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Foreword

Information Systems have played an increasingly visible role over the past several years in improving the competitiveness of business. They are more than just tools for handling repetitive tasks; they will guide and advance all of a company's daily activities. Integrated Management Software is today very often a key source of significant competitive advantage.

Open Source Software: Making Business Applications accessible

Some may look at the Business Application market as a mature market dominated by a few large key players, with no new business opportunities.

This would be ignoring the market reality. So many customers are frustrated by their experience with existing vendors; so many companies around the world need to have access to business applications, but cannot afford them.

OpenERP believes that business applications should not be a luxury. That any company, anywhere in the world, should be able to afford the best tools to professionally expand business. That is one of the reasons why OpenERP needs to break the existing rules of the ERPs and the Business Applications market.

Customers should use their budget smartly and invest in customizing the application to their specific needs, rather than paying expensive license fees. OpenERP is committed to the Open Source Business Model precisely because Open Source allows for this. Open Source is a disruptive model, as it creates more value for the customers.

For decades, customers have developed applications which remained specific to their own needs, and in the end proved extremely expensive to maintain. Open Source means that customers can benefit from past developments of other companies. Also by contributing to the evolution of the software, the users will enjoy the guarantee that their development will be included in future versions of the software. One of the major advantages is that such a *Community* brings a wealth of new functionality.

Open Source also allows us to engage with our customers differently. Since there is no licensing cost, any potential customer can download, test and use the software. OpenERP has no need for an expensive sales force to promote the product. OpenERP just needs to make the best product and make it available to customers.

Open Source allows for many barriers in this industry to be broken. The software is available to many companies who could otherwise not afford expensive business applications license fees. The OpenERP solution allows customers to use their money smartly and tailor the software to their individual needs. OpenERP leverages from its customer base to enrich the software and finally eradicate any lock-in to allow customers to use and even drop the software freely.

The OpenERP Solution

OpenERP can build a new breed of business applications, more modular, more customer-friendly, fully web-based, which others cannot due to the heritage of their legacy systems.

OpenERP is a comprehensive suite of business applications including Sales, CRM, Project management, Warehouse management, Manufacturing, Financial management, and Human Resources, just to name a few. More than 1000 OpenERP modules are available from the OpenERP Apps market place (<http://apps.openerp.com/>).

The key to continued sales success is effective Customer Relationship Management, and that is precisely the main topic of the book you are reading. OpenERP's CRM and Sales features are flexible and highly developed to assist you in managing all aspects of partner relationships.

OpenERP can share information with the most common email clients, calendars and mobile phones, allowing your staff to build on previous productivity and experience by continuing to use familiar email and office systems, now connected to OpenERP. In a few clicks, your sales person can transfer necessary information to the OpenERP software. You can link important emails to the CRM directly from your current mailbox and even reply from your own mailbox and have the answer stored in your CRM automatically.

Structure of this book

Part One, *First Steps with OpenERP* (page ??), starts with the basic steps to install OpenERP. You will also be introduced to the main concepts, such as Sales Teams & Stages, and you will be guided through a complete workflow, from Quotation to Sales Order. Part One also presents the OpenERP Online offer (SaaS solution), and the configuration wizards in the *ch-start* chapter. To discover OpenERP's features, you can jump directly to Part Two.

Part Two, *part2-beg* explains you how to manage your customer relationships with OpenERP. You will learn more about how to manage Leads and Opportunities, to integrate existing communication tools with OpenERP, to efficiently manage a sales and channel department, and to monitor performance.

Part Three, *part3-crm-market*, is devoted to Direct Marketing. In a step-by-step tutorial, we will guide you through the process of setting up a marketing campaign in OpenERP.

Part Four, *part4-crm-sales*, guides you from quotation to sales order, explaining several advanced sales features.

Finally part Five, *part5-crm-install*, explains the detailed installation procedures for OpenERP. This chapter also explains how to install the Thunderbird & Outlook plugins, to get the most out of your existing email programs.

About the authors

Fabien Pinckaers

Fabien Pinckaers was only eighteen years old when he started his first company. Today, over ten years later, he has founded and managed several new technology companies, all based on Free / Open Source software.

He originated Tiny ERP, now OpenERP, and is the director of two companies including OpenERP S.A., the editor of OpenERP. In a few years time, he has grown the Tiny group from one to sixty-five employees without loans or external fund-raising, and while making a profit.

He has also developed several large scale projects, such as Auction-in-Europe.com, which became the leader in the art market in Belgium. Even today people sell more art works there than on ebay.be.

He is also the founder of the LUG (Linux User Group) of Louvain-la-Neuve, and of several free projects like OpenReport, OpenStuff and Tiny Report. Educated as a civil engineer (polytechnic), he has won several IT prizes in Europe such as Wired and l’Inscène.

A fierce defender of free software in the enterprise, he is in constant demand as a conference speaker and he is the author of numerous articles dealing with free software in the management of the enterprise.

Follow Fabien on his blog <http://fptiny.blogspot.com/> or on twitter fpopenerp.

Els Van Vossel

Els Van Vossel always had a dedication to both written and spoken word. Clear and explicit communication is crucial.

Educated as a Professional Translator in Antwerp, she worked as an independent translator on the localization of major ERP software. Els acquired ERP knowledge and decided to start working as a functional ERP consultant and a Technical Communicator for ERP software.

As such, the world of OpenSource software became more and more attractive. She started working with OpenERP software in her free time and doing so, Els really wanted to meet Fabien Pinckaers to share thoughts about documentation and training strategy. At a Partner Meeting she heard Fabien was looking for someone to manage the trainings & documentation. This was absolutely an opportunity to be qualified, and now Els is the OpenERP Training Program Manager and in this job responsible for the worldwide training and certification program of OpenERP.

Being an author of several Software Manuals, she finds it exciting to work on the OpenERP documentation and continuously take it to a higher level. Please note that this is a hell of a job, but Els finds great pleasure in doing it!

Follow Els on her blog <http://training-openerp.blogspot.com/> or on twitter elsvanvossel.

Acknowledgements

From Els Van Vossel

Thank you Fabien, for offering me the opportunity to work with OpenERP. I thank all OpenERP team members for their support and understanding. My special thanks to my family who encouraged me to write this book.

From Fabien Pinckaers

I address my thanks to all of the team at OpenERP for their hard work in preparing, translating and re-reading the book in its various forms. My particular thanks to Laurence Henrion and my family for supporting me throughout all this effort.

OpenERP is an impressive software system, being easy to use and yet providing great benefits in helping you manage your company. It is easy to install under both Windows and Linux compared with other enterprise-scale systems, and offers unmatched functionality.

Part I

Installation and Initial Setup

Whether you want to test OpenERP or put it into full production, you have at least two possible starting points:

- you can use OpenERP Online by subscribing to <http://www.openerp.com/online/>;
- you can install the solution on your own computers to test it in your company's system environment.

In this chapter, the easy-to-use *OpenERP Online* solution will be briefly explained. For more information about installing OpenERP on your computer, please refer to the chapter *part5-crm-install*.

Some Interesting Websites from OpenERP



- Main Site: <http://www.openerp.com>,
- OpenERP Online Site: <http://www.openerp.com/online>,
- Online demo at <http://demo.openerp.com>,
- Documentation site: [http://doc.openerp.com/](http://doc.openerp.com),
- Community discussion forum where you can often receive assistance: <http://www.openerp.com/forum>.

Current documentation



The procedure for installing OpenERP and its web server are likely to change and improve with each new version, so you should always check each release's documentation on the website for the latest installation procedures.

Use OpenERP Online

Nothing is easier for you to discover OpenERP than subscribing to the OpenERP Online offer. You just need a web browser to get started.

The Online service can be particularly useful to small companies, that just want to get going quickly at low cost. You have immediate access to OpenERP's Integrated Management System built on the type of enterprise architecture used in many organizations.

OpenERP's Online offer includes several services: hosting at high bandwidth, database management, stable security update, backups, maintenance (24/7 server monitoring), bug fixing and migrations.

OpenERP guarantees that the software running on OpenERP Online is exactly the same as the Open Source official version of OpenERP. Any improvement made on OpenERP will be available online. This allows you to easily switch from the online version to the local version anytime.

So even if the OpenERP Online solution might be the best solution to suit your needs today, you can easily switch to an installation on your own servers according to your company's changing requirements or growth. You are also able to change your service provider anytime, while continuing to use the exact same system. Hence, you do not depend on your host. In addition, OpenERP works with standard and open formats and programming languages which allow you to export your data and use them in any other software.

These advantages give you total control over your data, your software, your platform.

OpenERP Online 1 Month Free Trial Subscription

First name John

Last name Doe

Email john.doe@mycompany.com

Company My Company

Country United States

Phone (optional) Eg: +32 81 81 37 00

Instance name my-company .my.openerp.com

Instance Language English

Admin Password

Confirm Password

Install example data on my instance for testing purpose.

Got a Referral Code ?

By clicking the following button, you agree to the [Terms of service](#).

Create my account now

€39 per user / month

- ✓ Select the applications and build your own ERP at your own pace
- ✓ No software to install, use it from anywhere
- ✓ Supervision 24/7 and automatic backup
- ✓ Migrate to new version when it is right for you
- ✓ Select from over 20 available languages

Figure 1.1: *Subscribe and Start with OpenERP Online*

If you want to start working with the online platform, you can navigate to

<http://www.openerp.com/online>. After successful registration, you will be able to configure and use OpenERP online. To log in to your OpenERP Online account, you will receive a username and password. You can build the software to fit your needs, at your own pace!

OpenERP Online - Software as a Service - is hosted by OpenERP and paid in the form of a monthly subscription. The pricing model is extremely simple. OpenERP charges a fixed fee per month per user. You will get an invoice each month according to the number of users registered in the system at that time. If you add new users during the next 30 days, they will only be charged with the next invoice. You can find the details of current pricing and payment options at <http://www.openerp.com/online>.



Free Trial

For a month's free trial, check out OpenERP's <http://www.openerp.com/online>, which enables you to get started quickly without incurring costs for integration or for buying computer systems. After the free trial expires, you can easily continue using OpenERP Online.

Getting Started with OpenERP Online

2

If you want to focus on your customers, you need tools: to capture all the knowledge you have available; to help you analyze what you know; to make it easy to use all of that knowledge and analysis. OpenERP invites you to discover the CRM & Sales Management Business Application!

In this chapter, you can start exploring OpenERP!

Use a web browser of your choice to connect to OpenERP Web.

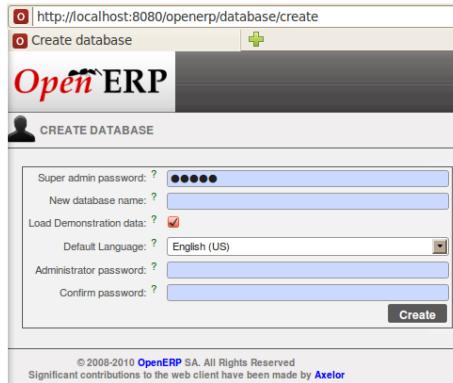


Figure 2.1: *Web Client at Startup*

OpenERP suggests that you configure your database using a series of questions. In the software, these series of questions are managed through so-called Configuration Wizards.

Click the Start Configuration button to continue.

The next configuration wizard will help you to decide what your user interface will look like, whether the screens will only show the most important fields - Simplified - or whether you also want to see the fields for the more advanced users, the Extended view. Select Extended and click Next to continue.

 **User Preferences**

You can easily switch from Simplified to Extended view by changing your *User Preferences*.

In the next wizard, you can fill your company data, select your company's base currency and add your company logo which can be printed on reports. Click *Next* to continue.

Select the Customer Relationship Management and Sales Management business applications for installation and click *Install*. Now OpenERP will start to install CRM & Sales, allowing

you to do a complete sales cycle, from lead / opportunity to quotation and sales order. You will have to wait for the next configuration wizard to be displayed (*Loading* will appear).

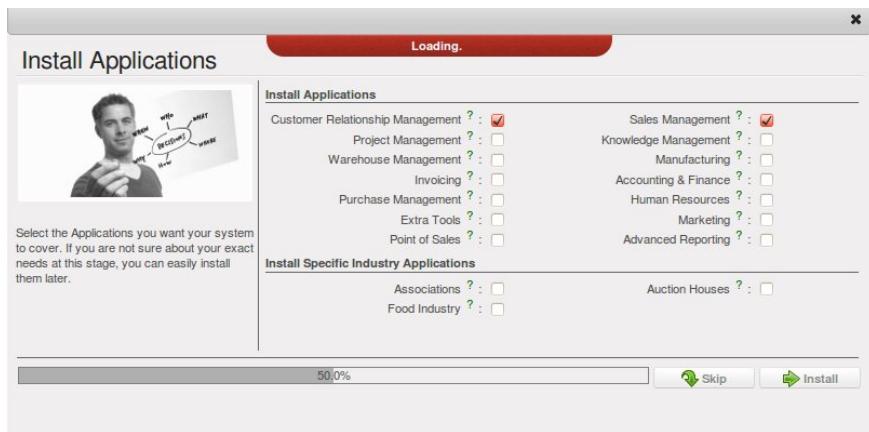


Figure 2.2: Selecting the CRM & Sales Functionality

OpenERP's modularity enables you to install a single Business Application (such as CRM) if that is all you need. Of course, you can choose to also install Sales Management, to handle quotations, sales orders and sales invoices as well. For now, please install Customer Relationship Management and Sales Management, as these two Business Applications will be discussed in this book.

 **Reconfigure**

Keep in mind that you can change or reconfigure the system any time, for instance through the *Reconfigure* option in the main bar.

When you choose a business application for installation, OpenERP will automatically propose to add or configure related (smaller) applications to enrich your system. When you install CRM, OpenERP will also ask you whether you want to install Fetchmail, or Sales FAQ, for instance.

The figure *Selecting Accounting Configuration* (page 9) shows the Accounting Application Configuration screen that appears when you select Sales Management to be installed.

Indeed, accounting is required to create sales invoices. Select the *Generic Chart of Account* and fill in the Sale Tax (%) applicable in your country. Click *Configure* to continue the configuration.

 **Accounting**

Please note that you can perfectly well use OpenERP's CRM without doing your accounting in OpenERP. When you only install CRM, there is no need to configure accounting.

OpenERP CRM offers lots of features. You can easily manage your address book (prospects, customers,

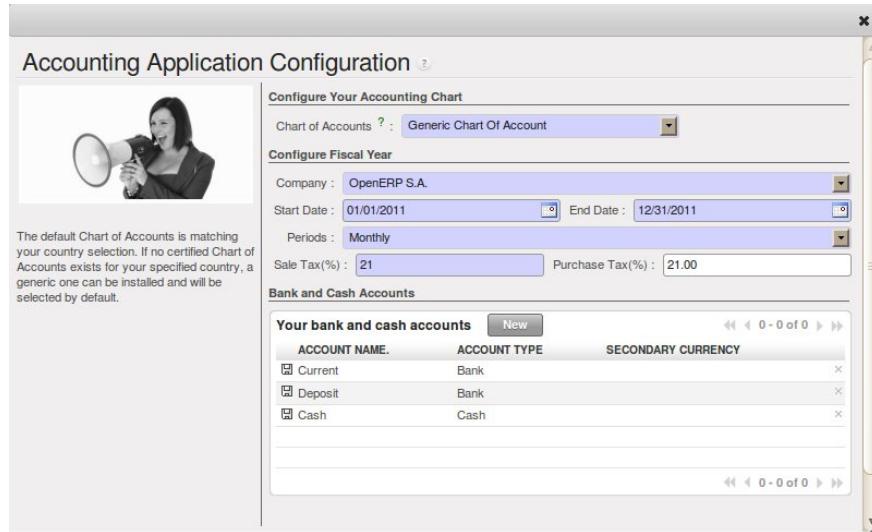


Figure 2.3: Selecting Accounting Configuration

...), keep track of leads and/or opportunities, manage meetings & phone calls, share (sales) knowledge and much more.

The figure *Selecting CRM Configuration* (page 9) shows the CRM Application Configuration screen that appears when you select Customer Relationship Management to be installed.

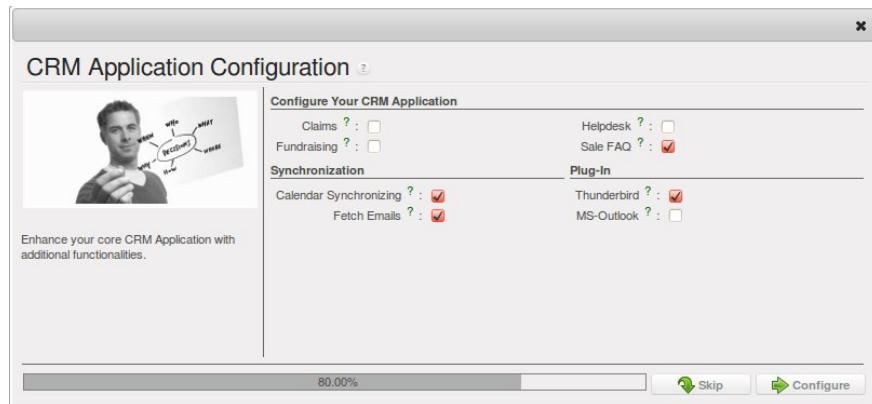


Figure 2.4: Selecting CRM Configuration

To stay in line with what will be described later in this book, please install the following options:

- Opportunity to Quotation will be checked by default, allowing you to create quotations from an opportunity,
- Sale FAQ to install a company wiki to share your sales knowledge,

- Calendar Synchronizing to link your OpenERP calendar to your mobile device, for instance,
- Fetch Emails to manage incoming and outgoing emails in OpenERP directly,
- Thunderbird or Outlook according to the email client you are using, to link your current mailbox to OpenERP and to create new leads or partners in OpenERP, directly from your mailbox.

If you have selected all of the above options, the following Configuration Wizards will appear:

- Configure your *Sales* application: click `Configure` to accept the default settings (no options checked).
- Configure your *Knowledge* application: click `Configure` to accept the default settings.
- *Thunderbird / Outlook* Plug-in Configuration: for now, you only have to click the `Save as` button to save the plug-in to your disk (or desktop). Then you can click `Configure` to continue the installation.
- Configure your *Accounting* application: click `Configure` to accept the default settings.
- Configure your *Sales* application: click `Configure` to accept the default settings.
- *Knowledge* application configuration: click `Next` to accept the default settings for the server address.



Plug-ins

For the configuration of the plug-in, please refer to the settings in chapter *thunder* or *outl*.

OpenERP's menu will be displayed, because your system is now ready for actual configuration. To get started, you click the Sales button in OpenERP's main screen. In the next chapter *ch-team* you will start working in the CRM application by telling OpenERP how your company's sales teams are organized.

As your business is growing and evolving all the time, your requirements as to the use of OpenERP are likely to change. To sustain your growth, you can easily extend your CRM with other OpenERP business applications, such as logistics or HR, to name some. OpenERP offers this flexibility; you can start with one business application, such as Customer Relationship Management, and gradually complete OpenERP to suit your ever changing needs!

Part II

Complete Example: from Lead to Sales Order

In this chapter, we will show you a complete sales flow, from lead to opportunity to quotation to sales order in a step-by-step scenario.

First you will get an explanation about the use case (what Thomas or one of his colleagues is supposed to do). Then the *Notes* will learn you how Thomas (or a colleague of his) enters the information in OpenERP CRM. For the simplicity of the use case, we will do all of the steps under the Admin user.



Simplified or Extended View

In OpenERP your user interface will look slightly different according to the User Preferences. In Simplified view, the screens will only show the most important fields / tab pages. To see also the fields for the more advanced users, you should switch to the Extended view. You can easily switch from *Simplified* to *Extended* view by changing your *User Preferences* through the ‘Edit Preferences’ button. For this use case, please switch to ‘Extended’ view.

1. Create a new campaign

Your company is exhibiting at the “House & Design” Fair in Paris and Thomas, a salesman of your company, meets lots of prospects during this event. Because Luc, the Sales Manager, would like to know the return on investment from hiring a stand at this fair, he asks Thomas, who will be hosting this event, to make a “House & Design” campaign.



Campaign

To create a new campaign, Thomas goes to *Sales* → *Configuration* → *Sales* → *Campaigns* and clicks the *New* button. In the *Campaign Name* field, he types *House & Design*.

2. Create and qualify a new lead

Thomas has to enter all contacts he met at the House & Design Fair as a new lead (contacts, prospects), assigning each individual lead to the “House & Design” campaign. He will start by adding a lead for Mr. John Doe of the *The Interior Design Company* who is interested in redecorating his office.



Figure 2.5: *Campaign*

 **Leads**

To create a new lead, Thomas goes to *Sales* → *Leads* and clicks the *New* button. The subject of a lead is in blue, because it is a mandatory field, so Thomas enters *Potential interior design customer* in that field. He uses the *Notes* field to add more information about the lead. When saving the lead, it will be in Draft state. Thomas opens it for further follow-up. In the chapter *part2-crm-leads* you will find more details about lead creation.

The screenshot shows a 'Leads' detail view. The lead's subject is 'Marketing Products', priority is 'High', category is 'Need a Website Design', and stage is 'Qualification'. The contact information includes 'John Peters' as the contact name, 'My IT Company' as the partner name, and 'Administrator' as the salesperson. The communication history section shows fields for email, phone, fax, and mobile. The notes section is empty. At the bottom, there are buttons for 'Cancel', 'Close', 'Pending', and 'Escalate'.

Figure 2.6: *Example of a Lead*

To contact his leads after the Fair and check if any of them can be qualified as a business opportunity, Thomas would like to group his leads by the “House & Design” Campaign, to have an overview of all the leads generated through this campaign.



Group by

To group his leads by campaign, Thomas goes to *Sales → Leads* and clicks the *Group by* list to show the buttons he can use. He clicks the *Campaign* button and notices that no lead is visible, but only the various campaigns. Each campaign has an arrow in front; he clicks the arrow to display all the leads for that campaign.

The screenshot shows the 'Search: Leads' interface. In the 'Group By' section, the 'CAMPAGIN' button is selected. Below it, a single lead entry is listed:

CAMPAGIN	CREATION DATE	SUBJECT	CONTACT NAME	EMAIL	PHONE	STAGE	SALES TEAM	SALESMAN	STATE
House & Design	03/31/2011 13:11:43	Potential interior design customer	John Doe	john.doe@gmail.com	+3281818181	Events	Administrator	Draft	

Figure 2.7: Leads grouped by Campaign

3. Convert the lead into an opportunity and create a new customer

Because the lead for John Doe from *The Interior Design Company* looks promising, Thomas decides to convert it into an opportunity and at the same time add a new Customer to the company's address book.

On the business opportunity, the salesman should provide more information, such as the estimated income. Thomas indicates that the expected revenue would be 5,000.00€, and that the success rate of the opportunity at this stage is 20%.

Thomas sets Luc, the sales manager, as the person responsible to follow up the opportunity. He also sets the date for the next action and describes that he has to call the potential customer to plan a meeting with Luc, the sales manager.



Convert to Opportunity

To convert the lead into an opportunity, Thomas goes to *Sales* → *Sales* → *Leads* and opens the lead concerned (there are various possibilities to quickly find the lead he needs). Thomas opens the lead and clicks the *Convert to Opportunity* button (he can also do this from the list of leads by clicking the Convert to Opportunity arrow of the lead concerned). OpenERP asks Thomas whether he wants to create a new partner. He confirms by clicking *Continue* to add the new potential customer to your company's address book. Then he clicks *Next* to convert the promising lead into an opportunity. In the *Expected Revenue* field, Thomas types 5,000.00€, and he enters a success rate of 20%. Thomas clicks the *Create Opportunity* button. As a *Next Action Date*, he sets tomorrow's date and in the *Next Action* field he types *Phone customer to plan meeting*.



Filters

The *Advanced Search View* provides a very user-friendly filtering mechanism to easily look up desired records from the list.

Usually, a filter view is composed of three elements, the *Filter* buttons at the top, the *Extended Filters* and the *Group by* option.

These filters are dynamic, so according to filters you apply, extra columns may be added to the view.

You can also easily combine filters; an arrow will be displayed and you will get a structure according to the order in which you clicked the *Filter* buttons.

Simply by changing the order in which you select your buttons, you will get a completely different filtered view. E.g. select Salesman first, then Campaign or vice versa.

4. Plan a meeting

One day later, Thomas contacts the prospect and convinces him to meet Luc so that the sales manager can give more information about the product range in view of a quotation.

Thomas plans a meeting for Luc. This meeting is organized next week with the customer and is related to the opportunity. He sets a reminder for Luc.

The screenshot shows a 'Leads Form' window. At the top, there are buttons for 'New', 'Edit', 'Duplicate', and 'Delete'. Below that, lead details are listed: Subject: Marketing Products, Priority: High, Category: Need a Website Design; Salesman: Administrator, Sales Team: Sales Department, Stage: Qualification. On the right side, there is a 'Convert to Opportunity' button with a green arrow icon, which is highlighted by a large red arrow in the image. The main area contains tabs for 'Lead', 'Extra Info', and 'Communication & History'. Under 'Contact', there are fields for Contact Name (John Peters), Title, Function, Street, Street2, Zip, City, Country (Australia), Fed. State, Email, Phone, Fax, Mobile, and Links. A 'Notes' section and a 'Create' button are also present.

Figure 2.8: *Convert Lead to Opportunity*

Meeting

Thomas goes to the list of opportunities through *Sales* → *Sales* → *Opportunities* to check his next actions. He opens the opportunity and contacts John Doe. He enters the key elements of his phone call in the *Details* field. To plan the meeting, Thomas clicks the *Schedule Meeting* button and clicks the *Week* button in the Calendar view. He uses the drag and drop function to schedule the meeting for Luc. He plans the meeting next week from 2 pm to 3 pm. He sets Luc as the person responsible and sets a reminder to be send 2 hours before the start of the meeting. He also changes the *Next Action Date* in the opportunity to the meeting date.

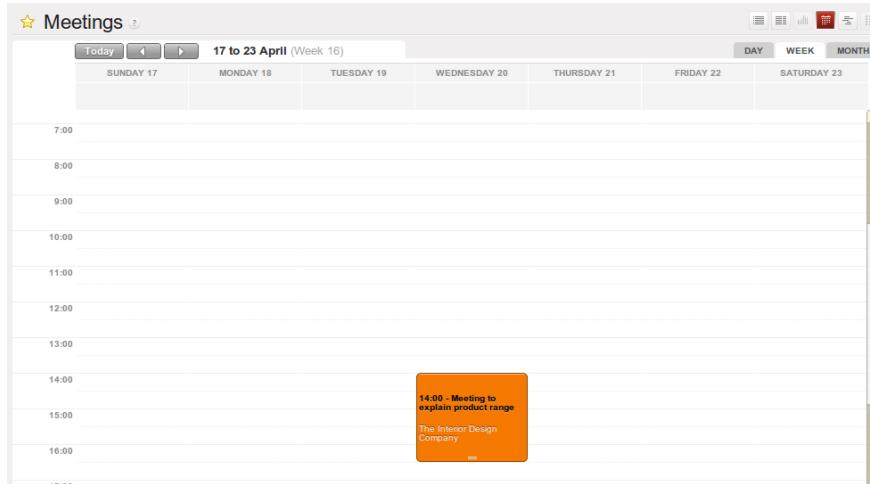


Figure 2.9: *Meeting Calendar*

5. Log an incoming phone call from the customer

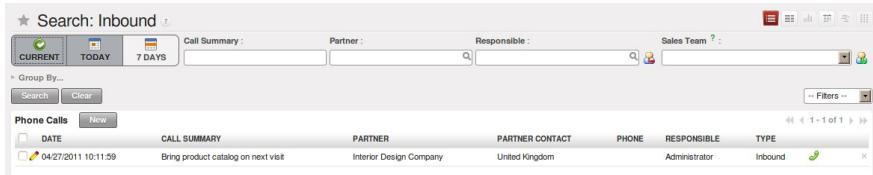


Figure 2.10: Incoming (Inbound) Call

A few days later, John Doe calls and Eric, the Product Manager, answers the phone. The customer asks Eric if Luc, the Sales Manager, can bring a product catalog when he comes to see him.

Eric enters a summary of the phone call as an inbound call, and links it to *The Interior Design Company*.

Phone Calls



Eric goes to *Sales* → *Sales* → *Phone Calls* and clicks *Inbound*, then *New* to start entering the call. The call can be entered in the line. In the *Call Summary*, he enters *Bring product catalog on next visit* and assigns the call to *The Interior Design Company*. He enters a summary of the phone call in the *Description* field so that Luc knows exactly what has been discussed.

Call Summary



Eric can also click the Form view button to open the call form, so that he can add a summary of the phone call in the *Description* field to make sure that Luc knows exactly what has been discussed.

6. Check the history of the customer

To prepare his meeting with *The Interior Design Company*, Luc checks the related customer form to get the history of all related events.

History



Luc goes to *Sales* → *Address Book* → *Customers* and types *Interior* in the Name field and clicks *Search*. He clicks the customer to open the form. On the *History* tab, Luc gets an overview of all the events, such as meetings and phone calls. So he notices that he has to bring a product catalog to the meeting.

7. Convert the opportunity into a sales quotation

Marketing Campaign Activities						
CAMPAIGN	SEGMENT	ACTIVITY	RESOURCE NAME	PARTNER	EXECUTION DATE	STATE
<< < 0 - 0 of 0 > >>						
Leads and Opportunities						
CREATION DATE	NAME	TYPE	STAGE	SALESMAN	STATE	
<< < 0 - 0 of 0 > >>						
Meetings						
RESPONSIBLE	SUBJECT	START DATE	END DATE			
<< < 0 - 0 of 0 > >>						
Phone Calls						
DATE	CALL SUMMARY	TYPE	RESPONSIBLE	STATE		
04/27/2011 10:11:59	Bring product catalog on next visit	Inbound	Administrator	Todo		
<< < 1 - 1 of 1 > >>						

Figure 2.11: Customer History

During the meeting, the customer *The Interior Design Company* finally asks to receive a quotation for an Office Desk and Chair. Luc generates the quotation directly from the business opportunity.

Product											
Save	Close										
Name	Codes	Characteristics									
Name : Office Desk New Orleans	Reference : 123.445.278	Can be Sold ? <input checked="" type="checkbox"/>									
	EAN13 :	Can be Purchased ? <input checked="" type="checkbox"/>									
<input type="button" value="Information"/> <input type="button" value="Procurement & Locations"/> <input type="button" value="Suppliers"/> <input type="button" value="Descriptions"/> <input type="button" value="Packaging"/> <input type="button" value="Accounting"/>											
Procurement <table border="1"> <tr> <td>Product Type ? : Stockable Product</td> <td>Base Prices</td> <td>Costing Method ? : Standard Price</td> </tr> <tr> <td>Procurement Method ? : Make to Order</td> <td></td> <td>Cost Price : 950</td> </tr> <tr> <td>Supply method ? : Buy</td> <td></td> <td>Sale Price ? : 1995</td> </tr> </table>			Product Type ? : Stockable Product	Base Prices	Costing Method ? : Standard Price	Procurement Method ? : Make to Order		Cost Price : 950	Supply method ? : Buy		Sale Price ? : 1995
Product Type ? : Stockable Product	Base Prices	Costing Method ? : Standard Price									
Procurement Method ? : Make to Order		Cost Price : 950									
Supply method ? : Buy		Sale Price ? : 1995									
Weights <table border="1"> <tr> <td>Volume ? : 0.000</td> <td>Category ? : All products</td> </tr> <tr> <td>Gross weight ? : 0.000</td> <td>Status ? :</td> </tr> <tr> <td>Net weight ? : 0.000</td> <td>Product Manager ? :</td> </tr> </table>			Volume ? : 0.000	Category ? : All products	Gross weight ? : 0.000	Status ? :	Net weight ? : 0.000	Product Manager ? :			
Volume ? : 0.000	Category ? : All products										
Gross weight ? : 0.000	Status ? :										
Net weight ? : 0.000	Product Manager ? :										
Stocks <table border="1"> <tr> <td>Real Stock ? : 0.000</td> <td>Update</td> <td>Track Manufacturing Lots ? : <input type="checkbox"/></td> </tr> <tr> <td>Virtual Stock ? : 0.000</td> <td></td> <td>Track Incoming Lots ? : <input type="checkbox"/></td> </tr> <tr> <td></td> <td></td> <td>Track Outgoing Lots ? : <input type="checkbox"/></td> </tr> </table>			Real Stock ? : 0.000	Update	Track Manufacturing Lots ? : <input type="checkbox"/>	Virtual Stock ? : 0.000		Track Incoming Lots ? : <input type="checkbox"/>			Track Outgoing Lots ? : <input type="checkbox"/>
Real Stock ? : 0.000	Update	Track Manufacturing Lots ? : <input type="checkbox"/>									
Virtual Stock ? : 0.000		Track Incoming Lots ? : <input type="checkbox"/>									
		Track Outgoing Lots ? : <input type="checkbox"/>									
Unit of Measure <table border="1"> <tr> <td>Default Unit Of Measure ? : PCE</td> <td></td> </tr> <tr> <td>Purchase Unit of Measure ? : PCE</td> <td></td> </tr> </table>			Default Unit Of Measure ? : PCE		Purchase Unit of Measure ? : PCE						
Default Unit Of Measure ? : PCE											
Purchase Unit of Measure ? : PCE											

Figure 2.12: Product



Quotation & Products

Luc opens the opportunity concerned from *Sales → Sales → Opportunities*. He clicks the *Convert to Quote* button, then *Create* to make a quotation that is automatically linked to the opportunity. Now he can enter the products he will be selling. Luc has to create a new product, because the desk ordered is a brand new product. From the sales order line, Luc presses the F1 button in the *Product* field to create a new product. He enters the data as specified in the screenshot. To print the quotation, he clicks *Quotation / Order* in the *Reports* section at the right side of the screen.

8. Check the pipeline of revenues for the next months

Luc, the Sales Manager, would also like to check the quality of his sales team, and he would like to know the delay to close the opportunity. He would like to see the average closing time for the House & Design campaign.



Average Closing Time

From the *Sales → Reporting → Opportunities Analysis*, Luc finds the average time taken to successfully respond to a request from a customer in the *Delay to Close* field. Instead of using the default grouping by salesman, Luc clicks the *Salesman* button in the Group by list to no longer group by salesman, and then he clicks the *Campaign* button to group by campaign.

9. Convert the quotation into a sales order

After some discussion about the prices, the customer decides to sign a contract. Luc confirms the quotation to turn it into a sales order.



Sales Orders

Luc opens the quotation concerned from *Sales → Sales Orders*. He clicks the *Quotation* button to see no confirmed sales orders. He opens the quotation by clicking the pencil in front of it, and changes the prices. Then he clicks the *Confirm Order* button to turn the quotation into a sales order. To print the sales order, he clicks *Quotation / Order* in the *Reports* section at the right side of the screen.

Below you find a graphical representation of the sales flow we explained before; the part from quotation to sales order. This view is available in OpenERP. You can open this *Process view* by clicking the question mark next to the *Sales Order* title.

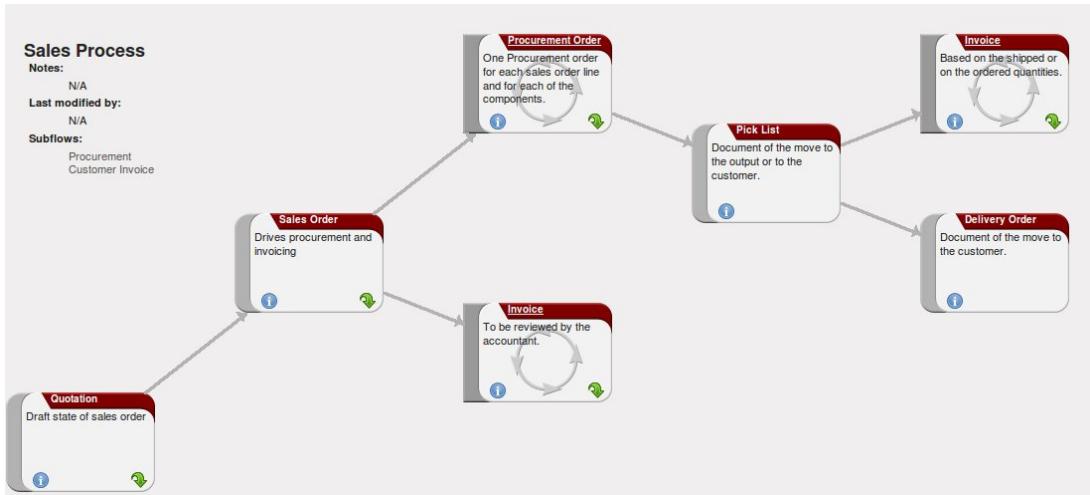


Figure 2.13: *From Quotation to Invoice*



Figure 2.14: *View Buttons*

Before going to the next chapter, just a quick word about the different View buttons in OpenERP. The screenshot below shows the kinds of buttons available. Each button represents a different way of looking at data.

From the opportunities screen, Thomas will click the first *List* view button to get an overview of several opportunities at a time. When Thomas wants more information about a specific opportunity, he will switch to *Form* view. Then Thomas decides he wants to see the opportunities in a graphical representation, so he clicks the *Graph* (3rd) button to display a graph with the opportunities expressed according to Category versus Expected Revenue. He could choose to display the opportunities in *Calendar* view. Thomas wants to see his meetings in a bar chart representation, and so he clicks the *Gantt* view button. To see a process representation of his marketing campaign, he clicks the *Diagram* view button.

Please note that this is just an explanation of the different view buttons.

Part III

RH

Key Features HR

This chapter describes OpenERP's main Human Resources and Employee Services features. Most of the solutions discussed after this chapter concern management by business or by project, and depend mostly on analytic accounting, with each business or project represented by an analytic account.

A company's effectiveness depends on its employees' good work. OpenERP's Human Resources modules enable you to manage important aspects of staff work efficiently, such as their skills, contracts, and working time.

For this chapter, you should start with a fresh database that includes demo data. To configure the Human Resource Application you should check *Human Resources* in the following configuration wizard.

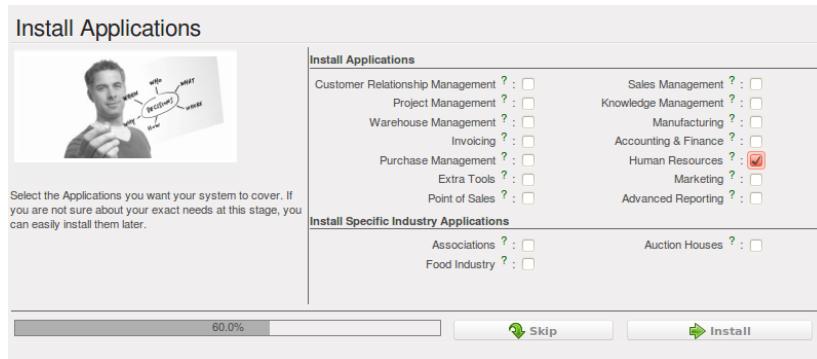


Figure 3.1: *Human Resources Application in the Configuration wizard*

3.1 Managing Human Resources

To establish a system that is integrated into the company's management, you need to start with a current list of collaborators.



Do not confuse employees and users

For OpenERP, “employee” represents all of the physical people who have a work contract with the company. This includes all types of contracts: contracts with both fixed and indeterminate time periods, and also independent and freelance service contracts.

A “user” is a physical person who is given access to the company’s systems. Most employees are users but some users are not employees: external partners can have access to parts of the system.

Here are some examples of functions which depend on the accuracy of the employee list:

- the cost of a service, which depends on the employee’s working contract,
- project planning, which depends on the work pattern of the project contributors,
- the client billing rate, which probably depends on the employee’s job function,
- the chain of command, or responsibilities, which is related to the hierarchical structure of the company.

3.1.1 Link employees and OpenERP users to facilitate the management of rights

To define a new employee in OpenERP, use the menu *Human Resources → Employees*.

Start by entering the employee’s name in *Name* and the company that this employee works for in *Company*. You can then create a new user of the OpenERP system linked to this employee by filling in a new *User* form through the *User* field.

Even if the employee is not a user, it is best if you create a system access for most of your staff just so that you can control their access rights from the outset (and you can do that through this field if you need to).



Employee and User link.

If the employee has a user account on the system, you always link his or her user account to the employee form.

Creating this link enables automatic completion to be done on the *Employee* field in the relevant forms, such as services and expense records.

Then enter the employee’s address.

This appears in the partner contact form in OpenERP. Since employees are people that have contracts with your company, it is logical that they have entries like any other partner in your database. So enter the name of the employee as a new partner Name and the address in the Partner Contact section of the

The screenshot shows the 'Employees' form in Odoo. At the top, it displays the name 'Quentin Paolino'. Below the header are buttons for 'Save', 'Save & Edit', and 'Cancel'. To the right, there are navigation icons and a page number '3 of 4'. The main area contains fields for basic information: Name (Quentin Paolino), User (Demo User), Company (OpenERP S.A.), Active (checked), Department (Management / Tech), Manager (Antoine Philippe), and a placeholder for an image. Below these are tabs for 'Personal Information', 'Categories', and 'Notes'. The 'Personal Information' tab is active and contains sections for 'Social IDs' (with fields for SSN, SIN, Identification No., and Passport No.) and 'Status' (Gender, Marital Status, Nationality, Date of Birth). It also includes 'Contact Information' (Home Address, Working Address, Job, Coach) and 'Position' (Work Phone, Work Mobile, Work E-mail, Office Location).

Figure 3.2: Form describing an employee

General tab. Then all of the functions that apply to a partner can also be applied to an employee. This is particularly useful for tracking debits and credits in the accounts – so you can track salary payments, for example.

To help employees encode and validate timesheets and attendances, you can install `hr_timesheet_sheet` by selecting *Timesheets* in the *Reconfigure* wizard. You can then set both an analytic journal and a linked product to this employee in the *Timesheets* tab. If you do it that way, then this information can be used to track services. For now, just complete the form with the following information:

- *Analytic Journal* : usually a Timesheet Journal,
- *Product* : a service product that describes how this employee would be charged out, for example as Service on Timesheet.

3.1.2 Define employees' billing prices and costs

To be able to use the timesheets at all, you must first define those employees who are system users. The employee definition forms contain the information necessary to use that sheet, such as the job title, and hourly costs.

Two fields will be of particular interest to you for managing timesheets: the *Analytic Journal* and the *Product*.

All the analytic entries about the costs of service times will be stored in the analytic journal. These enable you to isolate the cost of service from other company costs, such as the purchase of raw materials, expenses receipts and subcontracting. You can use different journals for each employee to separate costs by department or by function.

The employee is also associated with a product in your database in OpenERP. An employee is linked with a product, so they can be ‘bought’ (subcontracting) or ‘invoiced’ (project management). You have to create a product for each job type in your company.

The following information is important in the product form:

- *Name* : Secretary , Salesperson or Project Manager
- *Product Type* : Service
- *Unit of Measure* : Hour or Day
- *Cost Price*
- *Sale Price*
- *Costing Method* : either Standard Price or Average Price



Price Indexation

When the *Costing Method* is *Average Price* in the *Product* form, you can have a button *Update*, beside the *Cost Price* field, that opens up a wizard for changing the cost price.

In summary, each company employee corresponds, in most cases, to:

- a *Partner*
- an *Employee* form,
- a *System User*.

And each company job position corresponds to a *Product*.



Time Charge Rates

By default, the hourly cost of an employee is given by the standard cost of the product linked to that employee. But if you install the `hr_contract` module, it is possible to manage contracts differently. The hourly cost of the employee is then automatically calculated from their employment contract when they enter their timesheet data.

To do this, the software uses a factor defined in the contract type (for example, the gross monthly salary, calculated per day). Ideally, this factor should take into account the salary costs, taxes, insurances and other overheads associated with pay.

3.1.3 Define employee categories to assign different Holiday's rights to different employee groups

You must create and assign employee categories for employees in order to be able to assign and manage leave and allocation requests by category. You can define employee categories from *Human Resources* → *Configuration* → *Human Resources* → *Employees* → *Categories of Employee*. For a new category, define its name in *Category*. A category may also be assigned a *Parent Category*.

The screenshot shows a search interface titled "Search: Categories of Employee". At the top, there is a search bar labeled "Parent Category:" with a placeholder "Search" and a clear button. Below the search bar are "Search" and "Clear" buttons. To the right of the search bar is a "Filters" button. The main area displays a list of "Employees Categories" with a "New" button. The list includes the following categories:

- NAME
- Experience
- Ranking
- Ranking / CEO
- Ranking / CEO / CTO
- Ranking / CEO / CTO / Managers (Tech. Heads)
- Ranking / CEO / CTO / Managers (Tech. Heads) / Project Managers
- Ranking / CEO / CTO / Managers (Tech. Heads) / Project Managers / Employees
- Experience / Sr. Executives (5 years)
- Experience / Jr. Executives (6 months)
- Experience / Trainee

At the bottom of the list, there are navigation buttons for "1 - 10 of 10".

Figure 3.3: Example of categories defined for employees

To link an employee to a category, open the employee form through *Human Resources* → *Human Resources* → *Employees*. In the *Categories* tab, you can assign more than one category to an employee by clicking *Add* and selecting a category.

Now, when you create a new leave or allocation request from the menuitems under *Human Resources* → *Holidays*, if your *Leave Category* or *Allocation Category* is By Employee Category, then you must choose a pre-defined *Category*. The request will then be applicable to all those employees who belong to the category selected. For example, you can create an allocation request for employees belonging to the *Trainee* category, entitling them to fewer leaves than the rest of the employees.

The screenshot shows the 'Employees' form in Odoo. At the top, there are buttons for 'Save', 'Save & Edit', and 'Cancel'. Below that, the employee's name is listed as 'Quentin Paolino'. There are dropdowns for 'User' (set to 'Demo User'), 'Company' (set to 'OpenERP S.A.'), and 'Active' (checked). The 'Department' is 'Management / Tech' and the 'Manager' is 'Antoine Philippe'. A placeholder for an 'Image' is shown. Below the main fields, there are tabs for 'Personal Information', 'Categories', 'Evaluation', and 'Notes'. The 'Categories' tab is active, showing a list titled 'Employees Categories' with an 'Add' button. It contains two items: 'Ranking / CEO / CTO / Managers (Tech. Heads)' and 'Experience / Jr. Executives (6 months)'. Navigation arrows are visible at the bottom of the list.

Figure 3.4: Assign categories to an employee in the Employee form

3.1.4 Define contract types and wage types with start and end dates for contracts as well as trial periods

If you install the `hr_contract` module you can link contract details to the employee record. The configuration wizard to install this module is shown below.

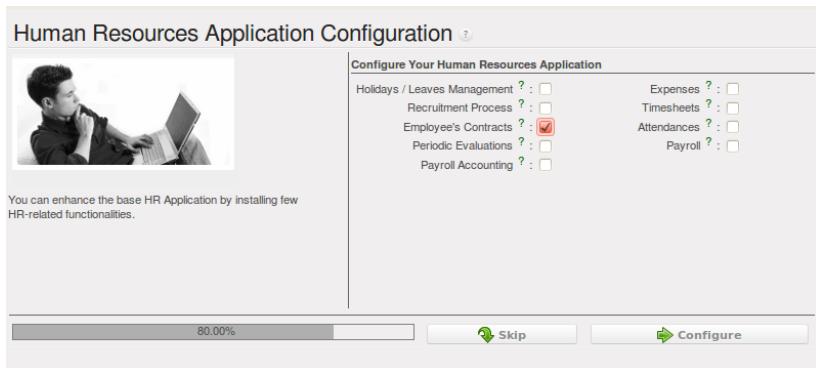


Figure 3.5: Configuration wizard to install `hr_contract`

Define new contract types at *Human Resources* → *Configuration* → *Human Resources* → *Contract* → *Contract Types*.

You may similarly define wage types at *Human Resources* → *Configuration* → *Human Resources* → *Contract* → *Wage Type*. Enter the following details in the form:



Figure 3.6: *Contract Types list*

- *Wage Type Name* : A name for the wage type.
- *Wage Period* : Select a pre-defined wage period. Wage periods are defined at *Human Resources* → *Configuration* → *Human Resources* → *Contract* → *Wage period*.
- *Type* : Either Gross or Net.
- *Factor for hour cost* : Used by the timesheet system to compute the price of an hour of work based on the contract of an employee.

Figure 3.7: *Wage Type form*

Using *Human Resources* → *Human Resources* → *Contracts* you can create and edit contracts.

You can enter information about the employment contract for the employee, such as:

- *Contract Reference*
- *Job Title*
- *Working Schedule*
- *Start Date*
- *End Date*
- *Wage Type* : Select one from pre-defined wage types.
- *Contract Type* : Select one from pre-defined contract types.

The screenshot shows the 'Contracts' module in OpenERP. At the top, there are buttons for 'Save', 'Save & Edit', and 'Cancel'. Below that, the 'Contract Reference' is set to 'First Contract', the 'Employee' is 'Quentin Paolino', the 'Job Title' is 'Project Managers', the 'Wage' is '10,000.00', the 'Wage Type' is 'Monthly Gross Wage', and the 'Contract Type' is 'Employee'. The main area is titled 'Information' and contains sections for 'Duration' and 'Advantages'. Under Duration, the 'Start Date' is '03/01/2011' and the 'End Date' is '02/29/2012'. Under Advantages, the 'Net Advantages Value' is '0.00' and the 'Gross Advantages Value' is '0.00'. There is also a 'Working Schedule' field set to '38 Hours/Week'. A 'Trial Period' section follows, with 'Trial Start Date' at '03/01/2011' and 'Trial End Date' at '05/31/2011'. A large 'Notes' section is present at the bottom.

Figure 3.8: *Definition of a working contract for a given employee*

- *Trial Start Date* : Start date for the contract trial period, if any.
- *Trial End Date* : End date for the contract trial period, if any.

3.1.5 Manage attendance (Sign in / Sign out)

In some companies, staff have to sign in when they arrive at work and sign out again at the end of the day. If each employee has been linked to a system user, then they can sign into OpenERP by using the menu *Human Resources* → *Attendances* → *Sign in / Sign out*.

If an employee has forgotten to sign out on leaving, the system proposes that they sign out manually and type in the time that they left when they come in again the next day. This gives you a simple way of managing forgotten sign-outs.

Find employee attendance details from their forms in *Human Resources* → *Employees*.

To get the detail of attendances from an employee's form in OpenERP, you can use the available reports:

- *Attendances By Month*
- *Attendances By Week*
- *Attendance Error Report*

The last report highlights errors in attendance data entry. It shows you whether an employee has entered the time of entry or exit manually and the differences between the actual and expected sign out time and the sign in time.

The second report shows the attendance data for the selected month.

3.2 Talent Acquisition

Using OpenERP, you can efficiently manage the process of hiring new people for your organization. It is a well managed recruitment process from initial contact to hiring the applicant. You need to install `hr_recruitment` module to efficiently manage the recruitment process. The configuration wizard to install this module is shown below:



Figure 3.9: Configuration wizard to install `hr_recruitment` module

The *Applicants* form can be seen from the menu *Human Resources* → *Recruitment* → *Applicants*.

You can manage the following information using the Applicants form:

- *Applicant's Name*
- *Applied Job*
- *Department*
- *Stage*: can be Initial Job Demand, Salary Negotiation, ...
- *Responsible*: Responsible person who conducts the interview
- *Contact information*
- *Contract Data*: including Availability, Expected Salary, Proposed Salary
- *Qualification* of the applicant
- *State*: reflects the actual status of the recruitment process like New, In Progress, Pending, Refused or Hired

Figure 3.10: Applicant recruitment form

Initially, the applicant state is **New**, after that it can be converted to **In Progress**. If the applicant is at one of the different stages like it may be in *Waiting for approval by human resource department* or *Waiting for offer acceptance by applicant*, in these cases, the applicant state should be **Pending**. When the status is **Hired**, you can find that applicant's detail from the list of employees.

The information about the *Job Position* can be maintained by the menu *Human Resources → Recruitment → Job Positions*.

DEPARTMENT	JOB NAME	COMPANY	EXPECTED EMPLOYEES	NO OF EMPLOYEE	EXPECTED IN RECRUITMENT STATE
Management		OpenERP S.A.	2	0.00	In Position
Management / Technical department		OpenERP S.A.	1	0.00	In Position
Management / Technical department / IT		OpenERP S.A.	6	0.00	In Position
Management / Technical department / IT	Project Managers	OpenERP S.A.	1	0.00	In Position
Management / Technical department / IT	Senior Application Analyst	OpenERP S.A.	1	0.00	In Position
Management / Technical department / IT	Junior Application Analyst	OpenERP S.A.	1	0.00	In Position
Management / Technical department / IT	Senior Developers	OpenERP S.A.	1	0.00	In Position
Management / Technical department / IT	Junior Developers	OpenERP S.A.	1	0.00	In Position
Management / Technical department / IT	Trainee	OpenERP S.A.	1	1.00	In Position

Figure 3.11: Job Positions in the organization

The key features of OpenERP for the process of hiring new people using `hr_recruitment` module are:

- It manages job positions and the recruitment process.
- It is integrated with the `survey` module to allow you to define interviews for different jobs.
- This module is integrated with the mail gateway to automatically track emails sent to `jobs@yourcompany.com`.
- It is also integrated with the document management system to store and search CVs in your CV base.

You can analyse data of recruitment process through the menu *Human Resources → Reporting → Recruitment Analysis*.

3.2.1 Create applicants automatically based on incoming mail and keep track of attachments such as resumes and cover letters

You have seen how to create new applicants from the *Applicants* form. You can also configure your email server in OpenERP to create new applicants based on incoming mails. For example, if you have an e-mail ID `jobs@yourcompany.com`, you can configure it such that all emails received at this ID automatically generate new job applicants.

For this, you have to install the `fetchmail` module by using the *Reconfigure* wizard and configuring *Fetch Emails* for installation in the *CRM Application Configuration* section.

Navigate to *Sales → Configuration → Emails → Email Servers* and click *New*. Supply the following information in the *Email Servers* form:

- *Name* : A name for the server configuration.
- *Server Type* : Either POP Server or IMAP Server.
- *Add Attachment* : Set to True, to be able to retrieve attachments like CVs, cover letters, etc.
- *Server* : Server name.
- *Port* : Server port.
- *User Name* : The username on this e-mail server.
- *Password* : The password for access to this e-mail account.
- *Model* : The object model for which you wish to generate a record. Select *Applicant* (`hr.applicant`) in this case.

After configuring your server, click the *Confirm* button to enable this configuration and start receiving e-mails.

Whenever you receive a new e-mail at the configured e-mail address, a new applicant record is created having the same subject name as the e-mail subject. The applicants e-mail details are stored too, for

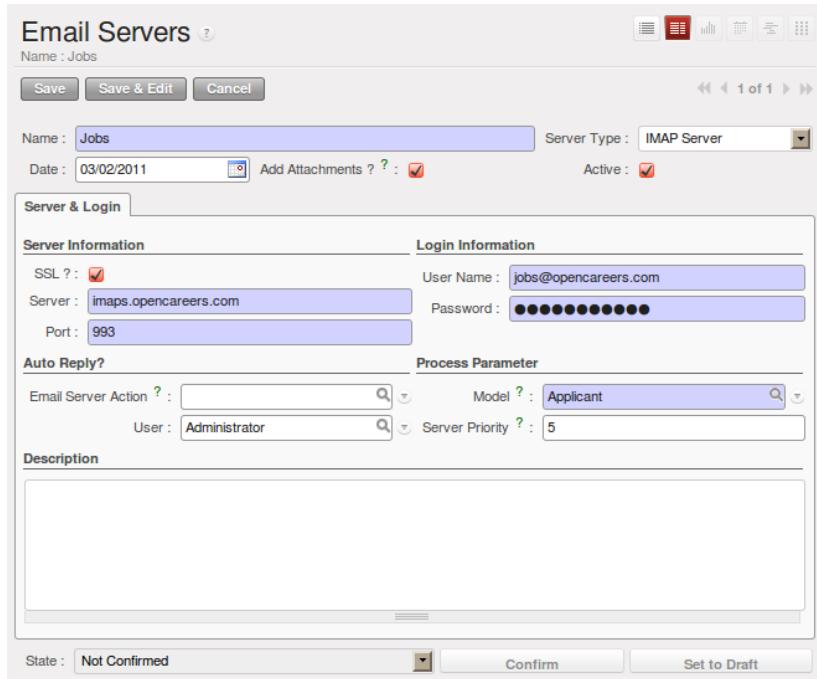


Figure 3.12: Configuring an e-mail server

future correspondence. You can add more details to this job application. You can view these newly created applicants from *Human Resources* → *Recruitment* → *Applicants* and by clicking the *Clear* button to clear all filters. In the figure *Job applicants automatically created from e-mails* (page 34), the top three applicants have been created automatically from received e-mails.

★ Search: Applicants									
	CURRENT	NEW	IN PROGRESS	PENDING	NEXT ACTIONS	Applicant's Name : Email :	Applied Job :	Responsible :	Department :
> Group By...									
<input type="checkbox"/>	CREATION DATE	SUBJECT	APPLICANT'S NAME	EMAIL	PHONE	APPLIED JOB	STAGE	APPRECIATION	RESPONSIBLE
<input type="checkbox"/>	03/02/2011 18:30:50	Job Application	A. Charles S.	<aas.charles@gmail.com>		Initial Jobs Demand	Good	New	
<input type="checkbox"/>	03/02/2011 18:26:47	Application for the post of Trainee Mgr	Cedric R.	<cedric_rdg_30@gmail.com>		Initial Jobs Demand	Good	New	
<input type="checkbox"/>	03/02/2011 18:21:49	Job Appl. for the post of HR Mgr	Gloria	<gloria_8140@yahoo.com>		Initial Jobs Demand	Good	New	
<input type="checkbox"/>	03/02/2011 16:35:36	Trainee - MCA	Tina Auguste		6630125	Contract Proposed		Good	Administrator
<input type="checkbox"/>	03/02/2011 16:35:36	Finance Job	David Armstrong		33969745	Contract Signed		On Average	Administrator
<input type="checkbox"/>	03/02/2011 16:35:36	Marketing Job	John Bruno		33969745	Contract Signed		On Average	Demo User
<input type="checkbox"/>	03/02/2011 16:35:36	More than 5 yrs Experience in PHP	Sandra Elvis			Refused by Employee		Good	Administrator
<input type="checkbox"/>	03/02/2011 16:35:36	Fresher	Jose		999666735	Second Interview		Excellent	Administrator
<input type="checkbox"/>	03/02/2011 16:35:36	Trainee - MCA	Marie Justine		6633225	Contract Proposed		Good	Administrator
<input type="checkbox"/>	03/02/2011 16:35:36	Salesman	Enrique Jones		1236547890	Initial Jobs Demand		Very Good	Administrator

Figure 3.13: Job applicants automatically created from e-mails

Because you have configured your server to add attachments, if an incoming applicant e-mail contains attachments, it will be linked to the corresponding applicant record. You can find it in the *Attachments* section at the right of the applicant form. You can click on the attachment name to open it.

Figure 3.14: Applicant form with its corresponding attachments

3.2.2 Define stages to track the progress in the recruitment process

Rarely will a recruitment process end after just a single meeting or a phone call. It is in fact a string of stages through which a recruitment progresses in order to bear a favourable outcome. You can define the stages which a recruitment process would undergo. Use the menu *Human Resources* → *Configuration* → *Recruitment* → *Stages* to define various stages.

Figure 3.15: Defining recruitment stages

You must give the stage a *Name*. Use the *Sequence* field to give a sequence order when displaying a list of stages. You may also associate the stage with a *Department*. The stages that you have defined then become available in the *Applicants* form's *Stage* field. Using this, you can qualify an ongoing recruitment process from one stage to another.

3.2.3 Define next action and next action dates

The *Next Action Date* and *Next Action* fields on the *Applicants* form let you define an action you would like to initiate on a given date. It serves as a reminder to the recruitment officer regarding what step he must take next and on which date.

3.2.4 Track the history of the e-mail communication with the applicant

Using the *Communication & History* tab in the *Applicants* form, you can add notes for internal reference or send e-mails to the applicant. You can also view the history of communication and notes for a recruitment application in the *History* section. If you specify e-mail addresses in the *Global CC* field, these e-mail addresses will be added to the *CC* field of all inbound and outbound e-mails for this record before being sent. You can separate multiple e-mail addresses with a comma.

To create an internal note, click the *Add Internal Note* button. Add a note description in the popup that appears. You also have a choice to change the application state at this stage. Click *Add* to save the note and see it listed in the *History* section.

To send an e-mail to the applicant, click the *Send New Email* button. In the popup, you must enter the following:

- *From* : E-mail address used to send an e-mail.
- *Reply To* : E-mail address for receiving a reply.
- *To* : The applicants e-mail address
- *Subject* : Subject of the e-mail. By default, it takes the subject of the recruitment application.
- *Message* : The message to send in the e-mail.

Here too, you have a choice to change the application state. You may also add attachments through the *Attachments* tab in the popup. Click *Send* to send the e-mail. You can see a listing of the correspondence as shown in the figure below:

3.2.5 Plan phone calls or appointments

One of the advantages of using the `hr_recruitment` module is that you can plan and organise phone calls to and appointments with prospective employees. This is made possible due to its integration with `crm` module's Phone Calls and Meetings features.

You can schedule a phone call from the *Applicants* form by clicking the *Phone Call* button. This brings up a popup as shown below:

You can enter the following details in the popup:

- *Assign To* : The user who is responsible for making the call.
- *Planned Date* : The scheduled date and time to make the call.

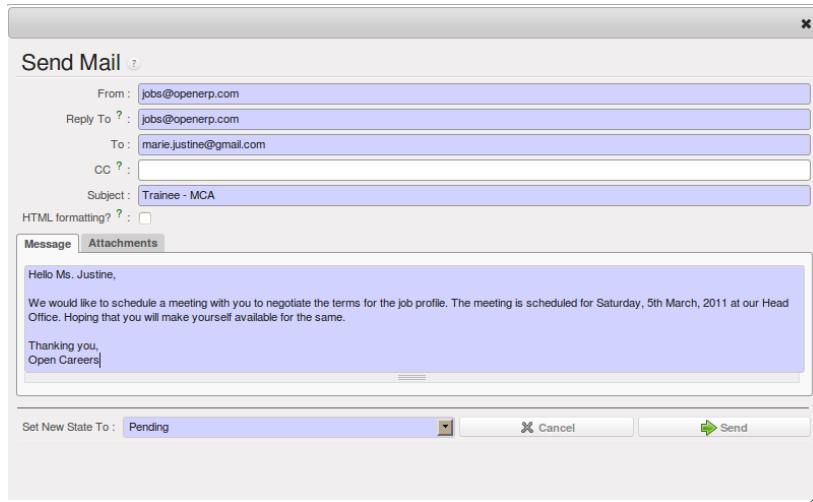


Figure 3.16: Send an e-mail to the applicant

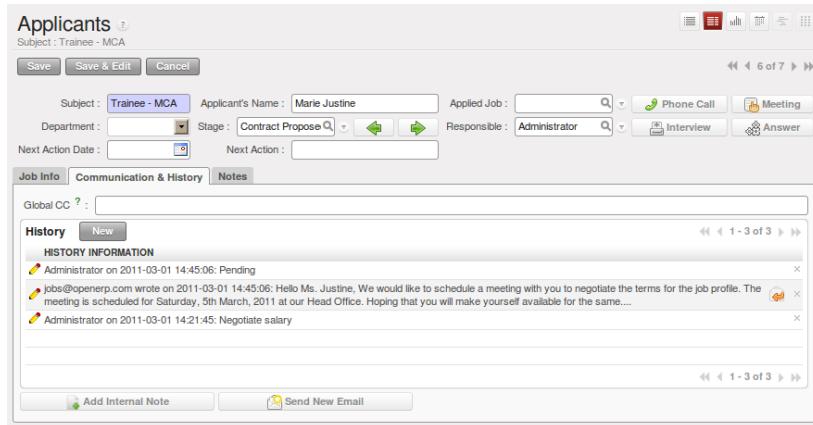


Figure 3.17: History of communication for the recruitment application

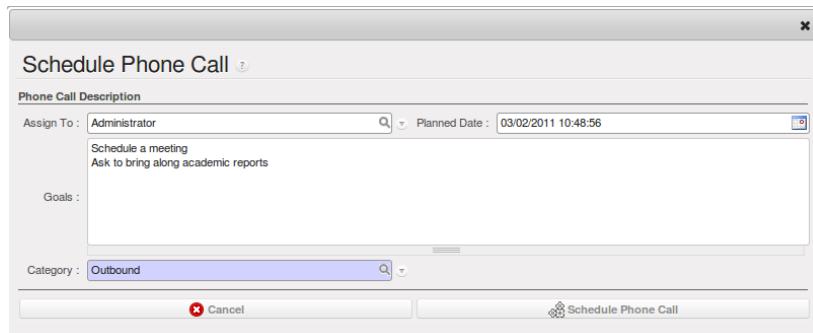


Figure 3.18: Schedule an outbound phone call to an applicant

- *Goals* : The agenda of the phone call.
- *Category* : Whether the call is Outbound (default) or Inbound.

You can then click the *Schedule Phone Call* button to create a plan for making the call. If the *Category* of your phone call is Outbound, the *Outbound* form opens where you may add additional details. Once you have made the phone call, you can enter the *Duration* as well and click the *Held* button. You can track and evolve your plans of phone calls to an applicant from *Sales* → *Phone Calls* → *Outbound*.

Figure 3.19: Details of an outbound phone call to an applicant

Just like you schedule phone calls, you can also schedule meetings with an applicant. To do this, click the *Meeting* button on the *Applicants* form. A calendar of meetings opens in the *Meetings* form. Here, you click an empty area on a date for which you wish to schedule the meeting. A popup appears as shown below:

You can manage the following details from this form:

- *Summary* : Is the recruitment application subject by default, although you can change it.
- *Start Date* : The scheduled start date and time.
- *End Date* : The scheduled end date and time.
- *Duration* : The duration of the meeting in hours.
- *Location* : Location of the meeting.
- *Reminder* : If you want to be reminded about the meeting, you can select an alarm time before the event occurs.
- *Description* : You may specify the agenda of the meeting here.

Figure 3.20: *Schedule a meeting with an applicant*

On the *Invitation Detail* tab, you also have the choice to invite people for the meeting. Click *Save* once you have entered the necessary details. You can then see the meeting appear in the calendar as shown below:

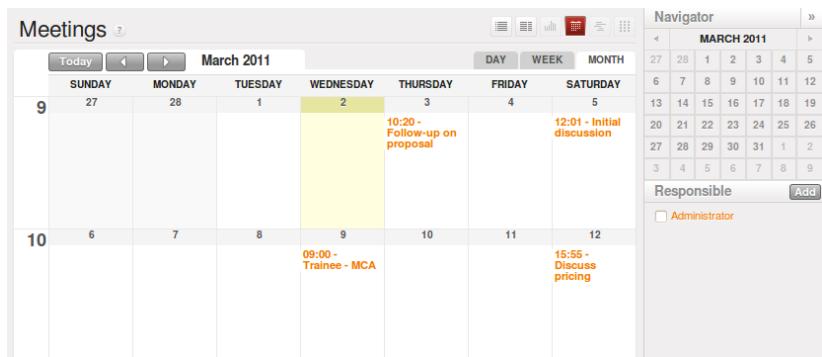


Figure 3.21: *The scheduled meeting “Trainee - MCA” with the applicant as seen in the calendar*

You can track and edit your meetings with applicants from the menu *Sales* → *Meetings* → *Meetings*. By default, you will see the month-wise calendar view of meetings.

3.2.6 Fill questionnaires for each applicant (for instance preliminary questionnaires)

You can use questionnaires as a tool to interview a job applicant. To be able to use questionnaires for a job applicant you must first define one through *Tools* → *Surveys* → *Define Surveys* → *Survey*. Click *New* to open a new survey form. You may enter the *Survey Title* and the *Responsible* user for the survey.

The screenshot shows the 'Surveys' application window. At the top, there are buttons for 'Save', 'Save & Edit', and 'Cancel'. Below that, the 'Survey Title' is set to 'Job Survey' and the 'Responsible' user is 'Administrator'. A toolbar with icons for 'Test Survey' and 'Edit Survey' is visible. The main area has tabs for 'Survey', 'Other', 'Invited User', and 'History', with 'Survey' selected. Under 'Survey Page', there are buttons for 'New' and 'Delete', and a section for defining survey pages. The current page is 'Default Section' (Page Nr: 1 of 3). Below this, the 'Survey Question' tab is active, showing three questions with their sequence numbers (1, 2, 3) and corresponding answers. The questions are: 'From which university will you graduate?', 'What is your gender?', and 'What age group do you belong to?'. The answers are '(0)', '(2)', and '(8)' respectively. At the bottom, the status is set to 'Draft' and there is an 'Open' button.

Figure 3.22: The survey form

A survey may have multiple pages. Each page may contain multiple questions and each question may have multiple answers. Different users may give different answers to the questions. You can define these in the *Survey* tab of the form. When you have entered the necessary details in the form, click *Save*. Since you will use this survey in a job interview, click the *Open* button to change the survey's state from *Draft* to *Open*.

Then, go to *Human Resources* → *Recruitment* → *Job Positions* and select the job position that the applicant has applied for, or create a new job position. In the *Survey* field of the *Job Positions* form, enter the name of the survey you have just created, thus linking a questionnaire with this job profile and making it available for use during the interview.

You can now open the form of the applicant whose interview you wish to initiate. If an *Applied Job* is specified to which a survey is linked, the *Answer* button becomes accessible. Click it to initiate the survey, and fill in the applicant's response as you proceed. After the questionnaire has been completed,

you can click the *Interview* button on the *Applicants* form to view the applicant's response in a PDF file.

The screenshot shows a PDF document titled "Survey Answer". At the top, there is a header bar with "Survey Answer" and a menu bar with "File Edit View Go Help". Below the header, there are navigation buttons for "Previous" and "Next", a page number "1 (1 of 2)", and a "Fit Page Width" button. The main content area has a title "Job Survey" and a status "Status :- Finished". It includes sections for "From which university will you graduate?", "What is your gender?", "What age group do you belong to?", and "Page :- Education & Activities". The "Education" section lists "Schooling from Mt. Carmel, 2005", "Graduation from XICA, 2008", and "Pursuing MCA from LDCE. Final semester ends June, 2011". The "Knowledge" section lists "Python, C, C++" and "SQL". The "Experience" section lists "Worked on the following projects: University Management System". The PDF is dated 03/02/2011 at 15:57:56 and was answered by admin on 02-03-2011 at 03:50:12 PM.

Figure 3.23: The applicant's response in a PDF file

3.3 Holiday Management

You can manage leaves taken by employees using the `hr_holidays` module. The configuration wizard to install this module is shown below:

Using the menu *Human Resources* → *Holidays* → *Leave Requests* an employee can request a leave.

Leaves requests can be recorded by employees and validated by their managers. Once a leave request is validated, it appears automatically in the agenda of the employee. You can define several allocation types (paid holidays, sickness, etc.) and manage allocations per type.

OpenERP can provide the following features for efficient holiday management process:

- It helps you to manage leaves and leave requests.

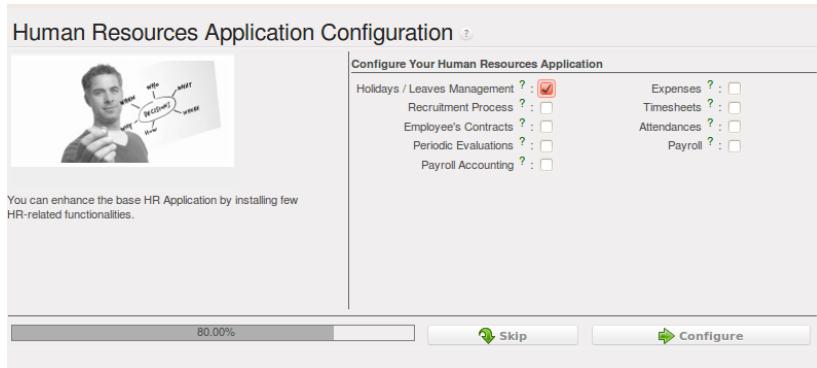


Figure 3.24: Configuration wizard to install *hr_holidays* module

- Synchronisation with an internal agenda (use of `crm`) is possible: in order to automatically create a case when a holiday request is accepted, you have to link the holidays status to a case section.
- You can set up colour preferences according to your leave type, for example, *Sick Leave* should be red in reports.
- An employee can request for more days off, by making a new Allocation Request through *Human Resources* → *Holidays* → *Allocation Requests*.

The statistical report for leaves can be seen using the *Human Resources* → *Reporting* → *Holidays* → *Leaves Analysis* menu.

3.3.1 Define different leave types

You can define various leave types which can be availed of by an employee during a request for leave. To define a new leave type, navigate to *Human Resources* → *Configuration* → *Holidays* → *Leave Type* and click *New*.

Details	Validation	Misc
Leave Type : Casual Leave Color in Report ? : Black Meeting ? : <input type="button" value="dropdown"/>	Apply Double Validation ? : <input type="checkbox"/> Allow to Override Limit ? : <input type="checkbox"/>	Active ? : <input checked="" type="checkbox"/>

Figure 3.25: Leave Type form

You can configure the following information:

- *Leave Type* : A name for the leave type.
- *Colour in Report* : A colour that will be used in the leaves summary report.
- *Meeting* : If you select a meeting, once a leave is validated, an event will be created in the calendar.
- *Apply Double Validation* : If True, then the request will require a second validator.
- *Allow to Override Limit* : If True, the employee will be allowed to take more leaves than the maximum limit.

After entering the leave type information, click *Save*.

3.3.2 Manage Holiday requests and approvals

An employee can request for leave from *Human Resources* → *Holidays* → *Leave Requests*. In a new *Leave Requests* form, you may enter the following:

- *Description* : Reason for leave.
- *Leave Category* : Either By Employee or By Employee Category.
- *Employee* : If leave category is By Employee, you must select an employee who places this request.
- *Category* : If leave category is By Employee Category, you must select an employee category which places this request.
- *Leave Type*: Select a pre-defined type of leave.
- *Start Date* : Leave start date.
- *End Date* : Leave end date.
- *Number of Days* : It is calculated based on the *Start Date* and the *End Date*.

The employee can click *Confirm* to make the leave request available to his manager for approval. The employee's manager can find leave requests awaiting approval by navigating to *Human Resources* → *Holidays* → *Leave Requests* and clicking *Clear* and *To Approve* filter button. The manager can select a pending request to open its form view and click *Refuse* to reject the request or *Approve* to accept the request. If the selected leave type has *Apply Double Validation* set to True, then another action by a second manager will be required to give the request its final state, from Waiting Second Approval to either Approved or Refused.

The screenshot shows the 'Leave Requests' form in OpenERP. At the top, there are buttons for 'Save', 'Save & Edit', and 'Cancel'. The 'Leave Category' is set to 'By Employee'. The 'Employee' is listed as 'Fabien Pinckaers'. The 'General' tab is selected, showing fields for 'Leave Type' (set to 'Casual Leave'), 'Department', 'Start Date' (03/01/2011), 'End Date' (03/03/2011), 'Number of Days' (3.00), and 'Approval' (First Approval and Second Approval both empty). Below the general tab is a 'Reasons' section with a large text area. At the bottom, the 'State' is set to 'Draft' with a 'Confirm' button.

Figure 3.26: *Leave Requests form*

3.3.3 Track previous Holiday requests

Previous holidays can be tracked in a number of ways in OpenERP. You can get a report of leave requests by all users from *Human Resources* → *Holidays* → *Leave Requests*. Click *Clear* and then *Validated* to see a list of all approved leave requests. To see refused requests, click *Clear* and see the records marked with the colour red.

To see previous allocation requests, navigate to *Human Resources* → *Holidays* → *Allocation Requests* and follow the same procedure as above.

Through *Human Resources* → *Holidays* → *Leaves Summary*, you can track previous leaves as well as allocation requests in the same manner, but only for the currently logged in user. By default, you can see the requests grouped by leave type.

Human Resources → *Reporting* → *Holidays* → *Leaves Analysis* will give you the statistical report of leaves and allocations grouped by employee and leave type. To see all requests without grouping, click *Clear*.

All the above statistical reports are enhanced by various filters and groupings to assist you in your search for required information. You can filter requests by their *State* (*Validated*, *To Confirm*, *To Approve*), *Employee*, *Department* and *Leave Type*. You can also view requests placed in *This Month*. You can group by *Employee*, *Manager*, *Department*, *Type* and *State*.

To get an overview of leaves by department, go to *Human Resource* → *Reporting* → *Holidays* → *Leaves by Department*. You may select a *From* date, a *Leave Type* (Validated, Confirmed or Both Validated and Confirmed) and select atleast one department. Click *Print* to generate a PDF report based on your specifications.

★ Search: Leaves Analysis

Employee : Department : Leave Type :

VALIDATED TO CONFIRM TO APPROVE THIS MONTH Employee ? : Department : Leave Type :

Extended Filters... Group By...

EMPLOYEE MANAGER DEPARTMENT TYPE STATE

Search Clear -- Filters --

Leaves Summary New

EMPLOYEE	LEAVE TYPE	REQUEST TYPE	DESCRIPTION	NUMBER OF DAYS	START DATE	END DATE	STATE
Fabien Pinckaers	Casual Leave			11.00			
Fabien Pinckaers	Casual Leave	Leave Request	Trip with Family	-3.00	03/01/2011 00:00:00	03/03/2011 00:00:00	Draft
Fabien Pinckaers	Casual Leave	Leave Request	Field Trip	-2.00	03/07/2011 12:51:40	03/08/2011 12:51:49	Approved
Fabien Pinckaers	Casual Leave	Leave Request	Social Event	-1.00	03/30/2011 00:00:00	03/30/2011 00:00:01	Refused
Fabien Pinckaers	Casual Leave	Allocation Request	Casual Leave for Fabien Pinckaers	20.00			Draft
Fabien Pinckaers	Sick Leave			-3.00			
Fabien Pinckaers	Sick Leave	Leave Request	Doctor Appointment	-3.00	03/20/2011 00:00:00	03/22/2011 00:00:00	Approved
Quentin Paolini	Casual Leave			8.00			
Quentin Paolini	Casual Leave	Leave Request	Field Trip	-2.00	03/07/2011 12:51:40	03/08/2011 12:51:49	Approved
Quentin Paolini	Casual Leave	Allocation Request	Allocation for CTOs	10.00			Approved
				19.00			

Figure 3.27: Leaves Analysis statistical report

Summary Of Leaves

File Edit View Go Help

Previous Next | 1 (1 of 1) Fit Page Width

03/04/2011 14:27 OpenERP S.A. Page 1 of 1

Off-Days' Summary
Analyze from 03/01/2011 to 04/29/2011 of the Confirmed and Validated holidays.

Month	March	April
Departments and Employees	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Technical department		
Quentin Paolini		2

Color Holiday Type

Black	Casual Leave
Red	Sick Leave

Figure 3.28: Leaves by Department PDF report

3.3.4 Allow employees to enter their own allocation requests

To be able to request leaves at all, an employee must be allocated some leaves which he can avail of. Usually the management makes an allocation of leaves for its employees. But, for instance, when an employee has been working on an exceptional basis on weekends, he might be entitled to extra leaves. In such a case, the employee himself can be allowed to place a request for allocation, which can then be approved or rejected by his manager. If approved, the employee can request leaves based on the type and limit of this allocation too.

Leave allocations can be requested from *Human Resources → Holidays → Allocation Requests*. In its form view you can fill the following details:

- *Description* : A name for the request.
- *Allocation Category* : Either By Employee or By Employee Category.
- *Employee* : If allocation category is By Employee, you must select an employee for whom this allocation is made.
- *Category* : If allocation category is By Employee Category, you must select an employee category for whom this allocation is made.
- *Leave Type* : Select a pre-defined leave type.
- *Number of Days* : The number of days requested for allocation.
- *Reasons* : Specify the reason of request.

The remaining fields are read-only and will acquire details once the request has been accepted or rejected. The employee can click *Confirm* to send the allocation request to his manager. The state of the request will now be *Waiting Approval*.

The manager will then find this request in his list of allocation requests. He can then either click *Refuse* to reject the request or click *Approve* to accept the request.

The screenshot shows the 'Allocation Requests' form in OpenERP. At the top, it displays the title 'Allocation Requests' and a description 'Casual Leave for Fabien Pinckaers'. Below this are buttons for 'Save', 'Save & Edit', and 'Cancel'. A toolbar with various icons is located at the top right. The main area has tabs for 'General' and 'Reasons'. Under 'General', there are fields for 'Leave Type' (set to 'Casual Leave'), 'Department' (empty), 'Number of Days' (set to '20.00'), 'First Approval' (empty), and 'Second Approval' (empty). Below these is a large text area for 'Reasons'. At the bottom, a dropdown menu shows 'State' set to 'Draft' and a 'Confirm' button.

Figure 3.29: Allocation Requests form

3.4 Inspire your People through Assessments

A motivated workforce of people can give the best outcome for an organization. OpenERP can maintain this motivational process by periodical evaluation of employees' performance.

The regular assessment of human resources can benefit your people as well your organization. For efficient periodical evaluation of employees' performance, you need to install the `hr_evaluation` module. The configuration wizard to install this module is shown below:



Figure 3.30: Configuration wizard to install `hr_evaluation` module

To create and manage new evaluations, you can use the menu `Human Resources → Evaluations → Evaluations`.

Each employee can be assigned an evaluation plan. These plans define the frequency and the way you

The screenshot shows the 'Evaluations' screen in OpenERP. At the top, there are buttons for 'Save', 'Save & Edit', and 'Cancel'. To the right, there are navigation icons and a message '1 of 1'. Below this, the 'Evaluation Data' section includes fields for 'Employee' (Quentin Paolino), 'Plan' (Manager's Evaluation), 'Appreciation' (0.00%), 'Evaluation Deadline' (04/09/2011), 'Progress' (0.00%), and 'Ending Date'. There are tabs for 'Appraisal', 'Internal Notes', and 'Public Notes', with 'Appraisal' selected. The main area displays 'Interview Evaluation' records:

Deadline Date	Survey	Interviewer	Employee to Interview	State
04/09/2011	Employee Evaluation	Administrator	Quentin Paolino	Waiting Answer
04/09/2011	Employee Evaluation	Demo User	Quentin Paolino	Waiting Answer
04/09/2011	Job Survey	Administrator	Quentin Paolino	Waiting Answer

At the bottom, there is a 'State' dropdown set to 'Plan In Progress', and buttons for 'Cancel' and 'Validate Evaluation'.

Figure 3.31: *Employee Evaluation form*

manage your periodic personal evaluation. You will be able to define steps and attach interview forms to each step. OpenERP manages all kinds of evaluations: bottom-up, top-down, self evaluation and final evaluation by the manager.

The main features of the evaluation process covered by OpenERP are as follows:

- Ability to create employees evaluation.
- An evaluation can be created by an employee for subordinates, juniors as well as his manager.
- The evaluation is done under a plan in which various surveys can be created. Each survey can be answered by a particular level of employee hierarchy. The final review and evaluation is done by the manager.
- Every evaluation filled by employees can be viewed through a PDF form.
- Interview Requests are generated automatically by OpenERP according to employees evaluation plans. Each user receives automatic emails and requests to perform evaluation of their colleagues periodically.

You can analyse evaluation data through the menu *Human Resources → Reporting → Evaluations Analysis*.

3.4.1 Define different evaluation categories

You can create new evaluation plans from *Human Resources → Configuration → Periodic Evaluations → Evaluation Plans*. Click *New* and fill in the following details:

- *Evaluation Plan* : A name for the evaluation plan.

- *First Evaluation in (months)* : This will be used to schedule the first evaluation date of the employee when selecting an evaluation plan.
- *Periodicity of Evaluations (months)* : This depicts the delay between each evaluation of this plan (after the first one).

The screenshot shows a software interface titled 'Evaluation Plans'. At the top, there are buttons for 'Save', 'Save & Edit', and 'Cancel'. Below these, the 'Evaluation Plan' is set to 'Manager's Evalu'. The 'First Evaluation in (months)' field contains '3', and the 'Periodicity of Evaluations (months)' field contains '6' with '(months)' suffix. A checkbox labeled 'Active' is checked. The main area is titled 'Evaluation Phases' and contains a table with four rows:

SEQUENCE	PHASE	ACTION	APPRaisal FORM	WAIT PREVIOUS PHASES
1	Send to Subordinates	Bottom-Up Appraisal Requests	Employee Evaluation	<input type="checkbox"/>
2	Send to Managers	Top-Down Appraisal Requests	Employee Evaluation	<input type="checkbox"/>
3	Send to Employee	Self Appraisal Requests	Employee Evaluation	<input type="checkbox"/>
4	Final Interview With Manager	Final Interview	Job Survey	<input checked="" type="checkbox"/>

Figure 3.32: *Evaluation Plans form*

You must also create *Evaluation Plan Phases*, to let your plan evolve from one stage to another and be able to take appropriate action at every stage, like sending an e-mail. You can configure the following settings in an evaluation plan phase:

- *Phase* : A name for the evaluation plan phase.
- *Wait Previous Phases* : Set to True if you want all preceding phases to finish before launching this phase.
- *Sequence* : The sequence number of this phase.
- *Action* : Select an action, either Top-Down Appraisal Requests, Bottom-Up Appraisal Requests, Self Appraisal Requests or Final Interview.
- *Appraisal Form* : The survey to link to this phase.

If you use the GTK-client, it will be possible to open the form view of an evaluation plan phase. Here you will be able to customize more settings, like whether you would like to send an e-mail for this phase and the corresponding layout for it. You can also choose to send the results (answers) of this phase to the managers and employees.

3.4.2 Plan assessment dates

Once an evaluation plan is created, you can use it in an evaluation of an employee. Create a new evaluation from *Human Resources* → *Evaluations* → *Evaluations*. Select an *Employee* for whom this evaluation is being designed and select a *Plan* too. Here you must specify a deadline for the evaluation in the *Evaluation Deadline* field.

Although, evaluation reminders are sent based on the *First Evaluation in (months)* and *Periodicity of Evaluations (months)* fields in *Evaluation Plans* form. You can use these to regulate assessment dates of evaluations that utilize a corresponding plan.

3.4.3 Link survey and job evaluations

An evaluation plan is a sequence of phases, and each phase is linked to an appraisal form. This appraisal form is nothing but a survey, a tool for assessment through a questionnaire. Surveys are defined at *Tools → Surveys → Define Surveys → Surveys*. When an evaluation is started, interview requests are automatically created based on evaluation plans. If you create additional interview requests, there too you have to link the interview to a *Survey*. You may link to a survey that is any state (even *Draft*), but in order to start the interview, the linked survey must be in *Open* state.

3.5 Attendances and Timesheet Management

In most service companies where OpenERP has been integrated, service sheets, or timesheets, have revolutionized management practices. These service sheets are produced by each employee as they work on the different cases or projects that are running. Each of these is represented by an analytic account in the system.

Throughout the day, when employees work on one project or another, they add a line to the timesheets with details of the time used on each project. At the end of the day, each employee must mark all the time worked on client or internal projects to make up the full number of hours worked in the day. If an account is not in the system, then the time is added to the hours that have not been assigned for the day.

The screenshot shows a search interface for 'Timesheet Lines'. The top bar includes fields for 'User' (set to 'Administrator'), 'Analytic Account' (empty), and 'Date' (empty). Below the search bar are buttons for 'Search', 'Clear', and 'Filters'. The main area displays a table of timesheet entries:

	DATE	USER	DESCRIPTION	ANALYTIC ACCOUNT	QUANTITY	TYPE OF INVOICING
<input type="checkbox"/>	03/09/2011	Administrator	Delivery and maintenance	OpenERP S.A. / Internal / Our Super Product Development / Stable	00:00	x
<input type="checkbox"/>	03/09/2011	Administrator	Integration and system testing	OpenERP S.A. / Internal / Our Super Product Development / Stable	00:00	x
<input type="checkbox"/>	03/09/2011	Administrator	Coding and module testing	OpenERP S.A. / Internal / Our Super Product Development / Stable	00:00	x
<input type="checkbox"/>	03/09/2011	Administrator	Design and specification	OpenERP S.A. / Internal / Our Super Product Development / Stable	00:00	x
<input type="checkbox"/>	03/09/2011	Administrator	Requirements analysis and specification	OpenERP S.A. / Internal / Our Super Product Development / Stable	00:00	x
					0.00	

Figure 3.33: *Timesheet for a working day*

The figure *Timesheet for a working day* (page 50) gives an example of a timesheet for an employee.



Do not confuse timesheets and attendance compliance

The timesheet system is not intended to be a disguised attendance form. There is no control over the service times and the employee is free to encode 8 or 9 hours or more of services each day if they want.

If you decide to put such a system into place, it is important to clarify this point with your staff. The objective here is not to control hours, because the employees decide for themselves what they will be entering – but to track the tasks running and the allocation of costs between them is the responsibility of the management.

To enable your system with all the features related to *Timesheet*, your configuration wizard should be like this.



Figure 3.34: Configuration wizard for *Timesheet*

Amongst the many uses of such a timesheet system for a company, here are some of the most important:

- enabling tracking of the true costs of a project by accounting for the time used on it,
- tracking the services provided by different employees,
- comparing the hours really used on a project with the initial planning estimates,
- automatically invoicing based on the service hours provided,
- obtaining a list of the service hours for a given client,
- knowing the costs needed to run the company, such as the marketing costs, the training costs for a new employee, and the invoicing rates for a client.

Timesheet Categories

You will need to install the *Manufacturing* application (mrp) in order to access timesheet categories. The different timesheet categories (working time sessions) can be defined through the menu

Working Time																																																										
Name : 38 Hours/Week																																																										
Save		Save & Edit																																																								
Cancel		1 of 1																																																								
Name : 38 Hours/Week Workgroup manager : <input type="text"/> <input type="button" value=""/>																																																										
<table border="1"> <thead> <tr> <th>Working Time</th> <th>New</th> <th>DAY OF WEEK</th> <th>WORK FROM</th> <th>WORK TO</th> </tr> </thead> <tbody> <tr><td>Monday morning</td><td></td><td>Monday</td><td>08:00</td><td>12:00</td></tr> <tr><td>Monday evening</td><td></td><td>Monday</td><td>13:00</td><td>18:00</td></tr> <tr><td>Tuesday morning</td><td></td><td>Tuesday</td><td>08:00</td><td>12:00</td></tr> <tr><td>Tuesday evening</td><td></td><td>Tuesday</td><td>13:00</td><td>18:00</td></tr> <tr><td>Wednesday morning</td><td></td><td>Wednesday</td><td>08:00</td><td>12:00</td></tr> <tr><td>Wednesday evening</td><td></td><td>Wednesday</td><td>13:00</td><td>18:00</td></tr> <tr><td>Thursday morning</td><td></td><td>Thursday</td><td>08:00</td><td>12:00</td></tr> <tr><td>Thursday evening</td><td></td><td>Thursday</td><td>13:00</td><td>18:00</td></tr> <tr><td>Friday morning</td><td></td><td>Friday</td><td>08:00</td><td>12:00</td></tr> <tr><td>Friday evening</td><td></td><td>Friday</td><td>13:00</td><td>18:00</td></tr> </tbody> </table>				Working Time	New	DAY OF WEEK	WORK FROM	WORK TO	Monday morning		Monday	08:00	12:00	Monday evening		Monday	13:00	18:00	Tuesday morning		Tuesday	08:00	12:00	Tuesday evening		Tuesday	13:00	18:00	Wednesday morning		Wednesday	08:00	12:00	Wednesday evening		Wednesday	13:00	18:00	Thursday morning		Thursday	08:00	12:00	Thursday evening		Thursday	13:00	18:00	Friday morning		Friday	08:00	12:00	Friday evening		Friday	13:00	18:00
Working Time	New	DAY OF WEEK	WORK FROM	WORK TO																																																						
Monday morning		Monday	08:00	12:00																																																						
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Thursday evening		Thursday	13:00	18:00																																																						
Friday morning		Friday	08:00	12:00																																																						
Friday evening		Friday	13:00	18:00																																																						
1 - 10 of 10																																																										

Figure 3.35: Timesheet category for full time 38 hours per week

Manufacturing → Configuration → Resources → Working Period and selecting one of the groups there such as *38 Hours/Week*.

Entering Timesheet Data To be able to use timesheets fully, install the module *hr_timesheet_sheet* through the *Reconfigure* wizard by selecting *Timesheets* and clicking *Configure*. Once this module has been installed and the employees configured, the different system users can enter their timesheet data in the menu *Human Resources → Time Tracking → Working Hours*, then click *New*.



Shortcut to Timesheets

It is a good idea if all employees who use timesheets place this menu in their shortcuts. That is because they will need to return to them several times each day.

For a new entry:

1. The *User* : proposed by default, but you can change it if you are encoding the first timesheet for another company employee.
2. The *Date* : automatically proposed as today's date, but it is possible to change it if you are encoding the timesheet for a prior day.
3. *Analytic Account* : for the project you have been working on - obviously it should be predefined.
4. *Description* : a free text description of the work done in the time.
5. *Quantity* : number of units of time (the units are defined as part of the product).

The other fields are automatically completed, but can be modified: the *Product* which is the service product such as consultancy, the *Unit of Measure* (predefined, and could perhaps be minutes, hours or days), the *Cost* of the service (which is calculated by default), and the associated *General Account*.

The hours are then encoded throughout the day by each employee. It helps to revisit the list at the end of the day to verify that the number of hours of attendance in the company has been properly accounted for. The total entered is shown at the bottom right of the list of service hours.



Hiding Service Costs

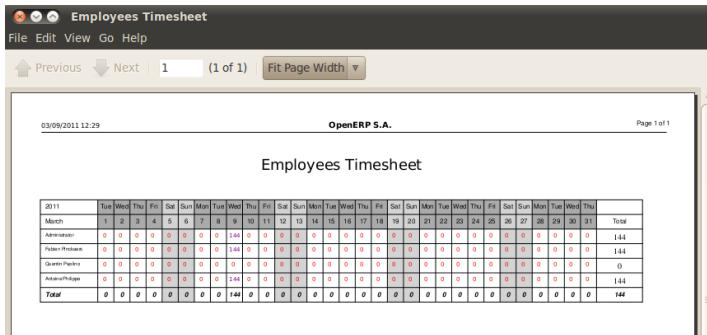
By default, OpenERP is configured to show the cost of each service when an employee encodes the number of hours per project. You can modify this field by adding the attribute `invisible=True` in the timesheet view.

(And the way to do that is either to modify the view on the file system, or to use the web client to modify the view in the current database. For the latter, there is a pale grey *[Customize]* label to the bottom left of each form that gives you access to the *Manage Views* option. If you have sufficient permissions, you can edit the XML that defines the current view.)

The value in the cost field shows employees the cost of their time used in the company, so masking this field might not always be the best option.

The accuracy of the services entered is crucial for calculating the profitability of the different jobs and the recharging of services. Different reports are therefore available for verifying employees' data entry. Employees can verify their own timesheet using the following reports:

- Printing the particular employee's timesheet, using the menu *Human Resources → Reporting → Timesheet → Employee Timesheet*.
- Printing more than one employees' timesheet, using the menu *Human Resources → Reporting → Timesheet → Employees Timesheet*. You can print a summary in the form of a table per user and per day.



The screenshot shows a computer window titled "Employees Timesheet" from the OpenERP S.A. application. The window includes a header bar with standard operating system icons, a menu bar with "File", "Edit", "View", "Go", "Help", and a toolbar with "Previous", "Next", "Fit Page Width", and page navigation buttons. Below the header is a status bar showing the date "03/09/2011 12:29", the system name "OpenERP S.A.", and the page number "Page 1 of 1". The main content area is titled "Employees Timesheet" and displays a monthly summary table for March 2011. The table has columns for each day of the month (labeled 1 through 31) and rows for various employees. The table includes headers for the week days (Tue, Wed, Thu, Fri, Sat, Sun, Mon) and the month (Mar). The data shows hours worked for each employee per day. The table ends with a "Total" row at the bottom. The entire screenshot is framed by a thick black border.

Figure 3.36: Employees' monthly summary timesheet

- Reviewing profit of timesheet, using the menu *Human Resources* → *Reporting* → *Timesheets* → *Timesheet Profit*.
- You can then use the statistical reports to analyze your services by period, by product or by account using the menu *Human Resources* → *Reporting* → *Timesheets* → *Timesheet Analysis* and *Human Resources* → *Reporting* → *Timesheets* → *Timesheet Sheet Analysis*.

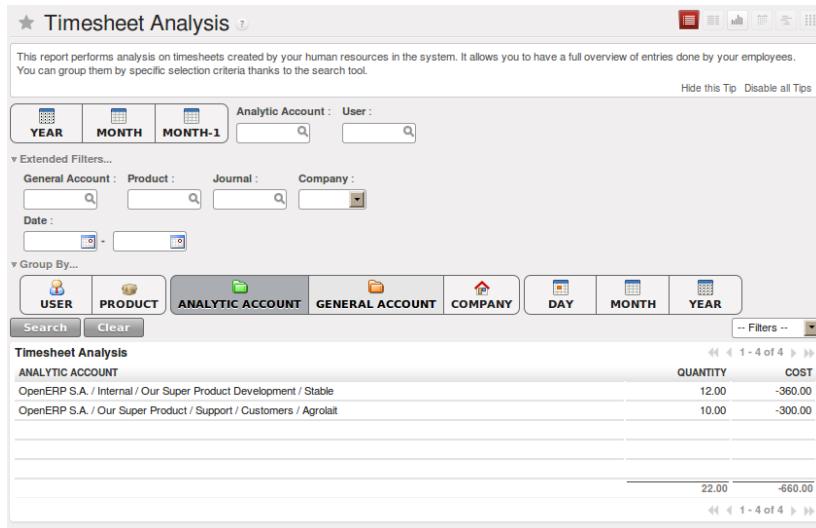


Figure 3.37: Chart of timesheet by account

The data making up these list views can be varied using the filters available in the upper part of the screen. If you want to see more detail, switch to the graph view. **Evaluation of Service Costs**

You already know that timesheets are closely linked with analytic accounts. The different projects reported on the timesheets correspond to analytic accounts. The timesheet entries themselves are analytic entries.

These entries comprise various analytic operations that do not correspond to any of the general accounts. Therefore all operations that modify and create timesheet lines automatically impact the corresponding analytic line and, conversely are automatically modified by changes in that line.

note

Timesheets and Analytical Data

The implementation of timesheets in OpenERP relating to analytic entries is managed by an inheritance mechanism: the timesheet object inherits the analytic entry object.

The information is therefore not encoded into the database as two separate events, which avoids many synchronization problems. They are stored in two different tables, however, because a service is an analytical entry, but an analytical entry is not necessarily a service.

This is not a classical approach, but it is logical and pragmatic. Employee timesheets are a good indication of how the costs of a service enterprise are spread across different cases, as reported in the analytic accounts. An analytic account should be reflected in the general accounts, but there is no direct counterpart of these analytic accounts in the general accounts. Instead, if the hourly costs of the employees are correctly accounted for, the month's timesheet entries should be balanced by the salary + benefits package paid out to all the employees at the end of the month.

Despite all this, it is quite difficult to work out the average hourly cost of an employee precisely, because it depends on:

- the extra hours that they have worked,
- holidays and sickness,
- salary variations and all the linked costs, such as social insurance charges.

The reports that enable you to relate general accounts to analytic accounts are valuable tools for improving your evaluation of different hourly costs of employees. The difference between product balances in the analytic account and in the general accounts, divided by the total number of hours worked, can then be applied to the cost of the product. Some companies adjust for that difference by carrying out another analytic operation at the end of the month in an account created for that purpose. This analytic account should have a balance that tends towards zero.

Because you have got a system with integrated timesheets, you can then:

- track the profitability of projects in the analytic accounts,
- look at the history of timesheet entries by project and by employee,
- regularly adjust hourly costs by comparing your rates with reality,



Project Cost Control

Controlling the costs and the profitability of projects precisely is very important.

It enables you to make good estimates and to track budgets allocated to different services and their projects, such as sales and, R&D costs. You can also refine your arguments on the basis of clear facts rather than guesses if you have to renegotiate a contract with a customer following a project slippage.

The analyses of profitability by project and by employee are available from the analytic accounts. They take all of the invoices into account, and also take into account the cost of the time spent on each project.

3.5.1 Manage attendance through Sign in / Sign out

In some companies, staff have to sign in when they arrive at work and sign out again at the end of the day. If each employee has been linked to a system user, then they can sign in on OpenERP by using the

menu *Human Resources* → *Attendances* → *Sign in / Sign out*.

If an employee has forgotten to sign out on leaving, the system proposes that they sign out manually and type in the time that they left when they come in again the next day. This gives you a simple way of managing forgotten sign-outs.

Find employee attendance details from their forms in *Human Resources* → *Employees*.

To get the detail of attendance from an employee's form in OpenERP, you can use the available reports:

- *Attendances By Month*
- *Attendances By Week*
- *Attendance Error Report*

The last report highlights errors in attendance data entry. It shows you whether an employee has entered the time of entry or exit manually and the differences between the actual and expected sign out time and the time.

3.5.2 Keep track of differences between timesheets and attendance

When they are used properly, timesheets can be a good control tool for project managers and can provide awareness of costs and times.

When employee teams are important, a control system must be implemented. All employees should complete their timesheets correctly because this forms the basis of planning control, and the financial management and invoicing of projects

You will see in *ch-services* that you can automatically invoice services at the end of the month based on the timesheet. But at the same time, some contracts are limited to prepaid hours. These hours and their deduction from the original limit are also managed by these timesheets. In such a situation, hours that are not coded into the timesheets represent lost money for the company. So it is important to establish effective follow-up of the services timesheets and their encoding. To set up a structure for control using timesheets you should install the module *hr_timesheet_sheet* (*Timesheets* in the *Reconfigure* wizard).

This module supplies a new screen enabling you to manage timesheets by period. Timesheet entries are made by employees each day. At the end of the week, employees validate their week's sheet and it is then passed to the services manager, who must approve his team's entries. Periods are defined in the company forms, and you can set them to run monthly or weekly.

To enter timesheet data each employee uses the menu *Human Resources* → *Time Tracking* → *My Timesheet*.

In the upper part of the screen, the user starts with the sign-in and sign-out times. The system enables the control of attendance day by day. The two buttons *Sign In* and *Sign Out* enable the automatic completion of hours in the area to the left. These hours can be modified by employee, so it is not a true management control system.

The area to the bottom of the screen represents a sheet of the employee's time entries for the selected day. In total, this should comprise the number of hours worked in the company each day. This provides a simple verification that the whole day's attendance time has been entered properly.

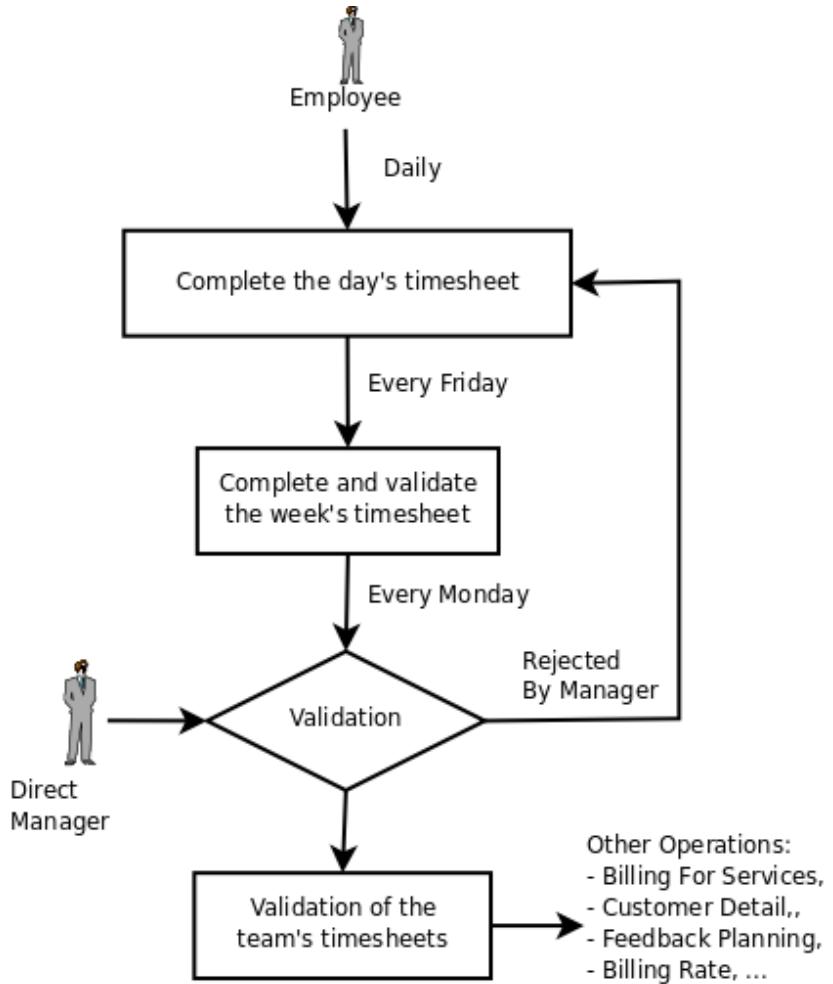


Figure 3.38: *Process of approving a timesheet*

The second tab of the timesheet, *By Day*, gives the number of hours worked on the different projects. When there is a gap between the attendance and the timesheet entries, you can use the second tab to detect the days or the entries that have not been correctly entered.

The action *Timesheet by Account* shows the time worked on all the different projects. That enables you to step back to see an overview of the time an employee has worked spread over different projects.

At the end of the week or the month, the employee confirms his timesheet. If the attendance time in the company corresponds to the encoded entries, the whole timesheet is then confirmed and sent to his department manager, who is then responsible for approving it or asking for corrections.

Each manager can then look at a list of his department's timesheets waiting for approval using the menu *Human Resource → Reporting → Timesheet → Timesheet Sheet Analysis* by applying the proper filters. He then has to approve them or return them to their initial state.

★ Open Timesheet

Description : Sheet 1

Save Save & Edit Cancel

1 of 1

Description : Sheet 1 Department :

Employee : Fabien Pinckaers Date from : 03/07/2011 Date to : 03/13/2011

Daily View By Day

Go to: 03/09/2011 Today Sign In Sign Out

Attendances

DATE	ACTION
03/09/2011 19:31:00	Sign Out
03/09/2011 13:32:00	Sign In

Current Status : Absent Total Attendance : 05:59

Timesheet Lines

ANALYTIC ACCOUNT	DESCRIPTION	QUANTITY	TYPE OF INVOICING
OpenERP S.A. / Internal / Our Super Product Development / Stable	Delivery and maintenance	00:00	x
OpenERP S.A. / Internal / Our Super Product Development / Stable	Integration and system testing	00:00	x
OpenERP S.A. / Internal / Our Super Product Development / Stable	Coding and module testing	00:00	x
OpenERP S.A. / Internal / Our Super Product Development / Stable	Design and specification	00:00	x
OpenERP S.A. / Internal / Our Super Product Development / Stable	Requirements analysis and specification	00:00	x

Difference : 05:59 Total Timesheet : 00:00

State : Draft Confirm

Figure 3.39: Form for entering timesheet data

To define the departmental structure, use the menu *Human Resources* → *Configuration* → *Human Resources* → *Departments*.

Timesheet Approval



At first sight, the approval of timesheets by a department manager can seem a bureaucratic hindrance. This operation is crucial for effective management, however. We have too frequently seen companies in the situation where managers are so overworked that they do not know what their employees are doing.

So this approval process supplies the manager with an outline of each employee's work at least once a week. And this is carried out for the hours worked on all the different projects.

Once the timesheets have been approved, you can then use them for cost control and for invoicing hours

★ Open Timesheet

Description : Sheet 1

Save Save & Edit Cancel

Description : Sheet 1 Department :

Employee : Fabien Pinckaers Date from : 03/07/2011 Date to : 03/13/2011

Daily View By Day

Period		ATTENDANCE	TOTAL TIMESHEET	DIFFERENCE
DATE				
03/07/2011		10:00	00:00	10:00
03/08/2011		04:33	00:00	04:33
03/09/2011		05:59	00:00	05:59
03/10/2011		05:24	00:00	05:24

Total Attendance : 25:56 Total Timesheet : 00:00 Difference : 25:56

State : Draft

Figure 3.40: Detail of hours worked by day for an employee

to clients.

Contracts and their rates, planning, and methods of invoicing are the object of the following chapter, *ch-services*.

3.6 Keeping Track of Expenses

Employee expenses are charges incurred on behalf of the company. The company then reimburses these expenses to the employee. The receipts encountered most frequently are:

- car travel, reimbursed per unit of distance (mile or kilometer),
- subsistence expenses, reimbursed based on the bill,
- other purchases, such as stationery and books, destined for the company but carried out by the employee.

Expenses generated by employees are grouped into periods of a week or a month. At the end of the period, the employee confirms all of his expenses and a summary sheet is sent to the department manager. The manager is responsible for approving all the expense requests generated by his team. The expense sheet must be signed by the employee, who also attaches its receipts to the expense sheet.

Once the sheet has been approved by the head of department, it is sent to the Accounting department, which registers the company's liability to the employee. Accounting can then pay this invoice and reimburse the employee who originally advanced the money.

Some receipts are for project expenses, so these can then be attached to an analytic account. The costs incurred are then added to the supplementary cost of the analytic account when the invoice is approved.

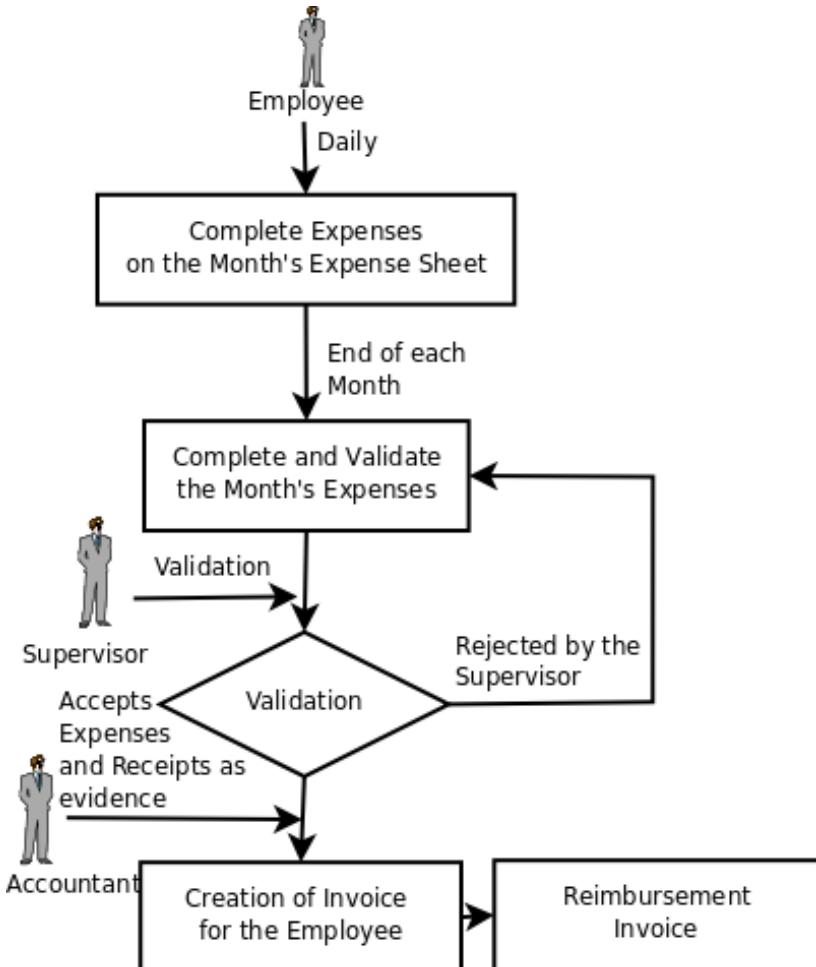


Figure 3.41: *Process for Dealing with Expense Rebursements*

You often need to invoice expenses to a customer, depending on the precise contract that has been negotiated. Travelling and subsistence expenses are generally handled this way. These can be charged to the customer at the end of the month if the contract price has been negotiated inclusive of expenses.

If you have to go through many steps to reclaim expenses, it can all quickly become too cumbersome, especially for those employees who claim large numbers of different expense lines. If you have got a good system that integrates the management of these claims, such as the one described, you can avoid many problems and increase staff productivity.

If your systems handle expenses well, then you can avoid significant losses by setting your terms of sales effectively. In fixed-price contracts, expense reimbursements are usually invoiced according to the actual expense. It is in your interest to systematize their treatment, and automate the process to the maximum, to recharge as much as you are contractually able.

3.6.1 Allow employees to enter professional expenses

Install the module `hr_expense` to automate the management of expense claims. The configuration wizard to install this module is shown below.

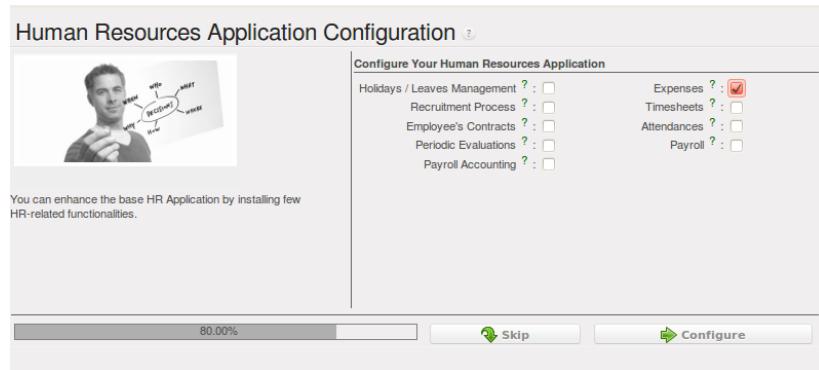


Figure 3.42: Configuration wizard to install `hr_expense` module

Users can then enter and review their expenses using the menu `Human Resources → Expenses → Expenses`.

A screenshot of the "Expenses" form in OpenERP. The top header says "Expenses" and "Description : Travel Expenses". Below that are buttons for "Save", "Save & Edit", and "Cancel". There are also buttons for navigating between expense lines. The main area shows a table of "Expense Lines" with columns: DATE, EXPENSE NOTE, REFERENCE, UNIT PRICE, QUANTITIES, and TOTAL. Two entries are listed: one for Hotel Expenses - Thymbra on 03/03/2011 at 400.00, and another for Bruxelles - Paris at 0.30. The total amount is 2,186.60. At the bottom, there's a "State" dropdown set to "Draft" and a "Confirm" button. There are also navigation buttons for the expense list.

Figure 3.43: Expenses form to enter and review expenses

Create templates for the various expenses accepted by the company using OpenERP's product form. You could, for instance, create a product with the following parameters for the reimbursement of travel expenses by car at 0.25 per kilometer:

- Name : Car travel ,

- *Default Unit Of Measure* : km ,
- *Cost Price* : 0.25 ,
- *Sale Price* : 0.30 ,
- *Product Type* : Service .

The employee keeps his expenses sheet in the *Draft* state while completing it throughout the period. At the end of the period (week or month), the employee can confirm his expense form using the *Confirm* button on the form. This puts it into the state *Waiting Approval* .

3.6.2 Track the approval management process

At the end of the period, the department manager can access the list of expense forms awaiting approval using the menu *Human Resources* → *Expenses* → *Expenses*.

The department manager can then approve the expenses. Now, the *Invoice* button is visible which on clicking creates a supplier invoice in the employee's name so that the employee can be reimbursed. An analytic account is coded onto each line of the invoice. When the invoice is confirmed, general and analytic accounting entries are automatically generated as they would be with any other invoice.

3.6.3 Rebill customers through analytical accounts

If you base your invoicing on service time or analytic costs, the expense will automatically be charged to the customer when the customer invoice is generated for services associated with the project.

Invoicing from timesheets allows you to prepare all your invoices, both expenses and timesheets for a project's customer.

You can view the statistical analysis of expenses using menu *Human Resources* → *Reporting* → *Expenses Analysis*.

Part IV

Process

If you have reached this far in the book, your mind may well be reeling with the number of new documents (based on business objects) and processes that you need to encounter to model and manage your business.

OpenERP's process module, which is installed automatically when a process-aware module is installed, shows you cross-functional processes and technical workflows for those nodes in the process that have them. This visualization is invaluable for documentation - but it also goes a step further. You can modify processes and workflows and even generate entirely new processes and workflows for your various document types.

If your starting point is a specific document, such as an invoice or order, then you will also be shown the exact position of that document on its process and workflow diagrams.

For this chapter you should start with a fresh database that includes demonstration data, with `sale` and its dependencies installed and no particular chart of accounts configured. `process` is one of those dependencies. Also install some of the `hr` modules for the second example in this chapter, such as `hr_attendance`, `hr_contract`, and `hr_holidays`.

4.1 Process Integration in the Management System

Processes are at the heart of a company: they form a structure for all activities that enable the company to function effectively. A company's human dimension is often disconnected from its processes at the moment, preventing individual employees' aspirations from being directed towards a collective objective.

From a mapping process, integrating management and the changing needs of each employee becomes very useful for the fulfilment of each. Based on that, each employee becomes aware of his own personal contribution to the company's value chain. This representation also helps an employee's own personal management because it shows his place and his role in the overall process, very often over several departments.

The system of 'Corporate Intelligence' will also be highly useful to system implementers who, after studying the requirements, have to formalize a company's processes to put them into operation in OpenERP.

4.1.1 Examples of Process

To understand the aims of the system of Corporate Intelligence (process) better, you will now see an overview of the functions available to you in a the study of two processes:

- A customer order quotation,

- The engagement of a new employee.

Following a Customer Sales Order

The example *Example of a process handling a customer order quotation* (page 66) shows the process for handling a customer sales order. Use the menu *Sales → Sales → Sales Orders* to list all orders, then choose Order SO001 – you can either check the checkbox to its left, or you can open the order itself by clicking the row containing the order.

To view the process for that specific order, click the *Corporate Intelligence* button (displayed as a question mark) at the top right of the title of the list or form. The process for this order is shown in the window, and the current state of this document can be seen by looking for the node whose left edge is colored maroon rather than grey.

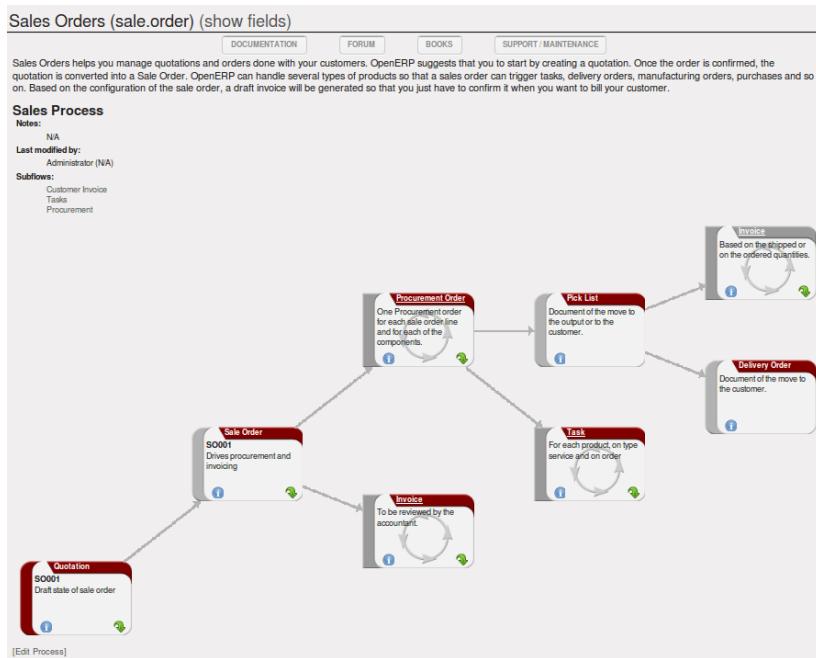


Figure 4.1: *Example of a process handling a customer order quotation*

This order is in the *Quotation* state. The whole of some nodes is greyed out because the selected document will never enter into that state, such as invoicing based on deliveries (the order is in an invoicing mode that is based on orders, not deliveries).

The process is completely dynamic and based on that specific sale order document. You can click each of the process nodes (*Quotation*, *Sale Order*, *Procurement*, *Draft Invoice*, *Outgoing Products*) using one of the links or icons on it:

- Obtaining the documentation and the corresponding process in the quality manual, using the *Help* (or *Information*) icon,

- Obtaining the documents that an employee needs to carry out the process by clicking the green arrow icon,
- Seeing the menu that OpenERP uses to get the document by hovering over the green arrow icon.

New Employee Induction

Open the employee form for Fabien Pinckaers from the menu *Human Resources → Human Resources → Employees*. Click the *Corporate Intelligence* button to open the detailed process of engagement.

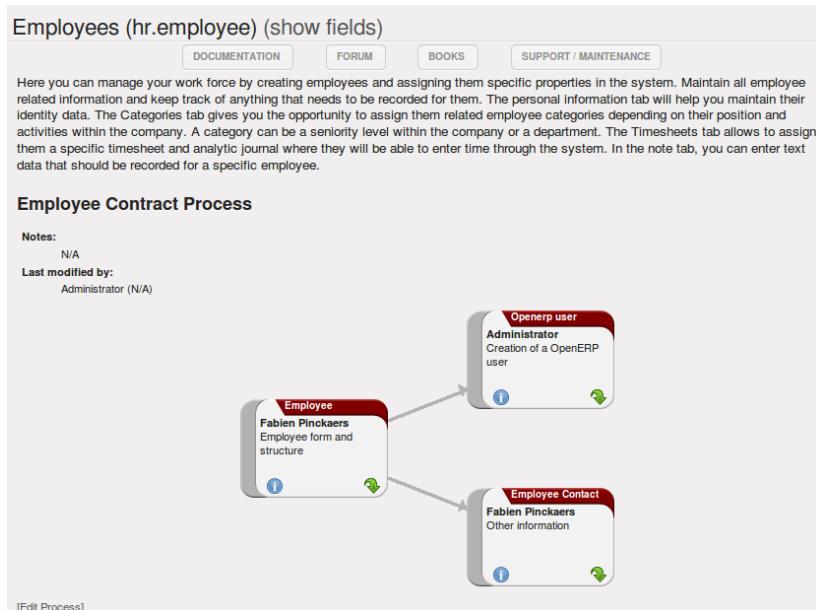


Figure 4.2: Example of a process engaging a new employee

You can immediately see things that might interest the HR manager. On a single screen she has all of the documents about the selected employee. She can then zoom into each document to look at associated documents or the user account in the system.

4.2 Workflows and User Processes

Workflows are used to define the behaviour of a given document. They are used by developers and system implementers to determine which object should execute which actions and at which moments. These are principally technical processes defined in a vertical way on the lifecycle of a complete object (represented by a document). Changing a workflow will have a direct impact on the behaviour of the software in response to user actions. You handle all possible exceptions there, so that the software is robust.

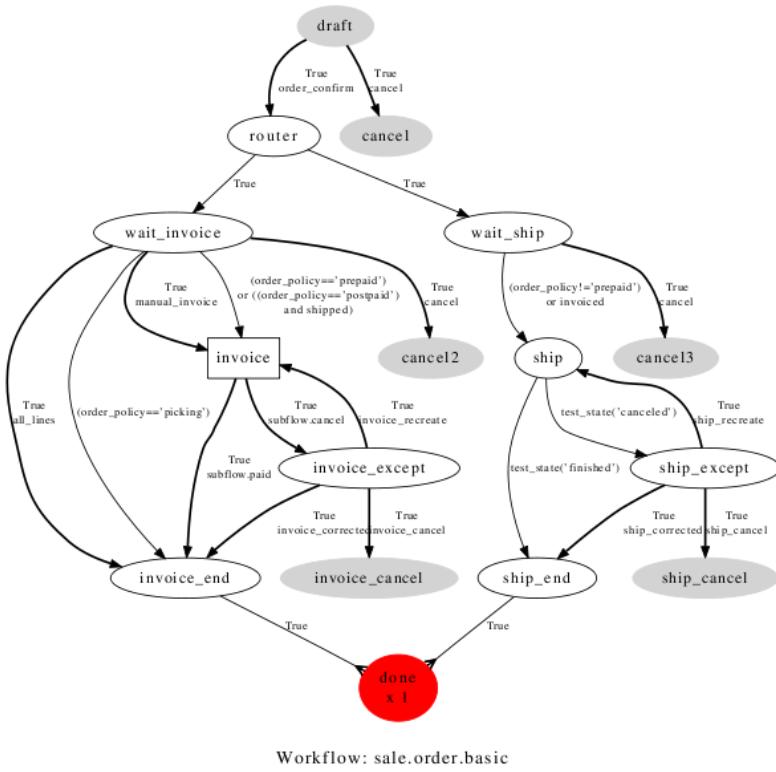


Figure 4.3: Example of a workflow handling a customer order

Unlike workflows, user processes represent workflows across all of a company and its documents. They are used by end-users to locate an action for more complete handling. A change of user process will not have any effect on the software but will show the user another way of working on a given problem.

Processes are used by end-users to help them understand the problems which have not been handled in OpenERP. You can find actions that have no influence on the software, such as “Telephone customer to thank him”, and “Send a fax to reassure him”. Alongwith providing user help, processes provide functions such as:

- integration with OpenERP Help and the company’s quality manual,
- showing the user the menu for finding a specific document.

User processes are thus connected to technical workflows. If you modify the software’s behaviour with a workflow, the changes will be directly visible in the user processes that are based on the modified document. So if you modify certain transitions on a workflow they will automatically be shown in the process corresponding to the modified document.

To get maximum benefit from the power of user processes and the workflow engine, OpenERP provides an integrated workflow editor and user process editor. These enable you to modify them through the client interface.

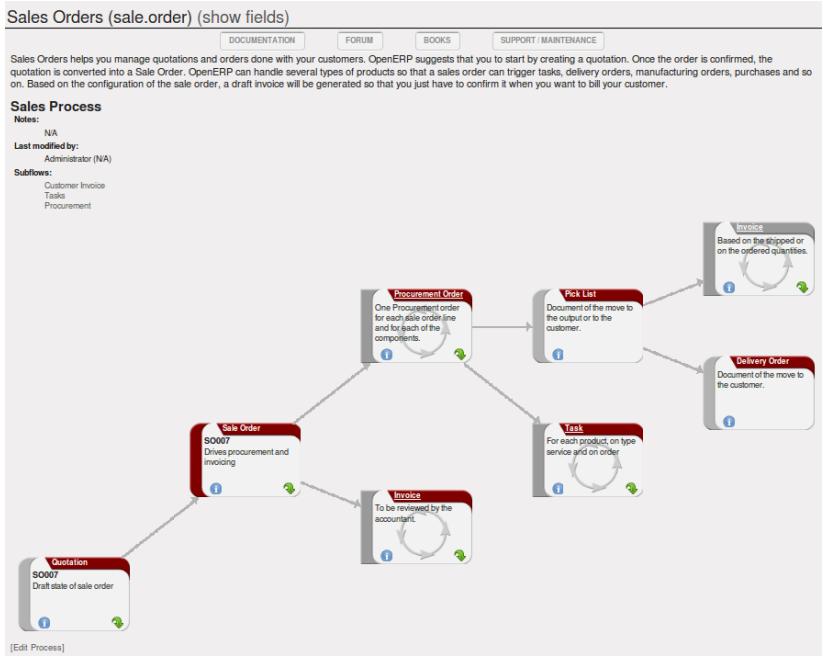


Figure 4.4: Example of a process handling a customer order

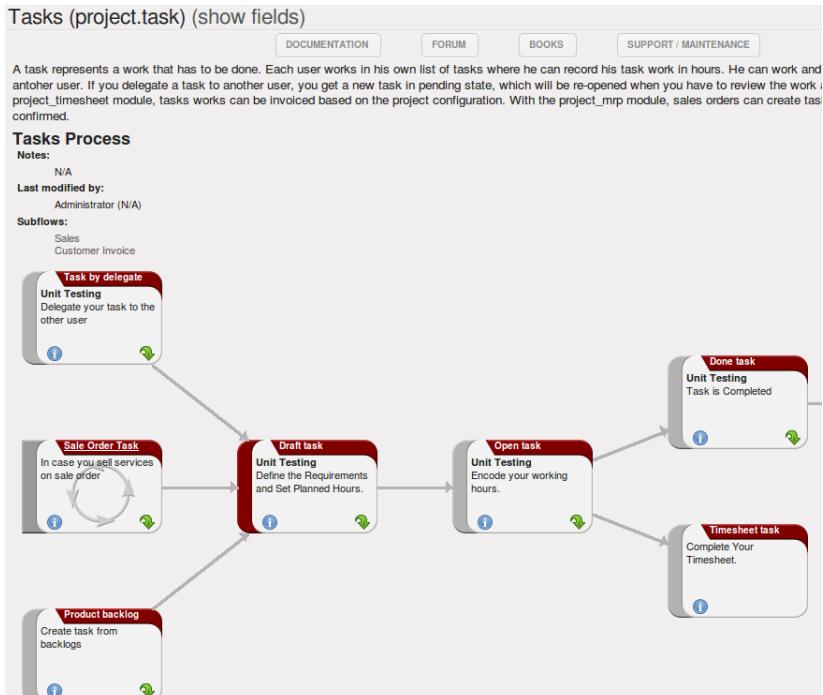


Figure 4.5: Relationship between workflow and user process

You will only work with the process editor in this chapter. If you want to view and edit the workflow of a document, click on the link *Edit Workflow* to the right of the document. OpenERP opens a graphical view of the workflow for the selected document type.

If you want to edit a workflow in a text-based editor, you can use the menus under *Administration* → *Customization* → *Workflows*.

4.2.1 Using Processes Effectively

Regardless of which OpenERP screen you are in you can call up a process on the current document by clicking the *Corporate Intelligence* (question mark) icon. Depending on the document, you can have several processes defined using it. OpenERP then asks you to choose which one of them you want.

For example, if you are in a meeting form, OpenERP will ask you to choose from the processes it knows about that involve such forms:

- processes for selecting and inducting new employees,
- tracing customer orders in pre-sales,
- processes for visiting customers and handling expenses.

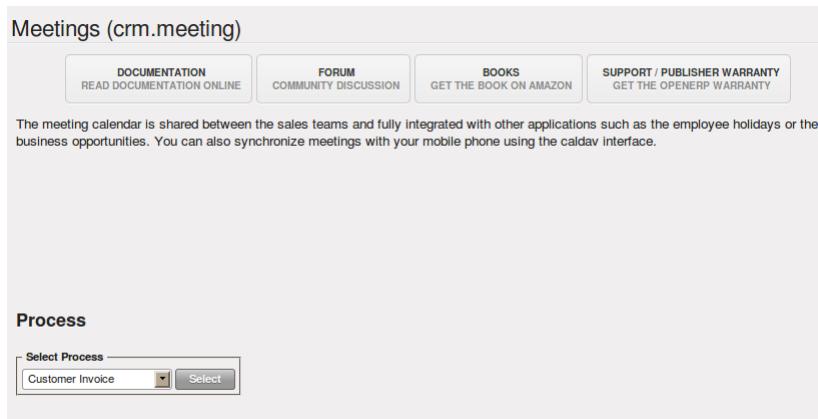


Figure 4.6: *Button for entering a user process from a form*

The element colored red shows the active process for the selected document. Elements in grey are the states that the selected document will not go through because of its configuration. You can use the different icons to open the document, print it, or get its documentation.

Some states have an image inside of arrows formed into a circle. These show that the state refers to another process. To go to this other process, you can click on the title of the state. For example, you can click on the invoice in the customer order management workflow to see in detail how that invoice is handled.

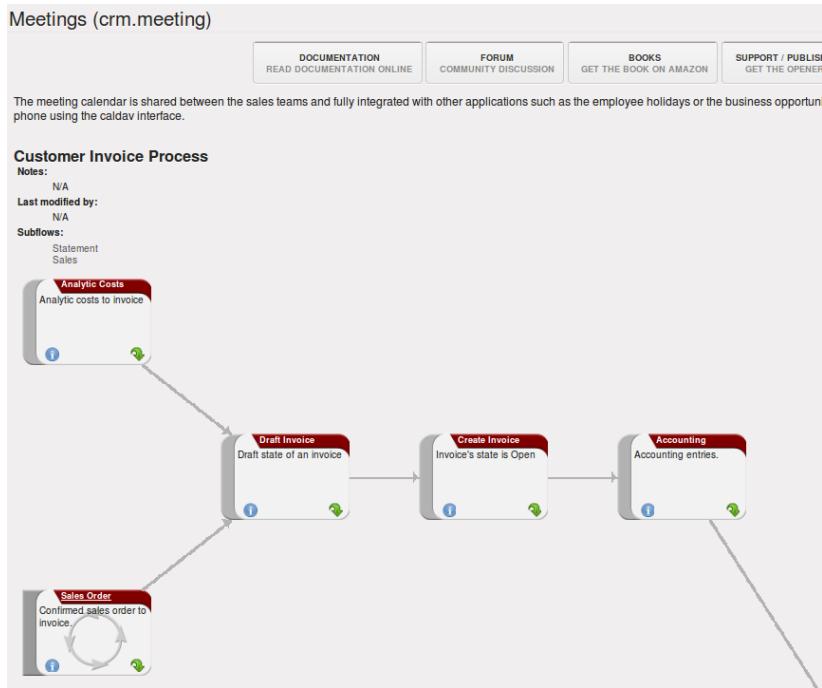


Figure 4.7: A state that refers to another workflow

4.2.2 Defining your Own User Processes

Use the menus under *Administration* → *Customization* → *Enterprise Process* to define new processes or modify existing processes. When entering a process, OpenERP shows you the list of states available for that process.

You can add a new state or modify an existing state. A state can be associated with an object (whose instances are represented by documents). If that is the case, choose it in the case object. You can set an expression that shows if the object can be found in that state or not. Expressions are in Python format. For example, for the quotation state choose the object `sale.order` and set the following expression `object.state == 'draft'`.

You can also link to a menu so that users can learn which menu to use to access objects in a state. You can set the conditions in which this object is in a greyed-out state in the section *Conditions*. These expressions, too, are encoded in Python format.

Once the node has been defined, you should set the transitions leaving this object. For each transition you can:

- Give the leaving and destination states,
- Set up a list of buttons that start various transitions in the process,
- Map between workflow transitions and the document that is selected,
- Put an explanatory notice in different languages.

Process ?

Name : Customer Invoice

Save Save & Edit Cancel

Name : Customer Invoice Object : Invoice Active ? :

Nodes Notes

Process Nodes			
NAME	OBJECT	KIND OF NODE	STARTING FLOW
Analytic Costs	Analytic Account	State	<input type="checkbox"/>
Draft Invoice	Invoice	State	<input type="checkbox"/>
Create Invoice	Invoice	State	<input type="checkbox"/>
Accounting	Account Entry	State	<input type="checkbox"/>
Bank Statement	Bank Statement	Subflow	<input type="checkbox"/>
Payment	Journal Items	State	<input type="checkbox"/>
Reconciliation	Account Reconciliation	State	<input type="checkbox"/>
Paid invoice	Invoice	State	<input type="checkbox"/>
Sales Order	Sales Order	Subflow	<input type="checkbox"/>

Figure 4.8: Form for defining a process

Process Transitions ?

Name : Validation

Save Save & Edit Cancel

Name : Validation Source Node : Draft Invoices Target Node : Create Invoice

Actions Workflow Transitions Associated Groups Notes

Actions		
NAME	TYPE	ACTION ID
Create Entry	Object Method	action_move_create

Figure 4.9: Screen for defining a process transition

The organization and quality of a company is typically related to its maturity. A mature company is one where processes are well established, and where staff do not waste much time searching for documents or trying to find out how to do their different tasks.

From this need for effective organization and explicit quality improvement, have appeared numerous tools:

- The ISO9001 quality standard,
- Business Process Management (BPM) tools,
- Use Case workflows, and formalized standards such as UML,

- The company Quality Manual.

The problem is that these tools are usually quite separate from your management system and often reserved for the use of just a few specific people in your company. They are treated separately rather than put at the heart of your management system. When you ask company staff about ISO9001 they usually see it as a constraint rather than a helpful daily management tool.

To help the company meet its quality requirements and to form these processes into assistance integrated with everyday work, OpenERP supplies a Corporate Intelligence® tool that enables you to put company processes at the heart of your management system.

The system enables:

- new employees to learn how to use the software by graphically and dynamically, discovering how each document and action works,
- easy access to all the links to a document and everything that is attached to it,
- people to see both a high-level map and the detail of all the company's processes,
- access to a graphical model and integrated quality manual for rapid access that depends on the work context,
- use of a knowledge base and capitalization of that knowledge for all of the company's actions in the form of interactive processes,
- an employee to become more aware of his role in the whole environment.

Part V

DMS

Information management has become a major strategic factor in companies' development. It is important to get the right information circulated to the right people, as efficiently as possible, yet still keep it secure. Document management provides a way for companies to organize their information, in all its forms, in one place.

The objectives of document management include easier archiving, access and reference, intelligent classification and distribution of documents and the information they contain. It concerns sets of all sorts of company documents such as work procedures, meeting reports, documents received from customers and suppliers, documents sent to customers, faxes, sales presentations and product datasheets.

For this chapter you should start with a fresh database that includes demo data, with sale, document and their dependencies installed and no particular chart of accounts configured.

5.1 The Importance of Good Document Management

Globalization means that workplaces are ever more geographically dispersed. This means that documents are also used more than ever by people in several countries and continents for communicating and collaborating.

You will see communication problems even between employees in the same office because they do not have easy access to the documents that they need. You find some documents kept by someone in the accounts office, shared directories that serve everybody, some documents in paper form, others in electronic form – quite a free-for-all.

An explosion in the number of documents that a company needs does not help. If their storage and indexation are badly organized, these documents become useless because they are almost impossible to find.

The results of poor document management can lead to a significant loss of time. Ask yourself how often you find yourself looking for:

- A supplier catalogue that has been sent to a purchasing manager,
- A customer contract signed several months ago,
- The final set of Terms and Conditions offered to a specific customer,
- The documents required for employing a new member of staff,
- An order confirmation sent by a customer to one of your salespeople or, perhaps even more common, when the relevant salesperson has gone on vacation, if you ever received such an order confirmation,

- A procedure from your quality manual if there has been a process fault,
- An email which was sent to one of your colleagues,
- A document that you need to be a template for a specific type of contract,
- A complete history of communications between yourselves and a supplier about a given contract.

Even worse than the loss of time, perhaps, the lack of good document management is bad for the quality of your organization and the service provided by your company. In such a company it is likely that:

- sets of documents do not follow a standard layout,
- all the salespeople prepare quotations in their own way and gradually change the way they do it for themselves but not for the group,
- a correction to a type of contract stays with a small group of people and does not percolate back into the rest of the company to benefit other users,
- version management is chaotic or even non-existent.

So a good integrated document management system can be a powerful tool to help in day-to-day company management. With it you could also easily:

- Continue the work started by a colleague if she has gone on vacation, and respond to her customers if needed,
- Get hold of examples of all document types with just a few clicks, so that you can follow company standards in such areas as order confirmation, price requests, meeting minutes, customer deliverables, contract examples, and models for faxes and letters,
- Retrieve procedures and other associated documents if you do not know how to do a certain task – such as things you should do when hiring a new employee, organizing a conference, or structuring meeting minutes,
- Reuse work done by a colleague to meet similar needs and build on all the individual work done in your own company,
- Find all the orders for a customer or from a supplier in just a few seconds to answer questions or to continue a discussion when the initial contact point in your company is not available,
- Build on your working methods and enable your colleagues to benefit from each improvement in a document type or a procedure.

From these examples you can see the importance of a good document management system, and what it might contribute to the improvement of productivity and the quality of the output from each employee.

5.2 Classic Document Management Solutions

Faced with the need to organize documents, companies have looked at a number of document management solutions that are promoted today, from simple email archiving to complete electronic management systems dedicated to arbitrary documents.

Unfortunately, these solutions have not always been very useful because they are too little integrated in companies' management systems. Most solutions that we have come across, are underused by the employees – often used by some of them but not by all.

The primary reason for this is that a document management system that is not integrated imposes extra work on an employee. For example, a salesperson should ideally save each customer confirmation in the document management system. Only that means quite a heavy additional workload just for an order confirmation:

1. Receive and read the email from the customer,
2. Save the email and its attachments on the desktop,
3. Connect to the ERP system and confirm the order,
4. Connect to the document management system,
5. Look for the best place to store the document,
6. Create a directory for the customer and the order if it does not yet exist,
7. Copy the files from the desktop to the right place in the document management system.

This is obviously a lot of operations just to handle a simple order confirmation. You can understand why many companies hardly use their document management system even if they have gone to the cost and effort of purchasing and installing one.



Free Document Management Systems

A number of free document management applications exist. The most well known are:

- Alfresco: <http://www.alfresco.com>
- Quotero: <http://www.quotero.com>

It is very difficult to keep information in the company's management system synchronized with that in the document management system. For example, when a customer changes his address, users will modify the details in the management software, but usually, not in the document management system.

Furthermore, since users should create the same storage structure in both systems, you quickly find after only a few months that the information in the document management system is quite disconnected from that in the company's management system, if the two are separate. For example, how do you

know where to store your least-frequently used documents such as (perhaps) employee car-leasing documents? Also, document management systems are typically very complex because they must manage user access rights in just the same way as those that are available in the company management system. This means that you have to enter the same sort of data about access rights twice for the system administrators.

You will see that the total integration of OpenERP's document management system with the main company management system, and plugins to Outlook and Thunderbird email clients, offers an elegant solution that addresses these problems.

5.3 The OpenERP Solution

OpenERP's management of documents is unique and totally innovative in its integrated approach. Its complete integration with the company's management system solves most of the problems that are encountered when you use independent document management systems:

- Login and the management of access rights is integrated with that of OpenERP for controlling access to different document types,
- Ultra-rapid access to documents, which are directly accessible through your email client or through the company management software,
- Automatic assignment of meta-information comes directly from information contained in your OpenERP login registration,
- Document workflow, which automatically follows OpenERP's documentation process, provides complete synchronization between the systems,
- Document classification is determined by OpenERP itself so that the structure that is created is always synchronized between the systems,
- Automatic indexation and classification of all documents produced by OpenERP for maximum efficiency.

5.3.1 Getting Started

This section is about how to get started with the document management system from its installation to advanced use with FTP access.

Installation

To install OpenERP's document management system, you just need to install the `document` and `document_ftp` modules through the *Reconfigure* wizard by selecting *Knowledge Management*, and further on, *Shared Repositories (FTP)* for installation. As the module installation proceeds, the system automatically proposes that you configure the FTP server.

Once the module has been installed, you will see a new entry in the main menu called *Knowledge*.

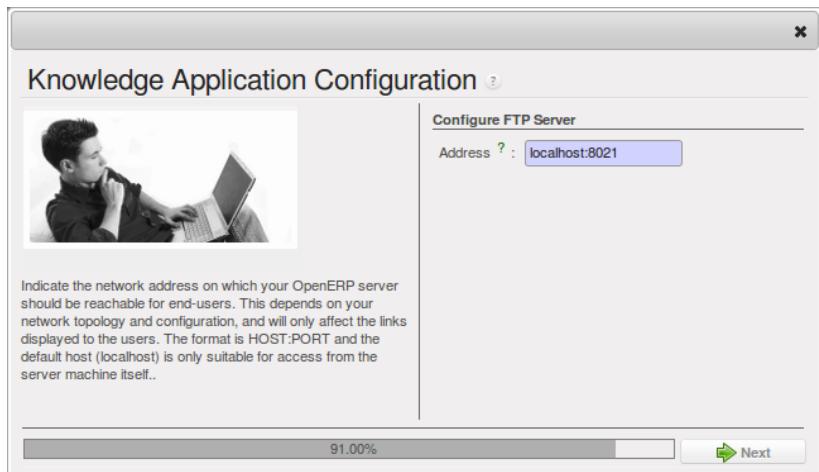


Figure 5.1: Screen for configuring document management

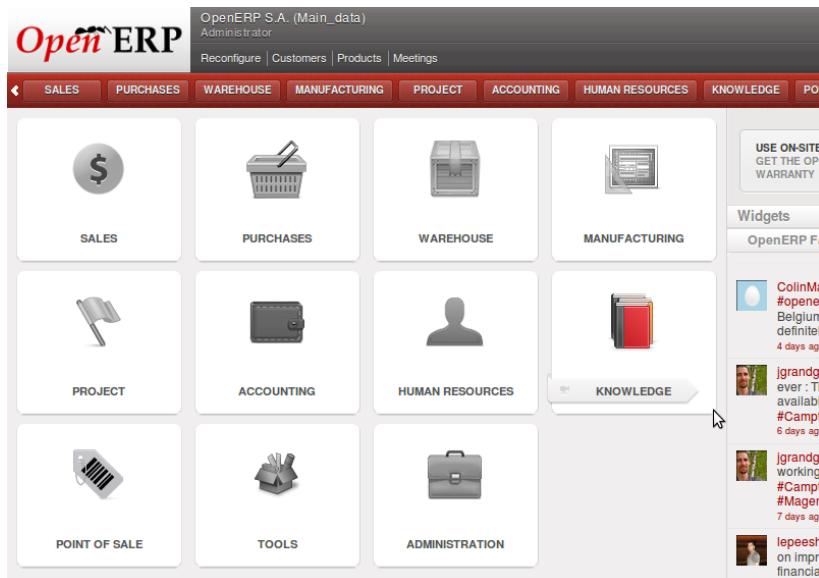


Figure 5.2: The Knowledge menu

5.4 Internal and External Access using FTP

The first configuration step is to create a directory structure that will be used to classify your document set. You can use the structure automatically proposed by OpenERP from the menu *Knowledge → Configuration → Document Management → Directories' Structure*.

Directories' Structure						
NAME	TYPE	OWNER	COMPANY	STORAGE	DATE CREATED	DATE MODIFIED
Admin Folder	Static Directory	Administrator	OpenERP S.A.	Database storage	12/10/10	
Partners by Category	Folders per resource		OpenERP S.A.	Database storage	12/10/10	
Personal Folders	Folders per resource		OpenERP S.A.	Database storage	12/10/10	
Products	Folders per resource		OpenERP S.A.	Database storage	12/10/10	12/10/10
Projects	Folders per resource		OpenERP S.A.	Database storage	12/10/10	12/10/10
▼Sales Order	Static Directory		OpenERP S.A.	Database storage	12/10/10	
All Sales Order	Folders per resource		OpenERP S.A.	Database storage	12/10/10	12/10/10
Quotations	Folders per resource		OpenERP S.A.	Database storage	12/10/10	12/10/10

Figure 5.3: *Structure of directories when the document module has been installed*

In addition to the usual access to documents through OpenERP, you will be able to connect to them directly through the file system using the FTP protocol. To connect to the FTP server, use the following address:

Parameter	Value
Server	Your OpenERP server, for example 127.0.0.1
Port	8021
Path	The ‘/’ character, for the root
User	Your user account in OpenERP
Password	Your OpenERP password



FTP Server

These comments about an FTP server may appear a bit technical, but it is just a general standard for getting hold of files without worrying too much about the platform (Windows, Mac, Linux, or other Unix-like system). So FTP is just a way of getting access to files without needing to use an OpenERP client. There could have been other ways, but FTP proved itself to the developers to be the one that performed best at lowest cost.

Once you are connected using FTP, you get to the root of a directory for the document management system. Once you enter that directory you find a structure that matches the structure defined in OpenERP.

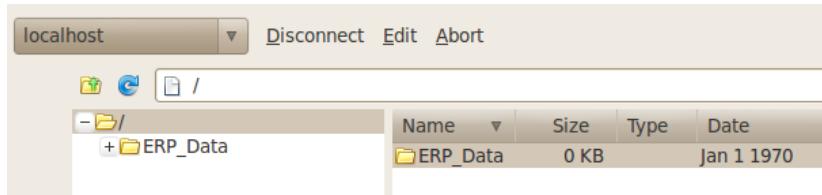


Figure 5.4: Root of the database directory seen through FTP

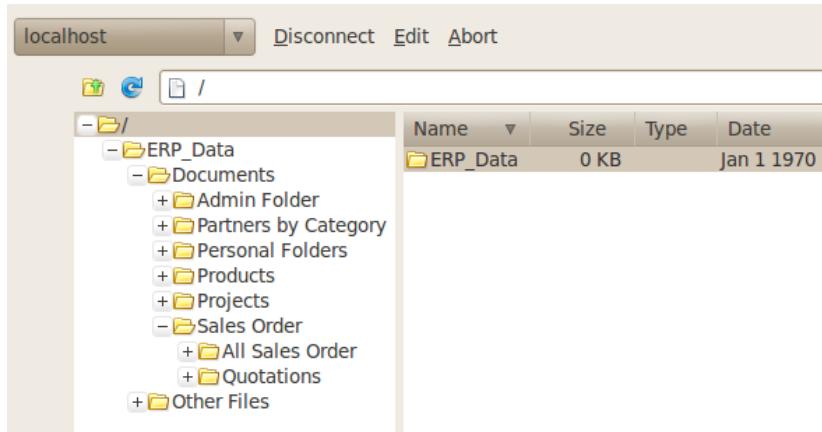


Figure 5.5: Structure of the directories in the document management system

5.5 Mapping between OpenERP Resources and Directories

Each directory can either have the type `Static` or `Folders` per resource. A static directory, as with operating systems, is the classic directory that can contain a set of files. On the other hand, the directories linked to systems resources automatically possess sub-directories for each of the resource types defined in the parent directory.



Directories in English

To keep them synchronized to the working language, directory names are not translatable. But OpenERP's demonstration data automatically creates directories in English. You can rename them through the menu *Knowledge* → *Configuration* → *Document Management* → *Directories*.

For example, you can look at the directory shown in *Documents* → *Sales Order* → *All Sales Order*. You will see the directory for all the orders present in OpenERP that was created automatically by the system.

Directories can follow a tree structure, like the tree of resources in OpenERP. For example, if you go to the directory *Documents* → *Projects* you will see the structure of the analytic accounts.

To define a directory containing a specific type of resource, you have to define parameters when you

★ Search: Sales Orders

Sales Orders helps you manage quotations and orders done with your customers. OpenERP suggests that you start by creating a quotation. Once the order is confirmed, the quotation is converted into a Sale Order. OpenERP can handle several types of products so that a sales order can trigger tasks, delivery orders, manufacturing orders, purchases and so on. Based on the configuration of the sale order, a draft invoice will be generated so that you just have to confirm it when you want to bill your customer.

Order Reference : Order date : Customer : Salesman :

QUOTATIONS	SALES	TO INVOICE	Order Reference	Order date	Customer	Salesman
			SO005	12/10/2010	China Export	Demo User
			SO004	12/10/2010	Ecole de Commerce de Liege	Demo User
			SO003	12/10/2010	Agrolait	Demo User
			SO002	12/10/2010	Bank Wealthy and sons	Demo User
			SO001	12/10/2010	Agrolait	Administrator

Figure 5.6: *Orders in OpenERP*

localhost /ERP_Data/Documents/Sales Order/All Sales Order

Name	Size	Type	Date
SO001	0 KB		Dec 16 21:20
SO002	0 KB		Dec 16 21:20
SO003	0 KB		Dec 16 21:20
SO004	0 KB		Dec 16 21:20
SO005	0 KB		Dec 16 21:20
SO006	0 KB		Dec 16 21:20

Figure 5.7: Directories representing all the orders in the document management system

define the directory itself:

- *Type* : Folders per resource
- *Resource model* : Choose one of the system objects
- *Domain* : an event filtered so that it sees only a subset of the resources
- *Tree Structure* : to show the resources hierarchically

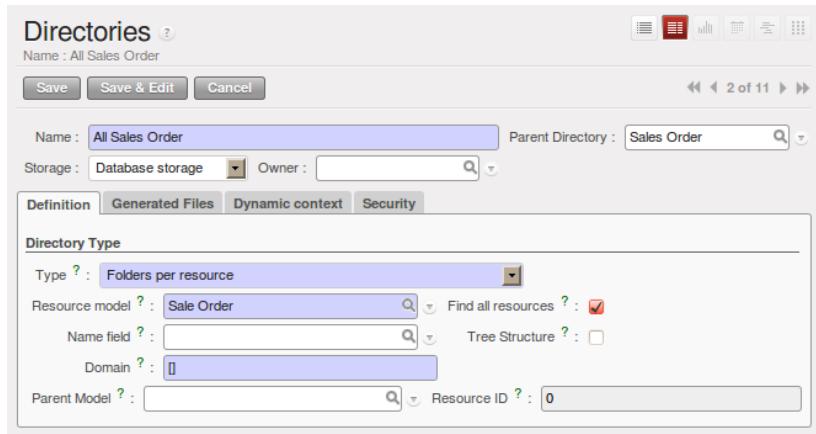


Figure 5.8: Configuration of the directory containing All Sales Orders

This is a very flexible approach because any modification of the resource in OpenERP is automatically reflected in the document management system. So when the quotation gets confirmed in OpenERP the directory no longer appears as a quotation through FTP access.

Here are some examples of directories linked to OpenERP resources that could be helpful when configured in the document management system:

- Quotations and Order: storing documents that relate to orders,
- Products: for storing products' technical datasheets,
- Users: to automatically define a directory owned by each user of the system,
- Employees: to store documents about employees, such as their CVs, your interview notes, contract details, and their annual assessments,
- Support Requests: storing items about requests or about technical support responses,
- Analytic Accounts or Project: to store project management and tracking documents.

5.6 Managing Attachments

As you see, you can connect any directory in the document management system to an OpenERP resource. The system then manages its creation and keeps the directory synchronized with the reports generated by OpenERP from its own data. You do not have to create or rename these directories because OpenERP does all this automatically as it resynchronizes with its own database.

You can then copy the files in the directories that correspond to any of the resources. The files are automatically attached to OpenERP's documents through attachment management. Conversely, if you attach a document to one of OpenERP's resources then that document will automatically become visible over FTP in the document management system.



File Storage

If you do not install the document management system then the files that are attached to an OpenERP resource are stored directly in the database. Once the document management system has been installed, the contents of the files are no longer stored in the database but are stored instead on the OpenERP server filesystem in a directory named 'filestore'.

You can then read and add attachments to OpenERP resources quite independent of the OpenERP interface or the FTP server using simple drag and drop.

5.7 Virtual Files

The most well-organized companies keep track of all the documents they have sent to customers in their document management system. It is very useful to be able to retrieve every document about a customer or a project. But the work of storing these documents can itself often take up quite a bit of time for staff. Each report must be saved in the document management system as well as be sent by email to the customer.

That is not the case in OpenERP. To automatically make OpenERP reports available in the FTP server, OpenERP automatically uses *virtual files*. You can put virtual files into directories that have the special type of *linked resource* and link the virtual files to OpenERP's reports.



Virtual Files

Virtual files do not actually exist in OpenERP but are made visible with a size of 0 in the FTP server. Once these files have been read by the client software, OpenERP prints the document related to this file and returns a PDF document linked to the resource.

When you copy or open a virtual file you print the selected resource. You do not then have to go and print a document through OpenERP – you just open the file containing that document in the document management system. The PDF file is then created in real time by OpenERP by reading the relevant data.

The screen *Virtual files for Sales Orders in OpenERP* (page 87) shows the parameters of the virtual files in All Sales Order. You define the virtual files using the name ORDERNUM_print.pdf, where ORDERNUM represents the reference to the order. To do this, you must check the option *Include Record Name* of the file for a directory. You can then find a virtual file for each report associated with an order.

The screenshot shows the 'Directories' screen in OpenERP. The title bar says 'Directories'. Below it, 'Name : All Sales Order' is displayed. There are 'Save', 'Save & Edit', and 'Cancel' buttons. On the right, there are navigation icons and a page number '2 of 11'. The main area has fields for 'Name' (set to 'All Sales Order'), 'Parent Directory' (set to 'Sales Order'), 'Storage' (set to 'Database storage'), and 'Owner'. Below these are tabs: 'Definition' (selected), 'Generated Files', 'Dynamic context', and 'Security'. A note says 'For each entry here, virtual files will appear in this folder.' Under the 'Definition' tab, there's a table with columns 'SEQ.', 'CONTENT NAME', 'SUFFIX', and 'DOCUMENT TYPE'. One row is shown: SEQ. 1, CONTENT NAME 'Print Order', SUFFIX '_print', and DOCUMENT TYPE 'PDF Report'. Navigation arrows at the bottom indicate '1 - 1 of 1'.

Figure 5.9: *Virtual files for Sales Orders in OpenERP*

To see the effect of this configuration, connect to the FTP server and go into a directory for an order such as *Documents* → *Sales Order* → *All Sales Order* → *SO003*. You can then just click the file *SO003_print.pdf* to get a printout of Order SO003. You can attach it to an email or put it on your desktop.

This system of virtual files is very useful in a lot of situations. For example, if you must quickly re-send a quotation to a customer, you do not have to open OpenERP, you can just attach the relevant virtual file to your email.

Importantly, once files have been read or copied, they become real files, taking up real space, rather than just virtual. This means that you can keep a legal record of all documents that have been created

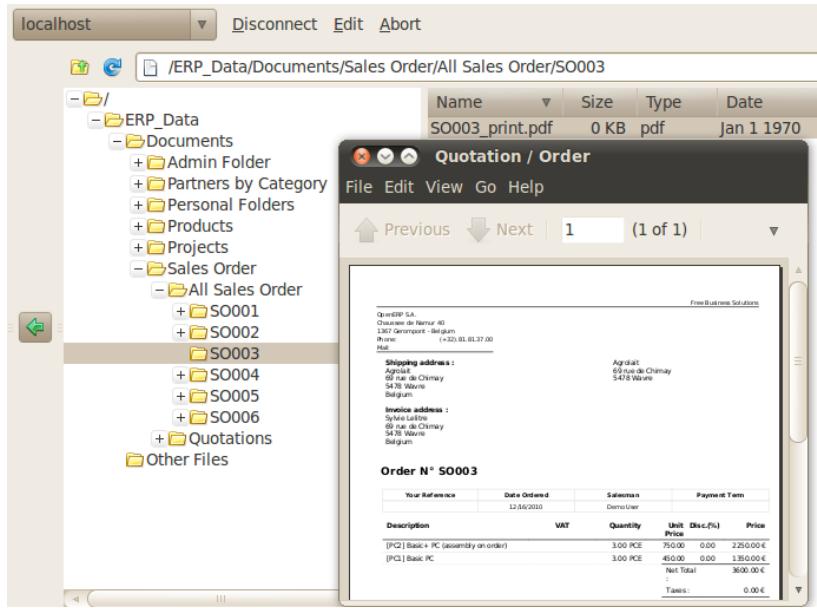


Figure 5.10: Virtual files for Sales Orders through FTP

and sent to customers and suppliers.

5.8 Standardizing Structures

You now have a configuration that enables you to automatically get a directory structure linked to OpenERP for each resource, such as for projects and orders. The ideal situation would now be to automatically structure the documents about projects, say for example, you could classify them depending on their type:

- Quotations,
- Meeting Minutes,
- Delivery Documents,
- Documentation.

OpenERP provides you with a system that lets you create a structure type for each type of a given document. It then provides that classification for all documents in the directories structured in that type.

So create the structure above for your project management system. To do that, create the four directories above and give them the following data:

- **Type :** Static Directory,
- **Parent Model :** Analytic Account.

Then in each project (represented by analytic accounts) you will get this substructure for organizing your documents efficiently.



Mapping

In practice, OpenERP does not create directories or files for every resource. It actually manages this by mapping between OpenERP resources and the FTP interface.

This approach gives a lot of flexibility because there is no synchronizing to do, nor any redundancy. Changes in either the document management system or in OpenERP will automatically be reflected over in the other side.

And system resources are obviously not used up by storing things twice.

Once a new project has been defined in OpenERP, the system automatically creates a directory corresponding to the project in the right place in the document management system, and creates a structure type there for classifying documents.

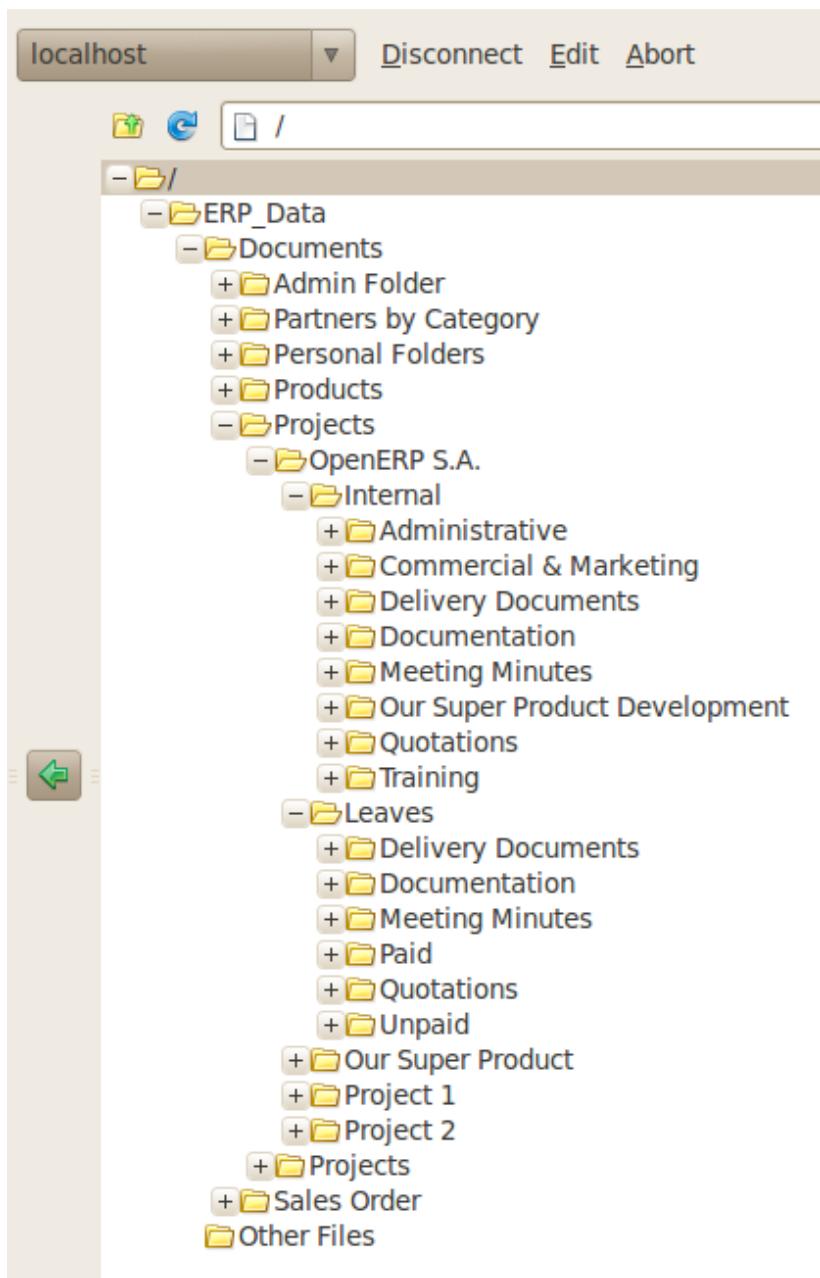


Figure 5.11: Substructure common to all projects

5.9 Optimizing Document Management

All documents produced by OpenERP are automatically indexed and classified for maximum efficiency. There is an ultra-rapid access to documents, which are directly available from your email client or the company management software. The user access rights are managed just the same way as those that are available in the company management system. All these features help you to get the best out of OpenERP's document management system.

5.9.1 Searching for Documents

You have seen several methods of accessing documents quickly:

- From attachments to an OpenERP resource,
- Through FTP access to OpenERP,
- Using the menu *Knowledge → Document Management → Directories' Structure*.

But if you do not know where a specific document can be found, OpenERP also has a search tool integrated into its document management to simplify your search. To search for a file, use the menu *Knowledge → Documents → Documents*. You get to a document search view that lets you search amongst all the attachments and all the documents in the FTP server.

You can search for a file using various different criteria:

- The attachment name,
- The attachment type,
- The filename,
- The owner of a file,
- The directory that it is found in,
- The indexed content.

Notice here an important advantage for an integrated document management system. Information such as which partner is associated with a document is automatically detected by OpenERP when the document has been stored in a directory. This information is never input by the user – it is detected automatically using the information about the resource when it is being saved as a file.

But your search is not limited to these few fields. You can also search on the content in the files. Each file is automatically indexed by the system to give you a search engine rather like Google's on the whole set of company documents.



Supported File Formats

The OpenERP document management system can index the following file formats:

- **TXT** : text files,
- **PDF** : PDF files,
- **SXW** : OpenOffice V1 files,
- **ODT** : OpenOffice V2 files,
- **DOC** : Microsoft Word files.

The other file formats are properly handled in the document management system, but their content is not indexed automatically.

This functionality is very significant. All you need to do is search for a partner name or an order number to automatically get all the documents that are referenced there. And you can use a fragment of text to find the document you need from within that subset.

5.9.2 Integration with Emails

Using Outlook and Thunderbird

OpenERP's document management system is well-integrated with popular email clients like Microsoft Outlook and Mozilla Thunderbird. For this, you can install the required plugins available in OpenERP, usually made available when you install and configure `crm`. Or you may install `outlook` or `thunderbird` module according to your requirement, and take advantage of its compatibility with OpenERP's documents. For more on this, refer *ch-commtools*.

5.9.3 Working with Users' Changes

To make the document management system's use as unobtrusive as possible, the system's users should easily be able to store all the documents that they produce or receive from their customers and suppliers. So OpenERP supplies dashboards to help system users approve their acceptance of such documents.

So you will find two dashboards in the menu *Knowledge → Reporting → Dashboard*. One dashboard is for the document management system manager and one dashboard is for tracking use by different users.

The first lets you track the changes to documents by month, by customer and by type of resource. You could also quickly assess the use that is made of the system by the various users.

The second dashboard shows you how different employees use the system. You can see the number of files sent by each user and who uses the document management system the least. That tells you

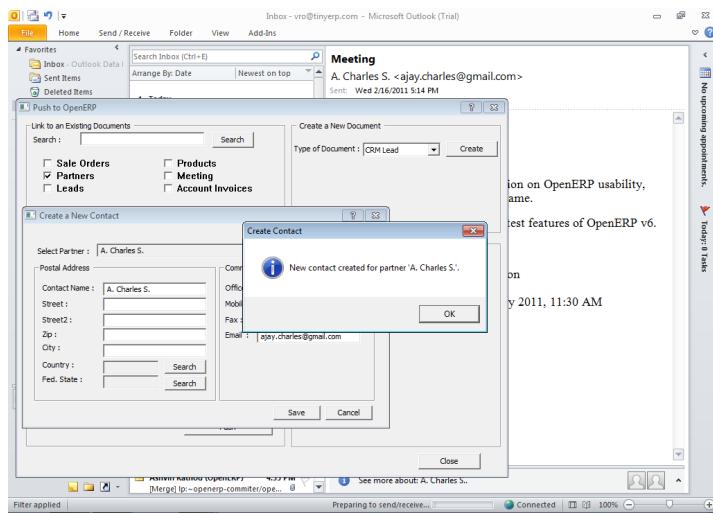


Figure 5.12: Creating a new contact through the Document Management System from Outlook

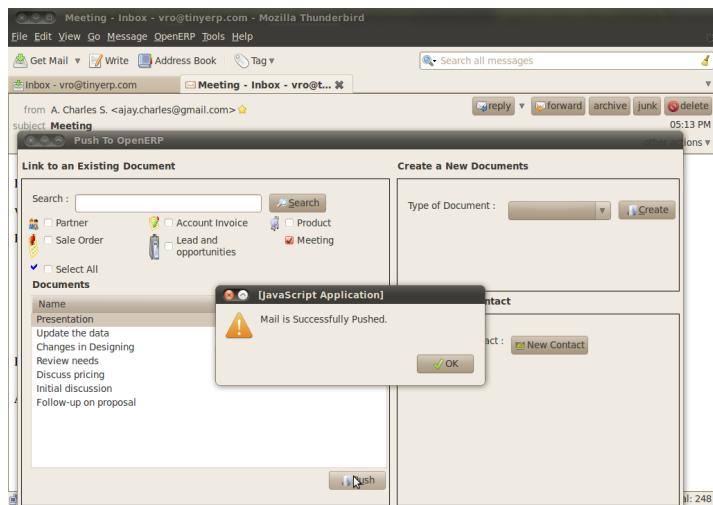


Figure 5.13: Pushing an attachment in the Document Management System from Thunderbird

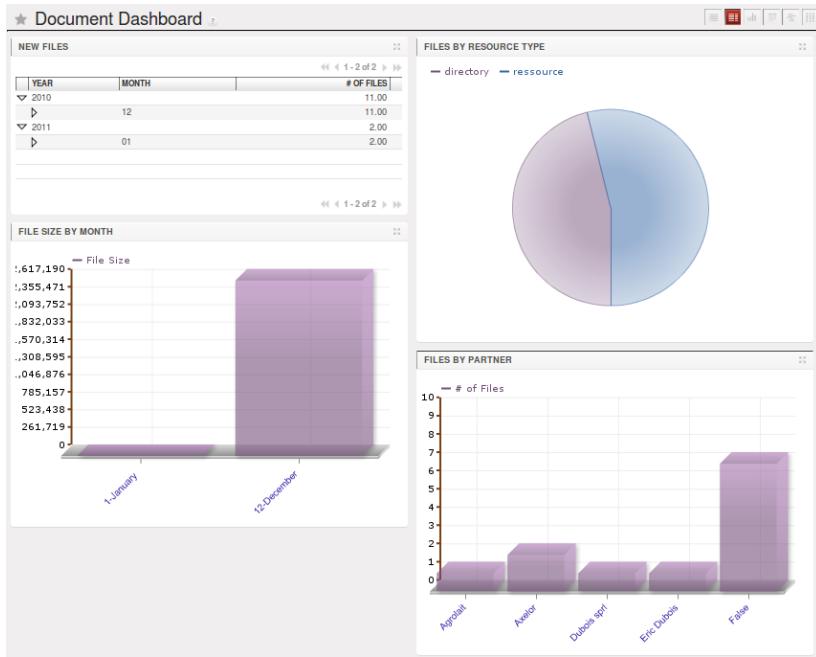


Figure 5.14: Dashboard for the document management system manager

something about your user training and whether you need to do something about changing work methods.

5.9.4 Version Management

There is usually a need to keep track of all the important documents that you have printed. For example, when you send an invoice to a customer it is a good idea to store a copy of that invoice internally in paper or electronic form. Then you can reprint it exactly in the same format as when you sent it, even if the company's details have changed in the meantime.

To do this, OpenERP can automatically store as attachments the different reports printed by users. By default, only invoices are saved as attachments, and they are saved when they are printed. That is because they are commonly legally required.

But you can configure the system so that it does not matter which type of report is printed - they can all be stored automatically. To activate that functionality on another type of report, modify this in the menu *Administration → Low Level Objects → Actions → Reports*. To be able to access this menu, the user should be added to the group *Usability / No One*.

Select the report that you want to change and complete the field *Save As Attachment Prefix*. Once you have done that, each document print action will automatically be saved as an attachment to the document.

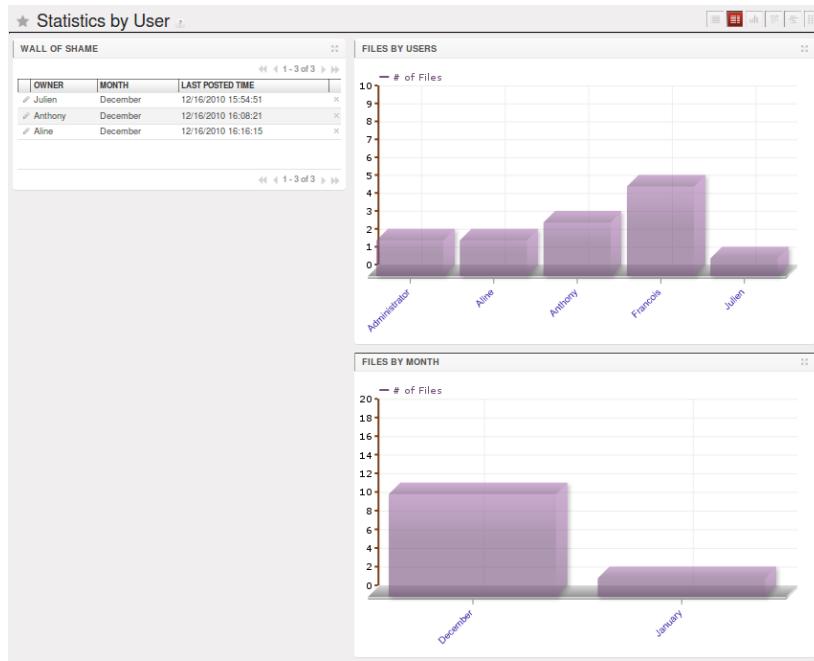


Figure 5.15: Dashboard for the document management system analyzed by user

Report ?
Name : Quotation / Order

Save Save & Edit Cancel ◀◀ 1 of 1 ▶▶

Name : Object : Action Usage :
 Service Name : Report Type ? : Report file ? :

Other Configuration Security

RML Report **XML Report**

Add RML header ? : XSL path :

Attachments **Miscellaneous**

Save As Attachment Prefix ? : On multiple doc. ? :
 Reload from Attachment ? : Custom python parser :

Figure 5.16: Modifying the definition of a report

Index

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 hr_holidays_request, 65
 hr_recruitment, 31
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