



**SINF**

**FEUP-MIEIC**

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## **Project Specification - Intercompany Application**

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**Project ID: P1**

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# 1 Project Overview

This project consists in the development of a simple web platform, **tech sinf**, which can be used by companies in a direct chain of supply. The platform's primary goal is to help companies keep track of and stay updated on the progress of purchase orders, and it does so by serving as a **link** between a supplier's private ERP and its customer's private ERP. As an extension, it also keeps the product catalogs of companies in sync with which other, making it easy to add new product lines.

The platform's ERP functionality is limited – it is assumed that some financial operations, like the creation of purchase orders, sales invoices and new product lines happen in each company's private ERP. The platform provides the automated service of keeping all these private ERPs synchronized without breaking the obvious confidentiality barriers.

The platform will only support *Primavera* as the private ERP. Support for other ERPs could be added on a case by case basis.

## 1.1 Usage

There are two types of accounts: **supplier** accounts and **customer** accounts.<sup>1</sup>

A **supplier company**<sup>2</sup> starts by creating an account on the platform and establishing a connection between their private ERP and the platform's central server. Once that is done, it can create (on the platform) a product catalog from a subset of all products registered in its ERP, and then distribute a generated access key to every interested customer company (through some other channel).

A **customer company** starts out the same way, but instead of creating a product catalog, it *subscribes* to supplier companies using their generated access keys.

The platform is meant exclusively for internal use within a company – and not in inter-company meetings, for example.

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<sup>1</sup>This distinction is a project simplification. Supporting a common type of account (with both functionalities/roles) would be perfectly reasonable.

<sup>2</sup>Company which seeks to use the platform as the means of receiving purchase orders from other companies.

## 2 Functionalities/Features

### 2.1 For Supplier companies

| Feature                                 | Description   | Core Views           |
|---|---|----------------------|
| List Customer Purchase Orders           | View a dynamic list of all customer purchase orders and their respective data, possibly filtered and/or sorted by current progress, order date, due date, items and/or price.       | CORE ORDER_LIST      |
| Accept Purchase Orders                  | Accept a pending purchase order submitted by the customer, automatically generating a Sales Order in the supplier's private ERP.  | CORE ORDER_LIST      |
| Reject Purchase Orders                  | Reject a pending purchase order submitted by the customer, possibly with a reason.  | CORE ORDER_LIST      |
| Create new Product Catalog              | Create a new product (sub)catalog from a subset of its full catalog (according to the listing in their private ERP).  | CORE PRODUCT CATALOG |
| Update Product Catalogs                 | Add or retire items from an existing product catalog. <sup>3</sup>  | CORE PRODUCT CATALOG |
| Retire Product Catalogs                 | Discontinue a catalog and all its associated private ERP links.   | CORE PRODUCT CATALOG |
| Manage Access Keys for Product Catalogs | Create and delete access keys that provide companies access to their product catalogs.  | CORE PRODUCT CATALOG |
| Last Visit Progress                     | View the number of new purchase orders and other news since the last visit. The orders may be filtered to match this criteria.  | CORE ORDER_LIST      |
| Configure ERP connection                | Manage the connection to the company's private ERP, e.g. set the ERP's required API access key.   | CORE MASTER_DATA     |
| Synchronize private ERP                 | Manually request a synchronization between the platform's server and the company's ERP. This includes at least pulling in new sales invoices and updating the full product catalog. | —                    |

## 2.2 For Customer companies

| Feature                            | Description   | Views               |
|------------------------------------|---|---------------------|
| List Purchase Orders               | View a dynamic list of all purchase orders made and their respective data, possibly filtered and/or sorted by current progress, order date, due date, items and/or price. | CORE<br>ORDER_LIST  |
| Generate Purchase Invoices         | Upon request, automatically generate the purchase invoice in the customer's private ERP for a completed sale from the supplier.   | CORE_<br>ORDER_LIST |
| Subscribe to a new Product Catalog | Using an access key provided from a supplier, subscribe to a product catalog and automatically create a <i>link</i> between the two companies' ERPs.                      | CORE<br>MASTER_DATA |
| Unsubscribe from a Product Catalog | Discontinue the subscription to a supplier's product catalog and the link between their ERPs.   | CORE<br>MASTER_DATA |
| Last Visit Progress                | View the number of concluded orders and other news since the last visit. The orders may be filtered to match this criteria.   | CORE<br>ORDER_LIST  |
| Configure ERP connection           | Manage the connection to the company's private ERP, e.g. set the ERP's required API access key.   | CORE<br>MASTER_DATA |
| Synchronize private ERP            | Manually request a synchronization between the platform's server and the company's ERP. This may includes pulling in new purchase orders.                                 | —                   |

### 3 Information Architecture

#### 3.1 CORE\_ORDER\_LIST

##### Business Goals

Provide progress tracking of all purchase orders currently in progress.

##### Inward Paths

- Navigation Menu
- Login

| Order     | Created     | Status  | Supplier           | Due         | Product            | Total   | Pin |
|-----------|-------------|---------|--------------------|-------------|--------------------|---------|-----|
| ORD-024   | 20 Nov 2019 | Draft   | Gunther Beard      | 21 Nov 2019 | Lorem Ipsum        | 142€    | ✓   |
| ORD-025   | 28 Nov 2019 | Paid    | Lingull            | 28 Nov 2019 | Doe Card           | 1 999€  | □   |
| ORD-026   | 10 Dez 2019 | Paid    | Pelican Steve      | 16 Dez 2019 | Product X          | 18 000€ | □   |
| ORD-028   | 17 Dez 2019 | Pending | Inverness McKenzie | 02 Jan 2020 | Web Ipsum          | 2 000€  | □   |
| ORD-033   | 18 Dez 2019 | Draft   | Gustav Purpleson   | 19 Dez 2019 | Server 9000        | 18 000€ | □   |
| ORD-035   | 26 Dez 2019 | Paid    | Eleanor Fant       | 07 Jan 2020 | Lego Pc Case       | 2 000€  | □   |
| ORD-039   | 01 Jan 2020 | Draft   | Fleece Marigold    | 03 Jan 2020 | Product Y          | 8 000€  | □   |
| ORD-042   | 13 Jan 2020 | Paid    | Lance Bogrol       | 21 Jan 2020 | Product Designer   | 12 000€ | □   |
| ORD-044   | 06 Jan 2020 | Draft   | Alan Fresno        | 16 Mar 2020 | Red Friday Package | 48 000€ | □   |
| ORD-046   | 02 Feb 2020 | Paid    | Spruce Springclean | 17 Apr 2020 | Best Product       | 2 000€  | □   |
| Invoice # | Created     | Status  | Customer           | Due         | Service            | Total   |     |

##### Outward Paths

- View purchase order states.
- Supplier: Accept and reject purchase orders.
- Customer: Generate invoice.
- Search, filter and order these purchase orders.

## 3.2 CORE\_MASTER\_DATA (CUSTOMERS)

### Business Goals

Manage list of product catalogs subscriptions.  
Manage Primavera API connection settings.

### Inward Paths

- Navigation Menu

The screenshot shows a web application interface for 'techsinf'. On the left is a dark navigation menu with links: Home, Order List, and Product List. The main content area is titled 'Jasmin Settings' and includes a 'Refresh' button. Below this are input fields for 'Username', 'Password', and 'Jasmin API Key', followed by a 'Submit' button. Under the 'Subscriptions' section, there is a table with columns: Supplier, #Pending Purchase Orders, Date, and Unsubscribe. The table lists five suppliers (S1 to S5) with their respective pending orders and dates. Each row has an 'Unsubscribe' button. At the bottom, there is a text prompt 'Insert Jasmin API Key to subscribe' followed by a large input field and a 'Subscribe' button.

| Supplier | #Pending Purchase Orders | Date        | Unsubscribe |
|----------|--------------------------|-------------|-------------|
| S1       | 0                        | 12 Mar 2019 | Unsubscribe |
| S2       | 3                        | 28 Mar 2019 | Unsubscribe |
| S3       | 1                        | 20 Apr 2019 | Unsubscribe |
| S4       | 0                        | 02 May 2019 | Unsubscribe |
| S5       | 0                        | 21 May 2019 | Unsubscribe |

### Outward Paths

- Subscribe to a new supplier's product catalog using an access key.
- Unsubscribe/Discontinue a product catalog connection.
- Change Primavera API connection settings.



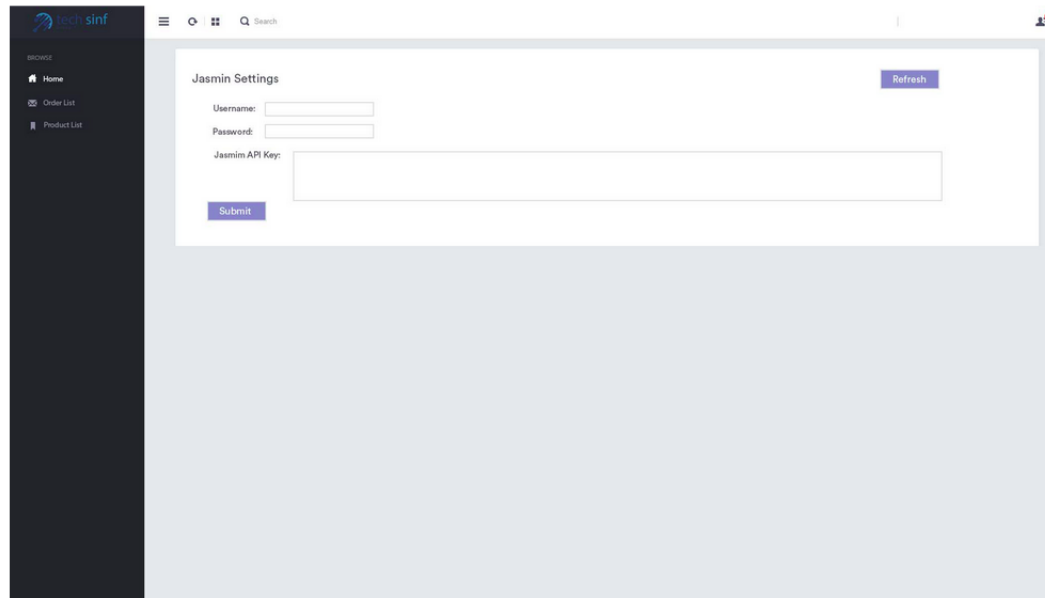
### 3.3 CORE\_MASTER\_DATA (SUPPLIERS)

#### Business Goals

Manage Primavera API connection settings.

#### Inward Paths

- Navigation Menu



The screenshot shows a web application interface for managing Primavera API connection settings. On the left is a dark navigation menu with the 'econ.sinf' logo and links for 'Home', 'Order List', and 'Product List'. The main content area is titled 'Jasmin Settings' and contains three input fields: 'Username', 'Password', and 'Jasmin API Key'. There are 'Submit' and 'Refresh' buttons. The top of the page has a search bar and a user profile icon.

#### Outward Paths

- Change Primavera API connection settings.

### 3.4 CORE\_PRODUCT\_CATALOG

#### Business Goals

Manage list of product catalogs.

#### Inward Paths

- Navigation Menu
- Master Data page

The screenshot shows a web application interface for 'tech sinf'. On the left is a dark navigation menu with links for 'Home', 'Order List', and 'Product List'. The main content area is titled 'Create Catalog' and features a table with the following data:

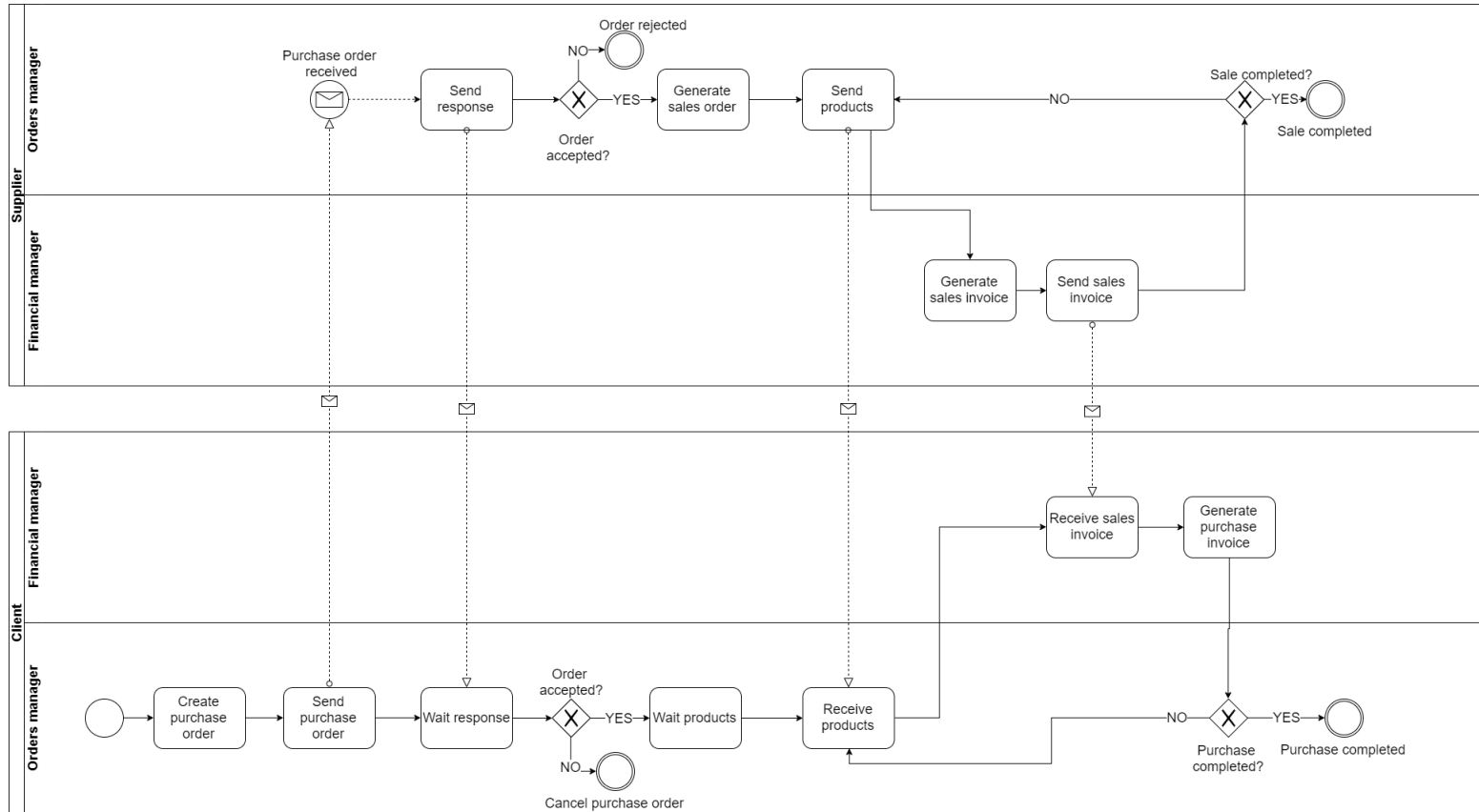
| Product ID | Name     | Date        | Add to Catalog           |
|------------|----------|-------------|--------------------------|
| ID-001     | Product1 | 12 Mar 2019 | <input type="checkbox"/> |
| ID-002     | Product2 | 28 Mar 2019 | <input type="checkbox"/> |
| ID-003     | Product3 | 20 Apr 2019 | <input type="checkbox"/> |
| ID-004     | Product4 | 02 May 2019 | <input type="checkbox"/> |
| ID-005     | Product5 | 21 May 2019 | <input type="checkbox"/> |

A purple 'Submit' button is located at the bottom right of the table.

#### Outward Paths

- Create product catalogs.
- Discontinue product catalogs and all associated subscriptions.

## 4 BPMN Flow



## 5 Planning (Gantt Project)

