



TOOLKIT

**EMPOWERMENT
THROUGH OPEN
SOURCE**

**A TOOLKIT FOR
DIGITAL SKILL
DEVELOPMENT IN
MSMES AND
THIRD SECTOR
ORGANIZATIONS**





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INTRODUCTION

Third sector organizations (TSOs) in many EU countries, including voluntary and community organizations, social enterprises, mutuals, cooperatives, and micro, small and medium enterprises (MSMEs), lag significantly in digital capacity. Contributing factors may include a shortage of suitable funding, very low income and lack of skills. Digital transformation for these organizations is inevitable. Without the necessary digital skills, knowledge, and tools, they will struggle to support their communities effectively and remain sustainable. The main objective of DigitOpen is to support a more modern, dynamic, committed, and professional environment inside the TSOs and MSMEs and by leveraging the open-source (OS) approach to boost their digital transformation. This will be achieved by integrating good practices and new methods and tools including digital capabilities into daily activities, in line with identified individual needs and organizational objectives.

The main **objective of the DigitOpen Toolkit** is to provide practitioners of TSOs and MSMEs with essential knowledge and practical skills in using open-source software (OSS) to enhance organizational efficiency, resource saving and cybersecurity. The modules cover key tools like Tryton ERP, Odoo, NextCloud, Joomla, Omnisend, ProjectLibre, and Bitwarden, focusing on their application in managing events, projects, marketing, communication sales and securing digital assets. By emphasizing end-user education and practical strategies, the modules aim to enable employees and volunteers in MSMEs and TSOs to implement effective solutions with minimal technical expertise. Also, to facilitate the vocational sector with easy-to-use training material on OSS importance and usage.

The Training Objectives of the DigitOpen Toolkit

The DIGITopen toolkit is designed to address the following training objectives:



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- ✓ **Objective #1:** To increase the capacity building of TSOs and MSMEs to better address their staff needs and develop synergies with VET providers
- ✓ **Objective #2:** To improve the staff's digital knowledge, skills and competences in using Open-Source Tools and software in line with organizational needs (e.g. management, accounting, marketing, education, internationalization etc.)
- ✓ **Objective #3:** To develop structured training for supporting TSOs and MSMEs' staff in their digital transition through Open-Source approach
- ✓ **Objective #4:** To create awareness, and collaborative learning in the TSOs and MSMEs to move towards the digital autonomy
- ✓ **Objective #5:** To enrich the educational offer of VET providers with regards to the development of Open-Source digital skills for TSOs and MSMEs.

The Key Components of DigitOpen Toolkit

The DigitOpen Toolkit has been designed and developed to offer effective training and capacity development experience for the practitioners of TSOs and MSMEs. To achieve this, it has incorporated the following components:

- Covers the most important topics particularly relevant to the sustainability of TSOs and MSMEs including management, marketing, communication, sales, cybersecurity, project management and event management.
- All modules provide a range of training material and resources to facilitate varied learning preferences.
- Provides a user-friendly training tool, specifically tailored to the needs of the TSOs and MSMEs practitioners which are structured around identified job activities and roles within the targeted organizations.



- Offers interactive elements and multimedia content to make the toolkit interesting and enjoyable. These include videos, tips, case studies, learning tasks, extra readings, reflection questions and assessment.

DigitOpen Toolkit Structure

This toolkit is structured around 7 modules as follows:

Module 1 titled *“Navigating OSS: An Introductory Guide for TSOs and MSMEs”* sets the ground knowledge by defining Open-Source Software (OSS) and its importance and evolution over the years. It presents briefly the key differences of OSS compared to proprietary software, along with the principles of the OSS approach and culture and the EU digital policies supporting adoption within the member states with specific initiatives. Furthermore, the module extends to present the relevant OSS licenses, tools and platforms for development.

Module 2 titled *“OSS Applications for the Management & Administration of TSOs and MSMEs”* introduces the relevant professionals to free and secure software solutions for managing the TSOs and MSMEs. It presents how to configure and use the 'Tryton ERP' for accurate invoicing and business transaction coordination, and the 'NextCloud' for file synchronization, sharing, and accessing documents from any device. Additionally, it presents the various applications that NextCloud offers to extend its functionalities and customization.

Module 3 titled *“OSS Applications for the Marketing and Communication of TSOs and MSMEs”* presents two open-source marketing tools, Joomla and Omnisend, that focus on building a community around a project or product by engaging with the right audience. Joomla excels in versatile content management and customization, while Omnisend specializes in e-commerce marketing automation, offering tools like email and SMS automation and personalized messaging for MSMEs and TSOs.



Module 4 titled *“OSS Applications for the Project Management of TSOs and MSMEs”* equip learners with comprehensive knowledge and practical skills in using open-source software for project management. Focusing on ProjectLibre, a prominent OSS tool, this module aims to enable participants to adopt a work and resource-based breakdown approach to streamline project oversight, enhance planning and monitoring, and optimize resource management within their *TSOs and MSMEs*.

Module 5 titled *“OSS Applications for the Cybersecurity of TSOs and MSMEs”* introduces cybersecurity fundamentals, by emphasizing end-user education and featuring Bitwarden, an open-source password manager. The module underlines the importance of password security in protecting digital assets and presents the basic cybersecurity concepts and key tools for information security. Also, it provides simple and effective strategies for employees and volunteers of *TSOs and MSMEs* to prevent cyber risks, rather than training them to become cybersecurity experts.

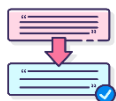
Module 6 titled *“OSS Applications for the Event Management of TSOs and MSMEs”* presents the advantages of Odoo for event management. Specifically, it guides the practitioners to publicize typical preparatory event related activities such as event presentation, event program, event speakers using Odoo. Also, instructs practitioners to use Odoo for communication purposes and for managing contacts, event announcements and event registration.

Module 7 titled *“Advanced Sales Management using EspoCRM”* covers the sales management capabilities of TSOs and MSMEs by leveraging the EspoCRM tool which is an open-source tool. Practitioners learn how to use EspoCRM to automate sales, contacts and accounts and track them through the sales pipeline.



MODULE DGO1: Navigating OSS: An Introductory Guide for TSOs and MSMEs

1.1. Introduction to Open-Source software (OSS)



Open-Source Software (OSS) refers to software that is distributed with its source code made available to the public. This allows anyone to inspect, modify, and enhance the software. Unlike proprietary software, which restricts access to its source code, OSS fosters an open environment where collaboration and innovation are encouraged.

The concept of OSS dates back to the early days of computing. In the 1980s, Richard Stallman launched the GNU Project and later founded the Free Software Foundation (FSF), which aimed to develop a complete Unix-like operating system that was free to use and modify. This movement gained momentum with the release of the Linux kernel by Linus Torvalds in 1991. Together, GNU and Linux formed a fully functional operating system, popularly known as Linux. Over the years, OSS has evolved into a robust ecosystem with a wide range of applications, from operating systems to office suites and web servers.

Importance of OSS in Today's Digital Landscape

OSS is crucial in the modern digital world for several reasons:

- **Cost-Effective:** Reduces the need for expensive software licenses.
- **Security:** Open code allows for extensive peer review, leading to more secure software.
- **Flexibility:** Users can modify software to meet their specific needs.
- **Community Support:** Large communities provide support, improvements, and updates.
- **Innovation:** Promotes innovation through collaborative development efforts.





Have a look [at this video](#) that tells you more about the rise of OSS.



Food for thought

There are common misconceptions about OSS. The main one is that OSS is always free of costs. Going back to the Free Software Movement, although slightly different from OSS, we can see an interesting reflection that can help us understand it:

“Free software” is a matter of liberty, not price. To understand the concept, you should think of “free” as in “free speech,” not as in “free beer.”



Check this out!

Local agribusiness adopts open-source software to reduce costs

Agripreneur Maria runs a small agribusiness producing organic vegetables. She struggled with high costs for proprietary software to manage inventory, track sales, and maintain customer records. After learning about Open-Source Software (OSS), she adopted an open-source solution like Odoo to manage her business. Not only did this reduce her operating costs, but it also allowed her to customize the software to suit her specific needs. Within a year, Maria reported a 20% increase in efficiency and better control over her inventory.

For small businesses with limited budgets, adopting OSS tools can significantly reduce software expenses while offering flexibility for customization.

After the completion of this module, you will

- ✓ be introduced to the open-source culture and the principles guiding the approach and OS culture



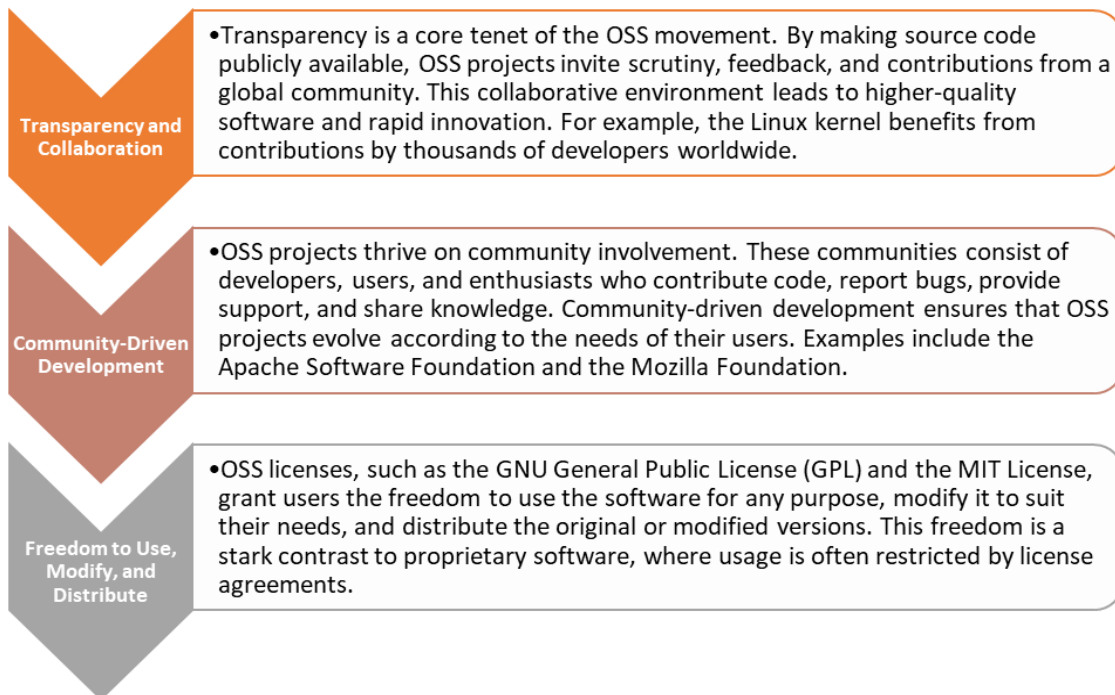
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- ✓ have a good understanding of the EU policy context supporting open-source
- ✓ become acquainted with the open-source software development approach and what are its advantages

1.2. Key Principles of the Open-Source Approach and Culture



Although not all the OSS are equal in terms of access, costs and license, there are some key principles that are shared across the OSS ecosystem. The main ones are:



Check this out!

Examples of Successful OSS Projects

Linux: A versatile operating system kernel used in servers, desktops, and mobile devices.



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Apache HTTP Server: Powers a significant portion of the web, known for its reliability and performance.

Mozilla Firefox: A web browser that emphasizes privacy and user control.

LibreOffice: An office suite offering word processing, spreadsheets, presentations, and more, compatible with other major office suites.



Practical Activity

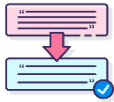
Carefully read the provided text on the open-source way [here](#). Focus on understanding its definition and principles. Write a short essay (200-250 words) reflecting on how the principles of the open-source way could be applied to a project or organization you are familiar with. Discuss potential benefits and any misconceptions that might need addressing.

Quick Recap (choose the correct answer):

1. What does transparency mean in the context of OSS?
 - A) The source code is open for anyone to inspect, modify, and contribute to.
 - B) Only trusted developers can access the code.
2. How does community-driven development benefit OSS projects?
 - A) It slows down innovation.
 - B) It encourages more contributors to improve the software over time.



1.3. The EU Policy Context Supporting the Open-Source Approach



Overview of EU Digital Policies

The European Union (EU) has recognized the importance of OSS in fostering innovation, ensuring digital sovereignty, and promoting competitiveness.

Policies and frameworks have been established to encourage the adoption and development of OSS within member states. Since 2017 an **EU OSS Strategy** has been developed. The latest update of the strategy, the *Open source Software Strategy 2020-2023 “Think Open”* represents the key policy document for the European Union as it defines the key objectives and the concrete actions to be implemented. The key objectives of the new strategy are to enable the European Commission (EC) to:

- Progress towards digital autonomy of Europe’s own, independent digital approach;
- Implement the European Commission Digital Strategy;
- Encourage sharing and reuse of software and applications, as well as data, information and knowledge;
- Contribute to the knowledge society by sharing the European Commission’s source code;
- Build a world-class public service;

The implementation of the strategy will be guided by 6 principles: **think open, transform, share, contribute, secure, stay in control**. In practice, the EC aims to reinforce an internal working culture that is already largely based on the principles of open source and achieve the goals of the strategy.



Additional Information

If you want to dive deeper into the strategy, you can find the full document [here](#).



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Furthermore, a specific initiative supported by the EU bodies exists and complements the EU OSS strategy.

Specific Initiatives and Frameworks Promoting OSS

- a) [European Interoperability Framework \(EIF\)](#): Promotes interoperability across public administrations using open standards and OSS.
- b) [ISA² Programme](#): Focuses on creating interoperable digital solutions that can be reused by public administrations, businesses, and citizens.
- c) [Open-Source Observatory \(OSOR\)](#): Facilitates the sharing and reuse of OSS among European public administrations, offering a repository of OSS projects and best practices.

Have a look below, you will also find EU initiatives and tools that promote OSS!



Focus

[EURL \(European Union Public License\)](#): Encourages the sharing and reuse of software developed by public administrations across the EU.

[Joinup](#): A collaborative platform created by the European Commission to share and reuse IT solutions, including OSS, fostering cross-border and cross-sector collaboration.



Practical Activity

Identify a digital challenge that your organization faces, such as high software costs or the need for customization. Propose a practical solution to this challenge. You can use information from European frameworks and initiatives as inspiration.

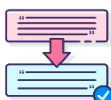


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Quick Recap (choose the correct answer):

1. What is one of the primary goals of the EU Open Source Software Strategy 2020-2023?
 - A) Increase reliance on proprietary software.
 - B) Promote digital autonomy and reuse of OSS.
2. What is the European Interoperability Framework (EIF)?
 - A) A set of guidelines to encourage cross-border sharing and use of open standards and OSS.
 - B) A licensing system for proprietary software.

1.4. Key Elements of Open Source Software Development



Open-Source Licenses and Their Implications

Understanding OSS licenses is crucial for legal compliance and maximizing the benefits of OSS. One might think that a user can do whatever he/she likes with an OSS and that such a software is always free of costs. So how do we understand and make the correct use of OSS thus contributing to the OSS ecosystem? **Licenses** are the legal basis to ensure that the use of OSS is regulated and implemented in the right and fair way.



Have a look [at this video](#) about licenses to understand more about them.

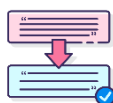
Key licenses include:

License	Main features	Example use
GNU General Public License (GPL)	Ensures modified versions remain open.	Linux OS



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MIT License	Permissive, allowing use with minimal restrictions.	Small web apps
Apache License 2.0	Ensures patent rights, allows any use.	Cloud platforms



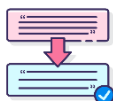
Tools and Platforms for OSS Development

Although you might not be a software developer, understanding the tools and procedures of the OSS development approach, can help you in sharing the vision and mission of the OS community. Here are some key platforms used by the OSS developers:

GitHub: A platform for hosting and collaborating on OSS projects, offering version control, issue tracking, and community engagement.

GitLab: Similar to GitHub, with additional features for integrated DevOps practices.

Bitbucket: Supports Git and Mercurial repositories, providing a collaborative environment for development teams.



Best Practices for OSS Project Management

Successful OSS project management, development and contribution to an OSS project, involves:

Clear Documentation	Comprehensive documentation helps new contributors understand the OSS project and contribute effectively.
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Open Communication Channels	Tools like mailing lists, forums, and chat platforms facilitate communication and collaboration.
Regular Updates	Consistent updates and maintenance ensure that the software remains relevant and secure.
Engaging with the OSS community	Encouraging contributions and feedback from the community enhances the project's quality and usability.

Active participation in the OSS community can provide valuable support and collaboration opportunities and it is at the core of the OSS environment. Ways to engage may include:

Contributing to Existing Projects	Submitting code, reporting bugs, and improving documentation.
Participating in Forums and Mailing Lists	Sharing knowledge and seeking advice.
Attending OSS Events	Conferences, meetups, and hackathons offer opportunities to learn and network with other OSS enthusiasts.

Quick Recap (choose the correct answer):

- Which OSS license ensures that modified versions of the software remain free?
 - A) GNU General Public License (GPL)
 - B) MIT License
- What platform is widely used for hosting OSS projects and collaborating with developers?
 - A) GitHub
 - B) Facebook



1.5. Comparison Between OSS and Proprietary Software



For the sake of this toolkit, the DigitOpen project does not aim to claim the superiority of OSS over proprietary software. On the contrary, the aim of the project and the utility of this toolkit is to inform MSMEs and TSO that an alternative exists, and it is actually as valuable as proprietary software. Here below we list some of the key implications an organization should consider when adopting a software, proprietary or open source:

Feature	OSS	Proprietary Software
Cost	Free or low-cost	Expensive licensing fees
Customization	Fully customizable	Limited to vendor options
Security	Peer-reviewed, transparent	Dependent on vendor updates
Support	Community-based with optional paid support	Vendor-provided support
Vendor Lock-In	No vendor dependency	High risk of vendor lock-in

When coming to the specific benefits for MSMEs and Third Sector Organizations, the adoption of OSS can lead to significant advantages:

Cost Savings: Reduces or eliminates software licensing fees.

Customization: Enables tailoring of software to meet specific needs.

Security: Enhances security through transparency and peer review.

Support: Access to a broad base of community support and professional services.



Have a look [at this video](#) and check what could be valuable OSS alternatives to common software that also your organization might be already using.



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Reflection Questions

Found anything interesting? Are you using any of the tools you saw in the video? Would you try any of the alternative proposed ?

Case study on the adoption of OSS in an MSME

The Unscented Company, launched in 2016 and based in Montreal, Canada, sells a complete line of natural home and body care products that are biodegradable and exclusively fragrance-free. This includes everyday products such as shampoo, conditioner, body wash, laundry detergent, and dish soap.

The Unscented Company's typical workflow when it comes to their products involves a lot of ins and outs. While the company doesn't own any of the manufacturing process, and instead works with contract sellers, it purchases and stores all of the components before manufacturing. This includes items such as labels, bottles, and caps that they then send to their contracted fillers along with the raw "ingredients" of the products. The products are then assembled by the contracted fillers.

The positive impact of Odoo has been tangible for the company: **after launching in 2021 with the software, The Unscented Company has gone from \$100,000 in online sales to \$1.2 million due to the connectivity that Odoo provides.** They were able to grow their B2C business seamlessly, and the write-off for their inventory is less than 1%.

What were the challenges the company was facing before adopting Odoo? Why is having an efficient ERP system fundamental also for a small enterprise? Read the ["The Unscent Company" story](#) and find valuable insights!



Additional Information about Odoo

Odoo is a suite of open-source business apps that cover all company needs: CRM, eCommerce, accounting, inventory, point of sale, project



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management, etc. Odoo's unique value proposition is to be at the same time very easy to use and fully integrated. A smooth and friendly user's experience that has been built to ensure the user seamless adoption. The flexibility of Odoo is such that apps can be added according to the growth of a company, adding one app at a time as the needs evolve and the customer base grows. Thanks to the open source community, Odoo is actively maintained by a large base of developers to meet evolving customer needs and provide new, innovative applications

Case study on the adoption of OSS in a TSO

The Scottish Book Trust and Suit CRM

The Scottish Book Trust is a national charity that believes reading and writing for pleasure has the power to change lives. Bringing the benefits of reading and writing to everyone in Scotland since 1998, the charity delivers world-class programmes and annual awards to well over two million people. From introducing books and storytelling to preschool children, to inspiring and empowering adult readers and writers, the charity works with a diverse range of audiences. With a broad range of programmes, Scottish Book Trust required a stable, easy-to-adapt platform that could grow with them in a cost-efficient way to support the day-to-day workflow of their teams. Scottish Book Trust required a CRM system which allowed for the better management and communication with a range of contact groups, and to support them in streamlining their programme management, as well as managing fundraising workflow and donations all currently stored in separate systems. The new CRM was seen as a crucial tool to efficiently manage communication, monitoring, and reporting. Have a read [at the full case study](#) to understand the key problems solved and the advantages of the tool!





Additional Information about SuiteCRM

It is the world's most popular open source CRM with over 900.000 downloads and an estimated 4.5 million users worldwide. Key features include sales, marketing, and service modules. SuiteCRM is a valuable option for enterprises and organisations looking for professional SuiteCRM services, such as migrations, consulting, or training

Quick Recap (choose the correct answer):

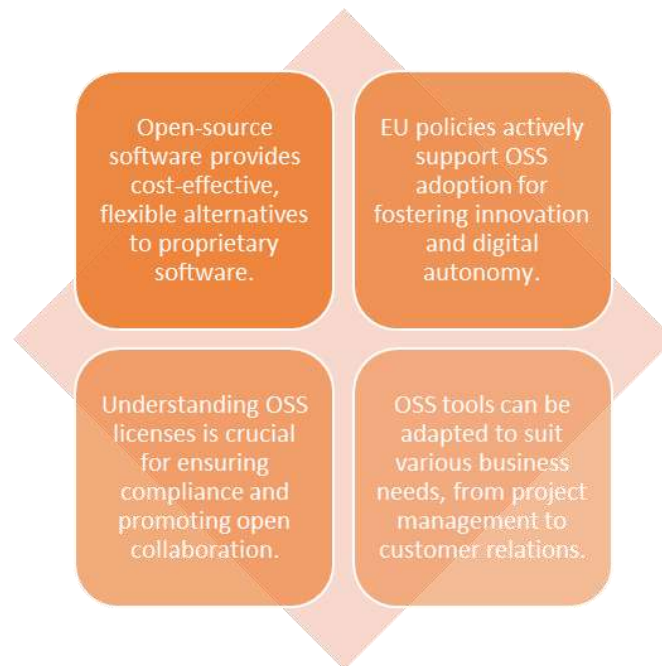
1. What is a key advantage of OSS over proprietary software?
 - A) It can be modified freely to fit specific needs.
 - B) It is locked into one vendor's system.
2. How does OSS help organizations avoid vendor lock-in?
 - A) By relying on a single vendor for updates.
 - B) By providing freedom to switch providers or self-manage the software.

1.6. Summary

In this module, we explored the fundamentals of Open-Source Software (OSS), its history, and its benefits for MSMEs and TSOs. You learned about the key principles of OSS, such as transparency, collaboration, and the freedom to modify and share software. We examined the EU's role in promoting OSS and discussed how OSS development processes work, including licensing and project management best practices.

Key takeaways from this module include:





By embracing open-source solutions, businesses can reduce costs, enhance security, and contribute to a growing community that fosters innovation and transparency.

To further explore these concepts, use the interactive activities and case studies provided throughout the module.

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MODULE DGO2: OSS Applications for the Management & Administration of TSOs & MSMES

2.1. Introduction



In this module, we will present two **open-source solutions** to **manage your business** in an **easy, practical, and secure way!**

But first, try to reflect on the current state of the business administration tools you use on a daily basis.

- How and by what means do you manage administrative tasks, such as accounting and invoicing in your company?
- What tool or platform do you use for teamwork and file sharing among your collaborators?
- Do you feel comfortable with these tools?
- Are you aware of weaknesses and strengths?

Maybe you still use word, excel or a spreadsheet to produce and edit your invoices, or Google Drive, One Drive to share documents, but are they still the smartest methods and the best and safest solutions?

The purpose of this module is to let you know that there are free and secure solutions, other than those mentioned, that you can use to administer and manage your company. You will learn how to configure and use the **'Tryton ERP'** invoicing software and the **'NextCloud'** collaboration tool. These solutions may facilitate your daily activities and enable you to better organise and administer your company. With a simple **step-by-step guide**, you will discover how to **easily use these tools** with **minimal effort** and **basic IT skills**.



You will be acquainted with the use of Tryton ERP and how it contributes to the accurate and efficient invoicing ensuring the smooth running of many business transactions. This includes coordination with sales and customer service departments, as well as compliance with financial regulations. You will also discover how to synchronize, view, share and access files and documents, as well as calendars and contacts, from all devices, using NextCloud. NextCloud offers a list of other applications (modules) that can extend functionalities (see here: <https://apps.nextcloud.com>).

Before diving into this module, make sure you have some skills. In terms of **accounting skills**, you should be able to identify needs, research and analyze information, understand the mandatory information required on an invoice along with additional legal details, and be familiar with your company's tax situation according to your country's regulations. In terms of **computer skills**, you must be capable of downloading and installing software, as well as importing and saving files.

Why to choose Tryton ERP (Enterprise Resource Planning)

Enterprise resource Planning - ERP¹ is the simplest, most comprehensive solution for streamlining operations and automating day-to-day tasks such as accounting, sales management and inventory management.

Tryton is an **easy-to-use, comprehensive** and **open-source ERP software** package, ideal for companies of all sizes. It is multi-device, and can be used from your cell phone, your computer directly via a

Other Open-Source ERPs

Odoo: ERP with two versions: a Free Software community version (<https://github.com/odoo/odoo>) and an Enterprise version (<http://odoo.com>). The enterprise version is more complete and Open Source, but requires a subscription.

Doolibar: Free Software ERP

¹ ERP (Enterprise Resource Planning) is a type of software that helps businesses manage and automate key functions like finance, human resources, manufacturing, supply chain, and customer relations. It integrates various business processes into one system, improving efficiency and data accuracy.

browser anywhere in the world, or from the client software previously installed on your desktop computer.

Open-source accounting software offers **four distinct advantages** including:

- potential cost savings,
- the possibility of customisation,
- transparency in accounting practices, and
- the possibility of correcting technical flaws in the software.

Why to choose the NextCloud collaboration tool

The term "**collaborative tool**" refers to software running on servers hosted in datacenters around the world, or on in-premise servers. They **enable information to be shared** between company staff and external correspondents under certain conditions. A collaborative tool enables users to **access the same files and information** from almost any device anywhere in the world. **Nextcloud** provides

open-source alternatives to commercial cloud storage solutions like Amazon AWS, Google Drive, or Apple's iCloud.

NextCloud is an **Open Source software** offering a **complete, safe and secure solution**; usable from your browser, via any computer or PDA (Smartphone, tablet, etc). In addition to the synchronization and sharing of files, calendar and contacts covered in this module, there are other complementary applications such as videoconferencing (talk) and an e-mail client (Mail) that extend its functionalities.

Other Open-Source collaborative tools

Offer fewer possibilities than Nextcloud, or not all of them are Free.

Seafile: File sharing (<https://www.seafile.com/en/home>).

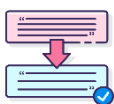
Owncloud: The Nextcloud ancestor (<https://owncloud.com>).



After the completion of this module, you will

- ✓ Understand the benefits of Open-Source Software in the field of management and administration
- ✓ Learn how to use the software Tryton ERP for invoicing
- ✓ Discover the key functionalities of NextCloud to optimise team collaboration
- ✓ Develop key management skills, such as efficiency, organisation, teamwork, and time management.

2.2. Billing management with Tryton ERP and Tryton software configuration



Case A :

Suppose you work for a small or medium-sized enterprise. Recently, your business has been growing rapidly, resulting in a significant increase in the number of invoices. However, your current system, based on using Word or Excel for invoicing, lacks the functionality to quickly and easily edit new invoices as well as the flexibility to effectively monitor late payments. As a result, you have encountered several difficulties that have hampered its efficiency and growth as described below.

Challenges Faced:

1. **Manual Errors:** Frequent mistakes in calculations and data entry due to manual processing. Errors in invoice numbers and customer details, leading to confusion and delays in payments.
2. **Time-Consuming Process:** Significant time spent on creating and managing invoices.
3. **Lack of Integration:** Disconnected systems for accounting, inventory, and sales made it difficult to track financial health accurately.
4. **Scalability Issues:** The volume of invoices increased with business growth, making Word and Excel cumbersome and inefficient. Difficulty in managing and organizing a growing number of documents.



5. Inconsistent Professionalism: Invoices lacked a standardized format, affecting the company's professional image. Maintaining compliance with tax regulations and accounting standards was challenging.

To address this issue, you attend a local seminar organized by an organization that supports SMEs. There, you discover Tryton software, which offers a potential solution to your problem.

Tryton has a 3-tier architecture (database, application server and desktop client or browser). The database and application server parts can either be hosted by a service provider or installed on your own servers. The choice depends on a number of criteria: knowledge, financial resources, location of your data, independence from the service provider, etc.

If you have an internal IT team, you can choose to install Tryton on an internal server. Otherwise, we recommend using a hosting provider like one of the following:

- Sisalp: <https://selfservice.tryton.online>
- Adiczion: <http://adiczion.com> (Recommended for a quick start-up)

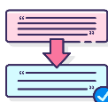
No worries, you can switch from one to the other at any time !

Configuration



Focus

The configuration of an invoicing tool depends on the accounting and tax rules of each country.



Interface overview

Before we begin, here is a presentation of the Tryton interface and navigation elements.

1. Hide/unhide the modules panel (9).
6. Editing user preferences



2. Access to favorites
3. Quick access to module panel elements
4. Tab bar
5. Toolbar (more on this below)
7. Quit (logout)
8. Data display area (list/form)
9. Modules panel

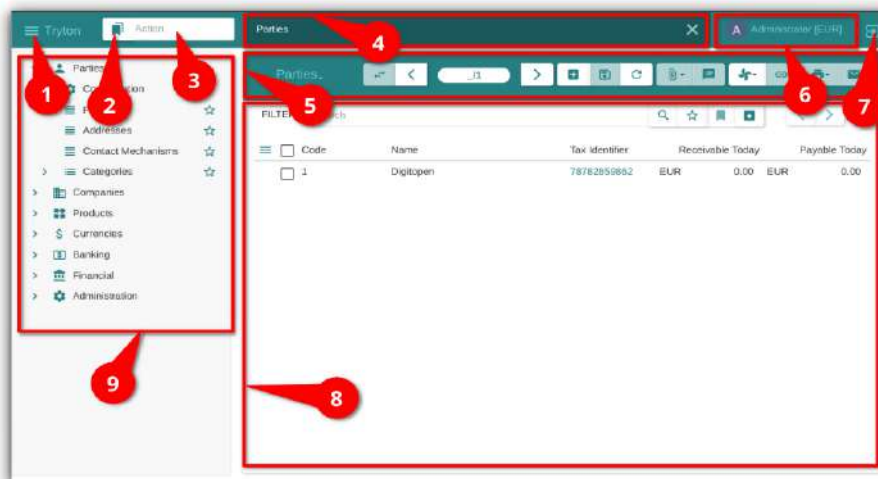
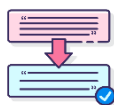


Fig. 2.1: Presentation of Tryton interface



The toolbar

The toolbar buttons are activated (or deactivated) according to the data display

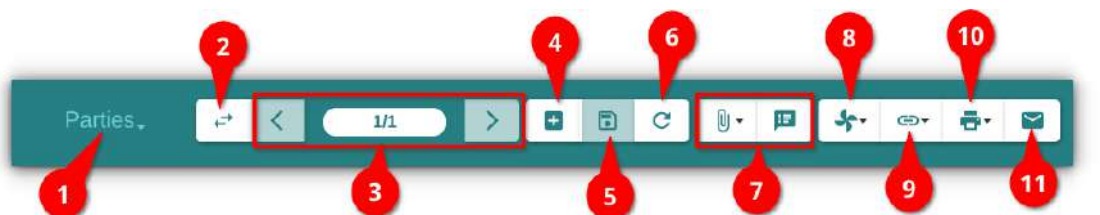


Fig. 2.2: Toolbar buttons

1. List of all possible actions on this data model (here Parties).
2. Switch view : list, form, graph (if avail.) etc.
3. Navigate through the list of records
4. Create new record
5. Save the record
6. Reload the view



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7. Add attachment/note to current record
8. Run a context-dependent action on selected records
9. Open a view on linked records
10. Print (if a report is available)
11. Send an email.

Note: in Tryton, fields that must be filled out in a form are highlighted in bold.



Login

Open your browser and type in the server URL provided by your chosen hosting provider. You should arrive at the following page:

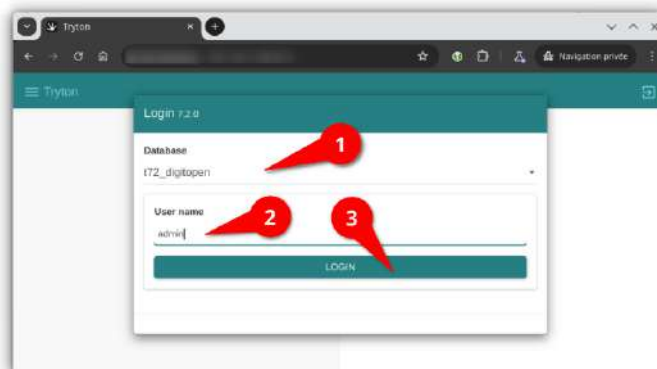
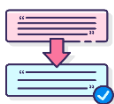


Fig. 2.3: Login page

1. Select database (it will already be selected if there is only one)
2. Enter the user name supplied (usually "admin")
3. Click on "Login", after that, a new window will appear where you can enter your password.



Settings

Environment initialization

- Start configuration



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At the first connection you will have to carry out the initial configuration of your environment. In the window below, click “OK”.

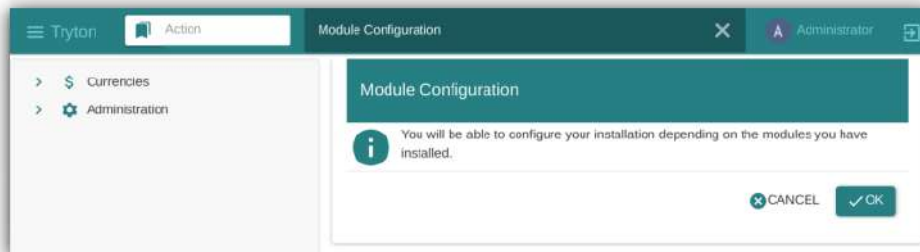


Fig. 2.4:-Module Configuration (part 1)

- Configuration languages: selection of additional languages

Tryton is able to generate documents in the language of the third-party recipient. To do this, you need to have the third party's language available in Tryton, and to have assigned a language to it when creating the third party (you will also need to translate into the third party's language all the elements you define and which must appear on the generated documents, such as product descriptions, for example).

Once you've selected your languages, click on “LOAD” and then “> NEXT”.

- Configure users: add your users

Click on "OK" and fill in the fields. You can grant each user different permissions for each module installed later.

Finally, click on "End" and then on "Next" to move on to the next step.

- Configure Modules: Adding modules to your installation

Now you can choose your modules. For billing, we'll need : *account_xx* (XX = extension of your country or your chart of accounts, here we'll choose "fr"), *Account dunning*, *Account dunning email*, *Account dunning fee*, *Account dunning letter*, *Account invoice* and *Bank*.

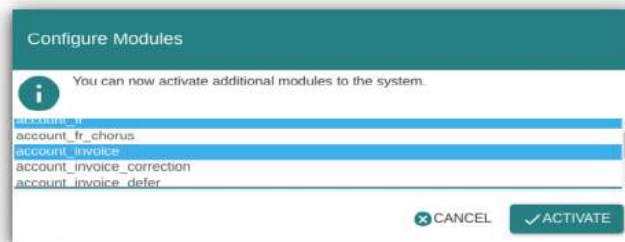


Fig. 2.5: Module Configuration (part 2)

When all modules have been selected, click on “ACTIVATE”.

A summary of the modules and their dependencies appears, click on “START UPGRADE”. Validate the installation result and the following confirmation to arrive at your company's configuration.

- **Configure Company**

Click on “OK” and fill in the necessary fields

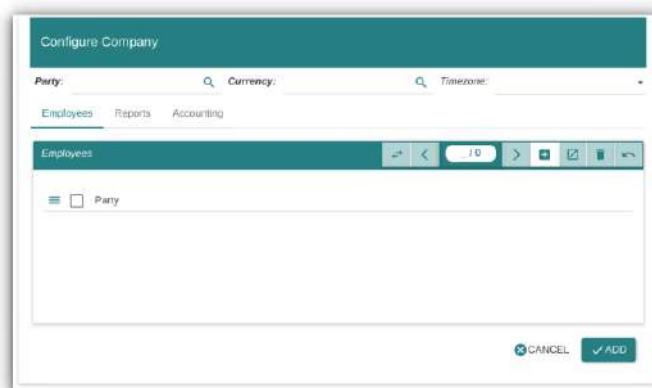


Fig.2.6: Configure company

- Party: click on the magnifying glass, then on "NEW", fill in the fields (At least the *Name* field at the top and the *Street, Postal Code, City* and *Country* fields in the General tab: Addresses) and save.
- Currency: click on the magnifying glass, choose your currency (for Europe, in search, type "Euro").
- Timezone: for Europe, type “Europe/ + the city of your timezone”.

- Create/Select your chart of account

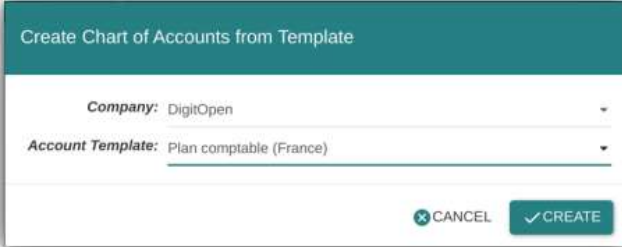
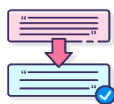


Fig.2.7: Selection of your chart of account

- In the "Company" field, if you have set up the software correctly up to this point, your company name should appear.
- Choose your chart of accounts in the "Account Template" field.
- Click on "CREATE".
- A new window will open, in which you must fill in the fields according to your country's tax regulations, and click on "CREATE" again.

Congratulations ! The 1st part of the configuration is complete, click on "OK".

Now, you can choose the default language for the administration user (see "Editing user preference").



Additional settings

Before issuing your first invoice, you need to complete Tryton's configuration while logged in as "admin." This involves entering information that will be used to automate the invoice creation process, significantly reducing the time spent editing invoices in the future. This process may seem a little long, but it's necessary in order to set all the parameters and will help you save a lot of time later on.



Check this out!



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Read the story of EcoHome Supplies for inspiration.

Case B : EcoHome Supplies, a growing company in the eco-friendly home goods industry, **struggled with managing its invoicing process**. Their existing system was outdated, prone to errors, and required significant manual effort. This inefficiency led to delayed payments, frustrated customers, and increased administrative costs.

EcoHome Supplies decided to implement Tryton ERP to streamline their invoicing process. The key reasons for choosing Tryton ERP included its robust automation capabilities, customization options, and seamless integration with other business operations.

The **transition to Tryton ERP was smooth**, thanks to its user-friendly interface and comprehensive support. The system was configured to automatically generate invoices from sales orders, ensuring accuracy and reducing manual workload. Customizable invoice templates were designed to meet regulatory requirements and reflect EcoHome Supplies' brand identity.

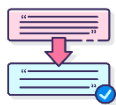
The **implementation of Tryton ERP at EcoHome Supplies led to several positive outcomes**. First, it increased efficiency by automating the entire invoicing process, from generation to distribution, which reduced errors and administrative overhead, allowing the finance team to focus on more strategic tasks. Second, it resulted in faster payments due to real-time data integration, providing better visibility into outstanding invoices and payment statuses, leading to quicker follow-ups and a significant reduction in late payments. Third, customer satisfaction improved with the Tryton ERP customer portal, which allowed clients to view and pay invoices online, enhancing their experience and convenience, and resulting in positive feedback and increased customer loyalty. Finally, the **company achieved notable cost savings by reducing the time and effort spent on manual invoicing**, thus minimizing the need for additional administrative staff.



EcoHome Supplies experienced a transformation in their invoicing process with Tryton ERP. The system's automation, integration, and customization capabilities not only improved efficiency and accuracy but also positively impacted customer satisfaction and the company's bottom line. By choosing Tryton ERP, EcoHome Supplies positioned itself for sustained growth and success in the competitive eco-friendly home goods market.

If your business faces similar invoicing challenges, consider Tryton ERP as a solution.

Its powerful features can help streamline operations, enhance accuracy, and improve overall financial management, ultimately contributing to your company's growth and customer satisfaction.



Final configuration steps

- Invoice legal information

If you have legal information to add to your invoice, in addition to the VAT number (this information will already be present on the invoice if you indicate it in the definition of the third party), you can, for example, add it in the footer.

Access: Companies → Companies → [Choose your company] → [go to the report tab] Fill in the “Footer” field with your legal information (you may also add your bank details).




- Customising reports

If the invoice template provided as standard by Tryton does not meet your expectations, it is possible to customise it (or have it customised) using LibreOffice.

- Retrieving the report

Access: Administration → User Interface → Actions → Reports



Open the report you want to modify and download it locally with the  in the “Content” field. Make your adaptations to the file, and replace the existing file by clicking on the  in the “content” field, then on the magnifying glass to select your modified file, save with .

- Fill in company identification numbers (e.g. VAT)

Access : Parties → Parties → *[Open the third party corresponding to your company]*

Go to the identifiers tab and add a new identification number using the "+" (on the small identifiers toolbar).

As a minimum, you'll need to add the VAT number (for taxable persons) to each third party.

- Defining your company's tax period


Access: Financial → Configuration → Fiscal Years → Fiscal Years → *Click on “+” to add a new fiscal Year*


Enter the name (usually the year), start date and end date of your fiscal period.

Before creating the periods (by clicking on the 'CREATE PERIODS' button), go to the Sequences tab to define the different numbering (sequences) required (accounting transaction, sales invoice and credit note, purchase invoice and credit note).

- Define your payment terms and methods

- Payment Terms

Access: Financial → Configuration → Payment terms → Payment terms → [Click on 

Enter the name of the 1st payment condition, then add the calculation lines using the .

For example, for 45 days month-end:

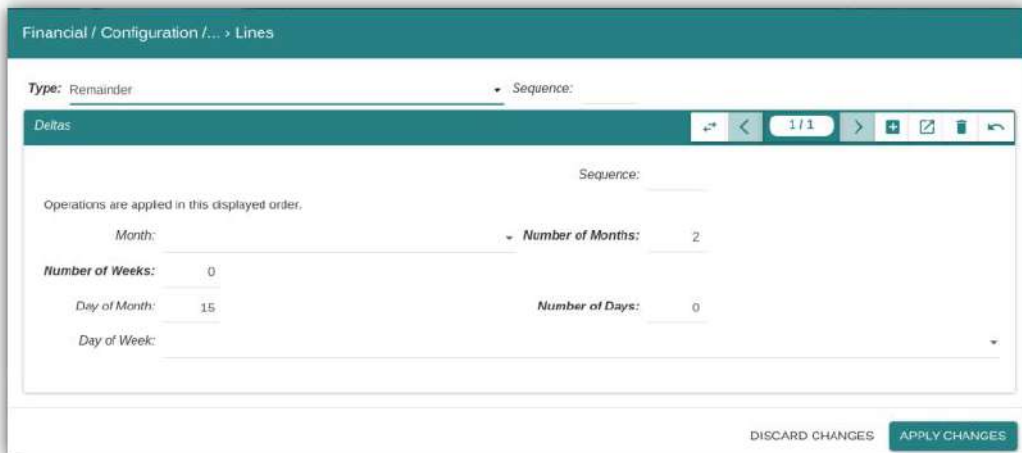



Fig. 2.8: Definition of payment terms

2nd example: 30% on receipt of invoice, balance due within 30 days:


Add a new condition by clicking on the **+**, give its name: *30% on receipt of invoice, balance 30 days from end of month*, and in this example you'll need to add two lines using the **+** (on Lines widget):

- 1st line: Type: Percentage in total, Ratio: 30%, leave the other fields as default and click on “ADD AND NEW”.
- 2nd line: Type: Remainder, Number of Months: 1, Day of Month: 31, click on “ADD”.

Then save the payment condition by clicking on the icon .

o Payment method

Before registering a payment method, you will need to create a payment journal.

Access: Financial → Configuration → Journals → Journals → [Click on 

Fill in the form below and save it with .

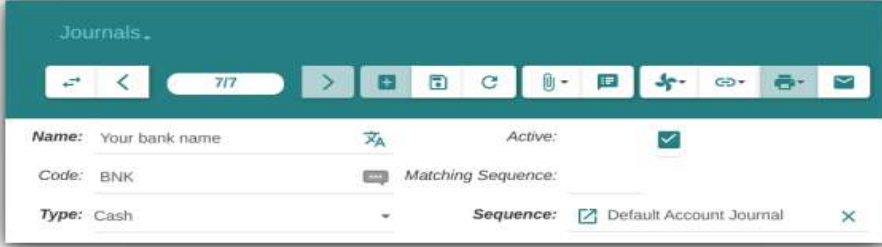


Fig. 2.9: Payment Journals

Then you can fill in your payment methods.

Access: Financial → Configuration → Journals → Invoice Payment Methods → [Click on +]

Fill in the form below and save it with [Save] (here we have used the information from the French chart of accounts, use the one from your country).

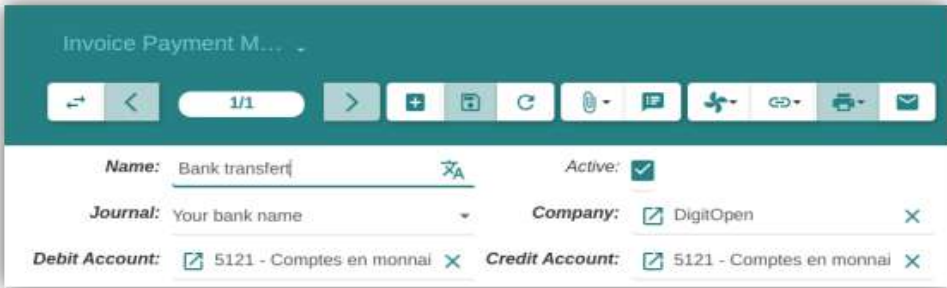


Fig. 2.10: Payment methods

Repeat this as many times as necessary to record all your payment methods.


- Enter your products

In Tryton, a product is made up of a model and a variant (at the very least, it is possible to define several variants for the same model depending on the different product options: colors, sizes, weight, volume, etc).

Before creating your products, you need to create their accounting categories.

- Creating an accounting category

Access: Products → Categories → [Click on +]

Fill in the form like the one below, but with the legal information for your country (here it's for France) and save with . (Note the "Accounting" checkbox)

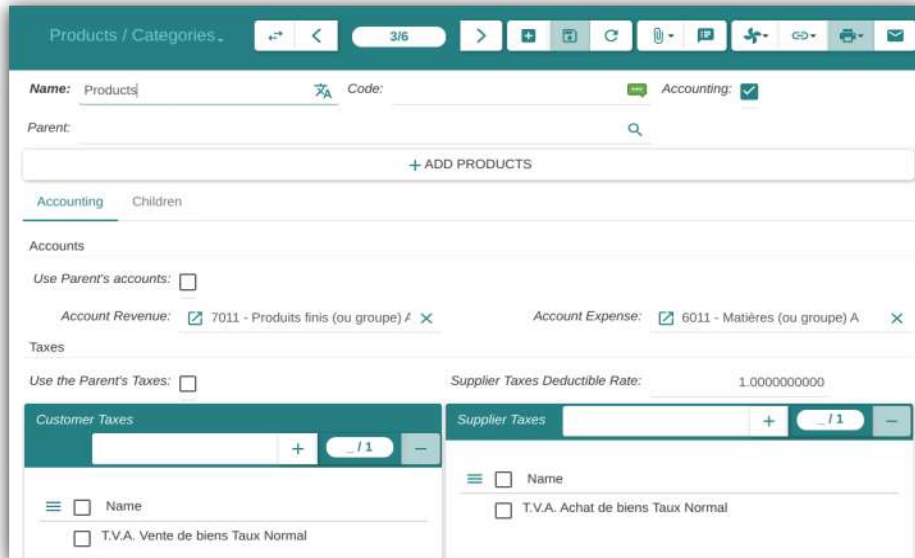



Fig. 2.11: Creation of an accounting category

- Other categories

To organize your products, you can create standard categories.

Access: Products → Categories → [Click on 

Fill in the form below and save it with  (here the category is called "Clothing" and it has two sub-categories "Skirt" and "Trousers").

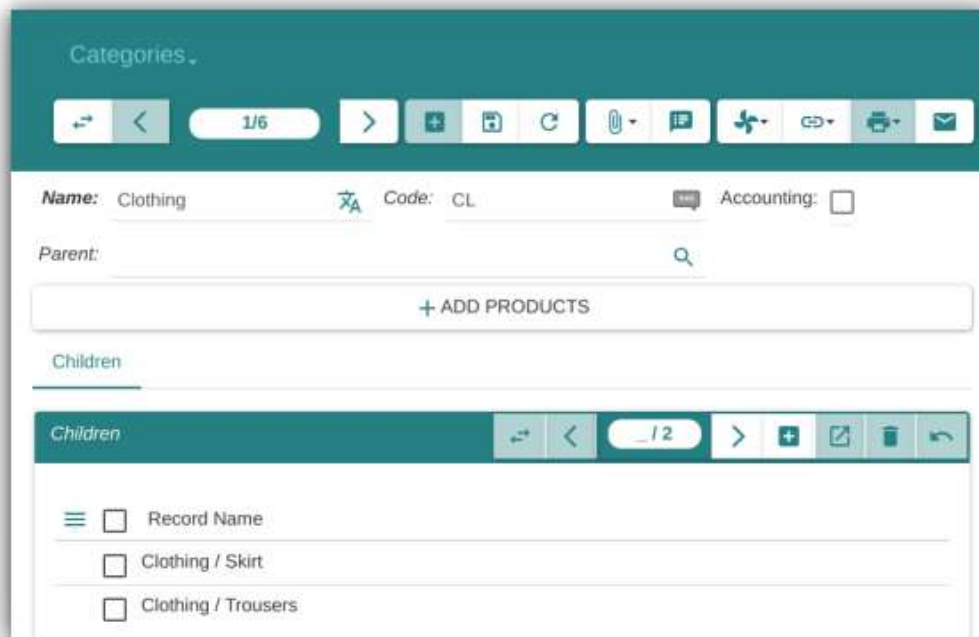



Fig.2.12: Creating other categories

- To create your products

Access: Products→Products → [Click on +]

Fill in the fields as in the example below and save it with . This form allows you to fill in the 2 elements that make up a product (the model and its variant(s)). Here, the Product will be called "Product A" and will have 2 variants: one "blue "and one "red".

You'll notice that the product's "Cost price" field is not filled in. It is normal when there are several variants (Tryton can't know which one to display, so it doesn't show anything).

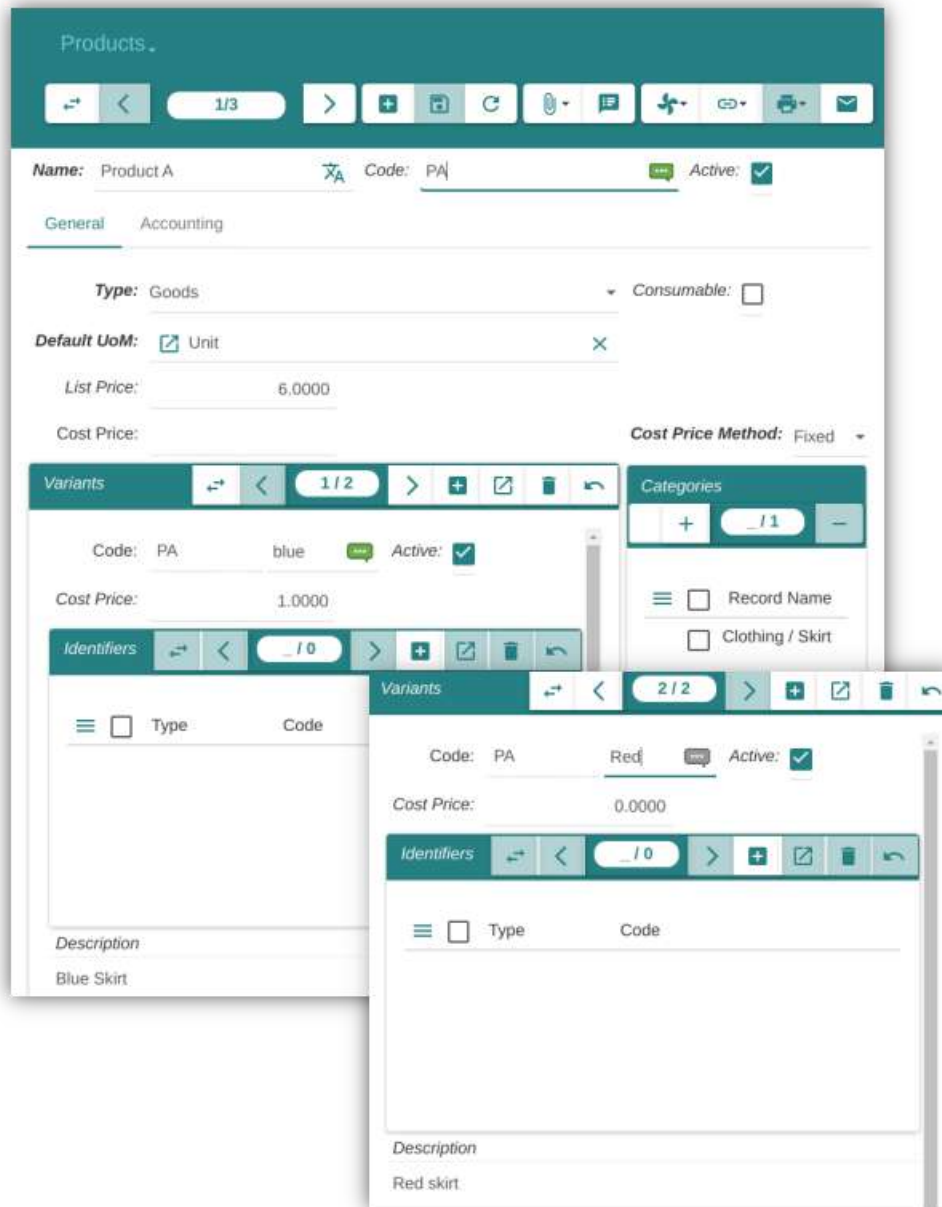


Fig. 2.13: Creation of products

Don't forget to assign the accounting category on the "Accounting" tab.

- Define dunning rules

Access: Financial → Configuration → Dunnings → Procedures → [Click on +]



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Enter the name of your relaunch and add different levels using the **+** (on Levels widget):

- Levels 1: Sequence: 1, Overdue: 10d, Check “Print on Letter” and “Send Email”,
From: your.email@server.com
- Levels 2: Sequence: 2, Overdue: 25d, Check “Print on Letter” and “Send Email”,
From: your.email@server.com
- Levels 3: Sequence: 3, Overdue: 45d, Check “Print on Letter” and “Send Email”,
From: your.email@server.com

In this example we have 3 levels of dunning at 10, 25 and 45 days late payment.

An e-mail and a reminder letter will be automatically generated at each level.

- Enter your third parties (customers/suppliers)

As with products, third parties can be categorized.

Access: Parties → Categories → Categories → [Click on **+**]

Fill in the “Name” field and save with **+**. Child categories can be added with the **+** (on Children widget)

Here, the category will be called “Customers” and will have 2 sub-categories: “Individual customer” and “Professional customer”.

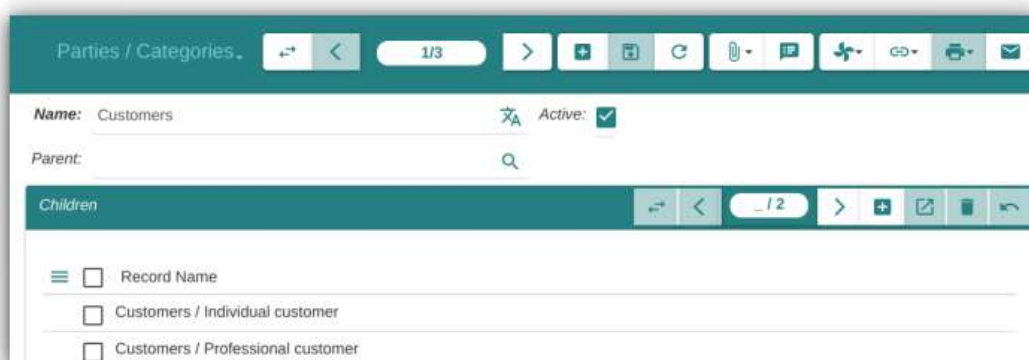



Fig. 2.14: Creation of third parties (customers/suppliers)- Part 1

- Define your third-party

Access: Parties → Parties → [Click on **+**]

Fill in the fields on the General, Identifiers, Banking (for this one you'll need to define a third-party "Third-party Name Bank"), accounting tabs save with with . Here the third party is called "Les péchés de Cyrano".

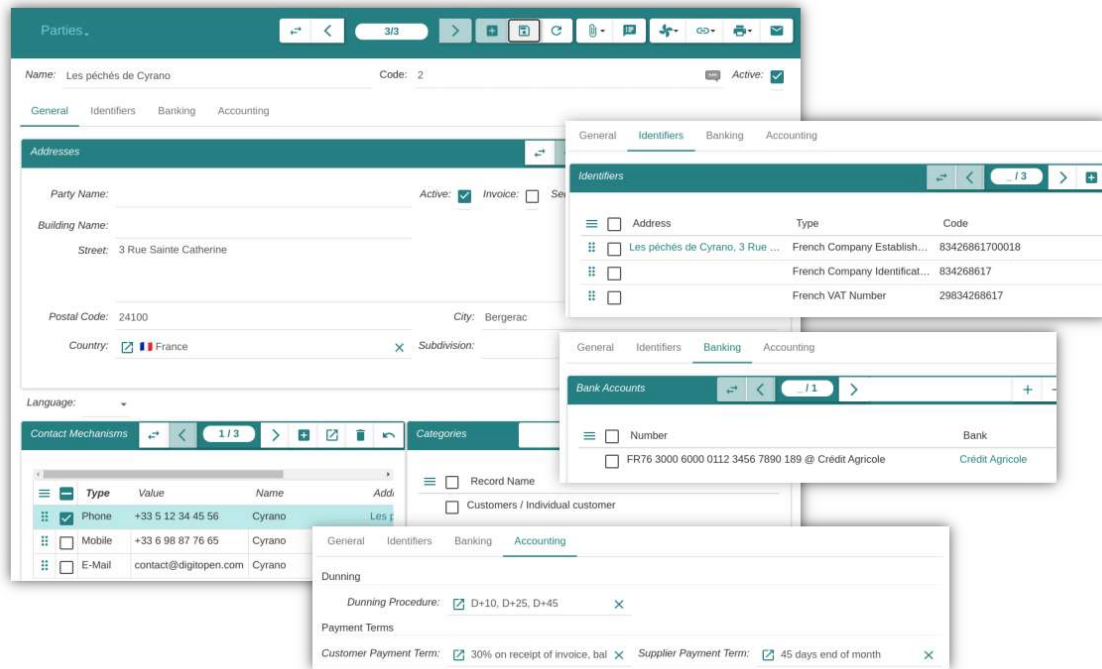
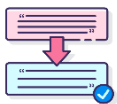



Fig.2.15: Creation of third parties (customers/suppliers)- Part 2

2.3. Using Tryton ERP for invoicing




Case C : Your company has just received a new order containing 100 white t-shirts. The parameters have been set in Tryton and all you need to do is create your first invoice !

Entering an invoice


Access: Financial → Invoices → Customer or Supplier Invoices (as you need) → [Click on ]



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Fill the invoice fields according to order and save with .

Add in the “Description” field the content of your order, e.g. white t-shirts. “Reference” field is the customer's order number or supplier’s order number. For supplier invoice you must also fill the invoice date.

To add details of invoiced items, click on  (lines widget) and fill in “Product”, “Quantity” and “Unit Price”. Click on “ADD AND NEW” to add another line, or “ADD” if it's the last one.

Validate and post the invoice

- To validate the invoice, click on “VALIDATE” (first control)
- To enter the invoice in the accounting, click on “POST”

Please note: a posted invoice can no longer be modified. If there is a billing error, create a credit note to cancel the erroneous invoice and re-invoice.

You can print your invoice with the  or send it by email with .

Enter a credit note

Access: Financial → Invoices → Customer or Supplier Invoices (as you need)

Select and open the invoice you wish to reimburse, click on  and select “Credit”.

A dialog box will open to determine the type of credit.

- **Full credit note:** tick the 'with refund' box, in which case the generated credit note will be posted and the original invoice will be cancelled.
- **Partial credit note:** leave the 'with refund' box unchecked, and a credit note with all invoiced lines but a negative amount will be created in draft mode. You will need to adapt it to your needs and post it to complete the refund procedure.
- The date on which the credit note will be issued.

All you have to do is confirm with the “CREDIT” button.



Follow invoice payment

Invoice payment

The easiest way to indicate that an invoice has been paid is to go to it and click on the "> PAY" button.

Fill in the dialogue box and click on "OK".

Note: it is possible to partially pay an invoice by changing the amount

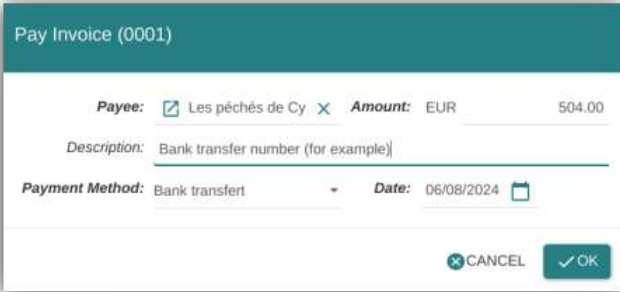
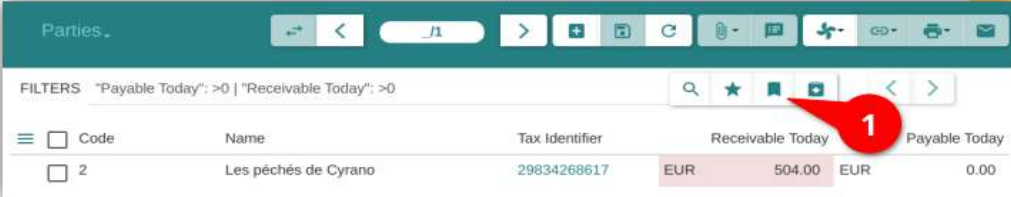


Fig. 2.16: Invoice Payment

The second way to mark invoices as paid is via bank reconciliation, but this functionality is beyond the scope of this course.

Late payment

In Tryton, there are several ways to track the payment of your invoices. The simplest is to filter the list of third parties with the following content: "Payable Today": >0 | "Receivable Today": >0, and save it in bookmarks (1). When you call up this filter, you'll see a list of customers and suppliers whose payments are overdue.




Code	Name	Tax Identifier	Receivable Today	Payable Today
2	Les péchés de Cyrano	29834268617	EUR 504.00	EUR 0.00

Fig. 2.17: Track due payments

Another way to do this is to use customer reminder management.

Access: Financial -> Dunning -> Create Dunning

Fill in the dialog box and click on "CREATE".

The result of this operation is a list of overdue payments. Select the ones you want to dun and click on the  to select 'Process Dunning'. Depending on what you have defined in the dunning settings, this will either send the dunning email and/or create the letter to be printed and sent to the customer. It is also possible to block certain dunning notices by using the "Blocked" checkbox in the dunning notice.

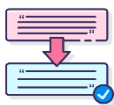
This procedure is carried out regularly, if not every day.



Food for thought

Transform your business with Tryton! Streamline your operations, effortlessly track invoice payments, and efficiently follow up with late payers. In short, Tryton structures and manages your business for optimal performance and success.

2.4. Managing and sharing company information with NextCloud



Like Tryton, you can either use Nextcloud from a hosting provider or install Nextcloud on your own servers. Here, you can find out how to use Nextcloud via a hosting provider.

The Nextcloud project website features third-party² companies offering free hosting services.

=> Go to the following address to choose a free supplier: <https://nextcloud.com/signup/>.

² A third-party utility refers to software or tools developed by an entity other than the original developer or manufacturer of the main system or platform it operates on. These utilities are often designed to enhance, supplement, or add specific functionality to an existing system, application, or device.

We've chosen to show you how Nextcloud works on one of them. There's no particular reason for this choice - we just needed one. (Recommended for quick start-up). We won't go into Internal server here, as advanced system and network administration skills are essential and not the aim of this module.



Creating your NextCloud account

Case D : Simon works as project coordinator in a Third Sector Organization. In addition to the paid staff, he frequently collaborates with volunteers who assist with project and event management tasks. Previously, Simon relied on a mix of cloud services, local storage, and email for file sharing and collaboration. **This fragmented approach led to issues with data security, version control, and inefficient workflows.** The team often struggled to find the latest versions of documents, and sensitive data was at risk due to inconsistent security measures.

Nextcloud's collaborative tools, such as real-time document editing and file sharing, significantly improved team collaboration. The team could now work simultaneously on documents, spreadsheets, and presentations, with changes reflected in real time.

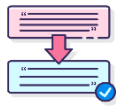
By consolidating their data management and collaboration tools into one platform, Simon managed to reduce the costs associated with maintaining multiple cloud services and software licenses.

Now it's your turn !

Here's the link to log in afterwards: <https://kim.nl.tab.digital/login>, remember to bookmark it, because once you've registered you won't find the home page to log in.

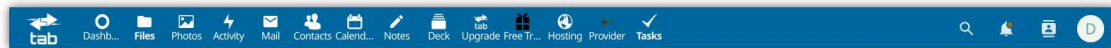
Choosing free hosting to take your first steps on Nextcloud won't allow you to use the shared calendar and contacts function. Sharing calendars and contacts requires multiple users on your instance, which is not the case in this mode.







First steps in the Nextcloud environment


The banner is self-explanatory, and contains all the features of the collaboration tool.





In this module, we will use only the following icons

- 

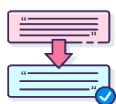
The Dashboard: your home page, where you'll find a summary of changes made to your shared documents, as well as upcoming events. You can also customize it.
- 

Activity: you'll be able to see the dates and people who have performed actions on your documents.
- 

Contacts: you'll find the contacts you've saved and those with whom you've already shared files. You can sort them by category.
- 

Files: you'll find all the documents you've saved in these files.
- 


Calendar: lets you save and share your meetings, schedules and events.

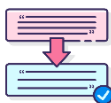


Files sharing

From the “Files” folder you can create new documents and folders by clicking on “+ New”; using this button you can also upload a file from your desktop (you can also upload files by simply dragging them from your desktop into the chosen folder).

It is possible to share a complete folder as well as a single file. This sharing can be done either to another user defined on your Nextcloud instance (this will not be the case here), to an external user by email, or to a user on another Nextcloud instance (via the federate cloud).

Whoever you want to share with, click on the icon . This will open a panel on the right enter the email (or name) of the recipient of the share. We recommend that you define the following sharing options: a password and an expiry date.



Shared calendar

In Nextcloud, you can create different diaries to manage your events, tasks, and appointments.

- Create a new diary

Access : Calendar

By clicking on "+ New calendar" you can add a new calendar with or without task management.

- Add an event

Access : Calendar

To add an event, click on "+ Event" or on the day you want to add your event. Fill in the quick registration dialog box and save. If you need to add participants, a reminder, etc., click on "More details".

- Calendar sharing

The Nextcloud calendar can be viewed and added to from most email tools, both on your desktop computer (Outlook, Thunderbird, Mail, etc.) and on your smartphone (IOS or Android). On the Microsoft online suite, it will only be available for consultation. You will need to add a third-party utility: caldav synchronizer (<https://caldavsynchronizer.org>) for Outlook.

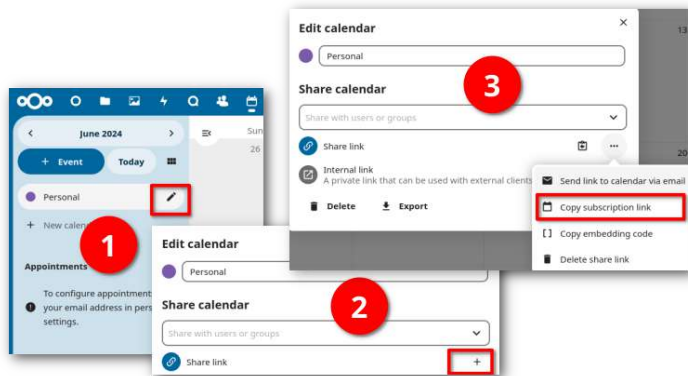
To do this, you need to retrieve the sharing link and add a calendar to your application.

- For full access (view and add)

- On a desktop or Android computer: Calendar -> Calendar setting -> Copy primary CalDAV address
- On iOS/mac OS: Calendar -> Calendar setting -> Copy primary CalDAV address



- For read-only access (view)



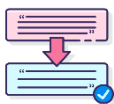
With this link you should be able to add an agenda in the destination application.

Fig.2.18: How to add an agenda



Focus

Managing permissions and sharing with other users will only be possible with a multi-user instance of Nextcloud, which is not the case with the free online single-user version. However, if you log in with the same account on several workstations, you can access the same calendars as if they were shared.



Shared Contacts

Contacts can be organised in several address books (e.g. Personal and Business). It is also possible to create groups of contacts that can be used as a recipient list.


- Creating a new address book

Access: Contact -> Contact settings

Fill in the “Add a new address book” field in the “contact settings” dialog box.

An address book can be shared (see the note on sharing address books and calendars), exported and deleted.

- Creating a contact

Click on the button  and fill in the fields as required, in particular the address book and/or contact groups fields.

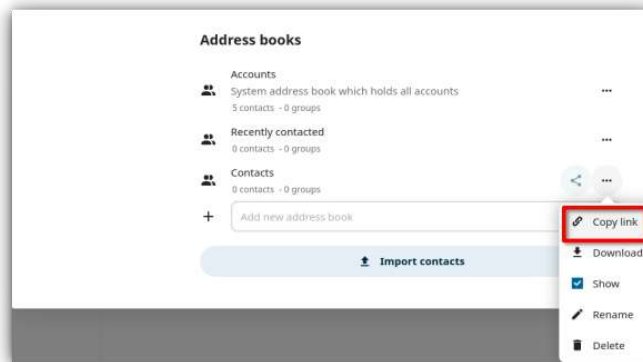
- Contact sharing

Same note for shared contacts as for shared calendars.



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You can also access your contacts from your email client, both on your desktop (Outlook, Thunderbird, Mail, etc.) and on your smartphone (IOS or Android). You will need to add a third-party utility: caldav synchronizer (<https://caldavsynchronizer.org>) for Outlook.



To do this, add a network address book to your tool and paste the retrieve link as shown on the left :

Access: Contact -> Contact settings

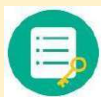
Fig.2.19: Creating contacts



Food for thought

Boost productivity and security with Nextcloud: seamless collaboration, complete data control, and peace of mind in the cloud!

2.5. General Conclusion & Tips



Recommendations

Tryton is a full-featured ERP, enabling complete company management. If you choose Tryton to manage your invoicing, it's probably a good idea to think about using its complementary modules in your company. On the <https://www.tryton.org> home page, you'll find a list of the main features available as standard. Finally, as it is Free Software, it is possible to extend its functionality very easily.



Recommendations

Nextcloud enables collaborative working for both very small and very large companies. It can be extended by adding applications available on this portal: <https://apps.nextcloud.com>. However, to be able to use all these possibilities, you will need to either host it on your servers or take out a subscription with a service provider.

Both applications require hosting, which can be either on your own machines or with a hosting provider.



Additional information

On the website of each of the projects you will find a list of partners providing services around these 2 software packages, in particular:

- **Sisalp:** free or professional Tryton hosting (<https://boutique.sisalp.fr/>)
- **Tab Digital:** free or professional Nextcloud hosting (<https://tab.digital/>)
- **The Good Cloud:** Free or professional Nextcloud hosting (<https://thegood.cloud/>)
- **Adiczion:** Professional hosting for Tryton and Nextcloud (<http://adiczion.com>)

2.6 Summary

Tryton ERP

Case A of this module shows that small and medium-sized enterprises often face challenges using manual invoicing tools like Word and Excel, which lead to:

- Manual errors: Frequent mistakes in calculations and data entry.
- Time-consuming processes: Difficulty in managing invoices as the business grows.
- Lack of integration: Disconnected systems for accounting, inventory, and sales.



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- Scalability issues: Cumbersome management of documents with increased invoice volume.
- Inconsistent professionalism: Non-standard invoice formats affecting business image.

The solution to these challenges is the Tryton ERP. It offers a 3-tier architecture (database, application server, and client). It can be hosted internally or via external providers. Tryton's flexibility and efficiency can address the scaling and integration issues encountered.

In this module we have seen how to configure Tryton and how to customize invoices to efficiently manage invoices, automate invoicing tasks, and provide a scalable, professional, and integrated solution.

NextCloud

Nextcloud is an open-source platform that allows users to store, manage, and share files and data in a private cloud environment. It consolidates various tools, allowing for better team collaboration, enhanced data security, and improved workflow efficiency. NextCloud can be used via a hosting provider or installed on your own server. In this module we have provided an overview of the NextCloud environment and provided the procedures to be followed to share files, calendar and contacts.

References

Tryton :

- <https://tryton.org>
- <https://docs.tryton.org>

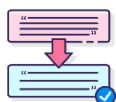
Nextcloud :

- <https://nextcloud.com>
- <https://docs.nextcloud.com>



MODULE DGO3: OSS Applications for the Marketing and Communication of TGOs & MSMEs

3.1. Introduction



This module aims to present two open-source marketing tools that focus on building a community around a project or product. It emphasizes engaging with the right audience—those who will actively use, contribute to, and advocate for your project—rather than just reaching a broad audience. The open-source software covered includes **Joomla** and **Omnisend**. Joomla excels in versatile content management and customization for diverse needs, while Omnisend specializes in e-commerce marketing automation, providing advanced tools like email and SMS automation and personalized messaging, crucial for engaging MSMEs. Alternatives like Drupal offer scalability for Joomla, while Klaviyo provides robust e-commerce-focused email marketing automation as an alternative to Omnisend, enhancing customer engagement and marketing efficiency. Both Joomla and Omnisend benefit from strong community support, providing valuable resources and assistance to users.

These OSS empowers businesses by optimizing marketing and communication strategies through:

- Flexibility for tool and platform customization, tailored to specific needs.
- Transforming online sales with global reach and personalized shopping experiences.
- Robust analytics offering insights into customer behavior and market trends, refining sales strategies to maintain competitiveness.

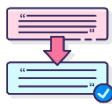
After the completion of this module, you will

- ✓ understand how to effectively use open-source tools like Joomla and Omnisend for marketing, communication, and e-commerce.



- ✓ be able to customize CMS platforms, create email campaigns, and integrate social media strategies to engage customers and enhance conversion rates.
- ✓ analyze real-world case studies demonstrating the application of OSS in solving marketing challenges.

3.2. Content Management Systems (CMS) Exploring Open-Source CMS Options, Customization and Scalability in Marketing Operation



A content management system (CMS) is a powerful marketing tool that streamlines the creation, organization, and storage of multimedia and files for websites. CMS platforms empower marketing teams by allowing individuals without technical expertise to easily generate, modify, and publish content. This eliminates the need for proficiency in web development or programming languages such as JavaScript, HTML, and CSS. With a CMS, marketers can focus on crafting compelling content and executing strategies swiftly, enhancing their ability to engage audiences and drive brand growth. The benefits of CMS can be summarised as follows. :

- Autonomously oversee website management tasks
- Swiftly curate and publish content, adapting strategies based on analytics
- Streamline analytics tracking and performance measurement for real-time adjustments

A retail company can integrate OSS for its e-commerce operations, revolutionizing its business processes. By implementing OSS, the company achieves real-time synchronization between its online and physical stores, ensuring seamless inventory management and providing customers with up-to-date product availability. This integration automates order processing, significantly reducing manual labor and errors, and speeding up delivery times. Furthermore, the company leverages OSS analytics to gain deep insights into customer behavior, preferences, and purchasing trends. By utilizing **OSS communication tools**, the company enhances customer interaction,



providing personalized support and engaging marketing campaigns. These strategic advantages collectively elevate the customer experience and drive the company's competitive edge in the market.

Businesses need a platform that streamlines **website layout and template management** to stay competitive. Such a platform ensures a professional and cohesive online presence, enhancing user experience and engagement. It allows businesses to quickly adapt to market trends and customer preferences by easily updating their website's design. Additionally, a robust layout and template platform can save time and resources, allowing businesses to focus on core activities while maintaining a visually appealing and functional website.

Joomla, as an open-source CMS software, offers a user-friendly interface for website creation and content management. Users can customize templates and install extensions to add various features to their sites, enhancing functionality without extensive programming. The key Joomla features are:

- Visually **professional** and technologically advanced templates
- **Customizable** templates to suit specific needs
- **Easy installation** of extensions for additional features like photo galleries, forms, member areas, payment systems, and online reservation systems.

Take a look at these types of layouts in the next image, they're incredibly easy to create!



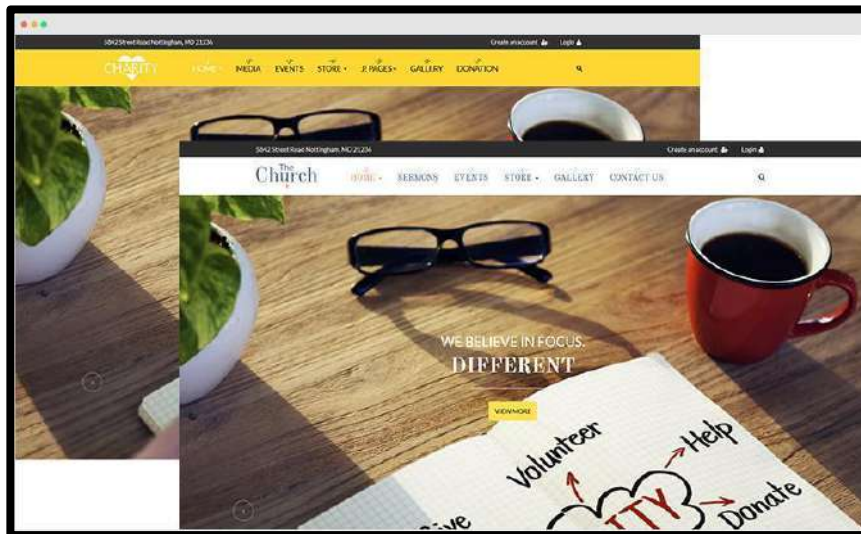


Fig.3.1: [Joomla's website layout options](#)

Templates are managed with the Template Manager of Joomla, which is located on the Extensions menu in the Backend (Administrator) area of the site: here you can change the color scheme, images and effects, fonts and browse specific solutions for you!

To access the Template Customize feature simply click on the template name under the Template column.

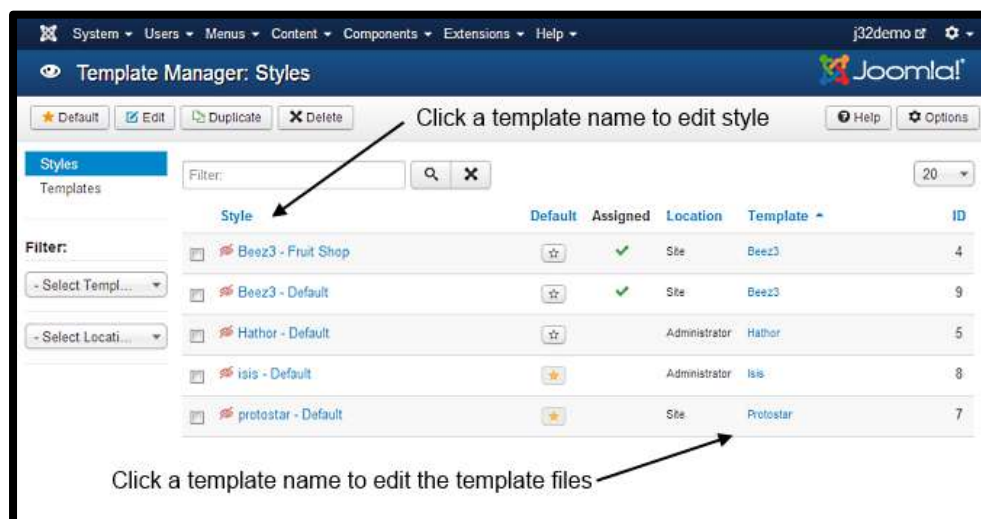


Fig. 3.2: [Template Manager Joomla](#)

You should now be looking at the image below “Template Manager: Customize Template”, where you can click on any file in order to edit it directly in the browser!



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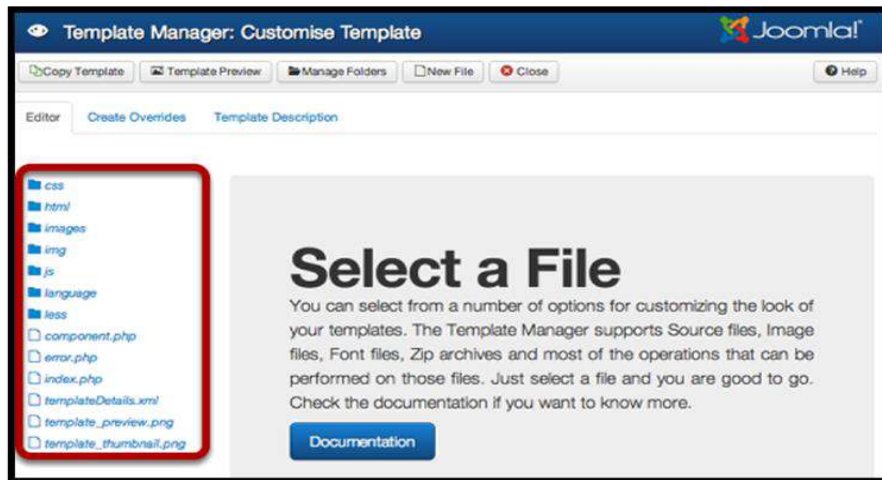


Fig. 3.3: [Template Manager: Customize Template](#)



Additional Information

On the Joomla magazine webpage, you'll find numerous websites offering video tutorials from various creators, helping you fully explore and understand the potential of this great tool!

Check it out here: [Joomla Magazine](#)

3.3 Email Marketing Platforms, Leveraging Open Source for Email Campaigns, Deliverability and Analytics Considerations



Email Marketing Platforms serve as comprehensive solutions for creating new campaigns and custom templates, essential for optimizing a well-defined communication plan.

Key Features:

- Streamlined campaign creation and custom template development.
- Emphasis on effective deliverability strategies:
 - **Authentication** protocols implementation.



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- **Sender reputation** monitoring.
- **Spam** content detection.
- Constant monitoring and optimization of deliverability metrics to maintain a positive sender reputation and ensure consistent email delivery to the target audience.

In addition to providing fully tailored email content encompassing various options like articles, videos, RSS lists, products, apps, and events, marketing automation software such as **Omnisend** offers robust automation and audience segmentation features. These capabilities facilitate the generation of comprehensive analytic reports, crucial for optimization and informed marketing strategy development.

Omnisend's Segments page allows **MSMEs** and **TSOs** to categorize audiences by demographics, behavior, and engagement. This targeted approach enhances marketing efficiency with personalized messaging, boosting conversions for MSMEs and improving engagement with donors and beneficiaries for TSOs, ultimately supporting strategic marketing goals effectively.

Take a look at the Segments page, it's so useful to organize your work!

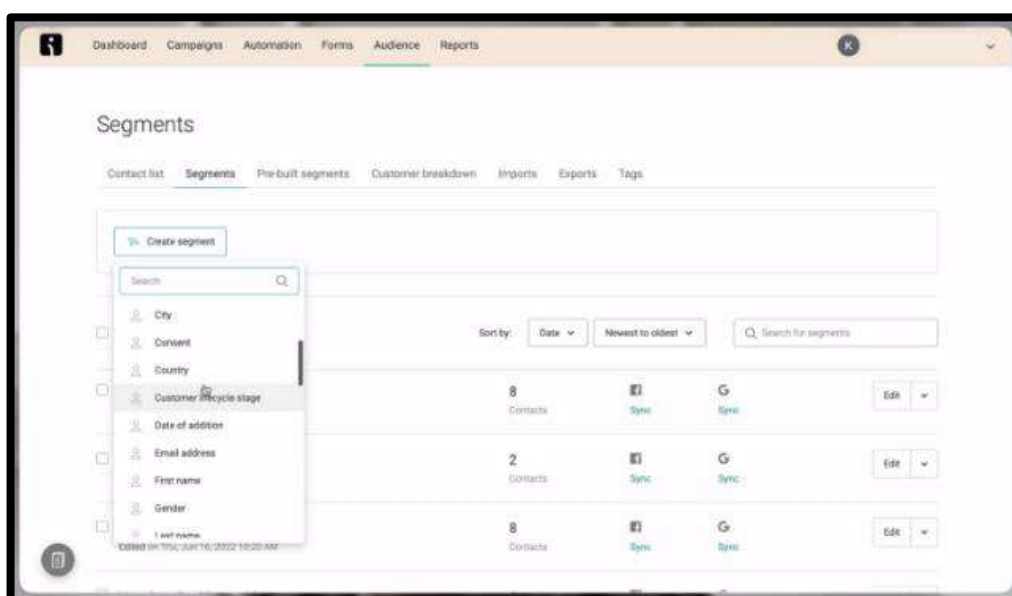


Fig. 3.4: [Segment Omnisend page](#)



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Additional Information

On their website you can find a tutorial about audience segmentation! [Click here!](#)

One excellent feature of Omnisend is its ability to create eye-catching forms that can significantly increase public interest in the website.

In a scenario where a small jewelry e-commerce business wants to boost newsletter sign-ups, Omnisend's Form Editor proves invaluable. It allows customization of a visually appealing signup form on their website, offering incentives like first-purchase discounts. Integrated with Omnisend's platform, it automates subscriber management and personalized email campaigns based on customer preferences, enhancing engagement and sales conversion effectively. Here's how you can create a form on Omnisend website!

1. After logging into your account, click on the "Forms" section located in the main selection tab at the top of the website.

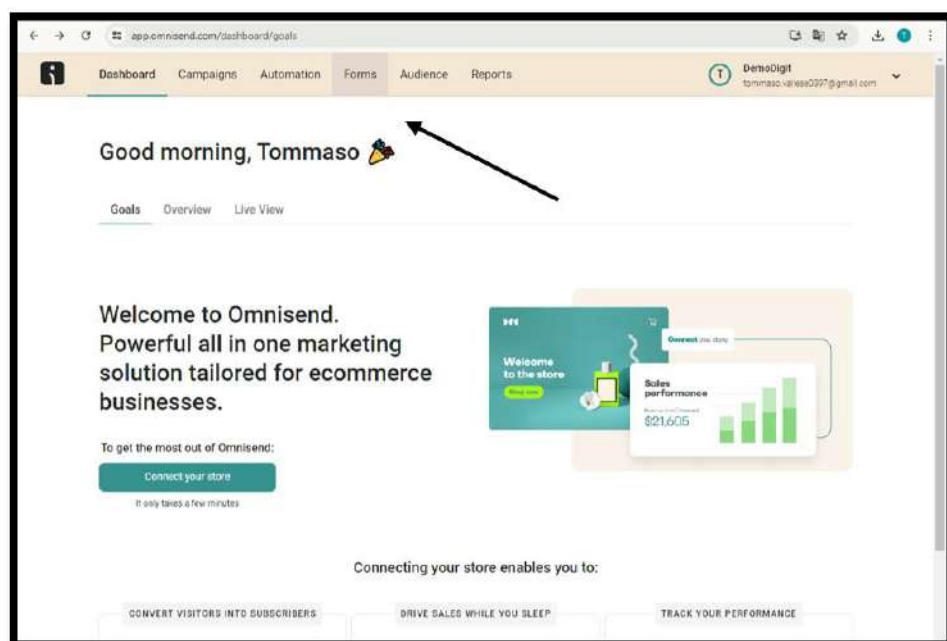


Fig. 3.5: [Omnisend main page](#)



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2. Now click on “**Preview and launch form**” located in the middle of the page.

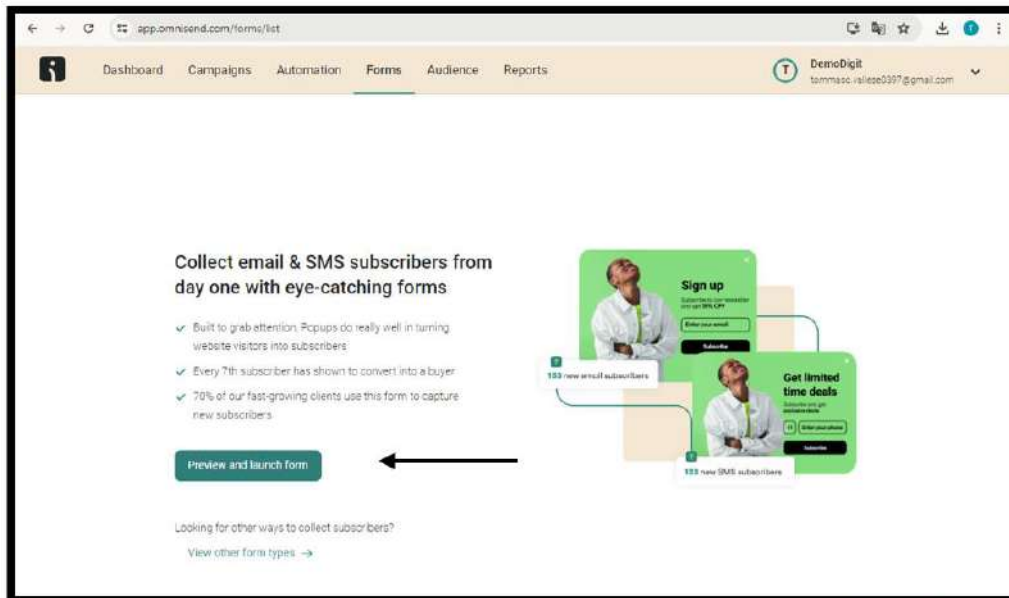


Fig.3.6: [Form section](#)

3. Here, you can customize your form as desired and select the **visibility type**, **frequency**, etc.

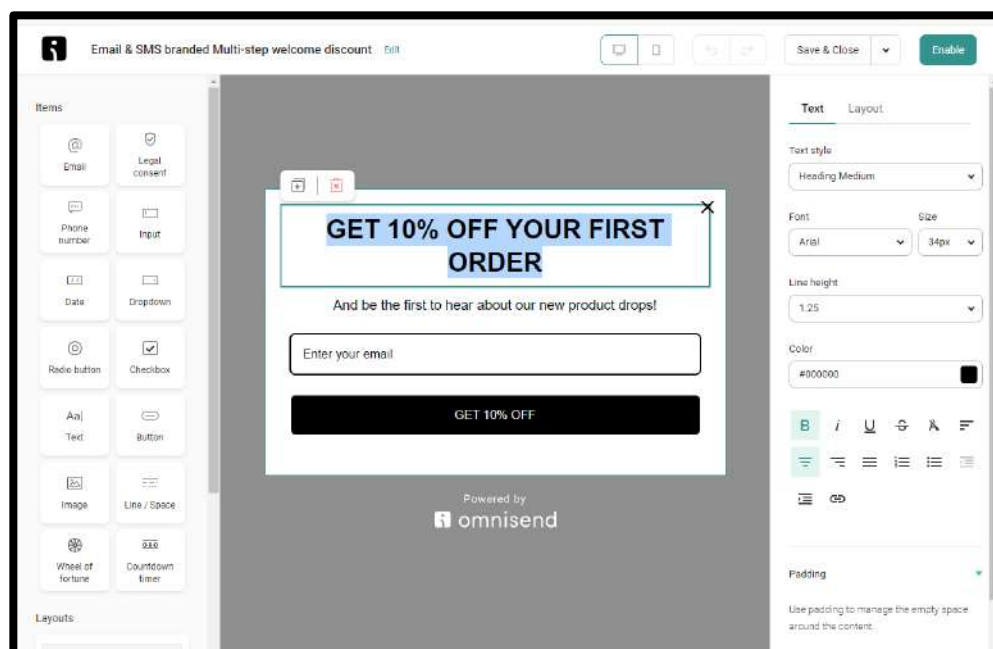


Fig. 3.7: [Form customization](#)



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4. When you're good to go, you can save it or enabling it straight to your website clicking "Enable" on the top right corner!

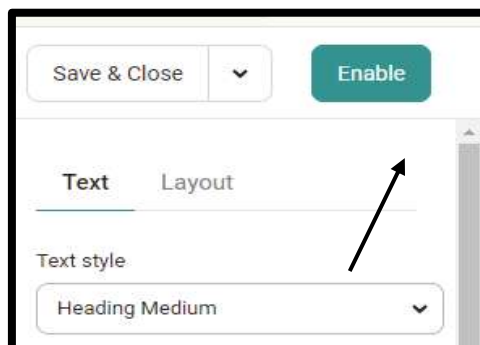
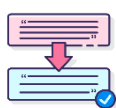


Fig. 3.8: [Zoom on Enable section](#)

3.4 Social media strategy with OSS



Digital marketing encompasses leveraging an array of internet-based channels and technological tools to advertise and market products or services. Its primary objective is to establish connections with specific demographics, actively engage them, and shape their buying choices using precise and quantifiable digital marketing methodologies.

Here are two scenarios along with solutions to improve your social media strategy using Joomla and Omnisend:

1. **Difficulty in managing and publishing consistent content across multiple social media platforms.**
 - o Solution: Implement Joomla as your centralized content management system (CMS). Use Joomla's extensions to streamline content creation and scheduling. You can find a great number of extensions at www.extensions.joomla.org,



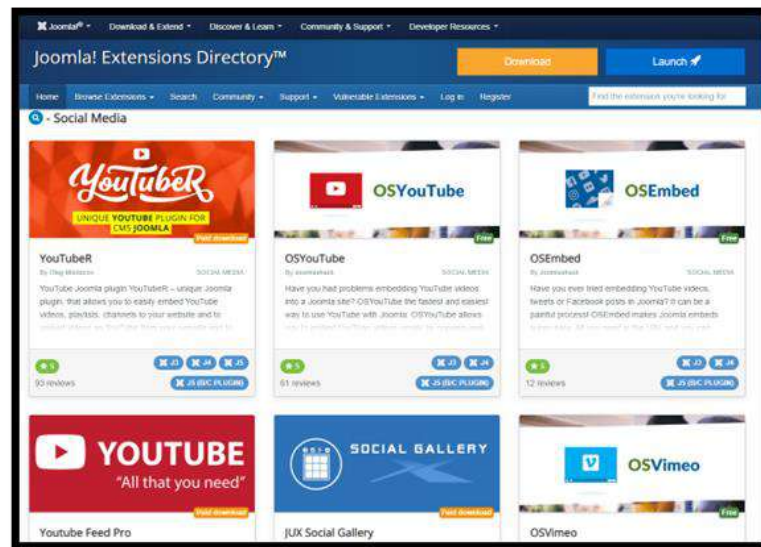


Fig. 3.9: [Joomla extension page](#)

choose the one that suits your project best and click on the download button on the top-right side of the page. It will be installed in a matter of seconds! Take a look at the next image!

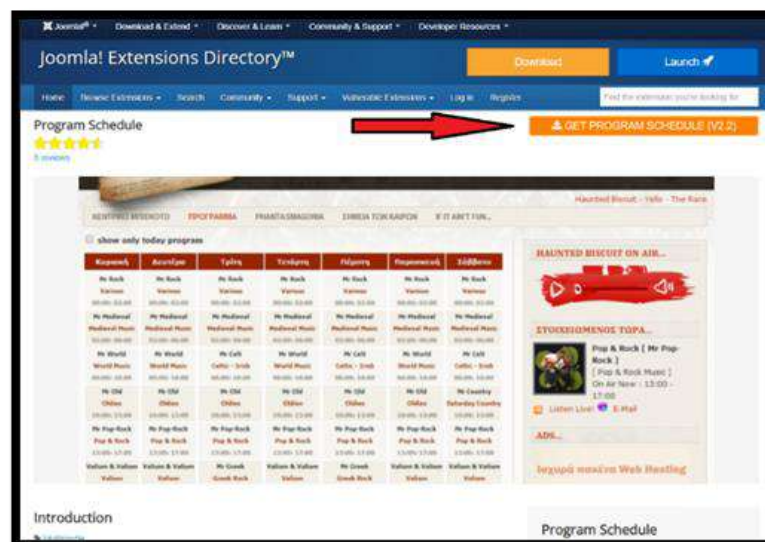


Fig. 3.10: [Program schedule Joomla extension main page](#)

- Integrate Omniscend to automate content distribution via email campaigns linked to social media posts, ensuring timely and consistent messaging.





Here's a video tutorial that will guide you step by step in designing and delivering your first email campaign on the platform! Check it out!

[Omnisend Academy Fundamentals: Design & Send Your First Email Campaign](#)

2. Inefficient customer engagement and response times on social media channels.

- o Solution: Utilize Joomla's community extensions to enhance customer support capabilities directly on your website.

You can use Joomla Issue tracker extension: this tool support staff to organise incoming queries or issues in an efficient manner, helping to provide a swift and efficient response.



Fig. 3.11: [Issue tracker extension](#)

- o Integrate Omnisend's email automation for personalized responses to inquiries received via social media.



This is one of many tutorial video about this topic you can find on YouTube:

[Email Automation Tutorial: Everything You Need to Know](#)



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By addressing these scenarios with Joomla and Omnisend, businesses can streamline content management, enhance customer engagement, and improve campaign performance on social media channels effectively.

3.5 Marketing and Communication Optimization with OSS. Implementing OSS solutions for inventory management, order processing, marketing and communication analytics.



Open-source software (OSS) serves as a versatile toolset for managing inventory, order processing, and analytics, offering robust pillars to streamline processes, elevate decision-making, and enhance overall efficiency in various operational areas.

Order Processing: Open-source platforms introduce automation and standardization to the fulfilment process with features like order tracking, integration with e-commerce platforms, and connectivity with payment gateways and shipping providers. This expedites order processing, enhances accuracy, and boosts customer satisfaction.



[Photo source](#)



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There are several extensions available that serve as excellent tools for managing marketing operations. RolandD Cyber Produksi offers four notable extensions: Ro Payments, which facilitates payment gateway integration; Single Sign On, allowing users to access multiple applications with a single login; Ro Users, simplifying user management; and Ro CSVI, streamlining the import and export of data. These tools collectively enhance the efficiency and effectiveness of marketing management.

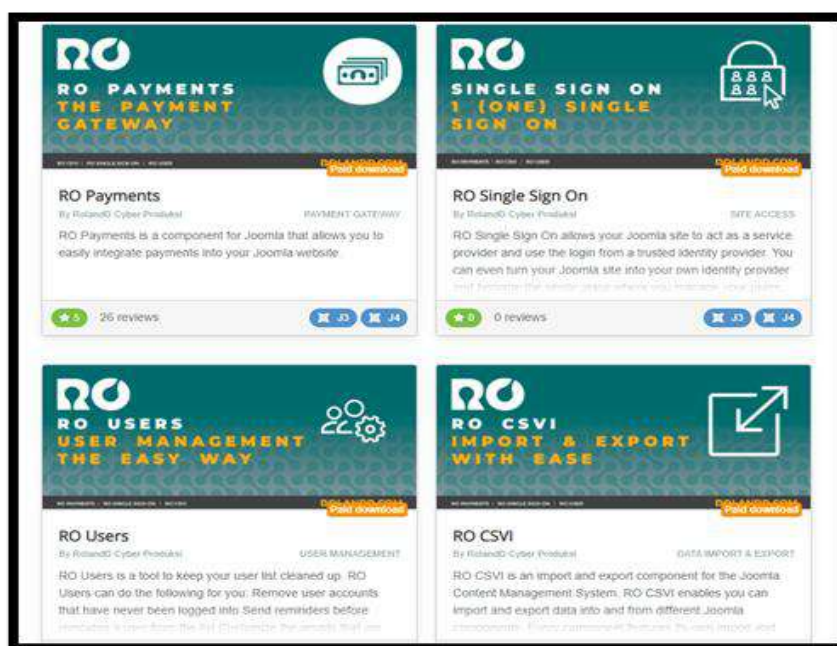


Fig. 3.12: [the four options provided by RolandD Cyber Produksi](#)

RO CSVI enables you to import and export data into and from different Joomla! components. Every component features its own import and export types to allow control over every part of the component. As you can see in the figure below, this feature gives the user comprehensive flexibility and precision in **managing data**. This capability is crucial for maintaining accurate and up-to-date information across your Joomla! site, ultimately enhancing your marketing operations by ensuring seamless data integration and management.

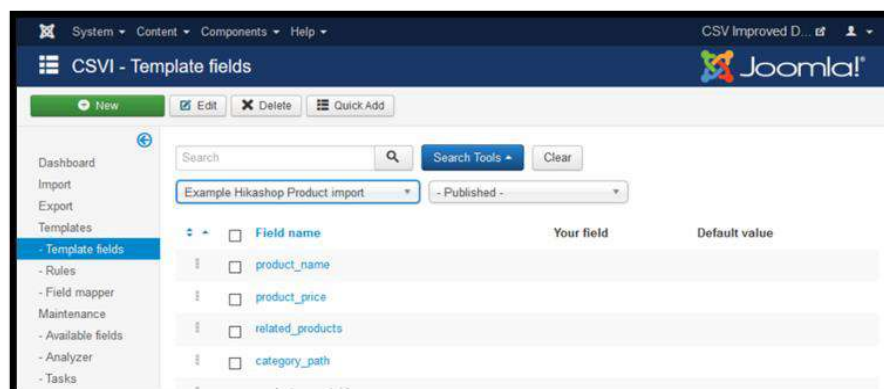
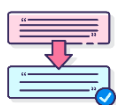


Fig. 3.13: [RO CSVI Template fields](#)

3.6 Leveraging open-source e-commerce platforms for online sales and transaction management.



Utilizing open-source e-commerce platforms as transaction managers offers substantial benefits for your online business:

- **Customizability:** Provides unparalleled flexibility by seamlessly integrating with third-party applications, payment gateways, and shipping providers.
- **Security and Transparency:** Continual community review ensures vulnerabilities are quickly addressed, enhancing security and transparency.
- **Scalability:** Handles high volumes of online traffic and supports complex integrations for seamless growth.
- **Ownership and Independence:** Grants complete control over your online store, free from restrictive licensing agreements.
- **Cost-effectiveness:** Free to use, allowing efficient resource allocation and reduced overall costs.
- **Developer Community Support:** Active communities offer invaluable support, troubleshooting, and innovative feature exploration at no additional cost.



Ecwid e-Commerce Shopping Cart for example is a robust and user-friendly extension that effortlessly integrates with your Joomla website! On the main page you can easily follow every step suggested by Ecwid guide in order to get your business on track!

In the next image you can see how it will be presented to you!

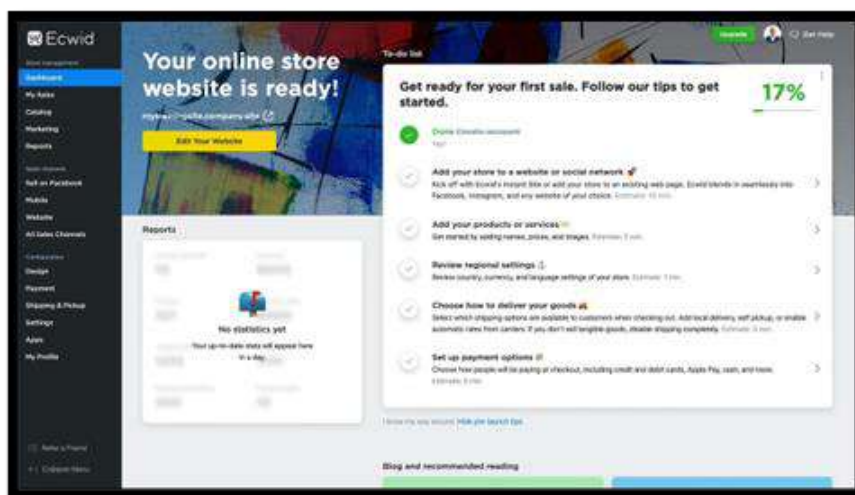


Fig. 3.14: [Getting started with Ecwid](#)

In the last section you can choose your preferred **shipping method** and apply it,

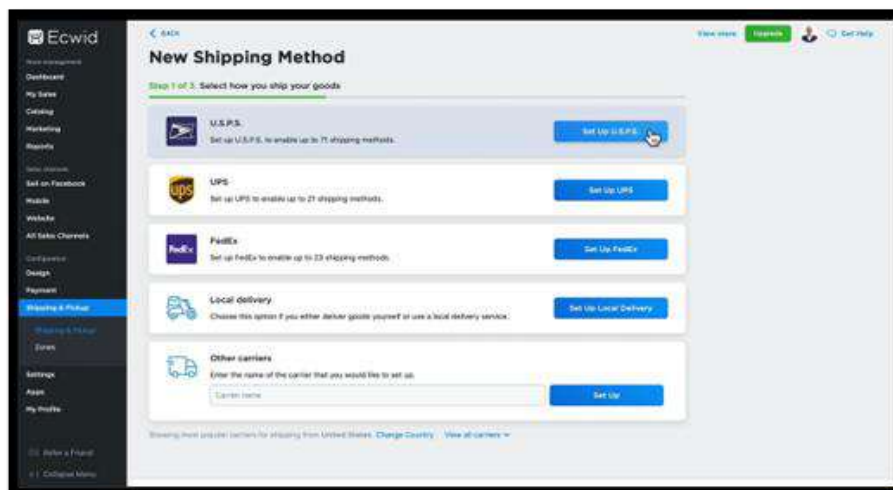


Fig.3.15: [Getting started with Ecwid](#)

the shipping rates and fees,

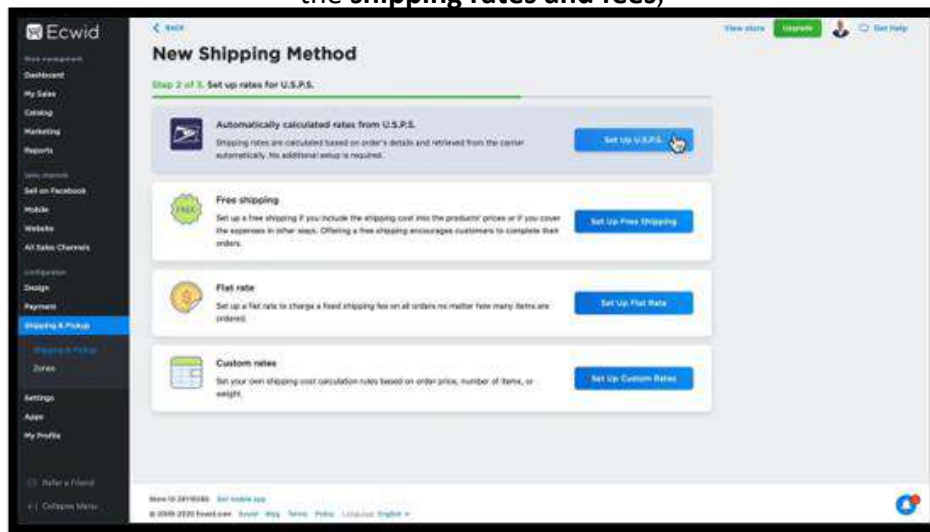


Fig. 3.16: [Getting started with Ecwid](#)

and even choose the location from where you'll ship your products!

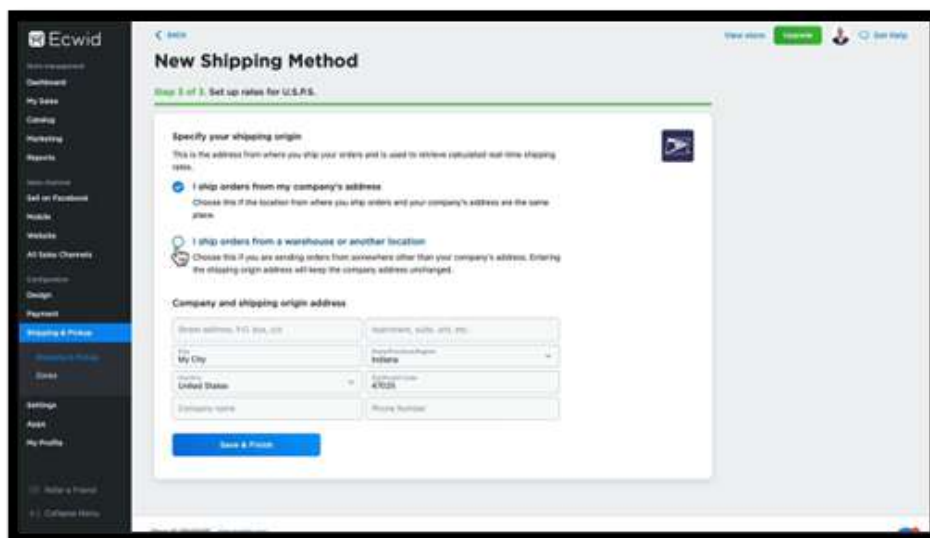
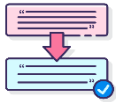


Fig. 3.17: [Getting started with Ecwid](#)



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3.7 Real-world Examples of Open-Source Software Implementation in marketing



From small start-ups to multinational corporations, organisations across various industries are leveraging the power of open-source solutions to streamline processes, reduce costs, and drive innovation in the marketing world.

Through some **examples**, we uncover the diverse applications and benefits of open-source technologies in practical settings, shedding light on the transformative potential of community-driven development and collaborative software solutions.

In this regard, two different examples are presented regarding:

- **AES Technologies (Joomla)**
- **Snatcher Online (Omnisend)**

These examples highlight how open-source tools can be tailored to meet specific business needs, demonstrating their potential to foster innovation and efficiency in the ever-evolving marketing landscape.



Check this out!

Example 1 – Joomla in Digital Marketing: AES Technologies

AES Technologies began as a small IT solutions firm dedicated to providing comprehensive e-commerce and web development services. Over the years, the company grew by consistently delivering innovative solutions tailored to their clients' unique needs. They expanded their offerings to include advanced CMS development, custom software solutions, and digital marketing services. Through a focus on client satisfaction, quality, and cutting-edge technology, AES Technologies established itself as a trusted partner for businesses looking to enhance their digital presence and operational efficiency.



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Problems solved with Joomla

AES Technologies highlights Joomla as an ideal CMS for enterprise solutions due to its ease of use, flexibility, and robust feature set. Joomla's extensive community support, multi-language capabilities, and efficient content management make it suitable for various organizational needs. The case study emphasizes Joomla's effectiveness in managing complex tasks, enhancing user experience, and ensuring security. AES customizes Joomla to improve SEO, integrate social media, and support multi-language users, providing significant cost savings and operational efficiencies.

Have a read [AES Joomla Case Study](#). to understand the key problems solved and the advantages of the tool!



Check this out!

Example 2 - Omnisend in Digital Marketing: Snatcher Online

Snatcher Online, founded in 2015 in South Africa, is a dynamic e-commerce retailer offering a wide range of products, from electronics to homeware. The company focuses on providing competitive pricing and excellent customer service, quickly gaining popularity in the online shopping market.

Problems solved with Omnisend

Before using Omnisend, Snatcher struggled with high cart abandonment rates and inefficient customer engagement. Omnisend's automation helped them recover lost sales, streamline their marketing efforts, and enhance customer interactions. This led to increased customer retention and higher sales conversion rates, contributing to significant financial growth.



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Financial Impact of Omnisend Implementation

- **Automated Sales Revenue:** \$120,000 in recovered sales through cart recovery automation.
- **Revenue Increase:** 74% increase attributed to email automation solutions.
- **Customer Engagement:** Enhanced engagement and sales conversion rates.

These improvements underscore the substantial impact of Omnisend on Snatcher's financial performance and operational efficiency.

Here you can find more info about this case study: [Omnisend case study](#).

3.8 Summary

This module provides a comprehensive overview of how open-source software (OSS) can be leveraged to optimize marketing and communication strategies for MSMEs and Third Sector Organizations (TSOs). The module highlights the importance of engaging with a targeted audience and demonstrates the use of Joomla for content management and Omnisend for email marketing automation.

Participants are introduced to the versatility and scalability of Joomla, which allows for the creation and management of a professional online presence without requiring advanced technical skills. The module also delves into the specifics of email marketing, covering critical aspects such as deliverability, segmentation, and automation, all facilitated by Omnisend.

In addition to exploring tools for content management and email marketing, the module addresses the integration of social media strategies with OSS, helping businesses maintain consistent and engaging content across platforms. The practical benefits of



open-source e-commerce platforms are also discussed, with a focus on how they can enhance transaction management and customer satisfaction.

Real-world case studies provide tangible examples of how businesses have successfully implemented OSS solutions to overcome marketing challenges, improve operational efficiency, and drive growth. Overall, the module equips participants with the knowledge and skills to effectively utilize open-source tools in their marketing and communication efforts.

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Raluca Dania Todor, "Marketing Automation", Bulletin of the Transilvania University of Brasov. Series V: Economic Sciences, 2016, p.7

Rachel A. Smith, "Audience Segmentation Techniques", Department of Communication, Arts and Sciences, College of the Liberal Arts, Pennsylvania State University, 2017, p.11

Omnisend, *Email Campaigns* - <https://www.omnisend.com/features/campaigns/>

Hootsuite, *Social Media Marketing Strategy* - <https://www.hootsuite.com/resources/social-media-strategy-guide>,

Woocommerce, *WooCommerce Marketplace* - <https://woocommerce.com/it/products/>

Wordpress, *our mission* - <https://wordpress.org/>

Webmarketingteam, *Che cos'è Joomla?* - <https://www.webmarketingteam.com/faq/hosting-cms/che-cosa-e-joomla.html>

Comarch, *OSS/BSS Data Analytics: A Data Analysis System for Telecoms* - <https://www.comarch.com/telecommunications/oss-bss-data-analytics/>



MODULE DGO4: OSS Applications for the Project Management of TSOs & MSMEs

4.1. Introduction



In the dynamic environment of third-sector organizations (TSOs) and micro, small, and medium-sized enterprises (MSMEs), efficient project management is pivotal for success. This learning module is designed to equip learners with comprehensive knowledge and practical skills in utilizing open-source software (OSS) applications tailored specifically for project management within these organizations. By focusing on **ProjectLibre**, a prominent OSS tool, this module aims to provide participants with the ability to streamline project oversight, enhance planning and monitoring, and optimize resource management.

ProjectLibre is an OSS that stands out due to its comprehensive feature set designed for project management. It is particularly beneficial for TSOs and MSMEs because it provides a cost-effective solution without sacrificing functionality. ProjectLibre offers robust tools for project planning, scheduling, and resource management, which are essential for organizations operating with limited budgets and resources.

While ProjectLibre is the focus of this module, alternative OSS tools such as Redmine, GanttProject and OpenProject can be considered. Each of these alternatives offers unique advantages:

- ✓ **Redmine:** Offers extensive customization options and a wide range of features, including scheduling, Gantt charts, document management, and issue tracking. Its support for plugins enhances its functionality, making it a flexible choice for diverse project management needs.
- ✓ **GanttProject:** Known for its simplicity and ease of use, making it an excellent choice for smaller projects and teams new to project management software.



- ✓ **OpenProject:** Provides comprehensive project management features with a focus on collaboration and Agile project management, ideal for teams looking for more flexibility.

Despite these alternatives, ProjectLibre is selected for this module due to its balance of advanced features, ease of use, and compatibility with existing project management practices commonly found in TSOs and MSMEs.

After the completion of this module, you will

- ✓ Understand the key features of ProjectLibre and its role in project management for TSOs and MSMEs.
- ✓ Learn how to create and manage tasks using ProjectLibre.
- ✓ Use Gantt charts, WBS, and RBS to organize project timelines and resources.

4.2. Getting started with ProjectLibre and becoming familiar with its key functions serving project management



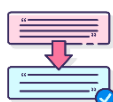
Suppose you are a project manager embarking on an exciting journey to launch your company's new advertising campaign using ProjectLibre. You start by easily downloading and installing the software. Next, you create a new project, entering the project name, assigning yourself as the manager, and setting the key dates. As you explore the intuitive ribbon bar, you quickly become familiar with the powerful features that ProjectLibre offers, setting you up for a streamlined and successful campaign.

How does the ribbon bar in ProjectLibre help you streamline your project management tasks?





Source: freepik. https://www.freepik.com/free-photo/people-standing-desk-working_1323936.htm



ProjectLibre is a free open-source project management software developed by Marc O'Brien and Laurent Chretienneau. It is designed to manage the entire project life cycle, from resource management and cost control to comparing planned and actual progress, making it an ideal alternative to Microsoft Project for small and medium-sized businesses. It supports multiple operating systems (Linux, Windows, and Mac OS), is compatible with various versions of MS Project, and is used globally in over 200 countries.

Key features of ProjectLibre include:



Advantages of ProjectLibre include the ability to set milestones, organize multiple projects, a simple and intuitive user interface, and rapid project planning.



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ProjectLibre is designed to be user-friendly, with most data entered into tables similar to Excel. Once your data is entered, ProjectLibre automatically generates diagrams, Gantt Charts, and a Work Breakdown Structure (WBS).



Focus

Necessary configuration for using ProjectLibre involves creating a new project.

In order to set up the new project, follow these simple steps:

1. Download ProjectLibre from <https://sourceforge.net/projects/projectlibre/> and install it.
2. Name the new project (e.g. "DIGITopen"), assign a manager (e.g. "Jane Smith"), and set a start date (e.g. 2.07.2024). You can also deselect the "Forward scheduled" option and set a finish date – in which case the software will backward schedule to determine the start date.

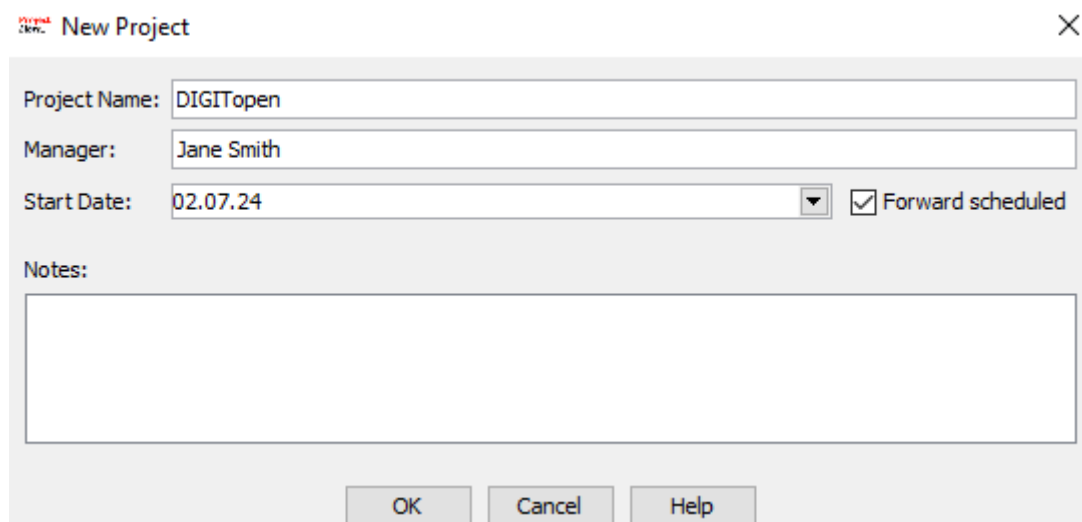


Fig. 4.1: Image source: ProjectLibre.

3. Familiarize yourself with the ribbon bar at the top. Under the "File" menu, you can create, open, and print project files. The "Task" menu offers multiple views, including Gantt charts and Work Breakdown Structure (WBS). These views help manage tasks by cutting, copying, pasting, indenting, and outdenting to create



summary structures. Under the “Resource” menu you can create a resource pool and assign resources to tasks. The “View” menu allows you to review the components mentioned above.

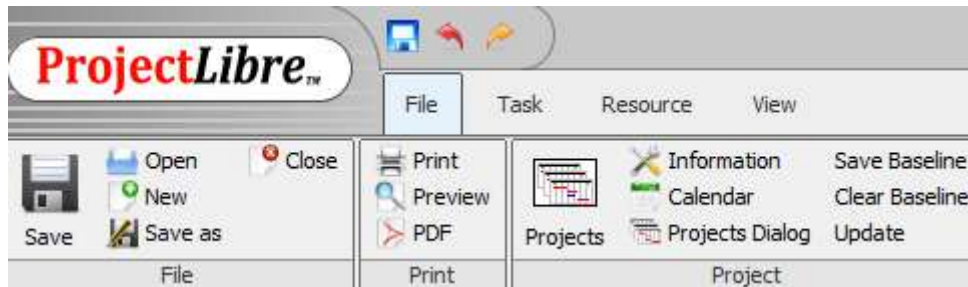


Fig. 4.2: Image source: ProjectLibre.

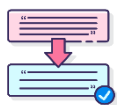


Check this out!

Most frequently, ProjectLibre is utilized by companies situated in the United States within the Information Technology and Services sector. It is commonly adopted by companies boasting employee counts ranging from 1000 to 5000 and revenue exceeding \$1000 million. Famous companies that use ProjectLibre include Fujitsu Ltd., Cisco Systems, Inc., and Lenovo Group Ltd. The fact that large and world-renowned companies employ ProjectLibre serves as evidence of its quality and adaptability.

Read more: <https://enlyft.com/tech/products/projectlibre>

4.3. Work Breakdown Structure: dividing the delivery workload into easy-to-manage tasks



A **Work Breakdown Structure (WBS)** involves breaking down a project into increasingly detailed levels until the desired level of detail is reached. This involves decomposing the project from broad summary tasks into sub-tasks, detailed



tasks, and work packages. This detailed breakdown is essential for creating a project plan that allows for tracking at the right level of detail. As the project advances, the WBS framework helps to assess the schedule and cost performance. Cost information aggregates up the WBS hierarchy, summarizing at each level, and enabling the tracking of cost accounts, variances, and earned value. This tracking should be done at a measurable level based on progress and assigned responsibilities, making the WBS an effective tool for communicating with stakeholders and customers.

Imagine a non-profit organization planning a community health awareness campaign. The Work Breakdown Structure (WBS) would help them break down tasks into manageable parts: defining campaign goals, recruiting volunteers, creating educational materials, and securing event locations. Each component ensures clarity in responsibilities and facilitates

effective communication with stakeholders. Similarly, a small manufacturing company launching a new product line would use a WBS to organize tasks such as market research, product design, production planning, and marketing strategy. This structured approach enables them to track progress, manage costs, and adjust timelines as needed, ensuring efficient project management and successful product launch.

How does breaking down the project into detailed tasks and subtasks help you manage the product launch more effectively?

How can you use the ProjectLibre OSS to make the Work Breakdown Structure of your project?



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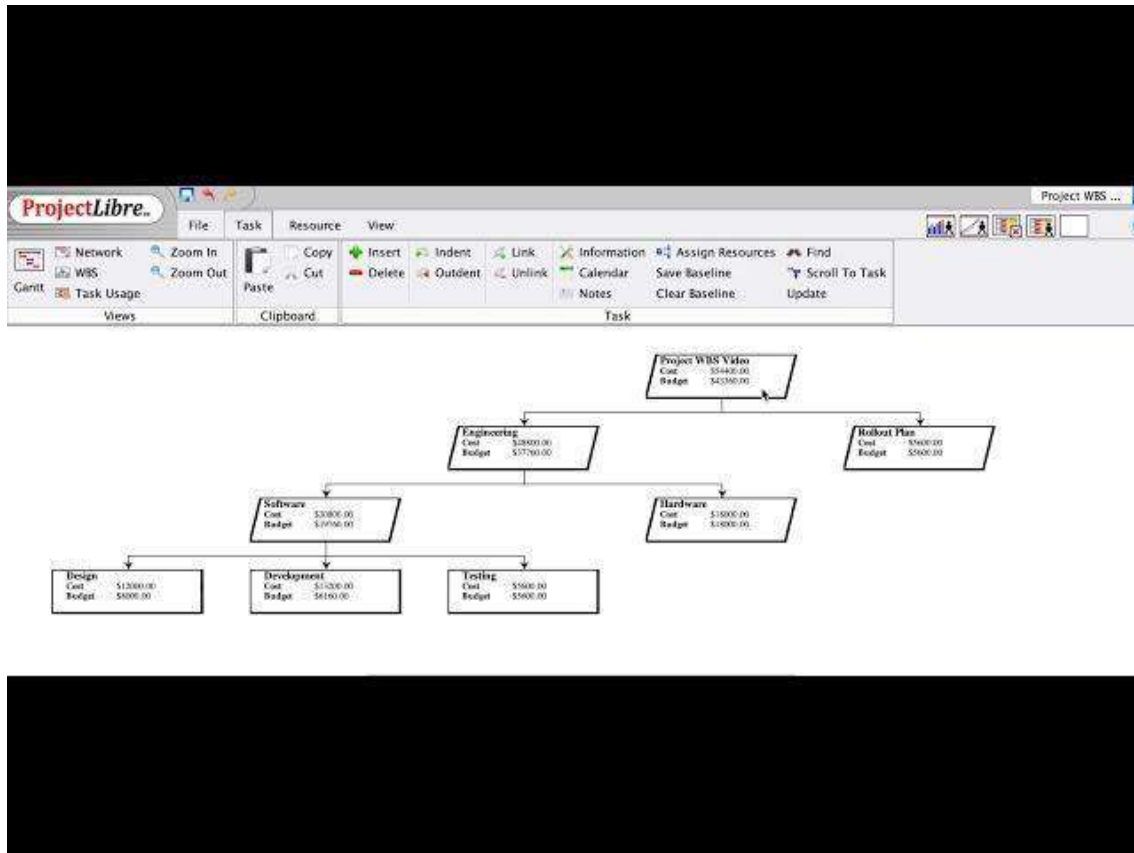


Fig. 4.3: Image source: <https://www.youtube.com/watch?v=OmylZvgOclK>

Imagine being a project coordinator at an innovative tech startup, tasked with organizing a groundbreaking product launch using ProjectLibre. You begin by breaking down the project into high-level tasks such as marketing, development, and logistics. Within the marketing category, you create detailed sub-tasks like social media campaigns, email marketing, and press releases. By indenting these tasks, you craft a clear and comprehensive Work Breakdown Structure (WBS), enabling you to track progress seamlessly and allocate resources with precision.



Configuration of Work Breakdown Structure in ProjectLibre

In order to configure the Work Breakdown Structure in ProjectLibre, follow these steps:



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1. Insert tasks and tasks groups. You can do it in the “Task” menu. Insert task names into proper Excel-like cells and set the dates. You can click on “Indent” to create a summary bar, which can be expanded or collapsed as needed. Below we will use an example of the case described above.



















		Name	Duration	Start	Finish
1		Marketing	32 days	02.07.24 08:00	14.08.24 17:00
2		Social media campaigns	30 days	02.07.24 08:00	12.08.24 17:00
3		Email marketing	30 days	04.07.24 08:00	14.08.24 17:00
4		Press releases	6 days	08.07.24 08:00	15.07.24 17:00
5		Development	28 days	03.07.24 08:00	09.08.24 17:00
6		Feature finalization	6 days	03.07.24 08:00	10.07.24 17:00
7		Testing and QA	18 days	11.07.24 08:00	05.08.24 17:00
8		Launch preparation	4 days	06.08.24 07:00	09.08.24 17:00
9		Logistics	24 days	03.07.24 09:00	06.08.24 09:00
10		Event planning	22 days	03.07.24 09:00	02.08.24 09:00
11		Product distribution	18 days	03.07.24 09:00	29.07.24 09:00
12		Launch event execution	7 days	26.07.24 09:00	06.08.24 09:00

Fig. 4.4: Image source: ProjectLibre.

2. If you have already introduced the Resources (see next topic 4.4), you can also assign them to particular tasks, either by clicking on an appropriate “Resource

		Name	Duration	Start	Finish	Predecessors	Resource Names
1		Marketing	32 days	02.07.24 08:00	14.08.24 17:00		
2		Social media campaigns	30 days	02.07.24 08:00	12.08.24 17:00		Alice
3		Email marketing	30 days	04.07.24 08:00	14.08.24 17:00		Benjamin
4		Press releases	6 days	08.07.24 08:00	15.07.24 17:00		Charlotte
5		Development	28 days	03.07.24 08:00	09.08.24 17:00		
6		Feature finalization	6 days	03.07.24 08:00	10.07.24 17:00		Daniel
7		Testing and QA	18 days	11.07.24 08:00	05.08.24 17:00		Emma
8		Launch preparation	4 days	06.08.24 07:00	09.08.24 17:00		Frederick
9		Logistics	24 days	03.07.24 09:00	06.08.24 09:00		
10		Event planning	22 days	03.07.24 09:00	02.08.24 09:00		George
11		Product distribution	18 days	03.07.24 09:00	29.07.24 09:00		Henry
12		Launch event execution	7 days	26.07.24 09:00	06.08.24 09:00		Isabella

name” cell and inserting the name manually, or by double clicking on the cell and choosing the resource(s) from the list. You can also use the button “Assign Resources”.

Fig. 4.5: Image source: ProjectLibre.

3. The indentation (and, if already introduced, the resource allocation – see: Topic 4.4) translates to the WBS view, reflecting the structure and allowing focused



analysis on specific areas. Just click “WBS” and review your Work Breakdown Structure.

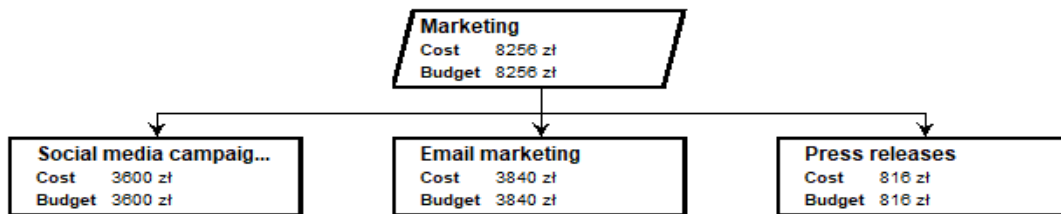


Fig. 4.6: Image source: ProjectLibre.



The video provided below offers step-by-step guidance and visual demonstrations to help you manage and streamline your project tasks effectively. Enhance your ProjectLibre skills and ensure your project's success with this valuable resource!

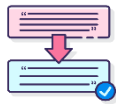
[Managing projects using Work Breakdown Structures in ProjectLibre](#)

Case Study: Siemens Spain uses WBS in ProjectLibre for new product line management

Siemens Spain used ProjectLibre’s Work Breakdown Structure (WBS) for the rollout of a new line of renewable energy products. Due to the complexity of managing numerous product development stages—ranging from initial research, regulatory compliance with Spanish and EU standards, and production to marketing—the company broke down the project into manageable components using WBS. This allowed Siemens to assign specific teams to each phase, improving both the accuracy of the timeline and budget adherence. The structured approach enabled Siemens to launch their product ahead of schedule, showcasing the utility of OSS in large-scale industrial projects. For more about Siemens Spain's projects, visit Siemens Spain website.



4.4. Resource Breakdown Structure: micro-managing resource components



The **Resource Breakdown Structure (RBS)** is a crucial tool for project management. It changes the focus from work-based project performance to a detailed breakdown of resources, ranging from a high-level summary to specific work packages. The RBS aids in the oversight, management, and evaluation of projects based on their resource utilization.

It is designed to be flexible for internal management use, whereas the Work Breakdown Structure (WBS) is often used to communicate with stakeholders or customers. The RBS offers similar performance insights but emphasizes resources, organizing them from overall summaries to detailed levels. This allows for performance assessments of different groups, such as software teams, testing teams, and marketing teams.

Additionally, the RBS facilitates the comparison of planned versus actual costs and variances, providing project managers and executives with a valuable tool to evaluate plan execution and identify potential discrepancies. It helps pinpoint areas where the project scope may have been misunderstood, poorly planned, or where execution is falling behind.

How does the Resource Breakdown Structure (RBS) differ from the Work Breakdown Structure (WBS), and how does it contribute to effective project management?

How can you use the ProjectLibre OSS to make the Resource Breakdown Structure of your project?

Picture yourself as a project manager in a construction firm, overseeing the intricate renovation of a historic building. With ProjectLibre, you can create a meticulous Resource Breakdown Structure (RBS) to manage all project resources efficiently. You can categorize resources into labor, materials, and equipment, further dividing each into



sub-categories. Assigning costs to these resources ensures accurate budgeting and optimal resource allocation throughout the project's lifecycle, helping you preserve the building's heritage with expert precision.

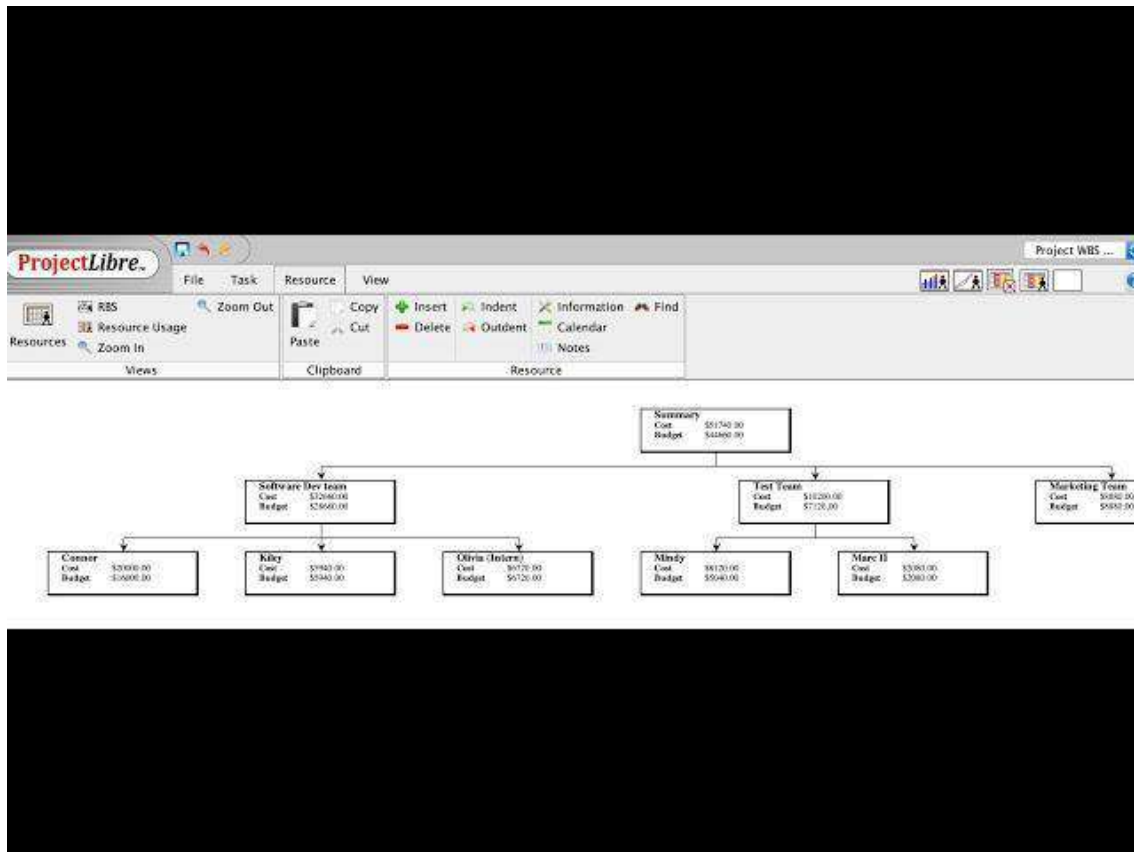
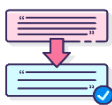


Fig. 4.7: Image source: <https://www.youtube.com/watch?v=hbJja3yL6w0>



Configuration of Resource Breakdown Structure in project Libre

In order to configure the Resource Breakdown Structure in ProjectLibre, follow these steps:

1. Click on the “Resource” menu. Check the resource pool where a series of resources can be entered. Note that this list does not have an indentation structure and it does not summarize costs and schedules.
2. Input the resources using Excel-like cells. Ensure each resource has relevant details: work type, rates, and cost per use (applicable for material resource).

3. Assign costs to resources by entering relevant information. Costs can be prorated (“to prorate” means to adjust the cost of something to reflect only the price of what is used), front-loaded (applied disproportionately to elements of the work that take place early on during a project or part of a project), or end-loaded (applied disproportionately to elements of the work that take place towards the end of a project or its part). You can also set up different calendars for various resources as needed. Coming back to the case described above, let’s assume you’re hiring 3 construction workers – Xavier, Yolanda and Zachary – with different standard and overtime rates, and different base calendars.

	⊙	Name	Type	E-m...	Mat...	Initials	Max. Units	Standard Rate	Overtime Rate	Accrue At	Base Calendar
1	⊙	Xavier	Work			X	100%	25 zł/hour	45 zł/hour ...	Prorated	Standard
2	⊙	Yolanda	Work			Y	100%	30 zł/hour	40 zł/hour ...	End	Night Shift
3	⊙	Zachary	Work			Z	100%	35 zł/hour	70 zł/hour ...	Prorated	Standard

Fig. 4.8: Image source: ProjectLibre.

4. Now you can set up a budget. Switch back to “Task” and then to “Gantt”. You can save a baseline (“Save Baseline”) for the entire project or selected tasks to establish a budget.



Fig. 4.9: Image source: ProjectLibre.

5. Configuring the Resource Breakdown Structure and establishing a budget will also affect the WBS, as shown in Fig. 7 (Topic 4.3).



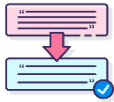
Watching this video will significantly improve your ability to manage project resources in ProjectLibre. It delivers clear, practical insights into setting up and optimizing your Resource Breakdown Structure, making resource management and budgeting more efficient.

[ProjectLibre Resource Breakdown Structure](#)



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4.5. Gantt charts



A **Gantt chart**, widely used in project management, is a graphical representation of a project schedule. It typically showcases tasks on the vertical axis and their respective timeframes on the horizontal axis. The bars on the chart indicate the start date, duration, and end date of each task. This visual tool offers various insights, such as displaying all project activities, highlighting task durations, illustrating overlaps between activities, showing task dependencies, and identifying the critical path of the project.

For example, a TSO planning a community outreach program can use a Gantt chart to see when community surveys start and end, overlap with workshop organization, and lead into an awareness campaign. Similarly, an MSME launching a product can visualize market research, development, marketing campaign, and launch phases to manage timelines and dependencies effectively. Gantt charts help these organizations streamline project management and ensure projects stay on track for successful completion.

How can you use the ProjectLibre OSS to create a Gantt Chart?

Imagine leading a team at a software company to develop a cutting-edge mobile app. As a project manager, you decide to harness the power of Gantt charts in ProjectLibre to keep track of tasks and deadlines. You create a Gantt chart that visually maps out the project schedule. This timeline visualization allows you to monitor progress, adjust schedules, and ensure your team stays on track, ultimately driving the successful launch of the app.

How can your team benefit from using a Gantt chart to manage the development of the mobile app, and what insights can you gain from it?





Focus

In ProjectLibre, a Gantt chart will be configured automatically once you have prepared the Work Breakdown Structure and the Resource Breakdown Structure! Simply go to the “Task” menu (or alternatively, the “View” menu) and click on “Gantt”. Your Gantt chart will appear.

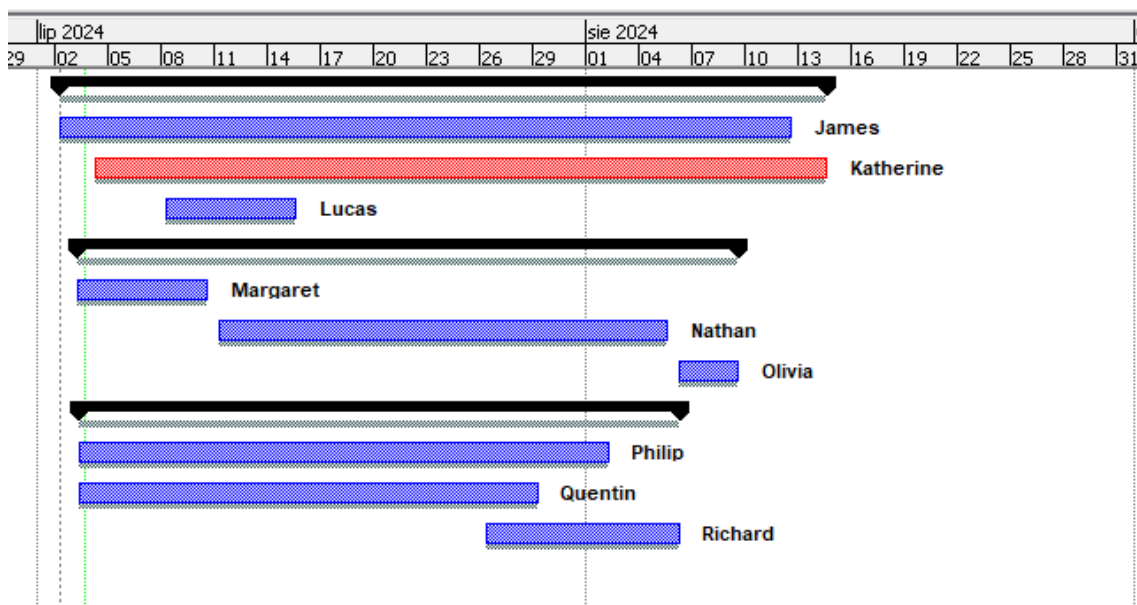


Fig. 4.10: Image source: ProjectLibre



Additional Information

You can find additional, advanced information on the Gantt chart customization in ProjectLibre in the link below:

[Gantt Chart Guide to Using Project Libre](#)



Case Study: UK charity uses Gantt charts to manage COVID-19 response efforts

During the COVID-19 pandemic, the British Red Cross relied on Gantt charts in ProjectLibre to manage their extensive relief operations across the UK. By visualizing task dependencies and timelines, the charity was able to coordinate efforts such as food deliveries, volunteer mobilization, and medical equipment distribution. Gantt charts allowed them to efficiently manage overlapping tasks in various regions while ensuring that critical path activities were completed on time. Their ability to adapt and respond to the crisis was greatly enhanced by ProjectLibre's visual planning tools.

For more about British Red Cross projects, visit [British Red Cross](#).



Practical Activity

Describe a hypothetical TSO or MSME project, including objectives and scope. Create a WBS and RBS using ProjectLibre. Develop a Gantt chart for the project timeline. Summarize key points and reflect on the impact of ProjectLibre on project management.

Additional information



Here are several websites and resources where you can stay updated on open-source software (OSS) developments, especially for project management and business operations:

1. [OpenSource.com](#)



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- A comprehensive platform for news, tutorials, and trends related to OSS. It covers a variety of sectors, including business, education, and project management tools.
- 2. [ProjectLibre Official Site](#)
 - The official website for ProjectLibre, offering updates on new releases, community discussions, and resources related to open-source project management software.
- 3. [GitHub](#)
 - GitHub hosts thousands of open-source projects, allowing you to follow updates, contribute to projects, and explore new OSS tools for various needs, including business and project management.
- 4. [Redmine](#)
 - A site dedicated to Redmine, another powerful open-source project management tool. The site provides updates, community forums, and detailed documentation for users.
- 5. TechRepublic - Open Source
 - TechRepublic covers the latest trends, news, and reviews on open-source software, including project management solutions. It's a great resource for keeping track of the latest OSS developments in business and technology.
- 6. [SourceForge](#)

SourceForge is a hub for finding, downloading, and reviewing open-source software, including project management tools like ProjectLibre. It's a valuable resource to keep up with new OSS projects and updates





Reflection Questions

Did you create a Gantt chart for your project? Were you able to assign resources using RBS in ProjectLibre? How does breaking down tasks with a WBS improve your project management?

4.4. Summary

Module DGO4 focuses on the use of open-source software (OSS) for project management in Third Sector Organizations (TSOs) and Micro, Small, and Medium-sized Enterprises (MSMEs). The primary tool discussed is ProjectLibre, an affordable, feature-rich OSS solution for planning, scheduling, and resource management. Other alternatives like Redmine, GanttProject, and OpenProject are mentioned for their unique capabilities.

The module guides learners through the basics of ProjectLibre, from project setup to key functions such as task management, creating Work Breakdown Structures (WBS), and generating Gantt charts. WBS helps break down projects into smaller, manageable tasks, while Resource Breakdown Structure (RBS) focuses on categorising resources like labour and materials. These structures enable efficient resource allocation and cost tracking in ProjectLibre.

Gantt charts offer a visual timeline of project activities, helping teams monitor progress and manage dependencies. The module includes a practical activity for learners to create WBS, RBS, and Gantt charts for a hypothetical project, reinforcing the practical application of OSS tools in managing projects for TSOs and MSMEs.

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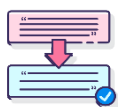
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MODULE DGO5: OSS Applications for the Cybersecurity of TGOs and MSMEs

5.1. Introduction



In this module, we will give an introduction to cybersecurity, the importance of end-user education and we will focus on a particular software, **Bitwarden**, an **open-source solution for password managers!**

The module is designed to equip you with the essential knowledge and skills to leverage open-source software effectively while maintaining robust cybersecurity practices. It addresses the growing importance of open-source solutions in the context of small and medium-sized enterprises (MSMEs) and third-sector organizations. (TOs).

In a world where cyber threats are ever-present, password security has become a critical aspect of protecting digital assets. Given that cybersecurity represents a very broad field containing several elements, the module will focus on the basics of the concept, and it will present some key tools for information security (password management), and end-user education.

In this module of the DigitOpen Toolkit we do not aim at training the staff of MSMEs and TSOs to become cybersecurity experts. This requires years of studies and very specific skills and knowledge. We will rather tackle the issue of cybersecurity from a different angle: how can any employee or volunteer in an organization put in place very simple and effective strategies to prevent cyber risks?

Before providing answers to that, let's start with a simple definition of cybersecurity: *"Computer security, cybersecurity, digital security, or information technology security (IT security) is the protection of computer systems and networks from attacks by malicious actors that may result in unauthorized information disclosure, theft of, or damage to*



hardware, software, or data, as well as from the disruption or misdirection of the services they provide.”³

We have presented in module 1 how and why OSS can contribute to an increased security of a software and in this module, we will present a very solid OSS for password management. But as we mentioned, the most powerful tool remains education.

After the completion of this module, you will

- ✓ be introduced to the key concept of cybersecurity and how open-source contributes to it
- ✓ have a good understanding of some of the key elements of cybersecurity, namely information security, network security, recovery planning and end-user education
- ✓ become acquainted with some OSS software for cybersecurity

5.2 The Importance of Cybersecurity Education for Small Organizations

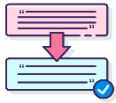


In today's digital age, cybersecurity has become a critical concern for organizations of all sizes. While large corporations often have the resources to implement robust security measures, small organizations frequently lack the same level of preparedness. This disparity makes them attractive targets for cybercriminals. Cybersecurity education is essential for small organizations to protect their assets, maintain customer trust, and ensure long-term viability.



Watch [the video](#) from the EU Parliament on the need for a strong cybersecurity strategy.

³ Schatz, Daniel; Bashroush, Rabih; Wall, Julie (2017). "Towards a More Representative Definition of Cyber Security". Journal of Digital Forensics, Security and Law. 12 (2)



Growing Cyber Threat Landscape

The cyber threat landscape is continuously evolving, with attackers employing increasingly sophisticated techniques. Small organizations are particularly vulnerable due to their limited resources and often outdated security practices. According to a report by the Ponemon Institute, over 60% of small businesses experienced a cyber-attack in the past year, with the average cost of a data breach reaching \$3.86 million globally. These statistics underscore the urgency for small organizations to prioritize cybersecurity education.



Protecting Sensitive Data

One of the primary reasons for emphasizing cybersecurity education is the protection of sensitive data. Small organizations often handle valuable information, including customer data, financial records, and proprietary business information. A data breach can lead to severe consequences, including financial losses, legal penalties, and reputational damage. Educating employees about the importance of data protection and best practices for securing information can significantly reduce the risk of data breaches.



Building a Cyber-Aware Culture

Cybersecurity education fosters a culture of awareness and vigilance within an organization. When employees understand the potential threats and their role in mitigating them, they are more likely to adhere to security policies and practices. This cultural shift is crucial, as human error remains one of the leading causes of security breaches. Training programs can cover various topics, such as recognizing phishing attempts, using strong passwords, and safely handling sensitive information. By embedding cybersecurity into the organizational culture, small businesses can create a proactive defense against cyber threats.

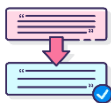


In the event of a cyber-attack, a swift and effective response is vital to minimize damage. Cybersecurity education equips employees with the knowledge and skills needed to respond to incidents promptly and efficiently. Training can include simulated attack scenarios, which help employees practice and refine their response strategies. By being prepared, small organizations can reduce downtime, limit financial losses, and recover more quickly from cyber incidents.



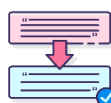
Watch the video by ENISA, the European Union Agency for Cybersecurity. It really takes one miss-step to threaten your company!

[Be aware, be prepared - Cybersecurity tips for SMEs – Protect your customers](#)



Compliance with Regulations

Many industries are subject to stringent data protection regulations, such as the [General Data Protection Regulation \(GDPR\) in Europe](#). Non-compliance with these regulations can result in hefty fines and legal repercussions. Cybersecurity education ensures that employees are aware of the regulatory requirements and adhere to the necessary standards. This compliance not only avoids legal penalties but also enhances the organization's reputation and credibility. Customers expect their personal information to be handled securely. A data breach can erode customer trust and damage the organization's reputation. Conversely, demonstrating a commitment to cybersecurity can enhance customer confidence and loyalty. Small organizations can leverage their cybersecurity efforts as a competitive advantage, reassuring customers that their data is protected. This trust is particularly important in an era where data privacy concerns are at the forefront of consumer consciousness.



Cost-Effective Security Measures

Investing in cybersecurity education is a cost-effective way for small organizations to enhance their security posture. While advanced security



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technologies can be expensive, educating employees about basic cybersecurity practices is relatively low-cost and yields significant returns. Preventing a data breach through education and awareness can save organizations substantial amounts of money compared to the costs associated with responding to and recovering from a cyber-attack.



Practical Activity

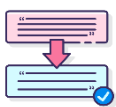
Do you know where to start? Take [the self-assessment test](#) to understand how safe your cybersecurity defences are!



Additional Information

If you want to dig deeper into cybersecurity and attend a full course on the topic, have a look at the [free online course](#) offered by the Open University.

5.3 Why is Bitwarden a useful open-source password management tool for TSOs & MSMEs?



Bitwarden is a powerful tool that enhances cybersecurity by providing secure, centralized password management with robust encryption and user-friendly features. Its open-source nature, affordability, and comprehensive functionality make it an excellent choice for individuals and organizations looking to safeguard their digital credentials.

Bitwarden is considered useful and its **key advantages**:

1. **Centralized Password Management Storage and Generation:** Bitwarden allows users to store and manage all their passwords in one secure vault. It also includes a password generator that creates strong, unique passwords for each site, reducing the risk of password reuse and weak passwords.



2. **Access from Anywhere:** Bitwarden can be accessed from any device, including desktops, laptops, smartphones, and tablets, ensuring that users always have their passwords available when needed.
3. **Enhanced Security Encryption:** Bitwarden uses end-to-end encryption to protect user data. This means that all sensitive information is encrypted on the user's device before it is sent to Bitwarden's servers, ensuring that even Bitwarden cannot access the data.
4. **Open Source:** Being open source, Bitwarden's code is publicly accessible, allowing security experts to audit it for vulnerabilities. This transparency enhances trust and security.
5. **Ease of Use User-Friendly Interface:** Bitwarden offers an intuitive and easy-to-use interface, making it accessible even for users who are not tech-savvy.
6. **Browser Extensions and Apps:** Bitwarden provides browser extensions for popular web browsers and dedicated apps for various operating systems, making it convenient to use across different platforms.
7. **Advanced Features Two-Factor Authentication (2FA):** Bitwarden supports various forms of two-factor authentication, adding an extra layer of security for accessing the vault.
8. **Password Sharing:** Securely share passwords with family, friends, or team members without compromising security.
9. **Security Reports:** Bitwarden provides reports that highlight weak, reused, or potentially compromised passwords, helping users to improve their overall password hygiene.
10. **Affordability Free and Paid Plans:** Bitwarden offers a robust free version with essential features, making it accessible to anyone. The paid plans are affordable and provide additional features.
11. **Organizational Benefits Team and Enterprise Solutions:** Bitwarden offers solutions tailored for teams and enterprises, allowing organizations to manage credentials efficiently and securely.



12. **Cross-Platform Compatibility:** It integrates well with various browsers and platforms, enhancing its versatility and ease of access.
13. **Community and Support Active Community:** As an open-source tool, Bitwarden benefits from an active community that continuously contributes to its improvement.

For Micro, Small, and Medium Enterprises (MSMEs) and TSOs, cybersecurity is crucial to protect sensitive data, ensure business continuity, and maintain customer trust. MSMEs are the backbone of economies worldwide, contributing significantly to employment, innovation, and economic growth. However, their growing reliance on digital technologies makes them increasingly vulnerable to cyber threats. Cybersecurity is therefore a necessity for MSMEs and TSOs to safeguard their data, maintain operational integrity, and uphold customer trust.

An opensource password manager offers a cost-effective, secure, and customizable solution to manage passwords, enhancing overall cybersecurity posture. Let's briefly explore the key benefits of an Open Source Password Manager Tool for MSMEs and TSOs:

- **Cost-Effectiveness:** Open source tools are generally free to use, which is beneficial for MSMEs operating on limited budgets.
- **Security:** Open source password managers are transparent, allowing security experts to audit the code. This can lead to higher security standards as vulnerabilities are identified and fixed quickly.
- **Customization:** MSMEs can tailor open source tools to fit their specific needs, enhancing efficiency and integration with existing systems.
- **Community Support:** Open source projects often have vibrant communities that provide support, updates, and enhancements, which can be valuable for MSMEs without dedicated IT departments.

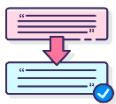


- **Control and Privacy:** By using open source software, MSMEs have more control over their data and how it is managed, reducing the risk of third-party data breaches.

Bitwarden is an open-source password manager (and much more). We know that a lot of organizations still use excel files (when not paper) to store their passwords.

Are you one of them?

Bitwarden is very intuitive which requires a very little effort to be used and results in an impressive efficiency and safety for the management of your organization's passwords.



Why Bitwarden is a Game-Changer for MSMEs and TSOs

1. Affordable Excellence

One of the most compelling reasons for MSMEs to adopt Bitwarden is its cost-effectiveness. As an open source tool, Bitwarden offers a free version that includes core functionalities suitable for many businesses. For those needing advanced features, Bitwarden's premium plans are competitively priced, ensuring that even the smallest businesses can afford top-tier password management without straining their budgets.

2. Enterprise-Grade Security

Bitwarden employs state-of-the-art security protocols to keep your passwords safe. With end-to-end encryption, only you have access to your data—Bitwarden can never see or share your passwords. This zero-knowledge architecture ensures that your sensitive information is protected against even the most sophisticated cyber threats. For MSMEs, this level of security is critical to maintaining trust with customers and partners.

3. Ease of Use and Integration

Time is a precious commodity for MSMEs. Bitwarden's user-friendly interface makes it easy to manage passwords across the organization. Employees can quickly generate,



store, and retrieve strong passwords, reducing the likelihood of using weak or reused passwords. Additionally, Bitwarden integrates seamlessly with various platforms and browsers, ensuring a smooth user experience across different devices and operating systems.

4. Collaboration and Access Management

Bitwarden's organizational features allow MSMEs to manage password access for teams effectively. Administrators can assign roles, control permissions, and share credentials securely with team members. This ensures that employees have access to the passwords they need while minimizing the risk of unauthorized access. For businesses with remote or distributed teams, this functionality is invaluable.

5. Customization and Flexibility

Being an open source tool, Bitwarden offers a high degree of customization. MSMEs can tailor the tool to meet their specific needs, whether it's integrating with existing IT infrastructure or developing bespoke security policies. This flexibility ensures that Bitwarden can grow with your business, adapting to new challenges and requirements as they arise.

6. Community and Support

The vibrant Bitwarden community provides a wealth of resources, from documentation and tutorials to forums and direct support. This community-driven approach ensures that users can find solutions and get help quickly, enhancing the overall user experience. For MSMEs without dedicated IT teams, this level of support is crucial.

Let's now embark on our journey to discover Bitwarden—a powerful, open source password manager designed to offer enterprise-grade security without breaking the bank. Let's dive into why Bitwarden is the ideal choice for MSMEs and TSOs striving to enhance their cybersecurity posture.

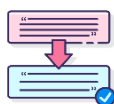




Reflection Question

Where do you/your organisation securely generate, store, and shares passwords and sensitive information?

5.4 Getting started with Bitwarden and become familiar with key functions serving cybersecurity



Cybersecurity in business is dependent on people. In a workplace, a strong security culture implies that every employee has a stake in safeguarding the organization's assets and data.

It is therefore crucial that all members of the organization are actively engaged in protecting sensitive information and assets to effectively build a strong security culture.



Focus

Using a password manager significantly enhances your cybersecurity posture by ensuring you use strong, unique passwords, protecting against phishing, and securely storing sensitive information.

Indeed, a **password manager** can play a key role in:

- **Enhancing password complexity:** Password managers generate and store complex passwords that are difficult to crack. Unlike simple, easy-to-remember passwords, complex passwords typically include a mix of uppercase and lowercase letters, numbers, and special characters, making them more secure.
- **Providing a unique password for every account:** A password manager enables you to use unique passwords for each of your accounts. This is crucial because if one account is compromised, the breach does not affect your other accounts. Using the same password across multiple sites increases the risk of a domino effect in case of a data breach.



- **Secure storage of sensitive information:** Password managers securely store not just passwords but also other sensitive information, such as credit card details, secure notes, and personal information. They use strong encryption to protect this data, making it accessible only to the authorized user.
- **Convenience and time savings:** Password managers save time by autofilling login details and generating passwords, reducing the hassle of remembering and typing complex passwords. This convenience encourages better security practices without compromising on ease of use.
- **Centralized password management:** Password managers provide a central location to manage all your passwords. This centralized approach makes it easier to update and manage passwords regularly, which is a good security practice.
- **Encryption and Security Features:** Most reputable password managers use advanced encryption standards (to protect your data. They also often include additional security features such as two-factor authentication to provide an extra layer of protection.

But how to start developing an online security culture at work? Take the first step by securing passwords and sensitive information with a secure open-source password manager!

Get started with [Bitwarden](#), an open source alternative for secure secrets management!



Source: <https://www.youtube.com/watch?v=oDRSBFuMyOU>

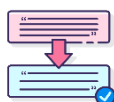


Are you ready to take your online security to the next level? Check out this short [video](#) on Bitwarden and learn how it can help you protect your digital life with ease, ensuring your passwords are strong, unique, and accessible only to you.

Bitwarden helps businesses and individuals to stay safe online. Indeed, it enables users to securely generate, store, and shares passwords and sensitive information from any location, browser, or device, boosting productivity with ease.

Bitwarden is a *freemium* open-source password management service. So, to start working more productively and powering up your protection, users have two options:

- Signing up for a [free individual account](#) (some basic services are provided free of charge).
- Getting started with a [free business trial](#) (more advanced features must be paid for).



Let's see the steps to follow to get started as an individual user. Taking the first steps with Bitwarden is straightforward. Start by downloading the application and setting up your organization's account. Conduct a security audit to identify weak or reused passwords and replace them with strong, unique ones generated by Bitwarden. Train your employees on using the tool and establish clear guidelines for password management. By taking these steps, you'll significantly enhance your business's cybersecurity defenses.

1. Creating a [Bitwarden account](#)

- Go to the [self-registration page](#) and insert your data.



Fig. 5.1: Bitwarden self-registration page

2. Creating a master password

- You will be asked to create a *master password*, that is the primary method for accessing Bitwarden. Please note that you can also secure Bitwarden with two-step login. For further information, please see Topic 4.

3. Getting to know your *vault items*

- A Bitwarden *vault* is used to store your items securely. You can have two kinds of vaults:

- ∨ All vaults
- 👤 My vault
- + New organization

Fig. 5.2: Individual and Organization vaults

Your individual vault, shown as *My vault*, is a vault owned and managed by your account. Your organization vault is a vault owned and managed by that organisation and shared with

- Individual vaults

Bitwarden can securely store more than just usernames and passwords. Indeed, you can store in your vault four types of [items](#): logins, cards, identities, and secure notes.



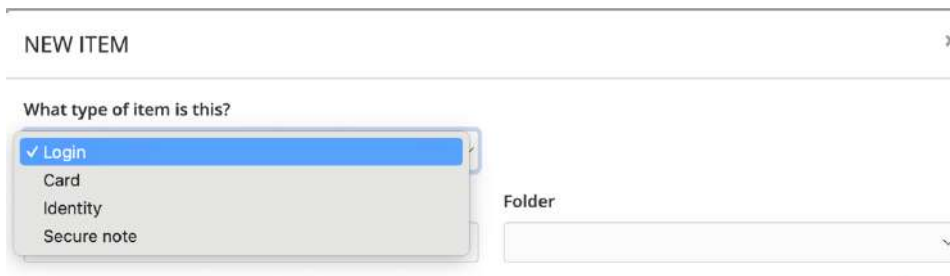


Fig. 5.3: Bitwarden's items

4. Accessing Bitwarden password manager

- This opensource password manger is available both:
 - [Desktop Applications](#): users can access Bitwarden on Windows, macOS, and Linux desktops with native applications.
 - Mobile Applications: available on [Google Play](#) and [App store](#).
 - Integrate Bitwarden directly into your favorite browser with [browser extensions](#).

5. Importing your data

- IT doesn't end here! Bitwarden enables you to import data such as previously saved passwords from a wide variety of other password managers or browsers. Read this [article](#) to get more information on how to import data to your vault.

6. Creating new items

- Are you wondering how to create a new item? Making a login is the simplest approach to start learning how to do it! To save the login for a website, navigate to it using the browser extension and click the + Add Item button. You can use the [Bitwarden password generator](#) - available to everyone, not only to current Bitwarden users - to create strong, random passwords. The generator will create a strong password that meets users 'specifications.



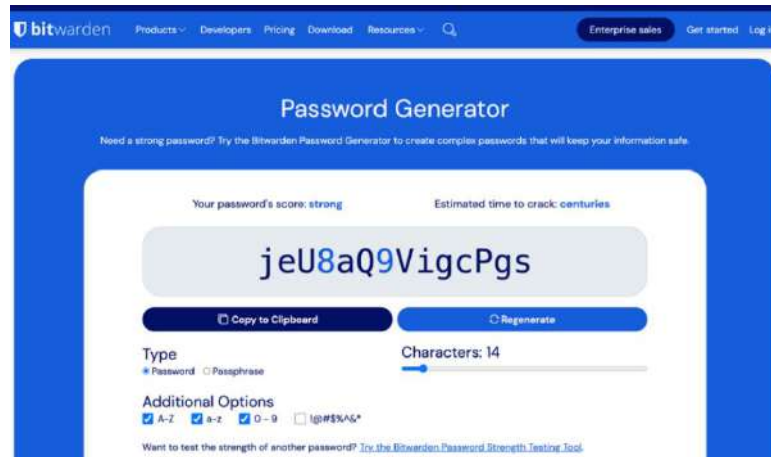


Fig. 5.4: Bitwarden password generator

5.3. Managing vault items



Once you log in, you'll land on all vaults view. This space will list all vault items, including logins, cards, identities, and secure notes.

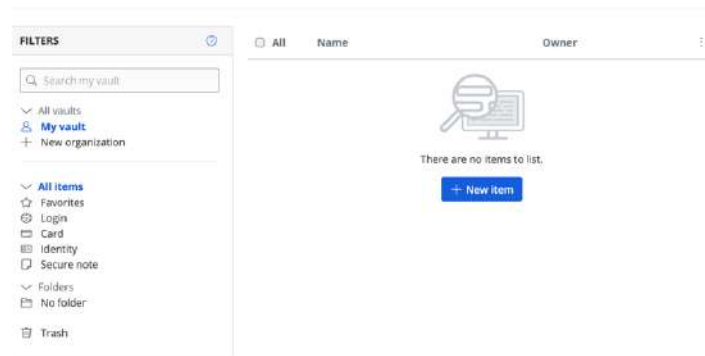


Fig. 5.5: Bitwarden's vaults view

Bitwarden's vault items are:

- Logins: are most often used to store username and password combinations, passkeys, and support [TOTP seeds](#) for premium users.

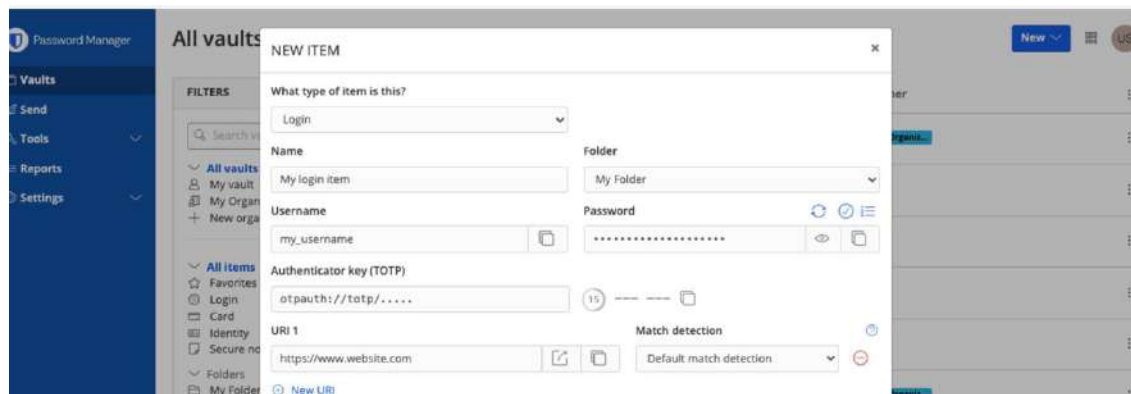


Fig. 5.6: Login item

- Cards: can be used to securely store credit or debit card information:

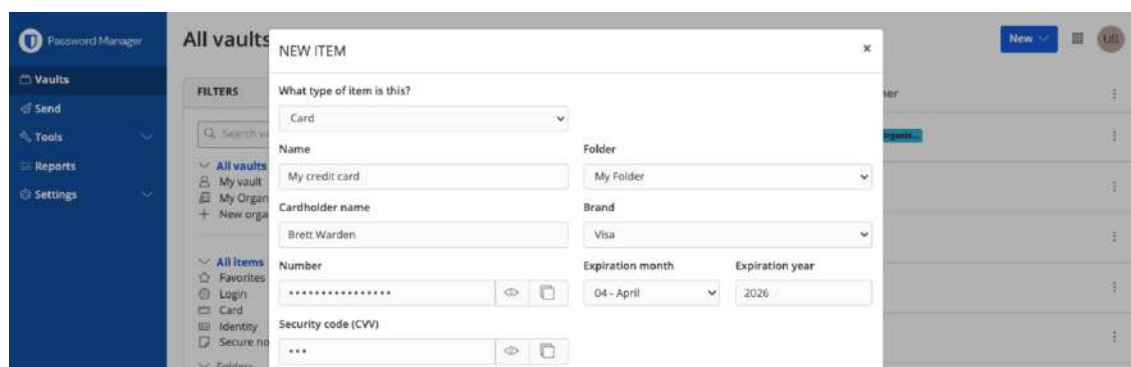


Fig. 5.7: Card item

- Identities: can be used to store billing, mailing, and most other types of information you might need when filling out online forms:

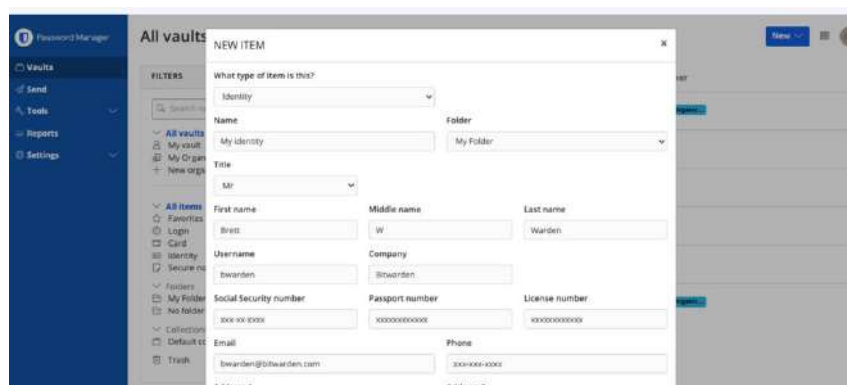


Fig. 5.8: Identity item

- Secure notes: can be used to store encrypted freeform text for anything you want protected:

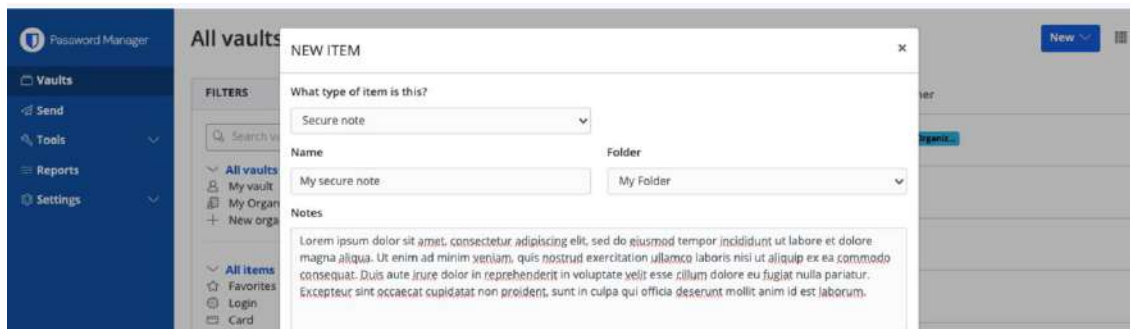


Fig. 5.9: Secure note item

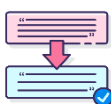
You can filter which items to list by whether they're in your individual vault (My Vault) or an organization vault.



Additional Information

To learn how to filter by vault, click [here](#).

5.4. Creating a folder and moving items to a folder



You are on your way to become a Bitwarden master!

The next step is to learn how to create a folder. To do this, follow these steps:

- Step 1: Select the **+ New** button and choose *Folder* from the dropdown:

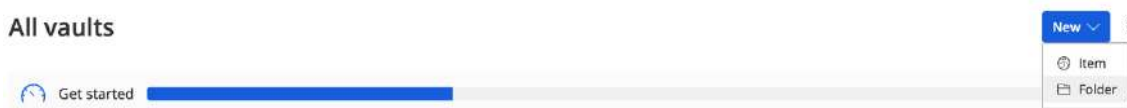


Fig. 5.10: Dropdown menu to create a folder

- Step 2: Enter a name (for example, DigitOpen) for your folder and click **Save**.

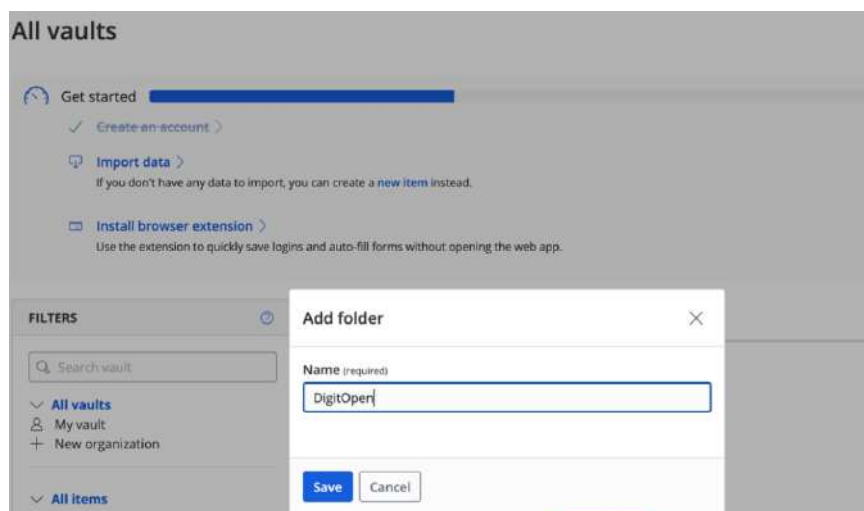


Fig. 5.11: Naming a folder

Once created, you can rename or delete a folder at any time by selecting the folder and clicking the Pencil icon:



Fig. 5.12: Pencil icon to rename/delete a folder



Additional Information

To learn more on how to organize folders and nest them click [here](#).

There [are many ways](#) to move your items to a folder:

- Web vault.

From the web vault, you have 2 options:

1. Navigate to the *Add Item* or *Edit Item* screen, select your new folder from the Folder dropdown and Save your item:



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NEW ITEM ×


What type of item is this?

Login ▼

Name Folder

My login item DigitOpen ▼

Fig. 5.13: Moving items to a folder from the web vault

- Navigate to the *Vaults* view, select the items you want to move and use the options menu  to select the *Move Selected* button. Choose the folder you want to move the item(s) to:

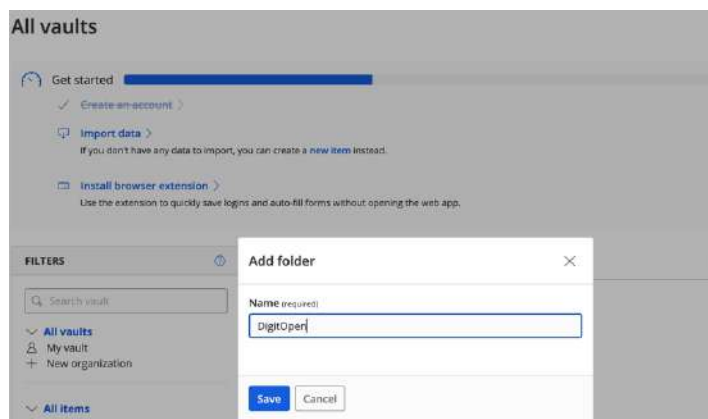
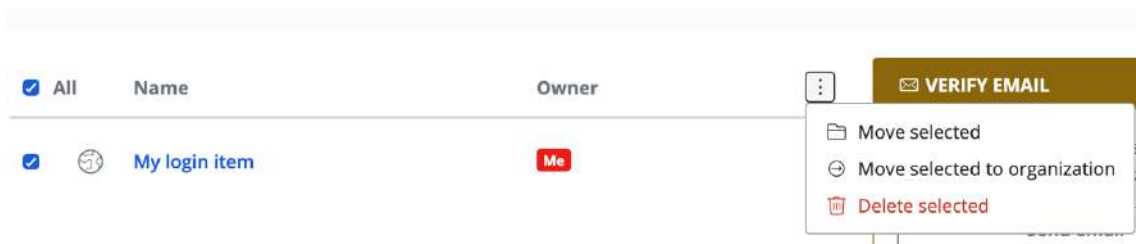


Fig. 5.14: Moving items to a folder from the web vault

- **Browser extension**
Open the vault item you want to move, select the *Folders* dropdown, and choose the folder to move the item to:

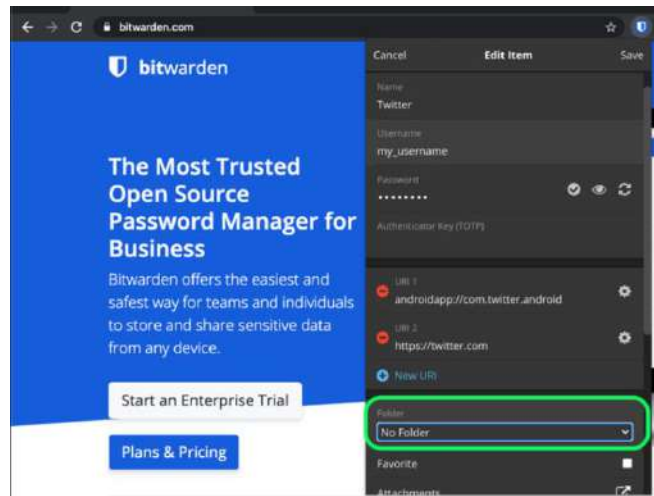


Fig. 5.15: Moving items to a folder from browser extension

- Mobile

Open the vault item you want to move, tap the *Folders* dropdown. Click on *Edit* and choose the folder to move the item to.

5.5. Creating a collection and moving items between collections



Your journey doesn't end here. Indeed, you have learned a lot so far, how to create a Bitwarden account, how to manage vault items and how to create and move folders, but there is still something to learn: creating a collection in Bitwarden.

Collections gather logins, notes, cards, and identities for secure sharing from an organization. So, what is the difference between a folder and a collection?

- Organizations control access to organization-owned items by assigning users or groups to collections.
- Organization-owned items must be included in at least one collection.

Creating a collection can **only** be done from the Password Manager web app. Organization members with collection management permission can create collections.

The first step to create a collection is to log in to the Bitwarden web app, select the *New* button, and choose *Collection* from the dropdown:



Fig. 5.16: Creating a collection

In the Collection info tab give your collection a Name, choose the Organization it should belong to.

Similar to folders, collections can be nested in order to logically organize them within your vault.




Additional Information

Click [here](#) to learn more on how to nest your collections.

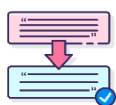
We can now create collections. But how do we move an item between collections? Users with access to multiple collections within your organization can move a vault item from one collection to another or add a vault item to multiple collections. This can be performed from **any Bitwarden app**.

- Web vault
 1. Select the *Options* menu for the item to move.
 2. Select the *Collections* icon from the dropdown.
 3. Select the collection(s) to add or move the item to and select *Save*.
- Browser
 1. Open the item and select *Edit*.
 2. On the Edit Item screen, select *Collections*.
 3. Select the collection(s) to add or move the item to and select *Save*.
 4. Back on the edit Item screen, select *Save* again.
- Mobile



1. Open the item and tap *Edit*.
2. Tap the  *Options* menu and tap *Collections*.
3. Tap the collection(s) to add or move the item to and tap *Save*.
4. Back on the edit Item screen, tap *Save* again.

5.6. Securing your vault



Once your vault is full of data, you should consider taking some steps to secure it. You can do it by setting up two-step login. But what is a two-step login?

This system provides an additional level of security when using sensitive online services. It requires you to verify your identity when logging in using an additional token, usually retrieved from a different device. The recommended method for a free Bitwarden account is using a mobile device authenticator app such as [Bitwarden Authenticator](#). This is a mobile authentication app you can use to verify your identity for websites and apps that use two-factor authentication (2FA).

To set up two-step login through Bitwarden Authenticator, follow these steps:

1. Download Authy on your mobile device.
2. In the Bitwarden web app, select *Settings* → *Security* → *Two-step login* from the navigation:

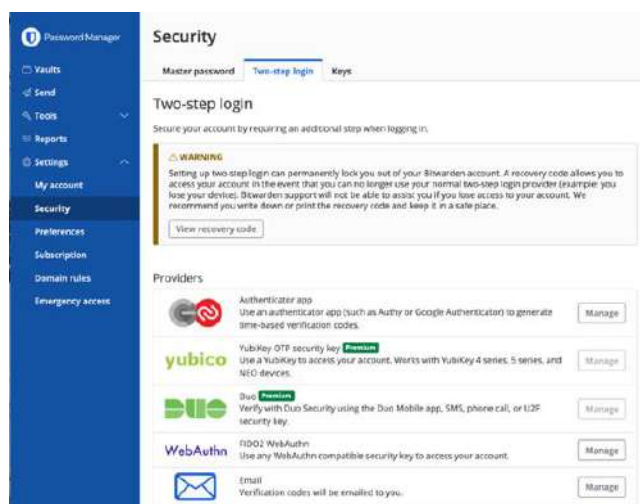


Fig. 5.17: Two-step login page

3. Locate the *Authenticator App* option, select *Manage* and enter your master password to continue.

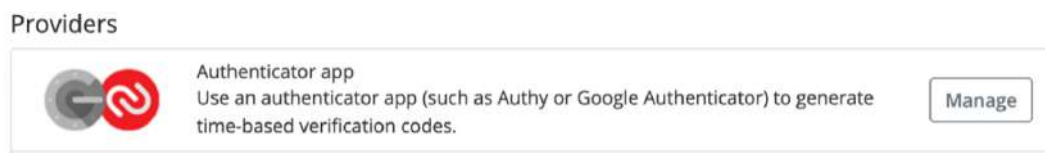
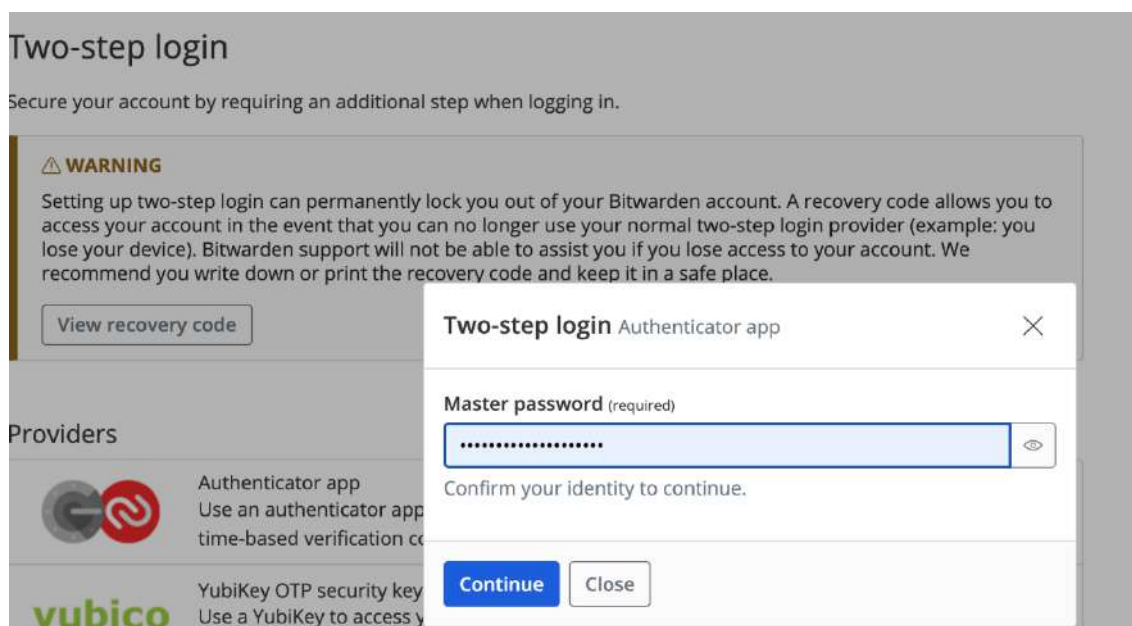


Fig. 5.18-19-20: Enabling two-step login for your Bitwarden account



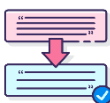
4. On your mobile device, open Bitwarden Authenticator and tap the + button.
5. Scan the QR code located in your web vault using Bitwarden Authenticator. Once scanned, Bitwarden Authenticator will display a six-digit verification code.
6. Enter the six-digit verification code into the dialog box in your web app and select the *Enable* button.
7. Select the *Close* button to return to the Two-step login screen and select the *View Recovery Code* button. Your recovery code can be used if you lose your mobile device. **This is a critical step to ensure you don't ever get locked out of your vault, so don't skip it-**
8. Enter your master password and select the *Continue* button to get your recovery code.



Additional Information

For further information on how to secure Bitwarden with two-step login read the [Field Guide to Two-Step Login](#).

5.7. Asking the community



As an open-source project, Bitwarden wouldn't exist without its users.

The [Bitwarden community](#) is a collective of users, developers, and enthusiasts who support and contribute to the Bitwarden password management platform. The community plays a crucial role in the development, support, and promotion of the software. Here are some key aspects of the Bitwarden community:

- **Forums and Discussions:** Bitwarden has an active community forum where users can ask questions, share tips, report bugs, and discuss features. This forum is a central hub for community interaction.
- **Open Source Contributions:** Since Bitwarden is open-source, the community can contribute to its development by submitting code, reporting issues, and suggesting new features.
Contributions are typically managed through GitHub, where the source code is hosted.
- **Support and Documentation:** Community members often contribute to support efforts by helping others troubleshoot issues, answering questions, and creating or improving documentation and guides.
- **Localization and Translations:** The community helps in translating Bitwarden into various languages, making the software accessible to a wider audience globally.
- **Security and Audits:** Community members, including security experts, participate in security reviews and audits, helping to ensure that Bitwarden remains a secure and trustworthy password manager.



The Bitwarden community is essential for the ongoing success and improvement of the platform, leveraging collective expertise and enthusiasm to enhance the user experience and maintain high security standards. Bitwarden users are now welcome to join a User Research program where community members will contribute feedback on early feature and design concepts to share insights with the Bitwarden product team.

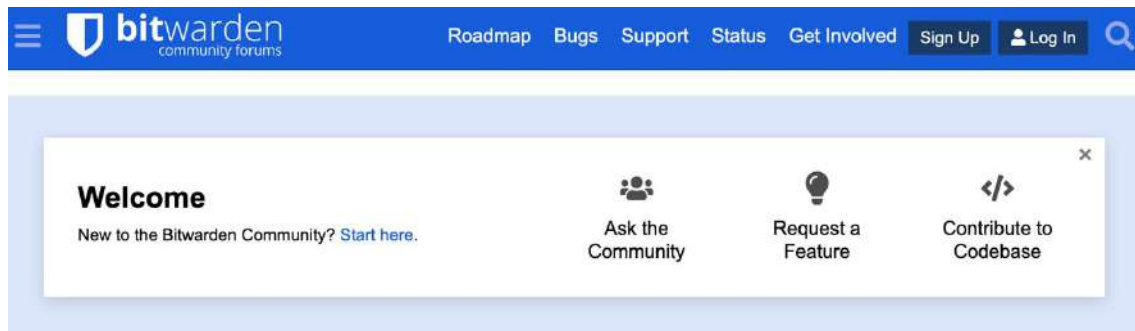


Fig.5.21: Bitwarden community forums

Bitwarden users are welcome to join a User Research program where community members will contribute feedback on early feature and design concepts to share insights with the Bitwarden product team. User research in the Bitwarden community is crucial for continuous improvement and ensuring the product meets the evolving needs of its users.

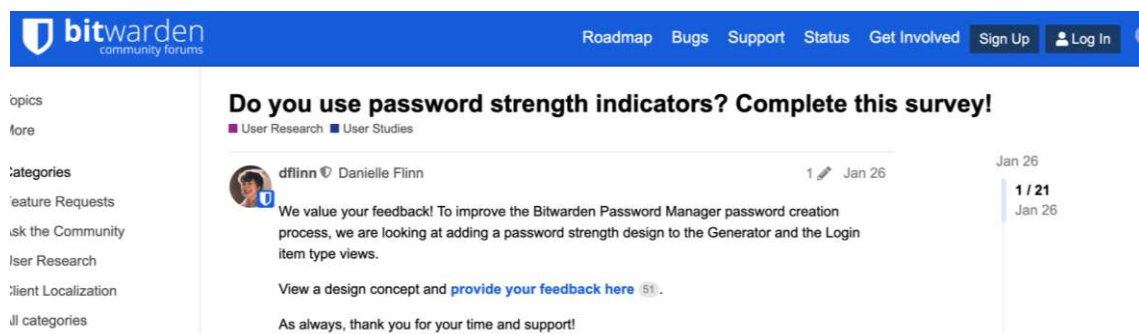


Fig.5.22: Example of user reserach

5.8 A successful example of using the Bitwarden



Inventory Hive is one of the UK's leading property inspection and virtual tour software platforms. When they first launched, they didn't have a password management system set up. But the company grew quickly, and they soon realized they needed to set up password security practices that were safe and easy to use. As a cloud-based company with their sights set on long-term partnerships with large, mature businesses, they needed to be proactive and set up airtight password security early on. Inventory Hive selected Bitwarden for its user-friendly interface, scalable pricing, and most of all, world-class security features. Inventory Hive chose Bitwarden for its following key characteristics:

- User-friendly interface
- Cross-platform access
- Strong password generator
- ISO 27001 certification
- Secure password sharing with collections
- Flexible pricing model

As part of their ongoing efforts to protect client and partner data, Inventory Hive became ISO 27001 certified in 2021. The Bitwarden password manager helped the Inventory Hive set up a secure password policy, which was a critical requirement for receiving their certification. With the Bitwarden password manager and ISO certification in place, Inventory Hive has built a strong security foundation, strengthened customer trust, and demonstrated to potential partners that they take security seriously. As a UK company whose partners often have extra concerns about GDPR compliance, this has proven to be particularly valuable.



Additional Information

Discover more organization that have used the Bitwarden [here](#).



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Reflection Questions

Many employees use MS Excel to securely store passwords. In your opinion, what are the disadvantages of using Excel as a password manager? And what are the advantages of using an open source password manager instead?



Practical Activity

Write a short essay (200-250 words) identifying the cybersecurity challenges faced by your organisation and outline a few strategies to mitigate these threats.

5.9 Summary

Cybersecurity education is critical for small organizations as they are increasingly targeted by cybercriminals due to limited resources and outdated security practices. With over 60% of small businesses experiencing cyber-attacks, educating employees on best practices is a cost-effective way to protect sensitive data, maintain customer trust, and ensure compliance with regulations like GDPR. A strong cybersecurity culture helps employees recognize threats, reduce human error, and respond to incidents swiftly.

A quick and simple step to take is to manage properly one's organization password. Bitwarden, an open-source password management tool, can be a valuable asset for small organizations (MSMEs and TSOs). It provides secure password storage, strong encryption, and a user-friendly interface. Bitwarden's features include password generation, two-factor authentication, and secure password sharing. Its affordability and community support make it a practical solution for enhancing cybersecurity within small organizations.



References

[SME Cybersecurity](#)

[Why should cybersecurity become top priority for SMEs](#)

[Bitwarden Learning](#)

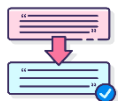
Schatz, Daniel; Bashroush, Rabih; Wall, Julie (2017). "Towards a More Representative Definition of Cyber Security". *Journal of Digital Forensics, Security and Law*. 12 (2)



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MODULE DGO6: OSS Applications for the Event Management of TSOs and MSMEs

6.1. Introduction



Third Sector and Micro and Small Enterprises regularly organise various events as part of the main service offer or to socialise, develop networks and promote their services or products to the selected markets. Therefore, events have a significant impact on their growth by fostering new business partnerships, collaborations, and valuable connections. This module presents the advantages of **Odoo** for event management in a digital business environment. Specifically, it guides the TSOs and MSMEs practitioners to publicise typical preparatory event related activities such as event communication and presentation, event program, event speakers, and event registration using Odoo.

Why Odoo is a useful tool for the event management of TSOs & MSMEs?

Odoo is a powerful tool for event management due to several key features catering to the diverse needs of organizing and executing successful events by TSOs and MSMEs. The following part explores the key characteristics of Odoo, and its advantages compared to other OSS Software.

Here are the main reasons why Odoo is particularly useful for event management:

- **Ease:** the tool is fast and easy to set up for both individuals and businesses.
- **Convenience:** with cross platform access for mobile, browser, and desktop apps. The tool is also supported in over 50 languages.
- **Security:** offers end-to-end encryption which guides the Odoo open-source approach to trust, accountability, and security.
- **Multi-purpose:** users can store logs, secure notes, and much more.
- **Accessibility:** users can access anywhere on any device.



Here are some more reasons why Odoo is particularly useful for the event management of TSOs and MSMEs:

- Odoo is a **Fully Integrated Platform** allowing the management of various aspects of an event including operations such as marketing communication, sales, CRM, accounting, etc.
- Odoo simplifies the process of **Event Creation and Configuration** with customizable templates and configuration options.
- Odoo provides **Real-Time Monitoring and Reporting** with real-time analytics and reporting tools to monitor event progress and attendee engagement.

What are the key Odoo's advantages compared to other options available?

Odoo stands out from other event management softwares due to its comprehensive integration of diverse business applications, offering a unified platform for all event-related tasks. Its customizable and scalable nature allows it to cater to events of any size. Odoo offers robust marketing, ticketing, and resource management tools for streamline operations, in parallel with real-time analytics and reporting which enhance decision-making. Additionally, its open-source model provides a cost-effective solution with extensive community support, making it an attractive option for organizations like TSOs and MSMEs seeking a flexible and efficient event management system (Odoo Reviews, 2024).

OTHER OSS OPTIONS FOR EVENT MANAGEMENT

Open Event
Eventum
Conference Organizing Tool
(COT)
CiviCRM
Dupal with COD



Watch this video [here](#) for getting to know the key features of Odoo

After the completion of this module, you will

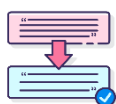
- Be aware and acquainted with the key features of OSS for managing events
- Have proficiency in using Odoo for event planning and management.



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- Be able to design and manage event programs, presentations, and registrations through Odoo.
- Be competent in organising and publicising event details, such as speakers, sponsors, and partners with Odoo.
- Perform effective communication and contact management for event announcements and participant engagement through Odoo.

6.2. Setting up an account in Odoo



Creating a user account in Odoo is the very first movement. Here are the steps forward.

- Go to <https://www.odoo.com/app/events>
- Click on **Try it free** on the top right corner
- Fill in the required details like in the example shown in the photo below and click on **Start Now**.

odoo Apps Community Pricing Cr

Odoo | Get Started

Instant access.

First and Last Name
Maria Kal

Email
s...@dtu.dk

Company Name
event-uop
event-uop.odoo.com

Phone Number
+45

Country
Greece

Language
English

Company size
5 - 20 employees

Primary Interest
Use it in my company

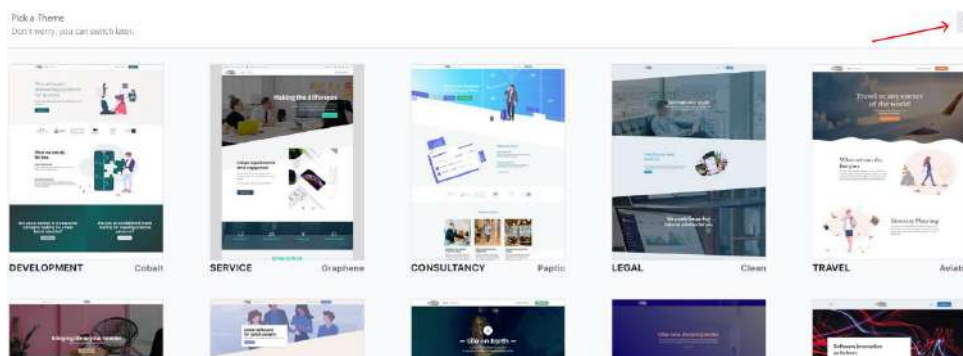
By clicking on **Start Now**, you accept our [Subscription Agreement](#) and [Privacy Policy](#)

[← Change apps selection](#) [Start Now >](#)

Fig.6.1: Get Started with Odoo.

- You can skip the first few steps that encourage you to build a website and when you reach the step on the picture below (*pick a theme*) Click on 'X' on the top right corner.





- You should land on a page like the one in the image below.

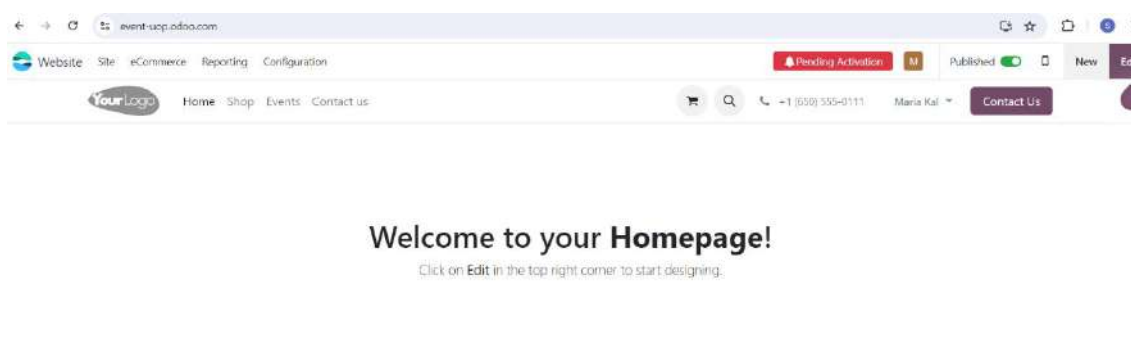


Fig. 6.2: Landed to the Odoo Homepage.

- You should log in to the email address that you put in and follow the instructions to activate your account. Once you do this, the *Pending activation* warning will disappear. You will be asked to create a password, then click on **Activate database** and **skip** the next steps.
- Once you have activated your account you should land on a page that looks like the image below:

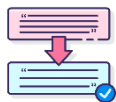


Fig. 6.3: Activated account by Odoo.



Watch this video [here](#) for more on the managing accounts in Odoo

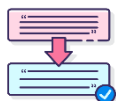
6.3. Throwing the basics of an event with Odoo



Case A: Let's suppose that you work for a social enterprise as event manager, and you have prepared the initial planning for the upcoming event titled **Yoga+ Life Music**. You have got approval from the board to start working on the project and ready for the first actions. You have decided to use Odoo for these actions to minimize cost and accelerate efficiency in reaching out to the target audience. Below are the first three actions for experimenting with an upcoming event:

- Create and customise a new example event with Odoo
- Design and upload the program of an example event
- Present a key person of the event

Action 1. How to create and customize an event with Odoo



Odoo caters for different types of events like exhibitions, sport, charity events, conference, webinars, training events, sales on-line etc., it is flexible and efficient so as to adjust to the needs of any event. Here are the key steps and tips for creating an event template with Odoo. Let's experiment on a sport event titled **Yoga+ Life Music**. To create an event, follow the next steps:

- To create a new event, click on **Events** on the top right navigation menu and then click on **New**.

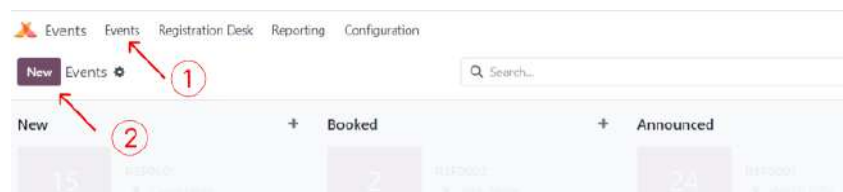


Fig. 6.4: Introducing a new event by Odoo.

- Fill in the details of your event. For this example, we filled in the following:

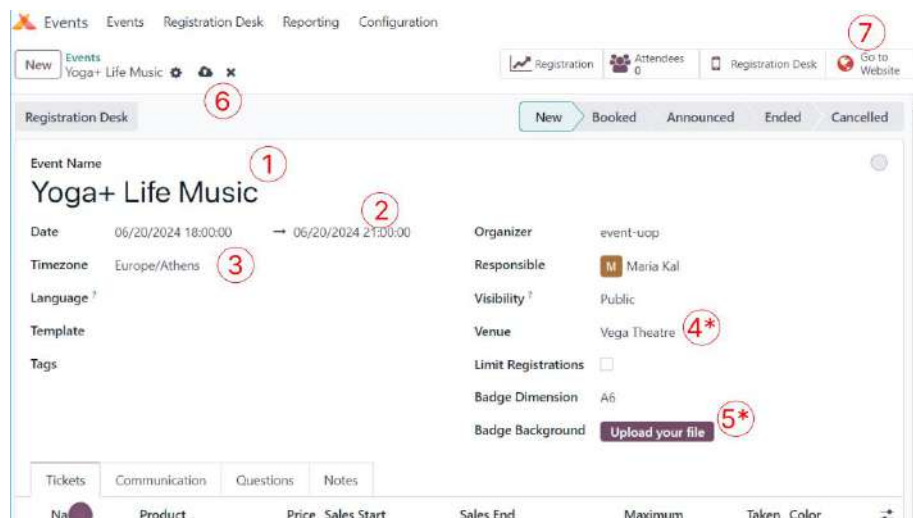
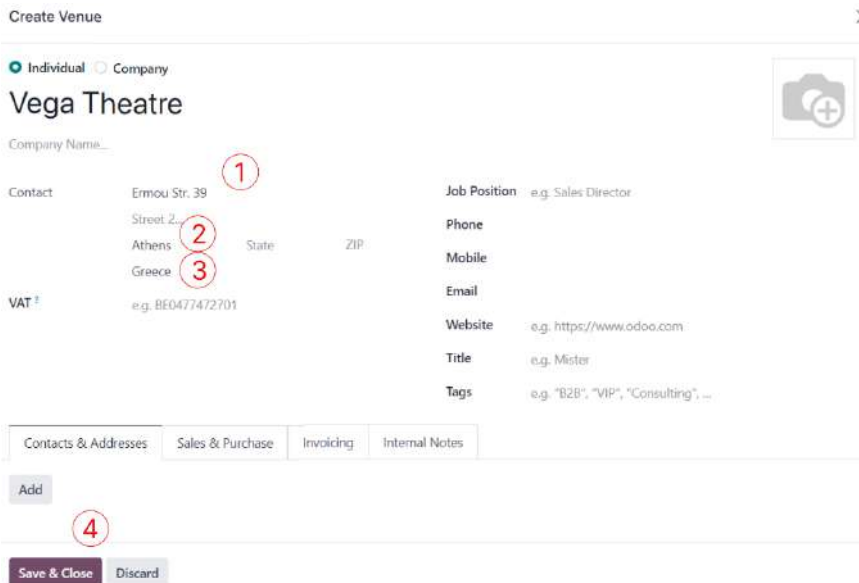


Fig. 6.5: Introducing a new event by Odoo.

1. Event title
2. Date and time
3. The time zone that you are in.
- 4*. The venue name. Once you type in the Venue name two options will appear. Click on **create and edit**. This enables you to fill in the address of the venue (1), city (2) and country (3). You can add more details in the corresponding fields, if you want. Once you finish, click on **Save & Close** (see image after number 7).
- 5*. Optionally you can upload an image relevant to the event.
6. Click on **Save manually**
7. Click on **Go to website**.





Create Venue

Individual Company

Vega Theatre

Company Name

Contact: Ermou Str. 39
Street 2...
Athens, Greece
State ZIP

VAT #: e.g. BE0477472701

Job Position: e.g. Sales Director

Phone
Mobile
Email
Website: e.g. https://www.odoo.com
Title: e.g. Mister
Tags: e.g. "B2B", "VIP", "Consulting", ...

Contacts & Addresses | Sales & Purchase | Invoicing | Internal Notes

Add

Save & Close Discard

Fig. 6.6: Introducing a new event by Odoo.

- By clicking on **Go to website** you should land on a page that looks like the image below. Click on **Edit** on the top right corner to start adding more details.

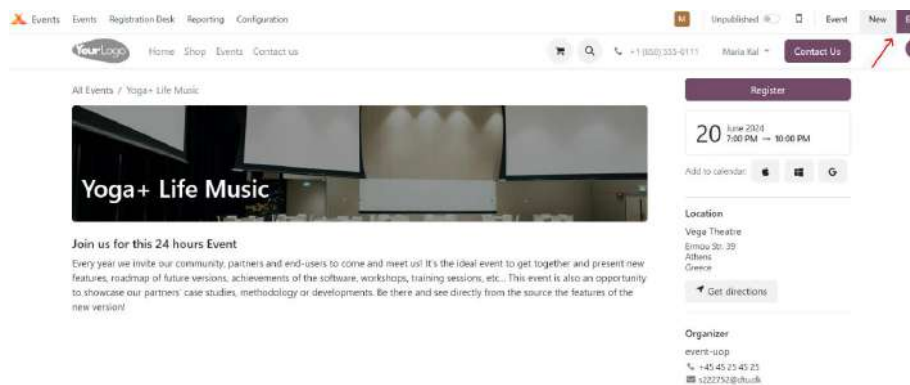


Fig. 6.7: Introducing a new event by Odoo.

- First let's configure the contact details. On the right column, under Organizer click on the company name that you have given (1). In this case it is *event-up* (see topic 1). Then from the drop down menu select your account as a contact detail (2), in this case it is *Maria Kal*. Then click on the contact details (3) and again from the dropdown select your account name (2). This will show only the contact details you have added to this account.

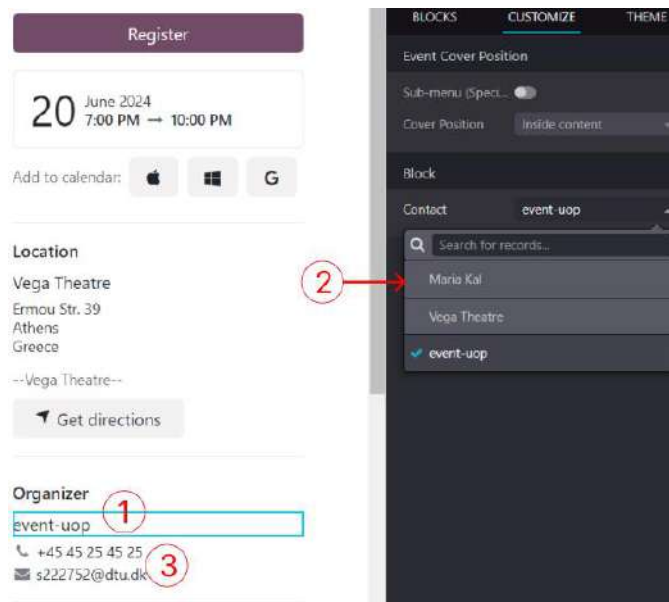


Fig. 6.8: Introducing a new event by Odoo.

- Now let us configure the contact details on the top navigation. You can do this by double clicking on the phone number and typing in the number you want your attendees to call if they want more information.

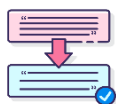


Fig. 6.9: Introducing a new event by Odoo



This video focuses on how to set and further manage the template of your event [here](#)

Action 2. How to place the event schedule/program on Odoo



The event program is a crucial component. It provides structure for the target market, ensuring a smooth flow and time management. It sets clear expectations for potential participants, enhances engagement, and helps organizers allocate resources efficiently. A well-planned event program maximizes the overall experience of the participants and drives sales.

Here is an example, let's try to publicize the Program for Yoga+ Life Music with Odoo

BOX #1 Yoga+ Life Music Event Program	
6:00 PM - 6:15 PM	Welcome and Introduction (15 minutes)
6:15 PM - 6:30 PM	Opening Meditation and Warm-Up (15 minutes)
6:30 PM - 7:15 PM	Vinyasa Flow Yoga Session (45 minutes)
7:15 PM - 7:35 PM	Live Music Performance (20 minutes)
7:35 PM - 8:05 PM	Restorative Yoga and Sound Healing (30 minutes)
8:05 PM - 8:20 PM	Intermission and Refreshments
8:20 PM - 8:50 PM	Yin Yoga Session (30 minutes)
8:50 PM - 9:00 PM	Closing Circle and Gratitude Practice (10 minutes)

- To add details, for example the schedule, in the form of text, click on the text box below and replace the existing text with the information you want to share.

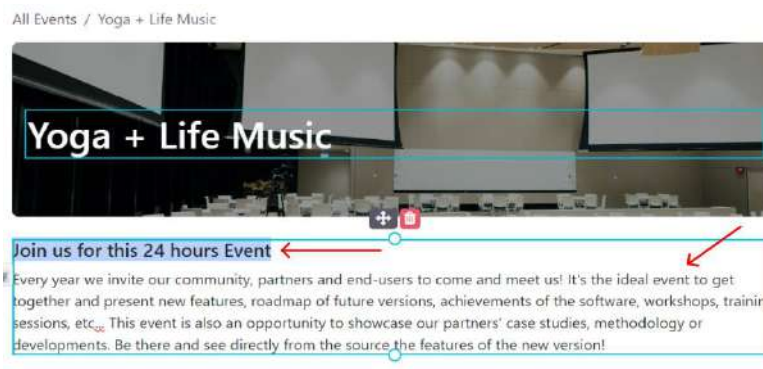


Fig. 6.10: Through the event program on Odoo

- For this example, the text above was replaced with the detailed event schedule. You can also customize the text further by using the options in the right-hand side of your screen.

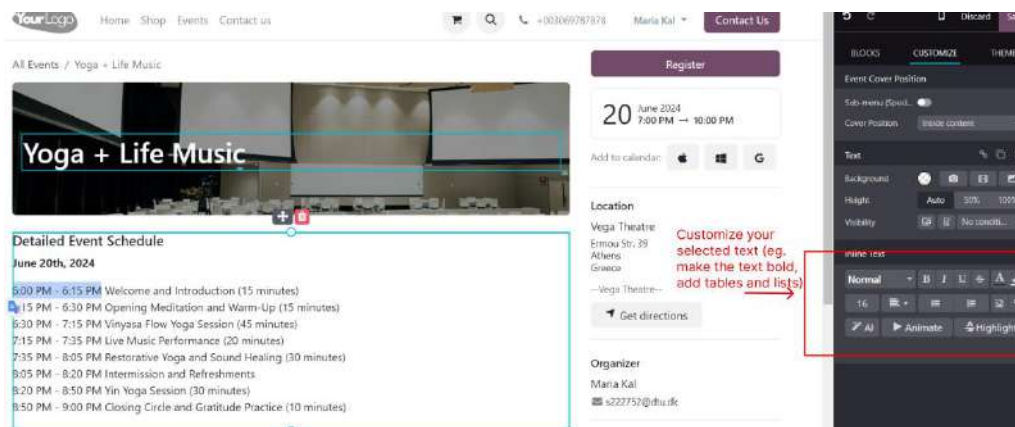


Fig. 6.11: Through the event program on Odoo

- Click **Save** on the top right corner. Now you have managed to create an event, adjust the contact details and location as well as add the detailed schedule.

Action 3. How to present speakers/performers/ partners/sponsors with Odoo



Presenting the speakers/performers/poets/ writers etc., is very important for raising the attractiveness of an event. Also sharing information for them builds credibility, engages the audience, and creates expectations. By highlighting the speakers' expertise and relevance, the event manager fosters awareness, anticipation and ensure participants understand the value and insights the speakers will bring to the event.

With Odoo, event organizers can present the event speakers effectively and raise interest for their events. The main content for significant event partners could be:

1. **Full Name and Title**
2. **Professional Background** (A brief biography highlighting their expertise, experience, and relevance to the event)
3. **Photograph** (professional headshot)

4. **Topic of Presentation** (title and brief description).
5. **Contact Information** Email and phone number for any necessary communication.
6. **Social Media Handles** (Links to professional profiles like LinkedIn, Twitter, etc.).

Let's work on one example. Here is the guidance you need....

BOX #2 Introducing an Yoga Instructor (Event Expert)

Peter Wight is a celebrated yoga instructor with over 15 years of experience in holistic wellness. Certified by the Yoga Alliance, he specializes in Vinyasa and Restorative Yoga. Peter has taught globally and is known for her compassionate teaching style and ability to make yoga accessible to everyone.

Follow him on Instagram: [@xxxxxxxYoga](#)

Join us in welcoming Peter and get ready to experience yoga in a transformative way.

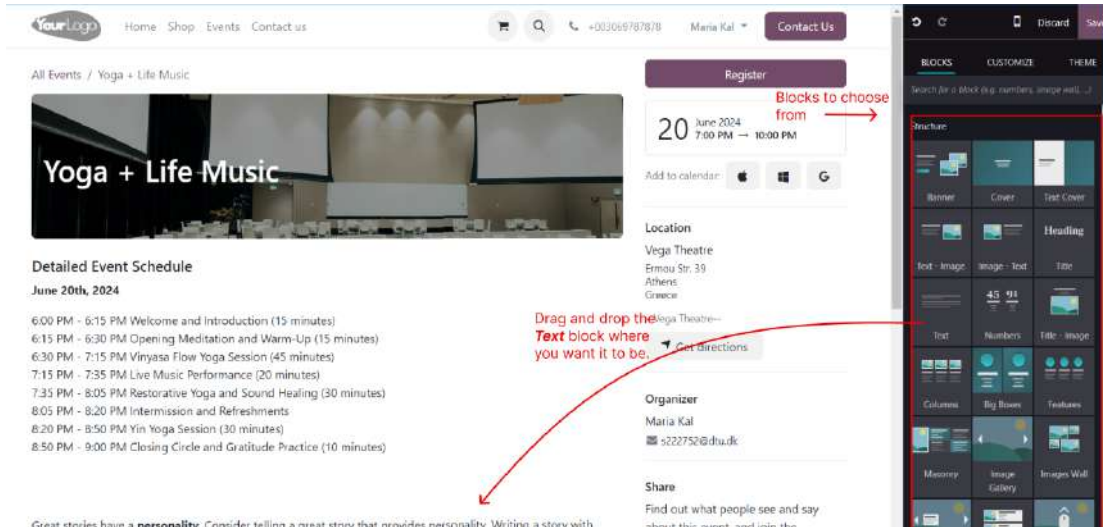
- There are two ways to add details about the speakers/presenters/sponsors:
 - o You can continue editing the text field used for the event schedule. This means that you can add the speakers/presenters/sponsors below the schedule the same way described in the previous section.

OR

- o Click again on *Edit* on the top right corner of the screen.
- o You will see some options for blocks on your right-hand side. These are the options that you can choose from in terms of what type of content you wish to add. For example, image+text, text only etc. For this example, we will use the easiest block, which is text.
- o Drag and drop the block to the place where you want it to be. A suggestion is under the Event schedule.



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The screenshot shows the DigitOpen website interface for an event titled "Yoga + Life Music" on June 20th, 2024. The event schedule is detailed, listing activities from 6:00 PM to 9:00 PM. The organizer is Maria Kal. A red arrow points to the "Register" button, with the text "Blocks to choose from" next to it. Another red arrow points to a "Text" block in the mobile app interface, with the text "Drag and drop the Text block where you want it to be." next to it.

Fig. 6.12: Present the event speakers with Odoo

- We can see that there is a sample text already. Click on it to erase what is already written and replace it with the presenter's information.



The screenshot shows the DigitOpen website interface for the event "Yoga + Life Music" on June 20th, 2024. The event schedule is detailed, listing activities from 6:00 PM to 9:00 PM. The organizer is Maria Kal. A section titled "Introducing an Yoga Instructor" is visible, featuring a sample text block for Harris Wight, a celebrated yoga instructor with over 15 years of experience. The text block is highlighted with a red box, and a red arrow points to it from the text "Click on it to erase what is already written and replace it with the presenter's information." in the list above.

Fig. 6.13: Present the event speakers with Odoo

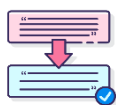
- If you want to present the speakers with images as well, then drag and drop a block that contains image and text (for example *Text – Image*), instead of text only. You will be given an option to upload a photo of your speaker.
- Click on *Save* on the top right corner of the screen to see what the event page looks like.



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- By following the steps above you can add more information about your event besides the schedule and the speakers.

Action 4. Ready for the most important action? This is to publish the page of the event to the public.



When you have finished adding information to the page, go to the top right corner of the screen and switch from unpublished to published. This will activate the page and it will be live on the internet.

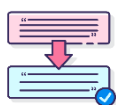


The url is on the search bar of your browser. You can copy it and share it on social media to advertise your event.



Fig. 6.14: Make the event public with Odoo

6.4. Accelerating the event communication with Odoo.



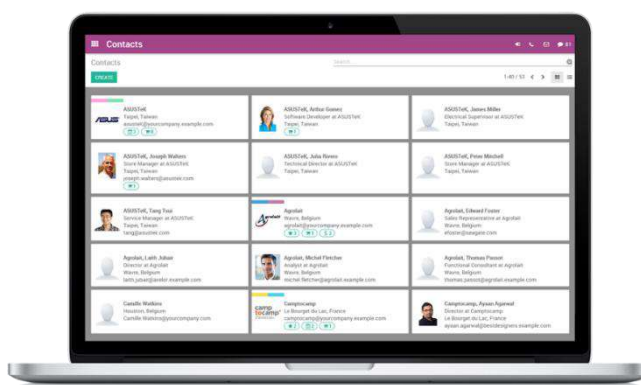
Effective event communication is critical for success as it creates interest on the part of target markets and ensures all stakeholders are informed and aligned. It fosters customer engagement, clarifies expectations, and reduces misunderstandings. Good communication enhances participant experience, ensures smooth coordination among organizers, and promotes the event, leading to higher customer attendance and satisfaction.

Action 1. Managing event-related business contacts with Odoo

Case B: Many event managers still depend on business cards or create excel files to record various contacts that are attained in social occasions. Others have supplemented cards with social networking which offer the option for sending messages. These practices by far cannot unlock the full value of the connections for effective event management. As an event manager, it is about time to move on to the efficient event contact management part of Odoo, which will enable you to manage a large scale of contacts across different events. Let's start.

Key features of managing a contact tool include: ([photo source](#))

- Reserves essential information for contacts (i.e., name, address, etc.,)
- Differentiates to business and individual contacts
- Offers filters for ease sort out
- Review contacts as graph, card, and geographically visualized
- Track contacts, interactions and follow ups.



In order to manage contacts, you will first need to create a new account in Odoo contacts. You will follow the same steps as in Topic #1:

- Go to <https://www.odoo.com/page/contacts> and click **Get Started**
- Fill in the details following exactly the same steps as in Topic# 1 BUT make sure to change the company's name (in this example we use *contacts-uop* instead of *events-uop*)
- From the options shown, choose Contacts.
- Activate your account following the same steps as in Topic#1.



Now let us create our first contact. The contacts can be either companies or individuals. For this example, we will create a contract for a company, but the same steps can be followed for creating individuals' contacts.

- Click on **New** on the top left corner of the screen.
- Type in the company's name and fill in the details you want (For individuals, make sure to select *individual* on the top left). The most important one is the email address so that you can send campaigns and messages to them.
- Click on the save manually icon.



- You have now created a contact.
- Go back and you will be able to see the contact in your dashboard.

Now let us create a tag. The tag will help you categorize your contacts (similar to having lists of contacts) in order to be able to send emails to a whole list of contacts instead of sending them one by one.

- Click on **Configuration** on the top left of your screen and from the drop down menu click on **Contact Tags**.
- Click on **New** on the top left of the screen
- Give the tag a name. For this example, we will be using "Yoga Event List"
- Click on the **save manually** icon.
- You have created a tag now.
- Go back to the contacts dashboard by clicking on **Contacts** on the top left of the screen.

Now let us add this tag to the contact we created above (Company 1)

- Click on the contact
- Click on the **Tags** field and select the tag you just created.



Individual Company

Company 1

Address Street...
Street 2...
City State ZIP
Country

VAT ⁷ e.g. BE0477472701

Phone
Mobile
Email 010@gmail.com
Website e.g. https://www.odoo.com

Tags e.g. "B2B", "VIP", "Consulting", ...

Contacts & Addresses Sales & Purchase Internal Notes

Add

Yoga event list
Search More...
Start typing...

Fig.6.15: Managing business contacts with Odoo

- Click on the save manually icon and go back to contacts.
- The contact should look like the image below.

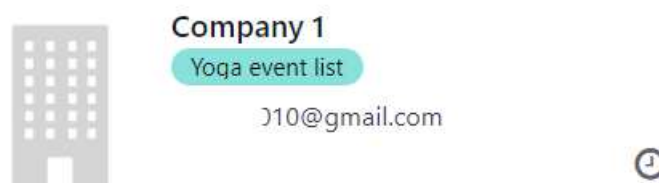


Fig. 6.16: Managing business contacts with Odoo



Useful Tip

If you are adding many contacts, it is more efficient to create the tags first and add them to your contacts when you create them rather than creating all the contacts first and going back to add the tags.

For this example, you should create 2 more contacts (one company and one individual) and add the new tag to them.

Now let's see how we can view the contacts according to the tags. Each tag represents a list or category of contacts. For this example, the "Yoga Event List" tag we created represents the list of contacts that should be contacted about this event.

- On the top right corner of the screen click on the *List* icon.



Fig. 6.16: Managing business contacts with Odoo

- You should see all your contacts in a list.
- On the search bar there is a dropdown menu on the right. Click on that and then on **Add Custom Group**.

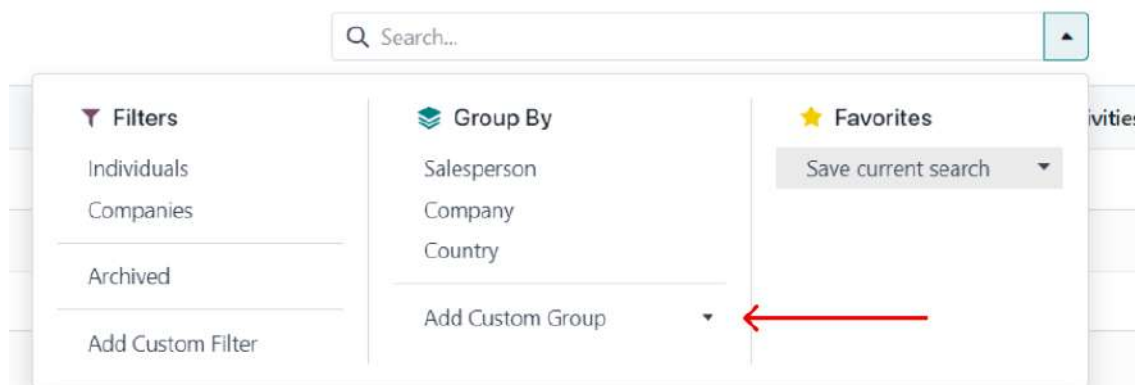






Fig.6.17: Managing business contacts with Odoo

- Scroll down the list and select **Tags**.
- The contacts should now appear categorized according to tag. You can click on the black triangle on the left to expand or minimize the lists.

New Contacts 

  Tags  Search...

<input type="checkbox"/>	Name	Phone	Email
<input checked="" type="checkbox"/>	Yoga event list (3)		
<input type="checkbox"/>	Company 1		t10@gmail.com
<input type="checkbox"/>	Company 2		50@upnet.gr
<input type="checkbox"/>	Lucy Manager		t10@gmail.com
<input type="checkbox"/>	None (2)		

Fig. 6.18: Managing business contacts with Odoo



Watch this video [here](#) on how to manage contacts



Practical Activity

After watching the previous video, explore Odoo contact management tool with typing in ten individual and ten business contacts from your own records.



Food for thought

You can try more on event contacts management [here](#)

Action 2. Put together the initial event announcement with Odoo?



The initial event announcement aims to inform and excite the target audience, providing key details and generating interest, ensuring potential attendees save the date and anticipate further information. Typically, the event announcement should include the basic information about your event, such as: event title, date, time and place, contact information and the key topic of the event. Let's experiment with Odoo on how to throughout the first announcement of an event using the example in the BOX #3.



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Having categorized the contacts, we can now select all the contacts with the *Yoga Event List* Tag and send them the message below.

- Check the box on the left side of the **Name** after having expanded the Yoga Event List tag.



Fig. 6.19: Send the first event announcement to the target market with Odoo

- Click on **Actions** and then **Send Email**.
- For this example, we just copy in the field the text below and add a subject.

BOX #3 An example of first event announcement

Dear Yoga Lovers!

We are excited to invite you to the upcoming event, Sunset YOGA +Life Music Session 2024 on July 21st, 2024, at 18:00.

Get ready to raise your vibes and connect to yourself, with good music and next to nature.

Learn more and register here

- We can add a direct links to the page we created in topic#2 under 'Learn more and register here' by adding the url of the page we created so that the recipients can be directed to the page.
- Copy the url of the page you created (see final steps of topic#2) and add it to the email.

Send email

From ? "Maria Kal" <s222752@dtu.dk>

Subject Yoga + Life Music Event Invitation

Content

Settings

Dear Yoga Lovers!

We are excited to invite you to the upcoming event, Sunset YOGA +Life Music Session 2024 on July 21st, 2024 at 18:00.

Get ready to raise your vibes and connect to yourself, with good music and next to nature.

Learn more and register here:

<https://event-uop.odoo.com/event/yoga-life-music-3/register>

|type "/" for commands

Attachments

Load template

Send

Discard

Save Template

Fig. 6.20: Send the first event announcement to the target market with Odoo

- Before you send it, go to the **Settings** tab (just below the subject of the email) and select *"Store email and replies in the chatter of each record"*, so that if the contacts reply you will see it in the Odoo interface. Otherwise, you can add a reply email address to receive any replies.
- Click on **Send** and your contacts will receive the email in their inbox.



Practical Activity on Event Announcement.

This is the time to explore further Odoo by uploading the announcement of your own event.



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Action 3. Become expert to manage event registration effectively with Odoo.



Ultimately, the most essential task of the event manager is to make sure that desired numbers of attendees will register for the event. Very often this is a very challenging task for the managers. Some critical questions which relate to this task are:

- Is the process easy enough for the target market?
- Do the potential attendees have all the necessary details to make the final decision to attend?
- How flexible is the registration process regarding time?

Now that you have published your page and sent out the announcement, your target audience can click on the register button and by adding their name and email they are added to the list of attendees. They will immediately receive a confirmation of registration email.

Now let's see how you can track and manage the attendees for your event.

- Go to <https://www.odoo.com/my/databases> , log in to your account and choose the events database that you created in topic#1.
- Click on **Events** and then on the *Yoga + Life Music* Event
- By clicking on **Attendees** you can see a list of all the people who have registered for your event and their contact information.

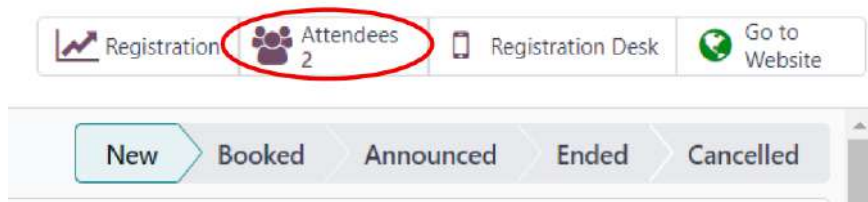


Fig. 6.21: Track and manage the event attendees with Odoo.

- By clicking on a specific attendee, you can also cancel their registration, mark if they attended or send clicking on an attendee you can also cancel their registration, mark if they attended or send them a message.

This guide has provided you with the basic steps to set up an event, add details to it, communicate it to the target audience and manage the attendance.



Additional Resources:

Find more about Odoo and its use in the following links

[Odoo's Top 6 Features](#)

[Managing events with Odoo video](#)

[Your First Event with Odoo](#)

[How to announce an event](#)

[Marketing Campaigns with Odoo](#)



Reflection Questions

1. After using Odoo for your events, what features of Odoo have you found most intuitive and beneficial for managing your events and which ones do you find challenging?

2. How do you think Odoo's integrated platform can impact the overall success and organization of your future events?

6.5 Summary

This module highlights the advantages of using Odoo for event management in a digital business setting. It provides a guide for TSOs (Trade Support Organizations) and MSMEs (Micro, Small, and Medium Enterprises) practitioners on how to utilize Odoo for event-related tasks, including event presentations, program design, speaker/partner/sponsor management, and registration. Additionally, it emphasizes Odoo's capabilities for efficient communication, managing contacts, event announcements, and streamlining the registration process.



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References

[Reviews of Pros and Cons of Odoo](#)

[Creating and Managing User Accounts in Odoo: A Step-by-Step Tutorial](#)

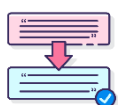
[Managing Contacts with Odoo](#)



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MODULE DGO7: Advanced Sales Management Using EspoCRM

7.1 Introduction



The primary aim of this module is to enhance the sales management capabilities of MSMEs and TSOs by leveraging the **EspoCRM**. The module is designed to improve the efficiency and effectiveness of sales processes through better lead management, opportunity tracking, and customer relationship management. The primary objectives are to automate sales processes, enhance lead management, and improve opportunity tracking. By streamlining sales activities from lead capture to deal closure and ensuring timely follow-ups, EspoCRM aids in systematically managing leads and opportunities. Centralizing customer data provides a single source of truth, simplifying access and management for sales teams. Additionally, supporting B2B models through comprehensive information storage about companies and their contacts enhances business account management. Finally, boosting sales performance is achieved through real-time dashboards and automated reminders, increasing lead conversion rates and overall sales effectiveness.

Customer relationship management (CRM) is a system for managing all of your company's interactions with current and potential customers. The goal is simple: improve relationships to grow your business. **CRM technology** helps companies stay connected to customers, streamline processes, and improve profitability. It supports sales management, delivers actionable insights, integrates with social media, and facilitates team communication. CRM tools can unify customer and company data from many sources and even use AI (artificial intelligence) to help better manage relationships across the entire customer lifecycle, spanning departments like marketing, sales, digital commerce, and customer service interactions.

A CRM system helps businesses keep customer contact details up to date, track every customer interaction, and manage customer accounts. It is designed to help businesses



improve customer relationships and also Customer Lifetime Value (CLV). This is vital because of the vast amount of such data businesses generate daily.

The benefits of CRM systems apply to all types of organizations, ranging from small businesses to large corporations. They include the following:

- **Enhanced customer service.** Having customer information, such as past purchases and interaction history, easily accessible helps customer support representatives provide better and faster customer service.
- **Trend spotting.** Collection of and access to customer data let businesses identify trends and insights about their customers through reporting and visualization features.
- **Automation.** CRM systems can automate menial, but necessary, sales pipeline and customer support tasks.

The key features of a CRM system typically include:

Contact management	All the latest information about customers — from contact details to service conversations — is easily available to access and update.
Lead management	The system enables users to track pipeline activities, tasks and targets, all the way from prospect through to conversion.
Sales forecasting	Forecasting reports enable salespeople to get better visibility over their pipelines, qualify leads more accurately, and see how close they are to hitting their targets. Sales managers can use reports to motivate and manage their people.
Instant messaging between employees	Real-time instant messaging functionality makes it easier for co-workers to ask and answer each other's queries, for instance in support of a live sales opp or service interaction. Managers can check in on staff in the field, and employees can ask for instant feedback or support as needed.
Email tracking and integration with Outlook and Gmail	Syncing email clients instantly with the CRM system allows businesspeople to get a complete view of their customers and leads without having to log in and out of different systems. Calendars and contacts can be viewed across every device, and emails can be created and managed from within a single workflow.



File and content sharing	Team members can upload information to a centrally stored location, and share easily and instantly with coworkers.
Dashboard-based analytics	Information is aggregated and presented in intuitive, meaningful dashboard displays that can be customised based on each individual's priorities.

The simplest open-source CRM that is easy to install and use is the EspoCRM. Here are some reasons why EspoCRM could be just what you are looking for:

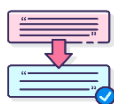
- **Easy Installation:** EspoCRM offers a very simple online installer that guides you step-by-step through the installation process. There are also detailed guides and documentation.
- **User-Friendly Interface:** EspoCRM has a clean and intuitive user interface that makes it easy to use even for those who have not used CRM systems before.
- **Features:** Offers all the core features smaller businesses and teams need, including contact and opportunity management, reporting, calendar management, and email integration.
- **Extensibility:** Although simple and lightweight, EspoCRM is still extensible and customizable, allowing you to add additional features and modules as needed.

After the completion of this module, you will

- ✓ Understand the core functionalities of EspoCRM.
- ✓ Learn to automate sales and manage customer relationships effectively.
- ✓ Utilize the sales pipeline for better tracking of opportunities and conversions.
- ✓ Customize EspoCRM to suit specific organizational requirements.
- ✓ Analyze sales data to improve decision-making and enhance sales performance.



7.2 Installation and setup of EspoCRM



To use EspoCRM you need to install it on your server, for this you can use the same web server where you have hosted your website. It is recommended to use professional IT support to install the software. The installation steps are the following:

- Check your server requirements
- Download EspoCRM installation from [here](#)
- Make a subdomain
- Create separated MySQL database
- Upload EspoCRM files to your server
- Run EspoCRM installation wizard



Additional Information

Follow this link for more information about the installation of EspoCRM
<https://docs.espocrm.com/administration/installation/>

How to Run the EspoCRM installation wizard

1. Press start

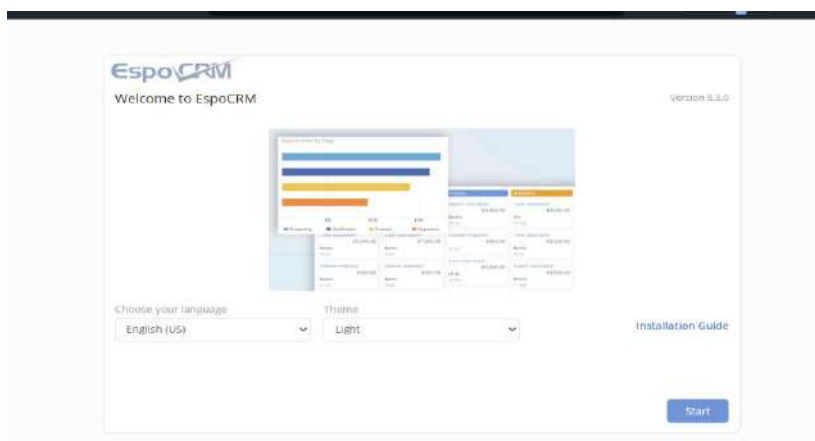
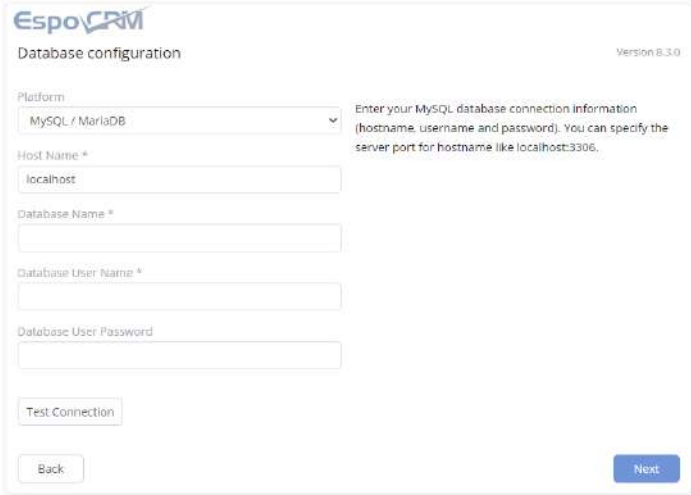


Fig. 7.1: Installation step 1

2. Accept the agreement.
3. Setup Database



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EspoCRM Database configuration Version 8.3.0

Platform
MySQL / MariaDB

Host Name *
localhost

Database Name *

Database User Name *

Database User Password

Test Connection

Back Next

Enter your MySQL database connection information (hostname, username and password). You can specify the server port for hostname like localhost:3306.

Fig. 7.2: Installation step 3

4. Do the system check and if everything is OK – click install.



EspoCRM
System Requirements Version 8.3.0

PHP settings

PHP Version	8.3.8	Success
json	On	Success
openssl	On	Success
mbstring	On	Success
zip	On	Success
gd	On	Success
iconv	On	Success
curl	On	Success
xml	On	Success
xmlwriter	On	Success
exif	On	Success
pdo_mysql	On	Success
max_execution_time	300	Success
max_input_time	120	Fail (180 is recommended)
memory_limit	384M	Success
post_max_size	100M	Success
upload_max_filesize	100M	Success

Database settings

MariaDB version	10.11.8	Success
Host Name	localhost	Success
Database Name	vhost67289s2	Success
User Name	vhost67289s2	Success

Permissions

/www/apache/domains/www.foaal.ee/htdocs/crm/data	Writable	Success
/www/apache/domains/www.foaal.ee/htdocs/crm/application/Espo/Modules	Writable	Success
/www/apache/domains/www.foaal.ee/htdocs/crm/client/custom	Writable	Success
/www/apache/domains/www.foaal.ee/htdocs/crm/client/modules	Writable	Success
/www/apache/domains/www.foaal.ee/htdocs/crm/custom/Espo/Custom	Writable	Success

[Configuration Instructions](#)




Fig. 7.3: Installation step 4

- Set your username and create a password. Click next and next process may take some time.



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EspoCRM Administrator Setup Version 8.3.0

User Name *

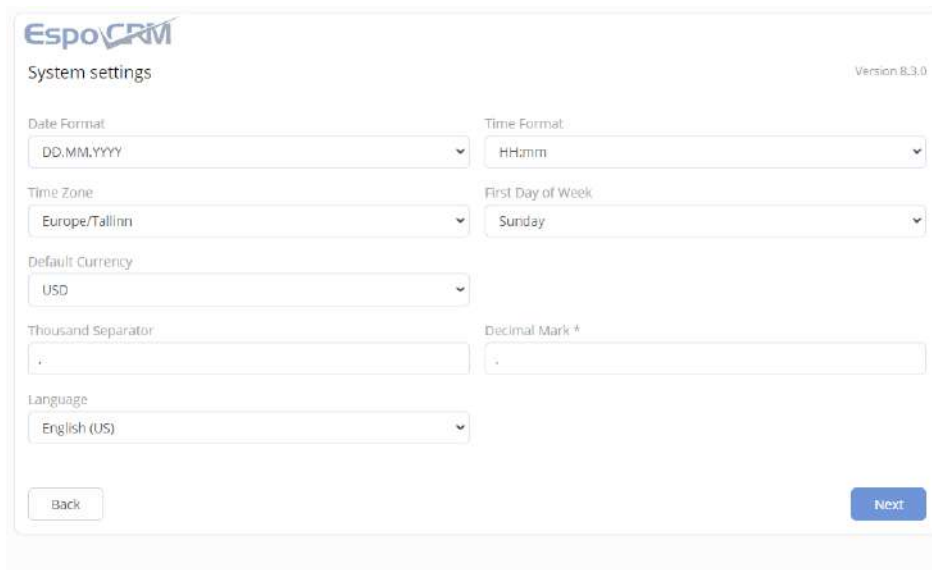
Password *

Confirm your Password *

[Next](#)

Fig. 7.4: Installation step 5

6. Set up Systems settings and add a crontab file to run Espo Scheduled Jobs.



EspoCRM System settings Version 8.3.0

Date Format: Time Format:

Time Zone: First Day of Week:

Default Currency:

Thousand Separator: Decimal Mark *:

Language:

[Back](#) [Next](#)

Fig. 7.5: Installation step 6



How to Setup the EspoCRM

Once you have installed EspoCRM, follow these steps to get it up and make it run effectively.

- Initial Configuration
 - Login: Use the admin credentials you created during the installation to log into the EspoCRM dashboard.
 - Setup Your Profile: Navigate to your user profile to set your preferences, such as language, time zone, and email signature.

At first, your EspoCRM look like this and it is empty.

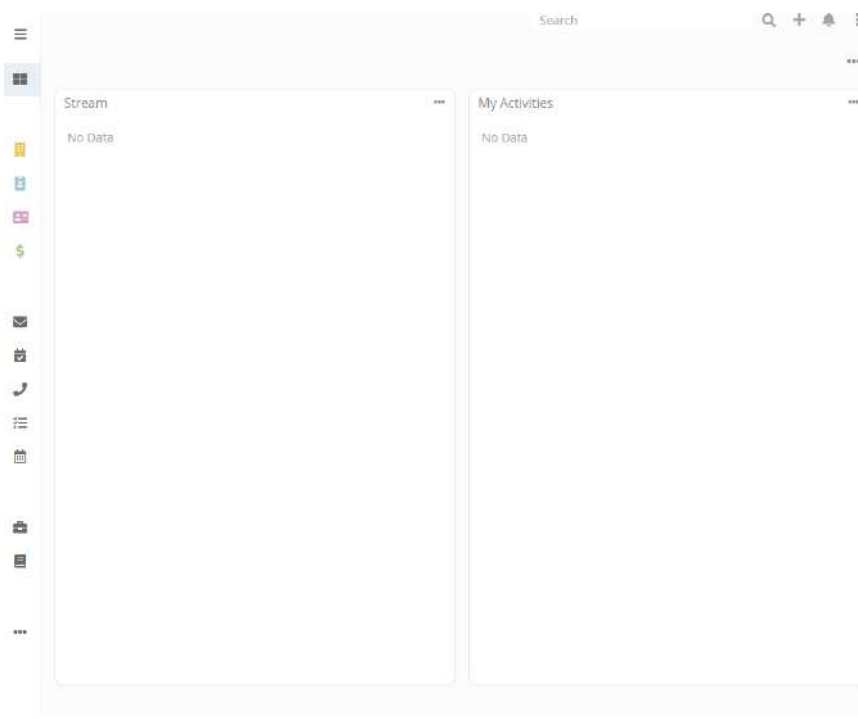


Fig. 7.6: Dashboard

- System Settings
 - General Settings: Go to the Administration panel and configure general settings like company details, logo, and date formats.
 - Email Settings: Set up your email settings to send and receive emails through EspoCRM. This includes configuring the SMTP server for outgoing emails and the IMAP/POP3 settings for incoming emails.



- Scheduled Jobs: Ensure your cron jobs are set up correctly to handle scheduled tasks like notifications and email processing. This usually involves adding the cron job line to your server's crontab.
- User Management
 - Create Users: Add new users who will be using the system. Assign roles and permissions based on their responsibilities.
 - Roles and Permissions: Define roles and set permissions to control access to different modules and records within EspoCRM.
- Modules Configuration
 - Customize Modules: Tailor the CRM modules to fit your business needs. You can add custom fields, change layouts, and set up filters.
 - Create Entities: If needed, create custom entities to manage specific data relevant to your business processes.
- Data Import
 - Import Contacts and Accounts: If you have existing data, use the import tool to bring in contacts, accounts, leads, and other data into EspoCRM.
 - Data Validation: Check and validate the imported data to ensure accuracy and completeness.

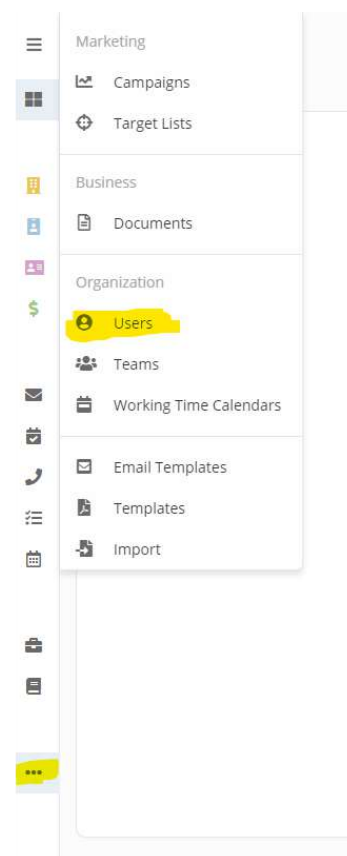


Fig. 7.7: Menu - Users

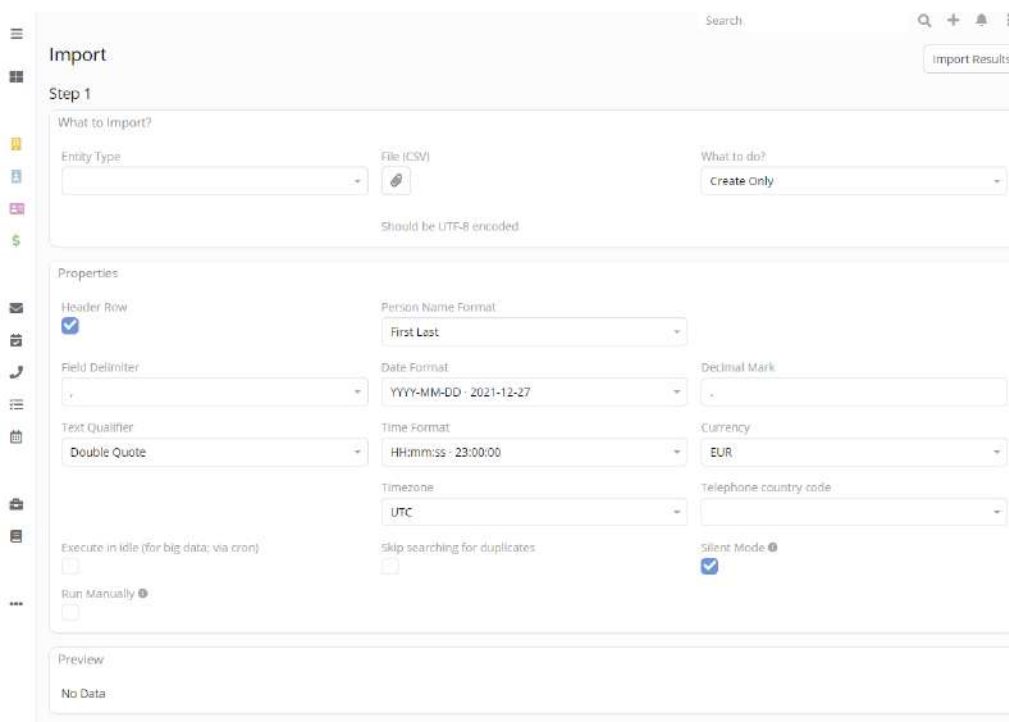
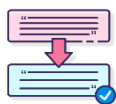


Fig. 7.8: User data import

7.3 EspoCRM main functions



In the fast-paced world of sales, staying organized and proactive is key to success. Imagine a system where no lead is ever forgotten, every opportunity is meticulously tracked, and customer relationships are managed seamlessly.

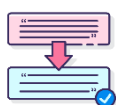
This is not just a dream; it's the reality you can achieve with EspoCRM.

EspoCRM transforms your sales process by automating routine tasks and centralizing customer information, allowing you to focus on what truly matters: building relationships and closing deals. Picture this: a new lead comes in, and instead of juggling between spreadsheets and notes, EspoCRM captures all the relevant details, sets automated follow-ups, and integrates seamlessly with your email. You'll never miss a beat.

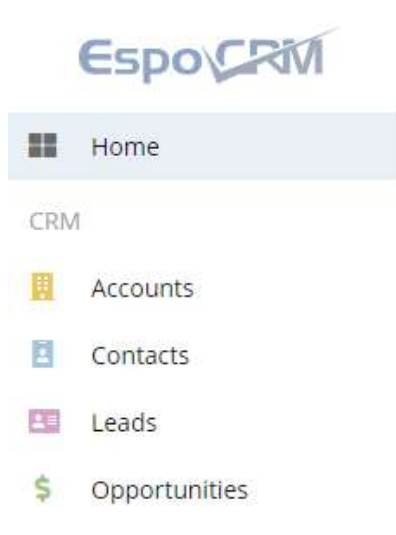


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With EspoCRM, your sales pipeline is a well-oiled machine. Leads are nurtured through a structured process, from initial contact to closing the deal. Visual pipelines and automated reminders ensure you're always on top of your game, helping you convert more leads into satisfied customers. The real-time dashboards and reports provide actionable insights, empowering you to make data-driven decisions that drive growth



In EspoCRM, the sales process can be automated to enhance efficiency and accuracy. The CRM system is structured around four main components: leads, opportunities, accounts, and contacts.



Leads represent potential clients or customers who have shown interest in your products or services. EspoCRM allows you to capture and manage these leads effectively, ensuring no potential opportunity is overlooked. Once a lead is qualified, it can be converted into an opportunity, account, or contact. This conversion process ensures that the lead is seamlessly transitioned into the appropriate category for further action, streamlining the sales workflow.

Fig. 7.9: EspoCRM main function

Opportunities in EspoCRM represent potential sales deals. This module allows you to track and manage each sales opportunity from initial contact to closing the deal. Opportunities are typically organized within a sales pipeline, where they pass through various stages such as qualification, proposal, negotiation, and closure. This visual representation helps sales teams monitor progress and forecast future sales accurately. Automation features can be set up to remind sales representatives of follow-up actions, ensuring timely engagement with potential clients.



In a B2B (business-to-business) model, **accounts** are the cornerstone of customer records. An account typically represents a company or organization with which you do business. Each account record can store comprehensive information about the business, including contact details, interaction history, and associated opportunities. This centralization of information makes it easier for sales teams to manage relationships and tailor their approach to each business client.

Contacts are individual people within the organizations you deal with. Each contact can have specific roles and responsibilities within their respective accounts. A single contact can be related to multiple accounts, allowing for flexibility in managing relationships, especially in complex sales environments where individuals may interact with various departments or subsidiaries of a larger organization. EspoCRM enables you to define the role and relationship of each contact within the accounts, helping to clarify their influence and decision-making power in the sales process.

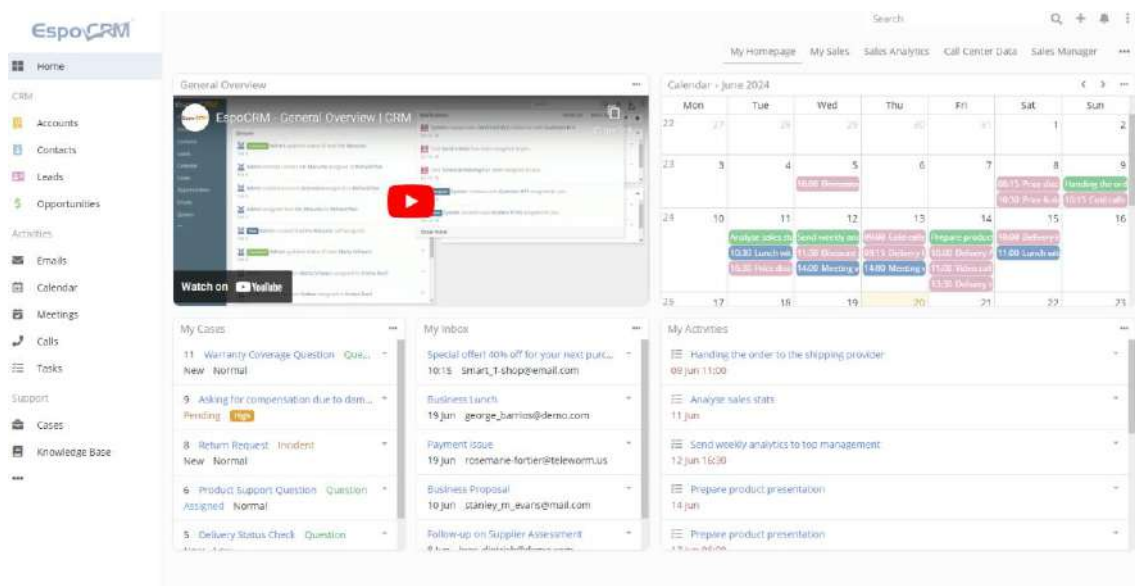


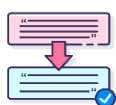
Fig. 7.10: EspoCRM main dashboard filled

The benefits of using EspoCRM include automation, which ensures that no lead or opportunity is neglected, thereby enhancing efficiency, and increasing the likelihood of closing deals. Centralization of all customer and sales information provides a single source of truth, making it easier for sales teams to access the data they need and



collaborate effectively. Additionally, EspoCRM's flexible architecture allows for customization of fields, workflows, and modules to fit specific business needs, ensuring that the CRM system aligns with your sales processes.

7.4. Lead Management



Case A. Let's say you have started working as a sales manager for a social enterprise. So far, the sales process had used to manage its leads using an email inbox and simple notes. This approach led to numerous problems: many leads were forgotten, contacted too late, or lost altogether. To overcome these challenges, you implemented EspoCRM to centralize and streamline their lead management processes. After the installations and setup, you started to work with lead management. Here are the actions to take.

Action 1. Lead Capture and Management Functions in EspoCRM

The main lead sources in EspoCRM can be:

- Enter leads manually
- Import them via CSV files.
- Automatic lead collection via online forms.

Manual leads: Let's say some sales leads were left for you on paper. These need to be manually entered. When entered manually, the lead form looks like this. When filling in the lead data, you should determine what the lead status is and direct it to the salesperson.



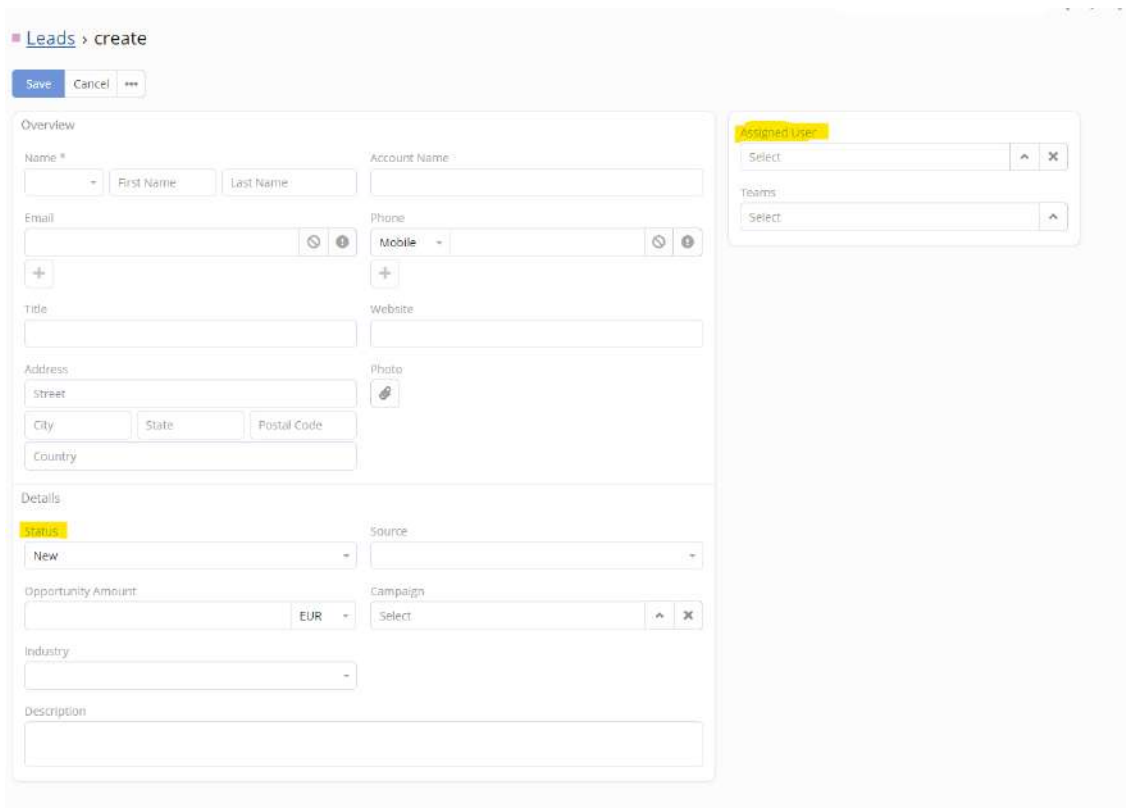


Fig. 7.12: EspoCRM lead creation

Import them via CSV file: In addition to the paper leads, you can also have an Excel spreadsheet on your computer with the main enquiries you have received about interest in your social enterprise service. It makes sense to import this table into EspeCRM. This way you don't have to manually enter all the leads. Here are the steps:

1. Prepare Your CSV File:

- Ensure your lead data is in a CSV (Comma-Separated Values) file format.
- Include columns for necessary lead details like First Name, Last Name, Email, Phone Number, Company, etc.
- Save the file on your computer.



2. Access the Import Function:

- In the main dashboard, click on the three-dot menu (:) at the bottom left corner
- Select "Import" from the dropdown menu.

Upload Your CSV File:

- Click on "Choose File" or "Browse" to locate your CSV file.
- Select the file from your computer and click "Open."
- Select field Delimiter the right delimiter and see if preview is OK

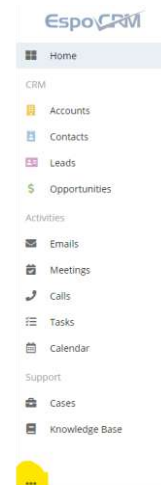
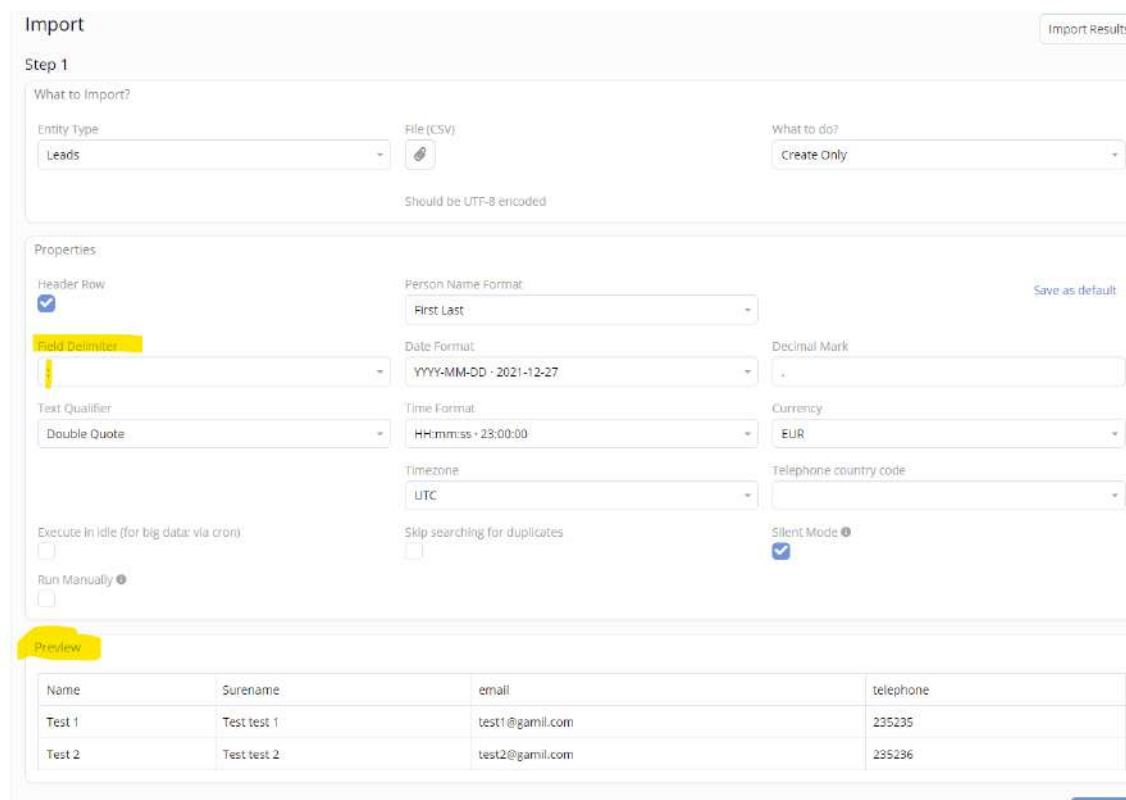


Fig. 7.13: EspoCRM import



Import Import Results

Step 1

What to Import?

Entity Type: File (CSV) What to do?:

Should be UTF-8 encoded

Properties

Header Row:

Person Name Format: Save as default

Field Delimiter:

Date Format: Decimal Mark:

Text Qualifier: Time Format: Currency:

Timezone: Telephone country code:

Execute in idle (for big data: via cron):

Skip searching for duplicates:

Run Manually: Silent Mode:

Preview

Name	Surname	email	telephone
Test 1	Test test 1	test1@gamil.com	235235
Test 2	Test test 2	test2@gamil.com	235236

Fig. 7.14: EspoCRM import



Map Your Fields:

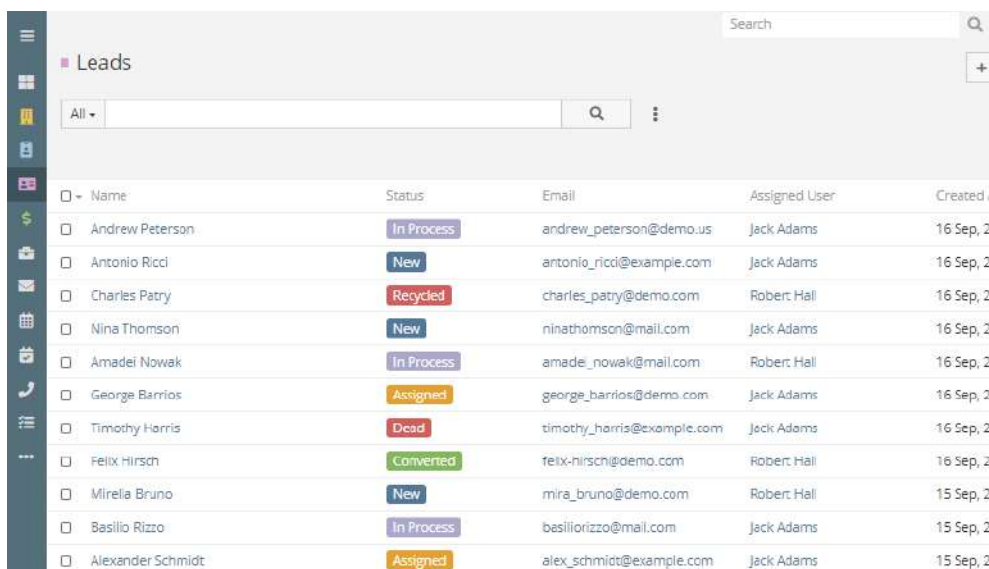
- EspoCRM will display a field mapping screen.
- Match the columns in your CSV file to the corresponding fields in EspoCRM (e.g., First Name -> First Name, Email -> Email).
- Ensure all required fields are mapped correctly.
- Click run import

Review the Import Results:

- Once the import is complete, EspoCRM will display a summary of the import results.
- Check for any errors or skipped records and address them if necessary.

Verify Imported Leads:

- Navigate back to the "Leads" module.
- Review the newly imported leads to ensure all data is correctly imported and displayed.



Name	Status	Email	Assigned User	Created
Andrew Peterson	In Process	andrew_peterson@demo.us	Jack Adams	16 Sep, 2
Antonio Ricci	New	antonio_ricci@example.com	Jack Adams	16 Sep, 2
Charles Patry	Recycled	charles_patry@demo.com	Robert Hall	16 Sep, 2
Nina Thomson	New	ninathomson@mail.com	Jack Adams	16 Sep, 2
Amadei Nowak	In Process	amadei_nowak@mail.com	Robert Hall	16 Sep, 2
George Barrios	Assigned	george_barrios@demo.com	Jack Adams	16 Sep, 2
Timothy Harris	Dead	timothy_harris@example.com	Jack Adams	16 Sep, 2
Felix Hirsch	Converted	felix-hirsch@demo.com	Robert Hall	16 Sep, 2
Mirella Bruno	New	mira_bruno@demo.com	Robert Hall	15 Sep, 2
Basilio Rizzo	In Process	basiliorizzo@mail.com	Jack Adams	15 Sep, 2
Alexander Schmidt	Assigned	alex_schmidt@example.com	Jack Adams	15 Sep, 2

Fig. 7.14: EspoCRM lead page



Optimizing lead generation strategies based on lead sources is a crucial aspect of any successful marketing campaign. By identifying and tracking your lead sources and channels, you can gain valuable insights into the effectiveness of your marketing campaign efforts and make data-driven decisions to improve your lead generation.



Focus

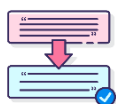
Capturing and organizing leads

Identifying lead sources is essential for effective marketing. Understanding where leads come from helps businesses optimize their strategies. Here are key methods to identify lead sources:

1. **Tracking URLs:** Use unique URLs for different campaigns to accurately track lead sources.
2. **UTM Parameters:** Add UTM tags to URLs to get detailed insights into campaign performance.
3. **Call Tracking:** Use unique phone numbers for different marketing channels to attribute calls accurately.
4. **Lead Capture Forms:** Use forms with questions about how leads found you to gather direct insights.
5. **CRM Integration:** Link lead generation efforts with CRM systems to analyze the effectiveness of each source.
6. **Surveys and Feedback:** Collect qualitative data on lead sources through surveys and feedback.



7.5 Sales Pipeline Management – Opportunities in EspoCRM



Imagine you are a sales manager tasked with overseeing a dedicated sales team. To effectively manage your team, it is crucial to have a clear understanding of your company's sales pipeline. By gaining insights into potential sales opportunities and identifying where leads are being lost, you can make more informed decisions and improve overall sales performance.

With EspoCRM, you can effortlessly monitor and analyze your sales pipeline, ensuring you have a comprehensive view of all stages—from initial contact to closed deals. This clarity helps you identify bottlenecks, optimize follow-up strategies, and ultimately boost your team's success rate. By leveraging the powerful features of EspoCRM, you will not only enhance your team's efficiency but also drive better sales outcomes for your company.

Configuring and managing the sales pipeline

A sales pipeline is a visual representation of your sales process. By breaking the process into different sections, it becomes possible to analyse and optimise each step of the sales process. Starting with a stranger being introduced to your business, your sales pipeline will take them through every step on their way to being a customer. A good sales pipeline will be able to estimate how many sales are expected to close in any given period. It can also reveal how that total is split between sales reps.

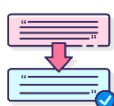
Because your pipeline is an indicator of the overall health of your sales efforts, all players have to be clear on your sales pipeline stages. Everyone—the reps, the sales manager, the vice president, and beyond—must understand what each stage means, how much pipeline there is, and the exit criteria for the next stage.

Here's is one option to describe the journey through the pipeline:

- Meeting Scheduled
- Qualification - working to see if your prospect is a fit for your product or service.



- Discovery - your goal is to learn more about your prospect (needs, pain, goals)
- Proposal
- Negotiation
- Closed-Won/Closed-Lost



Sales pipeline – Opportunities in EspoCRM

Using EspoCRM, the primary goal is to efficiently manage incoming sales leads and convert them into opportunities, ultimately driving sales growth.

Once a new lead is captured, it is essential to promptly follow up and schedule a meeting with the prospect. This initial interaction is crucial for understanding their needs and establishing a relationship.

After successfully setting up an appointment, the next step is to **convert** the sales lead into an opportunity within EspoCRM.

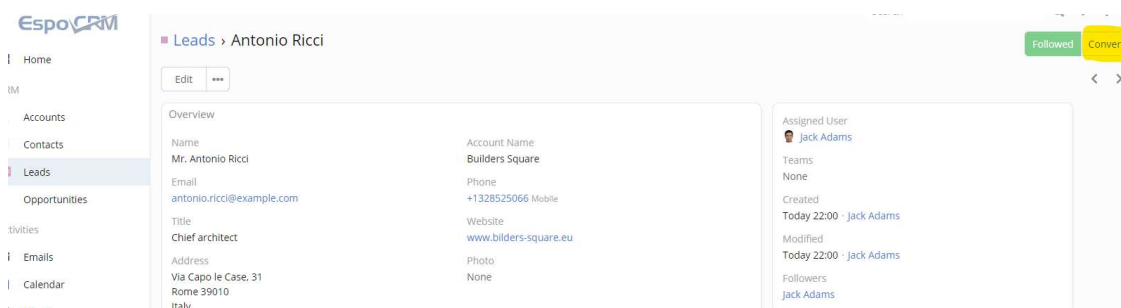


Fig. 7.15: EspoCRM lead convert

This conversion marks the transition from a potential interest to a qualified sales prospect.

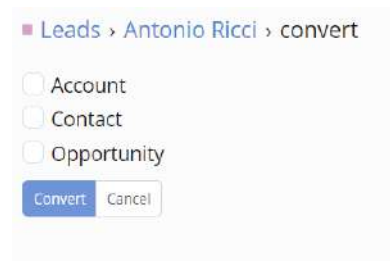
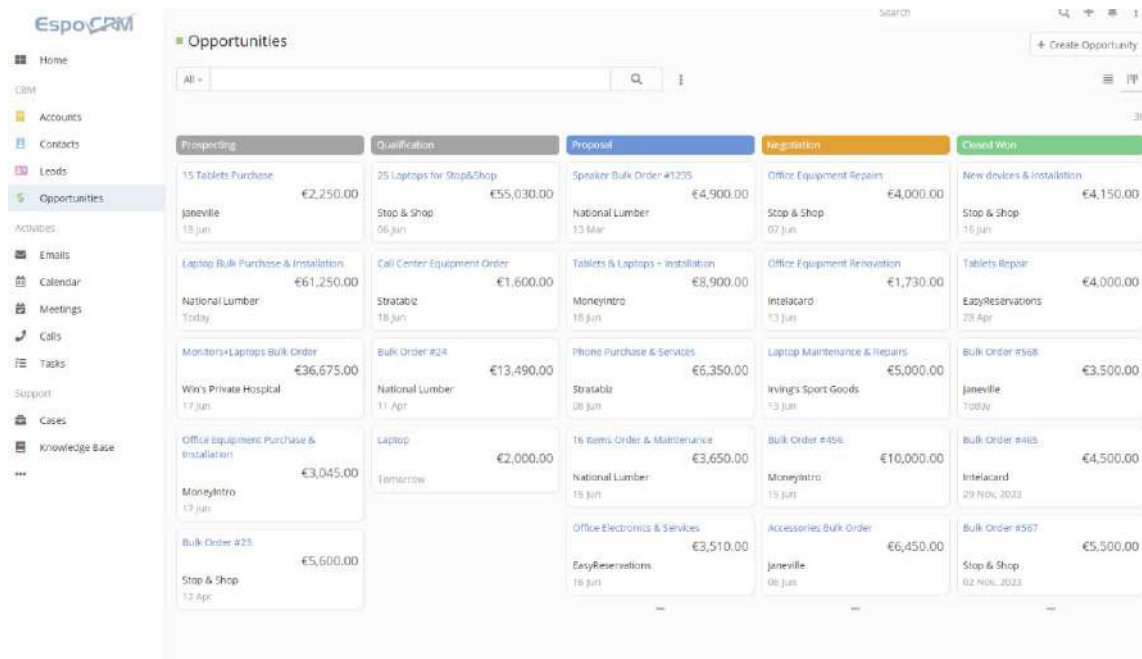


Fig. 7.16: EspoCRM lead conversion options




As an opportunity, the lead is now tracked through the sales pipeline, which consists of stages like qualification, proposal, negotiation, and closure. Each stage represents a critical step in the sales process, ensuring systematic progress and effective management.



Prospect	Qualification	Proposal	Negotiation	Closed Won
15 Tablets Purchase Janeville 18 Jun €2,250.00	25 Laptops for Stop&Shop Stop & Shop 06 Jun €55,030.00	Spezieller Bulk Order #1235 National Lumber 13 Mar €4,900.00	Office Equipment Repairs Stop & Shop 07 Jun €4,000.00	New devices & Installation Stop & Shop 16 Jun €4,150.00
Laptop Bulk Purchase & Installation National Lumber Today €61,250.00	Call Center Equipment Order Stratlabz 18 Jun €1,600.00	Tablets & Laptops - installation Moneyintro 18 Jun €8,900.00	Office Equipment Renovation Intelcard 13 Jun €1,730.00	Tablets Repair EasyReservations 29 Apr €4,000.00
Monitors+Laptops Bulk Order Win's Private Hospital 17 Jun €36,675.00	Bulk Order #24 National Lumber 11 Apr €13,490.00	Phone Purchase & Services Stratlabz 08 Jun €6,350.00	Laptop Maintenance & Repairs Irving's Sport Goods 13 Jun €5,000.00	Bulk Order #568 Janeville Today €3,500.00
Office equipment purchase & installation Moneyintro 12 Jun €3,045.00	Laptop Tannerrow €2,000.00	16 Items Order & Maintenance National Lumber 15 Jun €3,650.00	Bulk Order #456 Moneyintro 15 Jun €10,000.00	Bulk Order #465 Intelcard 29 Nov 2023 €4,500.00
Bulk Order #25 Stop & Shop 12 Apr €5,600.00		Office Electronics & Services EasyReservations 18 Jun €3,510.00	Accessories Bulk Order Janeville 06 Jun €6,450.00	Bulk Order #567 Stop & Shop 02 Nov 2023 €5,500.00

Fig. 7.17: EspoCRM opportunities pages

Throughout this process, EspoCRM enables sales teams to monitor and update the status of each opportunity, track interactions, and set reminders for follow-ups. Additionally, the system provides real-time visibility into the sales pipeline, allowing for better forecasting and strategic decision-making. By keeping all relevant information centralized, EspoCRM ensures that sales representatives have a comprehensive view of the contact's journey and can respond proactively to any changes in the sales market.



Additional resources

Introduction to CRM Systems

- <https://www.salesforce.com/eu/learning-centre/crm/crm-systems/>
(beginners guide to CRM)



- <https://clearcode.cc/blog/how-does-crm-work/>
- <https://www.techtarget.com/searchcustomerexperience/definition/CRM-customer-relationship-management>

Lead Management

- <https://fastercapital.com/content/Lead-source--How-to-identify-and-track-your-lead-sources-and-channels.html> (**Lead source: How to identify and track your lead sources and channels**)
- <https://blog.hubspot.com/marketing/effective-lead-management-guide> (How to Effectively Manage Leads at Every Stage in Your Sales Funnel)
- <https://www.captello.com/8-best-practices-for-lead-capture-part-1/> (8 best practices for lead capture)
- <https://fastercapital.com/content/Lead-source--How-to-identify-and-track-your-lead-sources-and-channels.html> (**Lead source: How to identify and track your lead sources and channels**)
- <https://lagrowthmachine.com/lead-qualification-guide/> (lead qualification step by step guide)
- <https://www.bigcontacts.com/blog/lead-qualification/>
- <https://fastercapital.com/content/Lead-source--How-to-identify-and-track-your-lead-sources-and-channels.html> (**Lead source: How to identify and track your lead sources and channels**)

Sales Pipeline Management

- <https://www.dooly.ai/blog/sales-pipeline-management/> (Sales Pipeline Management: A comprehensive guide to sales leaders and reps)
- <https://sopro.io/resources/blog/how-to-manage-your-sales-pipeline/> (How to manage your sales pipeline to close more sales)
- <https://improvado.io/blog/sales-pipeline-dashboard>
- <https://www.linkedin.com/pulse/decoding-metrics-deep-dive-your-pipeline-management-dashboard-parikh/>
- <https://www.varicent.com/blog/what-should-sales-pipeline-dashboard-provide>
- <https://www.geckoboard.com/dashboard-examples/sales/sales-pipeline-dashboard/>
- <https://www.zendesk.com/blog/sales-cycle/#4> (How to improve your sales cycle)
- <https://www.salemate.io/blog/sales-pipeline-tips/> (Tips to move deals from one stage to other)



7.5 Summary

Module 7 focuses on leveraging EspoCRM, an open-source customer relationship management (CRM) tool, to enhance sales management for TSOs and MSMEs. It teaches users how to automate sales, manage contacts, and track accounts, all while guiding them through the sales pipeline.

EspoCRM is presented as a powerful, customizable tool that can streamline sales processes, enabling organizations to efficiently track customer interactions and monitor sales progress. One of its key features is sales automation, where the system handles repetitive tasks such as follow-ups, reminders, and contact management, freeing up teams to concentrate on more strategic aspects of their work.

The module also highlights effective contact and account management, showing learners how to manage client and account information within EspoCRM. This includes tracking interactions, managing opportunities, and handling accounts through various stages of the sales process. A step-by-step guide is provided on managing the sales pipeline, covering everything from lead generation to closing deals, offering a structured approach to tracking leads and managing opportunities.

Customization is another significant aspect of EspoCRM, allowing users to tailor the platform to fit their specific organizational needs. Users can create custom fields, reports, and dashboards, ensuring the system aligns with their workflow. Additionally, the module explores how to utilize EspoCRM's analytics tools to generate insightful reports on sales performance, track key performance indicators (KPIs), and make informed, data-driven decisions to improve sales outcomes.



References

<https://www.salesforce.com/eu/learning-centre/crm/what-is-crm/>

<https://www.techtarget.com/searchcustomerexperience/definition/CRM-customer-relationship-management>

<https://fastercapital.com/content/Lead-source--How-to-identify-and-track-your-lead-sources-and-channels.html#Understanding-the-Importance-of-Lead-Sources>

<https://sopro.io/resources/blog/how-to-manage-your-sales-pipeline/>

<https://www.dooly.ai/blog/sales-pipeline-management/>



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