Data Flows / Flujos de Datos

Finanzas SD – Architecture, Flows & SOPs

Arquitectura, Flujos y Procedimientos

November 11, 2025

1 Data Flows / Flujos de Datos

1.1 EN: System Data Flows

Actors: Project Manager (PM), System, Finance Team (FIN), SharePoint

Flow: 1. PM logs into Finanzas SD portal - Project selection - Amount - Description - Category - Attachments (optional) 4. System validates input data 6. System generates notification for Finance approver 8. FIN approves or rejects with comments 10. System generates PDF document 11. System uploads PDF to S3 12. System deposits PDF to SharePoint (if configured) 13. System notifies PM of decision 14. PM receives notification and can download PDF

Data Elements: - Input: Project ID, Amount, Description, Category, Attachments - Processing: Validation, Budget check, Approval workflow - Output: PDF document, S3 URL, SharePoint URL, Notifications

1.1.1 2. Budget Allocation Flow

Actors: San Diego Manager (SDM), Finance Team (FIN), System

Flow: 1. SDM or FIN creates budget allocation 2. System validates fiscal year and quarter 3. System checks for existing budget records 4. System calculates available funds 5. System creates budget record in DynamoDB 6. System triggers approval workflow (if required) 7. Approver reviews and approves budget 8. System activates budget for project 9. System notifies project team

Data Elements: - Input: Project ID, Fiscal Year, Quarter, Amount - Processing: Validation, Duplicate check, Approval - Output: Active budget record, Notifications

1.1.2 3. Report Generation Flow

Actors: Any authenticated user, System, S3, SharePoint

Flow: 1. User requests report (PDF or CSV) 2. System authenticates and authorizes user 3. System queries DynamoDB for data 4. System aggregates and formats data 5. System generates document (PDF or CSV) 6. System uploads document to S3 7. System creates document metadata record 8. System returns pre-signed S3 URL to user 9. User downloads document 10. Optional: System deposits to SharePoint

Data Elements: - Input: Report type, Date range, Filters - Processing: Data query, Aggregation, Formatting, Document generation - Output: PDF/CSV file, S3 URL, Document metadata

1.1.3 4. Payroll Processing Flow

Actors: Finance Team (FIN), HR System, System

Flow: 1. FIN initiates payroll processing 3. System calculates totals by project and category 4. System generates payroll summary report 5. System exports data to CSV format 6. FIN reviews and validates totals 7. FIN exports to HR/Payroll system 9. System generates audit log entries

Data Elements: - Processing: Aggregation, Calculations, CSV generation

1.1.4 5. Month-End Close Flow

Actors: Finance Team (FIN), San Diego Manager (SDM), System

Flow: 1. FIN initiates month-end close process 3. System calculates budget utilization per project 4. System generates month-end reports: - Budget vs Actual - Outstanding approvals - Variance analysis 5. System generates PDF reports 6. System uploads reports to S3 and SharePoint 7. System sends summary notifications to SDM 8. SDM reviews and signs off on reports 9. System archives month data 10. System unlocks system for next month

Data Elements: - Processing: Calculations, Report generation, Data archival - Output: Month-end reports (PDF), Variance analysis, Archived data

1.1.5 6. Audit Trail Lineage Flow

Actors: Auditor (AUD), System, CloudWatch

Flow: 1. AUD requests audit trail for specific entity or time period 2. System authenticates and authorizes AUD user 3. System queries audit_logs table in DynamoDB 4. System retrieves related CloudWatch logs 5. System aggregates all audit events 6. System formats audit trail report 7. System generates comprehensive audit PDF 8. AUD reviews audit trail 9. AUD can drill down into specific events 10. System tracks auditor's access in audit log

Data Elements: - Input: Entity ID or Date range, Entity type - Processing: Log aggregation, Event sequencing, Report formatting - Output: Audit trail PDF, Event sequence, Change history

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1.2 ES: Flujos de Datos del Sistema

Actores: Gerente de Proyecto (PM), Sistema, Equipo de Finanzas (FIN), SharePoint
Flujo:

1.2.1 2. Flujo de Asignación de Presupuesto

Actores: Gerente de San Diego (SDM), Equipo de Finanzas (FIN), Sistema
[Traducción del flujo de asignación de presupuesto]

Data Flow Diagram

Figure 1: Data Flow Diagram

1.2.2 3. Flujo de Generación de Informes

Actores: Cualquier usuario autenticado, Sistema, S3, SharePoint
  [Traducción del flujo de generación de informes]

1.2.3 4. Flujo de Procesamiento de Nómina

Actores: Equipo de Finanzas (FIN), Sistema de RR.HH., Sistema
  [Traducción del flujo de procesamiento de nómina]

1.2.4 5. Flujo de Cierre de Mes

Actores: Equipo de Finanzas (FIN), Gerente de San Diego (SDM), Sistema
  [Traducción del flujo de cierre de mes]

1.2.5 6. Flujo de Linaje de Registro de Auditoría

Actores: Auditor (AUD), Sistema, CloudWatch
  [Traducción del flujo de linaje de registro de auditoría]