



Group Project 2

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EXECUTIVE SUMMARY

This document concludes the understanding of the business process applied by the application of enterprise resource planning systems. The audience will see the implementation of enterprise applications using Odoo, a collection of tools for managing businesses, such as CRM, e-commerce, billing, accounting, manufacturing, warehouse, project management, and inventory management, and how it manages various different business processes across multiple functional areas in the enterprise.

The scope of this research covers many things related to the business, instances of scenarios in the entire business processes, and the use of enterprise resource planning to deal with those circumstances.

This paper shows the buy and sell business process and the BPMN diagrams, an open standard to diagram a business process, of its concept design explanation. After building the BPMN diagrams of the process mentioned as a moment, the researcher makes use of the Odoo Scale-Up to create the business scenarios. Then, modifying and drawing the buy and sell process and business process descriptions accordingly. Last but not least, the researcher implements the buy and sell process using Odoo including Sales, Accounting, Inventory, Purchase, and further related modules to create new creative business strategies. Finally, the last topic in this report gives the audience the illustration of the useful reports of the company to be an example of Odoo implementation.

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THE COMPANY PROFILE

Business Overview

Central Group is one of the largest private commercial conglomerates in Thailand that provides both online and offline services. It consisted of various investments including Robinson, Super Sports, Central Food Retail Group, CHG (Central Home Group), Power Buy, B2S, and a lot more to bring development to localities and provinces in the countries and to lead the retail and service business of Thailand onto the world stage. [1]

History

In the 1950s, Tiang Chirathivat, had a strong commitment to building a small family-run shop. Then in the 1956s, his son, Samrit Chirathivat, expanded his father's merchandise business with the first establishment of the Central Department Store in Bangkok's Wang Burapha district. At first, He would name their business after the Chinese word "Tong lang" which means "Central " as it would be a place at the center for the customers to find all the goods and services. However, to become more melodious for both Thai and foreigners, he decided to use the word "Central " instead, and that is the starting point of the Central Group. In the next few years, they created several branches in many provinces that created more convenience for customers. For instance, In the 1973s, The Chidlom branch was established under the new "one-stop shopping" concept, customers come to Central and buy everything they need in one place. [1]

Key Business Process

Retail is Central Group's primary sector of business. The primary core activities of Central Retail include return processing, retail workflows, customer support, store planning, inventory management, and behavior analysis. [6]

Since there are more orders coming in from online shopping than ever before, return processing has become a crucial business process over the past year. Customers want a straightforward process for returning goods. [6]

For Central Retail, planning the operation of a modern business depends on understanding retail workflows. Customers' lifestyles are important to retailers, and face-to-face interaction with them is essential. The typical retail workflows include alerts for products with a short shelf life that are about to expire as well as stock levels, inventory losses, repeat customer purchasing

patterns, automated reminders to staff members who haven't turned in their timesheets on time, and stock levels. [6]

Due to the importance of customer satisfaction, customer support is now more important than ever. As brands offer 24/7 customer service, Central must take into account how they are already automating the process of updating customers on their orders in real-time. [6]

Sensors are used in store planning to identify and report which aisles and products customers spend the most time in. This data is used by Central to choose the best possible store design for its patrons. [6]

For inventory management, employees will manually access weekly spreadsheets to make management decisions. There are many advantages, including increased visibility and a reduction in errors made by employees. [6]

The ability to comprehend and serve their customers thanks to behavior analysis is crucial to Central. In order to capitalize on current trends, Central must be quick to react to them and access them in the retail sector. [6]

The COVID-19 situation prompted Central Group to announce its newest key business processes, which include four key business processes: providing a comprehensive solution for the nation's vaccination rollout program; developing a pilot project that provides SMEs with access to soft loans; raising public health standards; and uniting Thais to help Thais. [5]

An immediate vaccination for Thais, which is essential for economic recovery, offers a comprehensive solution for the nation's vaccination rollout program. At Thai Watsadu, Tops Plaza, Central and Robinson Department Stores, Robinson Lifestyle Malls, and Central Group, which operates in 109 locations, they collaborate with the Thai Chamber of Commerce. [5]

Create a pilot program allowing SMEs access to soft loans. For the first stage of the SandBox pilot project to increase liquidity for SMEs with less than THB 5 million, Central Group worked with commercial banks. [5]

Improve public health standards by working with all departments to cool the situation down. Facilitate health professionals' operations and support COVID-19 patients.

Thais should band together to support Thais. The Central Group values social power gained through public-private partnerships. The promotion of Thai cuisine, shopping for Thai goods, and local tourism will support domestic spending, which will quickly sustain itself and increase employment opportunities for all. [5]

The Importance of the ERP System of the Company

The way Central conducts business depends heavily on information technology. Central Group makes use of MIS and IT to lower operating expenses, study consumer behavior, and improve the customer experience. As a result, the Central group can modify the business process to promptly react to unforeseen events. For instance, Central advertised its online platforms, such as contactless payment, online communication, and omnichannel platform, at the start of the Covid-19 pandemic in response to the decline in customers who visited the physical store. In addition, Central offers SMEs opportunities for business growth during the pandemic by cutting costs for them, such as land rent, providing discounts on essential items for survival, and providing a distribution platform for communities. As a result of the incident, it is clear that Central Group not only manages unforeseen circumstances skillfully but also maintains its ability to assist other businesses. [7]

The integration of IT and MIS can harm a company's process, even though it aids Central Group in adapting the process to deal with any incident. As a result, they bring together the company's top executives to form the Information Technology Committee (ITC). In order to efficiently and effectively achieve sustainable goals, it assesses and maintains the systems, resources, and investments that support the company's operations and those of its subsidiaries. Additionally, it thinks through and chooses the best ways to manipulate IT systems.

To assist the organization and its subsidiaries in achieving their goals in a coordinated manner, the ITC is also charged with overseeing the company's information security mission statement and policy.

BPMN DIAGRAM OF BUY AND SELL PROCESS

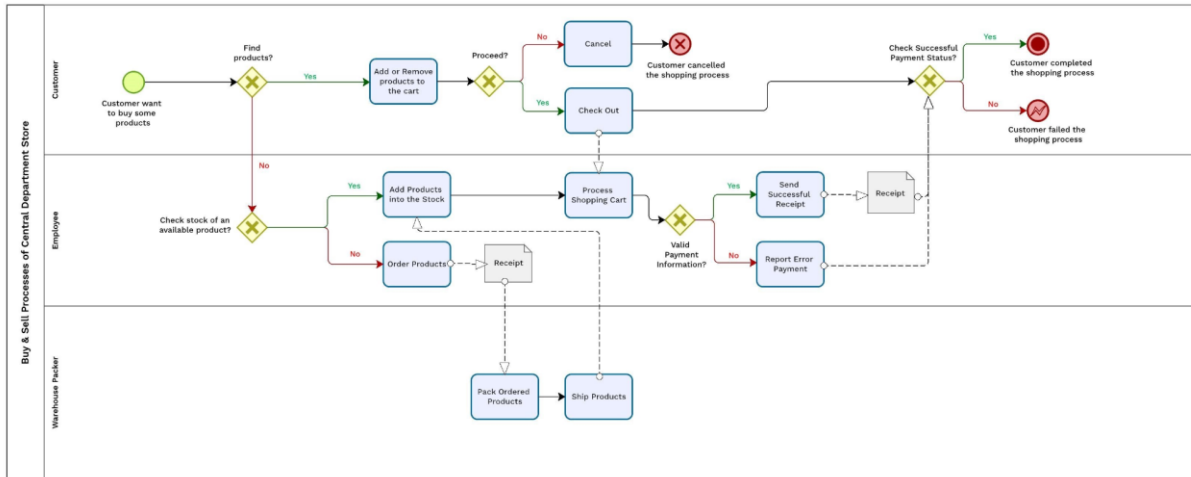


Figure 1: BPMN of Central Department's Buy and Sell

The BPMN of the Central Department's buy and sell has three main swimlanes including customer, employee, and warehouse packer. This BPMN focuses on offline service where customers go to the department store for shopping.

For customers, there are only buy processes in which customers buy products from the Central department store. Customers walk through the department store to find products. If no products are available on a shelf, customers can ask for the products from the employee. After finishing browsing products in a department store, customers can choose to cancel shopping and go home or continue shopping. If the customer wants to continue shopping, the customer will wait in the queue at the cashier counter and make a payment. The employee will process the payment and pack the order into a plastic bag. Then, the customer will receive a receipt from the cashier. The customer will check the payment status, is it correct or not. If the payment is not correct, the shopping process will fail. If the payment status is correct, it means the customer finishes the buying process at the Central department store.

For the employee, and warehouse packer there are sales processes. If the customer tells the employee that no product is on the shelf, the employee will tell the warehouse packer for shipping the product to the department store. The warehouse packer is about product packing and shipping. The warehouse packer will pack the product and send the product to the employee. The employee will add products to the stock. Also, the employee has another process which is a payment process. If the payment process is successful, the employee will give the receipt to the customer. If the payment is not successful, the customer's shopping process will be canceled.

MODIFIED BPMN DIAGRAM OF BUY AND SELL PROCESS

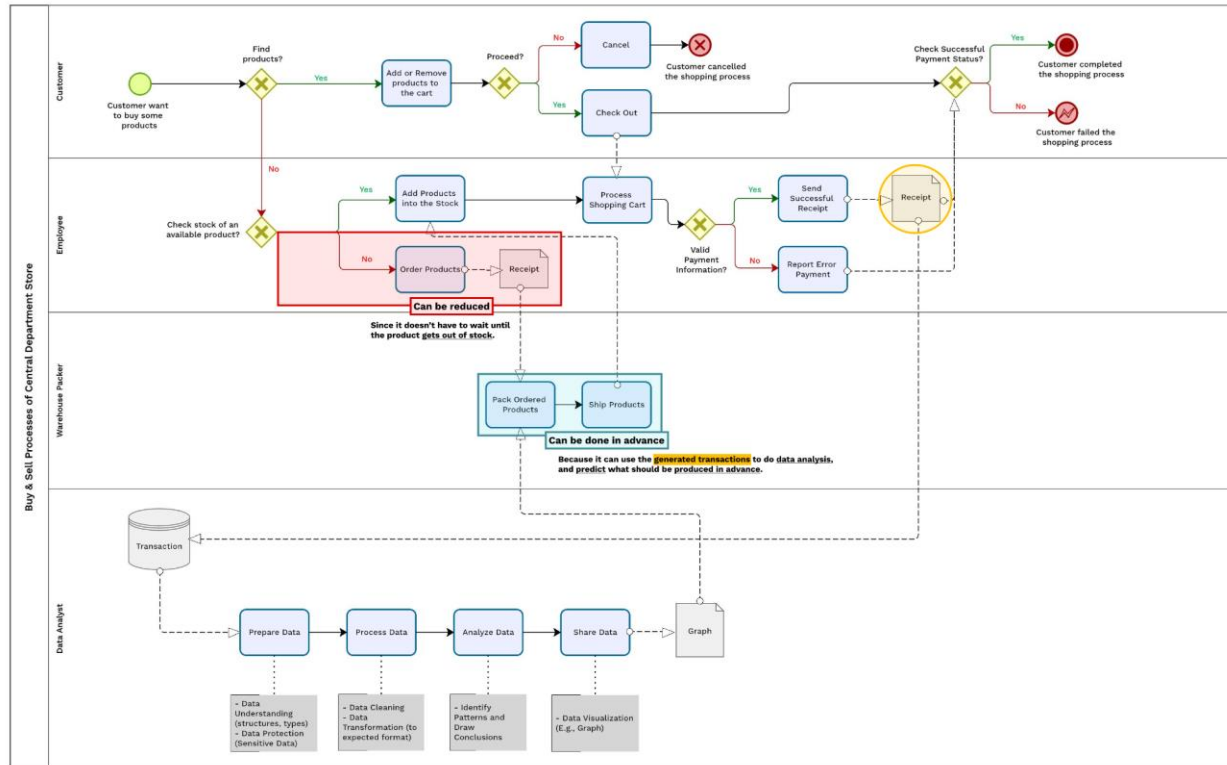


Figure 2: Modified BPMN of Buy and Sell (Sales Analysis)

According to the Buy and Sell diagram, customers' demands are unpredictable, and the transaction has been generated based on the purchases. In the modified Buy and Sell BPMN diagram, called Sales Analysis, the receipt data has been used to evaluate sales performance and sales forecast. Therefore, the organization can use that information to forecast which products should be produced at a specific time, and it could reduce customers' waiting time while improving customer satisfaction. For example, in the celebration festival, alcohol sales tend to have a higher selling rate than normal.

Software Modules & Business Values (Cited from the Odoo)

1. Sales

This module is used to create the sales received from the customer. It will send the quotations to sales orders and customers to know about the ordered products. It helps the company to manage their orders faster and makes the contract become trackable and maintained in the system for using those records in the future.

2. Invoicing

This module is used to simply create invoices based on the quotes you have sent to the customers. The invoices will be more professional in a PDF format, therefore it helps the company to attach this attachment to the related orders in a suitable way and the customer is satisfied with the format and helps build customer satisfaction.

3. Website

Website editor module is used to create a website with customizable themes and blocks of elements. In addition, the user can create building blocks by simply drag & drop to the page. It helps the company to have a professional website that attracts the customers.

4. Inventory

This module is used to check the product in the stock. It will show the product information such as Product Name, Unit Cost, Total Value. It helps the user to see the available product in the stock, so they can prepare what to purchase in advance.

5. Purchase

This module is used to create a product and fill the information into the system, there are two options: create it manually on Odoo and import the CSV or an Excel file. It will show product information including Product Name, Description, Quantity and Price (supported both retail and wholesale), and Vendor. The user can make requests (purchase) for the products in this module, and after the receipt has been confirmed, it will pass the next process to the Inventory module. It helps the user to easily modify the product information when it has any updates.

6. eCommerce

This module provides the support for eCommerce on the website created. After this module is installed, the shop tab will appear on the menu bar. Then the products created in the Odoo module will be imported into the Shop page. The administrator can select which products will be listed on the website and edit product categories. In addition, the module supports the shopping cart system, which allows the customer to put the products in the cart and checkout all at once. However, this module doesn't support payment by itself, the payment module is needed to allow the customer to make a payment. Moreover, the eCommerce module provides Sales Analytics as a dashboard and pivot table for analyzing product sales.

7. Odoo 16 Full Accounting Kit

Since the Odoo Accounting module is not free, Odoo 16 Full Accounting Kit, a third-party Odoo accounting app by Cybrosis, is used instead. This module is used to create the bill/invoice after they received the bill from the vendor. It will show the product information such as Product Name, Label, Account, Quantity, Price.

ODOO OF MODIFIED BPMN DIAGRAM

Required Modules

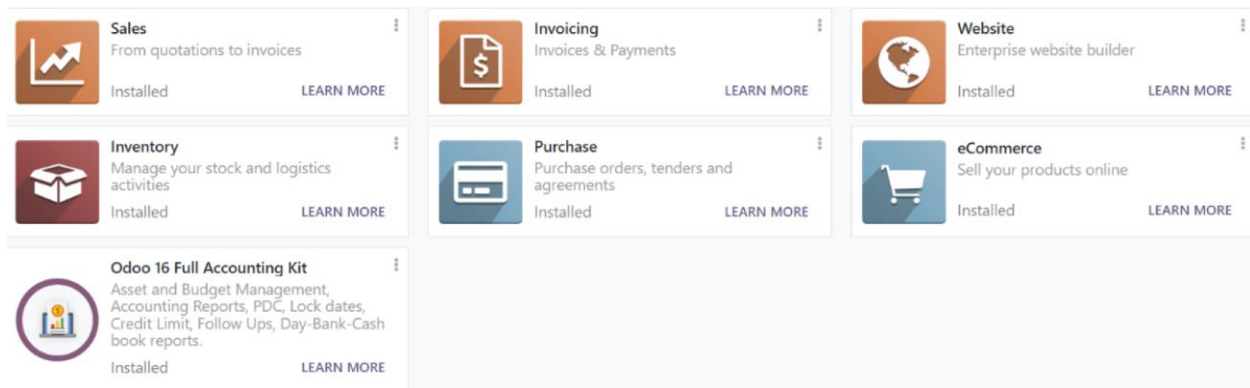


Figure 3: required Odoo Modules

Figure 3 illustrates the required modules of the BPMN operations. Moreover, the Odoo Accounting module isn't free, so Odoo 16 Full Accounting Kit, a third-party Odoo accounting app by Cybrosis, is used instead.

Creating Product

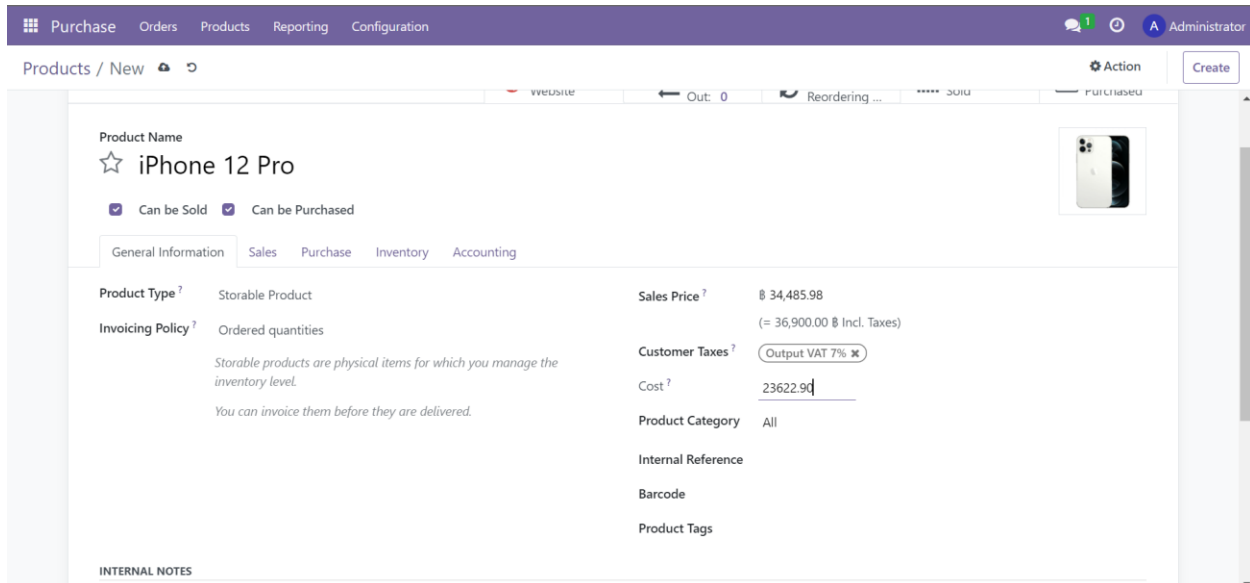


Figure 4: Creating a Product

To create a product, go to Purchase => Products => Products => Create. Then, fill in the information including Product Name, Sales Price, and Cost.

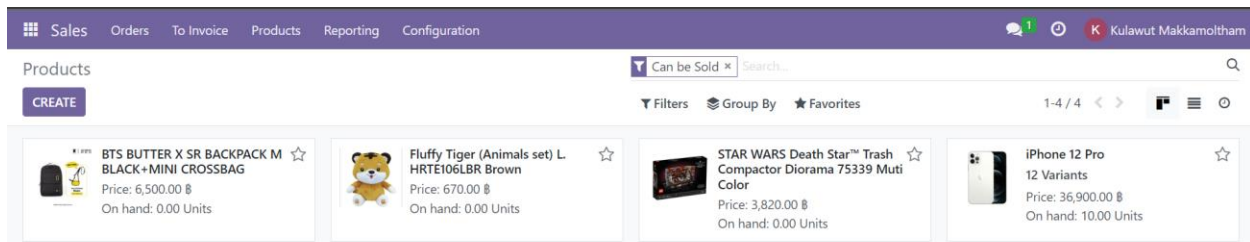


Figure 5: Importing Records

Alternatively, the user can import the product list by clicking on Favorites => Import records. The file can be a CSV or an Excel file.

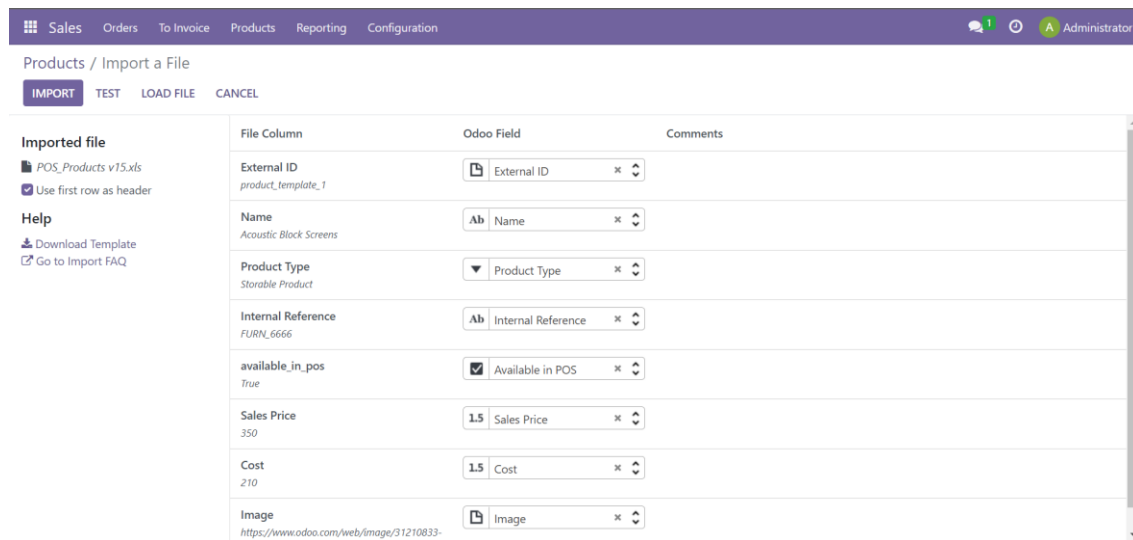


Figure 6: Choosing the file to import

After selecting the file, it will show the screen as shown above in Figure 6. The user can specify the column name by checking the “Use first row as header”, then Odoo will automatically read the attributes. When a user finishes reviewing the file structure, click Import to import the data.

Variants

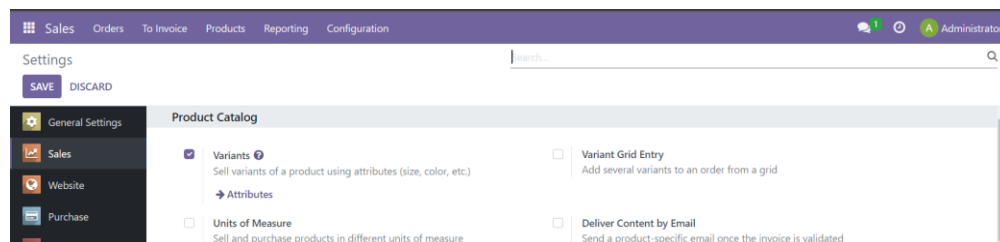


Figure 7: Enabling Variants in Sales Module

In addition, a user can edit the products attribute and variants at the Attributes and Variants tab after enabling it in the sales settings as shown in Figure 7.

Settings / Attributes / New

Attribute Name: Color

Display Type: ☐ Radio, ☐ Pills, ☐ Select, ☒ Color

Variants Creation Mode: ☒ Instantly, ☐ Dynamically, ☐ Never (option)

eCommerce Filter Visibility: ☒ Visible, ☐ Hidden

Value	Is custom value	Color
Silver	<input type="checkbox"/>	
Pacific Blue	<input type="checkbox"/>	
Gold	<input type="checkbox"/>	
Graphite	<input type="checkbox"/>	

Figure 8: Editing attributes

The administrator can edit the product variants like color and display them on the eCommerce webpage.

Value	HTML Color Index	Value Price Extra
<input type="checkbox"/> 128 GB		0.00 B
<input type="checkbox"/> 256 GB		4,000.00 B
<input type="checkbox"/> 512 GB		8,900.00 B

Figure 9: Configure product variants' price

The administrator can add the cost of product variants by going to product variants, and clicking configure at the right most of the attribute row.

The screenshot shows the 'Purchase' tab of the 'iPhone 12 Pro' product form. At the top, there are status bars for 'On Hand' (0.00 Units), 'Forecasted' (0.00 Units), 'In: Out: 0', 'Reordering ... 0', 'Sold' (0.00 Units), and 'Purchased' (0.00 Units). Below these, the 'Product Name' is 'iPhone 12 Pro' with a star icon and a checkbox for 'Can be Sold' and 'Can be Purchased'. The 'Purchase' tab is selected, showing a table with columns 'Vendor', 'Quantity', and 'Price'. The table contains two rows for 'Apple Inc.' with quantities 1.00 (price 25,276.50) and 5.00 (price 22,750.00). An 'Add a line' button is at the bottom of the table.

Figure 10: Specifying lot price

Sometimes, the products are cheaper when buying a lot of them. In the example, the iPhone 12 Pro costs only 22750 THB when the order quantity is more than 10. This setting will be automatically applied upon purchasing a product.

Purchasing a Product

The screenshot shows the 'Request for Quotation' form for 'P00001'. The 'Vendor' is 'Apple Inc.' and the 'Order Deadline' is '11/13/2022 22:07:31'. The 'Expected Arrival' is '11/15/2022 22:07:31'. There is a checkbox for 'Ask confirmation'. The 'Products' tab is selected, showing a table with columns 'Product', 'Description', 'Quantity', 'Unit Price', 'Taxes', and 'Subtotal'. The table contains five rows for different iPhone 12 Pro models. At the bottom, there is a summary section with 'Untaxed Amount: 243,803.00', 'VAT 7%: 17,066.22', and 'Total: 260,869.22'.

Figure 11: Request of Quotation

Firstly, specify the vendor, Odoo will automatically create a vendor if the vendor does not exist. Next, choose the products to purchase from the vendor. Then, click CONFIRM ORDER.

Receiving a Product

PurchaseOrdersProductsReportingConfiguration

Requests for Quotation / P00001 / WH/IN/00003

PrintAction1 / 1 < > Create

VALIDATE

CLEAR QUANTITIES

PRINT

PRINT LABELS

UNLOCK

CANCEL

DRAFT

WAITING

READY

DONE

☆ WH/IN/00003

Receive FromApple Inc.

Scheduled Date[?]11/15/2022 22:07:31

Deadline[?]11/15/2022 22:07:31

Source Document[?]P00001

Operations

Additional Info

Note

Product	Demand	Done	
iPhone 12 Pro (Silver, 128 GB)	2.00	2.00	
iPhone 12 Pro (Silver, 256 GB)	1.00	1.00	
iPhone 12 Pro (Graphite, 512 GB)	1.00	1.00	
iPhone 12 Pro (Pacific Blue, 128 GB)	5.00	5.00	
iPhone 12 Pro (Gold, 256 GB)	1.00	1.00	
Add a line			

Figure 12: Confirm the Purchase Order

After clicking CONFIRM ORDER, the user can see the receipt by either clicking on the truck icon on the top right corner or going to Inventory => Receipts, then choosing the receipt. When the products are received, set the Done quantity and click Validate.

Checking Stock

InventoryOverviewOperationsProductsReportingConfiguration

Stock

Available Products

FiltersGroup ByFavorites

1-5 / 5 < >

CATEGORY	Product	Unit Cost	Total Value	On Hand	Free to Use	Incoming	Outgoing	
All	<input type="checkbox"/> iPhone 12 Pro (Silver, 128 GB)	25,276.50 ₺	50,553.00 ₺	2.00	2.00	0.00	0.00	History Replenishment
	<input type="checkbox"/> iPhone 12 Pro (Silver, 256 GB)	27,276.50 ₺	27,276.50 ₺	1.00	1.00	0.00	0.00	History Replenishment
	<input type="checkbox"/> iPhone 12 Pro (Pacific Blue, 128 GB)	25,276.50 ₺	126,382.50 ₺	5.00	5.00	0.00	0.00	History Replenishment
	<input type="checkbox"/> iPhone 12 Pro (Gold, 256 GB)	27,276.50 ₺	27,276.50 ₺	1.00	1.00	0.00	0.00	History Replenishment
	<input type="checkbox"/> iPhone 12 Pro (Graphite, 512 GB)	30,000.00 ₺	30,000.00 ₺	1.00	1.00	0.00	0.00	History Replenishment
			261,488.50	10.00	10.00			

Figure 13: Check the stock

The administrator can check the stock by going to Inventory => Reporting => Stock. In addition, the Odoo inventory module has a filter option, and the user can use it to see only items that are in the stock like in Figure 13.

Controlling the Bill

Accounting
Overview
Customers
Vendors
Accounting
Reporting
Configuration

Bills / New
Print
Action
Create

CONFIRM
DRAFT
POSTED

Vendor Bill
BILL/2022/11/0001

Vendor
Apple Inc.

Bill Date

Bill Reference

Accounting Date
11/13/2022

Auto-Complete ?
Select a p...

Payment Reference ?

Due Date
11/13/2022

or Terms

Journal
Vendor Bills

Invoice Lines
Journal Items
Other Info

Product	Label	Asset Category	Account	Quantity	Price	Taxes	Subtotal
iPhone 12 Pro (Silver, 128 GB)	P00001: iPhone 12 Pro (Silver, 12...		510000 Cost of Revenue	2.00	22,750.00	Input VAT 7%	45,500.00
iPhone 12 Pro (Pacific Blue, 128 ...	P00001: iPhone 12 Pro (Pacific BL...		510000 Cost of Revenue	5.00	22,750.00	Input VAT 7%	113,750.00
iPhone 12 Pro (Silver, 256 GB)	P00001: iPhone 12 Pro (Silver, 25...		510000 Cost of Revenue	1.00	27,276.50	Input VAT 7%	27,276.50
iPhone 12 Pro (Graphite, 512 GB)	P00001: iPhone 12 Pro (Graphite,...		510000 Cost of Revenue	1.00	30,000.00	Input VAT 7%	30,000.00
iPhone 12 Pro (Gold, 256 GB)	P00001: iPhone 12 Pro (Gold, 256...		510000 Cost of Revenue	1.00	27,276.50	Input VAT 7%	27,276.50

Add a line
Add a section
Add a note

Terms and Conditions

Untaxed Amount:
243,803.00

VAT 7%:
17,066.22

Total:
260,869.22

Figure 14: Billing

After the company receives the bill from the vendor, Odoo can synchronize the data from the purchase order to create the bill (Autocomplete). Then, the administrator will need to fill in the Bill date and click the CONFIRM button.

Creating an eCommerce website

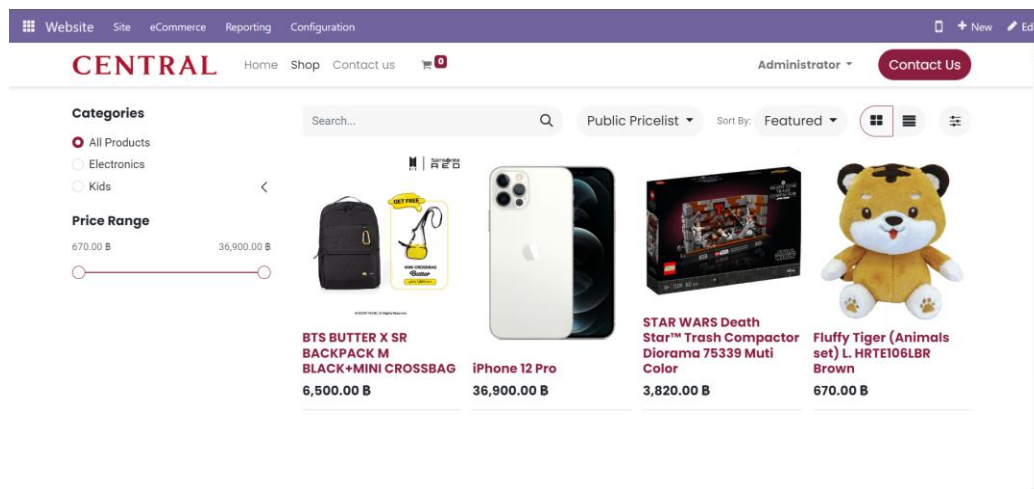


Figure 15 : eCommerce

To create a website, the website module needs to be installed. However, an eCommerce module is required to allow the website to support eCommerce functionalities. After installing the eCommerce Module, the shop tab will appear. The user can edit the webpage by clicking on edit at the top right corner. In addition, the user can set product attributes and eCommerce categories by clicking on eCommerce => eCommerce Categories or Attributes. Moreover, a customer can put items into the shopping cart by clicking the cart icon on the item card.

Handle Product out of stock

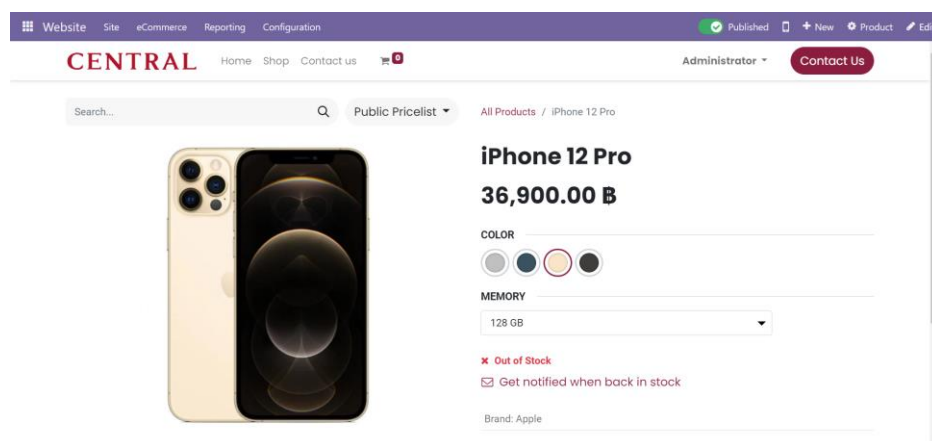


Figure 16: Product out of stock

If the product is out of stock, the website will be able to display the message as shown in Figure 16 (Can be set in the product option). However, Odoo has an inventory report, so this situation normally should be the case when the product isn't produced anymore.

Checkout

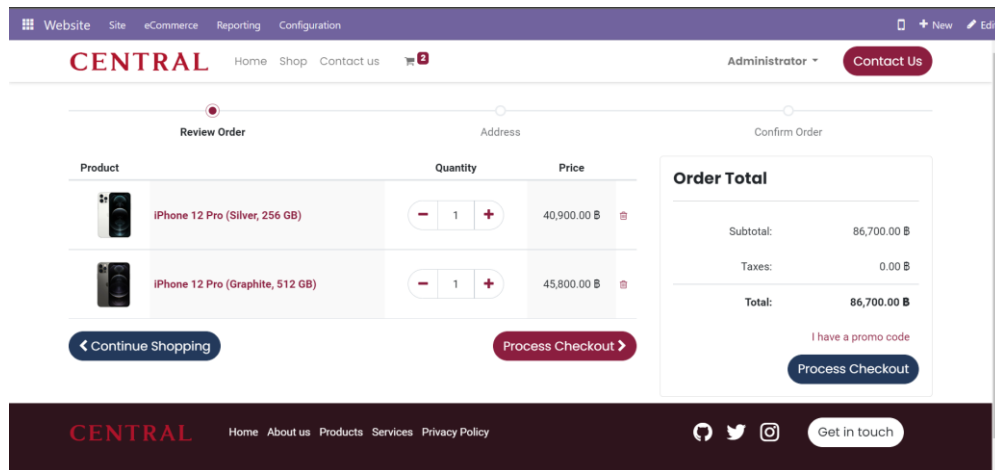


Figure 17: Review cart items before checking out

When a customer is satisfied with shopping, the user can click on the cart icon on the right of Contact us to enter the page in Figure 17 to review the items in the cart. After that, the user can proceed to checkout. Then, the customer will need to edit the billing address and the payment method

Payment

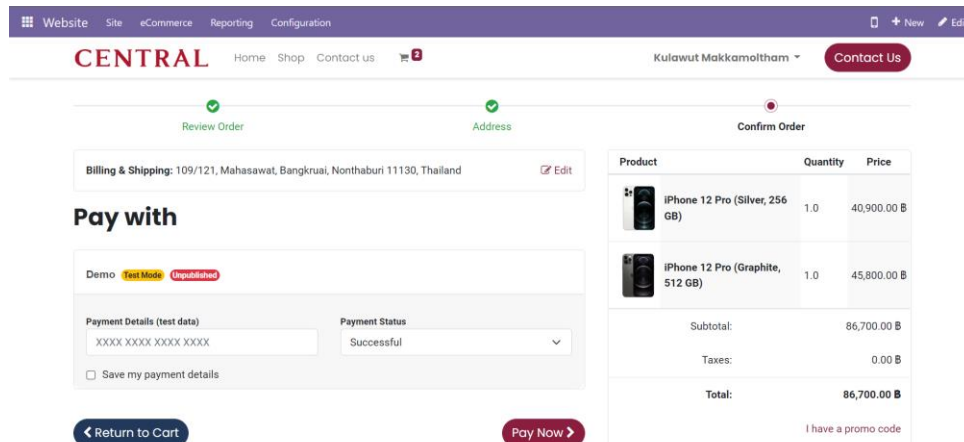


Figure 18: Make payment

After filling in the address, it will show the payment page. Figure 18 is the Demo provider from Odoo Module. The customer will need to fill in the payment information and then click the Pay Now button to make payment.

Payment Success

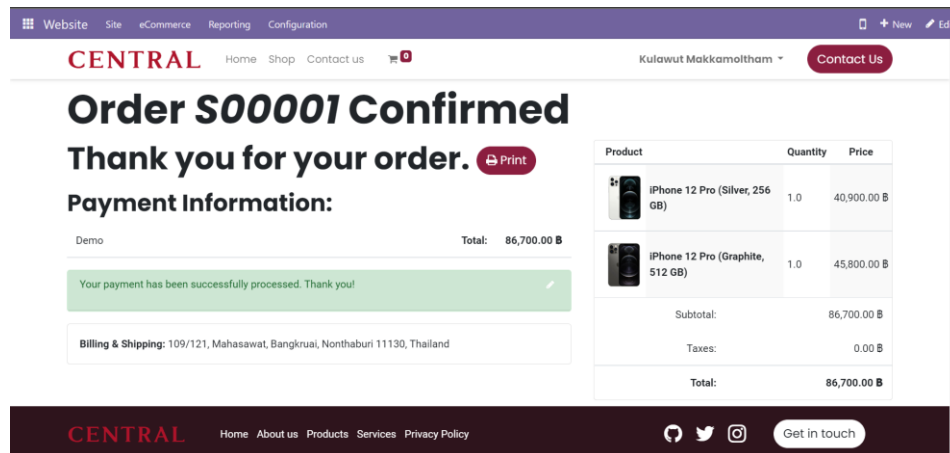


Figure 19: Payment Complete

When the customer payment is successful, it will show the success message as shown in Figure 19.

Payment Failed

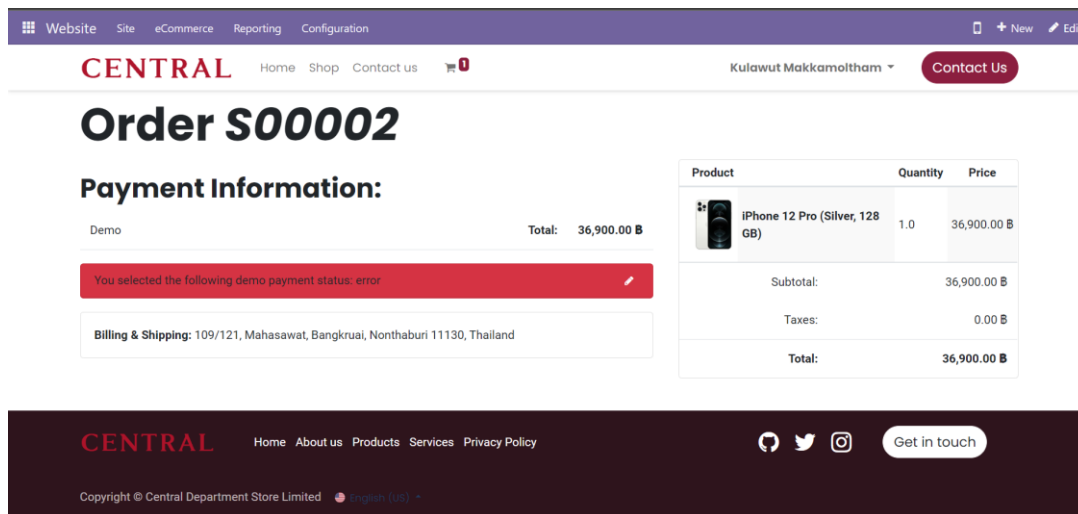


Figure 20: Payment Error

If the payment failed, it will display the reason why the payment failed. In figure 20, it shows the error message (default message by Odoo payment demo module).

Delivery

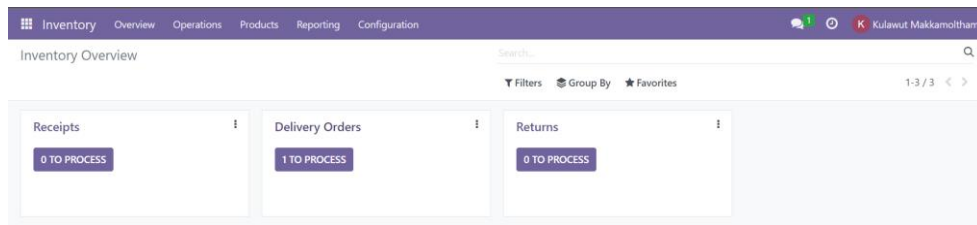


Figure 21: Delivery Order

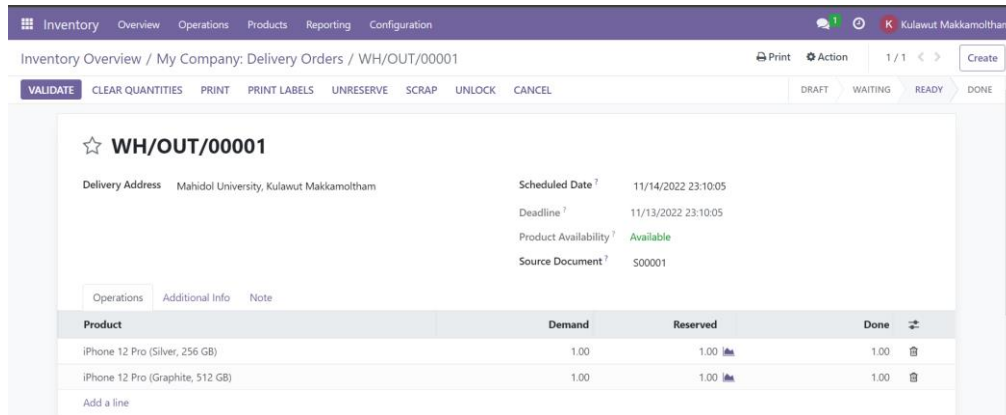


Figure 22: Confirm Delivery

When the delivery is done, change the Done to match the demand and click validate. Alternatively, the user can go to INVENTORY => Order to Delivery to access this page. Moreover, Odoo will prompt the message whether the delivery man wants to confirm the delivery by SMS text message after the delivery man clicks the validate button.

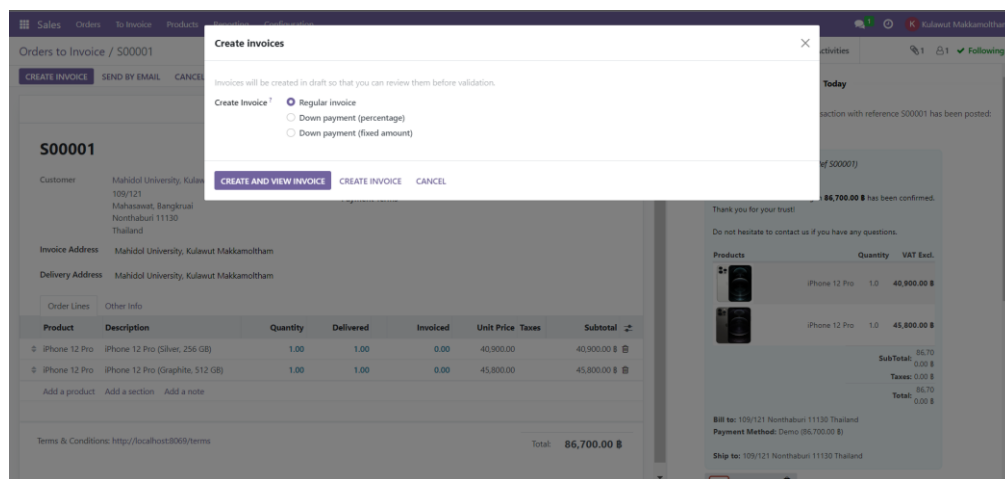


Figure 23: Creating an invoice

Accounting Overview Customers Vendors Accounting Reporting Configuration

Invoices / Draft Invoice INV/2022/00001 Print Action 1 / 1 Create

CONFIRM PREVIEW CANCEL DRAFT POSTED

Payment Transaction 1 Sale Orders

Customer Invoice
INV/2022/00001

Customer: Mahidol University,
109/121
Mahasawat, Bangkruai
Nonthaburi 11130
Thailand

Invoice Date:
Payment Reference ?
Due Date: 11/13/2022 or Terms
Journal: Customer Invoices

Delivery Address ? Mahidol University, Kulawut Makkamoltham

Invoice Lines Journal Items Other Info

Product	Label	Account	Quantity
iPhone 12 Pro (Silver, 256 GB)	iPhone 12 Pro (Silver, 256 GB)	410000 Income	1.00
iPhone 12 Pro (Graphite, 512 GB)	iPhone 12 Pro (Graphite, 512 GB)	410000 Income	1.00

Add a line Add a section Add a note

Terms & Conditions: <http://localhost:8069/terms> Total: **86,700.00 ฿**

Figure 24: Create invoices successfully

After the delivery is completed, the admin can create an invoice by going to Sales => To Invoice => Order to Invoice => CREATE INVOICE. After creating the invoice, it will show the page in Figure 24.

Accounting Overview Customers Vendors Accounting Reporting Configuration

Invoices / INV/2022/00001 Print Action 1 / 1 Create

SEND & PRINT PREVIEW ADD CREDIT NOTE RESET TO DRAFT DRAFT POSTED

Payment Transaction 1 Sale Orders

Customer Invoice
INV/2022/00001

Customer: Mahidol University, Kulawut
Makkamoltham
109/121
Mahasawat, Bangkruai
Nonthaburi 11130
Thailand

Invoice Date: 11/13/2022
Payment Reference ? INV/2022/00001
Due Date: 11/13/2022
Journal: Customer Invoices

Delivery Address ? Mahidol University, Kulawut Makkamoltham

Invoice Lines Journal Items Other Info

Product	Label	Account	Quantity	Price Taxes	Subtotal
iPhone 12 Pro (Silver, 256 GB)	iPhone 12 Pro (Silver, 256 GB)	410000 Income	1.00	40,900.00	40,900.00 ฿
iPhone 12 Pro (Graphite, 512 GB)	iPhone 12 Pro (Graphite, 512 GB)	410000 Income	1.00	45,800.00	45,800.00 ฿

Terms & Conditions: <http://localhost:8069/terms> Total: **86,700.00 ฿**

PAID
Paid on 11/13/2022 86,700.00 ฿

Figure 25: Confirm the invoice

Sales Analytics



Figure 26: Sales Analytics

The administrator can access Odoo Website Analytics by going to Website => Reporting => Analytics. This dashboard will show the summary of eCommerce Sales, which includes the bestseller product. The conversion percentage is the percentage of the carts that are checked out.

The pivot table provides a detailed breakdown of sales data. It shows the total sales for November 2022, categorized by product. The data is presented in a structured format with columns for various sales metrics.

	Untaxed Total	Qty Ordered	Qty Delivered	Qty Invoiced	Total	Count
Total	86,700.00	2.00	2.00	2.00	86,700.00	2
November 2022	86,700.00	2.00	2.00	2.00	86,700.00	2
iPhone 12 Pro (Silver, 256 GB)	40,900.00	1.00	1.00	1.00	40,900.00	1
iPhone 12 Pro (Graphite, 512 GB)	45,800.00	1.00	1.00	1.00	45,800.00	1

Figure 27: Online Sales Analysis Pivot table

Besides graph visualization, Odoo Sales Analytics provides a pivot table to see the detail of customer shopping history and determine their shopping style from this data.

USEFUL REPORT OF THE COMPANY

As we have studied so far, we are trying to illustrate how Odoo helps the company to manage the financial reports, purchase receipts, delivery slips, sales quotes, sales orders, invoice, and so on. Accounting, Inventory, Purchase and Sale Modules contribute those particular tasks in the company to achieve the company report easily. In this part, we will give four instances to depict how the modules we mentioned a moment actually work with the specific tasks.

Financial Report

A financial report is a statement that informs management, investors, and the government about an organization's financial situation. Real-time financial report generation is an auto capability of Odoo ERP. In addition, Odoo offers reports ranging from simple accounting reports to complex management reports [4]. The data will be examined by Odoo, which will then produce a PDF and XLS document.

Here is some of the reports that Odoo provided:

1. Journal Audit

Using this feature, you may keep track of who added or edited a record and when, as well as their actions in relation to accounting entries [8]. The Journal Audit report then can be used to track those logs.

2. Partner Ledger

The receivable and payable journal entries of the partners are displayed in the partner ledger. Partner ledgers are useful for analyzing and viewing each partner's debits and credits [9].

3. General Ledger

The general ledger report is the primary accounting document that contains an extensive record of all business financial transactions [9].

4. Trial Balance

All business actions are included in the trial balance. All of the company's ledgers are collected and compiled into a single document with a specific date [9].

5. Balance Sheet

The assets, liabilities, and equity of a corporate organization are presented on the balance sheet.

6. Profit & Loss

A report that summarizes a company's earnings and expenses over a specific time period is known as a profit and loss statement.

7. Cash Flow Statement

It is a budget overview that shows how changes in the monetary record and pay affect the money and its counterparts. The examination is further divided into operational, investment, and budgeting activities.

8. Executive Summary

The profit and loss, cash flow, and balance sheet reports are summarized in the executive summary.

9. Aged Partner Balance

- **Aged Receivables**

The report named aged receivables reveals the company's receivable accounts depending on the amount of time the invoice has been overdue [9].

- **Aged Payable**

Aged payables are the balance owed by the business to its suppliers as of the due dates. The company's unpaid bills are tracked through the aged payables report [9].

10. Tax Report

The tax report is the record that totals up the company's earned income and the amount of taxes paid [9].

Balance Sheet Report

2022-11-14 00:40

My Company

1 / 1

Balance Sheet

Target Moves:

All Entries

Name	Debit	Credit	Balance
Balance Sheet	695,138.44 ₪	695,138.44 ₪	0.00 ₪
Liability	504,672.22 ₪	347,569.22 ₪	157,103.00 ₪
Liability	260,869.22 ₪	260,869.22 ₪	0.00 ₪
210100-Account Payable	260,869.22 ₪	260,869.22 ₪	0.00 ₪
Profit (Loss) to report	243,803.00 ₪	86,700.00 ₪	157,103.00 ₪
Assets	190,466.22 ₪	347,569.22 ₪	-157,103.00 ₪
111002-Outstanding Receipts	86,700.00 ₪	0.00 ₪	86,700.00 ₪
111003-Outstanding Payments	0.00 ₪	260,869.22 ₪	-260,869.22 ₪
120000-Account Receivable	86,700.00 ₪	86,700.00 ₪	0.00 ₪
151000-Input VAT	17,066.22 ₪	0.00 ₪	17,066.22 ₪

Figure 28: Sample Balance Sheet

Our group's primary emphasis for the financial report is the balance sheet report, which displays the financial statements of the business we have selected, Central Group Corporation. Balance sheets serve as the foundation for calculating investor return rates and assessing a company's financial structure. The balance sheet is a financial statement that gives a quick overview of the assets and liabilities of a firm as well as the amount of shareholder investment [10].

As a result of the information provided above, we can summarize the sample balance sheet in figure 28 by saying that the Central Group Company's financial statement shows a loss since its assets are negative. Although the quantity of assets is substantial, the value of the debt is more than twice as much.

Quotation/Order



CENTRAL Online

Tom Cruise
1 Sukhumvit Rd, Khwaeng Khlong Tan, Khet
Khlong Toei
Bangkok 10110
Thailand

Order # S00007

Order Date:
11/17/2022

Salesperson:
Sasima Srijanya

DESCRIPTION	QUANTITY	UNIT PRICE	TAXES	AMOUNT
AirPods Pro 2nd generation	1.00 Units	8,990.00	Output VAT 7%	8,990.00 ฿
iPhone14 Pro AirPods Generation 2 with Charging Case White	1.00 Units	45,900.00	Output VAT 7%	45,900.00 ฿
Brush With Fate Brush Essentials Kit	1.00 Units	3,150.00	Output VAT 7%	3,150.00 ฿
Fix Magic Radiance	2.00 Units	1,215.00	Output VAT 7%	2,430.00 ฿
Foundation Pump	3.00 Units	250.00	Output VAT 7%	750.00 ฿
Powder Blush Melba	1.00 Units	1,008.00	Output VAT 7%	1,008.00 ฿
Lightful C + Coral Grass Tinted Primer Spf45/Pa++++ 30 mL	1.00 Units	1,950.00	Output VAT 7%	1,950.00 ฿
Untaxed Amount				64,178.00 ฿
VAT 7%				4,492.46 ฿
Total				68,670.46 ฿

Payment terms: Immediate Payment

contact@central.co.th

CENTRAL Online

1

Figure 29: Central Online Sales Quotation

Sales Quotation and Sales Order

One of the most crucial sales documents for a company is a sales quotation, which contains all the details about the costs associated with purchasing a specific item or service. When starting a commercial transaction, a seller or supplier may frequently provide a sales quotation to their clients or potential clients. The seller may provide a clear explanation of the product pricing, service price, or other specifics by making this sales quotation, and the buyer can gain more clarification regarding the specific product, service, and cost before finalizing the agreement. The Odoo platform enables us to develop expert sales quotations that include an itemized list of the items and the services they provide, the pricing associated with those products and services, and the terms and conditions governing the sale and payment.

Including the CRM module and integrating the Sales module with other Odoo modules is simple. So when a fresh opportunity presents itself, you can quickly develop sales quotes. Because of Odoo's high level of integration, businesses can quickly produce customized quotes in response to inquiries from potential clients who are interested in your goods or services. With a few simple clicks, the Odoo platform makes it possible to develop extremely professional sales quotes [11].

To illustrate visually, our group has created the sales quotation forms for the clients of the Central online sale store displayed in figure 29 by utilizing the sales module. The quotation order report included all the necessary details, such as the customer's name, delivery address, order number, salesperson, unit pricing, unit of measure, quantity, taxes, untaxed amount, subtotal, payment methods, and listings of the purchase order with their descriptions. Then lastly, we can decide whether to export the content as a PDF or an XLS file document.

Delivery Slip



CENTRAL Online

Vendor Address:

MAC
989 Rama I Rd, Khwaeng Pathum
Wan, Khet Pathum Wan
Bangkok 10330
Thailand
☎ +66 2 460 7100
WH/IN/00004

Warehouse Address:

CENTRAL
1027 Phloen Chit Rd, Lumpini, Pathum Wan
Bangkok 10330
Thailand
☎ 1425

Order:

P00003

Shipping Date:

11/17/2022 10:20:28

PRODUCT	ORDERED	DELIVERED
Lightful C + Coral Grass Tinted Primer Spf45/Pa++++ 30 mL	5.00 Units	5.00 Units
Powder Kiss Lipstick Powder Kiss Lipstick 3 g	8.00 Units	8.00 Units
MACStack Mascara MACStack Mascara 12 mL Black	10.00 Units	10.00 Units
Powder Blush Melba Powder Blush Melba 6 g.	12.00 Units	12.00 Units
Powder Kiss Liquid Lipcolor Powder Kiss Liquid Lipcolor 5 mL/.17Floz	7.00 Units	7.00 Units
M.A.C Art Library: Flame-Boyant M.A.C Art Library: Flame-Boyant 17.2 g	10.00 Units	10.00 Units
Foundation Pump	20.00 Units	20.00 Units
Brush With Fate Brush Essentials Kit	9.00 Units	9.00 Units



PRODUCT	ORDERED	DELIVERED
Eye Love Surprises Eye Shadow Palette X6 Eye Love Surprises Eye Shadow Palette X6 Best-Sellers 8.4 g./ .29 z	10.00 Units	10.00 Units
Prisma Defiance Eyeshadow Prisma Defiance Eyeshadow 1.5 g./ .05Oz	7.00 Units	7.00 Units
Studio Fix Fluid SPF15 Foundation	5.00 Units	5.00 Units
Fix Magic Radiance	16.00 Units	16.00 Units
Extra Dimension Skinfinish Extra Dimension Skinfinish 10 g./ .35Oz Wrapped In Gold	5.00 Units	5.00 Units

Figure 30: Central Online Delivery Slip

Delivery Slip

A delivery slip, or delivery confirmation slip, is used when it is important to obtain the signature of the recipient as proof that the goods were received in good order and to confirm any conditions that may relate to the receipt of the goods. [13]

Although goods are sometimes given to a seller "on consignment," delivery confirmation slips are also employed in these circumstances. In other words, scenarios where the product's publisher or manufacturer gives the seller units of the product at no initial cost. On behalf of the producer, the seller will make an effort to market the products. In these situations, no money exchanges hands until a later time when the seller pays the producer for any items that are sold out of the consignment inventory. [13]

Delivery confirmation slips are crucial for the manufacturer or producer because they serve as the only documentation of the specific products and quantities given to the seller. [13]

In the example, we create a delivery slip using the Inventory module. The slip, as shown in the above picture, contains useful information that is very important to the manufacturer or producer in order to acknowledge the essential delivery detail such as vendor and warehouse address, order number, shipping date, and list of products that must be delivered as well as the number of the ordered product and the amount of the products that have already been delivered.

Picking Operation



CENTRAL Online



Warehouse Address:

CENTRAL
1027 Phloen Chit Rd, Lumpini, Pathum Wan
Bangkok 10330
Thailand
☎ 1425

Vendor Address:

MAC
989 Rama I Rd, Khwaeng Pathum Wan, Khet
Pathum Wan
Bangkok 10330
Thailand
☎ +66 2 460 7100

WH/IN/00004

Order:

P00003

Status:

Done

Scheduled Date:

11/17/2022 09:50:35

PRODUCT	QUANTITY
Lightful C + Coral Grass Tinted Primer Spf45/Pa++++ 30 mL	5.00
Powder Kiss Lipstick	8.00
MACStack Mascara	10.00
Powder Blush Melba	12.00
Powder Kiss Liquid Lipcolor	7.00
M.A.C Art Library: Flame-Boyant	10.00
Foundation Pump	20.00
Brush With Fate Brush Essentials Kit	9.00
Eye Love Surprises Eye Shadow Palette X6	10.00
Prisma Defiance Eyeshadow	7.00
Studio Fix Fluid SPF15 Foundation	5.00

contact@central.co.th

CENTRAL Online

1



CENTRAL Online

PRODUCT	QUANTITY
Fix Magic Radiance	16.00
Extra Dimension Skinfinish	5.00

Figure 31: Central Online Picking Operation

Picking Operation

Warehouse picking is the process of selecting individual items from a fulfillment facility to fill customer orders. It is a necessary part of order fulfillment and is regarded as one of the most costly and labor-intensive activities for warehouses. [14]

It's crucial to choose the right order warehouse order picking system because it can improve order accuracy, picking operations efficiency, and customer satisfaction. The advantages of a warehouse order picking system are as follows. [15]

1. Reduces warehouse costs

Due to its labor-intensive nature, warehouse picking can be costly, especially in larger facilities. Customer orders are tracked by warehouse management systems, which also produce automated picking lists that direct your pickers.

2. Improves customer satisfaction

Customer satisfaction can be directly impacted by warehouse picking because it can mean the difference between a shipment arriving as expected or one that has missing or incorrect items.

3. Makes picker's jobs easier

With the right warehouse picking system, your warehouse staff can perform their duties more accurately and with fewer chances for human error. Pickers can increase accuracy while taking less time with each pick by automatically assigning them optimized routes with validations and photos to make sure they are picking the right items from the order.

The picking receipt shown above is a demonstration of how Odoo handled the process of the picking item to fulfill the customer's order. As you can see, the receipt has essential details of the particular picking order : warehouse and vendor address, order number, picking status, scheduled date, list of the picked product, and the amount of it.

DISCUSSION AND CONCLUSION

Discussion

Odoo offers over 35 modules that can be customized to meet the needs of the user. As a result, users can combine critical business components such as accounting, inventory, and CRM. Integrating multiple modules into your facilities to help your business grow. This is a list of Odoo benefits revealed by the researchers in this project.

1. Multiple Modules Integration

Odoo is made up of over 35 modules that are essential components of any business. The list of Odoo modules that help the company in various ways is provided below. Accounting, Human Resources, Inventory, Manufacturing, and Logistics are all integrated into Odoo ERP so that users can easily track products from manufacturing to delivery.

2. Customer Support

The only distinction between good and bad customer service is approachability. Odoo provides customer service through a variety of channels that are simple and approachable. Typically, software resources are limited, but when it comes to Odoo, there are numerous resources available online, as well as discussion threads, which is a good starting point for any beginner.

3. Customizable Architecture

Odoo allows end-to-end user customization without requiring major code rewrites or changes to its basic structure. In other ERPs, there is very little room for user customization. Users, on the other hand, can easily make changes in its architecture with the help of Odoo's advanced Apps and Themes.

Choosing the right ERP at the right time could make it possible for many businesses to have a prosperous future. It automates and integrates the back-end processes of many business functions, including sales, manufacturing, accounting, human resources, and customer service. Plan and organize the company's resources, which include not only its products but also its customers and employees, in an active manner.

Conclusion

Let us go through the business research of our chosen company, Central Group Corporation. Central Group is one of the biggest private business enterprises in Thailand, which offers both online and offline services. As a result of the new "one-stop shopping" strategy, which was implemented in 1973, consumers could now visit Central and purchase all of their needs there.

Due to the advancement of technology and the large volume of orders coming from online retailers, the online retail shop of Central Group will be the principal area of attention in this study. Understanding retail workflows are essential for Central Retail in order to plan the operation of modern organizations. The typical retail workflows include stock levels, inventory losses, repeat customer purchasing patterns, automated reminders to staff members who haven't turned in their timesheets on time, alerts for products with a short shelf life that is about to expire, and alerts for stock levels. Central Group employs MIS and IT to reduce operational costs, research consumer behavior, and enhance the customer experience with the use of an ERP system and IT solutions. As a consequence, the Central group can alter the business process to quickly respond to unanticipated circumstances.

The BPMN diagram that appears enables us to visualize the process. For instance, we developed the BPMN diagram for the Central department's purchase and selling process, which illustrates the customer's steps while using the physical retailer store service. Additionally, a newly updated version of BPMN is used to study the customer's unforeseen needs, which is referred to as the Sales Analysis. This analysis uses the receipt to assess sales success and prediction. As a result, the company may use that data to estimate which items should be manufactured and when which might decrease client wait times while increasing customer satisfaction.

The world's simplest all-in-one management software solution, Odoo, is implemented to serve a variety of businesses with CRM, e-commerce, billing, accounting, manufacturing, warehousing, project management, and inventory management [12]. In this document, we utilized Odoo to produce the redesign BPMN process by employing other modules. For instance, the Central Online store's e-commerce website might be readily created in the website module together with the sales, inventory, and buy modules, which would finish the process. Various kinds of reports will automatically be created for each module. For instance, ten distinct reports regarding the company's financial statements from the accounting module will be produced as PDF or XLS files.

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APPENDIX

This appendix consisted of demonstration VIDEO clip on how to use BPMN modeling tools to create the redesigned business process. The link to the video clip is https://drive.google.com/file/d/17XlheR9i0yFjB8N459_iL7Y8z_SL7Wt4/view?usp=sharing