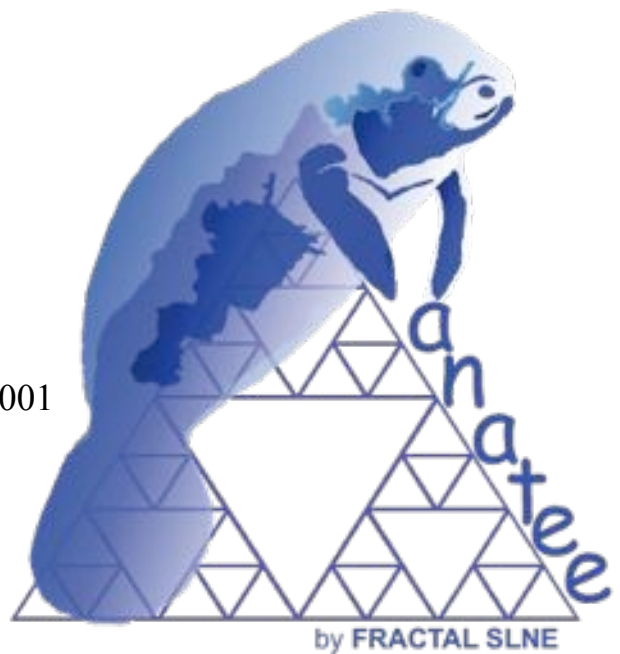


MANATEE: USER MANUAL

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Document Distribution List:

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Acronyms:

- CD Conceptual Design
- DD Detailed Design
- PD Preliminary Design
- PRD PRoDUCTION Phase
- PTR Personnel Time Report
- WBS Work Breakdown Structure
- WP Work Package

**Change Control**

Issue	Date	Section	Page	Change Description
1.A	16/11/09	All	All	First issue
1.B	06/10/10	3.3.2 12.1 12.2.2 12.3	16 170 174 176	Second issue - MANATEE Logo included in the header and front page. - Security Manager in Tomcat Server section added. - Import WBS's section added. - Add new section (12.2.2). - Change the restore application aspect (with the application logo). - Add a new field in the MySQL Users Restore window.
1.C	14/10/10	12.1	170	Third issue - Import WBS's section modified to include the selection of the operative system where the file to be imported is generated
1.D	10/06/11	3.4.2.2 6.1.7 6.2 6.3 6.3.6 6.5 6.5.3 11.2 11.7 12.1.2 12.1.3	21 41 56 66 77 89 93 160 169 171 172	Fourth issue - Add parameters for the secure mail SMTP service. - Change the access rights to displaying and printing the information of the project and add the possibility to export the gantt charts to txt and xml files (compatibles with MS Project and Merlin project softwares). - Field added in the WP form. - Fields added in the WBS form. - Change the access rights to print WBS information. - Field added in the Milestone form. - Print the complete or filtered milestones list. - Search users section added. - Delete user section added. - Import WP's section added. - Import Milestones section added.

Reference Documents

N#	Document Name	Code



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1 SUMMARY

This is the User Manual of the Fractal Project Management Tool (MANATEE).

In this manual, you can learn:

- The MANATEE functionality,
- How to install the application
- How to use the application step by step and
- How to handle the problems that could arise.



2 MANATEE OVERVIEW

The Project Management Tool (MANATEE) is mainly intended to:

- define the projects,
- facilitate the management of the project,
- maintain the project quality,
- make the project information available to all authorised users according to the access rights given to them (as described in section 4) and
- maintain the affected users informed.

MANATEE is especially suited when a company is geographically distributed or when several companies collaborate in a multi-discipline and complex project. As the projects evolve, the information generated in the diverse work centres by several individuals gets unmanageable very fast and the need for a specific computer-aided tool becomes essential.

MANATEE user interface is made by using WEB forms. This means that anyone who has access to the Internet may gain access to a project's information, if this person has an account in the system and the suitable permissions have been granted to him/her. The main advantage is that there is no need to install any specific software on the client computers; the WEB browser is enough. Similarly, the user does not need to access the e-mail, as the notifications are managed by the Tool and made available to the user via the WEB-based interface. The information is stored internally using a public relational database.

2.1 MANATEE Functionality: A quick look

The MANATEE functionality can be divided into the following areas:

- Project management:
 - Project administration: define new projects; set or modify their properties; end a project, removal or archive the project; print the project summary, the project plan (which includes all WPs and WBS's), the project Gantt chart, a quality summary, the project budget summary, the milestone summary, the cash flow summary and/or the external expenses summary.
 - WP management: define new WP's; set or modify their properties; delete a WP; print the WP information.
 - Milestones management: define new Milestones; set or modify their properties; delete a Milestone.
 - Cash Milestones management: define new Cash Milestones; set or modify their properties; delete a Cash Milestone.
 - WBS management: define new WBS's; set or modify their properties; delete a WBS; print the WBS information.
 - WBS Reports generation: define new WBS Reports; set or modify the information introduced in the report; print the WBS Report.



- Project quality control:
 - Risks administration: define new risks; set or modify their properties; delete a risk, print the risk information.
 - Non-conformities administration: define new non-conformities; set or modify their properties; delete a non-conformity; print the risk information.
 - Actions administration: define new actions; set or modify their properties; delete an action; print the action information.
- Human resources utilities:
 - Man-hours cost management: define man-hours cost for the personnel; set or modify their properties.
 - PTRs administration: fill the weekly PTRs; display and print the PTR information.
 - Display a people occupation summary
- Management analysis tools utilities:
 - Global control: display and print a summary of the global budget; display a summary of the global cash flow.
 - Graphics: provide a visual image of the user occupation, project manpower and cash flow.
- Information control:
 - Controlled access to the information introduced in the application according to the permissions defined for each user.
 - Keep all the involved users informed (via e-mail and internal notifications) about the creation, modification or removal of a project, WP, Milestone, WBS, risks, non-conformities and actions.
- System administration:
 - User administration: define new users; modify their attributes and permissions in connection with each project; unsubscribe users.
 - Tools: import WBS's from a text file.
 - Database administration: data backup or restore; upgrades.



3 INSTALLING MANATEE

3.1 Software requirements

The minimum software requirements to install MANATEE on your server computer are the following:

- Windows XP/Vista or Linux 2.4 or greater
- The Java Runtime Environment 6.0 or greater (<http://www.java.com/en/download/manual.jsp>)
- MySql Server v5.0 or greater (<http://dev.mysql.com/downloads/>)
- MySQL Connector/J 5.0 or greater (<http://dev.mysql.com/downloads/>)
- Tomcat Server 5.5 or greater (<http://tomcat.apache.org/>)
- e-mail account (through SMTP protocol) to manage the MANATEE mail service.

3.2 MySQL Server configuration

After MySQL Server is installed, there are a couple of parameters to be modified at my.ini MySQL options file in order to have working properly the MANATEE database.

The options to add or modify are described in the following lines:

- *Character set and collation.*

Add the following lines in the options file:

```
[mysql]
default-character-set=utf8

[mysqld]
default-character-set=utf8
default-collation=utf8_general_ci
```

- *max_allowed_packet*

Add the following lines in the options file:

```
[mysqld]
max_allowed_packet=100M
```



Note: When a MySQL client or the mysqld server receives a packet bigger than `max_allowed_packet` bytes, it issues a Packet too large error and closes the connection. If it happens, the `max_allowed_packet` value can be increased from 100 MB to as much as 1GB.

3.3 Tomcat Server configuration

After Tomcat Server is installed, the server must be configured.

3.3.1 Security JDBC Realm

A JDBCRealm is accesses authentication information stored in a relational database, accessed via a JDBC driver.

To configure the JDBCRealm for the MANATEE Web application:

- ✓ add the following lines in the file `$CATALINA_HOME/conf/server.xml`¹ (only the bold lines) :

```
...
<!-- Define the Tomcat Stand-Alone Service -->
<Service name="Catalina">
...
<!-- Define the top level container in our container hierarchy -->
<Engine name="Catalina" defaultHost="localhost">
...
<!-- Because this Realm is here, an instance will be shared globally -->
<Realm className="org.apache.catalina.realm.JDBCRealm" debug="99"
    driverName="com.mysql.jdbc.Driver"
    connectionURL="jdbc:mysql://localhost:3306/$DATABASENAME?autoReconnect=true"
    connectionName="user_m" connectionPassword="modificar"
    userTable="usuarios" userNameCol="usuario" userCredCol="clave"
    userRoleTable="roles" roleNameCol="rol"
    digest="md5" />
```

¹ `$CATALINA_HOME` is the home pathname where the tomcat server application is installed.



where

\$DATABASENAME is the database name (by default *geco*).

- ✓ Copy the MySQL Connector/J to the directory `$CATALINA_HOME/common/lib/`

3.3.2 Security Manager in Tomcat Server

If you choose to run Tomcat Server with the Security Manager, it is necessary to modify the configuration file.

- ✓ Add the following lines in the file `$CATALINA_HOME/conf/catalina.policy` (only the bold lines) :

```
// =====  
// catalina.corepolicy - Security Policy Permissions for Tomcat 5  
//  
// This file contains a default set of security policies to be enforced (by the  
// JVM) when Catalina is executed with the "-security" option. In addition  
// to the permissions granted here, the following additional permissions are  
// granted to the codebase specific to each web application:  
//  
// * Read access to the document root directory  
//  
// $Id: 01system.policy 2783 2006-11-22 10:50:31Z marcusb-guest $  
// =====  
  
// ===== SYSTEM CODE PERMISSIONS =====  
  
. . . .  
.  
.  
.  
  
// ===== CATALINA CODE PERMISSIONS =====  
  
. . . .  
.  
.  
.  
  
// ===== WEB APPLICATION PERMISSIONS =====  
  
// These permissions are granted by default to all web applications  
// In addition, a web application will be given a read FilePermission  
// and JndiPermission for all files and directories in its document root.  
grant {  
    // Required for JNDI lookup of named JDBC DataSource's and  
    // javamail named MimePart DataSource used to send mail  
    permission java.util.PropertyPermission "java.home", "read";  
    permission java.util.PropertyPermission "java.naming.*", "read";  
    permission java.util.PropertyPermission "javax.sql.*", "read";  
  
    // OS Specific properties to allow read access  
    permission java.util.PropertyPermission "os.name", "read";  
    permission java.util.PropertyPermission "os.version", "read";  
    permission java.util.PropertyPermission "os.arch", "read";  
    permission java.util.PropertyPermission "file.separator", "read";  
    permission java.util.PropertyPermission "path.separator", "read";  
    permission java.util.PropertyPermission "line.separator", "read";  
    permission java.util.PropertyPermission "catalina.base", "read";  
}
```




```
permission java.util.PropertyPermission "catalina.home", "read";

// JVM properties to allow read access
permission java.util.PropertyPermission "java.version", "read";
permission java.util.PropertyPermission "java.vendor", "read";
permission java.util.PropertyPermission "java.vendor.url", "read";
permission java.util.PropertyPermission "java.class.version", "read";
permission java.util.PropertyPermission "java.specification.version",
"read";
permission java.util.PropertyPermission "java.specification.vendor",
"read";
permission java.util.PropertyPermission "java.specification.name", "read";

permission java.util.PropertyPermission "java.vm.specification.version",
"read";
permission java.util.PropertyPermission "java.vm.specification.vendor",
"read";
permission java.util.PropertyPermission "java.vm.specification.name",
"read";
permission java.util.PropertyPermission "java.vm.version", "read";
permission java.util.PropertyPermission "java.vm.vendor", "read";
permission java.util.PropertyPermission "java.vm.name", "read";

// Required for OpenJMX
permission java.lang.RuntimePermission "getAttribute";

// Allow read of JAXP compliant XML parser debug
permission java.util.PropertyPermission "jaxp.debug", "read";

// Precompiled JSPs need access to this package.
permission java.lang.RuntimePermission
"accessClassInPackage.org.apache.jasper.runtime";
permission java.lang.RuntimePermission
"accessClassInPackage.org.apache.jasper.runtime.*";

    permission java.util.PropertyPermission "org.apache.jasper.runtime.*",
"read";

// Required for JDBC
permission java.lang.RuntimePermission
"accessClassInPackage.org.apache.tomcat.dbcp.*";

// Permission needed for web application
permission java.lang.RuntimePermission
"accessClassInPackage.org.apache.coyote.*";

// Permissions needed for user language
permission java.util.PropertyPermission "user.language", "write";

// Permissions to make database backup from web applications
permission java.io.FilePermission "<<ALL FILES>>", "execute";
};

// The permissions granted to the balancer WEB-INF/classes and WEB-INF/lib
directory
grant codeBase "file:/usr/share/tomcat5.5-webapps/balancer/-" {
    permission java.lang.RuntimePermission
"accessClassInPackage.org.apache.tomcat.util.digester";
    permission java.lang.RuntimePermission
```



```
"defineClassInPackage.org.apache.tomcat.util.digester";
};

grant codeBase "file:${catalina.home}/bin/tomcat-juli.jar" {

    permission java.io.FilePermission "/usr/share/tomcat5.5-webapps/jsp-
examples/WEB-INF/classes/logging.properties", "read";
    permission java.io.FilePermission "/usr/share/tomcat5.5-
webapps/servlets-examples/WEB-INF/classes/logging.properties", "read";

    // Permissions needed to can send mails from Web applications
    permission java.io.FilePermission "$MANATEE_HOME/WEB-
INF/classes/logging.properties", "read";

};

// These permission apply to the JDBC MySQL connector
grant {
    permission java.net.SocketPermission "localhost", "resolve";
    permission java.net.SocketPermission "127.0.0.1:3306", "connect,resolve";
};

// WEB MANATEE permissions
grant codeBase "file: $MANATEE_HOME/-" {

    // Permissions needed to use the temporal dir
    permission java.util.PropertyPermission "java.io.tmpdir", "read,write";
    permission java.io.FilePermission "$SYSTEM_TEMP_DIR/-", "read,write,delete";

    // Permissions needed to read and write files
    permission java.io.FilePermission "$MANATEE_BACKUP/-",
"read,write,delete,execute";
    permission java.io.FilePermission $MANATEE_HOME/private/doc/-",
"read,write,delete,execute";

    // Permissions needed to send e-mails
    permission java.net.SocketPermission "$MAILSERVER", "connect,resolve";

};
```

Where

\$MANATEE_HOME is the home pathname where the MANATEE web application is installed.

\$MANATEE_BACKUP is the home pathname where the MANATEE web application save backups (path user defined).

\$MAILSERVER is the SMTP Mail Server the company is going to use.

\$SYSTEM_TEMP_DIR is the pathname of the system temporal directory.



3.3.3 Define the MANATEE Web application

To define the MANATEE web application:

- ✓ Add the following lines in the file `$CATALINA_HOME/conf/server.xml` (only the bold lines) :

```
...
<!-- Define the Tomcat Stand-Alone Service -->
<Service name="Catalina">
...
<!-- Define the top level container in our container hierarchy -->
<Engine name="Catalina" defaultHost="localhost">
...
<!-- Define the default virtual host -->
<Host name="localhost" appBase="webapps" unpackWARs="true" autoDeploy="true"
  xmlValidation="false" xmlNamespaceAware="false">
...
<Context path="/manatee" docBase="$MANATEE_HOME" debug="0">
  <Logger className="org.apache.catalina.logger.FileLogger"
    prefix="localhost_manatee_log." suffix=".txt" timestamp="true"/>
  <!-- Database connector configuration -->
  <Resource name="jdbc/manatee" auth="Container" type="javax.sql.DataSource"
    maxActive="100" maxIdle="30" maxWait="10000" username="user_m"
    password="modificar" driverClassName="com.mysql.jdbc.Driver"
    url="jdbc:mysql://localhost:3306/$DATABASENAME?autoReconnect=true"/>
</Context>
</host>
```

Note: the attribute *docBase* defines the directory for the Web application associated with this `<Context>`. This is the pathname of a directory that contains the resources for the MANATEE Web application (see the section 3.4).

3.3.4 Add libraries to Tomcat Server

The MANATEE Web application needs two Jakarta Apache libraries.

For this, you have to add to `$CATALINA_HOME/common/lib/` the followings libraries:

- ✓ Apache Commons Object Pooling Library 1.3 or greater (http://commons.apache.org/downloads/download_pool.cgi)



- ✓ Apache Commons Database Connection Pooling Services 1.2.1 or greater (http://commons.apache.org/downloads/download_dbcp.cgi)

3.3.5 Setting JVM options for Tomcat Server

There are one important Java options which should be set for Tomcat.

- *Maximum heap size*: this is the maximum amount of heap memory the Java Virtual Machine (JVM) is allowed to allocate. In the case of most JVMs, the default setting of the maximum heap size is 64MB. You can increase the maximum heap size of applications by setting the **-Xmx** JVM parameter. For example **-Xmx1024m** allows maximum 1GB (1024MB) heap to be allocated for the JVM.

Note: it is recommended to specify a considerably *lower* value than the amount of physical RAM in your system, so the operating system and other applications will also have enough space. Otherwise the swap memory of the operating system will be used, which can result in high disk activity, and reduced system performance.

For MANATEE application it is recommended to increase the memory pool to 250MBs.

You can change this setting doing the following:

- ✓ For Windows XP: Go to the "Apache Tomcat x.x" folder in the Start Menu. Start the "Configure Tomcat".

Select the "Java" tab in the configuration dialog:

- *Maximum heap size*: The "Maximum memory pool" text box corresponds to the heap size limit. Fill it with the value 250 (If using this text box it is not needed to specify "-Xmx" Java option.)
- ✓ For Linux: place the Java options into the CATALINA_OPTS environment variable. For example: "-server -Xmx250m".

3.4 MANATEE Web Application Installation and Configuration

3.4.1 MANATEE Web Application installation

To install MANATEE Web application, follow the steps:

- ✓ Unzip the file manatee-wapp-1.0.zip to the directory you want to install the MANATEE Web Application (\$MANATEE_HOME).
- ✓ Changes the permissions in the directories \$MANATEE_HOME/doc and \$MANATEE_BACKUP to permit to Tomcat user to can read, write, delete and execute files.
- ✓ Changes, if it is necessary, the attribute *docBase* in the file \$CATALINA_HOME/conf/server.xml (see section 3.3.2).
- ✓ Install the MANATEE database into the MySQL server executing in the terminal the MySQL command: **mysql < geco.sql -u root -p**



3.4.2 MANATEE Web Application configuration

To configure MANATEE Web Application, it is necessary to changes some parameters in the configuration files:

- ✓ The file `$MANATEE_HOME/WEB-INF/web.xml`
- ✓ The file `$MANATEE_HOME/WEB-INF/classes/com/fractal/manatee/manatee.props`

3.4.2.1 *Web.xml configuration*

In the `$MANATEE_HOME/WEB-INF/web.xml`, change the variable `$MANATEE_HOME` with the real (the path where unzip the application, see 3.4.1).

```
...
<servlet>
  <servlet-name>main</servlet-name>
  <servlet-class>com.fractal.manatee.Main</servlet-class>
  <init-param>
    <param-name>config</param-name>
    <param-value>
      $MANATEE_HOME/WEB-INF/classes/com/fractal/manatee/manatee.props
    </param-value>
  </init-param>
</servlet>
...
```

3.4.2.2 *manatee.props configuration*

The file `manatee.props` is the MANATEE Web Application configuration file.

The parameter to configure are (the file path is `$MANATEE_HOME/WEB-INF/classes/com/fractal/manatee/manatee.props`):

- *manateePath* -> path where you unzip MANATEE Web Application (`$MANATEE_HOME`)

```
manateePath=$MANATEE_HOME/2
```

- *backupPath* -> pathname to save the backups files (path user defined)

```
backupPath=$MANATEE_BACKUP/
```

- *mysqlPath* -> path to the MySQL Server bin dir (`$MYSQL_HOME` is MySQL Server home dir).

```
mysqlPath=$MYSQL_HOME/bin/
```

- *mySQLPort* -> MySQL port (for example 3306).

² The “/” at the end of the path is mandatory.



```
mySQLPort=3306
```

- *mySQLHost* -> MySQL host name (for example *localhost*).

```
mySQLHost=localhost
```

- *dbName* -> MySQL database name (by default *geco*).

```
dbName=geco
```

- *mail.smtp.host* -> Mail SMTP Host name of the company (for example *mail.fractal-es.com*).

```
mail.smtp.host=mail.fractal-es.com
```

- *mail.smtp.auth* -> TRUE if the SMTP Mail Server need authentication, FALSE if not.

```
mail.smtp.auth=TRUE
```

- *mail.smtp.user* -> e-mail user to manage the MANATEE e-mail service (for example *manatee@company.com*).

```
mail.smtp.user=manatee@company.com
```

- *mail.smtp.password* -> e-mail user password to manage the MANATEE e-mail service.

```
mail.smtp.password=password
```

- *mail.from* -> e-mail user to manage the MANATEE e-mail service (for example *manatee@company.com*).

```
mail.from=manatee@company.com
```

In the case the mail SMTP server is secure (SSL), you have to add this others parameters:

- *mail.smtp.port* -> Mail SMTP port (for example 465).

```
mail.smtp.port=465
```

- *mail.smtp.socketFactory.port* -> Mail SMTP socketFactory port (for example 465). It is the same that in the parameter *mail.smtp.port*.

```
mail.smtp.socketFactory.port=465
```

- *mail.smtp.socketFactory.class* -> Mail SMTP socketFactory class. The value for this parameter has to be **javax.net.ssl.SSLSocketFactory**.

```
mail.smtp.socketFactory.class=javax.net.ssl.SSLSocketFactory
```



Note: If you change the user and/or password of the generic user_m user, you have to change the username and/or the password values in the manatee.props parameter *userAdmin* and/or *passwordAdmin*.

3.4.3 Start the Services

After the configurations, the MySQL Server and Tomcat Server services have to be started (or restart if the services were started before).

- ✓ Start/Restart MySQL Server
- ✓ Start/Restart Tomcat Server



3.5 MANATEE Restore Installation

The MANATEE Restore application is a Java application to manage the MANATEE restore tool.

This application has to be installed in the server computer.

To install MANATEE Restore application is only necessary:

- ✓ Copy the file MANATEERestore.jar to your server computer (\$MANATEERESTORE_HOME).



4 MANATEE USER'S PROFILES

The User's Profiles that can be defined in MANATEE are the following ones:

1. Administrator

The administrator has full access to all MANATEE administration capabilities.

The administrator also has the access rights to visualize project information, which allow him/her to clarify any doubt about permission that the users can arise.

2. Project manager

The project manager (or project managers of a particular project) has the access rights to create, modify and delete the WP's, WBS's, risks, non-conformities and actions associated to this project, decide which documents are related with this project and, also, decide the authors, reviewers and approvers to be assigned the documents of this project. The project manager can use in his/her project all analysis and visualization functions provided by MANATEE.

Each project must have at least one project manager.

The same user can be authorized as project manager for more than one project.

3. WP manager

The WP manager has the access rights to create and modify the WBS's associated to this WP, although the project manager of the project related with this WP must validate the created or modified WBS.

Each WP must have only one WP manager.

4. WBS responsible

The WBS responsible can visualize the corresponding WBS and generate WBS Progress Reports in this WBS.

Each WBS must have only one WBS responsible.

5. Human Resources manager

The Human Resources manager has the access rights to manage all human resources utilities, which include the administration of the hourly cost and PTR's and the use of the analysis and visualization capabilities related with the human resources functions.

The Human Resources manager also has the access rights to use the analysis, reporting and visualization tools provided by MANATEE to allow project track and organization control.

6. Quality manager

The Quality manager has the access rights to define, modify and delete the risk, non-conformities and actions.

7. Authorized in all documents versions



The authorized users to see all documents versions in a particular project are the users that can see and have a read-only copy to all documents in this project (i.e., not only approved documents but also draft versions of the documents).

8. Authorized in approved documents only

The authorized users to see only the approved versions in a particular project are the users that can see and have a read-only copy to all documents approved in this project.



5 STARTING MANATEE

5.1 Logging in

MANATEE can be executed from any WEB Browser.

So, in order to start the application, first, start a WEB browser instance in your machine and, then, type the MANATEE address into the address text box as follows:

http://CompanyWebServer/manatee

The following Login web page will appear:

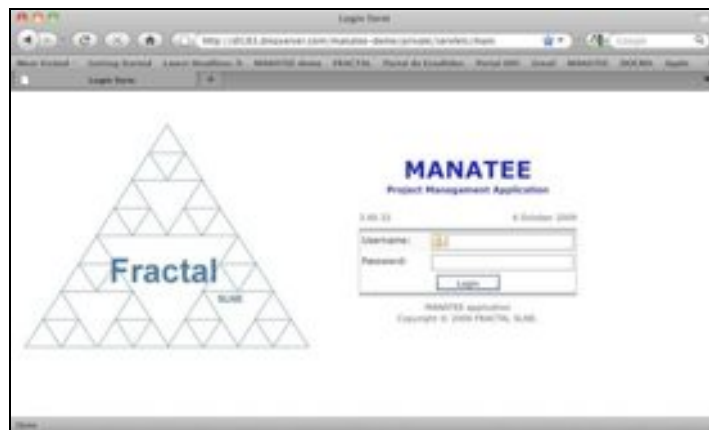


Figure 1: Login web page

- ⇒ Introduce the *Username*,
- ⇒ Introduce the *Password*,
- ⇒ click *Login*,

If the login information is correct, the MANATEE initial web page will be opened.



Figure 2: Initial web page



5.2 Accessing the data according to the User access rights

In order to provide the functionality described in section 2, MANATEE provides access to the following data sets:

- **Projects:**
 - **Definition of the projects**
 - **WP's**
 - **Milestones**
 - **Cash Milestones**
 - **WBS's**
 - **WBS reports**
- **Project quality control:**
 - **Risks**
 - **Non-conformities**
 - **Actions**
- **Human resources:**
 - **User's hourly cost**
 - **PTRs**
- **Users**
- **Notifications**
- **Backups**

The access to each data set is quite straight forward following the corresponding tab in the main bar in most of the MANATEE web pages.

- ⇒ To manage project data, select the *Project* label.
 - The projects are defined and managed as described in section 6.
- ⇒ To perform actions related with the quality control of the project, select the *Quality* label.
 - To do any actions (i.e., create, delete, modify or search) related with Risk, Non-conformities and actions see section 7.
- ⇒ To perform actions related with the human resources data of the company, select the *Human resources* label.
 - To do any actions (i.e., create, delete, modify or search) related with manpower cost or PTRs see section 8.
- ⇒ To use the analysis and visualization capabilities provided by MANATEE, select the *Tools* label.



- To analyze and visualize the information kept in MANATEE, such as manpower, cash flow and workload, see section 9.
- ⇒ To manage the Notifications, select the Notification label.
- To do any actions related with Notifications see section 10.
- ⇒ To manage the Users accounts, select the Users label.
- To do any actions (i.e., create, unsubscribe, modify or search) related with Users see section 11.
- ⇒ To work with the Backups, select the Backup label.
- To do any actions related with Backup see section 12.

Depending of the access rights and the roles that has been assigned to the user who has logged in the application, the data that will be displayed and the actions that could be done will be different, as described in section 4.

If any doubt about permissions, ask the administrator.

5.3 Logging out

In the any MANATEE web page, select *Logout*

The application will end.



6 PROJECT MANAGEMENT

A project is a strategy to reach a goal. All projects must be defined in terms of **Scope, Schedule and Price**, or Performance, Time, and Budget. The three parameters must be considered (and, therefore, controlled) in order to optimize the achievement of the project objectives meeting the planned schedule and assigned budget.

In order to organize and manage the project, the Project Manager has to propose the Work Breakdown Structure. The WBS is a deliverable-oriented grouping of project elements, which organizes and defines the total scope of the project.

The WBS technique uses a hierarchical tree structure. Each task is an activity and it is an element of work with clear project parameters.

The set of tasks managed by the same overall responsible, oriented to produce a single deliverable or to offer certain kind of services to the project are called Work Packages. The WPs are usually divided by the nature of the tasks to do (divided by the skills of the people that have to carry out the work). Each Work Package has an associated deliverable in such a way that the sum of the Work Packages is the system to be delivered.

Each WP is divided in sub-work packages and these into smaller pieces of work, tasks, and all together constitutes the Work Breakdown Structure, WBS.

6.1 Project administration

MANATEE provides the capabilities required to manage the projects that are kept into the system during their whole lifecycle.

The figure below shows all the states that a project could have during its lifecycle; i.e., since the project is created until it is deleted from the system or, even, afterwards, if the project is again restored.

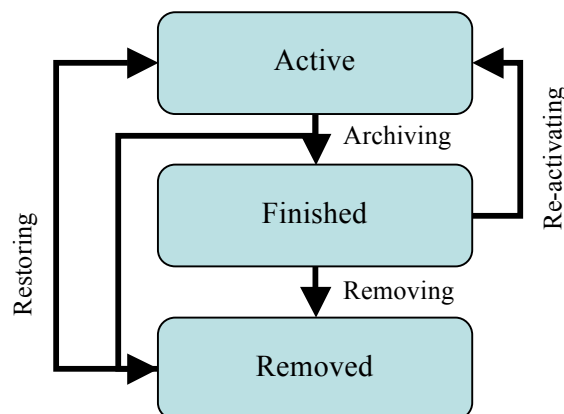


Figure 3: Project lifecycle diagram

Regarding the administration of the projects point of view, MANATEE provides the following functionality:

- Create a new project
- Search projects using different criteria
- Display the complete or filtered project list



- Display the projects properties
- Modify the definition of a project
- Change the dates associated to a project
- Display a summary of the information included in a project
- Print a summary of the project plan
- Print a project plan
- Print a Gantt view of the project plan (the whole project, only the WP's or only a selected WP and the associated WBS's)
- Print all risk, non-conformities and actions that have been initiated in a project
- Print a summary of the project budget in a selected period (organized by WP's or WBS's)
- Print a summary of the project milestones
- Print a summary of the project cash flow
- Archive a project
- Remove a project
- Restore a project

It is important to remember that each user can only do actions on the projects according to the access rights that this particular user has (see sections 4 or 5.2 for more information).

6.1.1 Creating a new project

To start working with projects, select *Project Management* tab and, then, *Projects* tab.

In order to create a new project, select *New Project* tab. Only the Administrator can create new projects.

The following form will appear.

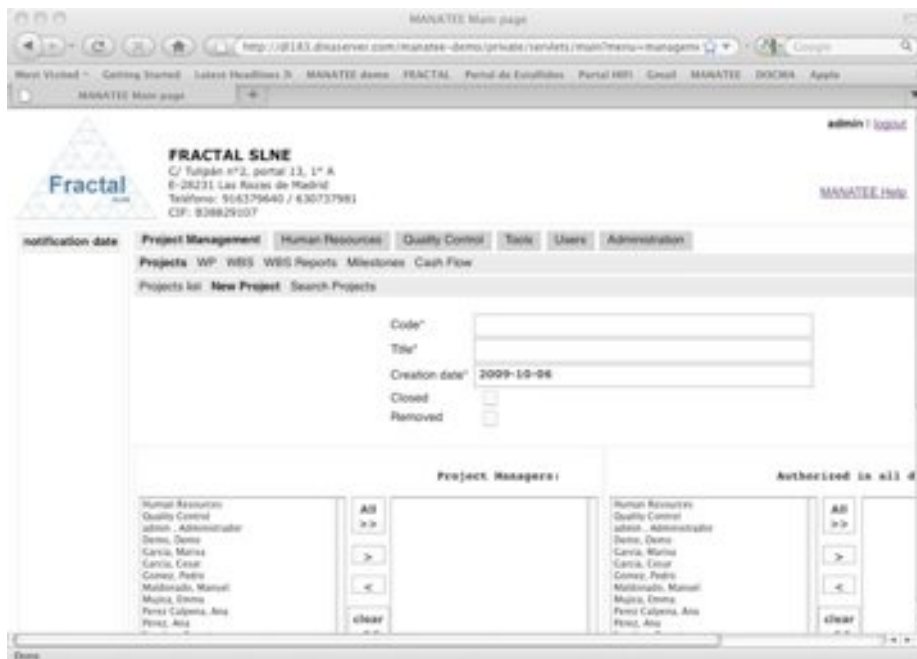


Figure 4: Creating a project page

- ⇒ Fill the following fields (all mandatory fields are marked with a star):
- **Code:** Introduce a code for the project. This is a text field and the maximum length of this field is 32 characters. The project code cannot include the separator character as defined in 14.
 - **Title:** Introduce the project title. This is a text field and the maximum length of this field is 200 characters.
 - **Creation date:** The creation date is automatically filled with the current date (i.e., the date when the project is being created). This date can only be modified at the definition of the project.
 - **Closed:** This box is automatically marked when the project is finished.
 - **Removed:** This box is automatically marked when the project is removed.
 - **Project managers:** Select which users are going to be the Project managers of the current project from the left list using the arrows between the boxes. The users selected will be kept in the right list.
 - **Authorized in all document versions:** Select which users are going to be authorized to see all versions of the documents in the current project from the left list using the arrows between the boxes. The users selected will be kept in the right list.
 - **Authorized in approved documents only:** Select which users are going to be authorized to see only approved versions of the documents in the current project from the left list using the arrows between the boxes. The users selected will be kept in the right list.
 - **Project Documents:** This box displays the codes of the documents that are created in the current project. This list will be automatically filled at the creation of the documents.



⇒ Click *add project*.

The project will be created.

The project status is changed to “Active”.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the creation of the project.

“*The project (Code) has been created*” to be sent to the Project managers and to the project authorized users.

A notification will be also sent (internally, a MANATEE notification) to the corresponding users in order to inform them about they are designed project manager.

“*You have been named manager of the project (Code)*” to be sent to the Project managers.

Note: If, for any reason, the project cannot be created, go to the section 13, which provides some guides to troubleshooting problems.

6.1.2 Searching projects

To start looking for projects, select *Project Management* tab and, then, *Projects* tab.

The complete list of projects that the current user can see will be displayed.

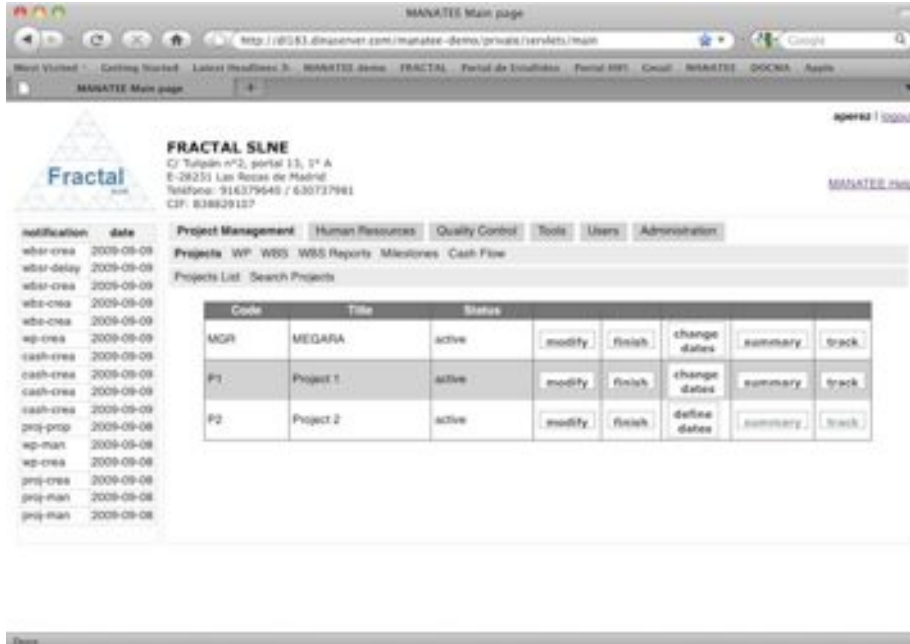


Figure 5: Projects List

As shown in the figure, the following issues could be available for each project in the list:

- **Code:** The code of the project.
- **Title:** The title of the project.



- **Status:** The current status of the project.
- **Show / Modify:** Two different action buttons can appear in this position:
 - The *show* button displays the project properties.
 - The *modify* button allows modifying the project properties.
- **Finish / Active:** Two different action buttons can appear in this position:
 - The *finish* button allows finishing the project. So, the project will be archived and it will not be active any more (i.e., any new document can now be created in this project).
 - The *active* button allows activating again a project that has been previously finished.
- **Remove:** The *remove* button allows removing the project completely from the system
- **Restore:** The *restore* button allows restoring the project into the system.
- **Define dates / Change dates / View dates:** Three different action buttons can appear in this position:
 - The *define dates* button allows defining the (planned and real) start and (planned and real) end dates of a project.
 - The *change dates* button allows modified the (planned and real) start and (planned and real) end dates of a project.
 - The *view dates* button shows the (planned and real) start and (planned and real) end dates of a project
- **Summary:** The *summary* button shows a summary of the project.
- **Track:** The *track* button allows printing different views of the information related with the project.

Some actions buttons (remove, restore and define dates) will be only displayed for the Administrator login because he/she is the only user with the capability to perform these actions.

The actions buttons of each project will also not be enabled (i.e., they will be displayed as greyed out) according to the access rights of the user and, also, to the current project status.

The projects are always arranged by the code.

Each screen will show 10 projects, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the project list.



Figure 6: Page selectors

In order to search a particular project or to constrain the number of project to be displayed, select *Search Project* tab.

The following form will appear.



notification	date
wbr-crea	2009-09-09
wbr-delay	2009-09-09
wbr-crea	2009-09-09
wbr-crea	2009-09-09
wbr-crea	2009-09-09
sp-crea	2009-09-09
cash-crea	2009-09-09
cash-crea	2009-09-09
cash-crea	2009-09-09
cash-crea	2009-09-09
proj-prop	2009-09-08
sp-man	2009-09-08
sp-crea	2009-09-08
proj-crea	2009-09-08
proj-man	2009-09-08
proj-man	2009-09-08

Figure 7: Search projects form

- ⇒ Fill as many fields as desired in order to filter the project list.
- **Code:** Introduce any number of alphanumeric characters (this is not case sensitive); any project which contains this sequence of characters in its code will be selected.
 - **Title:** Introduce any number of alphanumeric characters (this is not case sensitive); any project which contains this sequence of characters in its title will be selected.
 - **Closed:** Select “Yes” or “No” in the list; any project meeting the requested state will be selected. By default, the option “Yes” is selected.
 - **Project manager:** Select a user in the list; any project whose project managers list includes the introduced one will be selected.
 - **Authorized in all document versions:** Select a user in the list; any project in which the selected user is authorized in all document versions will be selected.
 - **Authorized in approved documents only:** Select a user in the list; any project in which the selected user is authorized in approved document versions will be selected.
 - **Project Documents:** Select a document in the list; any project which includes the introduced document will be selected.
- ⇒ Click *search*.

A new project list will be displayed taken all the filtering constrains introduced into account (i.e., the filtered projects match all constrains introduced).

Example:



The user is searching projects, which code starts as "P" and which project manager name is "Perez Calpena, Ana"

Then, the Search form must be filled as shown in the figure below

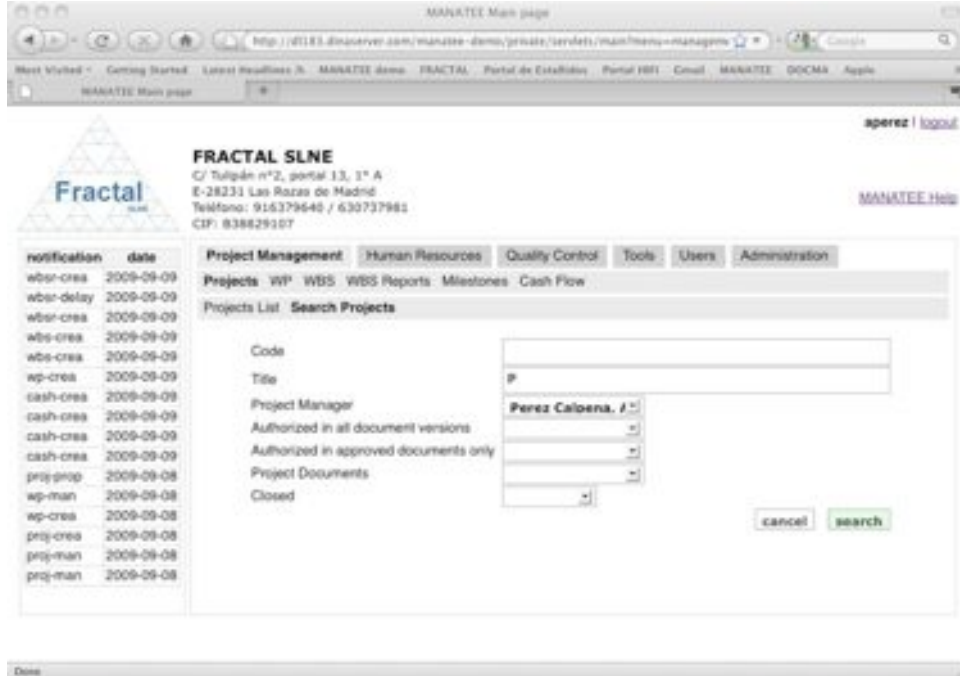


Figure 8: Example of a filled search project form

and the list of projects displayed would be the following one.

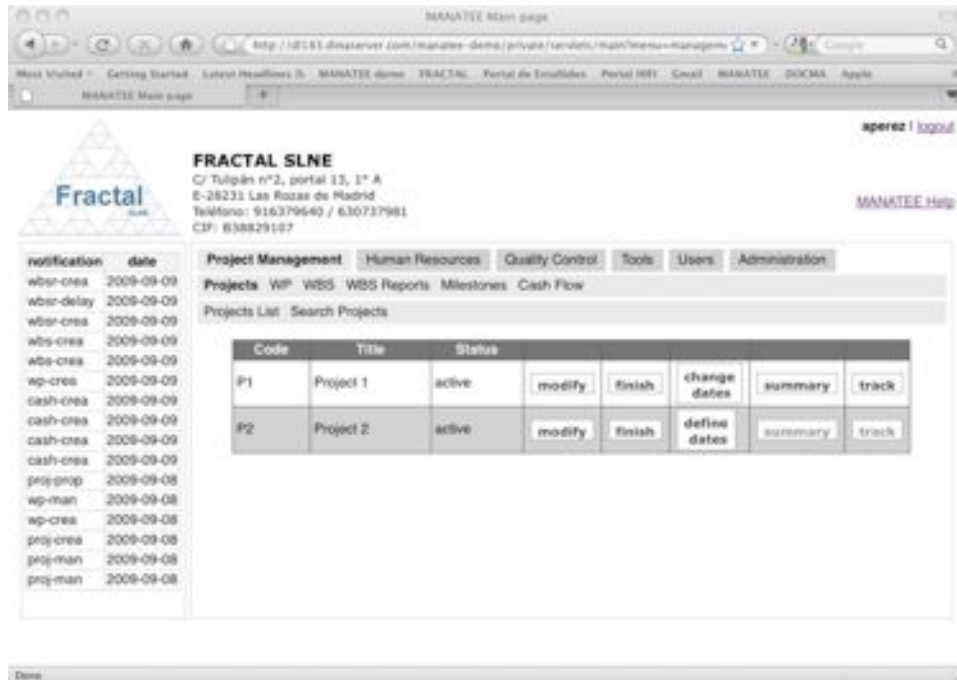


Figure 9: Example of a filtered projects list



Note: If the desired project does not appear in any screen, go to the section 13 which provides some guides to troubleshooting problems.

6.1.3 Defining the dates of a new project

Once a project has been created, the (planned and real) start and the (planned and estimated or real) end dates must be defined.

First, the project, which dates are going to be defined, must be displayed, which can be done following the steps described in the section 6.1.2. Then, click the *define dates* button.

Only the Administrator and the project manager of the corresponding project have the access rights to define the project dates.

The current status of the project must be “*active*”.

The following form will appear.

notification	date
wbs-crea	2009-09-09
wbs-delay	2009-09-09
wbs-crea	2009-09-09
wbs-crea	2009-09-09
wbs-crea	2009-09-09
wp-crea	2009-09-09
cash-crea	2009-09-09
cash-crea	2009-09-09
cash-crea	2009-09-09
cash-crea	2009-09-09
proj-prop	2009-09-08
wp-man	2009-09-08
wp-crea	2009-09-08
proj-crea	2009-09-08
proj-man	2009-09-08
proj-man	2009-09-08

Figure 10: *Defining the project dates page*

- ⇒ Fill the following fields (all mandatory fields are marked with a star):
- **Start planned date:** The planned start date as agreed in the project contract must be introduced.
 - **Start real date:** The real start date (the date when the project is really starting) must be introduced.
 - **End planned date:** The planned end date as agreed in the project contract must be introduced.
 - **End real date:** The real end date (the date when it is estimated than the project is going to end or, at the end of the project, the date when the project has been really ended) must be introduced.



- ⇒ **Move all the WP's and milestones:** Select (tick with the mouse) this option to move all the WP's and WBS's date according to the difference between the previous Start real date and the new Start real date.

Note: This action is only applied if no manpower hours have been already assigned in the PTR's to the WBS's that must be modified.

- ⇒ Click *add properties*.

The project dates will be defined.

Note: If, for any reason, the project properties cannot be defined, go to the section 13 which provides some guides to troubleshooting problems.

6.1.4 Displaying the properties of a project

Once the desired project is displayed, which can be done following the steps described in the section 6.1.2, click the *show* button (note: the projects manager of a particular project can display the properties of this project using the *modify* button instead, see section 6.1.5).

The project properties will be displayed.

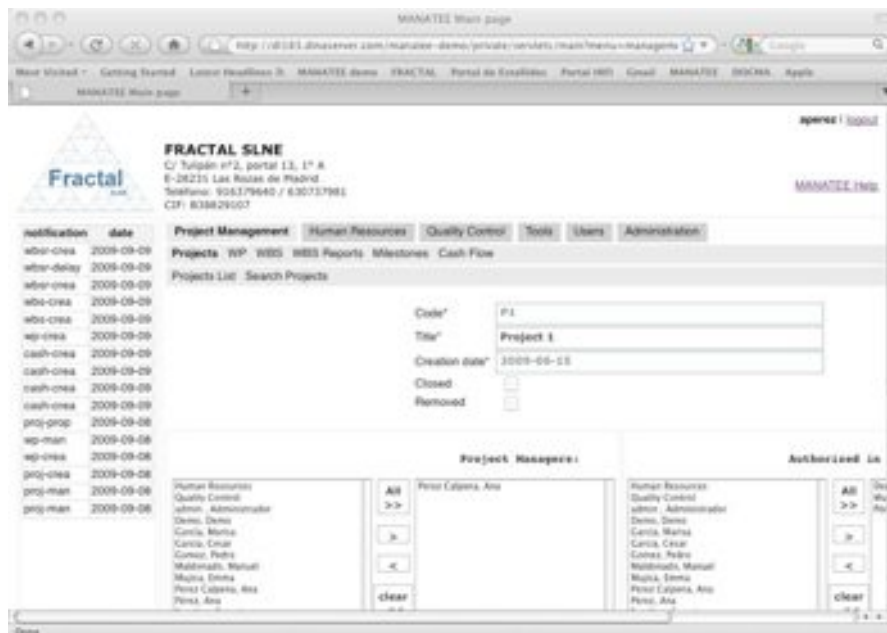


Figure 11: Project properties view

Note: If the *show* or *modify* buttons of the desired project (i.e., the modify button will be enabled instead of the *show* button when the user is the project manager of this project) are not available, go to the section 13 which provides some guides to troubleshooting problems.

6.1.5 Modifying the properties of an existing project

The projects properties include the project general properties and the project dates. Both can be modified as described in the following subsections.



6.1.5.1 Modifying the project general properties

Once the project which properties are going to be modified is displayed, which can be done following the steps described in the section 6.1.2, click the *modify* button.

Only the Administrator and Project managers of the projects to be modified have the access rights to modify the project properties.

The current status of the project must be “*active*”.

The following form will appear.

The screenshot shows the MANATEE web application interface. At the top, there is a navigation bar with tabs for Project Management, Human Resources, Quality Control, Tools, Users, and Administration. The main content area is titled 'Project Management' and shows a 'Projects List' with a search bar. A form for 'Project 1' is displayed, with fields for Code (P1), Title (Project 1), and Creation date (2009-06-15). Below the form are two panels: 'Project Managers' and 'Authorized In'. Both panels show a list of users with 'All' and '>>' buttons. The 'Project Managers' panel also has '<<' and 'clear' buttons. The 'Authorized In' panel has '<<' and 'clear' buttons. A notification table is visible on the left side of the page.

Figure 12: Modifying the project properties page

- ⇒ Modify the desired fields (taken into account constrains listed in section 6.1.1). Only the fields that are not greyed out can be modified.
- ⇒ Click *update*.

The project properties will be modified.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the modification of the project properties.

“The properties of the project (Code) have been modified” to be sent to the Project managers and to the authorized users in all document versions.

Note: If, for any reason, the project properties cannot be modified, go to the section 13 which provides some guides to troubleshooting problems.



6.1.5.2 Modifying the start and end dates of a project

Once the project, which dates are going to be modified, is displayed, which can be done following the steps described in the section 6.1.2, click the *change dates* button.

Only the Administrator and Project managers of the projects to be modified have the access rights to modify the project dates.

The current status of the project must be “*active*”.

The following form will appear.

The screenshot shows a web browser window with the URL `http://192.168.1.10:8080/manatee-demo/private/serafets/main/menu-managemen`. The page header includes the Fractal logo and company information for FRACTAL SLNE. The main content area has a navigation menu with options like Project Management, Human Resources, Quality Control, Tools, Users, and Administration. Below the menu is a table of notifications with columns for notification and date. The primary focus is a form titled 'Modifying the project dates' for project 'P1'. The form contains the following fields and values:

Project*	P1
Start planned date (yyyy-mm-dd)*	2009-02-01
Start real date (yyyy-mm-dd)*	2009-02-01
End planned date (yyyy-mm-dd)*	2011-01-15
End real date (yyyy-mm-dd)*	2011-01-15

At the bottom of the form, there is a checkbox labeled 'Move all the WBS's and Milestones*' which is currently unchecked. Two buttons, 'cancel' and 'update properties', are located at the bottom right of the form.

Figure 13: Modifying the project dates page

- ⇒ Modify the desired fields (taken into account constrains listed in section 6.1.3). Only the fields that are not greyed out can be modified.
- ⇒ Click *update*.

The project dates will be modified.

Note: If, for any reason, the project properties cannot be modified, go to the section 13 which provides some guides to troubleshooting problems.

6.1.6 Display a summary of a project

Once the desired project is displayed, which can be done following the steps described in the section 6.1.2, click the *summary* button.

Only the Human Resources manager and Project managers of the projects have the access rights to display the project summary.

This option is only available when the current status of the project is “*active*” and the projects dates are already defined.



A project summary will be displayed. The project summary contains the following information:

- Project code (as defined in the project general properties).
- Project title (as defined in the project general properties).
- Project managers (as defined in the project general properties).
- Start planned date (as defined in the project dates).
- Start real date (as defined in the project dates).
- End planned date (as defined in the project dates).
- End real date (as defined in the project dates).
- Manpower total hours (total manpower hours assigned in the different WBS's defined in this project).
- Total cost associated to manpower (total manpower cost, taking into account the man-hours and the cost of each person, assigned in the different WBS's defined in this project).
- Total cost associated to other resources (other resources, different to personnel cost, assigned in the different WBS's defined in this project).
- Total project cost (total cost associated to manpower plus total cost associated to other resources).
- A manpower table where the total manpower assigned to the project is displayed (detailing the hours to be dedicated by each person) as well as the total hours already spent (detailing the hours that have been spent by each person).

Note: If the *show* or *modify* buttons of the desired project (i.e., the modify button will be enabled instead of the *show* button when the user is the project manager of this project) are not available, go to the section 13 which provides some guides to troubleshooting problems.

6.1.7 Displaying and printing the information of a project

Once the desired project is displayed, which can be done following the steps described in the section 6.1.2, click the *track* button.

People authorized to the project have the access rights to display and print the project information described in this section.

This option is only available when the current status of the project is “*active*” and the projects dates are already defined.

The following window will be displayed.



The screenshot shows a web-based interface for project management. At the top, there are navigation tabs: Project Management, Human Resources, Quality Control, Tools, Users, and Administration. Below these, there are sub-tabs: Projects, WP, WBS, WBS Reports, Milestones, and Cash Flow. The main content area is titled 'Projects List Search Projects'. It contains a section for selecting a plan to print for 'P1 Project'. The options are:

- Project Plan Summary (print WP structure only)
- Project Plan (print WP structure and the associated WBS)
- Project Plan Gantt chart
- Project Plan Gantt chart (print WP structure only)
- Project Plan Gantt chart (print selected WP and the associated WBS)
- Quality Data Summary
- Project Budget Control
- Milestone Summary
- Cash Flow Summary
- External Expenses

Additional fields include 'Export to' text boxes, 'Select WP' (with 'WP-P1-Q01' selected), and 'Filter by' (with 'WP's' selected). Date fields for 'Period Start Date' and 'Period End Date' are also present. At the bottom right, there are 'previous' and 'Print' buttons.

Figure 14: Track project information menu

The following options are available:

- **Project plan summary (print WP structure only)**, which includes the project properties, the project dates and the definitions of the WP's associated to this project.
- **Project plan (print WP structure and the associated WBS)**, which includes the project properties, the project dates, the definition of the WP's associated to this project and the definition of the WBS's associated to the WP's.
- **Project Plan Gantt chart**, which includes the Gantt view of all the WP's and WBS's of the project. If the *Export to* option is selected, a txt file (compatible with the project software MS Project) or an xml file (compatible with the project software Merlin) is obtained. These files allow importing the project plan to the corresponding programs.
- **Project Plan Gantt chart (print WP structure only)**, which includes the Gantt view of only the WP's of the project. If the *Export to* option is selected, a txt file (compatible with the project software MS Project) or an xml file (compatible with the project software Merlin) is obtained. These files allow importing the project plan to the corresponding programs.
- **Project Plan Gantt chart (print selected WP and the associated WBS)**, which includes the Gantt view of the selected WP and WBS's of the project. If the *Export to* option is selected, a txt file (compatible with the project software MS Project) or an xml file (compatible with the project software Merlin) is obtained. These files allow importing the project plan to the corresponding programs.
- **Quality data summary**, which include the information recorded in the risk, non-conformities and actions that have been opened in the project.



- **Project budget control**, which include the project budget information for the selected period (the budget information can be organized by WP's or WBS's).
- **Milestone summary**, which include a summary of the milestones of the project.
- **Cash flow summary**, which include a summary of the project cash flow.
- **External expenses**, which include a summary of the external expenses of the project.

Select the desired option and, then, click *print*.

6.1.7.1 Project plan summary

The project plan summary contains the following information:

- Project code (as defined in the project general properties).
- Project title (as defined in the project general properties).
- Project managers (as defined in the project general properties).
- Start planned date (as defined in the project dates).
- Start real date (as defined in the project dates).
- End planned date (as defined in the project dates).
- End real date (as defined in the project dates).
- Information about each WP associated to this project, which includes:
 - WP code (as defined in the WP properties).
 - WP title (as defined in the WP properties).
 - WP manager (as defined in the WP properties).
 - WP project (as defined in the WP properties).
 - WP scope (as defined in the WP properties).
 - WP description (as defined in the WP properties).

The project plan summary can be printed or saved in pdf format.

6.1.7.2 Project plan

The project plan contains the following information:

- Project code (as defined in the project general properties).
- Project title (as defined in the project general properties).
- Project managers (as defined in the project general properties).
- Start planned date (as defined in the project dates).
- Start real date (as defined in the project dates).
- End planned date (as defined in the project dates).



- End real date (as defined in the project dates).
- Information about each WP associated to this project, which includes:
 - WP code (as defined in the WP properties).
 - WP title (as defined in the WP properties).
 - WP manager (as defined in the WP properties).
 - WP project (as defined in the WP properties).
 - Scope (as defined in the WP properties).
 - Description (as defined in the WP properties).
 - Information about each WBS associated to this WP, which includes:
 - WBS code (as defined in the WBS properties).
 - WBS title (as defined in the WBS properties).
 - WBS responsible (as defined in the WBS properties).
 - WP manager (as defined in the WBS properties).
 - WP project (as defined in the WBS properties).
 - Scope (as defined in the WBS properties).
 - Description (as defined in the WBS properties).
 - Goal (as defined in the WBS properties).
 - Inputs (as defined in the WBS properties).
 - Tasks (as defined in the WBS properties).
 - Deliverables (as defined in the WBS properties).
 - Planned start date (as defined in the WBS properties).
 - Real start date (as defined in the WBS properties).
 - Planned end date (as defined in the WBS properties).
 - Real end date (as defined in the WBS properties).
 - Associated milestones (as defined in the WBS properties).
 - Predecessor (as defined in the WBS properties).
 - Manpower (man-hours per each person as defined in the WBS properties).
 - Hardware resources (as defined in the WBS properties).
 - Software resources (as defined in the WBS properties).
 - Sub-contracts (as defined in the WBS properties).
 - Cost associated to the manpower (as defined in the WBS properties).

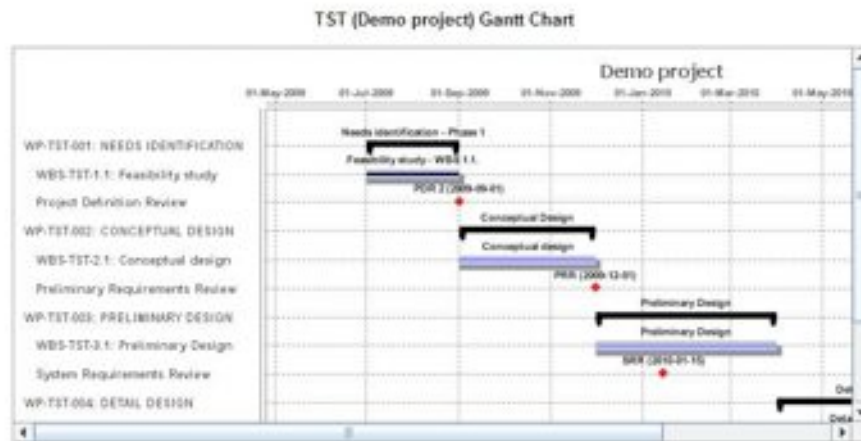


- Cost associated to other resources (as defined in the WBS properties).
- % completion (as included in the WBS properties).

The project plan can be printed or saved in pdf format.

6.1.7.3 Project Plan Gantt chart

The Gantt chart provides a Gantt view of the WP's, WBS's and Milestones dates included in the selected project.



Notes:

- Click and drag the mouse left button to select a smaller area of the plot (zoom in).
- Click the mouse right button on the plot to enlarge/reduce the coordinate ranges (zoom out/in).
- Click the mouse right button on the plot to print the Gantt Chart.

Figure 15: Project Gantt chart view

WP bars span from the real start date (as defined in the WP properties) to the real end date (as defined in the WP properties).

Outer WBS bars span from the real start date (as defined in the WBS properties) to the real end date (as defined in the WBS properties).

Inner WBS bars represent the percentage of WBS completion (as estimated in the WBS properties).

Milestones marks display the real milestones dates (as defined in the WBS properties).

The Gantt chart default range of the date axis includes all project dates (WP's, WBS's and Milestones) to be displayed.

In order to display a smaller date axis, click and drag the left mouse button in the graph to select the desired area.

Other operations related with the range axis and to modify the properties of the graph can be done by clicking the right mouse button and selecting the right choice in the graph menu. The following options are available:

- **Properties:** Several graph properties such as the title, colours or fonts can be customized.
- **Save as:** The Gantt chart can be saved as png format.



- *Print*: The Gantt chart can be printed or saved in pdf format.
- *Zoom in*: A smaller area of the date axis is displayed
- *Zoom out*: A bigger area of the date axis is displayed.
- *Auto range*: The default range of the date axis is displayed.

Another function about the Gantt chart is that it can be exported to a txt or xml file to can use in others compatibles project software. The txt file is compatible with the MS Project software, and the xml file is compatible with the Merlin software.

6.1.7.4 *Project Plan Gantt chart (WP only)*

A Gantt chart is displayed, which provides a Gantt view of the WP's included in the selected project.

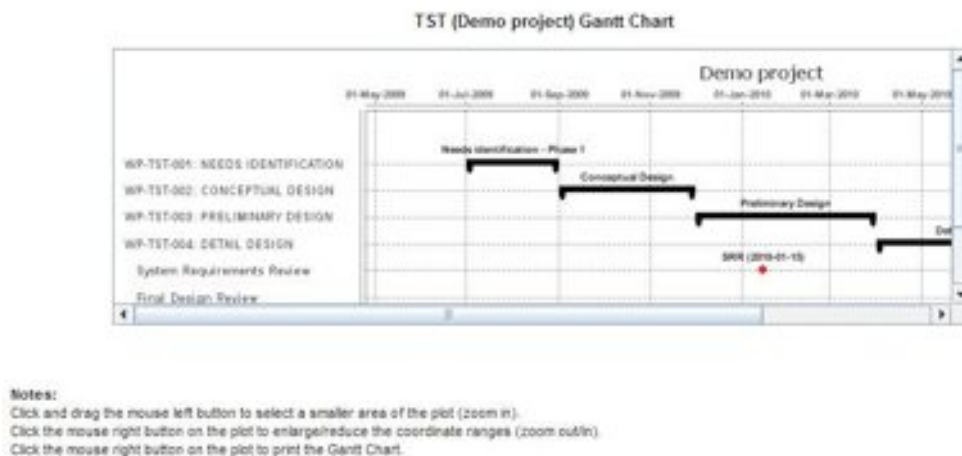


Figure 16: Project Gantt chart (only WPs) view

WP bars span from the real start date (as defined in the WP properties) to the real end date (as defined in the WP properties).

The Gantt chart default range of the date axis includes all project dates (WP's) to be displayed.

Smaller date periods and other operations related with to modify the range axis and the properties of the graph can be done as described in section 6.1.7.3.

Another function about the Gantt chart is that it can be exported to a txt or xml file to can use in others compatibles project software. The txt file is compatible with the MS Project software, and the xml file is compatible with the Merlin software.

6.1.7.5 *Project Plan Gantt chart (print selected WP and the associated WBS)*

After selecting this option, the WP's associated to the selected project will be available in the list.

⇒ Select a WP.



⇒ Click *print*.

A Gantt chart is displayed, which provides a Gantt view of the associated WBS included in the selected WP of the project.

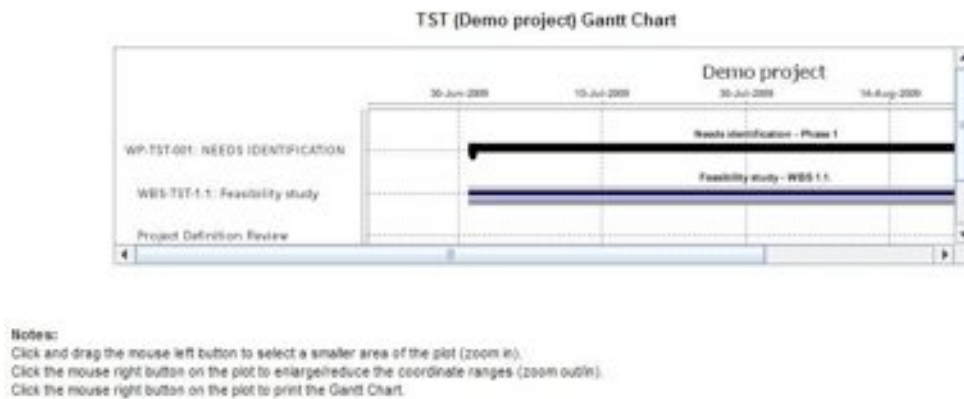


Figure 17: Project Gantt chart (only WPs) view

WP bars span from the real start date (as defined in the WBS's properties) to the real end date (as defined in the WBS's properties).

The Gantt chart default range of the date axis includes all project dates (WBS's) to be displayed.

Smaller date periods and other operations related with to modify the range axis and the properties of the graph can be done as described in section 6.1.7.3.

Another function about the Gantt chart is that it can be exported to a txt or xml file to can use in others compatibles project software. The txt file is compatible with the MS Project software, and the xml file is compatible with the Merlin software.

6.1.7.6 Quality data summary

The quality data summary contains the following information:

- Project code (as defined in the project general properties).
- Project title (as defined in the project general properties).
- Information about any risk associated to this project, which includes:
 - Risk code (as defined in the risk properties).
 - Risk title (as defined in the risk properties).
 - Project (as defined in the risk properties).
 - Creation date (as defined in the risk properties).
 - Modification date (as defined in the risk properties).
 - Description (as defined in the risk properties).
 - Effect (as defined in the risk properties).



- Severity (as defined in the risk properties).
- Probability (as defined in the risk properties).
- Actions (as defined in the risk properties).
- Conclusions (as defined in the risk properties).
- Information about any action associated to this project, which includes:
 - Action code (as defined in the action properties).
 - Action title (as defined in the action properties).
 - Project (as defined in the action properties).
 - Creation date (as defined in the action properties).
 - Modification date (as defined in the action properties).
 - Due date (as defined in the action properties).
 - Assigned to (as defined in the action properties).
 - State (as defined in the action properties).
 - Description (as defined in the action properties).
 - Conclusions (as defined in the action properties).
 - Due date (as defined in the action properties).
 - Assigned to (as defined in the action properties).
 - State (as defined in the action properties).
 - Due date (as defined in the action properties).
 - Assigned to (as defined in the action properties).
- Information about any non-conformity associated to this project, which includes:
 - Non-conformity code (as defined in the non-conformity properties).
 - Non-conformity title (as defined in the non-conformity properties).
 - Project (as defined in the non-conformity properties).
 - Creation date (as defined in the non-conformity properties).
 - Modification date (as defined in the non-conformity properties).
 - Description (as defined in the non-conformity properties).
 - Priority (as defined in the non-conformity properties).
 - Actions (as defined in the non-conformity properties).
 - Conclusions (as defined in the non-conformity properties).

The quality data summary can be printed or saved in pdf format.



6.1.7.7 *Project Budget Control*

After selecting this option, the following data must be introduced in order to display the project budget information for a requested period.

- ⇒ **Filter by:** Chose to display the budget information grouped by WP's or, in more detail, by WBS's.
- ⇒ **Period Start date:** Introduce the start date of the period.
- ⇒ **Period End date:** Introduce the end date of the period.
- ⇒ Click *print*.

The project budget data summary contains the following information:

- Project code (as defined in the project general properties).
- Project title (as defined in the project general properties).
- Period Start date (as introduced by the user to display the project budget control information).
- Period End date (as introduced by the user to display the project budget control information).
- The budget information related with each WP or WBS (according to the selected option) associated to the project, which includes:
 - WP or WBS code (as defined in the WP or WBS properties)
 - WP or WBS title (as defined in the WP or WBS properties)
 - User spent/planned hours (a manpower table where the manpower hours already spent or assigned to each WP or WBS are displayed for the selected period and for each person involved in the WP or WBS)
 - Total spent manpower budget (already spent manpower cost in this WP or WBS for the selected period)
 - Total planned manpower budget (total cost associated to manpower in this WP or WBS for the selected period)
 - Total spent other resources budget (already spent other resources cost in this WP or WBS for the selected period)
 - Total planned other resources budget (total cost associated to other resources in this WP or WBS for the selected period)
 - Total spent budget (already spent cost, adding the manpower and other resources, in this WP or WBS for the selected period)
 - Total planned budget (total cost, adding the manpower and other resources, in this WP or WBS for the selected period)
- The total project budget information, which is computed adding the values of each WP or WBS, according to the selected option, listed in the previous list.

The project budget data summary can be printed or saved in pdf format.



6.1.7.8 *Milestone summary*

The milestone data summary contains the following information:

- Project code (as defined in the project general properties).
- Project title (as defined in the project general properties).
- Information related with each milestone associated to the project, which includes:
 - Milestone date (as defined in the milestone properties)
 - Milestone name (as defined in the milestone properties)
 - Milestone planned date (as defined in the milestone properties)
 - Milestone critical (as defined in the milestone properties)

The milestone data summary can be printed or saved in pdf format.

6.1.7.9 *Cash flow summary*

The cash flow data summary contains the following information:

- Project code (as defined in the project general properties).
- Project title (as defined in the project general properties).
- Information related with each cash flow milestone associated to the project, which includes:
 - Cash flow milestone date (as defined in the cash flow milestone properties)
 - Cash flow milestone name (as defined in the cash flow milestone properties)
 - Cash flow milestone code (as defined in the cash flow milestone properties)
 - Cash flow milestone planned date (as defined in the cash flow milestone properties)
 - Cash flow milestone type (as defined in the cash flow milestone properties)
 - Cash flow milestone amount (as defined in the cash flow milestone properties)

The cash flow data summary can be printed or saved in pdf format.

6.1.7.10 *External expenses*

After selecting this option, the following data must be introduced in order to display the external expenses of the project for a requested period.

- ⇒ **Period Start date:** Introduce the start date of the period.
- ⇒ **Period End date:** Introduce the end date of the period.
- ⇒ Click *print*.

The external expenses summary contains the following information:

- Project title (as defined in the project general properties).



- Project code (as defined in the project general properties).
- Period Start date (as introduced by the user to display the external expenses information).
- Period End date (as introduced by the user to display the external expenses information).
- Total planned expenses (total expenses planned in the project, human resources are not considered, in the selected period according to the information included in the WBS's).
- Total real expenses (total expenses already done in the project, human resources are not considered, in the selected period according to the information included in the WBS Reports).
- Total planned cash-out (total cash-out in the selected period according to the information included in the planned cash-out milestones).
- Total real cash-out (total cash-out in the selected period according to the information included in the real cash-out milestones).
- Total planned net expenses (total planned expenses minus total planned cash-out).
- Total real net expenses (total real expenses minus total real cash-out).

The external expenses summary can be printed or saved in pdf format.

6.1.8 Archiving a project

Once the project that is going to be archived is displayed, which can be done following the steps described in the section 6.1.2, click the *finish* button.

Only the Administrator and the Project managers of the project to be archived have the access rights to archive projects.

The current status of the project must be “*active*”.

The following window displaying the project properties will appear.

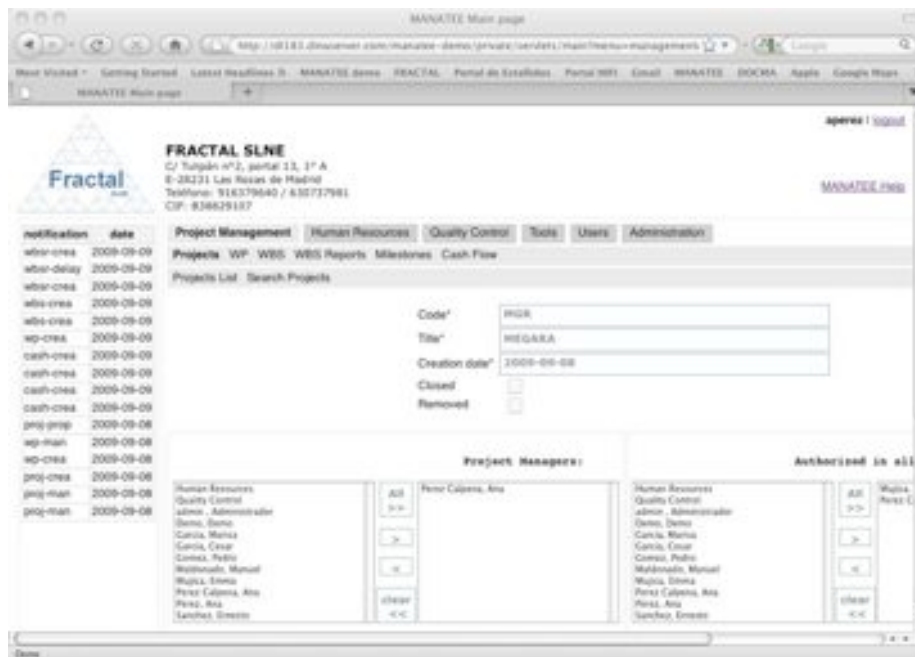


Figure 18: Project properties view

⇒ Click *finish*.

MANATEE will check that the status of all document associated to this project is *approved* or *obsolete*.

⇒ If all related documents are “*approved*” or “*obsolete*”, the project will be finished.

The project status will change to “*finished*”.

The status of the project documents will be the same status (“*approved*” or “*obsolete*”) they had before removing the project.

⇒ If there are documents in a different status to “*approved*” or “*obsolete*”, the project cannot be finished.

In this case, the following window will appear to warn the user that the action requested cannot be done.

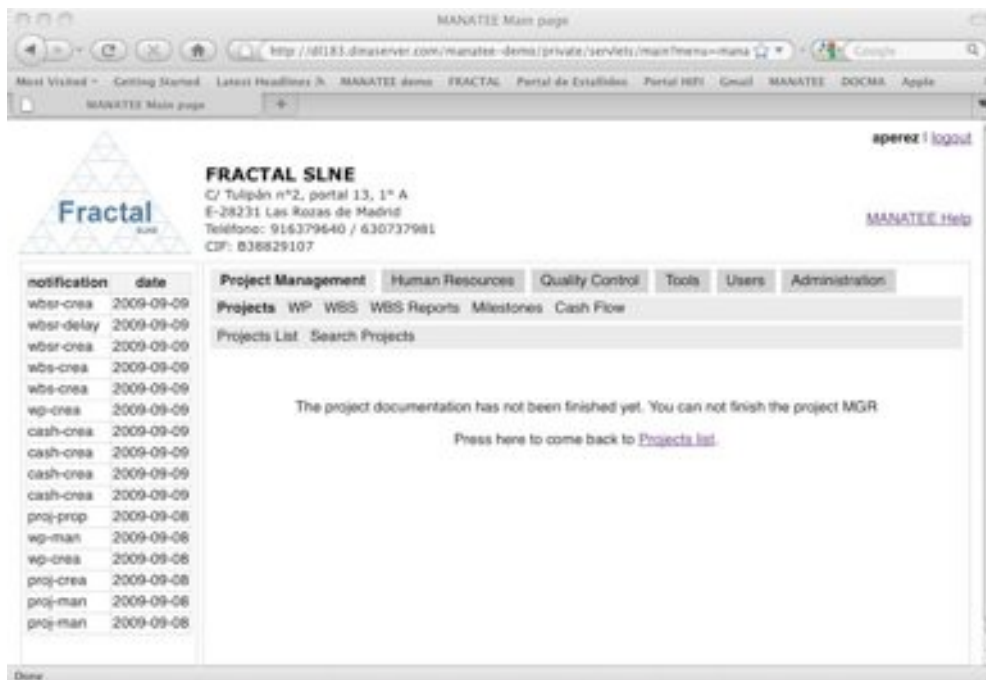


Figure 19: Warning window to notify the user that the project can not be finished

If the project has been finished, a notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform that the project has been finished.

“*The project (Code) has been finished*” to be sent to the Project managers and to the authorized users in the project.

Note: If, for any reason, the *finish* button is not available, go to the section 13 which provides some guides to troubleshooting problems.

6.1.9 Activating an archived project

Once the project that is going to be again activated is displayed, which can be done following the steps described in the section 6.1.2, click the *active* button.

Only the Administrator and the Project managers of the project to be activated have the access rights to do this action.

The current status of the project must be “*finished*”.

The following window displaying the project properties will appear.



Figure 20: Project properties view

⇒ Click *active*.

The project will be activated.

The project status will change to “*active*”.

The status of the project documents will be the same status (“*approved*” or “*obsolete*”) they had before declaring the project as finished.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them that the project has been activated.

“*The project (Code) is active*” to be sent to the Project managers and to the authorized users in the project.

Note: If, for any reason, the *active* button is not available, go to the section 13, which provides some guides to troubleshooting problems.

6.1.10 **Removing a project**

Once the project that is going to be removed is displayed, which can be done following the steps described in the section 6.1.2, click the *remove* button.

Only the Administrator has the access rights to remove projects.

The current status of the project must be “*active*” or “*finished*”.

The current status of the project documents must be “*approved*” or “*obsolete*”.

The following window displaying the project properties will appear.



Figure 21: Project properties view

⇒ Click *remove*.

The project will be removed from the system.

The project status will change to “*removed*”.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about that the project has been removed.

“*The project (Code) has been removed from the system*” to be sent to the Project managers and to the authorized users in the project.

Note: If, for any reason, the *remove* button is not available, go to the section 13, which provides some guides to troubleshooting problems.

6.1.11 Restoring a project

Once the project that is going to be restored is displayed, which can be done following the steps described in the section 6.1.2, click the *restore* button.

Only the Administrator has the access rights to restore projects.

The current status of the project must be “*removed*”.

The following window displaying the project properties will appear.

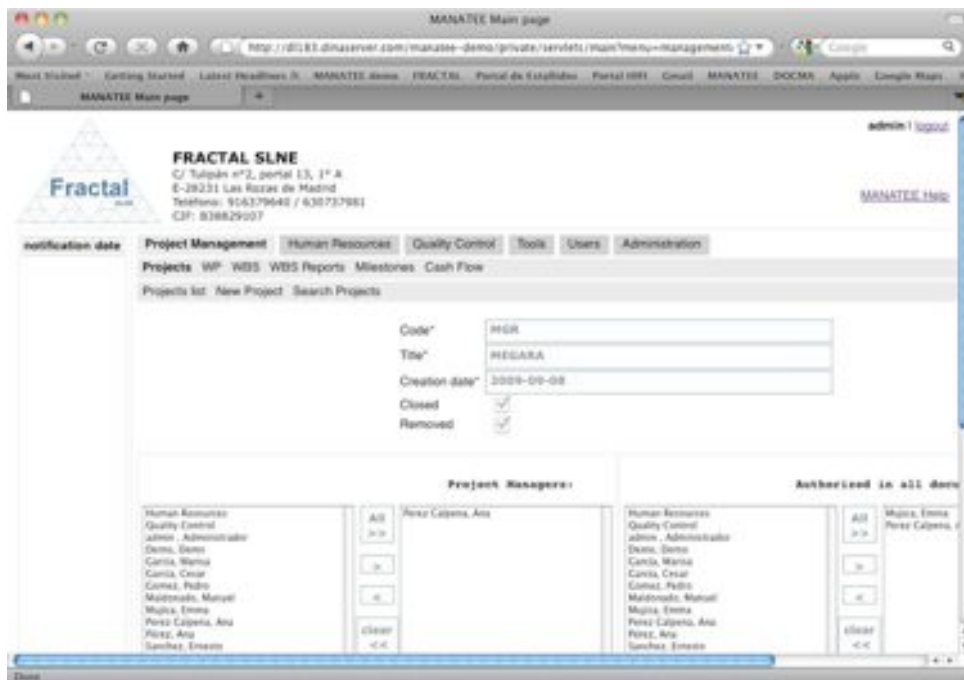


Figure 22: Project properties view

⇒ Click *restore*.

The project will be restored into the system.

The project status will change to “*finished*”.

The status of the project documents will be “*approved*”.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about that the project has been restored.

“*The project (Code) has been restored*” to be sent to the Project managers and to the authorized users in the project.

Note: If, for any reason, the *restore* button is not available, go to the section 13, which provides some guides to troubleshooting problems.

6.2 WP administration

MANATEE provides the capabilities required to manage the WP’s that are defined in a project.

From the WP management point of view, MANATEE provides the following functionality:

- Create a new WP
- Search WP using different criteria
- Display the complete or filtered WP list
- Display the WP properties
- Modify the definition of a WP



- Print the WP details
- Print the WP and all associated WBS's details
- Delete a WP

It is important to remember that each user can only do actions on the WP according to the access rights that this particular user has (see sections 4 or 5.2 for more information).

6.2.1 Creating a new WP

To start working with WP's, select *Project Management* tab and, then, *WP* tab.

In order to create a new WP, select *New WP* tab.

The current status of the project must be “*active*”.

Only Project Managers have this option available.

The following form will appear.

The screenshot shows the 'New WP' form in the MANATEE application. The form is titled 'New WP' and is part of the 'Project Management' section. It includes the following fields and controls:

- Project***: A dropdown menu with 'P1' selected.
- Code***: A text input field.
- Title***: A text input field.
- Description***: A large text area.
- WP Manager***: A dropdown menu with 'Demo, Demo' selected.
- Gantt title**: A text input field.
- Active***: A checked checkbox.

At the bottom right of the form, there are two buttons: 'cancel' and 'add WP'.

Figure 23: Creating a WP page

⇒ Fill the following fields (all mandatory fields are marked with a star):

- **Project:** Select in the list the project to which the new WP is going to be associated. A user must be the project manager of a project in order to create a new WP in this project. Therefore, only projects that the login user is project manager will be displayed in the list.
- **Code:** The Code is created automatically following the pattern described below (see section 14 for more information about which code patterns can be used):

WP-PC-nnn

where,



WP is the acronym of Work Package,

PC will be the project code of the project assigned to the WP,

nnn will be a sequence number that is automatically generated by the application

- **Title:** Introduce the WP title. This is a text field and the maximum length of this field is 300 characters.
- **Description:** Introduce a description of the WP scope. This is a text field and the length of the field is not limited.
- **WP manager:** Select in the list which user is going to be the WP manager. All users created in MANATEE are available in the list.
- **Gantt title:** Introduce the WP title that it will be used in the Gantt charts. This is a text field and the maximum length of this field is 100 characters.
- **Active:** Click this box to activate the WP (i.e., if the WP is created but it is not activated, WBS's could be created associated to this WP but no other actions, related with manpower, could be done. Otherwise, if the WP is created and activated, the WP is taken into account in the project budget control summaries and it appears in the PTR's lists). This option is activated by default.

⇒ Click *add WP*.

The WP will be created.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the creation of the WP.

"The WP (Code) has been created" to be sent to the Project managers and WP manager.

A notification will be also sent (internally, a MANATEE notification) to the corresponding users in order to inform them about they are designed project manager.

"You have been named manager of the WP (Code)" to be sent to the WP manager.

Note: If, for any reason, the WP cannot be created, go to the section 13, which provides some guides to troubleshooting problems.

6.2.2 Searching WP's

To start looking for WP's, select *Project Management* tab and, then, *WP* tab.

The complete list of WP that the current user can see will be displayed.

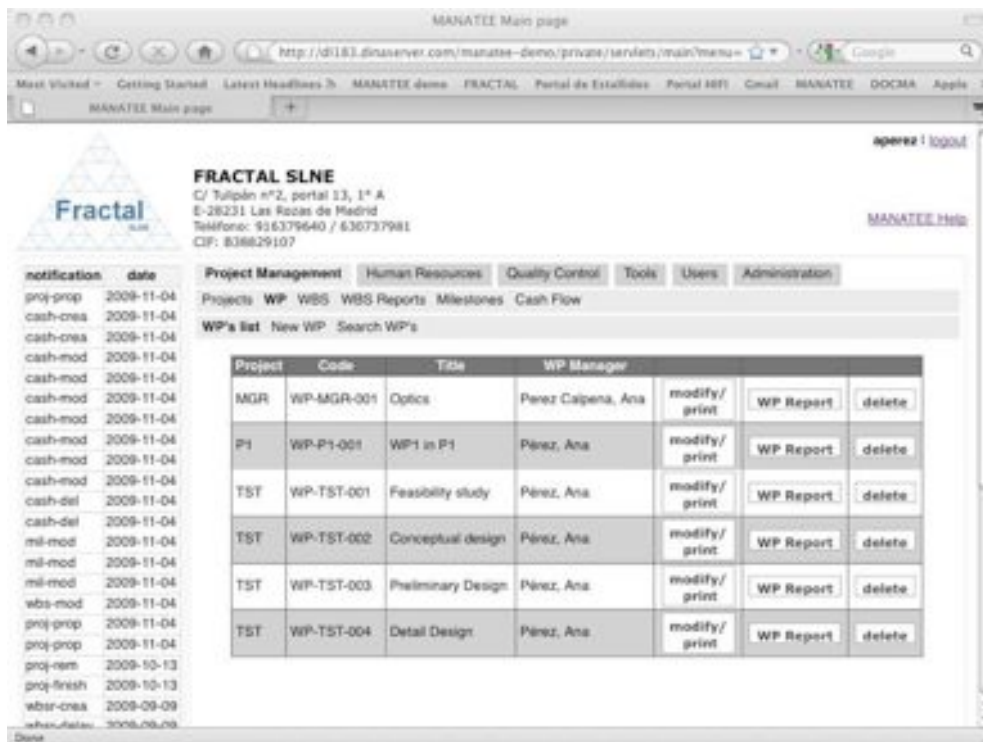


Figure 24: WP List

As shown in the figure, the following issues could be available for each WP in the list:

- **Project:** The code of the project associated to the WP.
- **Code:** The code of the WP.
- **Title:** The title of the WP.
- **WP manager:** The manager of the WP.
- **Show / Modify/print:** Two different action buttons can appear in this position:
 - The *show* button displays the WP properties.
 - The *modify/print* button allows modifying the WP properties and printing the WP details.
- **WP report:** The *WP report* button allows printing a summary of the WP and associated WBS's information.
- **Delete:** The *delete* button allows removing the WP completely from the system.

The actions buttons of each WP will not be enabled (i.e., they will be displayed as greyed out) according to the access rights of the user that has login into the system.

The WP's are always arranged by the code.

Each screen will show 10 WP's, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the WP's list.



Figure 25: Page selectors

In order to search a particular WP or to constrain the number of WP to be displayed, select *Search WP* tab.

The following form will appear.

Figure 26: Search WP form

- ⇒ Fill as many fields as desired in order to filter the WP list.
- **Project:** Introduce any number of alphanumeric characters (this is not case sensitive); any WP whose project contains this sequence of characters in its title will be selected.
 - **Code:** Introduce any number of alphanumeric characters (this is not case sensitive); any WP which contains this sequence of characters in its code will be selected.
 - **Title:** Introduce any number of alphanumeric characters (this is not case sensitive); any WP which contains this sequence of characters in its title will be selected.
 - **Description:** Introduce any number of alphanumeric characters (this is not case sensitive); any WP which contains this sequence of characters in its description will be selected.
 - **WP manager:** Select a user in the list; any WP whose manager corresponds to the introduced one will be selected.
 - **Gantt title:** Introduce any number of alphanumeric characters (this is not case sensitive); any WP which contains this sequence of characters in its Gantt title will be selected.
 - **Active:** Select “Yes” or “No” in the list; any WP meeting the requested state will be selected. By default, the option “Yes” is selected.



⇒ Click *search*.

A new WP list will be displayed taken all the filtering constrains introduced into account (i.e., the filtered WP match all constrains introduced).

Example:

The user is searching all WP included in the project "TST", which WP manager name is "Pérez, Ana"

Then, the Search form must be filled as shown in the figure below

Figure 27: Example of a filled search WP form

and the list of WP displayed would be the following one.

Project	Code	Title	WP Manager	modify/print	WP Report	delete
TST	WP-TST-001	Feasibility study	Pérez, Ana	modify/print	WP Report	delete
TST	WP-TST-002	Conceptual design	Pérez, Ana	modify/print	WP Report	delete
TST	WP-TST-003	Preliminary Design	Pérez, Ana	modify/print	WP Report	delete
TST	WP-TST-004	Detail Design	Pérez, Ana	modify/print	WP Report	delete



Figure 28: Example of a filtered WP list

Note: If the desired WP does not appear in any screen, go to the section 13, which provides some guides to troubleshooting problems.

6.2.3 Displaying the properties of a WP

Once the desired WP is displayed, which can be done following the steps described in the section 6.2.2, click the *show* button (note: project managers of the particular project associated to the WP can display the properties of this WP using the *modify* button instead, see section 6.2.4).

The Administrator and the people authorized to the project (including project managers and WP manager) associated to the WP have the access rights to display the properties of this WP.

The WP properties will be displayed.

Figure 29: WP properties view

Note: If the *show* or *modify* buttons of the desired WP (i.e., the modify button will be enabled instead of the *show* button when the user is a project manager of this project or the WP manager) are not available, go to the section 13 which provides some guides to troubleshooting problems.

6.2.4 Modifying the properties of an existing WP

Once the WP, which properties are going to be modified, is displayed, which can be done following the steps described in the section 6.2.2, click the *modify/print* button.

Only Project managers of the project associated to the WP have the access rights to modify the WP properties.

The current status of the project must be “*active*”.

The following form will appear.



notification date

FRACTAL SLNE
C/ Tulipán nº2, portal 13, 1ª A
E-28231 Las Rozas de Madrid
Teléfono: 916379640 / 630737981
CIF: 838829107

Project Management | Human Resources | Quality Control | Tools | Users | Administration

Projects | WP | WBS | WBS Reports | Milestones | Cash Flow

WPs list | New WP | Search WPs

Project* P1

Code* WP-P1-001

Title* WP1 in P1

Description* Test

WP Manager* Pérez, Ana

Gantt title

Active*

cancel update Print WP

Figure 30: Modifying the WP properties page

- ⇒ Modify the desired fields (taken into account constrains listed in section 6.2.1). Only the fields that are not greyed out can be modified.
- ⇒ Click *update*.

The WP properties will be modified.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the modification of the WP properties.

“The properties of WP (Code) have been modified” to be sent to the Project managers and the WP manager.

Note: If, for any reason, the WP properties cannot be modified, go to the section 13, which provides some guides to troubleshooting problems.

6.2.5 Printing the WP details

Once the WP, which properties are going to be printed, is displayed, which can be done following the steps described in the section 6.2.2, click the *modify/print* button.

Only project managers of the project associated to the WP and the WP manager of this particular WP have the access rights to print the WP properties.

The current status of the project must be *“active”*.

The WP properties will be displayed.

- ⇒ Click *print WP* button.

A summary of the WP properties that contains the following information will be generated:

- WP code (as defined in the WP properties).
- WP title (as defined in the WP properties).



- WP manager (as defined in the WP properties).
- WP project (as defined in the WP properties).
- WP description (as defined in the WP properties).

The WP details can be printed or saved in pdf format.

Note: If, for any reason, the *modify/print* button is not available, go to the section 13 which provides some guides to troubleshooting problems.

6.2.6 Printing a WP Report

Once the WP, which WP Report is going to be generated, is displayed, which can be done following the steps described in the section 6.2.2, click the *WP report* button.

Only project managers of the project associated to the WP and the WP manager of this particular WP have the access rights to generate WP Reports.

The current status of the project must be “*active*”.

The WP report contains the following information:

- WP code (as defined in the WP properties).
- WP title (as defined in the WP properties).
- WP manager (as defined in the WP properties).
- WP project (as defined in the WP properties).
- WP description (as defined in the WP properties).
- Information about each WBS associated to this WP, which includes:
 - WBS code (as defined in the WBS properties).
 - WBS title (as defined in the WBS properties).
 - WBS responsible (as defined in the WBS properties).
 - WP manager (as defined in the WBS properties).
 - WP project (as defined in the WBS properties).
 - Scope (as defined in the WBS properties).
 - Description (as defined in the WBS properties).
 - Goal (as defined in the WBS properties).
 - Inputs (as defined in the WBS properties).
 - Tasks (as defined in the WBS properties).
 - Deliverables (as defined in the WBS properties).
 - Planned start date (as defined in the WBS properties).



- Real start date (as defined in the WBS properties).
- Planned end date (as defined in the WBS properties).
- Real end date (as defined in the WBS properties).
- Associated milestones (as defined in the WBS properties).
- Predecessor (as defined in the WBS properties).
- Manpower (man-hours per each person as defined in the WBS properties).
- Hardware resources (as defined in the WBS properties).
- Software resources (as defined in the WBS properties).
- Sub-contracts (as defined in the WBS properties).
- Cost associated to the manpower (as defined in the WBS properties).
- Cost associated to other resources (as defined in the WBS properties).
- % completion (as included in the WBS properties).

The WP report can be printed or saved in pdf format.

Note: If, for any reason, the *WP print* button is not available, go to the section 13 which provides some guides to troubleshooting problems.

6.2.7 Deleting a WP

Once the WP, which is going to be deleted, is displayed, which can be done following the steps described in the section 6.2.2, click the *delete* button.

Only the project managers of the project associated to the WP have the access rights to delete the WP.

The current status of the project must be “*active*”.

The following window displaying the WP properties will appear.



Figure 31: WP properties view

⇒ Click *delete*.

The WBS's associated to the WP will be also deleted. A warning about this fact will be displayed to the user to confirm that the WP must be deleted.

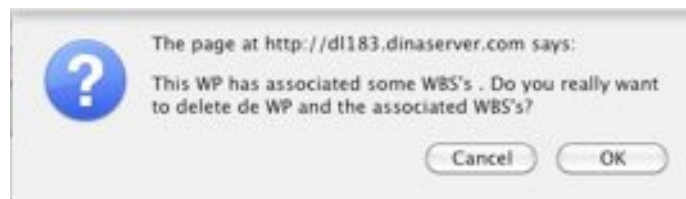


Figure 32: Warning before deleting a WP with associated WBS's

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about that the WP has been deleted.

“The WP (Code) has been deleted” to be sent to the Project managers and the WP manager.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about that the WBS has been deleted (if any).

“The WBS (Code) has been deleted” to be sent to the Project managers, the WP manager and the WBS responsible.

Note: If, for any reason, the *delete* button is not available, go to the section 13, which provides some guides to troubleshooting problems.

6.3 WBS administration

MANATEE provides the capabilities required to manage the WBS's that are defined in a WP.

From the WBS management point of view, MANATEE provides the following functionality:

- Create a new WBS



- Search WBS using different criteria
- Display the complete or filtered WBS list
- Display the information included in the WBS
- Modify the information included in the WBS
- Print the WBS information
- Delete a WBS

It is important to remember that each user can only do actions on the WBS according to the access rights that this particular user has (see sections 4 or 5.2 for more information).

6.3.1 Creating a new WBS

To start working with WBS's, select *Project Management* tab and, then, *WBS* tab.

In order to create a new WBS, select *New WBS* tab.

Only project managers and WP managers have this option available.

The following form will appear.

Figure 33: *Creating a WBS page*

⇒ Fill the following fields (all mandatory fields are marked with a star):

- **WP Code:** Select in the list the WP to which the new WBS is going to be associated. The user must be the project manager of the associated project or the WP responsible in order to create a new WBS in this WP. Therefore, only WP that the login user is WP or project manager will be displayed in the list.
- **WP manager:** This field is automatically filled after the WP Code has been already selected.



- **Code:** Introduce a WBS code (any combination of alphanumeric characters). The application automatically fills this field with the WP Code (changing the “WP” acronym in the code by “WBS”) because it is recommended to choose a WBS code based in the corresponding WP code. The suggested text can be changed as desired by the user. The maximum length of this field is 45 characters.

Note: The application will check that no WBS duplicated codes are introduced.

- **WBS Title:** Introduce the WBS title. This is a text field and the maximum length of this field is 300 characters.
- **WBS Responsible:** Select in the list which user is going to be the WBS responsible. All users created in MANATEE are available in the list.
- **Description:** Introduce a description of the WBS scope. This is a text field and the length of the field is not limited.
- **Gantt title:** Introduce the WBS title that it will be used in the Gantt charts. This is a text field and the maximum length of this field is 100 characters.
- **Goals:** Introduce the goals of the WBS. This is a text field and the length of the field is not limited.
- **Inputs:** Introduce the inputs of the WBS. This is a text field and the length of the field is not limited.
- **Tasks:** Introduce the tasks of the WBS. This is a text field and the length of the field is not limited.
- **Deliverables:** Introduce as many deliverables as desired.

New deliverables are introduced clicking the *Add deliverable* button and filling the following fields:

- **Milestone:** Select the milestone associated to the deliverable from the list. Only milestones created in this particular project are available in the list.
- **Deliverable code:** The Code is created automatically following the pattern described below (see section 14 for more information about which code patterns can be used):

DEL-PC-nnn

where,

DEL is the acronym of Deliverable,

PC will be the project code of the project assigned to the Deliverable,

nnn will be a sequence number that is automatically generated by the application

- **Description:** Introduce a description of the deliverable content. This is a text field and the maximum length limit is 300 characters.



- **Delete:** Click this box to delete the Deliverable.
- **Start planned date:** Introduce the planned start date for the WBS or select a start planned date from a milestone of the associated project.
- **Start real date:** Introduce the real start date for the WBS or select a start real date from a milestone of the associated project.
- **End planned date:** Introduce the planned end date for the WBS or select an end planned date from a milestone of the associated project.
- **End real date:** Introduce the real date for the WBS (or, before the WBS is really ended, the date when it is estimated that the WBS is going to end) or select an end real date from a milestone of the associated project.
- **WBS predecessor:** Introduce as many WBS predecessors as desired.

A WBS predecessor is introduced clicking the *Add WBS predecessor* button and filling the following fields:

- **WBS:** Select the WBS predecessor from the list. Only WBS existing in this particular project are available in the list.
- **Delete:** Click this box to delete the WBS predecessor.
- **Associated Milestone:** Associate as many milestones to the WBS as desired.

An Associated Milestone is introduced clicking the *Associate Milestone* button and filling the following fields:

- **Milestone:** Select the Milestone from the list. Only Milestone existing in this particular project are available in the list.
- **Delete:** Click this box to delete the Associated milestone.
- **Manpower:** Introduce the manpower that is going to participate in the WBS.

The manpower required from each user is introduced clicking the *Add User* button and filling the following fields:

- **User:** Select the Users from the list. All Users introduced in MANATEE are available.
- **Hours:** Introduce the estimated hours that each user must work in the WBS.
- **Hardware resources:** Introduce a description of the hardware required for the WBS. This is a text field and the length of the field is not limited.
- **Software resources:** Introduce a description of the software required for the WBS. This is a text field and the length of the field is not limited.
- **Sub-contracts resources:** Introduce a description of the sub-contracts required for the WBS. This is a text field and the length of the field is not limited.



- **Cost associated to manpower:** This field is automatically filled taken into account the manpower resources introduced in the WBS.
- **Cost associated to other resources:** Introduce the cost associated to other resources. Only numbers are valid values in this field.
- **% Completion:** This field is automatically filled from the level of completion estimated by the WBS responsible in the last generated WBS report.

⇒ Click *add WBS*.

The WBS will be created.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the creation of the WP.

“The WBS (Code) has been created” to be sent to the Project managers, the WP manager and the WBS responsible.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding user in order to inform him/her about he has been assigned as responsible of the WBS.

“You have been named responsible of the WBS (Code)” to be sent to the WBS responsible.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about they have been assigned to the WBS.

“You have been assigned to the WBS (Code) with (Hours) hours” to be sent to the users assigned to the WBS.

Note: If, for any reason, the WBS cannot be created, go to the section 13 which provides some guides to troubleshooting problems.

6.3.2 Searching WBS's

To start looking for WBS, select *Project Management* tab and, then, *WBS* tab.

The complete list of WBS's that the current user can see will be displayed.



demo / login

MANATEE Help

FRACTAL SLNE
 C/ Tulipán nº2, portal 13, 1ª A
 E-28231 Las Rozas de Madrid
 Teléfono: 916379640 / 630737981
 CIF: 838829107

Project Management Human Resources Quality Control Tools Users Administrators

Projects WP WBS WBS Reports Milestones Cash Flow

WBS's List Search WBS's

Code	Title	Responsible	Start date (real)	End date (real)	Validate			
WBS-F1-001	Optics	Mujica, Emma	2009-07-01	2010-12-01	false	show/print	modify/print	delete
WBS-Test-1.1	Test 1	Perez Calpena, Ana	2009-01-01	2009-01-01	true	show/print	modify/print	delete

notification date

proj-prop 2011-02-25

proj-prop 2011-02-25

proj-prop 2010-11-24

proj-prop 2010-11-24

project 2010-03-25

proj-finish 2010-03-25

proj-finish 2010-03-02

project 2010-03-02

proj-finish 2010-03-02

proj-act 2010-03-02

proj-finish 2010-03-02

proj-act 2010-03-02

proj-rest 2010-03-02

proj-rest 2010-03-01

proj-finish 2010-03-01

proj-act 2010-03-01

Figure 34: WBS List

As shown in the figure, the following issues could be available for each WBS in the list:

- **Code:** The code of the WBS.
- **Title:** The title of the WBS.
- **WBS responsible:** The responsible of the WBS.
- **Start date (real):** The real start date of the WBS.
- **End date (real):** The real end date of the WBS.
- **Validate:** Indicates if the WBS has been validated by the project manager.
- **Show/print:** The *show/print* button allows displaying the WBS properties and printing the WBS details.
- **Modify/print:** The *modify/print* button allows modifying the WBS properties and printing the WBS details.
- **Delete:** The *delete* button allows removing the WBS completely from the system.

The actions buttons of each WBS will not be enabled (i.e., they will be displayed as greyed out) according to the access rights of the user that has login into the system.

The WBS is always arranged by the code.

Each screen will show 10 WBS's, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the WBS's list.



Figure 35: Page selectors

In order to search a particular WBS or to constrain the number of WBS to be displayed, select *Search WBS* tab.

The following form will appear.



Figure 36: Search WBS form

- ⇒ Fill as many fields as desired in order to filter the WBS list.
- **WBS Code:** Introduce any number of alphanumerical characters (this is not case sensitive); any WBS which contains this sequence of characters in its code will be selected.
 - **WBS Title:** Introduce any number of alphanumerical characters (this is not case sensitive); any WBS which contains this sequence of characters in its title will be selected.
 - **Responsible:** Select a user in the list; any WBS whose responsible corresponds to the introduced one will be selected.
 - **WP Code:** Select a WP in the list; any WBS associated to the introduced WP will be selected.
 - **Description:** Introduce any number of alphanumerical characters (this is not case sensitive); any WBS which contains this sequence of characters in its description will be selected.
 - **Gantt title:** Introduce any number of alphanumerical characters (this is not case sensitive); any WBS which contains this sequence of characters in its Gantt title will be selected.
 - **Goals:** Introduce any number of alphanumerical characters (this is not case sensitive); any WBS which contains this sequence of characters in its goals will be selected.
 - **Inputs:** Introduce any number of alphanumerical characters (this is not case sensitive); any WBS which contains this sequence of characters in its inputs will be selected.
 - **Tasks:** Introduce any number of alphanumerical characters (this is not case sensitive); any WBS which contains this sequence of characters in its tasks will be selected.
 - **Start planned date:** Introduce a date; any WBS whose Start planned date meets the introduced one will be selected.
 - **Start real date:** Introduce a date; any WBS whose Start real date meets the introduced one will be selected.
 - **End planned date:** Introduce a date; any WBS whose End planned date meets the introduced one will be selected.
 - **End real date:** Introduce a date; any WBS whose End real date meets the introduced one will be selected.
 - **Hardware resources:** Introduce any number of alphanumerical characters (this is not case sensitive); any WBS which contains this sequence of characters in its hardware resources field will be selected.



- **Software resources:** Introduce any number of alphanumerical characters (this is not case sensitive); any WBS which contains this sequence of characters in its software resources field will be selected.
- **Sub-contracts resources:** Introduce any number of alphanumerical characters (this is not case sensitive); any WBS which contains this sequence of characters in its sub-contracts resources will be selected.
- **% Completion:** Introduce a number; any WBS whose percentage of completion meets the introduced number will be selected.

⇒ Click *search*.

A new WBS list will be displayed taken all the filtering constrains introduced into account (i.e., the filtered WBS match all constrains introduced).

Example:

The user is searching all WBS included which code contains "TST" and which WP responsible name is "Pérez, Ana"

Then, the Search form must be filled as shown in the figure below

The screenshot shows the MANATEE software interface. At the top left is the Fractal logo. The main header area contains the text "FRACTAL SLNE" and contact information: "C/ Tulipán nº2, portal 13, 1ª A", "E-28231 Las Rozas de Madrid", "Teléfono: 916379640 / 630737981", and "CIF: B38829107". Below this is a navigation bar with tabs for "Project Management", "Human Resources", "Quality Control", "Tools", "Users", and "Administration". Under "Project Management", there are sub-tabs for "Projects", "WP", "WBS", "WBS Reports", "Milestones", and "Cash Flow". The main content area is titled "WBS's List" and has a "Search WBS's" section. This section contains a form with the following fields: "WBS Code" (filled with "TST"), "WBS Title" (empty), "Responsible" (filled with "Pérez, Ana"), and "WP Code" (empty). Below these are larger text areas for "Description", "Gantt file", and "Goals".

Figure 37: Example of a filled search WBS form

and the list of WBS displayed would be the following one.

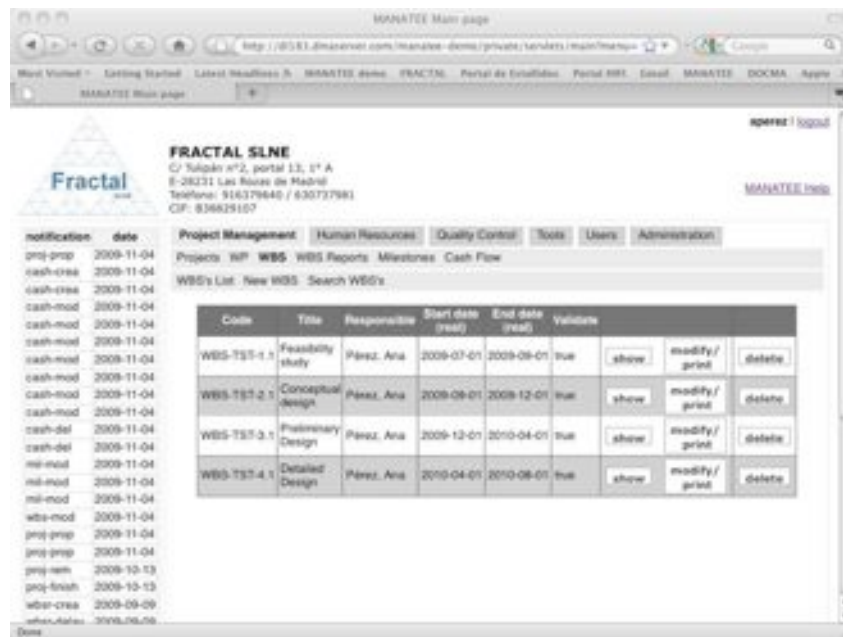


Figure 38: Example of a filtered WBS list

Note: If the desired WBS does not appear in any screen, go to the section 13 which provides some guides to troubleshooting problems.

6.3.3 Displaying the properties of a WBS

Once the desired WBS is displayed, which can be done following the steps described in the section 6.3.2, click the *show* button.

The Administrator, the WBS responsible, the WP manager and the people authorized to the project (including the project managers) associated to the WBS have the access rights to display the properties of this WBS.

Most of the WBS properties will be displayed (i.e., costs associated to manpower and other resources are not displayed).



The screenshot shows a web-based application interface for 'FRAC TAL SLNE'. At the top left is the Fractal logo. The main header area contains the company name and contact information: 'FRAC TAL SLNE', 'C/ Tulipán nº2, portal 13, 1ª A', 'E-28231 Las Rozas de Madrid', 'Teléfono: 916379640 / 630737961', and 'CIF: B38829107'. A navigation bar includes tabs for 'Project Management', 'Human Resources', 'Quality Control', 'Tools', 'Users', and 'Administration'. Below this, there are links for 'Projects', 'WIP', 'WBS', 'WBS Reports', 'Milestones', and 'Cash Flow'. The main content area is titled 'WBS's List' and includes a 'New WBS' button and a search field. The 'WBS properties view' form contains the following fields: 'WP Code*' (with a dropdown menu showing 'WP-FI-001'), 'WP Manager' (with a dropdown menu showing 'Pérez, Ana'), 'WBS Code*' (with a dropdown menu showing 'WBS-FI-001'), 'WBS Title*' (with a dropdown menu showing 'Optica'), 'Responsible*' (with a dropdown menu showing 'Pérez, Ana'), 'Description*' (a large text area), 'Gantt file' (a text input field), and 'Goals' (a text input field).

Figure 39: WBS properties view

Note: If the *show* button of the desired WBS is not available, go to the section 13 which provides some guides to troubleshooting problems.

6.3.4 Modifying the properties of an existing WBS

Once the desired WBS is displayed, which can be done following the steps described in the section 6.3.2, click the *modify/print* button.

Only project managers of the project associated to the WBS and the WP manager of the WP associated to the WBS have the access rights to modify the WBS properties.

The current status of the project must be “*active*”.

The following form, which contains all WBS properties, will appear.



Figure 40: Modifying the WBS properties page

- ⇒ Modify the desired fields (taken into account constraints listed in section 6.3.1). Only the fields that are not greyed out can be modified.
- ⇒ Click *update*.

The WBS properties will be modified.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the modification of the WP properties.

“The properties of WBS (Code) have been modified” to be sent to the Project managers, the WP manager and the WBS responsible.

Note: If, for any reason, the WBS properties cannot be modified, go to the section 13 which provides some guides to troubleshooting problems.

6.3.5 Validate a WBS

Once the desired WBS is displayed, which can be done following the steps described in the section 6.3.2, click the *modify/print* button.

The project manager must review the information introduced for the WBS responsible and perform any modification (if desired) as described in 6.3.4.

Once the project manager has finished the review and clicks the *update* button, the WBS is validated.

The notification corresponding to the WBS properties update will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users.

“The properties of WBS (Code) have been modified” to be sent to the Project managers, the WP manager and the WBS responsible.



Note: If the *modify/print* button of the desired WBS is not available, go to the section 13 which provides some guides to troubleshooting problems.

6.3.6 Printing the WBS information

Once the WBS, which information is going to be printed, is displayed, which can be done following the steps described in the section 6.3.2, click the *modify/print* button.

The Administrator, the WBS responsible, the WP manager and the people authorized to the project (including the project managers) associated to the WBS have the access rights to print the information of the WBS.

The current status of the project must be “*active*”.

The WBS properties will be displayed.

⇒ Click *print WBS* button.

A summary of the WBS properties that contains the following information will be generated:

- WBS code (as defined in the WBS properties).
- WBS title (as defined in the WBS properties).
- WBS responsible (as defined in the WBS properties).
- WP manager (as defined in the WBS properties).
- Project code (as defined in the WBS properties).
- Description (as defined in the WBS properties).
- Goal (as defined in the WBS properties).
- Inputs (as defined in the WBS properties).
- Tasks (as defined in the WBS properties).
- Deliverables (as defined in the WBS properties).
- Planned start date (as defined in the WBS properties).
- Real start date (as defined in the WBS properties).
- Planned end date (as defined in the WBS properties).
- Real end date (as defined in the WBS properties).
- WBS predecessor (as defined in the WBS properties).
- Associated milestones (as defined in the WBS properties).
- Manpower (man-hours per each person as defined in the WBS properties).
- Hardware resources (as defined in the WBS properties).
- Software resources (as defined in the WBS properties).
- Sub-contracts (as defined in the WBS properties).
- Cost associated to the manpower (as defined in the WBS properties).



- Cost associated to other resources (as defined in the WBS properties).
- % completion (as included in the WBS properties).

The WBS information can be printed or saved in pdf format.

Note: If, for any reason, the *modify/print* button is not available, go to the section 13 which provides some guides to troubleshooting problems.

6.3.7 Deleting a WBS

Once the WBS, which is going to be deleted, is displayed, which can be done following the steps described in the section 6.3.2, click the *delete* button.

Only project managers of the project associated to the WBS have the access rights to delete the WBS.

The current status of the project must be “*active*”.

The following window displaying the WBS properties will appear.

The screenshot shows the 'WBS properties view' window. At the top left is the Fractal logo. The title bar reads 'FRACTAL S.I.N.E.' followed by the company address: 'C/ Tulipán nº2, portal 13, 1ª A', 'E-28231 Las Rozas de Madrid', 'Teléfono: 916379640 / 830737981', and 'CIF: 838629107'. The main menu includes 'Project Management', 'Human Resources', 'Quality Control', 'Tools', 'Users', and 'Administration'. Below the menu, there are tabs for 'Projects', 'WP', 'WBS', 'WBS Reports', 'Milestones', and 'Cash Flow'. The 'WBS' tab is active. The main area contains a table with columns 'WPs list', 'New WP', and 'Search WPs'. Below the table are several input fields: 'Project*' (with a dropdown menu showing 'P1'), 'Code*' (with the value 'WP-P1-001'), 'Title*' (with the value 'WP1 in P1'), 'Description*' (with a text area containing 'Text'), 'WP Manager*' (with a dropdown menu showing 'Pérez, Ana'), 'Cell title' (with a text field), and 'Active*' (with a checked checkbox). At the bottom right, there are 'cancel' and 'delete' buttons.

Figure 41: WBS properties view

⇒ Click *delete*.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about that the WBS has been deleted.

“*The WBS (Code) has been deleted*” to be sent to the Project managers, the WP manager and the WBS responsible.

Note: If, for any reason, the *delete* button is not available, go to the section 13 which provides some guides to troubleshooting problems.



6.4 WBS Report administration

MANATEE provides the capabilities required to generate and manage the reports that are periodically created in each WBS in order to describe the progress reached in this WBS during the reported period.

From the WBS Reports management point of view, MANATEE provides the following functionality:

- Create a new WBS Report
- Search WBS Reports using different criteria
- Display the complete or filtered WBS Report list
- Display the information included in the WBS Report
- Modify the information included in the WBS Report
- Print the WBS Report information

It is important to remember that each user can only do actions on the WBS Reports according to the access rights that this particular user has (see sections 4 or 5.2 for more information).

6.4.1 Creating a new WBS Progress Report

To start working with WBS's Reports, select *Project Management* tab and, then, *WBS Reports* tab.

In order to create a new WBS Report, select *New WBS Report* tab.

Only the users assigned as WBS responsible have this option available.

The following form will appear.

notification	date
proj-prop	2009-11-04
proj-prop	2009-11-04
proj-prop	2009-11-04
wbs-mod	2009-11-04
wbs-crea	2009-11-04
wbs-mang	2009-11-04
wbs-resp	2009-11-04
wbs-resp	2009-11-04
wbs-crea	2009-11-04
wbs-mang	2009-11-04
wbs-mod	2009-11-04
wbs-mang	2009-11-04
wbs-crea	2009-11-04
wbs-resp	2009-11-04
wbs-mod	2009-11-04
wbs-resp	2009-11-04
wbs-crea	2009-11-04
wbs-del	2009-11-04
wbs-del	2009-11-04
wbs-del	2009-11-04
wbs-del	2009-11-04
sm-crea	2009-11-04

Figure 42: Creating a WBS Report page



- ⇒ Fill the following fields (all mandatory fields are marked with a star):
- **WBS Code:** Select in the list the WBS to which the new WBS Report is going to be associated. The user must be the WBS responsible in order to create a new WBS Report associated to this WBS. Therefore, only the WBS's that the login user is WBS responsible and that are not completed (the level of completion is less than 100%) will be displayed in the list.
 - **WBS Title:** This field is automatically filled after the WBS Code has been already selected.
 - **WBS Responsible:** This field is automatically filled after the WBS Code has been already selected.
 - **Period Start date:** Introduce the start date of the period that is going to be reported in the WBS Report.
 - **Period End date:** Introduce the end date of the period that is going to be reported in the WBS Report.
 - **Estimated % Completion:** Introduce the estimated percentage of the level of completion for the WBS.
 - **WBS Start real date:** This field is automatically filled after the WBS Code has been already selected.
 - **WBS End real date:** This field is automatically filled after the WBS Code has been already selected.
 - **WBS Estimated end date:** Introduce the estimated end date for the WBS.
 - **Period spent manpower:** This field is automatically filled according to the WBS Report period that has been introduced (the application takes into account the hours spent in this WBS as reported in the PTR's for the selected period).
 - **Total spent manpower:** This field is automatically filled according to the WBS Report period that has been introduced (the application takes into account the total hours spent in this WBS as reported in the PTR's until the end date of the period).
 - **Total assigned manpower:** This field is automatically filled after the WBS Code has been already selected (the application takes into account the hours assigned to this WBS).
 - **Period spent other cost Budget:** Introduce the other costs (different to manpower) spent during the selected period related in this WBS.
 - **Total spent other cost Budget:** This field is automatically filled taken into account the value introduced in the previous field and the other costs already reported in the previous WBS reports of this WBS.
 - **Total manpower exceeded:** This box is automatically marked when the total spent manpower is greater than the total assigned manpower.
 - **End planned day exceeded:** This box is automatically marked when the End real day exceeds the End planned day.



- **Comments:** Introduce any additional comment in this field. This is a text field and the length of the field is not limited.
- **PR Comments attached file:** Attach a file with additional information that the user wants to annex to the WBS Report. Click in the *Choose file* button to search the file.

⇒ Click *add WBS Report*.

The WBS Report will be created.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the creation of the WP.

“New WBS (Code) Progress Report created” to be sent to the Project managers and the WP manager associated to this WBS.

A notification could be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about a WBS delay (whenever the End real day exceeds the End planned day).

“The responsible of the WBS (Code) reports a delay” to be sent to the Project managers and the WP manager associated to this WBS.

A notification could be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the WBS has been finished (i.e., the percentage of completion is 100%).

“The WBS (Code) has been finished” to be sent to the Project managers, the WP manager associated to this WBS and the WBS responsible.

Note: If, for any reason, the WBS Report cannot be created, go to the section 13, which provides some guides to troubleshooting problems.

6.4.2 Searching WBS’s Progress Report

To start looking for WBS Reports, select *Project Management* tab and, then, *WBS’s Reports List* tab.

The complete list of WBS Reports that the current user can see will be displayed.

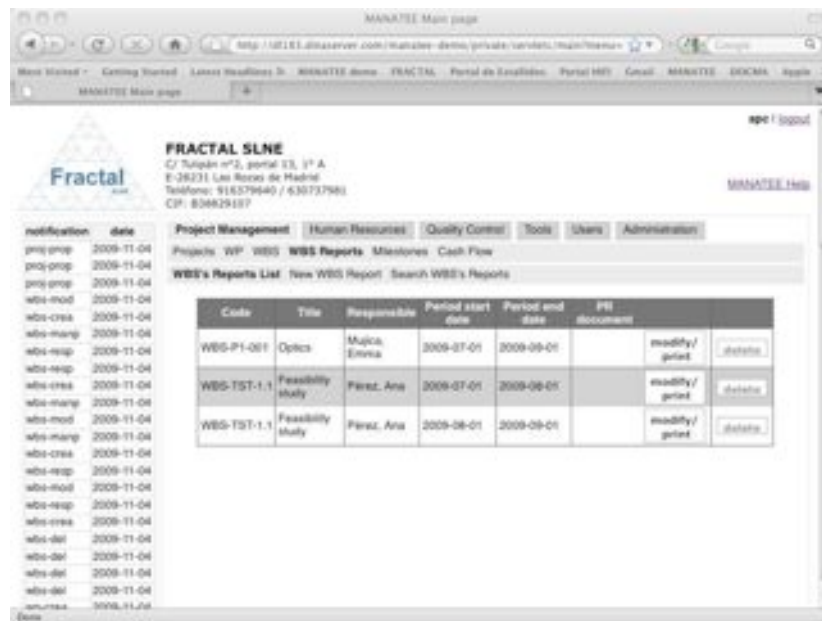


Figure 43: WBS Reports List

As shown in the figure, the following issues could be available for each WBS Report in the list:

- **Code:** The code of the WBS.
- **Title:** The title of the WBS.
- **Responsible:** The responsible of the WBS.
- **Period Start date:** The start date of the period used in the WBS Report.
- **Period End date:** The end date of the period used in the WBS Report.
- **PR Comment:** The attached file of the WBS Report.
- **Show / Modify/print:** Two different action buttons can appear in this position:
 - The *show* button displays the WBS Report.
 - The *modify/print* button allows modifying the WBS Report and printing the WBS Report details.

The actions buttons of each WBS Report will not be enabled (i.e., they will be displayed as greyed out) according to the access rights of the user that has login into the system.

The WBS Reports are always arranged by the period dates.

Each screen will show 10 WBS Reports, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the list.



Figure 44: Page selectors

In order to search a particular WBS Report or to constrain the number of WBS Reports to be displayed, select *Search WBS's Report* tab.



The following form will appear.

The screenshot shows a web browser window titled 'MANATEE Main page'. The address bar shows 'http://10.185.80.101:8080/manatee-demo/private/verifier/manatee/mainframe.jsp'. The page content includes a 'Fractal SLNE' logo and contact information: 'C/ Tulipán nº2, portal 23, 1ª A', 'E-28233 Las Rozas de Madrid', 'Teléfono: 916379640 / 630737981', 'CIF: B38829127'. Below this is a navigation menu with tabs: 'Project Management', 'Human Resources', 'Quality Control', 'Tools', 'Users', 'Administration'. The 'Project Management' tab is active, showing a 'WBS Reports List' with columns for 'notification' and 'date'. A 'Search WBS's Reports' form is displayed with the following fields: 'WBS Code*' (dropdown), 'WBS Title*' (text), 'WBS Responsible*' (dropdown), 'Period start date (yyyy-mm-dd*)' (text), 'Period end date (yyyy-mm-dd*)' (text), 'Estimated % Completion*' (text), 'WBS Start date real (yyyy-mm-dd)' (text), 'WBS End date real (yyyy-mm-dd)' (text), and 'WBS Estimated end date (yyyy-mm-dd*)' (text). A 'Done' button is at the bottom left of the form.

Figure 45: Search WBS Report form

- ⇒ Fill as many fields as desired in order to filter the WBS Report list.
- **WBS Code:** Select a WBS Code from the list; any WBS Report associated to this WBS will be selected.
 - **WBS Title:** Introduce any number of alphanumeric characters (this is not case sensitive); any WBS Report associated with a WBS, which contains this sequence of characters in its title, will be selected.
 - **WBS Responsible:** Select a user in the list; any WBS Report associated to a WBS, whose responsible meets the selected one, will be selected.
 - **Period Start date:** Introduce a date; any WBS Report whose period start date meets the introduced one will be selected.
 - **Period End date:** Introduce a date; any WBS Report whose period end date meets the introduced one will be selected.
 - **Estimated % Completion:** Introduce a number; any WBS Report whose estimated percentage level of completion meets the introduced one will be selected.
 - **WBS Start real date:** Introduce a date; any WBS Report associated to a WBS, whose Start real date meets the introduced one, will be selected.
 - **WBS End real date:** Introduce a date; any WBS Report associated to a WBS, whose End real date meets the introduced one, will be selected.
 - **WBS Estimated end date:** Introduce a date; any WBS Report whose WBS Estimated start date meets the introduced one will be selected.



- **Total manpower exceeded:** Select a value in the list; any WBS report which Total manpower exceeded field meets the introduced value will be selected. By default, the searching results are not constrained by this value.
- **End planned date exceeded:** Select a value in the list; any WBS report which End planned date exceeded field meets the introduced value will be selected. By default, the searching results are not constrained by this value.
- **Comments:** Introduce any number of alphanumeric characters (this is not case sensitive); any WBS Report that contains this sequence in its comments will be selected.

⇒ Click *search*.

A new WBS Reports list will be displayed taking all the filtering constraints introduced into account (i.e., the filtered WBS Reports match all constraints introduced).

Example:

The user is searching all WBS Reports whose associated WBS code is "WBS-TST-1.1" and whose WBS responsible name is "Pérez, Ana"

Then, the Search form must be filled as shown in the figure below

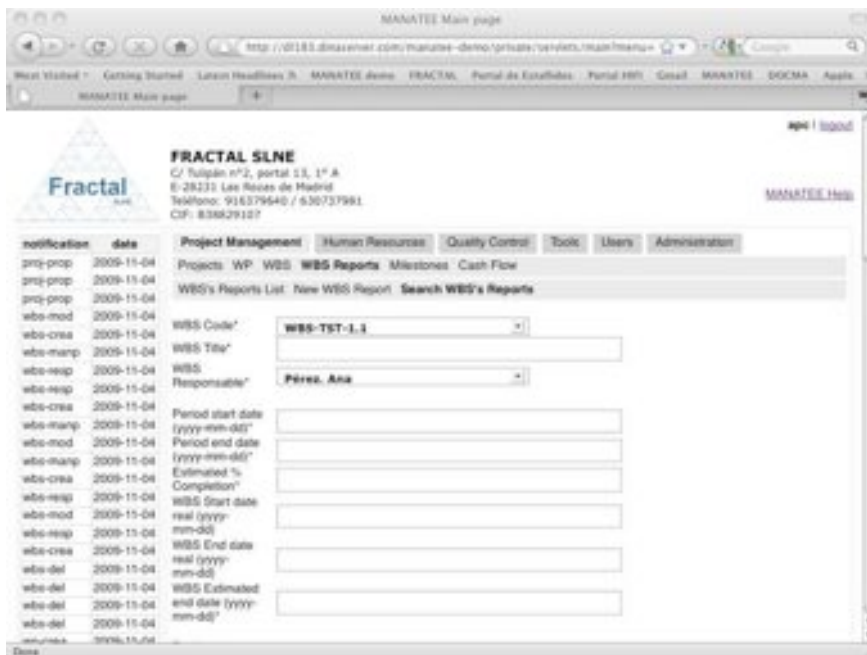


Figure 46: Example of a filled search WBS Report form

and the list of WBS Report displayed would be the following one.



Figure 47: Example of a filtered WBS Report list

Note: If the desired WBS Report does not appear in any screen, go to the section 13, which provides some guides to troubleshooting problems.

6.4.3 Displaying the information in a WBS Progress Report

Once the desired WBS Report is displayed, which can be done following the steps described in the section 6.4.2, click the *show* button.

The people authorized to the project associated to the WBS have the access rights to display the information included in this WBS Report.

The WBS Report information will be displayed.



Figure 48: WBS properties view



Note: If the *show* button of the desired WBS Report is not available, go to the section 13, which provides some guides to troubleshooting problems.

6.4.4 Modifying the information in an existing WBS Progress Report

Once the desired WBS Report is displayed, which can be done following the steps described in the section 6.4.2, click the *modify/print* button.

Only project managers of the project associated to the WBS, the WP manager associated to the WBS and the WBS responsible have the access rights to modify the information included in the WBS Progress Report.

The current status of the project must be “*active*”.

The following form will appear.

The screenshot shows a web browser window with the URL <http://192.168.1.100/manatee-demos/private/whitelabel/main/whitelabel.html>. The page title is 'MANATEE Main page'. The main content area displays the 'FRAC TAL SLNE' logo and contact information. Below this is a navigation menu with tabs for 'Project Management', 'Human Resources', 'Quality Control', 'Tools', 'Users', and 'Administration'. The 'Project Management' tab is active, showing sub-tabs for 'Projects', 'WP', 'WBS', 'WBS Reports', 'Milestones', and 'Cash Flow'. The 'WBS Reports' sub-tab is selected, displaying a table of notifications and a form for editing a WBS report. The form fields include:

WBS Code*	WBS-T57-2.1
WBS Title*	Feasibility study
WBS Responsible*	Perez, Ana
Period start date (YYYY-MM-DD)*	2009-07-01
Period end date (YYYY-MM-DD)*	2009-08-01
Estimated % Completion*	40
WBS Start date real (YYYY-MM-DD)	2009-07-01
WBS End date real (YYYY-MM-DD)	2009-09-01
WBS Estimated end date (YYYY-MM-DD)*	2009-09-01
Period spent	0
marginover	
Total spent	

Figure 49: Modifying the WBS Report properties page

- ⇒ Modify the desired fields (taken into account constrains listed in section 6.4.1). Only the fields that are not greyed out can be modified.
- ⇒ Click *update*.

The WBS Report properties will be modified.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the modification of the WBS properties.

“The WBS (Code) Progress Report (period (Period start date) – (Period end date)) has been modified” to be sent to the Project managers, the WP manager and the WBS responsible.

A notification could be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about a WBS delay (whenever the End real day exceeds the End planned day).



“*The responsible of the WBS (Code) reports a delay*” to be sent to the Project managers, the WP manager and the WBS responsible.

A notification could be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the WBS has been finished (i.e., the percentage of completion is 100%).

“*The WBS (Code) has been finished*” to be sent to the Project managers, the WP manager and the WBS responsible.

Note: If, for any reason, the WBS properties cannot be modified, go to the section 13, which provides some guides to troubleshooting problems.

6.4.5 Printing the WBS Progress Report

Once the WBS Report that is going to be printed is displayed, which can be done following the steps described in the section 6.4.2, click the *modify/print* button.

Only project managers of the project associated to the WBS, the WP manager associated to the WBS and the WBS responsible have the access rights to print the information included in the WBS Progress Report.

The current status of the project must be “*active*”.

The content of the WBS Report will be displayed.

⇒ Click *Print WBS Progress Report* button.

A summary of the WBS report that contains the following information will be generated:

- WBS code (as defined in the WBS Report).
- WBS title (as defined in the WBS Report).
- Responsible (as defined in the WBS Report).
- Period covered (as defined in the WBS Report).
- Start date (real) (as defined in the WBS Report).
- Start date (estimated) (as defined in the WBS Report).
- Estimated % Completion (as defined in the WBS Report).
- Total manpower exceeded (as defined in the WBS Report).
- End planned date exceeded (as defined in the WBS Report).
- Period spend manpower (as defined in the WBS Report).
- Total spent manpower (as defined in the WBS Report).
- Total assigned manpower (as defined in the WBS Report).
- Period spent other cost budget (as defined in the WBS Report).
- Total spent other cost budget (as defined in the WBS Report).



- Comments (as defined in the WBS Report).

The WBS Report can be printed or saved in pdf format.

Note: If, for any reason, the *modify/print* button is not available, go to the section 13, which provides some guides to troubleshooting problems.

6.4.6 Deleting an existing WBS Progress Report

Once the desired WBS Progress Report is displayed, which can be done following the steps described in the section 6.4.2, click the *delete* button.

Only project managers of the project associated to the WBS Progress Report have the access rights to delete the WBS Progress Report.

The current status of the project must be “*active*”.

The following form will appear.

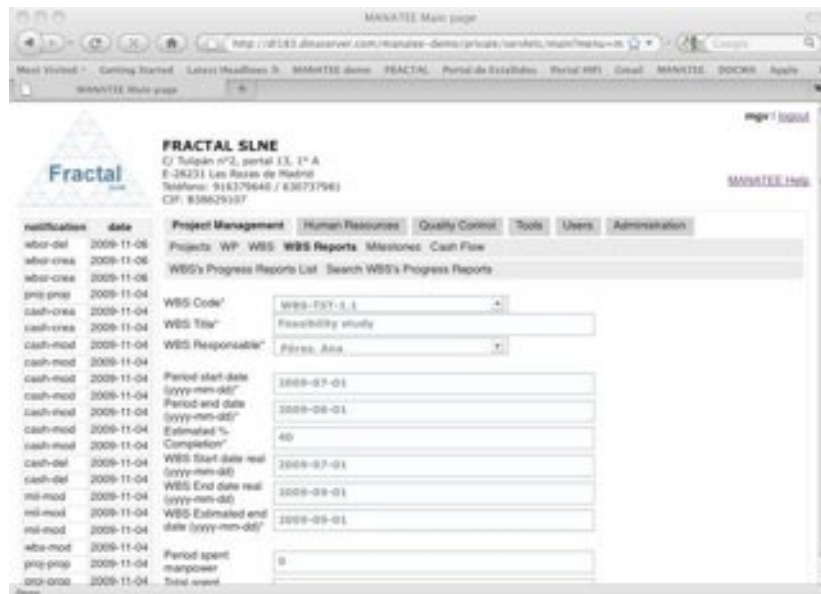


Figure 50: Deleting the WBS Report properties page

⇒ Click *delete*.

The WBS Report properties will be modified.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them that the WBS Progress Report has been deleted.

“*The WBS (Code) Progress Report (period (Period start date) – (Period end date)) has been deleted*” to be sent to the Project managers, the WP manager and the WBS responsible.



6.5 Milestones administration

MANATEE provides the capabilities required to manage the milestones that are defined in a project.

From the milestones management point of view, MANATEE provides the following functionality:

- Create a new milestone
- Search milestones using different criteria
- Display the complete or filtered milestone list
- Display the milestone properties
- Modify the definition of a milestone
- Delete a milestone

It is important to remember that each user can only do actions on the milestone according to the access rights that this particular user has (see sections 4 or 5.2 for more information).

6.5.1 Creating a new Milestones

To start working with milestones, select *Project Management* tab and, then, *Milestones* tab.

In order to create a new milestone, select *New Milestone* tab.

Only project managers have the access rights to create new milestones.

The following form will appear.

The screenshot shows the 'Creating a Milestone' page in the MANATEE web application. The page header includes the Fractal logo and contact information for 'FRAGMENTAL SLNE'. The navigation menu is visible, with 'Project Management' selected. The 'Milestones' tab is active, and the 'New Milestone' sub-tab is selected. The form contains several input fields: 'Project*' (a dropdown menu), 'Code*' (a text field), 'Name*' (a text field), 'Planned date (yyyy-mm-dd)*' (a date field), 'Date (yyyy-mm-dd)*' (a date field), 'Cost life' (a text field), and 'Critical' (a checkbox). There are 'cancel' and 'add Milestone' buttons at the bottom right of the form.

Figure 51: Creating a Milestone page

⇒ Fill the following fields (all mandatory fields are marked with a star):

- **Project:** Select in the list the project to which the new milestone is going to be associated. A user must be the project manager of a project in order to create a new milestone in this project. Therefore, only projects that the login user is project manager will be displayed in the list.



- **Code:** The Code is created automatically following the pattern described below (see section 14 for more information about which code patterns can be used):

MIL-PC-*nnn*

where,

MIL is the acronym of Work Package,

PC will be the project code of the project assigned to the WP,

nnn will be a sequence number that is automatically generated by the application

- **Name:** Introduce the milestone name. This is a text field and the maximum length of this field is 250 characters.
- **Planned date:** Introduce the initial planned date for the milestone.
- **Date:** Introduce the real date (or estimated real date) for the milestone.
- **Gantt title:** Introduce the Milestone title that it will be used in the Gantt charts. This is a text field and the maximum length of this field is 10 characters.
- **Critical:** Click this box to indicate that this milestone is critical to accomplish the project schedule.

⇒ Click *add Milestone*.

The milestone will be created.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the creation of the milestone.

“The Milestone (Code) has been created” to be sent to the Project managers.

Note: If, for any reason, the milestone cannot be created, go to the section 13 which provides some guides to troubleshooting problems.

6.5.2 Searching Milestones

To start looking for milestones, select *Project Management* tab and, then, *Milestones* tab.

The complete list of milestones that the current user can see will be displayed.



Figure 54: Search Milestone form

- ⇒ Fill as many fields as desired in order to filter the milestones list.
- **Project:** Introduce any number of alphanumeric characters (this is not case sensitive); any milestone whose associated project contains this sequence of characters in its title will be selected.
 - **Name:** Introduce any number of alphanumeric characters (this is not case sensitive); any milestone which contains this sequence of characters in its name will be selected.
 - **Planned date:** Introduce a date period (start and end dates); any milestone whose planned date is included in the introduced interval will be selected.
 - **Date:** Introduce a date period (start and end dates); any milestone whose date is included in the introduced interval will be selected.
 - **Gantt title:** Introduce any number of alphanumeric characters (this is not case sensitive); any milestone which contains this sequence of characters in its Gantt title will be selected.
 - **Critical:** Select the criticality in the list; any milestone meeting the requested criticality will be selected. By default, the searching results are not constrained by this value.
- ⇒ Click *search*.

A new milestones list will be displayed taking all the filtering constraints introduced into account (i.e., the filtered milestones match all constraints introduced).

Example:

The user is searching all milestones belonging to the project "TST" that are scheduled in 2009.

Then, the Search form must be filled as shown in the figure below



notification date:

FRACTAL SLNE
C/ Tulpán nº2, portal 13, 1ª A
E-28231 Las Rozas de Madrid
Teléfono: 916379640 / 630737981
CIF: 838829107

Project Management Human Resources Quality Control Tools Users Administration

Projects WP WBS WBS Reports Milestones Cash Flow

Milestones list New Milestone Search Milestones

Project: TST

Name:

Planned date (yyyy-mm-dd): 2009-01-01 - 2009-12-31

Date (yyyy-mm-dd):

Card title:

Critical:

cancel search

Figure 55: Example of a filled search milestones form and the list of milestones displayed would be the following one.

notification date:

FRACTAL SLNE
C/ Tulpán nº2, portal 13, 1ª A
E-28231 Las Rozas de Madrid
Teléfono: 916379640 / 630737981
CIF: 838829107

Project Management Human Resources Quality Control Tools Users Administration

Projects WP WBS WBS Reports Milestones Cash Flow

Milestones list New Milestone Search Milestones

Project	Date	Name	Planned date	Critical		
TST	2009-09-01	Project Definition Review	2009-09-01	No	modify	delete
TST	2009-12-01	Preliminary Requirements Review	2009-12-01	No	modify	delete

print list

Figure 56: Example of a filtered milestones list

Note: If the desired milestone does not appear in any screen, go to the section 13 which provides some guides to troubleshooting problems.

6.5.3 Print the complete or filtered milestone list

Once the desired milestone list (complete or filtered) is displayed, which can be done following the steps described in the section 6.5.2.

⇒ Click *print list* button.

A summary of the milestones list that contains the following information will be generated:

- Project code associated to the milestone (as defined in the milestone properties).
- Milestone date (as defined in the milestone properties).
- Milestone planned date (as defined in the milestone properties).



- Milestone critical level (as defined in the milestone properties).

The milestone list can be printed or saved in pdf format.

6.5.4 Displaying the properties of a Milestone

Once the desired milestone is displayed, which can be done following the steps described in the section 6.5.2, click the *show* button (note: project managers of the project associated to this particular milestone can display the milestone properties using the *modify* button instead, see section 6.5.5).

People authorized to the project associated to the milestone have the access rights to display the properties of this milestone.

The milestone properties will be displayed.

Figure 57: Milestone properties view

Note: If the *show* or *modify* buttons of the desired milestone (i.e., the modify button will be enabled instead of the *show* button when the user is a project manager of this project) are not available, go to the section 13 which provides some guides to troubleshooting problems.

6.5.5 Modifying the properties of an existing Milestone

Once the WP which properties are going to be modified is displayed, which can be done following the steps described in the section 6.5.2, click the *modify* button.

Only project managers of the project associated to this particular milestone have the access rights to modify the milestone properties.

The current status of the project must be “active”.

The following form will appear.



Figure 58: Modifying the milestone properties page

- ⇒ Modify the desired fields (taken into account constrains listed in section 6.5.1). Only the fields that are not greyed out can be modified.
- ⇒ Click *update*.

The milestone properties will be modified.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the modification of the milestone properties.

“The properties of the Milestone (Code) have been modified” to be sent to the Project managers of the project associated to the milestone.

Note: If, for any reason, the milestone properties cannot be modified, go to the section 13 which provides some guides to troubleshooting problems.

6.5.6 Deleting a Milestone

Once the milestone, which is going to be deleted, is displayed, which can be done following the steps described in the section 6.5.2, click the *delete* button.

Only project managers of the project associated to the milestone have the access rights to delete the milestone.

The current status of the project must be *“active”*.

The following window displaying the milestone properties will appear.



Figure 59: Milestone properties view

⇒ Click *delete*.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about that the milestone has been deleted.

“The Milestone (Code) has been deleted” to be sent to the Project managers of the project associated to the milestone.

Note: If, for any reason, the *delete* button is not available, go to the section 13 which provides some guides to troubleshooting problems.

6.6 Cash flow milestones administration

MANATEE provides the capabilities required to manage the cash flow that is defined in a project.

From the Cash milestones management point of view, MANATEE provides the following functionality:

- Create a new Cash milestone
- Search Cash milestones using different criteria
- Display the complete or filtered Cash milestone list
- Display the Cash milestone properties
- Modify the definition of a Cash milestone
- Delete a Cash milestone

It is important to remember that each user can only do actions on the Cash milestone according to the access rights that this particular user has (see sections 4 or 5.2 for more information).

6.6.1 Creating a new Cash Milestones

To start working with Cash milestones, select *Project Management* tab and, then, *Cash Flow* tab.



In order to create a new Cash milestone, select *New Cash Milestone* tab.

Only project managers have the access rights to create new Cash milestones.

The following form will appear.

The screenshot shows the 'MANATEE Main page' with a navigation menu and a 'New Cash Milestone' form. The form fields are:

- Project* (dropdown menu)
- Code* (text input)
- Name* (text input)
- Planned date (yyyy-mm-dd)* (text input)
- Date (yyyy-mm-dd)* (text input)
- Type* (dropdown menu)
- Amount* (text input)

Buttons: 'cancel' and 'add Cash milestone'.

Figure 60: Creating a Cash Milestone page

⇒ Fill the following fields (all mandatory fields are marked with a star):

- **Project:** Select in the list the project to which the new Cash flow milestone is going to be associated. A user must be the project manager of a project in order to create a new Cash flow milestone in this project. Therefore, only projects that the login user is project manager will be displayed in the list.
- **Code:** The Code is created automatically following the pattern described below (see section 14 for more information about which code patterns can be used):

CASMIL-PC-*nnn*

where,

CM is the acronym of Cash Milestone,

PC will be the project code of the project assigned to the Cash milestone,

nnn will be a sequence number that is automatically generated by the application

- **Name:** Introduce the milestone name. This is a text field and the maximum length of this field is 400 characters.
- **Planned date:** Introduce the initial planned date for the milestone.



- **Date:** Introduce the real date (or estimated real date) for the milestone.
- **Type:** Select in the list the type of the Cash milestone. The options “cash-in” and “cash-out” are available.
- **Amount:** Introduce the amount of money associated to this particular Cash milestone. This field must be a number.

⇒ Click *add Cash milestone*.

The Cash milestone will be created.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the creation of the milestone.

“Cash milestone (Code) has been created” to be sent to the Project managers.

Note: If, for any reason, the Cash milestone cannot be created, go to the section 13 which provides some guides to troubleshooting problems.

6.6.2 Searching Cash Milestones

To start looking for milestones, select *Project Management* tab and, then, *Cash Flow* tab.

The complete list of Cash milestones that the current user can see will be displayed.



Figure 61: Cash milestones List

As shown in the figure, the following issues could be available for each Cash milestone in the list:

- **Project:** The code of the project associated to the milestone.
- **Code:** The code of the Cash milestone.
- **Name:** The name of the Cash milestone.



- **Planned date:** The planned date of the Cash milestone.
- **Date:** The real (or estimated) date of the Cash milestone.
- **Show / Modify:** Two different action buttons can appear in this position:
 - The *show* button displays the Cash milestone properties.
 - The *modify* button allows modifying the Cash milestone properties.
- **Delete:** The *delete* button allows removing the Cash milestone completely from the system.

The actions buttons of each Cash milestone will not be enabled (i.e., they will be displayed as greyed out) according to the access rights of the user that has login into the system.

The Cash milestones are always arranged by code.

Each screen will show 10 milestones, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the Cash milestones list.



Figure 62: Page selectors

In order to search a particular milestone or to constrain the number of milestones to be displayed, select *Search Cash Milestone* tab.

The following form will appear.

The screenshot shows the MANATEE web application interface. At the top, there is a navigation menu with tabs: Project Management, Human Resources, Quality Control, Tools, Users, and Administration. Below the menu, there is a search bar and a list of milestones. The search form is titled "Search Cash Milestones" and contains the following fields:

- Project: A dropdown menu.
- Code: A text input field.
- Name: A text input field.
- Planned date (yyyy-mm-dd): A date input field.
- Date (yyyy-mm-dd): A date input field.
- Type: A dropdown menu.

At the bottom of the form, there are "Cancel" and "Search" buttons.

Figure 63: Search Cash Milestone form

- ⇒ Fill as many fields as desired in order to filter the Cash milestones list.
- **Project:** Introduce any number of alphanumeric characters (this is not case sensitive); any Cash milestone whose associated project contains this sequence of characters in its title will be selected.



- **Code:** Introduce any number of alphanumerical characters (this is not case sensitive); any milestone that contains this sequence of characters in its code will be selected.
- **Name:** Introduce any number of alphanumerical characters (this is not case sensitive); any Cash milestone which contains this sequence of characters in its name will be selected.
- **Planned date:** Introduce a date; any Cash milestone whose planned date meets the introduced one will be selected.
- **Date:** Introduce a date; any Cash milestone whose date meets the introduced one will be selected.
- **Type:** Select the Cash flow type in the list; any Cash milestone meeting the requested type will be selected. By default, the searching results are not constrained by this value.

⇒ Click *search*.

A new Cash milestones list will be displayed taking all the filtering constraints introduced into account (i.e., the filtered Cash milestones match all constraints introduced).

Example:

The user is searching all Cash-in milestones belonging to the project "TST".

Then, the Search form must be filled as shown in the figure below

The screenshot shows a web browser window displaying the MANATEE application. The page title is 'FRACTAL SLNE'. The navigation menu includes 'Project Management', 'Human Resources', 'Quality Control', 'Tools', 'Users', and 'Administration'. The 'Cash Flow' section is active, showing a 'Search Cash Milestones' form. The form fields are filled as follows: Project: TST, Code: (empty), Name: (empty), Planned date (yyyy-mm-dd): (empty), Date (yyyy-mm-dd): (empty), Type: cash-in. There are 'cancel' and 'search' buttons. On the left, a table lists milestones with columns for 'notification' and 'date'.

notification	date
mbn-del	2009-11-06
mbn-crea	2009-11-06
mbn-crea	2009-11-06
mbn-del	2009-11-06
mbn-del	2009-11-06
mbn-mod	2009-11-06
mbn-mod	2009-11-06
mbn-mod	2009-11-06
mbn-mod	2009-11-06
mbn-del	2009-11-06
mbn-crea	2009-11-06
mbn-crea	2009-11-06
prp-prop	2009-11-04
cash-crea	2009-11-04
cash-crea	2009-11-04
cash-mod	2009-11-04
cash-mod	2009-11-04
cash-mod	2009-11-04
cash-mod	2009-11-04
cash-mod	2009-11-04
cash-mod	2009-11-04
cash-mod	2009-11-04
cash-mod	2009-11-04

Figure 64: Example of a filled search Cash milestones form and the list of Cash milestones displayed would be the following one.



Figure 65: Example of a filtered Cash milestones list

Note: If the desired Cash milestone does not appear in any screen, go to the section 13 which provides some guides to troubleshooting problems.

6.6.3 Displaying the properties of a Cash Milestone

Once the desired Cash milestone is displayed, which can be done following the steps described in the section 6.6.2 click the *show* button (note: project managers of the particular project associated to the Cash milestone can display the properties of this Cash milestone using the *modify* button instead, see section 6.6.4).

People authorized to the project associated to the Cash milestone have the access rights to display the properties of this Cash milestone.

The Cash milestone properties will be displayed.

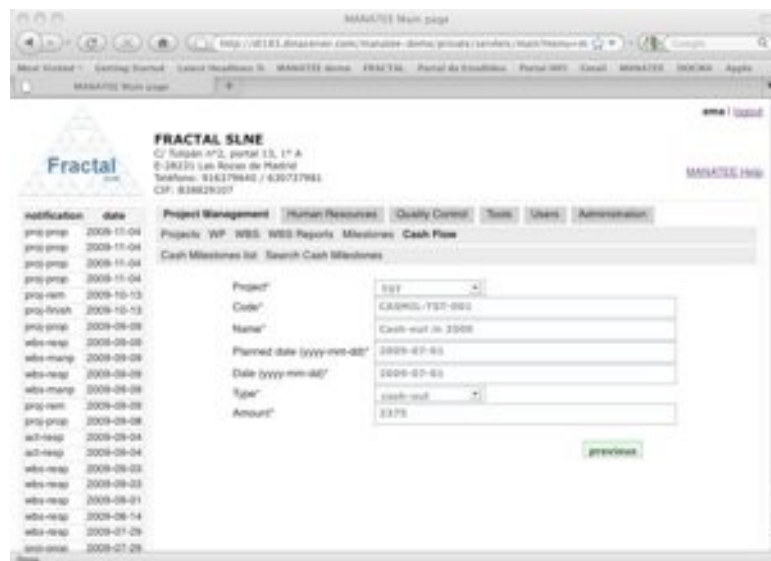


Figure 66: Cash milestone properties view



Note: If the *show* or *modify* buttons of the desired Cash milestone (i.e., the modify button will be enabled instead of the *show* button when the user is a project manager of this project) are not available, go to the section 13 which provides some guides to troubleshooting problems.

6.6.4 Modifying the properties of an existing Cash Milestone

Once the Cash milestone which properties are going to be modified is displayed, which can be done following the steps described in the section 6.6.2, click the *modify* button.

Only project managers of the project associated to this particular Cash milestone have the access rights to modify the Cash milestone properties.

The current status of the project must be “*active*”.

The following form will appear.

The screenshot shows a web browser window with the URL <http://192.168.1.100/manatee-demo/private/wh/MS/man/0mmpw/01>. The page title is "MANATEE Main page". The main content area is titled "FRACTAL SLNE" and includes contact information: "C/ Tulipán nº2, planta 11, 1ª A", "E-29211 Las Rozas de Madrid", "Teléfono: 95379640 / 630737981", and "CIF: B38829007". There are navigation tabs for "Project Management", "Human Resources", "Quality Control", "Tools", "Users", and "Administration". The "Cash Flow" tab is active, showing a "Cash Milestones list" and a "New Cash Milestone" form. The form fields are: "Project*" (dropdown menu with "FST" selected), "Code*" (text input with "CASHM-FST-003"), "Name*" (text input with "Cash-in - Kick-off"), "Planned date (yyyy-mm-dd)*" (text input with "2009-07-01"), "Date (yyyy-mm-dd)" (text input with "2009-07-01"), "Type*" (dropdown menu with "cash-in" selected), and "Amount*" (text input with "30000"). There are "cancel" and "update" buttons at the bottom of the form. On the left side, there is a table with columns "notification" and "date", listing various milestones and their dates.

Figure 67: Modifying the Cash milestone properties page

- ⇒ Modify the desired fields (taken into account constraints listed in section 6.6.1). Only the fields that are not greyed out can be modified.
- ⇒ Click *update*.

The Cash milestone properties will be modified.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the modification of the Cash milestone properties.

“*Cash Milestone (Code) properties have been modified*” to be sent to the Project managers of the project associated to the Cash milestone.



Note: If, for any reason, the Cash milestone properties cannot be modified, go to the section 13 which provides some guides to troubleshooting problems.

6.6.5 Deleting a Cash Milestone

Once the Cash milestone, which is going to be deleted, is displayed, which can be done following the steps described in the section 6.6.2, click the *delete* button.

Only project managers of the project associated to the milestone have the access rights to delete the Cash milestone.

The current status of the project must be “*active*”.

The following window displaying the Cash milestone properties will appear.

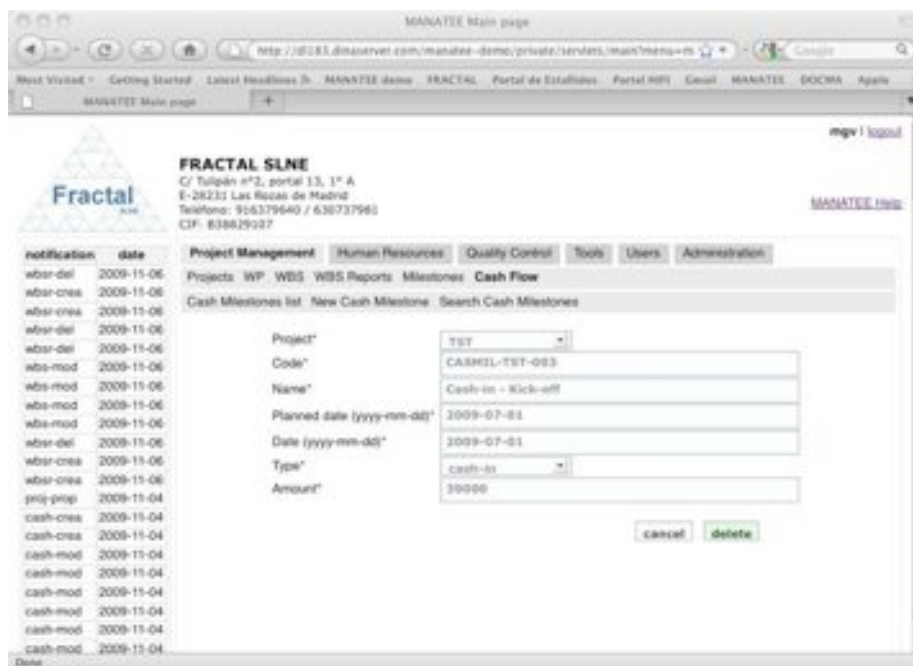


Figure 68: Cash milestone properties view

⇒ Click *delete*.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about that the Cash milestone has been deleted.

“*Cash Milestone (Code) has been deleted*” to be sent to the Project managers of the project associated to the Cash milestone.

Note: If, for any reason, the *delete* button is not available, go to the section 13 which provides some guides to troubleshooting problems.



7 PROJECT QUALITY CONTROL

MANATEE provides some utilities to maintain the quality control in a project, which includes the following issues.

- Define and manage the risks, which are identified in each project.
- Define and manage the non-conformities, which are identified in each project.
- Define and manage the preventive and corrective actions, which are defined to control the risks and non-conformities identified in each project.

7.1 Risk administration

MANATEE provides the capabilities required to manage the risks that are identified in a project.

From the risk administration point of view, MANATEE provides the following functionality:

- Introduce a new risk
- Search risks using different criteria
- Display the complete or filtered risk list
- Display the risk properties
- Modify the definition of a risk
- Print the risks details
- Delete a risk

It is important to remember that each user can only do actions on the risks according to the access rights that this particular user has (see sections 4 or 5.2 for more information).

7.1.1 Creating a new risk

To start working with risks, select *Quality Control* tab and, then, *Risks* tab.

In order to create a new risk, select *New Risk* tab.

Only the Quality manager and project managers have the access rights to create new risks.

The following form will appear.

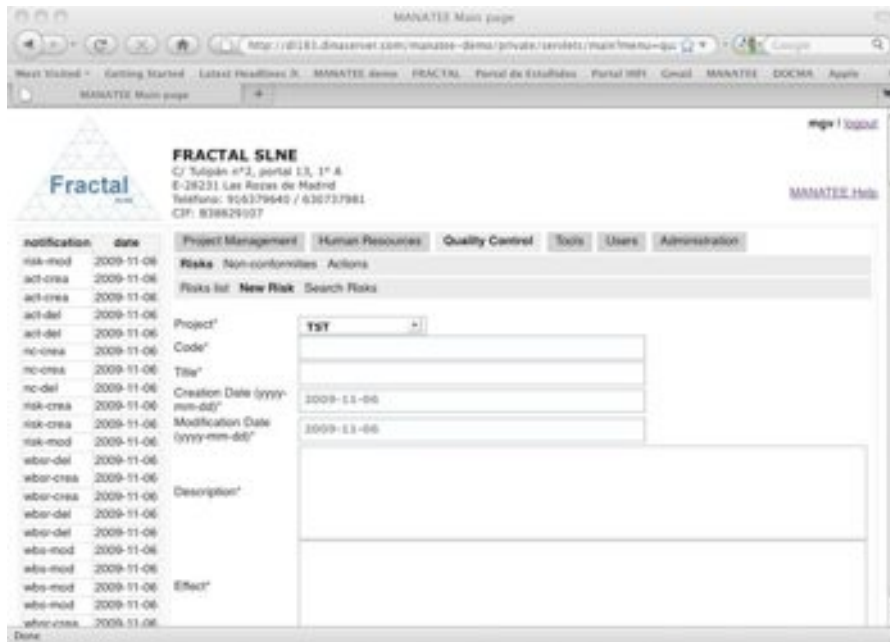


Figure 69: Creating a Risk page

⇒ Fill the following fields (all mandatory fields are marked with a star):

- **Project:** Select in the list the project to which the new risk is going to be associated. Only the project manager of the associated project and the Quality manager can create new risks. Therefore, for project managers, only projects that the login user is project manager will be displayed in the list. If the login user is the Quality manager, all active projects will be displayed in the list
- **Code:** The Code is created automatically following the pattern described below (see section 14 for more information about which code patterns can be used):

RI-PC-*nnn*

where,

RI is the acronym of Risk,

PC will be the project code of the project assigned to the risk,

nnn will be a sequence number that is automatically generated by the application

- **Title:** Introduce the risk title. This is a text field and the maximum length of this field is 300 characters.
- **Creation date:** The creation date is filled automatically using the current date (i.e., the date when the risk is being created).
- **Modification date:** The modification date is filled automatically using the current date (i.e., the date when the risk is being modified).
- **Description:** Introduce a description of the risk. This is a text field and the length of this field is not limited.



- **Effect:** Describe the effects that the risk could have. This is a text field and the maximum length limit is 300 characters.
- **Severity:** Select the severity of the risk among the options offered in the combo box, which include the following ones: Catastrophic, Critical, Major, Minor and Negligible.
- **Probability:** Select the probability of the risk among the options offered in the combo box, which include the following ones: High, Medium, Low and Negligible.
- **Actions:** Describe the actions that are planned and/or have been taken to mitigate the risk (if the actions have been registered in MANATEE, it is recommended to include in this field the code of those actions). This is a text field and the maximum length limit is 300 characters.
- **Conclusions:** Describe the current status of the risk. If the actions taken to mitigate the risk have been successful, it is convenient to indicate in this field that the risk is currently controlled. This is a text field and the maximum length limit is 300 characters.

⇒ Click *add Risk*.

The Risk will be created.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the creation of the risk.

“The Risk (Code) has been created” to be sent to the Project managers and the WP managers of the associated project and to the Quality manager.

Note: If, for any reason, the risk cannot be created, go to the section 13 which provides some guides to troubleshooting problems.

7.1.2 Searching risks

To start looking for risks, select *Quality Control* tab and, then, *Risks* tab.

The complete list of risks that the current user can see will be displayed.



Figure 70: Risk List

As shown in the figure, the following issues could be available for each risk in the list:

- **Project:** The code of the project associated to the risk.
- **Code:** The code of the risk.
- **Title:** The title of the risk.
- **Creation date:** The creation date of the risk.
- **Modification date:** The last modification date of the risk.
- **Severity:** The severity of the risk.
- **Probability:** The probability of the risk.
- **Show / Modify/print:** Two different action buttons can appear in this position:
 - The *show* button displays the risk content.
 - The *modify/print* button allows modifying the risk content and printing the risk details.
- **Delete:** The *delete* button allows removing the risk completely from the system.

The actions buttons of each risk will not be enabled (i.e., they will be displayed as greyed out) according to the access rights of the user that has login into the system.

The risks are always arranged by the code.

Each screen will show 10 risks, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the risks list.



Figure 71: Page selectors



In order to search a particular risk or to constrain the number of risks to be displayed, select *Search Risks* tab.

The following form will appear.

The screenshot shows the MANATEE web application interface. At the top, there is a navigation bar with tabs for 'Project Management', 'Human Resources', 'Quality Control', 'Tools', 'Users', and 'Administration'. The 'Search Risks' tab is selected. Below the navigation bar, there is a table of notifications with columns for 'Notification' and 'date'. The table contains several rows of data. To the right of the table is a search form with the following fields: 'Project*', 'Code*', 'Title*', 'Creation Date (yyyy-mm-dd)*', 'Modification Date (yyyy-mm-dd)*', 'Description*', 'Effect*', and 'Severity*'. The 'Project*' field has a dropdown menu with 'SI' selected. The 'Creation Date' and 'Modification Date' fields have date pickers. The 'Description*' field has a text area. The 'Effect*' and 'Severity*' fields have dropdown menus.

Figure 72: Search risks form

- ⇒ Fill as many fields as desired in order to filter the risk list.
- **Project:** Introduce any number of alphanumeric characters (this is not case sensitive); any risk whose project contains this sequence of characters in its title will be selected.
 - **Code:** Introduce any number of alphanumeric characters (this is not case sensitive); any risk which contains this sequence of characters in its code will be selected.
 - **Title:** Introduce any number of alphanumeric characters (this is not case sensitive); any risk which contains this sequence of characters in its title will be selected.
 - **Creation date:** Introduce a date; any risk whose creation date meets the introduced one will be selected.
 - **Modification date:** Introduce a date; any risk whose modification date meets the introduced one will be selected.
 - **Description:** Introduce any number of alphanumeric characters (this is not case sensitive); any risk which contains this sequence of characters in its description will be selected.
 - **Effect:** Introduce any number of alphanumeric characters (this is not case sensitive); any risk which contains this sequence of characters in its effect will be selected.
 - **Severity:** Select a severity level in the list; any risk whose severity date meets the introduced one will be selected.



- **Probability:** Select a probability level in the list; any risk whose probability date meets the introduced one will be selected.
- **Actions:** Introduce any number of alphanumerical characters (this is not case sensitive); any risk which contains this sequence of characters in its actions field will be selected.
- **Conclusions:** Introduce any number of alphanumerical characters (this is not case sensitive); any risk which contains this sequence of characters in its conclusions field will be selected.

⇒ Click *search*.

A new risk list will be displayed taken all the filtering constrains introduced into account (i.e., the filtered risk match all constrains introduced).

Example:

The user is searching the risks in the project "TST", which title includes the word "requirements"

Then, the Search form must be filled as shown in the figure below

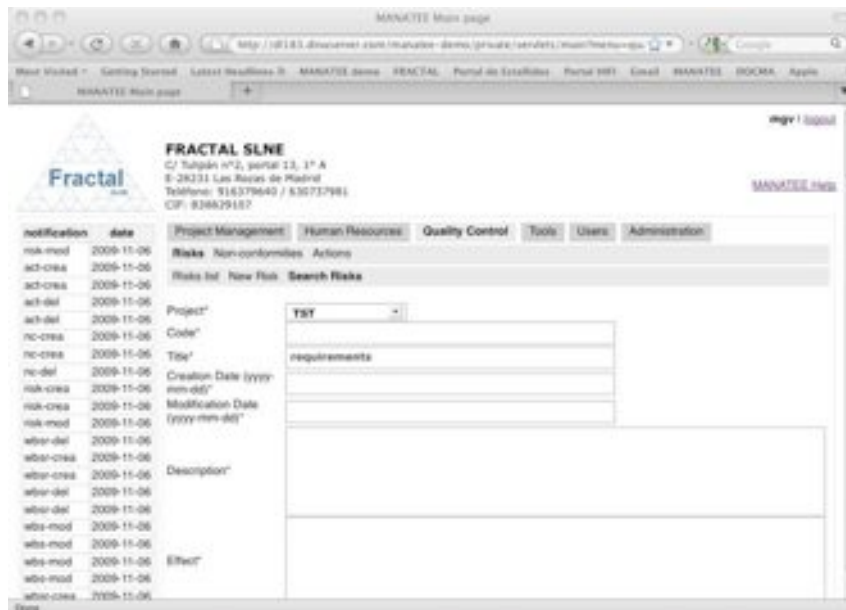


Figure 73: Example of a filled search risk form and the list of risks displayed would be the following one.



Figure 74: Example of a filtered risk list

Note: If the desired risk does not appear in any screen, go to the section 13 which provides some guides to troubleshooting problems.

7.1.3 Displaying the risk information

Once the desired risk is displayed, which can be done following the steps described in the section 7.1.2, click the *show* button (note: project managers of the particular project associated to the risk and the Quality manager can display the properties of this risk using the *modify/print* button instead, see section 7.1.4).

The Administrator and people authorized to the project associated to the risk have the access rights to display the properties of this risk.

The risk properties will be displayed.



Figure 75: Risk properties view



Note: If the *show* or *modify/print* buttons of the desired risk (i.e., the modify button will be enabled instead of the *show* button when the user is the project manager of this project or the Quality manager) are not available, go to the section 13 which provides some guides to troubleshooting problems.

7.1.4 Modifying the information in an existing risk

Once the risk, which properties are going to be modified, is displayed, which can be done following the steps described in the section 7.1.2, click the *modify/print* button.

Only project managers of the project associated to the risk and the Quality manager have the access rights to modify the information of the risk.

The current status of the project must be “*active*”.

The following form will appear.

Figure 76: *Modifying the risk properties page*

- ⇒ Modify the desired fields (taken into account constrains listed in section 7.1.1). Only the fields that are not greyed out can be modified.
- ⇒ Click *update*.

The risk will be modified.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the modification of the risk.

“*The properties of the Risk (Code) have been modified*” to be sent to the Project managers and the WP managers of the associated project and to the Quality Manager.

Note: If, for any reason, the risk cannot be modified, go to the section 13 which provides some guides to troubleshooting problems.



7.1.5 Printing the risk information

Once the risk, which properties are going to be printed, is displayed, which can be done following the steps described in the section 7.1.2, click the *modify/print* button.

Only project managers of the project associated to the risk and the Quality manager have the access rights to modify the information of the risk.

The current status of the project must be “*active*”.

The risk information will be displayed.

⇒ Click *Print Risk* button.

A summary of the risk that contains the following information will be generated:

- Code (as defined in the risk properties).
- Title (as defined in the risk properties).
- Project (as defined in the risk properties).
- Creation date (as defined in the risk properties).
- Modification date (as defined in the risk properties).
- Description (as defined in the risk properties).
- Effect (as defined in the risk properties).
- Severity (as defined in the risk properties).
- Probability (as defined in the risk properties).
- Actions (as defined in the risk properties).
- Conclusions (as defined in the risk properties).

The risk details can be printed or saved in pdf format.

Note: If, for any reason, the *modify/print* button is not available, go to the section 13 which provides some guides to troubleshooting problems.

7.1.6 Deleting a risk

Once the risk, which is going to be deleted, is displayed, which can be done following the steps described in the section 7.1.2, click the *delete* button.

Only project managers of the project associated to the risk and the Quality manager have the access rights to delete the risk.

The current status of the project must be “*active*”.

The following window displaying the risk properties will appear.

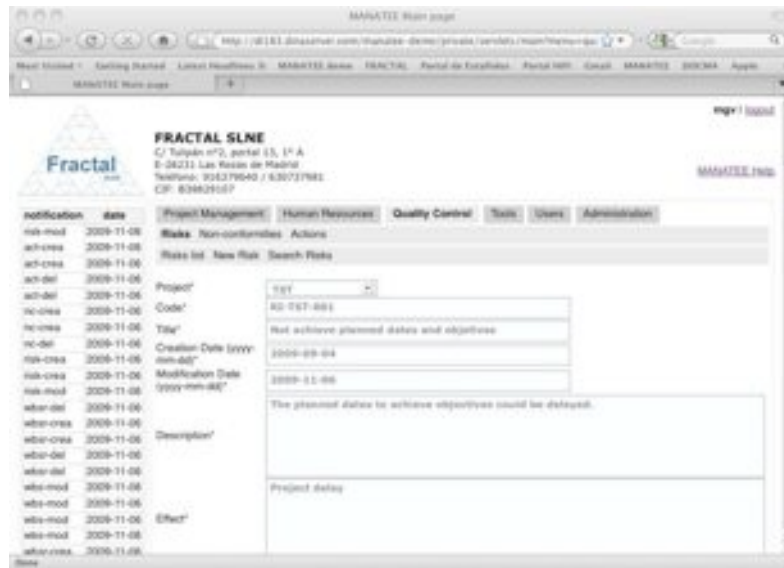


Figure 77: Risk properties view

⇒ Click *delete*.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about that the risk has been deleted.

“*The risk (Code) has been deleted*” to be sent to the Project managers and the WP managers of the associated project and to the Quality Manager.

Note: If, for any reason, the *delete* button is not available, go to the section 13 which provides some guides to troubleshooting problems.

7.2 Non-conformities administration

MANATEE provides the capabilities required to manage the non-conformities that are identified in a project.

From the non-conformity administration point of view, MANATEE provides the following functionality:

- Introduce a new non-conformity
- Search non-conformities using different criteria
- Display the complete or filtered non-conformity list
- Display the non-conformity information
- Modify the information of a non-conformity
- Print the non-conformities details
- Delete a non-conformity

It is important to remember that each user can only do actions on the non-conformities according to the access rights that this particular user has (see sections 4 or 5.2 for more information).



7.2.1 Creating a new non-conformity

To start working with non-conformities, select *Quality Control* tab and, then, *Non-conformities* tab.

In order to create a new non-conformity, select *New Non-conformity* tab.

Only the Quality manager and project managers have the access rights to create new-conformities.

The following form will appear.

The screenshot shows a web browser window with the URL `http://192.168.1.100:8080/manatee-demo/private/manatee/NonConformity.jsp`. The page header includes the Fractal logo and company information for 'FRAC TAL SLNE'. The main content area has a navigation menu with 'Quality Control' selected. Below the menu, there are tabs for 'Risks', 'Non-conformities', and 'Actions'. The 'Non-conformities' tab is active, showing a 'New Non-conformities' form. The form fields are: 'Project' (dropdown menu), 'Code' (text input), 'Title' (text input), 'Creation Date (yyyy-mm-dd)' (calendar), 'Date (yyyy-mm-dd)' (calendar), 'Description' (text area), 'Priority' (dropdown menu), and 'Actions' (text input). A table on the left side of the page lists various notification types and dates.

Figure 78: Creating a Non-conformity page

⇒ Fill the following fields (all mandatory fields are marked with a star):

- **Project:** Select in the list the project to which the new non-conformity is going to be associated. For project managers, only projects that the login user is project manager will be displayed in the list. If the login user is the Quality manager, all active projects will be displayed in the list
- **Code:** The Code is created automatically following the pattern described below (see section 14 for more information about which code patterns can be used):

NC-PC-*nnn*

where,

NC is the acronym of Non-conformity,

PC will be the project code of the project assigned to the non-conformity,

nnn will be a sequence number that is automatically generated by the application



- **Title:** Introduce the non-conformity title. This is a text field and the maximum length of this field is 300 characters.
- **Creation date:** The creation date is filled automatically using the current date (i.e., the date when the non-conformity is being created).
- **Date:** The modification date is filled automatically using the current date (i.e., the date when the non-conformity is being modified).
- **Description:** Introduce a description of the non-conformity. This is a text field and length of this field is not limited.
- **Priority:** Select the priority of the non-conformity among the options offered in the combo box, which include the following ones: High, Medium and Low.
- **Actions:** Describe the actions that are planned and/or have been taken to solve the non-conformity (if the actions have been registered in MANATEE, it is recommended to include in this field the code of those actions). This is a text field and the maximum length limit is 300 characters.
- **Conclusions:** Describe the current status of the non-conformity. If the actions taken to solve the non-conformity have been successful, it is convenient to indicate in this field that the non-conformities is currently solved or controlled. This is a text field and the maximum length limit is 300 characters.

⇒ Click *add NC*.

The Non-conformity will be created.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the creation of the non-conformity.

“The Non-conformity (Code) has been created” to be sent to the Project managers and the WP managers of the associated project and to the Quality manager.

Note: If, for any reason, the non-conformity cannot be created, go to the section 13 which provides some guides to troubleshooting problems.

7.2.2 Searching non-conformities

To start looking for non-conformities, select *Quality Control* tab and, then, *Non-conformities* tab.

The complete list of non-conformities that the current user can see will be displayed.



Project	Code	Title	Created Date	Date	Priority	modify/print	delete
TST	NC-TST-001	PFR documentation is not available on time	2009-11-06	2009-11-06	high	modify/print	delete
TST	NC-TST-002	PFR documents do not include the expected content	2009-11-06	2009-11-06	high	modify/print	delete

Figure 79: Non-conformity List

As shown in the figure, the following issues could be available for each non-conformity in the list:

- **Project:** The code of the project associated to the non-conformity.
- **Code:** The code of the non-conformity.
- **Title:** The title of the non-conformity.
- **Creation date:** The creation date of the non-conformity.
- **Date:** The last modification date of the non-conformity.
- **Priority:** The priority of the non-conformity.
- **Show / modify/print:** Two different action buttons can appear in this position:
 - The *show* button displays the non-conformity content.
 - The *modify/print* button allows modifying the non-conformity content and printing the non-conformity details.
- **Delete:** The *delete* button allows removing the non-conformity completely from the system.

The actions buttons of each non-conformity will not be enabled (i.e., they will be displayed as greyed out) according to the access rights of the user that has login into the system.

The non-conformities are always arranged by the code.

Each screen will show 10 non-conformities, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the non-conformities list.



Figure 80: Page selectors



In order to search a particular non-conformity or to constrain the number of non-conformities to be displayed, select *Search Non-conformities* tab.

The following form will appear.

notification	date
risk-mod	2009-11-06
act-crea	2009-11-06
act-crea	2009-11-06
act-del	2009-11-06
act-del	2009-11-06
nc-crea	2009-11-06
nc-crea	2009-11-06
nc-del	2009-11-06
risk-crea	2009-11-06
risk-crea	2009-11-06
risk-mod	2009-11-06
after-del	2009-11-06
after-crea	2009-11-06
after-crea	2009-11-06
after-del	2009-11-06
after-del	2009-11-06
after-mod	2009-11-06
after-mod	2009-11-06
after-mod	2009-11-06
after-crea	2009-11-06

Figure 81: Search non-conformities form

- ⇒ Fill as many fields as desired in order to filter the non-conformity list.
- **Project:** Introduce any number of alphanumerical characters (this is not case sensitive); any non-conformity whose project contains this sequence of characters in its title will be selected.
 - **Code:** Introduce any number of alphanumerical characters (this is not case sensitive); any non-conformity which contains this sequence of characters in its code will be selected.
 - **Title:** Introduce any number of alphanumerical characters (this is not case sensitive); any non-conformity which contains this sequence of characters in its title will be selected.
 - **Creation date:** Introduce a date; any non-conformity whose creation date meets the introduced one will be selected.
 - **Date:** Introduce a date; any non-conformity whose modification date meets the introduced one will be selected.
 - **Description:** Introduce any number of alphanumerical characters (this is not case sensitive); any non-conformity which contains this sequence of characters in its description will be selected.
 - **Priority:** Select a priority level in the list; any non-conformity whose severity date meets the introduced one will be selected.
 - **Actions:** Introduce any number of alphanumerical characters (this is not case sensitive); any non-conformity which contains this sequence of characters in its actions field will be selected.



- **Conclusions:** Introduce any number of alphanumerical characters (this is not case sensitive); any non-conformity which contains this sequence of characters in its conclusions field will be selected.

⇒ Click *search*.

A new non-conformity list will be displayed taken all the filtering constrains introduced into account (i.e., the filtered non-conformity match all constrains introduced).

Example:

The user is searching the non-conformities in the project "TST" that includes the word "time" in their title.

Then, the Search form must be filled as shown in the figure below

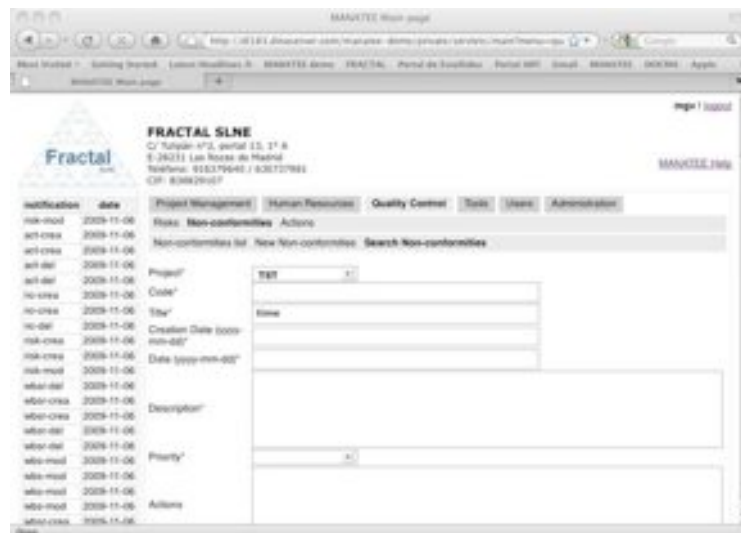


Figure 82: Example of a filled search non-conformity form and the list of non-conformities displayed would be the following one.



Figure 83: Example of a filtered non-conformity list



Note: If the desired non-conformity does not appear in any screen, go to the section 13 which provides some guides to troubleshooting problems.

7.2.3 Displaying the non-conformity information

Once the desired non-conformity is displayed, which can be done following the steps described in the section 7.2.1, click the *show* button (note: the Administrator, project managers of the particular project associated to the non-conformity and the Quality manager can display the properties of this non-conformity using the *modify/print* button instead, see section 7.2.4).

The Administrator and People authorized to the project associated to the non-conformity have the access rights to display the properties of this non-conformity.

The non-conformity properties will be displayed.

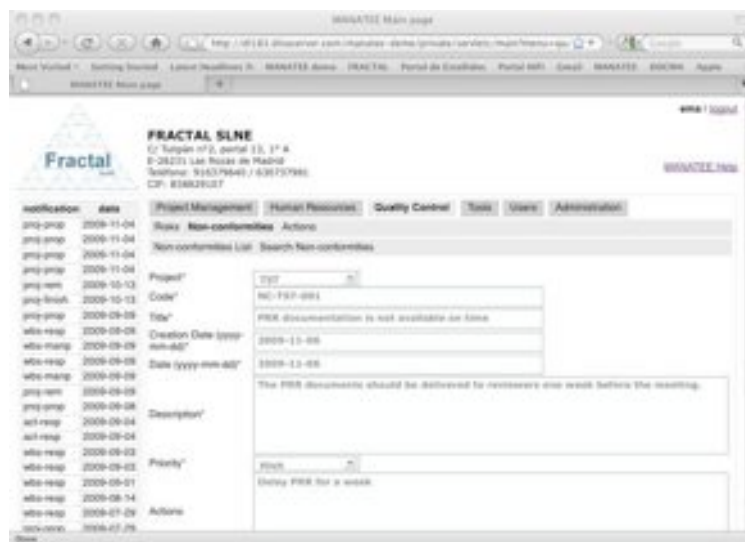


Figure 84: Non-conformity properties view

Note: If the *show* or *modify/print* buttons of the desired non-conformity (i.e., the modify button will be enabled instead of the *show* button when the user is the project manager of this project or the Quality manager) are not available, go to the section 13 which provides some guides to troubleshooting problems.

7.2.4 Modifying the information in an existing non-conformity

Once the non-conformity, which properties are going to be modified, is displayed, which can be done following the steps described in the section 7.2.1, click the *modify/print* button.

Only project managers of the project associated to the non-conformity and the Quality manager have the access rights to modify the information of the non-conformity.

The current status of the project must be “*active*”.

The following form will appear.



Figure 85: *Modifying the non-conformity properties page*

- ⇒ Modify the desired fields (taken into account constrains listed in section 7.2.1). Only the fields that are not greyed out can be modified.
- ⇒ Click *update*.

The non-conformity will be modified.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the modification of the non-conformity.

“The properties of the Non-conformity (Code) have been modified” to be sent to the Project managers and the WP managers of the associated project and to the Quality Manager.

Note: If, for any reason, the non-conformity cannot be modified, go to the section 13 which provides some guides to troubleshooting problems.

7.2.5 Printing the non-conformity information

Once the non-conformity, which properties are going to be printed, is displayed, which can be done following the steps described in the section 7.2.1, click the *modify/print* button.

Only project managers of the project associated to the non-conformity and the Quality manager have the access rights to modify the information of the non-conformity.

The current status of the project must be *“active”*.

The non-conformity information will be displayed.

- ⇒ Click *Print Non-conformity* button.

A summary of the non-conformity that contains the following information will be generated:

- Code (as defined in the non-conformity properties).



- Title (as defined in the non-conformity properties).
- Project (as defined in the non-conformity properties).
- Creation date (as defined in the non-conformity properties).
- Modification date (as defined in the non-conformity properties).
- Description (as defined in the non-conformity properties).
- Priority (as defined in the non-conformity properties).
- Actions (as defined in the non-conformity properties).
- Conclusions (as defined in the non-conformity properties).

The non-conformity details can be printed or saved in pdf format.

Note: If, for any reason, the *modify/print* button is not available, go to the section 13 which provides some guides to troubleshooting problems.

7.2.6 Deleting a non-conformity

Once the non-conformity, which is going to be deleted, is displayed, which can be done following the steps described in the section 7.2.1, click the *delete* button.

Only project managers of the project associated to the non-conformity and the Quality manager have the access rights to delete the non-conformity.

The current status of the project must be “*active*”.

The following window displaying the non-conformity properties will appear.



Figure 86: Non-conformity properties view

⇒ Click *delete*.



A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about that the non-conformity has been deleted.

“The non-conformity (Code) has been deleted” to be sent to the Project managers and the WP managers of the associated project and to the Quality Manager.

Note: If, for any reason, the *delete* button is not available, go to the section 13 which provides some guides to troubleshooting problems.

7.3 Actions administration

MANATEE provides the capabilities required to manage the actions that are created in a project.

From the action administration point of view, MANATEE provides the following functionality:

- Introduce a new action
- Search actions using different criteria
- Display the complete or filtered action list
- Display the action properties
- Modify the definition of a action
- Print the actions details
- Delete a action

It is important to remember that each user can only do actions on the actions according to the access rights that this particular user has (see sections 4 or 5.2 for more information).

7.3.1 Creating a new action

To start working with actions, select *Quality Control* tab and, then, *Actions* tab.

In order to create a new action, select *New Action* tab.

Only the Quality manager and project managers have the access rights to create new actions.

The following form will appear.

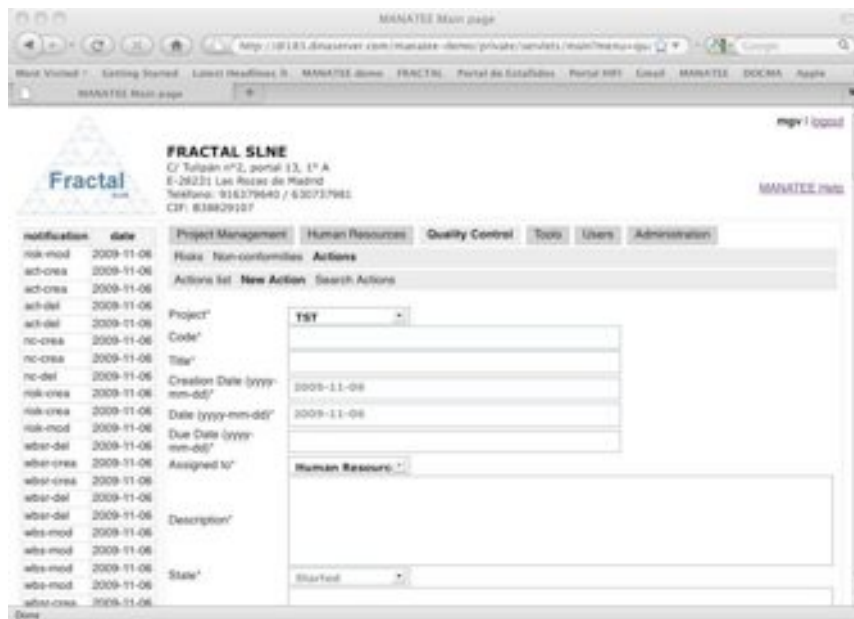


Figure 87: Creating a Action page

⇒ Fill the following fields (all mandatory fields are marked with a star):

- **Project:** Select in the list the project to which the new action is going to be associated. Only the project manager of the associated project and the Quality manager can create new actions. Therefore, for project managers, only projects that the login user is project manager will be displayed in the list. If the login user is the Quality manager, all active projects will be displayed in the list.
- **Code:** The Code is created automatically following the pattern described below (see section 14 for more information about which code patterns can be used):

AC-PC-nnn

where,

AC is the acronym of Action,

PC will be the project code of the project assigned to the action,

nnn will be a sequence number that is automatically generated by the application

- **Title:** Introduce the action title. This is a text field and the maximum length of this field is 100 characters.
- **Creation date:** The creation date is filled automatically using the current date (i.e., the date when the action is being created).
- **Date:** The modification date is filled automatically using the current date (i.e., the date when the action is being modified).
- **Due date:** Introduce a date to establish a limit date to perform the action.



- **Assigned to:** Select in the list the person that must perform the action (all users registered in MANATEE are available).
- **Description:** Introduce a description of the action. This is a text field and the length of this field is not limited.
- **State:** Select the state of the action among the options offered in the combo box, which include the following ones: *Started*, *On-going* and *Close*. When the action is created, the state of the action is filled automatically as *Started* (the other options area not available).
- **Conclusions:** Introduce any additional information about the action to be done and/or the action taken. This is a text field and the maximum length limit is 300 characters.

⇒ Click *add action*.

The Action will be created.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the creation of the action.

“The Action (Code) has been created” to be sent to the project managers, the WP managers of the associated project, the Quality manager and the assigned person.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to inform the corresponding user about the action that has been assigned to him/her.

“You have been named responsible of the Action (Code)” to be sent to assigned person.

Note: If, for any reason, the action cannot be created, go to the section 13 which provides some guides to troubleshooting problems.

7.3.2 Searching actions

To start looking for actions, select *Quality Control* tab and, then, *Actions* tab.

The complete list of actions that the current user can see will be displayed.



Figure 88: Action List

As shown in the figure, the following issues could be available for each action in the list:

- **Project:** The code of the project associated to the action.
- **Code:** The code of the action.
- **Title:** The title of the action.
- **Creation date:** The creation date of the action.
- **Date:** The last modification date of the action.
- **Due date:** The due date of the action.
- **State:** The state of the action.
- **Show / Modify/print:** Two different action buttons can appear in this position:
 - The *show* button displays the action content.
 - The *modify/print* button allows modifying the action content and printing the action details.
- **Delete:** The *delete* button allows removing the action completely from the system.

The actions buttons of each action will not be enabled (i.e., they will be displayed as greyed out) according to the access rights of the user that has login into the system.

All actions, which due date is in the past and are not closed yet, will be displayed in red.

The actions are always arranged by the code.

Each screen will show 10 actions, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the actions list.



Figure 89: Page selectors



In order to search a particular action or to constrain the number of actions to be displayed, select *Search Actions* tab.

The following form will appear.

Figure 90: Search actions form

- ⇒ Fill as many fields as desired in order to filter the action list.
- **Project:** Introduce any number of alphanumerical characters (this is not case sensitive); any action whose project contains this sequence of characters in its title will be selected.
 - **Code:** Introduce any number of alphanumerical characters (this is not case sensitive); any action which contains this sequence of characters in its code will be selected.
 - **Title:** Introduce any number of alphanumerical characters (this is not case sensitive); any action which contains this sequence of characters in its title will be selected.
 - **Creation date:** Introduce a date; any action whose creation date meets the introduced one will be selected.
 - **Date:** Introduce a date; any action whose modification date meets the introduced one will be selected.
 - **Due date:** Introduce a date; any action whose due date meets the introduced one will be selected.
 - **Assigned to:** Select a person in the list; any action whose assigned person meets the introduced one will be selected.
 - **Description:** Introduce any number of alphanumerical characters (this is not case sensitive); any action which contains this sequence of characters in its description will be selected.



- **State:** Select a state in the list; any action whose state meets the introduced one will be selected.
- **Conclusions:** Introduce any number of alphanumerical characters (this is not case sensitive); any action which contains this sequence of characters in its conclusions field will be selected.

⇒ Click *search*.

A new action list will be displayed taken all the filtering constrains introduced into account (i.e., the filtered action match all constrains introduced).

Example:

The user is searching the actions in the project "TST", which status is "on-going"

Then, the Search form must be filled as shown in the figure below

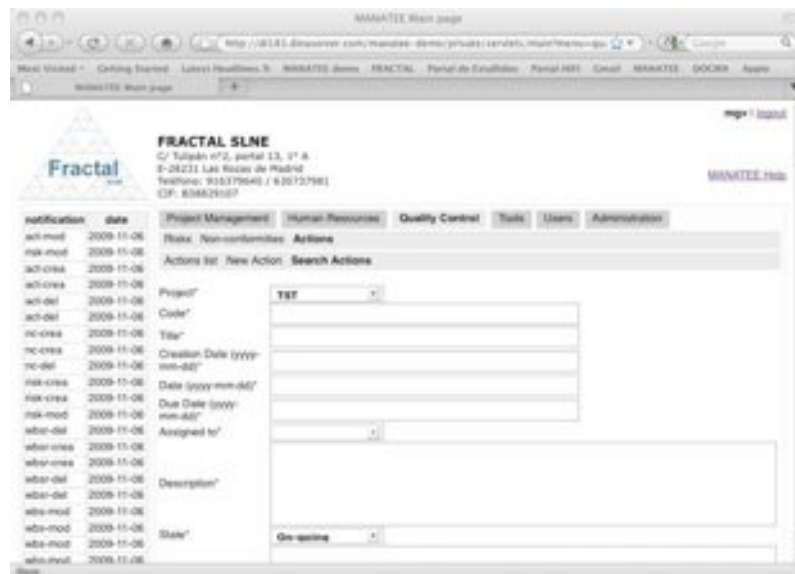


Figure 91: Example of a filled search action form

and the list of actions displayed would be the following one.



Figure 92: Example of a filtered action list

Note: If the desired action does not appear in any screen, go to the section 13 which provides some guides to troubleshooting problems.

7.3.3 Displaying the action information

Once the desired action is displayed, which can be done following the steps described in the section 7.3.2 click the *show* button (note: the Administrator, project managers of the particular project associated to the action, the Quality manager and the assigned person can display the properties of this action using the *modify/print* button instead, see section 7.3.4).

The Administrator and People authorized to the project associated to the action have the access rights to display the properties of this action.

The action properties will be displayed.

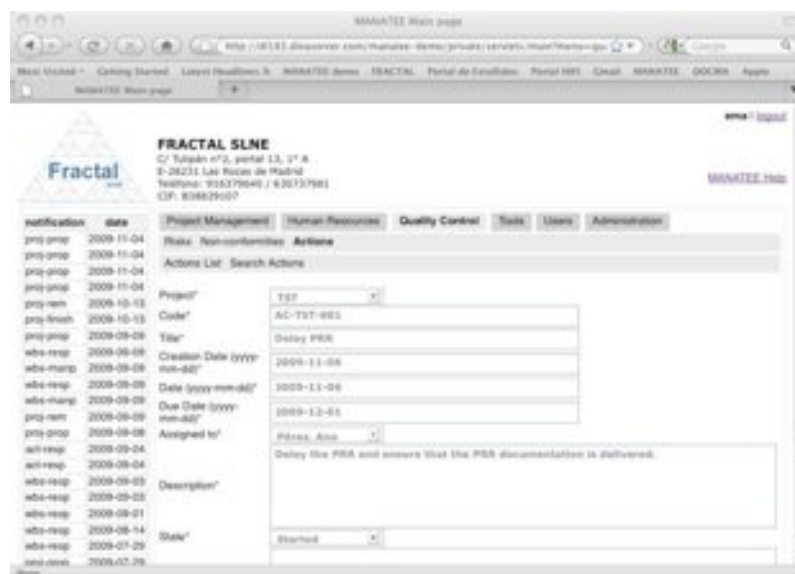


Figure 93: Action properties view



Note: If the *show* or *modify/print* buttons of the desired action (i.e., the modify button will be enabled instead of the *show* button when the user is the project manager of this project or the Quality manager) are not available, go to the section 13 which provides some guides to troubleshooting problems.

7.3.4 Modifying the information in an existing action

Once the action, which properties are going to be modified, is displayed, which can be done following the steps described in the section 7.3.2, click the *modify/print* button.

Only project managers of the project associated to the action, the Quality manager and the assigned person to this particular action have the access rights to modify the information of the action.

The current status of the project must be “*active*”.

The following form will appear.

notification	date
risk-mod	2009-11-06
act-crea	2009-11-06
act-crea	2009-11-06
act-del	2009-11-06
act-del	2009-11-06
nc-crea	2009-11-06
nc-crea	2009-11-06
nc-del	2009-11-06
risk-crea	2009-11-06
risk-crea	2009-11-06
risk-mod	2009-11-06
alter-del	2009-11-06
alter-crea	2009-11-06
alter-crea	2009-11-06
alter-del	2009-11-06
alter-mod	2009-11-06
alter-mod	2009-11-06
alter-mod	2009-11-06
alter-mod	2009-11-06
alter-crea	2009-11-06

Project*	TET
Code*	AC-TST-001
Title*	Delay PRB
Creation Date (YYYY-mm-dd)*	2009-11-06
Date (YYYY-mm-dd)*	2009-11-06
Due Date (YYYY-mm-dd)*	2009-11-01
Assigned to*	FERRIS, ENRI
Description*	Delay the PRB and ensure that the PRB documentation is delivered.
State*	Started

Figure 94: Modifying the action properties page

- ⇒ Modify the desired fields (taken into account constrains listed in section 7.3.1). Only the fields that are not greyed out can be modified.
- ⇒ Click *update*.

The action will be modified.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the modification of the action.

“The properties of Action (Code) have been modified” to be sent to the Project managers and the WP managers of the associated project, the Quality Manager and the assigned person.



When the status of the action is changed to *Close*, a notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about the action has been close and the status could not be changed again.

“*The Action (Code) has been closed*” to be sent to the Project managers and the WP managers of the associated project, the Quality Manager and the assigned person.

Note: If, for any reason, the action cannot be modified, go to the section 13 which provides some guides to troubleshooting problems.

7.3.5 Printing the action information

Once the action, which properties are going to be printed, is displayed, which can be done following the steps described in the section 7.3.2, click the *modify/print* button.

Only project managers of the project associated to the action, the Quality manager and the assigned person to this particular action have the access rights to modify the information of the action.

The current status of the project must be “*active*”.

The action information will be displayed.

⇒ Click *Print Action* button.

A summary of the action that contains the following information will be generated:

- Code (as defined in the action properties).
- Title (as defined in the action properties).
- Project (as defined in the action properties).
- Creation date (as defined in the action properties).
- Modification date (as defined in the action properties).
- Due date (as defined in the action properties).
- Assigned to (as defined in the action properties).
- Description (as defined in the action properties).
- State (as defined in the action properties).
- Conclusions (as defined in the action properties).

The action details can be printed or saved in pdf format.

Note: If, for any reason, the *modify/print* button is not available, go to the section 13 which provides some guides to troubleshooting problems.

7.3.6 Deleting an action

Once the action, which is going to be deleted, is displayed, which can be done following the steps described in the section 7.3.2, click the *delete* button.



Only project managers of the project associated to the action and the Quality manager have the access rights to delete the action.

The current status of the project must be “*active*”.

The following window displaying the action properties will appear.

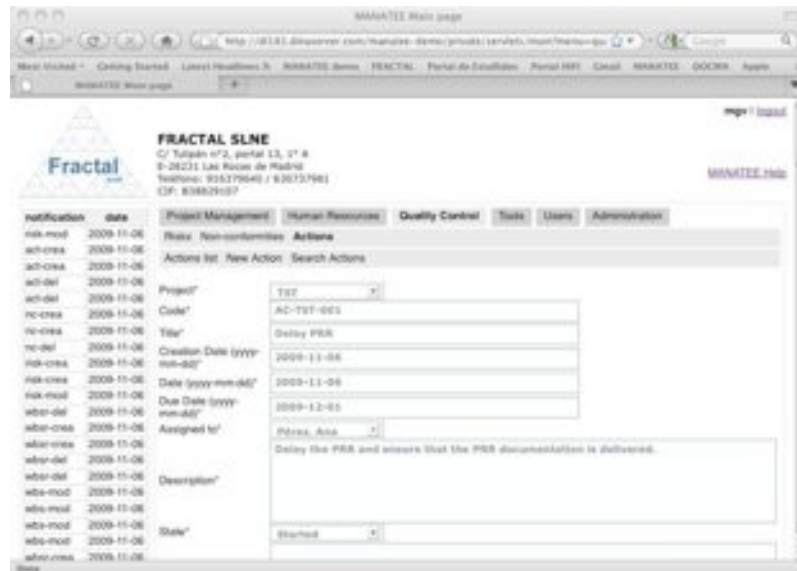


Figure 95: Action properties view

⇒ Click *delete*.

A notification will be also sent (internally, a MANATEE notification and, externally, an e-mail) to the corresponding users in order to inform them about that the action has been deleted.

“*The action (Code) has been deleted*” to be sent to the Project managers and the WP managers of the associated project, the Quality Manager and the assigned person to this action.

Note: If, for any reason, the *delete* button is not available, go to the section 13 which provides some guides to troubleshooting problems.



8 HUMAN RESOURCES TOOLS

MANATEE provides several capabilities that have been designed to facilitate the human resources activities that are usually performed in any organization. These capabilities includes:

- Define and maintain the hourly cost of the people working in the organization.
- Provide the PTR (Personal Time Report) forms to be filled by the people working in the organization.
- Summarize (taken into account the data introduced in the PTR's) the people occupation for a selected period.

It is important to remember that each user can only do actions on the actions according to the access rights that this particular user has (see sections 4 or 5.2 for more information).

8.1 User's hourly cost administration

MANATEE provides the capabilities required to define and maintain the hourly cost of the people working in the organization.

From the user's hourly cost administration point of view, MANATEE provides the following functionality:

- Define the hourly cost of a user
- Search the hourly cost of a user
- Modify the hourly cost of a user
- Delete the hourly cost of a user

This administration of the user's hourly cost is restricted to the Human Resources manager, which is, therefore the only user that have available the functionality described in this section.

8.1.1 Define a new User's hourly cost

To define a new hourly cost for a user, select *Human Resources* tab and, then, *HHRR* tab.

The Human Resources manager is the only user that can define a new User's hourly cost.

The hourly cost already defined by the MANATEE users will be displayed.

In order to define a new hourly cost for a user, select *New user's hourly cost* tab.

The following form will appear.

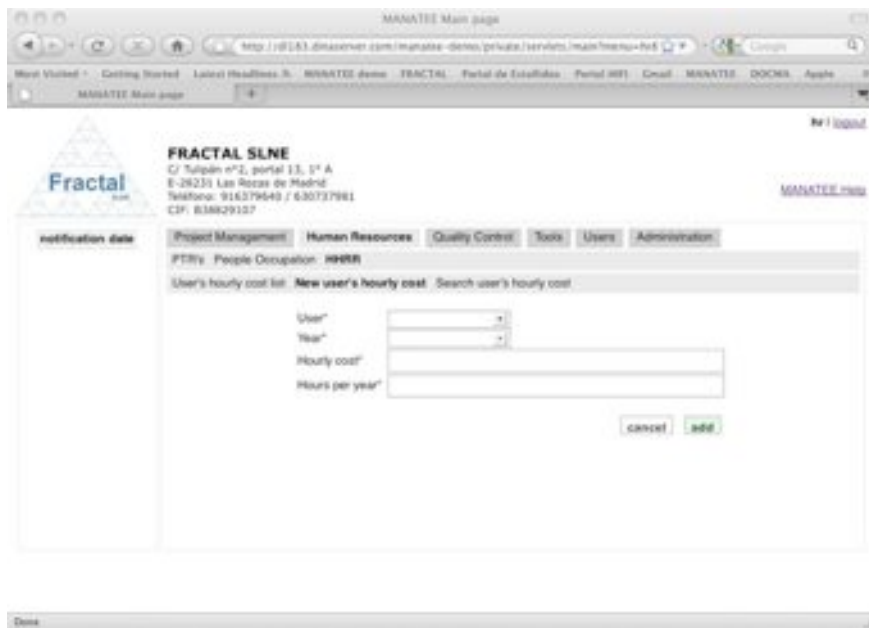


Figure 96: Defining a user's hourly cost page

- ⇒ Fill the following fields (all mandatory fields are marked with a star):
- **User:** Select a person in the list (all users registered in MANATEE are available).
 - **Year:** Select a year in the list.
 - **Hourly cost:** Introduce the hourly cost of the selected person. This is a numerical field.
 - **Hours per year:** Introduce the number of hour that the selected person works in year. This is a numerical field.
- ⇒ Click *add*.

The hourly cost has been defined for the selected user and year.

Note: If, for any reason, the hourly cost cannot be created for a user, go to the section 13 which provides some guides to troubleshooting problems.

8.1.2 Searching User's hourly costs

To start looking for User's hourly costs, select *Human Resources* tab and, then, *HHRR* tab.

Only the Human Resources manager can visualize the user's hourly cost.

The User's hourly cost already defined will be displayed.

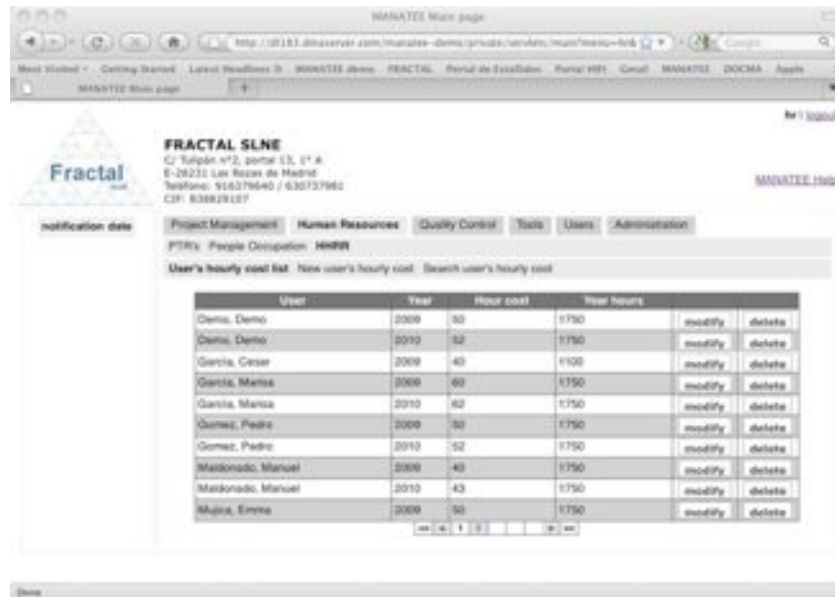


Figure 97: User's hourly cost List

As shown in the figure, the following issues could be available for each hourly cost defined in the list:

- **User:** The name of the user.
- **Year:** The year corresponding to the hourly cost defined.
- **Hour cost:** The cost per hour of the mentioned user and year.
- **Year hours:** The number of hours per year that the mentioned user works.
- **Modify:** The *modify* button allows modifying the user's hourly cost definition.
- **Delete:** The *delete* button allows deleting the user's hourly cost definition.

The user's hourly costs are always arranged, first, by user and, then, by year.

Each screen will show 10 user's hourly costs, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the user's hourly costs list.



Figure 98: Page selectors

In order to search a particular user's hourly cost or to constrain the number of user's hourly costs to be displayed, select *Search user's hourly cost* tab.

The following form will appear.



Figure 99: Search user's hourly cost form

- ⇒ Fill as many fields as desired in order to filter the action list.
- **User:** Select a person in the list; any hourly cost corresponding to the introduced user will be selected.
 - **Year:** Introduce a year; any hourly cost corresponding to the introduced year will be selected.
 - **Hourly cost:** Introduce a number; any hourly cost that meets this figure will be selected.
 - **Hours per year:** Introduce a number; any the hourly costs of the users that works per year the introduced number will be selected.
- ⇒ Click *search*.

A new user's hourly costs list will be displayed taken all the filtering constrains introduced into account (i.e., the filtered user's hourly costs match all constrains introduced).

Example:

The Human Resources manager is searching the hourly cost of the user "Pérez, Ana".

Then, the Search form must be filled as shown in the figure below

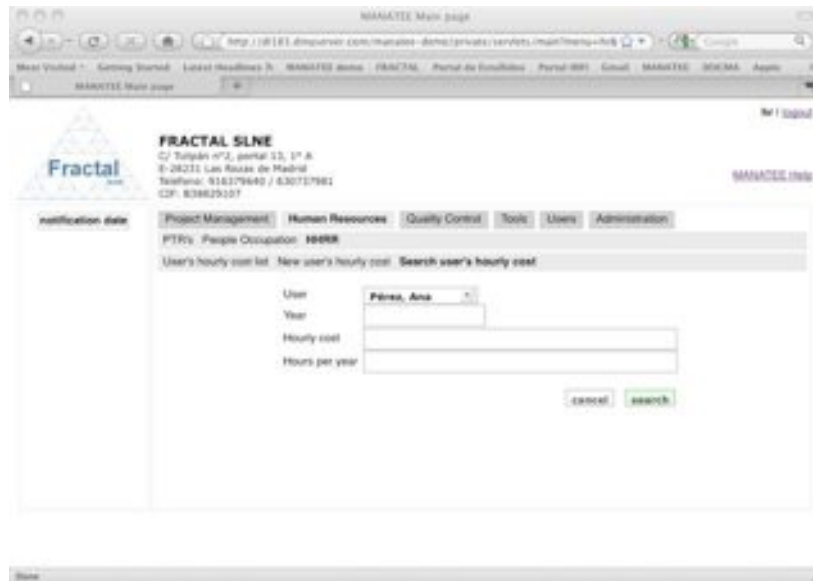


Figure 100: Example of a filled search user's hourly cost form and the list of user's hourly cost displayed would be the following one.



Figure 101: Example of a filtered user's hourly costs list

Note: If the desired user's hourly cost does not appear in any screen, go to the section 13 which provides some guides to troubleshooting problems.

8.1.3 Modifying the information in an existing User's hourly cost

Once the user's hourly cost that is going to be modified is displayed, which can be done following the steps described in the section 8.1.2, click the *modify* button.

Only the Human Resources manager can modify the user's hourly cost.

The following form will appear.



Figure 102: *Modifying the user's hourly cost definition page*

- ⇒ Modify the desired fields (taken into account constraints listed in section 8.1.1). Only the fields that are not greyed out can be modified.
- ⇒ Click *update*.

The user's hourly cost will be modified.

Note: If, for any reason, the user's hourly cost cannot be modified, go to the section 13 which provides some guides to troubleshooting problems.

8.1.4 Deleting a User's hourly cost

Once the user's hourly cost, which is going to be deleted, is displayed, which can be done following the steps described in the section 8.1.2, click the *delete* button.

Only the Human Resources manager can delete an user's hourly cost.

The following window displaying the user's hourly cost properties will appear.

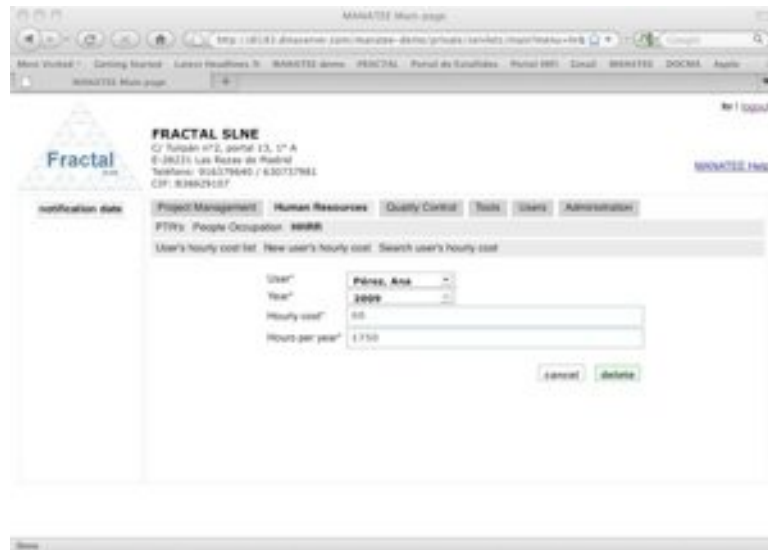


Figure 103: User's hourly cost information view

⇒ Click *delete*.

Note: If, for any reason, the *delete* button is not available, go to the section 13 which provides some guides to troubleshooting problems.

8.2 PTR

MANATEE provides the capability to fill PTRs to all users registered in MANATEE that have activated the PTR option (see 11.6).

The PTR's spans for a week.

From PTR management point of view, MANATEE provides the following functionality:

- Fill a new PTR.
- Search for an existing PTR.
- Display the PTR information.
- Modify the information of an existing PTR.
- Print the PTR details.
- Delete a PTR.

As indicated in section 11, only the Administrator has the access right to activate the PTR for a user.

8.2.1 Filling a new PTR

To fill a new PTR, select *Human Resources* tab and, then, *PTR's* tab.

The PTR's already filled by the user will be displayed.

In order to fill a new PTR, select *New PTR* tab.



The PTR form will appear.

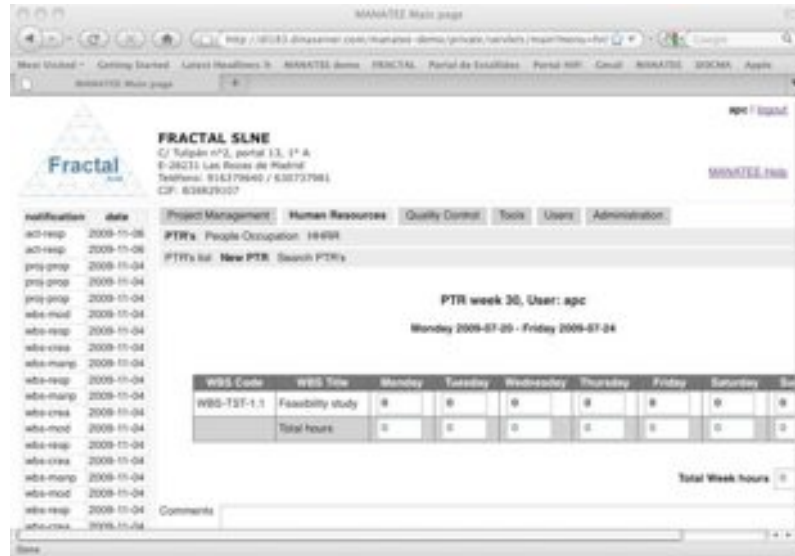


Figure 104: Creating a PTR page

In the PTR form, each user will see the WBS's assigned to him/her that have been active during the period covered by the PTR to be filled (i.e., the PTR dates are between the start real date and end read date of the WBS). The period of the new PTR would always be the following week to the last PTR filled by this user.

- ⇒ Introduce the hours that have been spent in each **WBS** during the PTR period. These are numerical fields.
- ⇒ Introduce any additional comment in the **Comments** box. This is a text field and length of this field is not limited.
- ⇒ Click *add PTR*.

The PTR has been created for the corresponding PTR period.

Note: If, for any reason, the PTR cannot be created, go to the section 13 which provides some guides to troubleshooting problems.

8.2.2 Searching weekly PTR's

To start looking for PTR's, select *Human Resources* tab and, then, *PTR's* tab.

The PTR's already filled by the login user will be displayed.

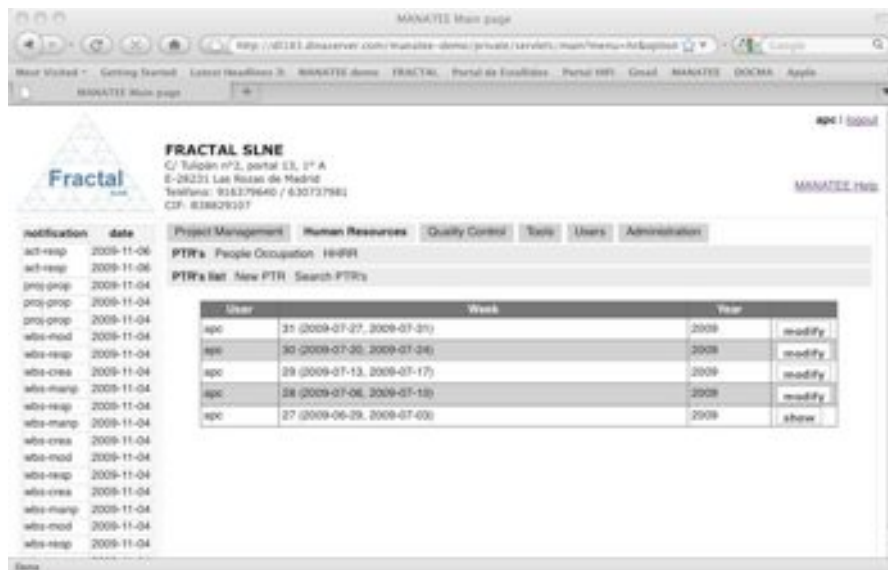


Figure 105: PTR's List

As shown in the figure, the following issues could be available for each PTR in the list:

- **User:** The username of the login user.
- **Week:** The number of the week in the year corresponding to the PTR.
- **Year:** The year corresponding to the PTR.
- **Show / modify:** Two different action buttons can appear in this position:
 - The *show* button displays the PTR content and allows printing the PTR details.
 - The *modify* button allows modifying the PTR content and printing the PTR details.
- **Delete:** The *delete* button allows deleting the PTR.

The PTR's are always arranged by date (from the most recent one to the oldest one).

Each screen will show 10 PTR's, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the PTR's list.



Figure 106: Page selectors

In order to search a particular PTR or to constrain the number of PTR's to be displayed, select *Search PTR's* tab.

The following form will appear.

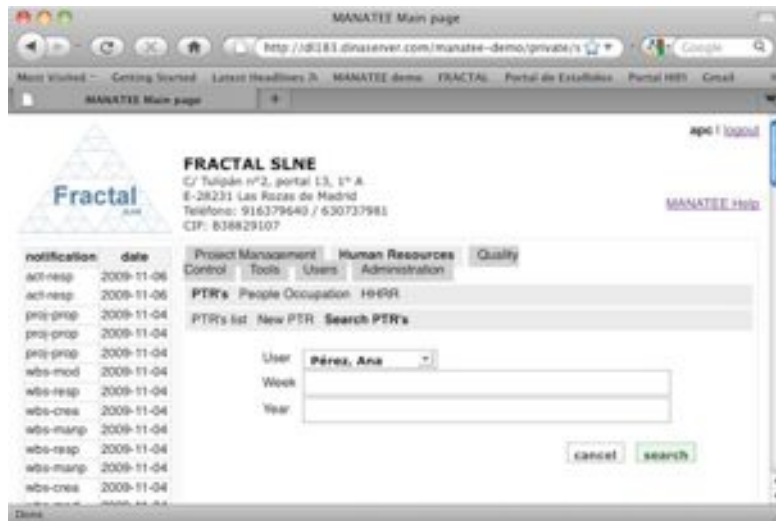


Figure 107: Search PTR's form

- ⇒ Fill as many fields as desired in order to filter the action list.
- **User:** Select a person in the list; any PTR corresponding to the introduced person will be selected. If the user is the Human Resources manager, all users registered in MANATEE will be available. Other users can only see themselves.
 - **Week:** Introduce a week; any PTR corresponding to the introduced week will be selected.
 - **Year:** Introduce a year; any PTR corresponding to the introduced year will be selected.
- ⇒ Click *search*.

A new PTR list will be displayed taken all the filtering constrains introduced into account (i.e., the filtered PTR's match all constrains introduced).

Example:

An user is searching the PTR filled in the week 29.

Then, the Search form must be filled as shown in the next figure.

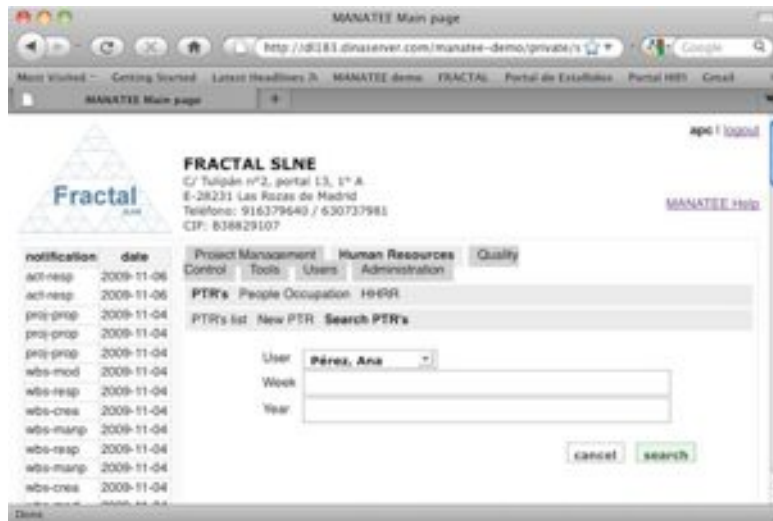


Figure 108: Example of a filled search PTR form

and the list of PTR's displayed would be the following one.

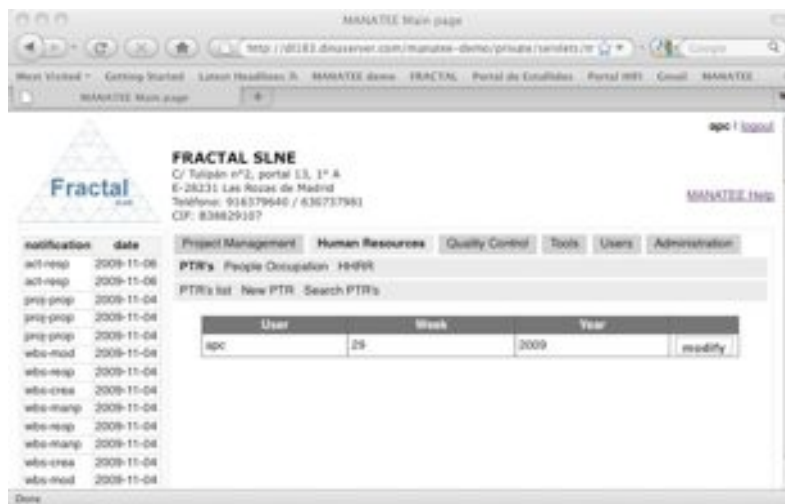


Figure 109: Example of a filtered PTR's list

Note: If the desired PTR does not appear in any screen, go to the section 13 which provides some guides to troubleshooting problems.

8.2.3 Displaying the PTR information

Once the desired PTR is displayed, which can be done following the steps described in the section 8.2.2 click the *show* button (note: the Human Resources manager will have available the *modify* button to visualize the PTR. Other users will have available the *modify* button instead of the *show* button for the last four filled PTR's).

The PTR content will be displayed.

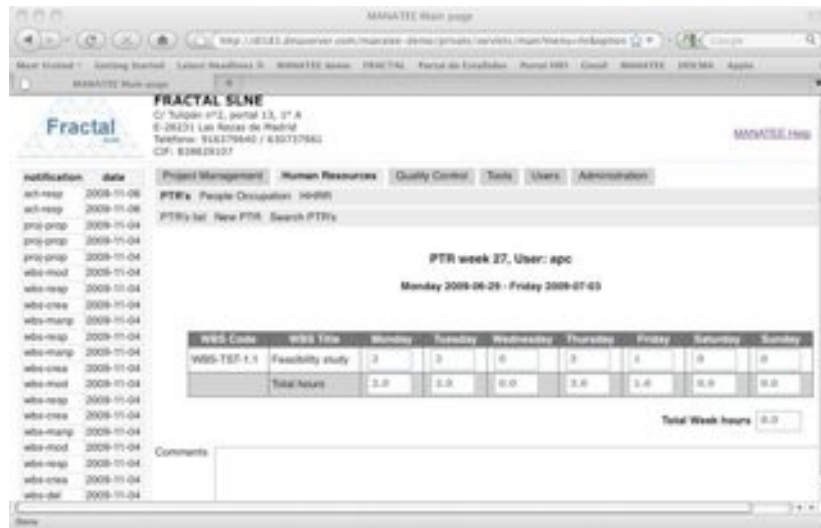


Figure 110: PTR information view

Note: If the *show* or *modify* buttons of the desired PTR are not available, go to the section 13 which provides some guides to troubleshooting problems.

8.2.4 Modifying the information in an already created weekly PTR

Once the PTR that is going to be modified is displayed, which can be done following the steps described in the section 8.2.2 click the *modify* button.

The Human Resources manager can modify any PTR. Other users can only modify their last four filled PTR's.

The following form will appear.

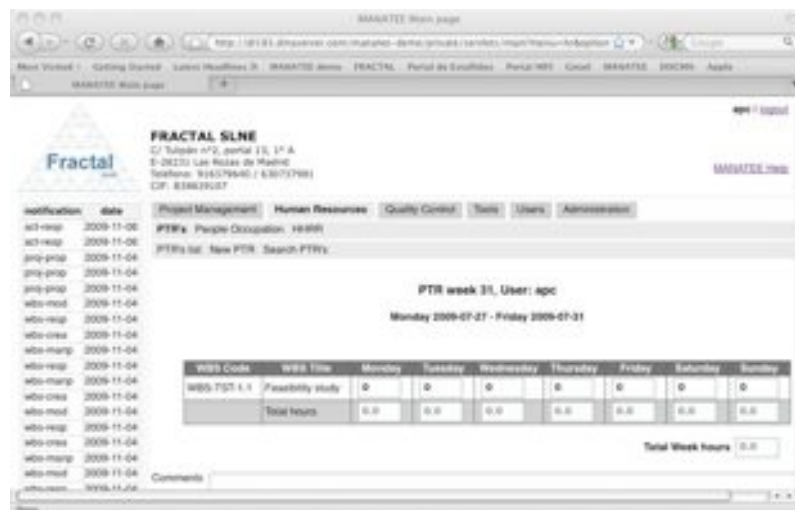


Figure 111: Modifying the PTR information page

⇒ Modify the desired fields (taken into account constrains listed in section 8.2.1). Only the fields that are not greyed out can be modified.

⇒ Click *update*.



The PTR will be modified.

Note: If, for any reason, the PTR cannot be modified, go to the section 13 which provides some guides to troubleshooting problems.

8.2.5 Printing the PTR information

Once the PTR that is going to be printed is displayed, which can be done following the steps described in the section 8.2.2 click the *show* or *modify* buttons (depending which one is available for the desired PTR).

The PTR content will be displayed.

⇒ Click *Print PTR* button.

A summary of the PTR that contains the following information will be generated:

- Name (PTR user name).
- Week starts on (starting date of the PTR).
- Week finishes on (ending date of the PTR).
- Title and code of the WBS's that have been active during the PTR period.
- Hours reported as worked in each WBS's during the PTR period.
- Summary of the worked hours (per day and week).

Signature boxes for the user and the Human Resources manager will be also available in the form to be printed. The PTR details can be printed or saved in pdf format.

Note: If, for any reason, the *show or modify* buttons is not available, go to the section 13 which provides some guides to troubleshooting problems.

8.2.6 Deleting a PTR

Once the PTR, which is going to be deleted, is displayed, which can be done following the steps described in the section 8.2.2, click the *delete* button.

The Human Resources manager is the only user that has the access rights to delete a PTR and only can delete the last filled PTR by a user.

The following window displaying the PTR properties will appear.



Figure 112: PTR information view

⇒ Click *delete*.

Note: If, for any reason, the *delete* button is not available, go to the section 13 which provides some guides to troubleshooting problems.

8.3 People occupation

Taken into account the data introduced in the PTR's, MANATEE can provide a summary of the people occupation for a selected period.

To display the people occupation, select *Human Resources* tab and, then, *People Occupation* tab.

This option is only available to the Human Resources manager and to project managers.

The following form will appear.

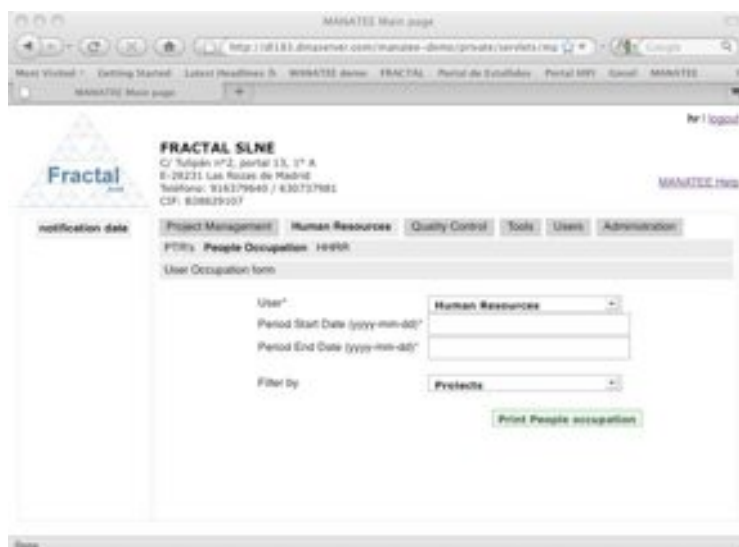


Figure 113: Display people occupation form



- ⇒ Fill the following fields (all mandatory fields are marked with a star):
- **User:** Select a person in the list. If the login user is the Human Resources manager, all MANATEE users will be available. If the login user is a project manager, only persons related with the project managed by the login user will be available.
 - **Period start date:** Introduce a starting date for the period to be displayed.
 - **Period end date:** Introduce an ending date for the period to be displayed.
 - **Filtered by:** Select an option in the list. People occupation can be displayed by projects, WP's and WBS's.
- ⇒ Click *Print People occupation*.

The people occupation summary will be displayed. It contains the following information:

- Name (as selected in the previous form).
- Period start date (as selected in the previous form).
- Period end date (as selected in the previous form).
- Information related with each project, WP or WBS (depending of the option selected in the previous form) assigned to the selected user (i.e., all projects, WP's or WBS's where the user have planned hours will be displayed), which includes:
 - Code (as defined in the project, WP or WBS properties)
 - Title (as defined in the project, WP or WBS properties)
 - Spent hours (in each project, WP or WBS according to the information reported in the user's PTR's)
 - Percentage (in each project, WP or WBS considering the spent hours divided by the total spent hours showed in this summary)
 - Planned hours (in each project, WP or WBS according to the information planned in each WBS's assigned to the user)
 - Left hours (in each project, WP or WBS considering the planned hour minus the spent hours showed in this summary)

The people occupation summary can be printed or saved in pdf format.



9 MANAGEMENT ANALISYS TOOLS

MANATEE provides several additional analysis capabilities (to the ones described in the previous sections) that helps to control and visualize the information managed by the tool such as the manpower, the cash flow or the workload.

Those capabilities are described in more detail in the following subsections.

9.1 Global control

Taking into account the information introduced in projects and PTRs, MANATEE allows summarizing the global budget and global cash flow of an organization.

9.1.1 Global budget control

To display the global budget for a selected period, select *Tools* tab; then, *Global control* tab and, finally, *Global budget control* tab.

This option is only available to the Human Resources manager.

The following form will appear.

Figure 114: Display global budget control form

- ⇒ Fill the following fields (all mandatory fields are marked with a star):
- **Period start date:** Introduce a starting date for the period to be displayed.
 - **Period end date:** Introduce an ending date for the period to be displayed.
- ⇒ Click *print*.

The global budget control summary will be displayed. It contains the following information for each project and the selected period:

- Code of the project
- Title of the project



- Spent hours (in each project considering the information reported in the user's PTR's)
- Percentage (in each project considering the spent hours in a project divided by the total spent hours in all projects showed in this summary)
- Total spent manpower budget (total spent manpower cost in each project considering the spent hours and the hourly cost of each user)
- Total planned manpower budget (in each project considering the planned hours in each WBS's included in the project and the hourly cost of each user)
- Total spent other resources budget (in each project considering the information reported in the WBS's reports of the WBS's included in the project)
- Total planned other resources budget (in each project considering the information defined in the WBS's included in the project)
- Total spent budget (in each project adding the total spent manpower budget and the total spent other resources budget showed in this summary)
- Total planned budget (in each project adding the total planned manpower budget and the total planned other resources budget showed in this summary)

The global budget control summary can be printed or saved in pdf format.

9.1.2 Global cash flow control

To display the global cash flow for a selected period, select *Tools* tab; then, *Global control* tab and, finally, *Global cash flow control* tab.

This option is only available to the Human Resources manager.

The following form will appear.

The screenshot shows a web browser window displaying the MANATEE Main page. The page header includes the Fractal logo and contact information for FRACTAL SLNE. The main navigation menu includes Project Management, Human Resources, Quality Control, Tools, Users, and Administration. The 'Tools' tab is selected, and the 'Global control' sub-tab is active. The 'Global Cash Flow control' form is displayed, featuring two input fields for 'Period Start Date (yyyy-mm-dd)' and 'Period End Date (yyyy-mm-dd)', and a 'search' button.

Figure 115: Display global cash flow control form



- ⇒ Fill the following fields (all mandatory fields are marked with a star):
- **Period start date:** Introduce a starting date for the period to be displayed.
 - **Period end date:** Introduce an ending date for the period to be displayed.
- ⇒ Click *search*.

The summary of the global cash flow for the selected period will be displayed.

- Period start date (as selected in the previous form)
- Period start date (as selected in the previous form)
- Total cash-in (total cash-in in the selected period, taking into account the cash-in of each project)
- Total cash-out (total cash-out in the selected period, taking into account the cash-out milestones defined in each project plus the total cost associated to the employees³)
- Total net (total cash considering the total cash-in minus the total cash-out)

9.2 Graphics

Taking into account the information introduced in projects and PTRs, MANATEE provides several graphical utilities that helps to visualize different issues, such as:

- Occupation of the users.
- Real and planned manpower distribution in the different projects.
- Cash-flow overviews.
- Budget charts.

9.2.1 User occupation pie charts

To have a visual image of the people occupation for a selected period, select *Tools* tab; then, *Graphics* tab and, finally, *User Occupation Pie Charts* tab.

This option is only available to the Human Resources manager and project managers.

The following form will appear.

³ The application computes the employees cost taken into account full months inside the selected period for all users that have already defined an hourly cost.



Figure 116: User occupation pie charts form

- ⇒ Fill the following fields (all mandatory fields are marked with a star):
- **User:** Select a person in the list. If the login user is the Human Resources manager, all MANATEE users will be available. If the login user is any other user, only persons related with the project managed by the login user will be available.
 - **Period start date:** Introduce a starting date for the period to be displayed.
 - **Period end date:** Introduce an ending date for the period to be displayed.
 - **Group by:** Select an option between the following ones:
 - **All projects**, to display the user occupation in all projects where the user is working for the selected period.
 - **A project**, to display the user occupation in a particular project. In this option, the following fields must be filled:
 - **Project:** Select the project in the list.
 - **Filter by:** Select an option in the combo box (the user occupation can be grouped using *WP's* or *WBS's*).
- ⇒ Click *OK*

Two graphs will be displayed.

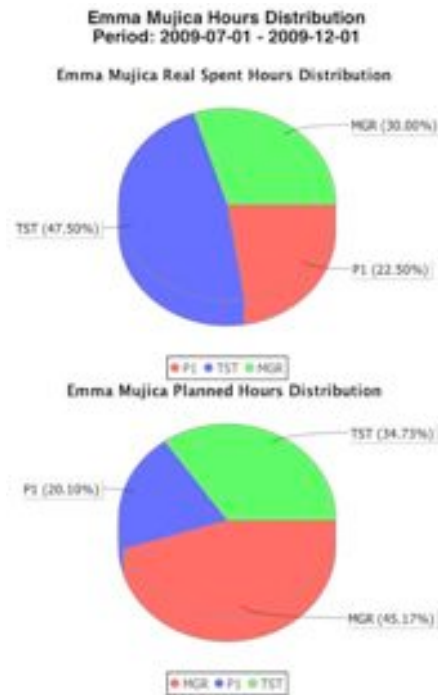


Figure 117: User occupation pie charts example

The upper one shows the real spent hours distribution and the lower one shows the planned spent hour distribution for the selected user and the selected period.

The graphs can be saved, printed or their properties modified as described in section 6.1.7.3.

9.2.2 Project manpower pie charts

To have a visual image of the hours spent in a project for a selected period grouped by users or WP's, select *Tools* tab; then, *Graphics* tab and, finally, *Project manpower Pie Charts* tab.

This option is available to the Human Resources manager and project managers.

The following form will appear.

The screenshot shows the MANATEE web application interface. The main content area displays the 'Project manpower Pie Charts' form. The form includes the following elements:

- Navigation:** Project Management, Human Resources, Quality Control, Tools, Users, Administration.
- Global control:** Graphics.
- Section:** User Occupation Pie Charts, Project manpower Pie Charts, Cash Flow Charts, Total Budget Charts.
- Description:** This section allows viewing the manpower pie chart for a given project in a given period, grouped by users or by WPs. Grouped by users: different sectors represent the spent hours of different users. Grouped by WPs: different sectors represent the total spent hours (for all users) of different WPs.
- Form Fields:**
 - Project:
 - Period Start Date (yyyy-mm-dd):
 - Period End Date (yyyy-mm-dd):
 - Group by: (with dropdown arrows)
- Legend:** MGR (red), Users (blue).
- Buttons:** OK.

Figure 118: Project manpower pie charts form



- ⇒ Fill the following fields (all mandatory fields are marked with a star):
- **Project:** Select a project in the list. If the login user is the Human Resources manager or the administrator, all projects will be available. If the login user is any other user, only project managed by the login user will be available.
 - **Period start date:** Introduce a starting date for the period to be displayed.
 - **Period end date:** Introduce an ending date for the period to be displayed.
 - **Group by:** Select how the information must be group. There two options by *Users* (the hours spent by each person associated to the project will be displayed) or by *WP's* (the hours spent in each WP's defined in the project will be displayed).
- ⇒ Click *OK*

The project manpower pie charts will be displayed.

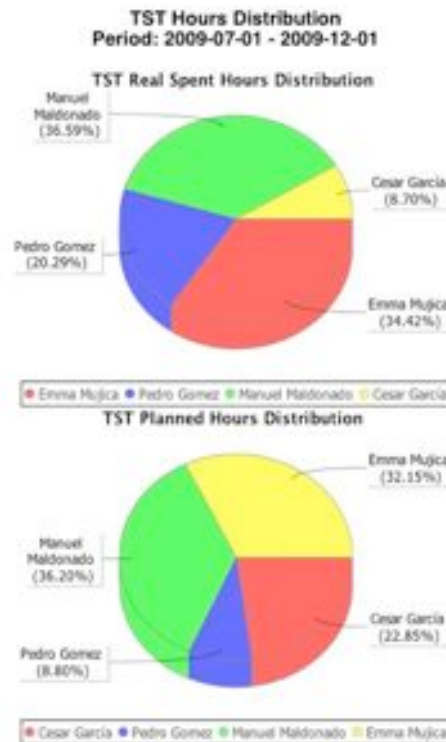


Figure 119: Power manpower pie charts example

The upper one shows the real spent hours distribution and the lower one shows the planned spent hour distribution grouped by users or WP (as selected) and for the selected period.

The charts can be saved, printed or their properties modified as described in section 6.1.7.3.

9.2.3 Cash flow charts

To have a visual image of the cash flow for a selected period, select *Tools* tab; then, *Graphics* tab and, finally, *Cash Flow Charts* tab.

This option is available to the Human Resources manager and project managers.



The following form will appear.

MANATEE Main page

http://0181.dns.server.com/manatee-demo/private/servlets/main.html

Most Visited Getting Started Latest Headlines 0 MANATEE Home FRACTAL Portal de Estadísticas Portal HR1 Gmail MANATEE - DOKMA

MANATEE Main page

Fractal SLNE

C/ Tulipán nº2, portal 13, 3º A
E-28235 Las Rozas de Madrid
Teléfono: 916379640 / 630737961
CIF: 838629107

notification date

Project Management Human Resources Quality Control Tools Users Administration

Global control Graphics

User Occupation Pie Charts Project manpower Pie Charts **Cash Flow Charts** Total Budget Charts

This section allows viewing the Cash Flow for a given period in two 2D plots.
Two possibilities can be chosen: Add all projects or Select a particular project.

Period Start Date (yyyy-mm-dd)*

Period End Date (yyyy-mm-dd)*

Group by:

All projects

A Project MGR

OK

Figure 120: Cash flow charts form

- ⇒ Fill the following fields (all mandatory fields are marked with a star):
- **Period start date:** Introduce a starting date for the period to be displayed.
 - **Period end date:** Introduce an ending date for the period to be displayed.
 - **Group by:** Select an option between the following ones:
 - *All projects*, to display the total organization cash flow.
 - *A project*, to display the cash flow in a particular project. Select a project in the list. If the login user is the Human Resources manager or the administrator, all projects will be available. If the login user is any other user, only project managed by the login user will be available.
- ⇒ Click *OK*

The cash flow chart will be displayed.

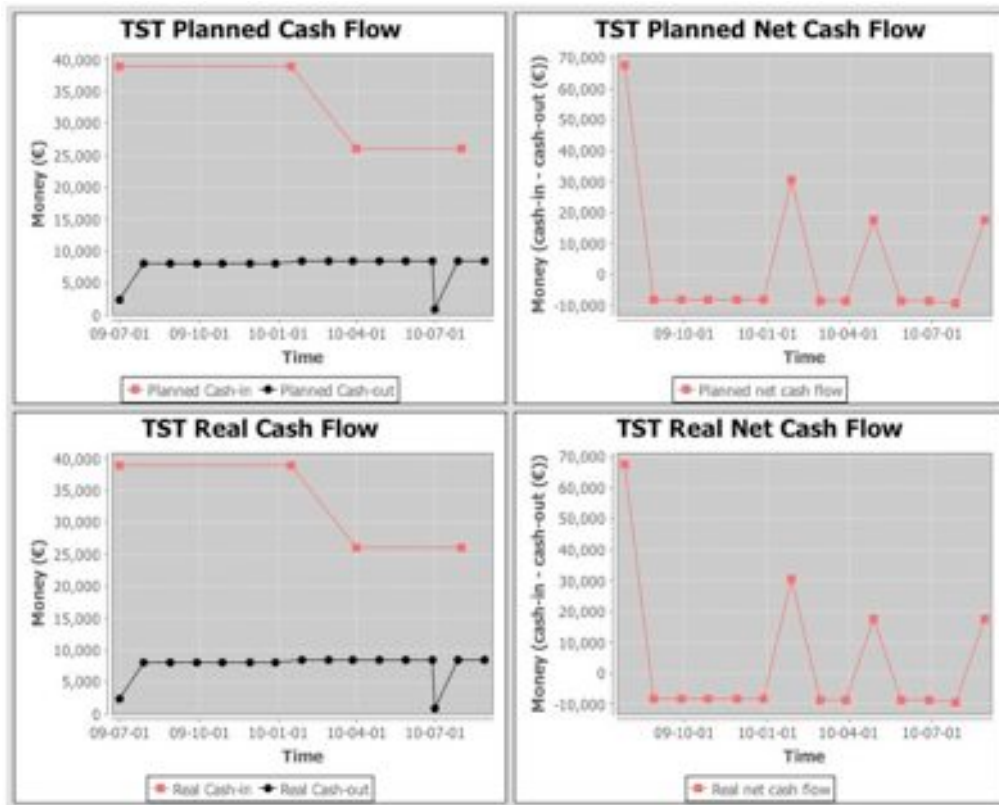


Figure 121: Cash flow charts example

The graph can be printed, saved or its properties modified as described in section 6.1.7.3.

9.2.4 Total budget charts

To have a visual image of the total spent and planned budget, select *Tools* tab; then, *Graphics* tab and, finally, *Total budget Charts* tab.

This option is available to the Human Resources manager and project managers.

The following form will appear.

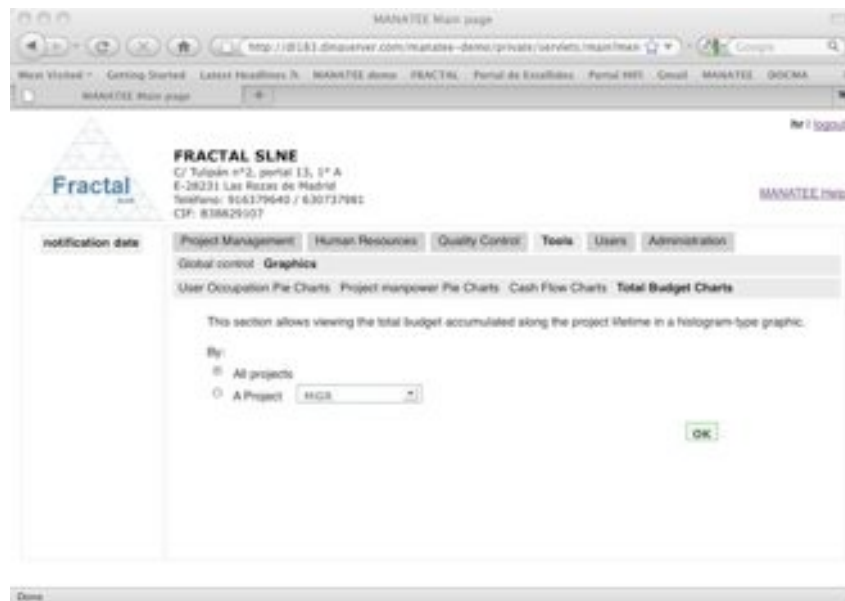


Figure 122: Total budget charts form

⇒ Fill the following fields (all mandatory fields are marked with a star):

- **All project:** Select this option to display the spend budget (considering the manpower as reported in PTR's and other resources expenses as reported in WBS reports) and the planned budget (considering the manpower and other resources as planned in the WBS's) for each project.
- **A project:** Select this option to display the spend budget (considering the manpower as reported in PTR's and other resources expenses as reported in WBS reports) and the planned budget (considering the manpower and other resources as planned in the WBS's) for each WP in the selected project. The project must be selected in the combo box. If the login user is the Human Resources manager or the administrator, all projects will be available. If the login user is any other user, only project managed by the login user will be available.

⇒ Click *OK*

The total budget chart will be displayed.

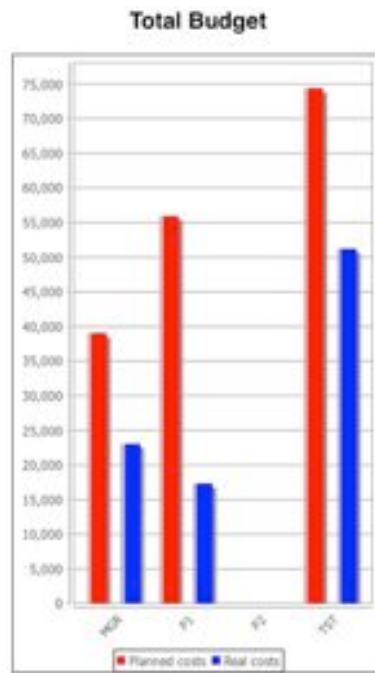


Figure 123: Total budget chart example

The graph can be saved, printed or its properties modified as described in section 6.1.7.3.



10 CHECKING NOTIFICATIONS

MANATEE displays the internal notifications to the users in two ways:

- There is a column in the left part of all MANATEE main pages where a summary of all users' notifications is displayed.
- A notification list where the complete notification text is displayed can be found clicking the *User Tools* tab and, then, *Notification* tab.

In order to manage the notifications, MANATEE provides the following functionality:

- Display the notification list.
- Delete notifications one by one.
- Delete all notifications

10.1 Displaying the notification list

To display all the information about the notifications, select *User Tools* tab and, then, *Notification* tab.

The complete list of notifications that the current user has received will be displayed.



Figure 124: Notification List

As shown in the figure, the following issues could be available for each notification in the list:

- **Subject:** A short text that describes the action that is reported in the notification.
- **Notification:** The full text of the notification.
- **Date:** The date when the notification was sent.
- **Delete:** The *delete* button allows deleting the notification.



The notifications are always arranged by the sending date, from the most recent date to the oldest one.

Each screen will show 10 notifications, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the notification list.



Figure 125: Page selectors

10.2 Deleting notifications

After deciding which notification is going to be deleted, click the *delete* button of this notification.

The notification will be deleted.

Note: If the *delete* button of the desired notification is not enabled, go to the section 13 which provides some guides to troubleshooting problems.

10.3 Deleting all notifications

If the user wants to remove all notifications, it can be done by clicking the *delete all notifications* button that appears at the bottom right corner of the notification list page.

All notifications will be deleted.

Note: If the *delete all notifications* button of the desired notification is not enabled, go to the section 13 which provides some guides to troubleshooting problems.



11 USERS MANAGEMENT

Users must be first registered in MANATEE to be able to log into the application.

As Users management, MANATEE provides the following functionality:

- Create a new user
- Modify the properties of a user
- Deactivate or activate an user access to MANATEE (i.e., MANATEE is usually used integrated with DOCMA, FRACTAL Documentation Management Tool. Both applications use the same database. So, the users created in DOCMA or MANATEE could have access to both applications or, only, to DOCMA depending if the access to MANATEE is activated or not).
- Activate the PTR option for a user (i.e., this user should start to fill weekly his/her PTR's).
- Unsubscribe a user

It is important to remember that only the Administrator has the access rights to create new users, to unsubscribe the existing ones to deactivate the MANATEE access and to activate the PTR option. Otherwise, each user can see their own profile and modify his/her properties.

11.1 Creating a new user

To start working with users, select *Users* tab and, then again, *Users* tab in the bar below.

In order to create a new user, select *New User* tab. Only the Administrator can create new users.

The following form will appear.

MANATEE Main page

FRAC TAL SLNE
C/ Tulipán nº2, portal 13, 1º A.
E-28221 Las Rozas de Madrid
Teléfono: 916379640 / 630737981
CIF: 838629107

notification date

Project Management Human Resources Quality Control Tools Users Administration

Users Notifications

Users list New User

Name*
Surname (1)
Surname (2)
e-mail*
User*
Password (mandatory new user)
Confirmation
Organization*
Location
Phone

Figure 126: Creating a user page



- ⇒ Fill the following fields (all mandatory fields are marked with a star):
- **Name:** Introduce the first name of the user. This is a text field and the maximum length of this field is 45 characters.
 - **Surname (1):** Introduce the surname of the user. This is a text field and the maximum length of this field is 45 characters.
 - **Surname (2):** Introduce the second surname of the user (if exists). This is a text field and the maximum length of this field is 45 characters.
 - **e-mail:** Introduce the e-mail address of the user. This is a text field and the maximum length of this field is 45 characters.
 - **User:** Introduce a user name for logging into DOCMA. This is a text field and the maximum length of this field is 15 characters.
 - **Password:** Introduce a password for logging into DOCMA whenever using the user name introduced in the previous text field. This is a text field and the maximum length of this field is 32 characters.
 - **Confirmation:** Introduce again the same password (as done in the previous text field). This is a text field and the maximum length of this field is 32 characters.
 - **Organization:** Introduce the name of the Organization to which the user belongs. This is a text field and the maximum length of this field is 45 characters.
 - **Location:** Introduce the user's address. This is a text field and the maximum length of this field is 45 characters.
 - **Phone:** Introduce the user's phone number. This is a text field and the maximum length of this field is 45 characters.
 - **Mobile:** Introduce the user's mobile number. This is a text field and the maximum length of this field is 45 characters.
- ⇒ Click *add user*.

The user will be created.

An e-mail will be also sent to the Administrator and to the new user in order to inform them about the creation of the user.

“You have been registered in MANATEE. Your password is (password)”

Note: If, for any reason, the user can not be created, go to the section 13 which provides some guides to troubleshooting problems.

11.2 Searching users

To start looking for users, select *Users* tab.

This option is only available to the Administrator.



notification date

FRACTAL SLNE
C/ Tulpán nº2, portal 13, 1ª A
E-28231 Las Rozas de Madrid
Teléfono: 916379640 / 630737981
CIF: B38829107

admin | [logout](#)

[MANATEE Help](#)

Project Management Human Resources Quality Control Tools Users Administration

Users: Notifications

Users list New User Search Users

Name					
Human Resources	modify	unsubscribe	delete	deactivate MANATEE	activate PTR
Quality Control	modify	unsubscribe	delete	deactivate MANATEE	activate PTR
admin , Administrador	modify	unsubscribe	delete	deactivate MANATEE	modify activate PTR
Demo, Demo	modify	unsubscribe	delete	deactivate MANATEE	modify activate PTR
García, Cesar	modify	unsubscribe	delete	deactivate MANATEE	modify activate PTR
García, Maria	modify	unsubscribe	delete	deactivate MANATEE	modify activate PTR
Gomez, Pedro	modify	unsubscribe	delete	deactivate MANATEE	modify activate PTR
Mattonadi, Manuel	modify	unsubscribe	delete	deactivate MANATEE	modify activate PTR
Mujica, Emma	modify	unsubscribe	delete	deactivate MANATEE	modify activate PTR
Pérez, Ana	modify	unsubscribe	delete	deactivate MANATEE	modify activate PTR

<< < 1 2 > >>

Figure 127: Users list.

As shown in the figure, the following issues could be available for each user in the list:

- **Name:** The name of the user.
- **Modify:** The *modify* button allows modifying the user properties.
- **Unsubscribe:** The *unsubscribe* button allows unsubscribe the user from the system.
- **Delete:** The *delete* button allows delete the user completely from the system.
- **Deactivate MANATEE or activate MANATEE:** The *deactivate* or *activate* button allows deactivate or activate the user from the system (see 11.5).
- **Activate PTR or modify activate PTR:** The activate PTR or modify activate PTR allows activate or modify activate PTR (see 11.6)

The actions buttons of some users will not be enabled (i.e., they will be displayed as greyed out) according to the users role (i.e., special user such as the Human Resources, Quality Control and admin cannot be unsubscribed or deleted).

Non-special users are always arranged by the name.

Each screen will show 10 users, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the user list.



Figure 128: Page selectors

In order to search a particular user or to constrain the number of user to be displayed, select *Search User* tab.

The following form will appear.



The screenshot shows the MANATEE web application interface. At the top left is the Fractal SLNE logo and contact information: C/ Tulipán nº2, portal 13, 1º A, E-28231 Las Rozas de Madrid, Teléfono: 916379640 / 630737981, CIF: B38829107. At the top right is the MANATEE Web logo and a user login area with 'admin | login'. Below the header is a navigation menu with tabs for Project Management, Human Resources, Quality Control, Tools, Users, and Administration. The 'Users' tab is selected, showing a sub-menu with 'Users Notifications' and 'Users list | New User | Search Users'. The 'Search Users' form contains the following fields: Name*, Surname (1), Surname (2), e-mail*, User*, Organization*, Location, Phone, and Mobile. At the bottom of the form are 'cancel' and 'search' buttons.

Figure 129: Search users form

- ⇒ Fill as many fields as desired in order to filter the user list.
- **Name:** Introduce any number of alphanumerical characters (this is not case sensitive); any user which contains this sequence of characters in its name will be selected.
 - **Surname (1):** Introduce any number of alphanumerical characters (this is not case sensitive); any user which contains this sequence of characters in its surname (1) will be selected.
 - **Surname (2):** Introduce any number of alphanumerical characters (this is not case sensitive); any user which contains this sequence of characters in its surname (2) will be selected.
 - **E-mail:** Introduce any number of alphanumerical characters (this is not case sensitive); any user which contains this sequence of characters in its e-mail will be selected.
 - **User:** Introduce any number of alphanumerical characters (this is not case sensitive); any user which contains this sequence of characters in its user will be selected.
 - **Organization:** Introduce any number of alphanumerical characters (this is not case sensitive); any user which contains this sequence of characters in its organization will be selected.
 - **Location:** Introduce any number of alphanumerical characters (this is not case sensitive); any user which contains this sequence of characters in its location will be selected.
 - **Phone:** Introduce any number of alphanumerical characters (this is not case sensitive); any user which contains this sequence of characters in its phone will be selected.



- **Mobile:** Introduce any number of alphanumerical characters (this is not case sensitive); any user which contains this sequence of characters in its mobile will be selected

⇒ Click *search*.

A new user list will be displayed taken all the filtering constrains introduced into account (i.e., the filtered users match all constrains introduced).

Example:

The admin is searching all users included which name starts as "de" and which organization starts as "frac"

Then, the Search form must be filled as shown in the figure below

The screenshot shows a web application interface for 'FRAC TAL SLNE'. The header includes the company logo and contact information: 'C/ Tulipán nº2, portal 13, 1º A', 'E-28231 Las Rozas de Madrid', 'Teléfono: 916379640 / 630737981', and 'CIF: B38829107'. There are links for 'admin | logout' and 'MANATEE Web'. The main navigation bar contains 'Project Management', 'Human Resources', 'Quality Control', 'Tools', 'Users', and 'Administration'. Below this, there are tabs for 'Users' and 'Notificacions'. The 'Users' tab is active, showing a sub-menu with 'Users list', 'New User', and 'Search Users'. The 'Search Users' form is displayed with the following fields: 'Name*' (filled with 'de'), 'Surname (1)', 'Surname (2)', 'e-mail', 'User*', 'Organization*' (filled with 'Frac'), 'Location', 'Phone', and 'Mobile'. At the bottom of the form are 'cancel' and 'search' buttons.

Figure 130: Example of a filled search user form and the list of users displayed would be the following one.



Figure 131: Example of a filtered users list

Note: If the desired user does not appear in any screen, go to section 13 which provides some guides to troubleshooting problems.

11.3 Modifying the properties of an User

First, the user, which properties are going to be modified, must be displayed, select *Users* tab and, then again, *Users* tab in the bar below.

The Administrator will see all users created into the system, which are ordered alphabetically by the first surname.

Each screen will show 10 users, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the users list.



Figure 132: Page selectors

Any other user will see only his/her own user.

Once the user which properties are going to be modified is displayed, click the *modify* button.

The following form will appear.



Figure 133: Modifying the user properties page

- ⇒ Modify the desired fields (taken into account constrains listed in section 11.1). Only the fields that are not greyed out can be modified.
- ⇒ Click *update*.

The user properties will be modified.

An e-mail will be also sent to the Administrator and to the user which properties have been modified in order to inform them about the modification of the user properties.

“The User’s properties have been modified”

As a particular case, when the password is modified, an e-mail will be sent in addition to the previous one to the Administrator and to the user which password has been modified as follows:

“Your password has been modified”

Note: If, for any reason, the user properties can not be modified, go to the section 13 which provides some guides to troubleshooting problems.

11.4 Unsubscribing an User

First, the user that is going to unsubscribe must be displayed, select *Users* tab and, then again, *Users* tab in the bar below.

The Administrator will see all users created into the system, which are ordered alphabetically by the first surname.

Each screen will show 10 users, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the users list.





Figure 134: Page selectors

Once the user that is going to unsubscribed is displayed, click the *unsubscribe* button.

An e-mail will be also sent to the Administrator and to the user which has been unsubscribed in order to inform them about the action done.

“You have been unregistered in MANATEE.”

The user will be unsubscribed. It means, the user cannot log again into the system and his/her name cannot be selected anymore in the user’s list but his/her name will not disappear of the system in order to maintain the history of the documents.

Note: The User will still appear in the left person lists of the projects where he had a role before but greyed out (i.e., he/she can not selected anymore). The User will also still appear in the right person lists of the projects where he had a role before. If he/she is removed of the right person lists, he/she cannot be selected again.

Note: If, for any reason, the user can not be unsubscribed, go to the section 13 which provides some guides to troubleshooting problems.

11.5 Deactivate or activate the user access to MANATEE

The users created in MANATEE have access to MANATEE. The access of those users to MANATEE can be deactivated using the deactivate button as explained in this section.

The Users created in DOCMA do not have access to MANATEE. The access of those users to MANATEE can be activated using the activate button as explained in this section.

The user access to MANATEE can be activated or deactivated any time.

First, the user, which access to MANATEE is going to be deactivated or activated, must be displayed, select *Users* tab and, then again, *Users* tab in the bar below.

The Administrator will see all users created into the system, which are ordered alphabetically by the first surname.

Each screen will show 10 users, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the users list.



Figure 135: Page selectors

Once the user, which access to MANATEE is going to deactivated, is displayed, click the *deactivate MANATEE* button.

The following form will appear:

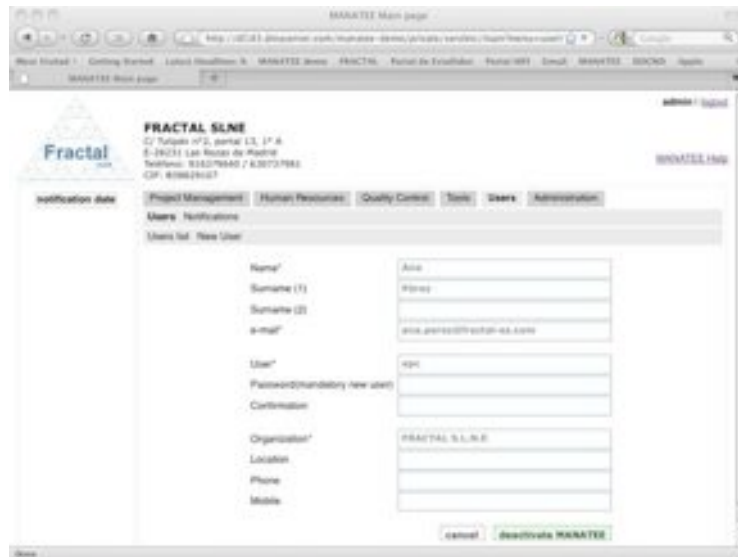


Figure 136: Deactivate MANATEE form.

⇒ Click again *deactivate MANATEE*.

The user cannot log into MANATEE.

Once the user, which access to MANATEE is going to activated, is displayed, click the *activate MANATEE* button.

The following form will appear:

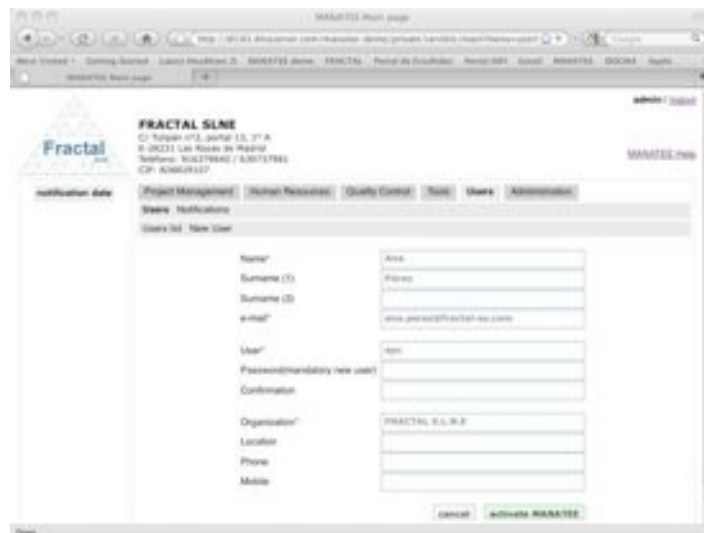


Figure 137: Activate MANATEE form.

⇒ Click again *activate MANATEE*.

The user can log into MANATEE.

Note: If, for any reason, the user access to MANATEE cannot be deactivated or activated, go to the section 13 which provides some guides to troubleshooting problems.



11.6 Activate PTR

First, the user, which is going to start filling the PTR's, must be displayed, select *Users* tab and, then again, *Users* tab in the bar below.

The Administrator will see all users created into the system, which are ordered alphabetically by the first surname.

Each screen will show 10 users, to move among the screens select the other pages numbers or use the arrows that appear in the bottom of the users list.



Figure 138: Page selectors

Once the user, which is going to start filling the PTR's, is displayed, click the *activate PTR* button.

Note: A user must have access (to be activated) in MANATEE before this option is enabled.

The following form will appear:

The screenshot shows a web browser window titled 'MANATEE Main page'. The address bar shows 'http://83.83.83.dnsserver.com/manatee-demo/private/users/regist?'. The page content includes the Fractal SLNE logo and contact information. A navigation menu has tabs for 'Project Management', 'Human Resources', 'Quality Control', 'Tools', 'Users', and 'Administration'. The 'Users' tab is active, showing a 'Users Notifications' section with a 'New User' form. The form has two input fields: 'User' with the value 'web' and 'Date (yyyy-mm-dd)*' with the value '2009-08-10'. There are 'cancel' and 'update' buttons. A note below the form states: 'Note: * The date must be a date of the first week where the user must control the PTR's.'

Figure 139: Activate PTR form.

- ⇒ Fill the following field (all mandatory fields are marked with a star):
 - **Date:** Introduce any date of the week when the user must start to fill the PTR's.
- ⇒ Click *activate PTR*.

The PTR option will be activated for the selected user.

Note: If, for any reason, the PTR cannot be activated for the selected user, go to the section 13 which provides some guides to troubleshooting problems.



11.7 Deleting an User

Once the User, which is going to be deleted, is displayed, which can be done following the steps described in the section 11.2, click the *delete* button.

Only the Administrator has the access rights to delete the user.

The following window displaying the User properties will appear.

The screenshot shows the 'User properties view' for a user named 'demo'. The interface includes a navigation menu with options like 'Project Management', 'Human Resources', 'Quality Control', 'Tools', 'Users', and 'Administration'. The 'Users' section is active, showing a list of users and a 'New User' button. The user details form contains the following information:

Name*	Demo
Surname (1)	Demo
Surname (2)	
e-mail*	demo@fractal-es.com
User*	demo
Password(mandatory new user)	
Confirmation	
Organization*	Fractal S.L.N.E
Location	
Phone	
Mobile	

At the bottom right of the form, there are two buttons: 'cancel' and 'delete'.

Figure 140: User properties view

⇒ Click *delete*.

If the user is author, reviewer and/or approver of some documents a warning will be displayed to the Administrator.

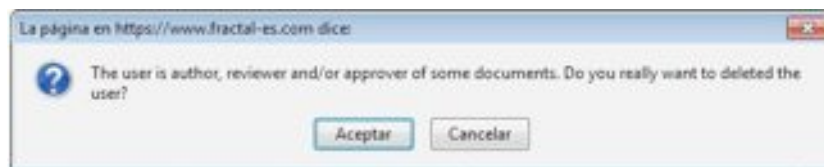


Figure 141: Warning before deleting a user that the user is author, reviewer and/or approver of some documents.

If the warning is accepted, the users shall be completely removed from the system.



12 MANATEE ADMINISTRATION

MANATEE provides the tools needed to manage the MANATEE import WBS's, backups and restores.

12.1 Tools

12.1.1 Import WBS's

A set of WBS's can be imported in a row in MANATEE using the import WBS's tool.

To make use of this functionality, select *Administration* tab, then *Tools* tab and finally *Import WBS's* tab. Only the MANATEE administrator can use this functionality.

The following form will appear:

notification date

FRAC TAL SLNE
C/ Tulipán nº2, portal 13, 1º A
E-28231 Las Rozas de Madrid
Teléfono: 916379640 / 630737981
CIF: B38829107

admin | [logout](#)

[MANATEE Web](#)

Project Management | Human Resources | Quality Control | Tools | Users | Administration

Backups | Tools

Import Milestones | Import WPs | **Import WBS's**

You are going to import into the database the WBS records defined in a bid file.

If you are sure to do so, choose the bid file and click import WBS records button. To leave this page click cancel.

Choose the operative system used to generate the text file*

Choose the text file*

cancel | import WBS records

Note:

- Click [here](#) to download the template file to import WBS's

Figure 142: Importing WBS's

As explained in the form, the text file, where the information about each particular WBS is included, must be prepared before filling the import WBS's form.

A template of this text file is available in the import WBS's page (see note at the page bottom). Please, follow the instructions included in template file to fill it correctly. Once the template file has been filled, the text file, which will be finally imported, must be generated as follows (this instruction are provided for OpenOffice Calc, a similar sequence could be used with other application in order to generate the text file with the required format):

- In the *Archive* menu, select *Save as* and the “*CSV text*” filter.
- Select “*Kept current format*”.
- Choose “*Unicode (UTF-8)*” as character set, “*{Tab}*” as field delimiter and “*”*” as text delimiter.

Once the text file is prepared, we can proceed to import the WBS's as follows:



- ⇒ Fill the following field (mandatory fields are marked with a star):
- **Choose the operative system used to generate the text file:** Select an operative system (Windows, Linux or Mac Os) in the list.
 - **Choose the text file:** Introduce the path and name of the text file directly in the text box or click in the *Choose File* button to select it using the Document explorer.
- ⇒ Click *import WBS records*.

The WBS's will be imported.

12.1.2 Import WP's

A set of WP's can be imported in a row in MANATEE using the import WP's tool.

To make use of this functionality, select *Administration* tab, then *Tools* tab and finally *Import WP's* tab. Only the MANATEE administrator can use this functionality.

The following form will appear:

The screenshot shows the MANATEE web application interface. At the top left is the Fractal logo. The main header area displays 'FRAC TAL SLNE' and contact information: 'C/ Tulipán nº2, portal 13, 1º A', 'E-28231 Las Rozas de Madrid', 'Teléfono: 916379640 / 630737981', and 'CIF: B38829107'. On the right, there is a user login 'admin | logged' and a 'MANATEE Help' link. Below the header is a navigation menu with tabs: 'Project Management', 'Human Resources', 'Quality Control', 'Tools', 'Users', and 'Administration'. Under 'Tools', there are sub-tabs: 'Backups', 'Tools', 'Import Milestones', 'Import WP's', and 'Import WBS's'. The 'Import WP's' tab is active, showing a form with the following content: 'You are going to import into the database the WP records defined in a txt file.', 'If you are sure to do so, choose the txt file and click import WP records button. To leave this page click cancel.', 'Choose the operative system used to generate the text file*' (dropdown menu), 'Choose the text file*' (text input field), and buttons for 'cancel', 'Import WP records', and 'Examinar...'. A 'Note:' section at the bottom says: 'Click [here](#) to download the template file to import WP's'.

Figure 143: Importing WP's

As explained in the form, the text file, where the information about each particular WP is included, must be prepared before filling the import WP's form.

A template of this text file is available in the import WP's page (see note at the page bottom). Please, follow the instructions included in template file to fill it correctly. Once the template file has been filled, the text file, which will be finally imported, must be generated as follows (this instruction are provided for OpenOffice Calc, a similar sequence could be used with other application in order to generate the text file with the required format):

- In the *Archive* menu, select *Save as* and the “*CSV text*” filter.
- Select “*Kept current format*”.



- Choose “Unicode (UTF-8)” as character set, “{Tab}” as field delimiter and “” as text delimiter.

Once the text file is prepared, we can proceed to import the WP’s as follows:

- ⇒ Fill the following field (mandatory fields are marked with a star):
 - **Choose the operative system used to generate the text file:** Select an operative system (Windows, Linux or Mac Os) in the list.
 - **Choose the text file:** Introduce the path and name of the text file directly in the text box or click in the *Choose File* button to select it using the Document explorer.
- ⇒ Click *import WP records*.

The WP’s will be imported.

12.1.3 Import Milestones

A set of milestones can be imported in a row in MANATEE using the import milestones tool.

To make use of this functionality, select *Administration* tab, then *Tools* tab and finally *Import Milestones* tab. Only the MANATEE administrator can use this functionality.

The following form will appear:

The screenshot shows the MANATEE web application interface. At the top left is the Fractal logo. The main header area displays 'FRACTAL SLNE' and contact information: 'C/ Tulipán nº2, portal 13, 1ª A, E-28231 Las Rozas de Madrid, Teléfono: 916379640 / 630737981, CIF: B38829107'. On the right, there are links for 'admin | logout' and 'MANATEE Help'. Below the header is a navigation menu with tabs: 'Project Management', 'Human Resources', 'Quality Control', 'Tools', 'Users', and 'Administration'. The 'Tools' tab is active, showing sub-tabs: 'Backups', 'Tools', 'Import Milestones', 'Import WPs', and 'Import WBS's'. The 'Import Milestones' sub-tab is selected. The main content area contains the following text: 'You are going to import into the database the Milestone records defined in a txt file. If you are sure to do so, choose the txt file and click import Milestone records button. To leave this page click cancel. Choose the operative system used to generate the text file* (dropdown menu). Choose the text file* (text input field with 'Examinar...' button). At the bottom are 'cancel' and 'Import Milestone records' buttons. A 'Note:' section at the bottom left says: 'Click [here](#) to download the template file to import Milestones.'

Figure 144: Importing Milestones

As explained in the form, the text file, where the information about each particular milestone is included, must be prepared before filling the import Milestones form.

A template of this text file is available in the import Milestones page (see note at the page bottom). Please, follow the instructions included in template file to fill it correctly. Once the template file has been filled, the text file, which will be finally imported, must be generated as



follows (this instruction are provided for OpenOffice Calc, a similar sequence could be used with other application in order to generate the text file with the required format):

- In the *Archive* menu, select *Save as* and the “*CSV text*” filter.
- Select “*Kept current format*”.
- Choose “*Unicode (UTF-8)*” as character set, “{*Tab*}” as field delimiter and “*”*” as text delimiter.

Once the text file is prepared, we can proceed to import the milestones as follows:

- ⇒ Fill the following field (mandatory fields are marked with a star):
 - **Choose the operative system used to generate the text file:** Select an operative system (Windows, Linux or Mac Os) in the list.
 - **Choose the text file:** Introduce the path and name of the text file directly in the text box or click in the *Choose File* button to select it using the Document explorer.
- ⇒ Click *import Milestones records*.

The Milestones will be imported.

12.2 Backups Management

MANATEE provides you with a backup tool.

As Backups management, MANATEE provides the following functionality:

- Backup the MANATEE Database
- Backup the MANATEE Web Application

It is important to remember that only the Administrator has the access rights to manage the MANATEE backups.

12.2.1 MANATEE Database Backup

To start working with backups, select *Backups* tab.

In order to make the MANATEE database backup, select *Database backup* tab. Only the Administrator can make the database backup.

The following form will appear.



Figure 145: Making MANATEE database Backup

⇒ Click *execute database backup*.

The database backup will be made.

Note: If, for any reason, the database backup cannot be made, go to the section 13 which provides some guides to troubleshooting problems.

12.2.2 MANATEE Documentation Backup

To start working with backups, select *Backups* tab.

In order to make the MANATEE documentation backup, select *Documentation backup* tab. Only the Administrator can make the documentation backup.

The following form will appear.

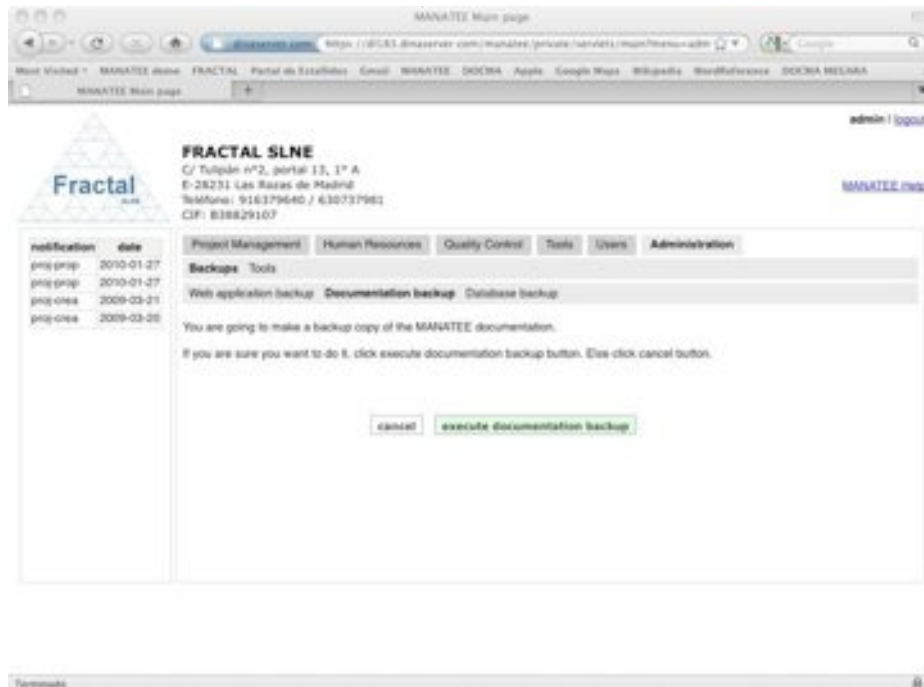


Figure 146: Making MANATEE documentation Backup

⇒ Click *execute documentation backup*.

The documentation backup will be made.

Note: If, for any reason, the documentation backup cannot be made, go to section 13 which provides some guides to troubleshooting problems.

12.2.3 MANATEE Web Application Backup

To start working with backups, select *Backups* tab.

In order to make the MANATEE Web application backup, select *Web application backup* tab. Only the Administrator can make the Web application backup.

The following form will appear.

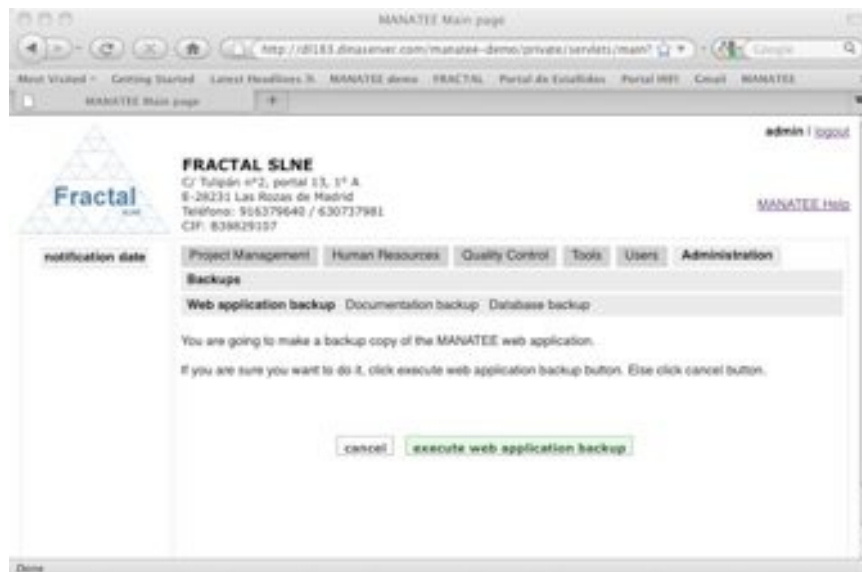


Figure 147: Making MANATEE Web application Backup

⇒ Click *execute web application backup*.

The Web application backup will be made.

Note: If, for any reason, the Web application backup can not be made, go to the section 13 which provides some guides to troubleshooting problems.

12.3 Restores

This tool is not integrated in the MANATEE Web Application because it needs to be independent to MANATEE crashes.

In order to restore MANATEE, you must open the MANATEE Restore Java application.

To Start the MANATEE Restore application you must execute in a terminal the following commands:

```
cd $MANATEERESTORE_HOME
java -jar MANATEERestore.jar
```

Once MANATEE Restore is executed, the following Main window will appear:

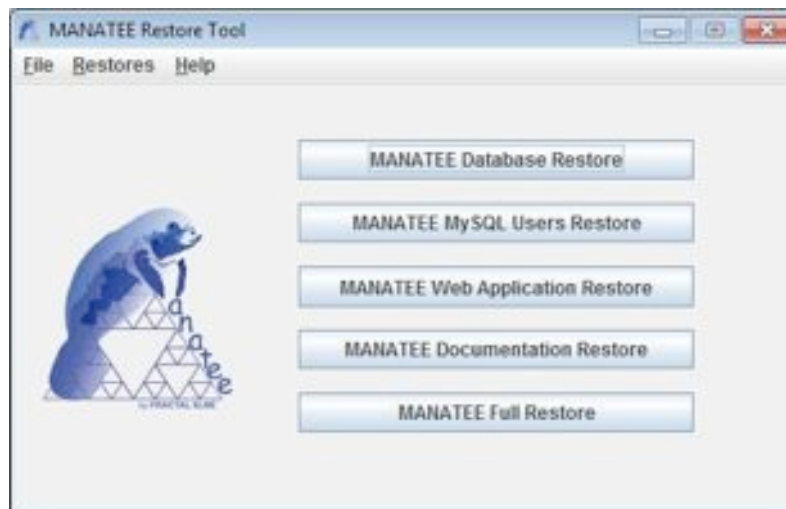


Figure 148: MANATEE Restore Main window

12.3.1 MANATEE Database Restore

Be sure you have installed and running the MySQL server service before restore MANATEE database.

Starting at the Main Window of the application,

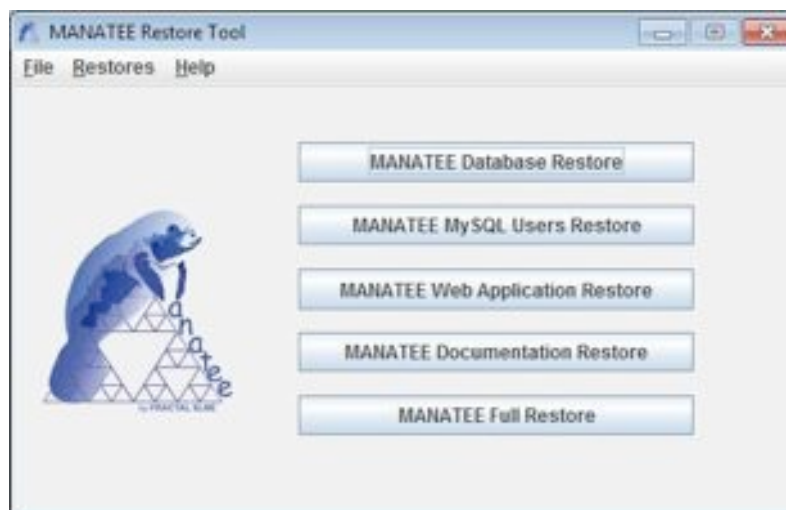


Figure 149: MANATEE Restore Main window

The following steps must be executed in order to restore MANATEE database:

A. Open the MANATEE Database Restore dialog:

In the Main window, the MANATEE database restore dialog can be opened in two different ways:

A.I. Going through the Restores Menu.

In the Main window, select *Restores Menu* ⇒ *MANATEE Database Restore* or press *ALT+R+D*.

The MANATEE Database restore dialog will be opened.



A.II. Selecting the MANATEE Database Restore button.

In the Main window, click MANATEE Database Restore button.

The MANATEE Database restore dialog will be opened.



Figure 150: MANATEE Database Restore window

B. Fill the information about the MySQL server, the server name (networking name or IP) as well as the MANATEE database backup file.

In the MANATEE Database Restore dialog (see fig. 141):

⇒ Introduce the *MySQL Server workdir* or select it from a Open dialog by clicking the ... button,

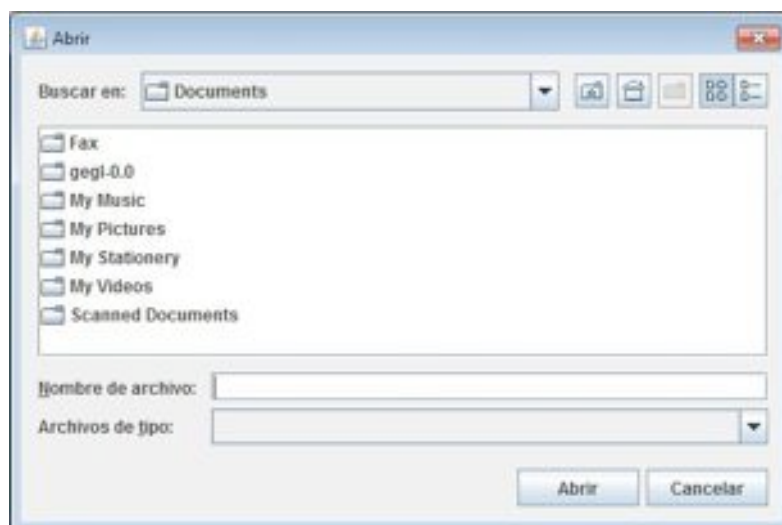


Figure 151: Open dir window

⇒ Introduce *Server name*

⇒ Introduce *Database name*



- ⇒ Introduce *MySQL port*
- ⇒ Introduce *MySQL root user*
- ⇒ Introduce *MySQL root password*
- ⇒ Introduce the *MANATEE database backup file* or select it from a Open dialog by clicking the ... button,

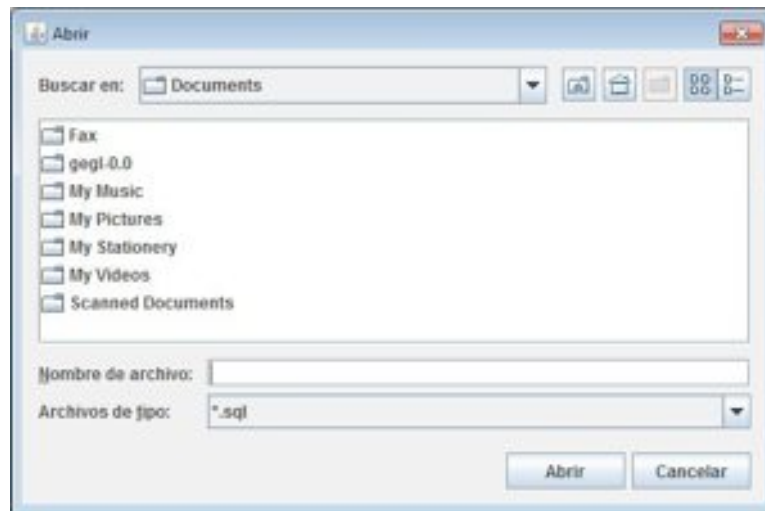


Figure 152: Open file window

- ⇒ Click *OK*

C. One of the following information windows will appear.

If MANATEE database were restored, it will appear:

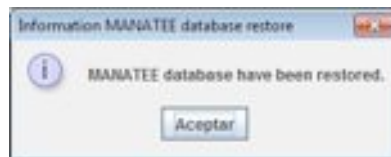


Figure 153: Information confirmation MANATEE database restore

If MANATEE database were not restored, the following window will appear:

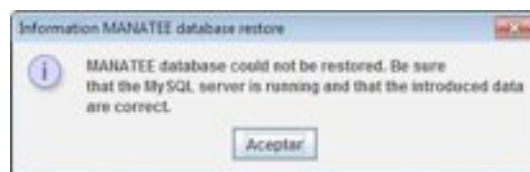


Figure 154: Information error DOCMA database restore

12.3.2 MANATEE MySQL Users Restore

For any database in MySQL, there are MySQL users that have different permissions through this database.

In this case, the MANATEE database has defined two users:



- ✓ user_m -> this user have SELECT, INSERT, UPDATE, DELETE, CREATE, DROP, INDEX, ALTER permissions through MANATEE database.
- ✓ user_1 -> this user have SELECT permission through MANATEE database.

Only in the case that you have to reinstall the MySQL Server in you server computer, you will have to restore the MANATEE MySQL users.

Be sure you have installed and running the MySQL server service before restoring MANATEE MySQL users.

Starting at the Main Window of the application,

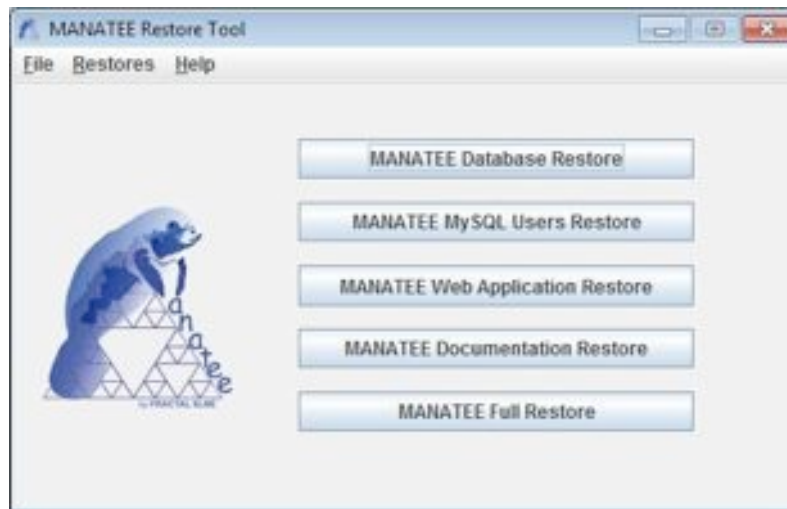


Figure 155: MANATEE Restore Main window

The following steps must be executed in order to restore MANATEE MySQL users:

A. Open the MANATEE MySQL users Restore dialog:

In the Main window, the MANATEE MySQL users restore dialog can be opened in two different ways:

A.I. Going through the Restores Menu.

In the Main window, select *Restores Menu* ⇒ *MySQL users Restore* or press *ALT+R+M*.

The MANATEE MySQL users restore dialog will be opened.

A.II. Selecting the MANATEE MySQL Users Restore button.

In the Main window, click MANATEE MySQL Users Restore button.

The MANATEE MySQL users dialog will be opened.

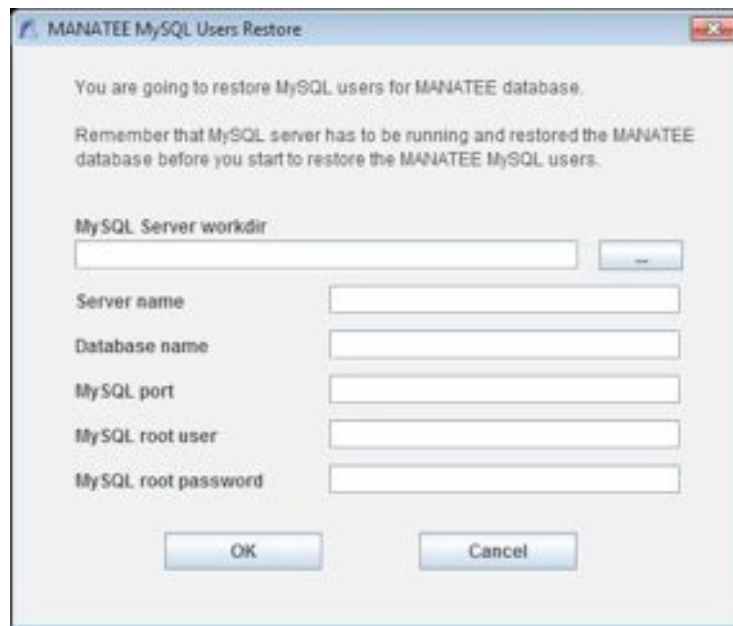


Figure 156: MANATEE MySQL Users Restore window

B. Fill the information about the MySQL server as well as the server name (networking name or IP)

In the MANATEE MySQL Users Restore dialog (see fig. 147):

- ⇒ Introduce the *MySQL Server workdir* or select it from a Open dialog by clicking the ... button,

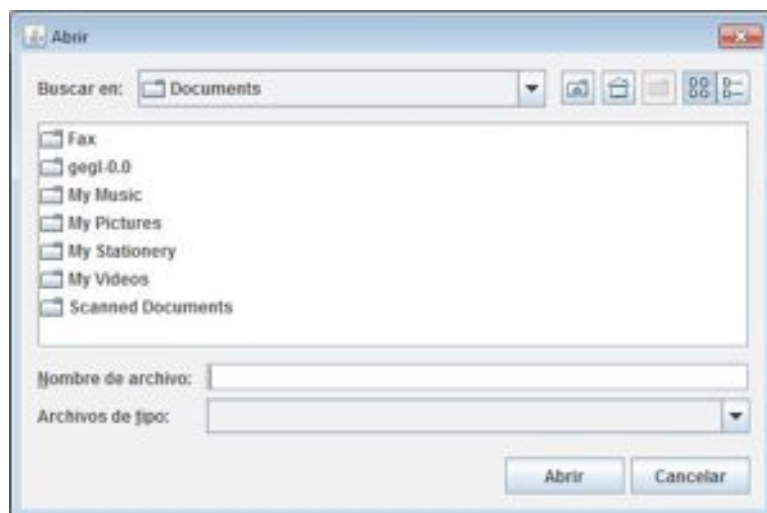


Figure 157: Open dir window

- ⇒ Introduce *Server name*
- ⇒ Introduce *Database name*
- ⇒ Introduce *MySQL port*
- ⇒ Introduce *MySQL root user*
- ⇒ Introduce *MySQL root password*



⇒ Click *OK*

C. One of the following information windows will appear.

If MySQL users were restored, the following window will appear:



Figure 158: Information confirmation MySQL users restore

If MySQL users were not restored, the following window will appear:



Figure 159: Information error MySQL users restore

12.3.3 MANATEE Web Application Restore

Be sure you have installed Tomcat server (see section 3.3) before restore MANATEE Web Application.

After restore MANATEE Web application configure the tomcat server (see section 3.4).

Starting at the Main Window of the application,

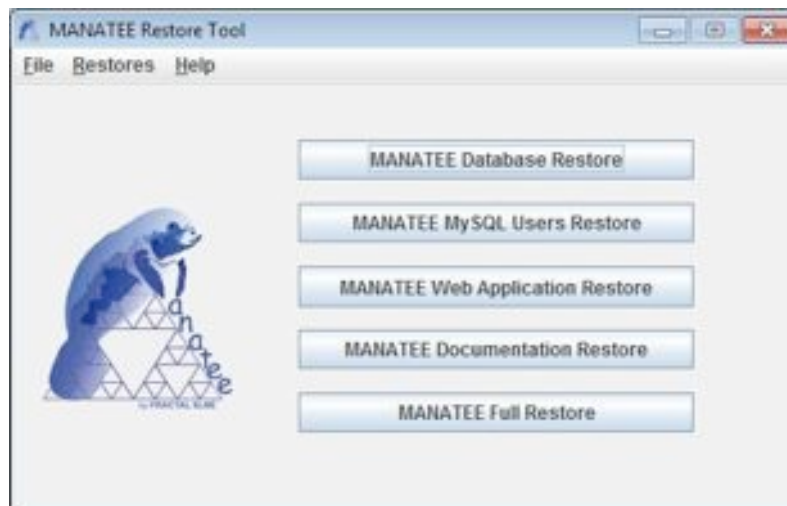


Figure 160: MANATEE Restore Main window

The following steps must be executed in order to restore MANATEE Web Application:

A. Open the MANATEE Web Application restore dialog:



In the Main window, the MANATEE Web Application restore dialog can be opened in two different ways:

A.I. Going through the Restores Menu.

In the Main window, select *Restores Menu* ⇒ *MANATEE Web application Restore* or press *ALT+R+W*.

The MANATEE Web application restore dialog will be opened.

A.II. Selecting the MANATEE Web application Restore button.

In the Main window, click MANATEE Web application Restore button.

The MANATEE Web application Restore dialog will be opened.

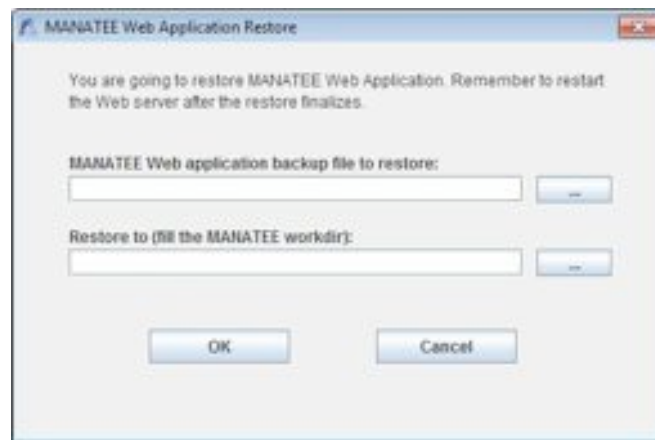


Figure 161: MANATEE Web application Restore window

B. Fill the information about the MANATEE Web application backup file as well as the MANATEE Web application workdir (\$MANATEE_HOME).

In the MANATEE Web Application Restore dialog (see fig. 152):

⇒ Introduce the *MANATEE Web application backup file* or select it from a Open dialog by clicking the ... button,

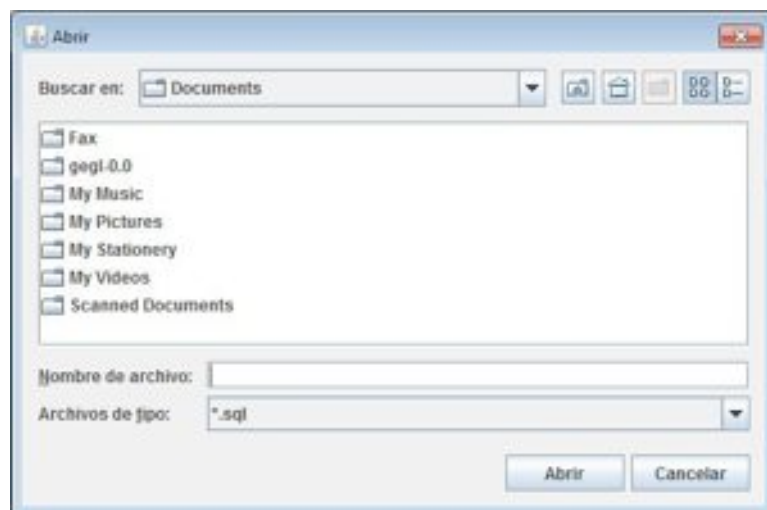


Figure 162: Open file window



⇒ Introduce the *MANATEE Web application workdir* or select it from a Open dialog by clicking the ... button,

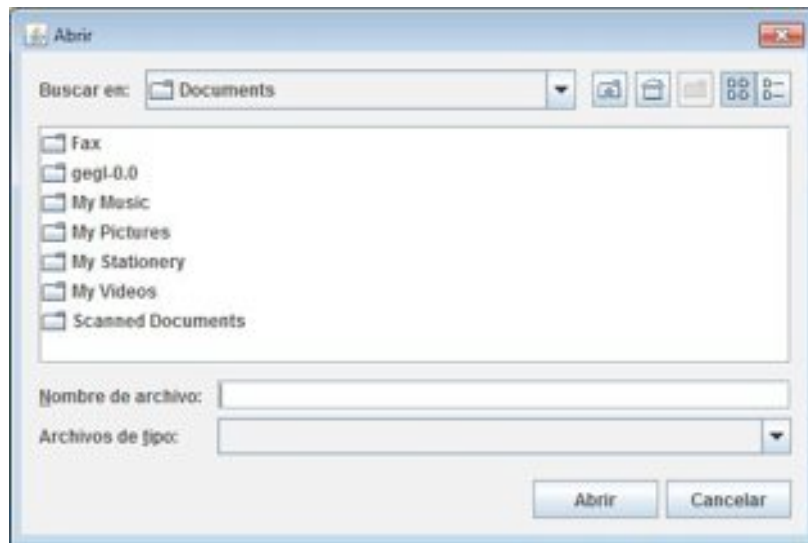


Figure 163: Open dir window

⇒ Click *OK*

C. One of the following information windows will appear.

If MANATEE Web application were restored, the following window will appear:



Figure 164: Information confirmation MANATEE Web application restore

If MANATEE Web application were not restored, the following window will appear:



Figure 165: Information error MANATEE Web application restore

12.3.4 MANATEE Documentation Restore

Be sure you restored MANATEE Web Application before restore MANATEE Documentation.

Starting at the Main Window of the application,

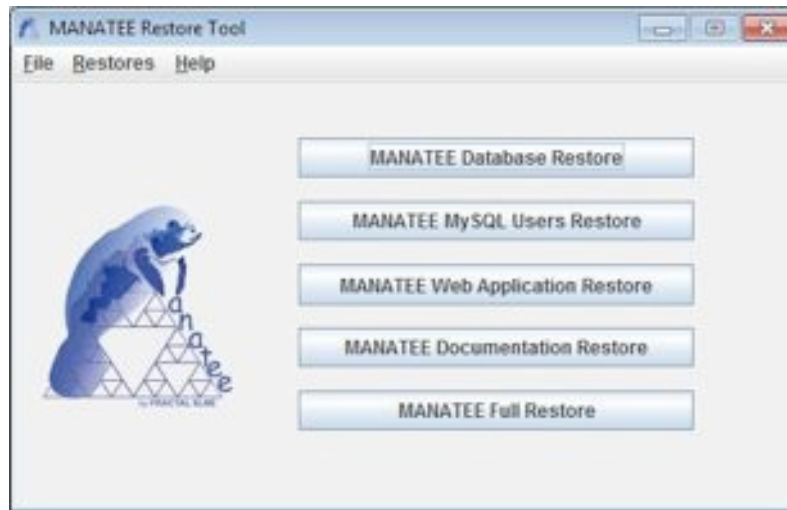


Figure 166: MANATEE Restore Main window

The following steps must be executed in order to restore MANATEE Documentation:

D. Open the MANATEE Documentation restore dialog:

In the Main window, the MANATEE Documentation restore dialog can be opened in two different ways:

D.I. Going through the Restores Menu.

In the Main window, select *Restores Menu* ⇒ *MANATEE Documentation Restore* or press *ALT+R+W*.

The MANATEE Documentation restore dialog will be opened.

D.II. Selecting the MANATEE Documentation Restore button.

In the Main window, click MANATEE Documentation Restore button.

The MANATEE Documentation Restore dialog will be opened.

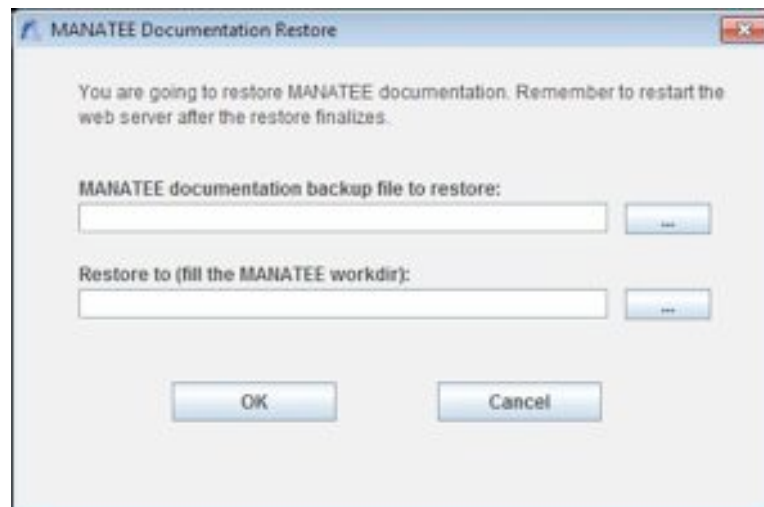


Figure 167: MANATEE Documentation Restore window



E. Fill the information about the MANATEE Documentation backup file as well as the MANATEE Web application workdir (\$MANATEE_HOME).

In the MANATEE Documentation Restore dialog (see fig. 158):

- ⇒ Introduce the *MANATEE Documentation backup file* or select it from a Open dialog by clicking the ... button,

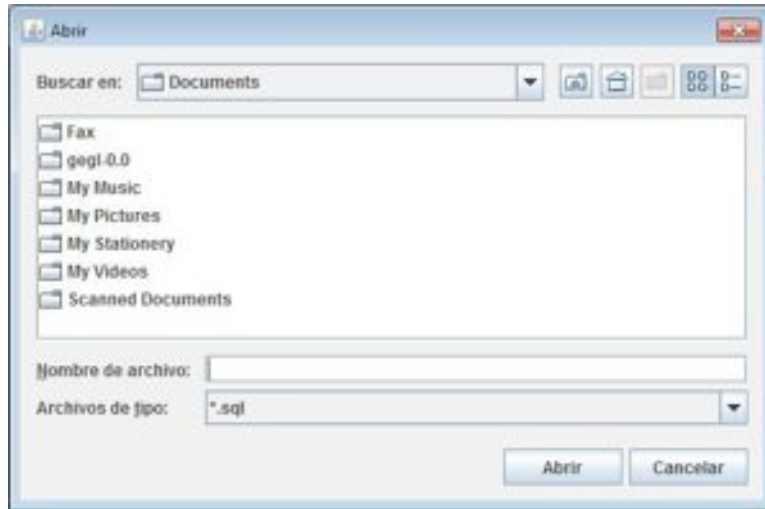


Figure 168: Open file window

- ⇒ Introduce the *MANATEE Web application workdir* or select it from a Open dialog by clicking the ... button,

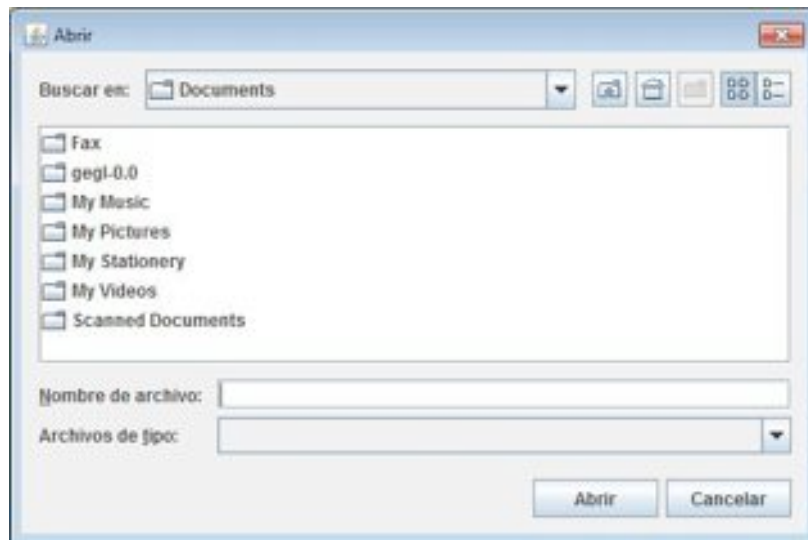


Figure 169: Open dir window

- ⇒ Click *OK*

F. One of the following information windows will appear.

If MANATEE Documentation were restored, the following window will appear:

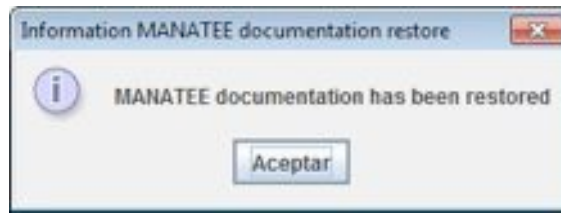


Figure 170: Information confirmation MANATEE Documentation restore

If MANATEE Documentation were not restored, the following window will appear:

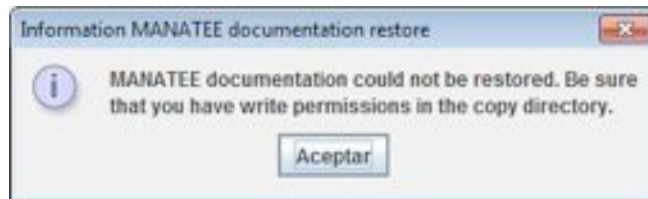


Figure 171: Information error MANATEE Documentation restore

12.3.5 MANATEE Full Restore

Be sure you have installed and running the MySQL server service and Tomcat server (see section 3.3) before restore MANATEE.

After restore MANATEE configure the tomcat server (see section 3.4).

Starting at the Main Window of the application,

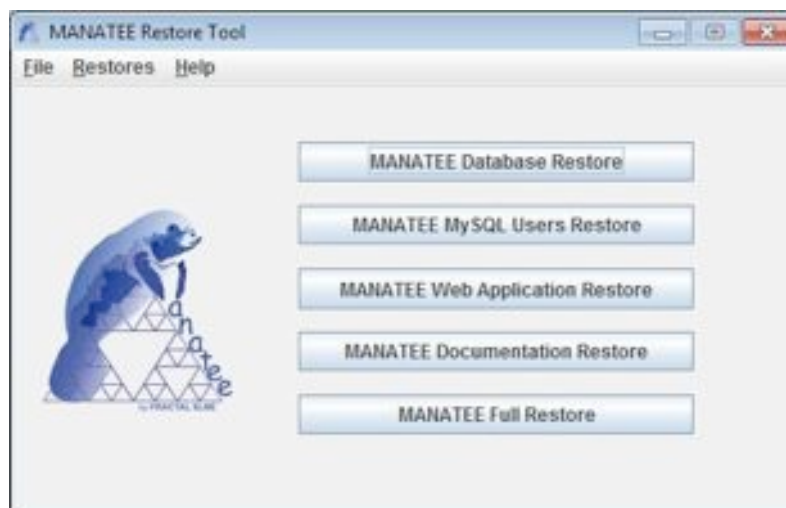


Figure 172: MANATEE Restore Main window

The following steps must be executed in order to restore MANATEE:

A. Open the MANATEE Full Restore Step 1 dialog:

In the Main window, the MANATEE Full restore dialog can be opened in two different ways:

A.I. Going through the Restores Menu.



In the Main window, select *Restores Menu* \Rightarrow *MANATEE Full Restore* or press *ALT+R+F*.

The first MANATEE restore dialog will be opened.

A.II. Selecting the MANATEE Full Restore button.

In the Main window, click MANATEE Full Restore button.

The first MANATEE restore dialog will be opened.



Figure 173: MANATEE Full Restore: Step 1 window

B. Fill the information about the MySQL server, the server name (networking name or IP) as well as the MANATEE database backup file.

In the MANATEE Full Restore Step1 dialog (see fig. 164):

\Rightarrow Introduce the *MySQL Server workdir* or select it from a Open dialog by clicking the ... button,

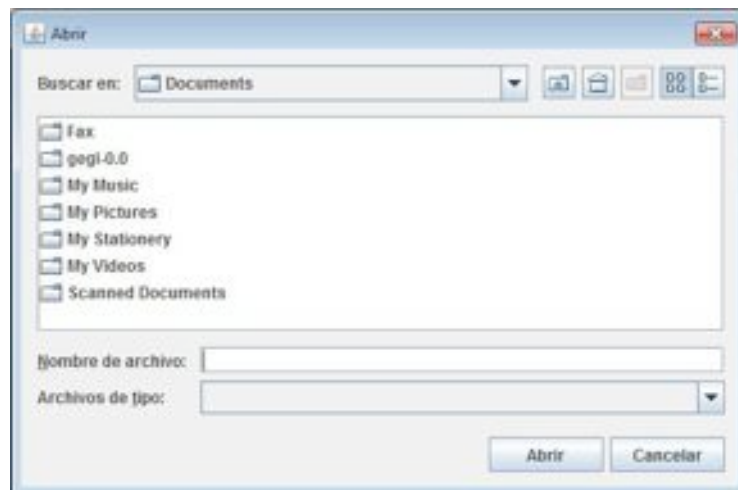


Figure 174: Open dir window

- ⇒ Introduce *Server name*
- ⇒ Introduce *Database name*
- ⇒ Introduce *MySQL port*
- ⇒ Introduce *MySQL root user*
- ⇒ Introduce *MySQL root password*
- ⇒ Introduce the *MANATEE database backup file* or select it from a Open dialog by clicking the ... button,

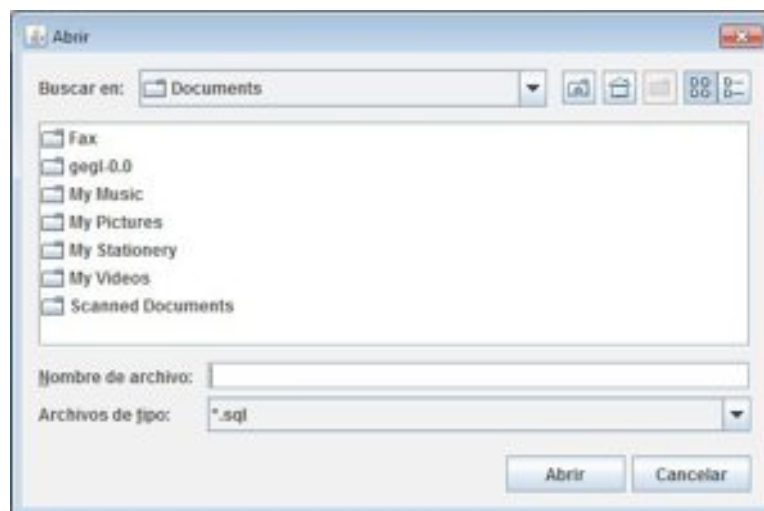


Figure 175: Open file window

- ⇒ Click *OK*

C. One of the following information windows will appear.

If MANATEE database were restored, the following dialog will appear that must be accepted to go to the next step (see **D**).



Figure 176: Information confirmation MySQL users and MANATEE database restore

If MANATEE database were not restored, the following dialog will appear to indicate that the MANATEE Full restore is interrupted.

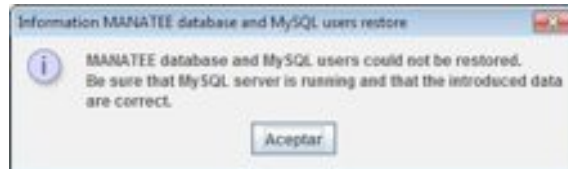


Figure 177: Information error MySQL users and MANATEE database restore

D. MANATEE Full Restore Step 2 dialog will appear:

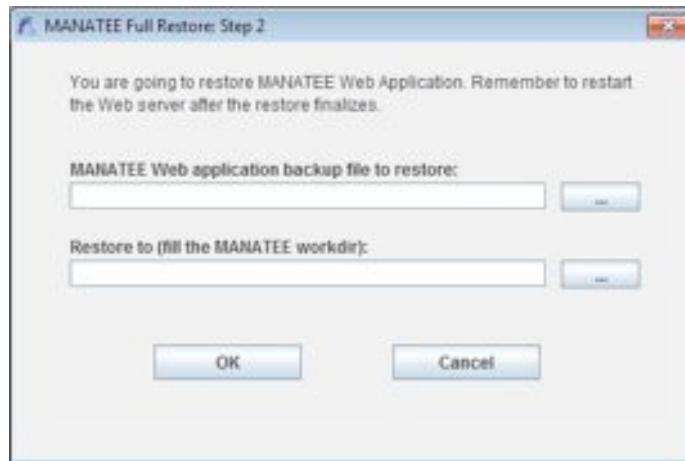


Figure 178: MANATEE Full Restore: Step 2 window

E. Fill the information about the MANATEE Web application backup file as well as the MANATEE Web application workdir (\$MANATEE_HOME).

In the MANATEE Full Restore Step 2 dialog (see fig. 169):

- ⇒ Introduce the *MANATEE Web application backup file* or select it from a Open dialog by clicking the ... button,

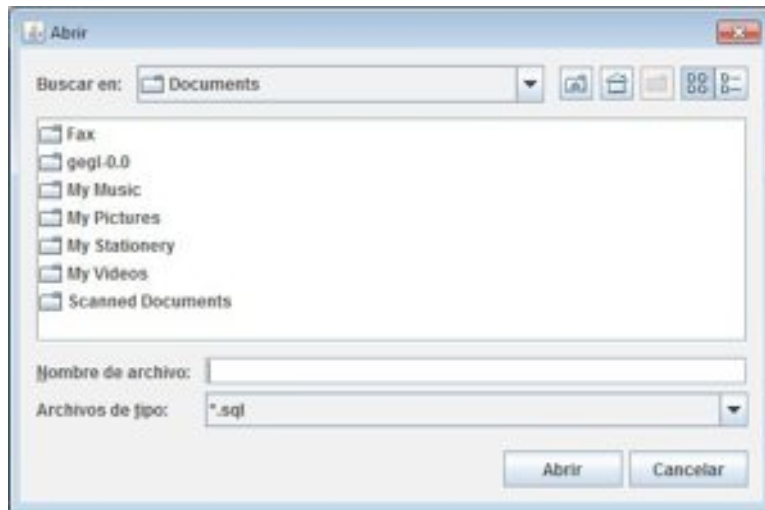


Figure 179: Open file window

⇒ Introduce the *MANATEE Web application workdir* or select it from a Open dialog by clicking the ... button,

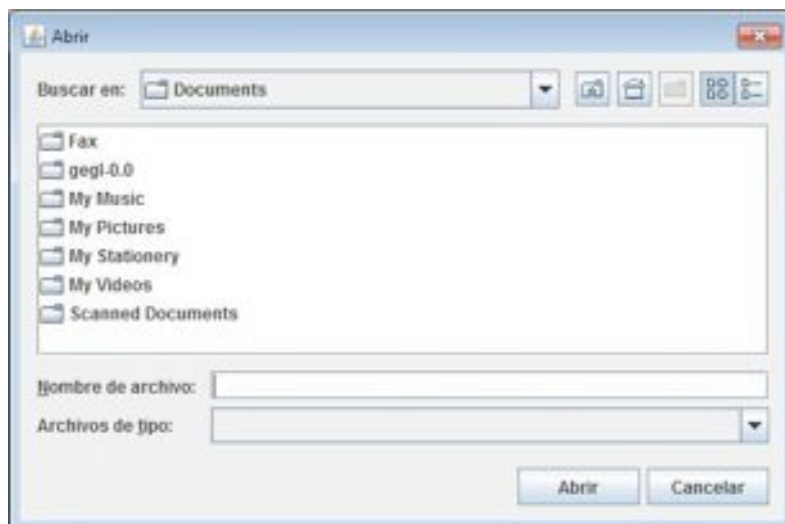


Figure 180: Open dir window

⇒ Click *OK*

F. One of the following information windows will appear.

If MANATEE Web application were restored, the following dialog will appear.



Figure 181: Information confirmation MANATEE Web application restore

If MANATEE Web application were not restored, the following window will appear to indicate that the MANATEE Full restore is interrupted.



Figure 182: Information error MANATEE Web application restore

G. MANATEE Full Restore Step 3 dialog will appear:

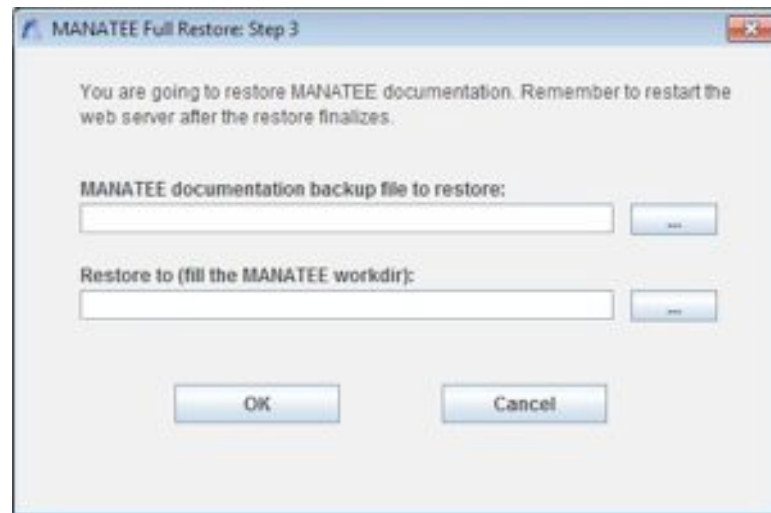


Figure 183: MANATEE Full Restore: Step 3 window

H. Fill the information about the MANATEE Documentation backup file as well as the MANATEE Web application workdir (\$MANATEE_HOME).

In the MANATEE Full Restore Step 3 dialog (see fig. 174):

⇒ Introduce the *MANATEE Documentation backup file* or select it from a Open dialog by clicking the ... button,

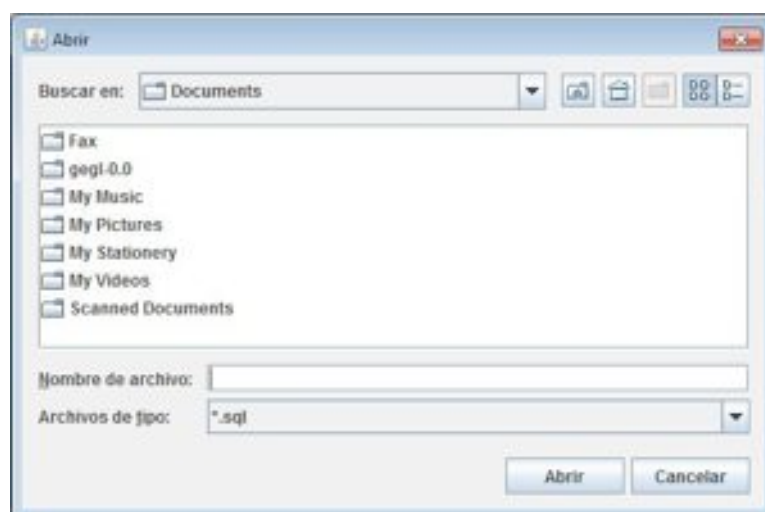


Figure 184: Open file window

⇒ Introduce the *MANATEE Web application workdir* or select it from a Open dialog by clicking the ... button,

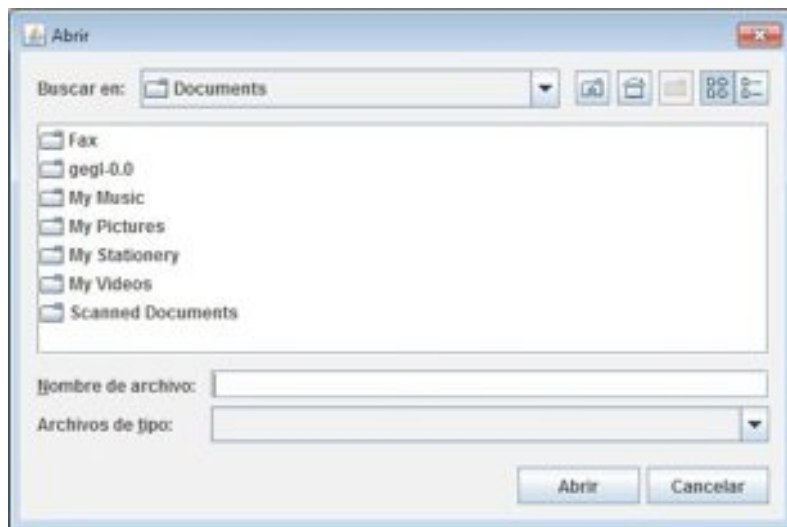


Figure 185: Open dir window

⇒ Click *OK*

I. One of the following information windows will appear.

If MANATEE Documentation were restored, the following dialog will appear.

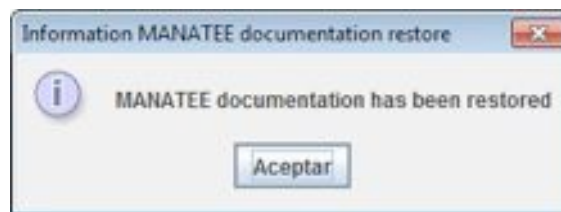


Figure 186: Information confirmation MANATEE Documentation restore

If MANATEE Documentation were not restored, the following window will appear to indicate that the MANATEE Full restore is interrupted.

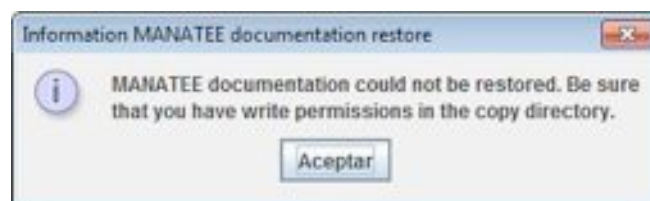


Figure 187: Information error MANATEE Web application restore



13 TROUBLESHOOTING

In this section, some guidelines are provided to help user troubleshooting the problems that can be encountered.

1. *A new user, project or any other item can not be created*

This problem could happen whenever the user is trying to add a new user, project or any other item without filling all mandatory fields, which are identified with an “*”.

2. *The properties of an existing user, project or any other item can not be modified*

This problem could happen whenever the user is trying to modify the information included in the item without taking into account constraints associated to each field. Check the field's definition in each section.

3. *The desired project can not be displayed*

If the user is not able to find a particular project, it could happen that this user have not the required access rights. Check with the Administrator or the Project managers of that particular project that the user has been authorized to this project (as Project manager, Authorized to all documents or Authorized only to approved version).

4. *The desired item (WP, WBS, etc.) can not be displayed*

If the user is not able to find a particular item, it could happen that this user have not the required access rights to visualize the associated project. Check with the Administrator or the Project manager of the project associated to this item that the user has been authorized to this project (Authorized to all documents or Authorized only to approved version).

5. *The desired button is not enabled or not displayed*

If a user wants to do a particular action and the desired button is not enabled or not displayed, the following questions can be raised:

- Has the user the access rights to do this action?
 - i. Check again the information about permissions given to perform this particular action in the corresponding section. The role that must have a user before performing an action is indicated in the section where each particular action is described.
 - ii. Check with the Project manager or with the Administrator to confirm that the user has the access rights to perform the desired action.
- Is the project or item currently in a status that allows doing this action?
 - i. Projects and items have constraints as described in the corresponding sections (where the actions that can be performed in relation with each item are detailed). Each action can be done only if the initial status is the one expected by the application. Check again in the corresponding step that the initial status that must have the item before doing the action is the right one.



14 SETTING-UP MANATEE

MANATEE gives some flexibility to establish the way that the data codes are defined. Whenever an Organization starts to use MANATEE, the Organization must decide how they want the codification convention for the code of the information managed by MANATEE and these decisions will be inserted in MANATEE database and used as constraints during the life of each particular application.

In this section, we describe the rules and restrictions to define the code conventions. It is important to mention that once they are established, they must not be changed afterwards, to avoid any incoherencies in the data.

WP code follows the pattern described below:

WP-PC-n

where,

-: separator

PC: Project Code

n: Sequence number that will be automatically generated by the application

The user must define:

- The character to be used as separator inside the WP code. In this example and along this manual, we have selected the "-". The only character not allowed is "%".