CVDex

Prefactura_Swimlane

Finanzas SD – Architecture, Flows & SOPs

Arquitectura, Flujos y Procedimientos

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1 Pre-factura Swimlane / Diagrama de Carriles de Pre-factura

1.1 EN: Pre-factura Process Swimlane

1.1.1 Overview

This document illustrates the end-to-end process flow for pre-factura (preliminary invoice) submission, approval, and document generation across all actors in the system.

1.1.2 Actors and Responsibilities

Project Manager (PM)

- Creates and submits pre-facturas
- Provides supporting documentation
- Receives approval/rejection notifications
- Downloads final PDF documents

System

- Validates input data
- Enforces business rules
- Routes approval requests
- Generates documents
- Sends notifications
- Maintains audit trail

Finance Team (FIN)

- Reviews pre-factura details
- Verifies budget availability
- Approves or rejects requests
- Provides feedback/comments

SharePoint

- Stores final documents
- Provides external access
- Maintains version history

1.1.3 Process Flow

Phase 1: Submission

1. **PM**: Navigates to "Create Pre-factura" form

2. **PM**: Enters details:

- Project selection
- Amount ($)
- Description
- Category (Travel, Materials, Services, etc.)
- Upload attachments (optional)

3. **System**: Validates required fields
4. **System**: Checks project budget availability
5. **System**: Creates pre-factura record (status: "draft")
6. **PM**: Reviews and confirms submission
7. **System**: Updates status to "pending"
8. **System**: Creates approval task
9. **System**: Sends notification to assigned FIN approver

Phase 2: Review and Approval

10. **FIN**: Receives notification
11. **FIN**: Opens pre-factura details
12. **FIN**: Reviews:

- Project context
- Budget impact
- Supporting documents
- Historical patterns

13. **System**: Displays budget utilization metrics
14. **FIN**: Makes decision:

- **If Approved**:
    - FIN clicks "Approve"
    - FIN adds approval comments (optional)
    - System updates status to "approved"
- **If Rejected**:
    - FIN clicks "Reject"
    - FIN provides rejection reason (required)
    - System updates status to "rejected"

15. **System**: Records decision in audit log
16. **System**: Updates budget utilization if approved

Phase 3: Document Generation

17. **System**: Triggers PDF generation Lambda
18. **System**: Compiles data:

- Pre-factura details
- Approval information
- Project context
- Budget impact
- Timestamp and approval chain

19. **System**: Generates branded PDF document
20. **System**: Uploads PDF to S3 bucket
21. **System**: Stores S3 URL in document metadata

Phase 4: SharePoint Integration

22. **System**: Checks SharePoint configuration
23. **System**: Authenticates to SharePoint
24. **System**: Uploads PDF to designated library
25. **System**: Creates folder structure if needed
26. **System**: Sets permissions
27. **System**: Stores SharePoint URL in metadata

Phase 5: Notification

28. **System**: Generates notification for PM
29. **System**: Sends email notification (if configured)
30. **PM**: Receives notification
31. **PM**: Logs into portal
32. **PM**: Views updated pre-factura status
33. **PM**: Downloads PDF from S3 or SharePoint

Phase 6: Audit and Reporting

34. **System**: Records all actions in audit log:

- Submission timestamp
- Approval timestamp
- Document generation timestamp
- SharePoint upload timestamp
- User actions and IP addresses

35. **System**: Updates analytics dashboard
36. **System**: Includes in month-end reports

1.1.4 Timing Expectations

- **Submission to Pending**: < 5 seconds
- **Approval Decision**: Within 24-48 business hours
- **PDF Generation**: < 30 seconds
- **SharePoint Upload**: < 60 seconds
- **Total End-to-End**: 1-2 business days

1.1.5 Error Handling

- **Budget Insufficient**: System rejects submission with clear error message
- **PDF Generation Failure**: System retries 3 times, then alerts admin
- **SharePoint Upload Failure**: System stores locally and retries hourly
- **Notification Failure**: System logs error but completes process

1.1.6 Business Rules

1. Pre-factura amount must not exceed remaining project budget
2. All pre-facturas require approval before PDF generation
3. Only assigned approvers can approve/reject
4. Rejected pre-facturas can be edited and resubmitted
5. Approved pre-facturas cannot be edited
6. All actions are logged for audit compliance

1.2 ES: Diagrama de Carriles del Proceso de Pre-factura

1.2.1 Descripción General

Este documento ilustra el flujo de proceso de extremo a extremo para el envío, aprobación y generación de documentos de pre-factura (factura preliminar) en todos los actores del sistema.

1.2.2 Actores y Responsabilidades

[Traducción de la sección de actores y responsabilidades]

1.2.3 Flujo del Proceso

[Traducción de las 6 fases del proceso con sus respectivos pasos]

1.2.4 Expectativas de Tiempo

- **Envío a Pendiente**: < 5 segundos
- **Decisión de Aprobación**: Dentro de 24-48 horas hábiles
- **Generación de PDF**: < 30 segundos
- **Carga a SharePoint**: < 60 segundos
- **Total de Extremo a Extremo**: 1-2 días hábiles

Pre-factura Swimlane