Oracle Fusion Fixed Assets Technical Specification

Record to Report (R2R) Implementation

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1. Executive Summary

This technical specification document outlines the implementation requirements for Oracle Fusion Fixed Assets module as part of the Record to Report (R2R) business process. The solution will provide comprehensive asset lifecycle management capabilities including Construction-in-Progress (CIP) asset management, asset creation, adjustments, and integration with procurement and payables systems.

1.1 Document Purpose

This specification defines the technical requirements, system architecture, and implementation approach for Oracle Fusion Fixed Assets to support the organization's R2R processes with focus on asset capitalization, depreciation, and financial reporting.

1.2 Scope

The implementation covers:

- Construction-in-Progress (CIP) asset management
- Asset creation and capitalization
- Asset adjustments and transfers
- Integration with Oracle Fusion Procurement and Payables
- General Ledger integration
- Reporting and analytics
- Lease accounting integration

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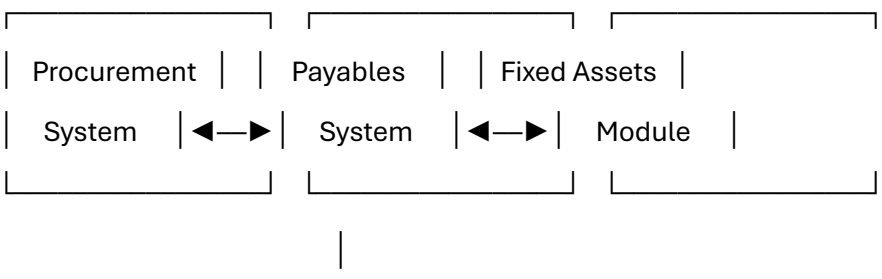
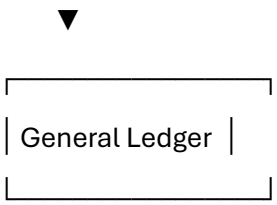
2. System Architecture

2.1 High-Level Architecture





2.2 Integration Points

- **Oracle Fusion Procurement Cloud:** Purchase requisitions and orders
- **Oracle Fusion Payables Cloud:** Invoice processing and mass additions
- **Oracle Fusion General Ledger:** Accounting entries and financial reporting
- **Third-party Maintenance Systems:** Asset tracking and maintenance records
- **Oracle Lease Accounting:** Lease lifecycle management

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3. Functional Requirements

3.1 Construction-in-Progress (CIP) Asset Management

3.1.1 CIP Asset Creation

Requirement ID: FA-CIP-001
Description: Create CIP assets for specific asset categories with asset type set as 'CIP'

Technical Implementation:

- Configure asset categories with CIP designation in Asset Categories setup
- Implement CIP asset creation workflow using Oracle Fusion Assets API
- Enable asset splitting functionality for proper allocation when information becomes available

Configuration Points:

- Asset Categories: Define CIP-specific categories
- Asset Books: Configure corporate and tax book treatments
- Workflow: CIP creation approval process

3.1.2 Procurement Integration

Requirement ID: FA-CIP-002
Description: Integration with purchasing system for capex budgeting and approval

Technical Implementation:

- Establish real-time integration between Oracle Fusion Procurement and Fixed Assets
- Configure purchase requisition workflows with proper CIP allocation
- Implement budget controls and approval hierarchies

Integration Specifications:

- **Method:** REST API integration
- **Frequency:** Real-time
- **Data Format:** JSON payload
- **Error Handling:** Retry mechanism with exponential backoff

3.1.3 CIP Accounting and Capitalization

Requirement ID: FA-CIP-003
Description: Manage complete CIP flow from acquisition to asset capitalization

Technical Implementation:

- Configure CIP clearing accounts in Chart of Accounts
- Implement mass additions process for CIP invoice processing
- Enable automatic generation of CIP accounting entries
- Support capitalization with accurate service date recording

Accounting Configuration:

- CIP Clearing Account: Configure automatic clearing entries
- Journal Import: Automated GL posting for CIP transactions
- Capitalization Rules: Define automatic capitalization triggers

3.2 Asset Creation and Management

3.2.1 Manual Asset Creation

Requirement ID: FA-CREATE-001
Description: Define assets manually through UI or spreadsheet import

Technical Implementation:

- Develop custom asset creation forms with Descriptive Flexfields (DFF)
- Implement Excel-based bulk asset import functionality
- Configure validation rules for asset data integrity

Technical Components:

- **UI Framework:** Oracle ADF (Application Development Framework)
- **Import Process:** Oracle ADFdi (Application Development Framework Desktop Integration)
- **Validation Engine:** Custom PL/SQL validation procedures

3.2.2 Payables Integration

Requirement ID: FA-CREATE-002
Description: Import asset information from payables with DFF transfer

Technical Implementation:

- Configure mass additions process to transfer payables data
- Implement DFF mapping from PO/PR/AP to Fixed Assets
- Enable source document linking for audit trail

Integration Flow:

AP Invoice → Mass Additions → Asset Creation → GL Posting

Data Mapping:

- Purchase Order DFF → Asset DFF
- Invoice Line Details → Asset Cost Components
- Supplier Information → Asset Vendor References

3.2.3 Capitalization Thresholds

Requirement ID: FA-CREATE-003
Description: Check threshold limits for capitalization decisions

Technical Implementation:

- Configure capitalization thresholds by asset category
- Implement separate thresholds for tax and corporate books
- Enable automatic expense vs. capitalize decisions

Configuration Parameters:

- Category-level thresholds
- Book-specific rules
- Override capabilities for manual decisions

3.3 Asset Adjustments and Transfers

3.3.1 Asset Inquiry and Filtering

Requirement ID: FA-ADJ-001
Description: Inquire about multiple assets with location-based filtering

Technical Implementation:

- Develop advanced search functionality with multiple filter criteria
- Implement location hierarchies (maintenance, third-party, manufacturing)
- Enable saved search configurations

Search Criteria:

- Maintenance Location
- Third-party Location (free-text field)
- Manufacturing Location
- Asset Category
- Service Date Range
- Cost Range

3.3.2 Individual Asset Adjustments

Requirement ID: FA-ADJ-002
Description: Adjust individual assets for financial changes and category transfers

Technical Implementation:

- Create adjustment transaction forms with approval workflows
- Support multiple adjustment types (transfer, category change, cost adjustment)
- Implement validation rules for adjustment constraints

Supported Adjustments:

- Cost adjustments
- Category transfers
- Source line modifications
- Depreciation method changes
- Location transfers

3.3.3 Bulk Asset Adjustments

Requirement ID: FA-ADJ-003
Description: Simultaneous adjustment of multiple assets via spreadsheet

Technical Implementation:

- Develop Excel-based bulk adjustment interface
- Implement validation and error reporting
- Support mass approval workflows

Process Flow:

1. Export eligible assets to Excel
2. Modify asset details in spreadsheet
3. Upload and validate changes
4. Submit for approval
5. Process approved adjustments

3.4 Approval and Workflow Management

3.4.1 Approval Hierarchies

Requirement ID: FA-APPR-001
Description: Review and approve asset changes based on materiality

Technical Implementation:

- Configure Oracle Fusion Approval Management (AME)
- Define approval rules based on adjustment type and amount
- Implement escalation procedures for overdue approvals

Approval Criteria:

- Adjustment amount thresholds
- Asset category sensitivity
- User role and authorization levels
- Business unit considerations

3.5 General Ledger Integration

3.5.1 Accounting Entry Generation

Requirement ID: FA-GL-001
Description: Automatic transfer of accounting entries to General Ledger

Technical Implementation:

- Configure journal import processes for all asset transactions
- Implement real-time GL posting for critical transactions
- Support period-end batch processing

Transaction Types:

- Asset additions
- Depreciation expense
- Asset transfers
- Retirements and disposals
- Adjustments and corrections

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4. Technical Architecture

4.1 Database Design

4.1.1 Custom Tables

Asset Extensions Table (XX_FA_ASSET_EXTENSIONS)

```
CREATE TABLE XX_FA_ASSET_EXTENSIONS (
  ASSET_ID NUMBER,
  MAINTENANCE_LOCATION VARCHAR2(100),
  THIRD_PARTY_LOCATION VARCHAR2(100),
  MANUFACTURING_LOCATION VARCHAR2(100),
  MAINTENANCE_SYSTEM_ID VARCHAR2(50),
  INITIATIVE_CODE VARCHAR2(30),
  CREATED_BY NUMBER,
  CREATION_DATE DATE,
  LAST_UPDATED_BY NUMBER,
  LAST_UPDATE_DATE DATE
);
```

4.1.2 Interface Tables

Asset Mass Additions Interface Enhancement

- Extended FA_MASS_ADDITIONS with custom DFF columns
- Added validation staging tables for data quality checks

4.2 API Integration

4.2.1 REST API Endpoints

Asset Creation API

```
POST /fscmRestApi/resources/11.13.18.05/fixedAssets
Content-Type: application/json

{
  "AssetNumber": "FA001234",
  "AssetCategory": "IT_EQUIPMENT",
  "Description": "Server Hardware",
  "DatePlacedInService": "2025-07-14",
  "Cost": 15000.00,
  "LocationCode": "DC_SYDNEY",
  "CustomAttributes": {
    "MaintenanceLocation": "SYDNEY_DC",
```

```
    "InitiativeCode": "PROJ_2025_001"
  }
}
```

4.2.2 Error Handling

- Implement comprehensive error logging
- Configure retry mechanisms for transient failures
- Provide detailed error messages for troubleshooting

4.3 Security Implementation

4.3.1 Role-Based Access Control

Roles Definition:

- Fixed Assets Accountant
- Fixed Assets Manager
- Fixed Assets Viewer
- System Administrator

4.3.2 Data Security

- Implement field-level security for sensitive financial data
- Configure audit trails for all asset transactions
- Enable data masking for non-production environments

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5. Integration Specifications

5.1 Procurement Integration

5.1.1 Purchase Requisition Flow

Integration Point: Oracle Fusion Procurement Cloud
Method: Real-time ESS (Enterprise Scheduler Service) jobs
Frequency: Every 15 minutes during business hours

Data Flow:

1. Purchase requisition created with asset flag
2. Approval workflow processes requisition
3. PO created with asset allocation
4. Asset placeholder created in Fixed Assets
5. Receipt triggers asset cost accumulation

5.2 Payables Integration

5.2.1 Mass Additions Process

Integration Point: Oracle Fusion Payables Cloud
Method: Scheduled batch process
Frequency: Daily at 11:00 PM

Process Steps:

1. Extract approved invoices with asset distribution
2. Validate invoice data against asset rules
3. Create mass addition records
4. Process asset additions
5. Generate accounting entries
6. Post to General Ledger

5.3 General Ledger Integration

5.3.1 Journal Import Configuration

Integration Method: Oracle GL Journal Import
Frequency: Real-time for critical transactions, batch for others

Journal Categories:

- Asset Additions
- Depreciation Expense
- Asset Transfers
- Asset Retirements
- CIP Capitalization

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6. Reporting and Analytics

6.1 Standard Reports

6.1.1 Asset Addition Reports

- Monthly asset addition summary
- CIP aging analysis
- Capitalization threshold analysis
- Asset category performance

6.1.2 Adjustment Reports

- Asset adjustment audit trail
- Pending approval summary

- Bulk adjustment status
- Error resolution tracking

6.2 Custom Reports

6.2.1 Location-Based Reports

- Assets by maintenance location
- Third-party location inventory
- Manufacturing location analysis
- Cross-location asset transfers

6.2.2 Financial Reports

- Asset clearing account reconciliation
- Depreciation expense analysis
- Cost center asset allocation
- Project-based asset tracking

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7. Data Migration Strategy

7.1 Legacy Data Assessment

- Inventory existing asset data sources
- Assess data quality and completeness
- Identify data cleansing requirements
- Plan phased migration approach

7.2 Migration Process

7.2.1 Data Extraction

- Extract asset master data from legacy systems
- Gather historical transaction data
- Collect maintenance system references
- Prepare location mappings

7.2.2 Data Transformation

- Standardize asset categories and classifications
- Map legacy locations to new hierarchy
- Convert financial data to standard formats
- Validate data integrity and completeness

7.2.3 Data Loading

- Load asset master data first
- Import historical depreciation data
- Create audit trail for migrated data
- Validate loaded data against source systems

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8. Testing Strategy

8.1 Unit Testing

- Test individual asset creation functions
- Validate calculation engines
- Test integration endpoints
- Verify security controls

8.2 Integration Testing

- End-to-end procurement to asset flow
- Payables to fixed assets integration
- General ledger posting validation
- Report generation testing

8.3 User Acceptance Testing

- Business process validation
- Performance testing under load
- Security and access control testing
- Disaster recovery testing

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9. Deployment Plan

9.1 Pre-Deployment Activities

- Environment setup and configuration
- Data migration execution
- User training completion
- Security configuration validation

9.2 Deployment Phases

9.2.1 Phase 1: Core Asset Management

- Basic asset creation and management
- CIP asset functionality
- Standard reporting

9.2.2 Phase 2: Advanced Features

- Bulk adjustment capabilities
- Advanced reporting and analytics
- Lease accounting integration

9.2.3 Phase 3: Optimization

- Performance tuning
- Advanced workflow configurations
- Custom report development

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10. Support and Maintenance

10.1 Support Structure

- Level 1: Help desk support for basic issues
- Level 2: Functional analysts for business process issues
- Level 3: Technical developers for system issues
- Level 4: Oracle support for platform issues

10.2 Maintenance Activities

- Monthly security patching
- Quarterly performance reviews
- Annual system health checks
- Continuous monitoring and alerting

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11. Risk Management

11.1 Technical Risks

- Integration complexity with multiple systems
- Data quality issues during migration
- Performance issues with large data volumes
- Security vulnerabilities in custom code

11.2 Mitigation Strategies

- Comprehensive testing at each phase
- Phased rollout approach
- Regular security assessments
- Continuous monitoring and alerting

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12. Appendices

Appendix A: Configuration Worksheets

- Asset Category Configuration
- Book Setup Parameters
- Depreciation Method Configuration
- Location Hierarchy Setup

Appendix B: API Documentation

- REST API Specifications
- Error Code Reference
- Sample Request/Response Payloads
- Authentication Requirements

Appendix C: Database Schema

- Custom Table Definitions
- Index Recommendations
- Data Dictionary
- Relationship Diagrams

Appendix D: Security Matrix

- Role and Responsibility Matrix
- Access Control Lists
- Audit Trail Requirements
- Compliance Checklist

Document Control:

- **Author:** Technical Architecture Team
- **Reviewer:** Fixed Assets Functional Team
- **Approver:** IT Director

- **Next Review Date:** October 14, 2025

Change Log:

Version	Date	Author	Description
1.0	July 14, 2025	Architecture Team	Initial document creation

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