

P3 - 360° Company Dashboard

Project Specification

Integrated Master in Informatics and Computer Engineering

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1. Project Overview

The theme of this project is 360° Company Dashboard. The project's objective is to develop a web app which provides information about the company status. The project will take a SAF-T file as input and show information about sales and the company's financial situation. It'll also have information about the company's purchases, which will be accessed through Jasmin's API. There will also be shown information relative to each product, so that the user can analyse how it has been doing in terms of sales, and to each supplier.

1.1. Functional Architecture

We decided to divide the information between the following sections:

- **Finances:** To allow the user to evaluate the company's financial position, by checking the balance sheet and other variables related to the income statement.
- **Sales:** To allow the user to check how the sales are doing, by seeing the top sold products and top consumers.
- **Purchases:** To allow the user to check on its most purchased products and top suppliers.
- **Product:** To allow the user to check a product's information.
- **Supplier:** To allow the user to check a supplier's information.

The following **sitemap** specifies how these pages interact with each other:

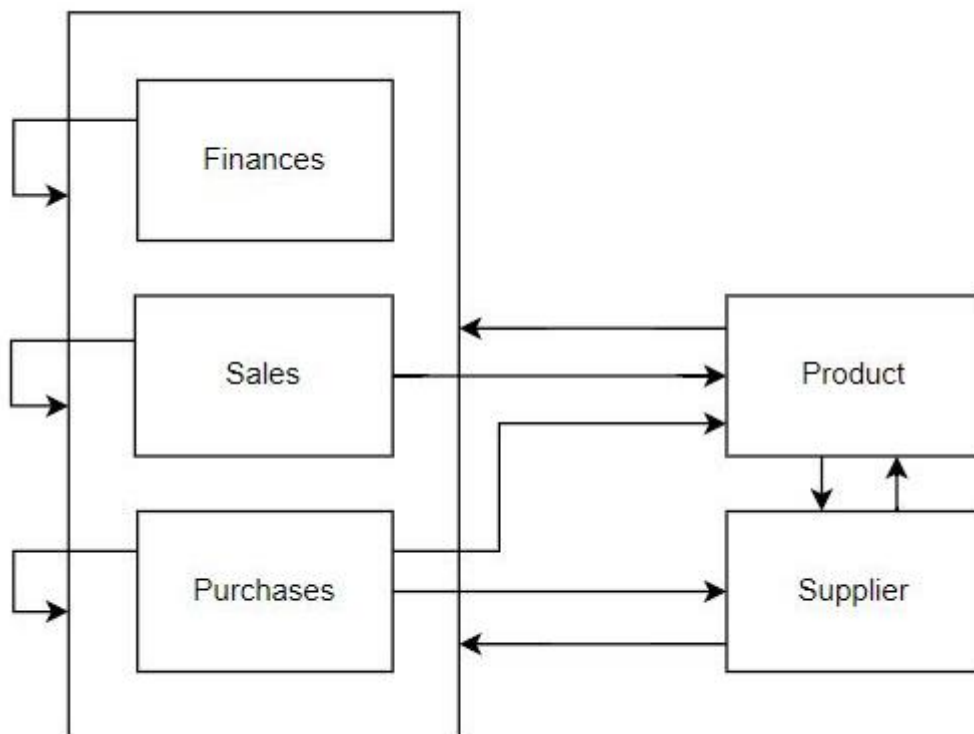


Figure 1: Sitemap of the project.

2. Functionalities

2.1. Finances

2.1.1. Functionalities

- **Balance Sheet:** is a financial statement that reports a company's assets, liabilities and shareholders' equity at a specific point in time and provides a basis for computing rates of return and evaluating its capital structure.
- **Sales:** refers to the earnings that the company got simply by selling products.
- **Cost of Goods Sold (COGS):** refers to the direct costs of producing the goods sold by a company. This amount includes the cost of the materials and labour directly used to create the good. It excludes indirect expenses, such as distribution costs and sales force costs.
- **Gross Profit:** is the gross margin of profit, calculated by subtracting the cost of goods sold from the sales.
- **EBITDA:** Earnings Before Interest, Taxes, Depreciation and Amortization.
- **EBIT:** Earnings Before Interest and Taxes.
- **Net income:** income that the company earned after subtracting all the expenses and costs, related to taxes and many other variables, from the gross profit.

2.2. Sales

2.2.1. Functionalities

- **List of top products:** a list of top products with a description, number of units sold, price per unit and total earnings with that product.
- **List of top consumers:** a list of top consumers with their name, the most bought product and the total spent.
- **Sales.**
- **Cost of Goods Sold (COGS).**
- **Gross Profit.**
- **Accounts receivable:** refers to the money in credit that the company still has to receive from its customers.

2.3. Purchases

2.3.1. Functionalities

- **List of top purchases:** a list of top purchases with a name, number of units sold, price per unit and total earnings with that product.
- **List of top suppliers:** a list of top suppliers with their name, the most bought product and the total spent.
- **Total spent.**
- **Accounts payable:** refers to the money in credit that the company has to pay to its suppliers.

2.4. Product

2.4.1. Functionalities

- **Name and ID.**
- **Product's description.**
- **Product's supplier.**
- **Quantity sold.**
- **Quantity in stock.**
- **Graph of sales of the product over the year.**

2.5. Supplier

2.5.1. Functionalities

- **Name and ID.**
- **Address.**
- **Contacts** (email and phone number).
- **List of products supplied:** a list of products supplied with a id, name, number of units bought and price per unit.
- **Total units bought.**
- **Total spent.**

3. Information Architecture

3.1. Core_Financial_Area

User and Business Goals

- View to be used as a financial management tool.
- View in detail the company's financial status.

Inward Paths/Trigger Words

- Navbar navigation
- Sign-in/ Sign out

Financial area

Sales

Purchases

Profit / Loss

+ Sales	50.000\$
- Cost of good sold	30.000\$
Gross Profit	20.000\$

+ Gross profit	20.000\$
- Expenses	3.000\$
EBITDA	17.000\$

+ EBITDA	17.000\$
- Depreciation	2.000\$
- Amortization	3.000\$
EBIT	12.000\$

+ EBIT	12.000\$
- Interest	2.000\$
- Taxes	4.000\$
Net income	6.000\$

Balance Sheet

Assets

11 Caixa	13.000\$
12 Depósitos à ordem	25.000\$
21 Clientes	10.000\$

Total assets 48.000\$

Liabilities

63 Gastos com o pessoal	2.000\$
22 Fornecedores	15.000\$

Total liabilities 17.000\$

Equity

31.000\$

Outwards Paths/ to action

- Provide the user a financial view of the company's current state.
- See **Sales** and **Purchases** pages.

Core elements

- P_01(Profit/Loss panel) contains **KPI_01**, **KPI_02**, **KPI_03** and **KPI_04**
- **KPI_01**(KPI) - Gross Profit **KPI_02** – EBITDA **KPI_03** - EBIT **KPI_04** - Net Income
- P_02(Balance sheet) contains **KPI_05**, **KPI_06**, **KPI_07**
- **KPI_05**(KPI) - Assets **KPI_06**(KPI) - Liabilities **KPI_07**(KPI) - Equity

3.2. Core_Sales

User and Business Goals

- View to be used as a sales management tool.
- View in detail the company's sales status.


Inward Paths/Trigger Words

- Navbar navigation
- Sign-in/ Sign out
- Products name

Financial area

Sales

Purchases



+ Sales

50.000\$

- Cost of good sold

30.000\$

Gross Profit

20.000\$

Accounts receivable

17.000\$

Top Products

Top	Product	Units sold	Price per unit	Total earned
1	Lenços de Papel folha dupla	120.000	3\$	360.000\$
2	Lenços de Papel menta	80.000	4\$	320.000\$
3	Lenços de Papel ultra suave	70.000	3\$	210.000\$

Top Consumers

Top	Consumer	Most bought product	Total spent
1	SONAE	Lenços folha simples	500.000\$
2	Lidle	Lenços folha dupla	300.000\$
3	Pingo Doce	Lenços ultra suave	250.000\$

Outwards Paths/ to action

- Provide the user with detailed data of the company's sales state.
- Drill down to know more about each **Product**.
- See **Financial area** and **Purchases** pages.

Core elements

- **KPI_11**(KPI) - Gross Profit **KPI_12** – Accounts
- **T_11**(table) – Top Products
- **T_12**(table) – Top Consumers

3.3. Core_Purchases

User and Business Goals

- View to be used as a purchase's management tool.
- View in detail the company's purchases status.


Inward Paths/Trigger Words

- Navbar navigation
- Sign-in/ Sign out
- Product's name
- Supplier's name

Financial area

Sales

Purchases



SNIF

Total spent

20.000\$

Accounts payable

7.000\$

Top Purchases

Top	Product	Units sold	Price per unit	Total earned
1	Lenços de Papel folha dupla	120.000	3\$	360.000\$
2	Lenços de Papel menta	80.000	4\$	320.000\$
3	Lenços de Papel ultra suave	70.000	3\$	210.000\$

Top Suppliers

Top	Supplier	Most bought product	Total spent
1	Renova	Lenços folha simples	500.000\$
2	kleenex	Lenços folha dupla	300.000\$
3	Softy's	Lenços ultra suave	250.000\$

Outwards Paths/ to action

- Provide the user with detailed data of the company's purchases state.
- Drill down to know more about each **Product** and **Supplier**.
- See **Sales** and **Financial area** pages.

Core elements

- **KPI_21**(KPI) - Total spent **KPI_22** – Accounts payable
- **T_21**(table) – Top Purchases
- **T_22**(table) – Top Suppliers

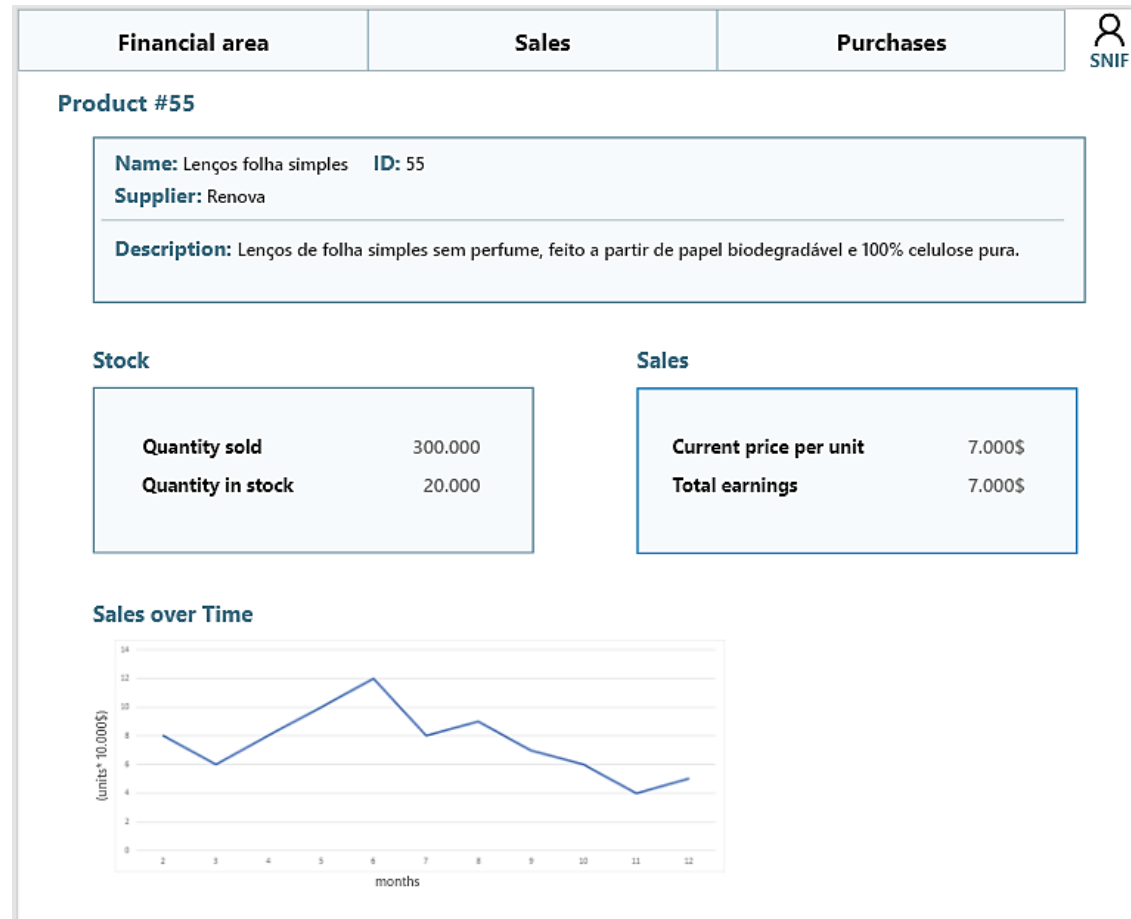
3.4. Core_Product

User and Business Goals

- View to be used as a product management tool.
- View in detail a product's information.

Inward Paths/Trigger Words

- Navbar navigation
- Sign-in/ Sign out
- Supplier's name



Outwards Paths/ to action

- Provide the user with detailed data of a specific product.
- Drill down to know more about the **Supplier**.
- See **Financial area**, **Sales** and **Purchases** pages.

Core elements

- **T_31**(table) – Product details
- **P_31**(panel) – Stock contains **KPI_31**(KPI) – Quantity sold **KPI_32** – Quantity in stock
- **P_32**(panel) – Sales **KPI_33**(KPI) – Current price per unit **KPI_34** –Total earnings
- **LINE_31**(Line chart) – Sales over Time

3.5. Core_Supplier

User and Business Goals

- View to be used as a supplier management tool.
- View in detail a supplier's information.

Inward Paths/Trigger Words

- Navbar navigation
- Sign-in/ Sign out
- Product's name

Financial areaSalesPurchases

SNIF

Supplier #3

Name: KleenexID: 3Phone: 0800 626008

Email: kleenex1uk@gmail.com

Address: Kimberly-Clark Ltd Tower View,
West Malling Kent, ME19 4HA

Product supplied

ID	Product	Units bought	Price per unit
12	Lenços de Papel folha dupla	120.000	3\$
13	Lenços de Papel pocket size	80.000	4\$
14	Lenços de Papel ultra suave	70.000	3\$
14	Lenços de Papel ultra suave extraLarge	90.000	2\$

Total units bought360.000

Total spent1.070.000\$

Outwards Paths/ to action

- Provide the user with detailed data of a specific supplier.
- Drill down to know more about each **Product**.
- See **Financial area**, **Sales** and **Purchases** page.

Core elements

- T_41(table) – Supplier details
- T_42(table) – Product supplied
- KPI_41(KPI) – Total units bought KPI_42(KPI) – Total spent

4. BPMN Flow

4.1. Process of selling a product

We decided to build our BPMN diagram based on how the company's sales process generally works, which is not directly applied to our project, since our theme involves only showing information and that is not exactly a business process. As a result, the following BPMN describes the process of a client ordering a product to our company, through a hypothetical website that would work as an online shop.

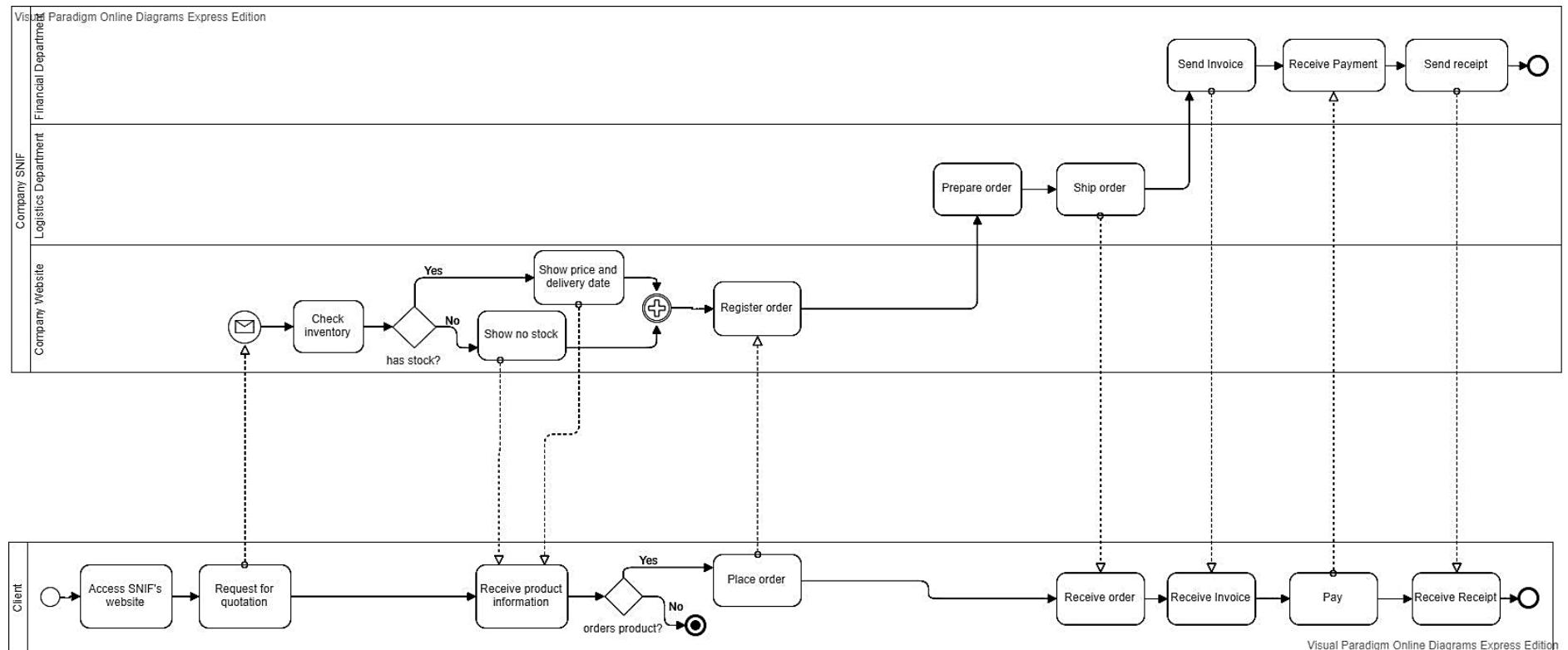


Figure 2: BPMN flow for the process of selling a product.

4.2. Process of purchasing a product

We also developed a BPMN diagram to describe the company's purchases process, which is also not directly applied to our project, like it was explained above. The following BPMN describes the process of the purchases department ordering a product to a supplier, which also uses the website to check a product's stock.

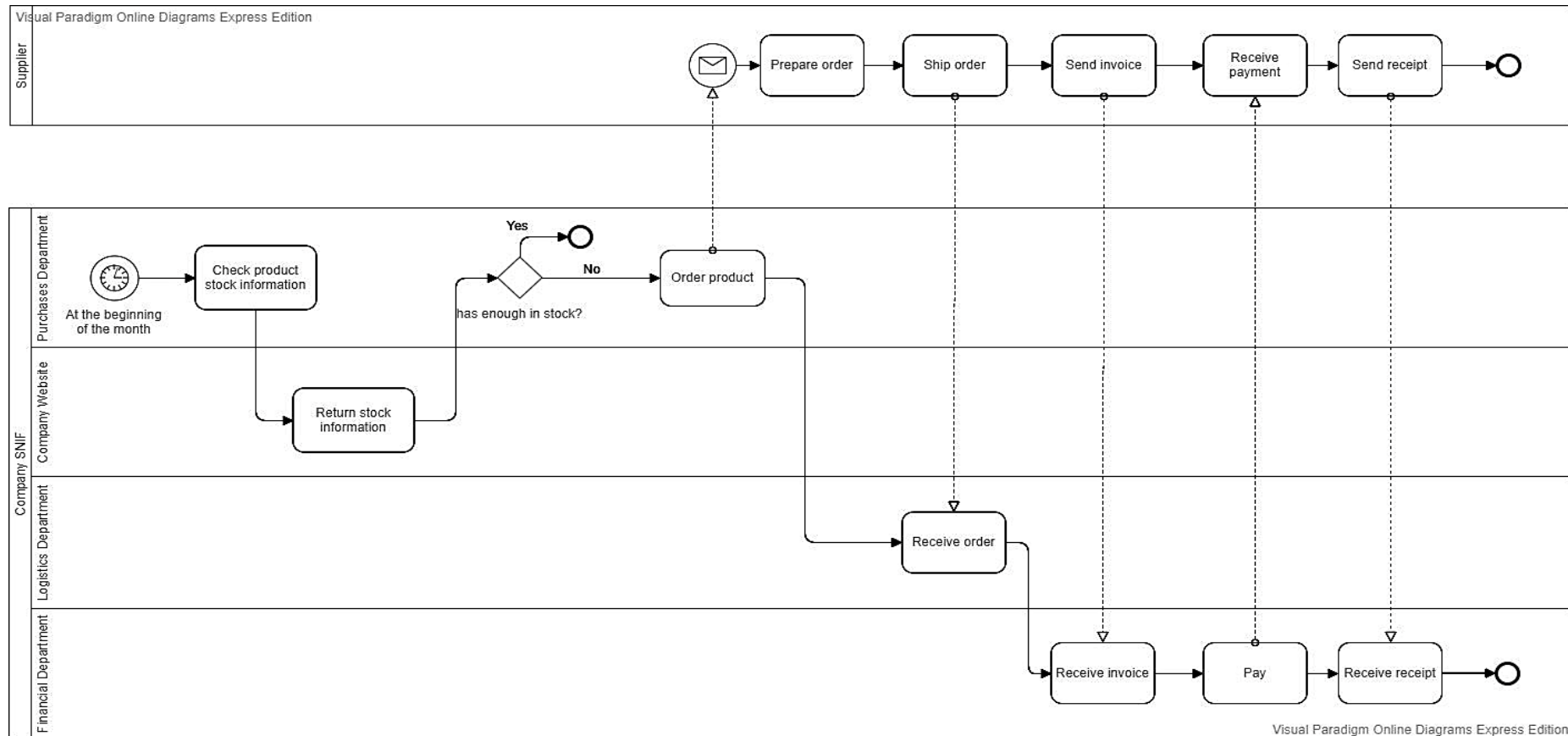


Figure 3: BPMN flow for the process of purchasing a product.

5. Planning

5.1. Gantt Chart

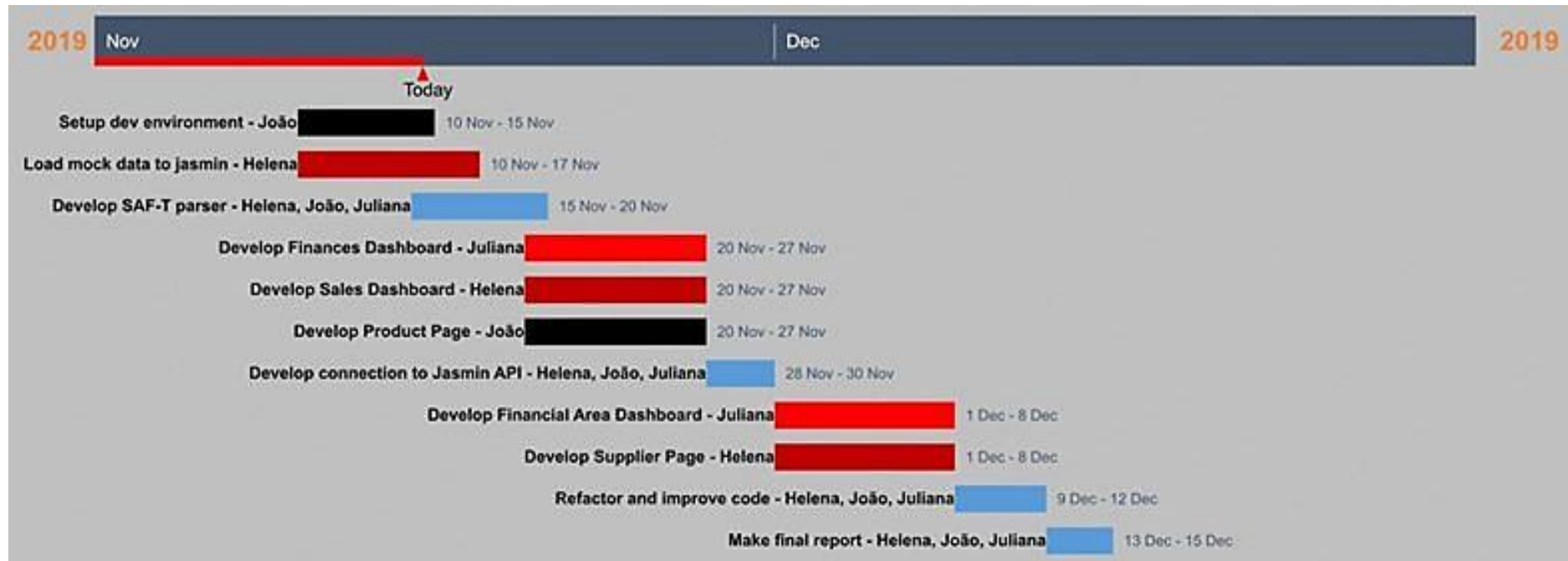


Figure 4: Gantt chart of the project development