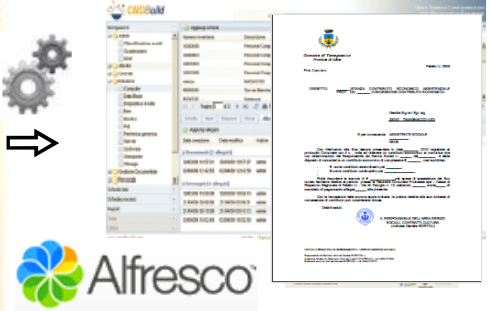
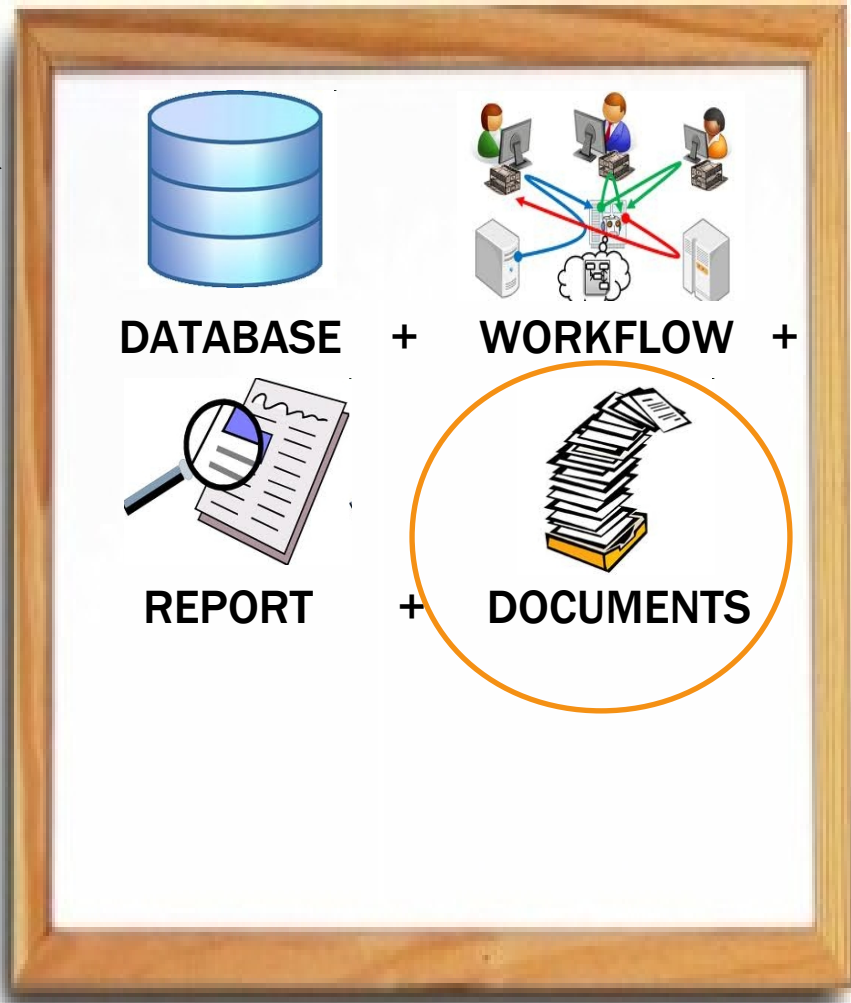
XML



JasperReports  
OpenSource



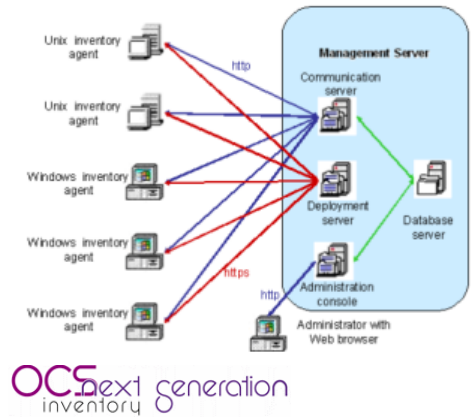
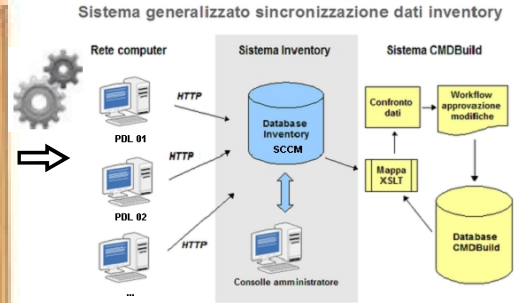
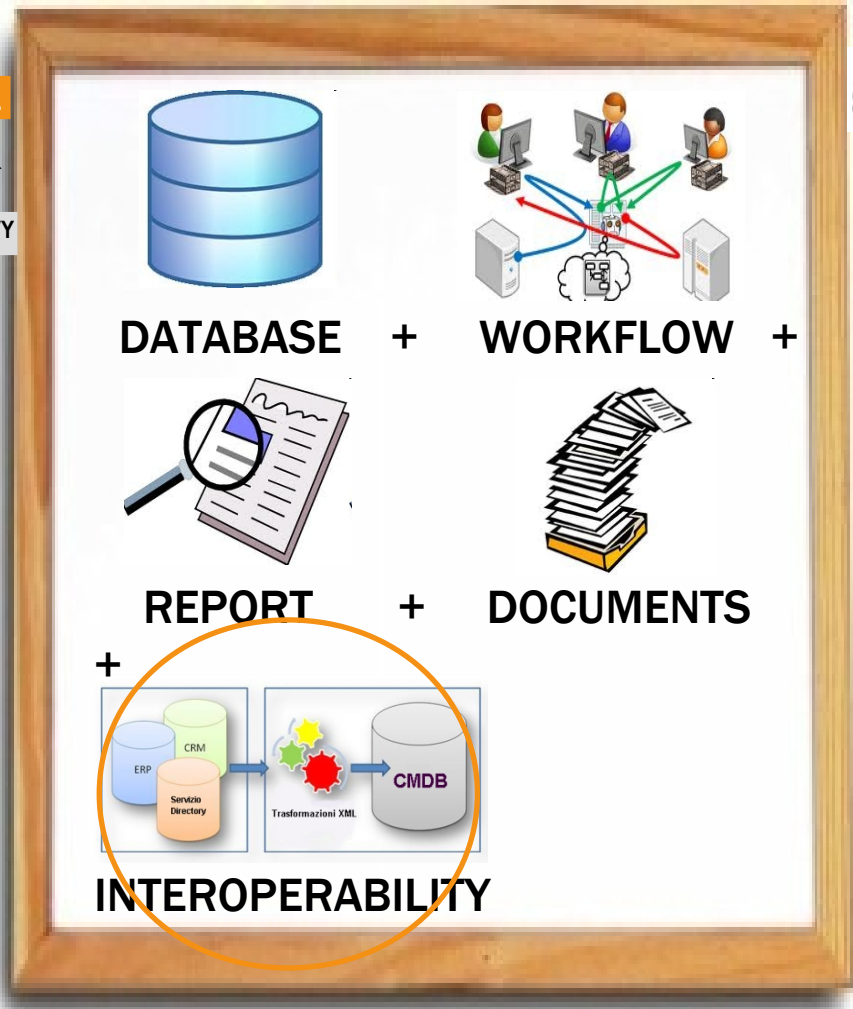
# How CMDBuild works (5)



# How CMDBuild works (6)



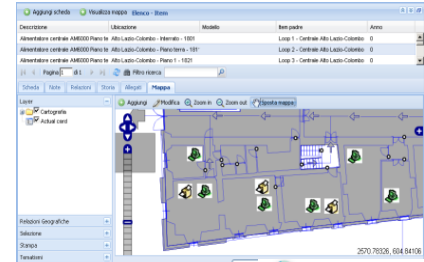
XML  
→  
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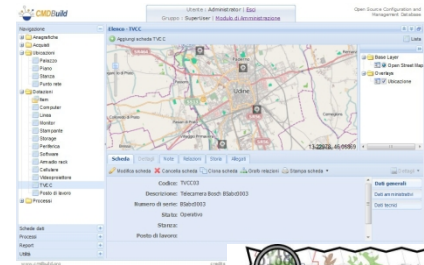
# How CMDBuild works (7)

```
O:\GIS\Lesson4\read.csv - Notepad++
1 Id;X;Y
2;829483.42958600000;2274075.75441000000
3;829640.12362100000;2274195.14034000000
4;829841.58738100000;2274292.14141000000
5;829960.97331200000;2274210.06358000000
6;829886.35710500000;2273978.75334000000
7;829834.12576000000;2273889.21389000000
8;829841.58738100000;2273754.90472000000
```

SHAPE



OpenLayers



# "Open" components

The open source license has allowed to reuse **components with a high level of technology:**



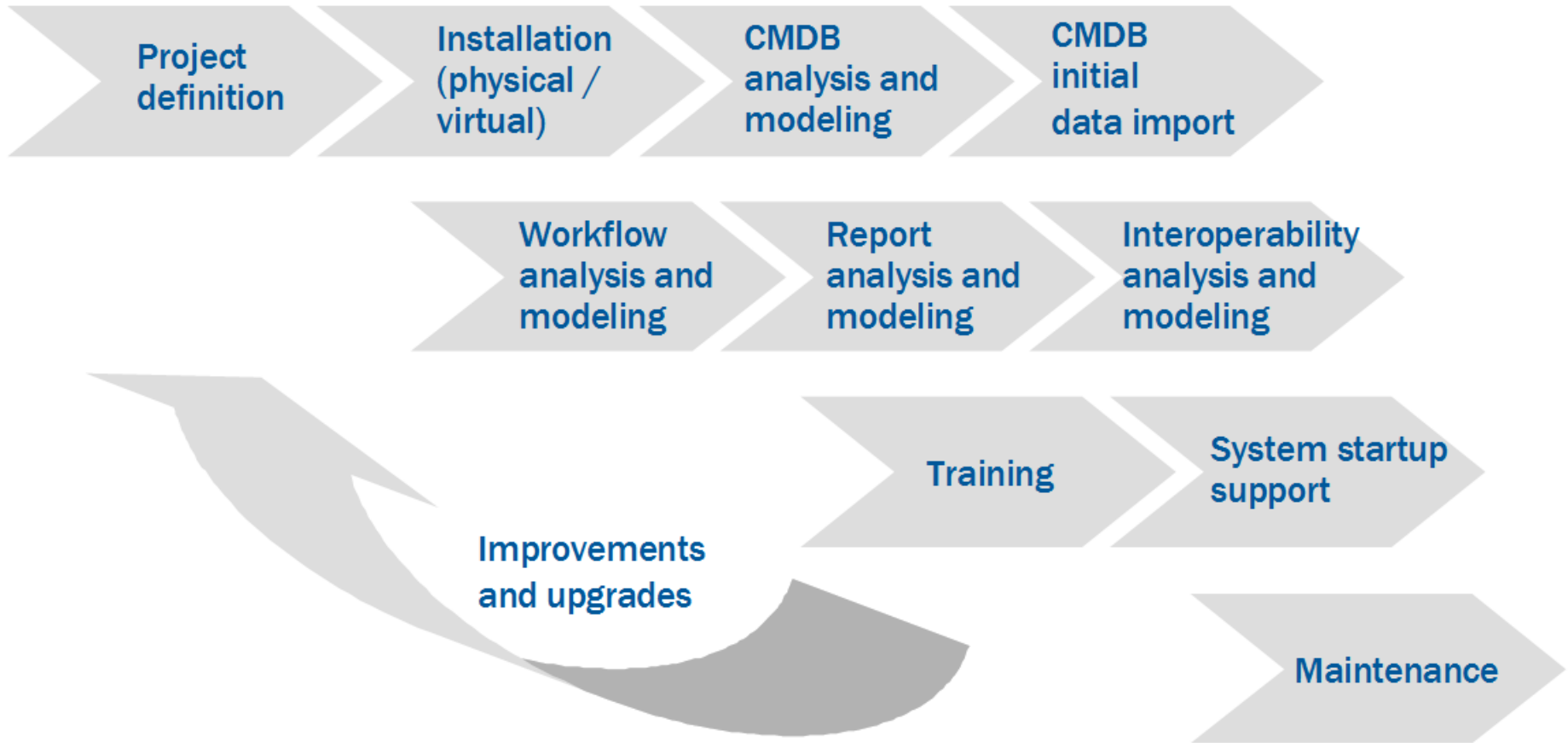
# What can you configure in IT? (for example) <sup>19</sup>

- CMDB with **various types of CI**: IT assets, personnel, locations, vendors and contracts, etc.
- ticketing processes associated to internal or external operators, external portal configuration (for process start), email notifications, user satisfaction, SLA monitoring, etc.
- manage **scheduled maintenance** activities
- workflow and reports to perform **impact analysis**
- **accounting** systems (quantity / % resources usage)
- **reports** (statistical analysis, spreadsheets, DPS inventory, documents, etc.)
- **SOAP cooperation** with other applications (SAP SM)

# What else can you configure? (for example) <sup>20</sup>

- system for the facilities management or, more generally, for the **real estate** maintenance processes
- system for **artwork** management with processes for restoration / loan / exposure
- front office for **maintenance activities** of public schools
- system for **office practices** management (Social Services, Examinations, etc.)
- ... and any other system requiring **database / workflow / reports / interoperability / maps / documents**

# Support services

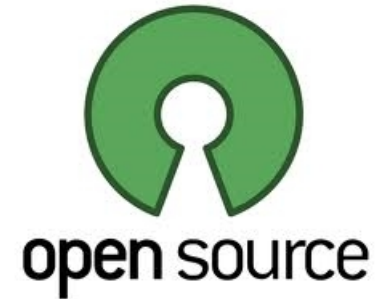


# Web resources

- **website** with official documentation
- **on-line demo** (Italian, English, French, Spanish, Serbian)
- public repository (**Bitbucket**)
- **manuals** (six manuals, the most important available also in English language)
- **slides** of all the events / meetings we attend
- video tutorials (**YouTube**)
- **newsletter** (subscriptions on the website)
- social networks (**Twitter / LinkedIn**)

## Latest features (released / in progress)

- **GIS** integration (December – ver 1.3.0)
- **simplified class** management (December – ver 1.3.0)
- **SOAP calls** inside workflow (December – ver 1.3.0)
- **public repository** (January)
- **case history** publication (February)
- **CAS single sign on** (March – ver 1.3.1)
- **data synchronization** framework (March ⇒)
- **attributes on relations** (April ⇒ ver 1.4.0)
- **English** manuals (April ⇒ August)



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