

XERPIUM

Product Lifecycle Management

Enterprise Resource Planning

Solusi ERP lengkap untuk industri
product lifecycle management

2000+

MODUL

AI

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PREMISE

Bahasa Indonesia Edition — brostur.xerpium.com

Product Lifecycle Management Enterprise-Grade

XERPIUM PLM adalah ekosistem modul manajemen siklus produk yang dibangun di atas XERPIUM 18 — mencakup Engineering Change Orders (ECO), BOM Revision Control, Approval Workflow, Document Management, dan KPI Dashboard.

ECO — Inti Product Lifecycle Management

xerpium.plm.eco adalah model utama yang mengelola seluruh siklus perubahan engineering — dari draft, review, approval, hingga apply.

ECO Core Features

Auto-Sequence — Reference ECO/##### di-generate otomatis via ir.sequence

Description & Priority — Normal / High priority dengan tracking

Change Type — Apply on Bill of Materials atau Product Only

Effectivity — As soon as possible atau At Date (effective date)

Tags & Color — Kategorisasi ECO dengan colored tags

Kanban State — Normal / Approved / Blocked untuk visual tracking

ECO Type & Mail Alias

ECO Types — Kategori perubahan (e.g. "BOM Change", "Product Update")

Stage Mapping — Setiap type bisa memiliki set stages sendiri

Mail Alias — Email ke alias otomatis create ECO dengan type tersebut

Smart Counters — nb_ecos, nb_approvals, nb_approvals_my, nb_validation

Company-Scoped — Multi-company support per ECO type

BOM Revision & Apply

Start Revision — Copy BOM ke working copy, version +1, active=False

Previous BOM Link — Chain previous_bom_id untuk audit trail

Apply Changes — Activate new BOM, deactivate old, sync operation documents

Version Toggle — will_update_version flag — apply tanpa bump version

Product Versioning — Auto-increment product.template.version pada apply

Change Impact Analysis

Component Changes — Auto-diff add/remove/update dengan quantity & UoM delta

By-Product Changes — Tracking perubahan by-product pada BOM

Operation Changes — Routing/workcenter changes dengan time cycle delta

Color-Coded — Green=add, Red=remove, Blue=update di form view

Rebase Tracking — previous_change_ids & bom_rebase_ids untuk conflict

Manufacturing Integration

Create ECO from MO — One-click dari Manufacturing Order, auto-fill BOM & product

MO ↔ ECO Link — production_id pada ECO, eco_ids pada MO

BOM ↔ ECO Link — eco_ids & eco_count pada mrp.bom

Product ↔ ECO Link — eco_ids & action_view_ecos() pada product.template

Operation Documents — Sync dokumen ke new BOM operations saat apply

Rebase & Conflict Handling

Rebase State — state='rebase' ketika upstream BOM berubah selama ECO in progress

Conflict State — state='conflict' untuk manual resolution

Intermediate BOM — current_bom_id untuk tracking perubahan mid-ECO

Rebase Diff — bom_rebase_ids & previous_change_ids auto-compute

Audit Trail — Full changelog via mail.thread chatter

Role-Based Approval Engine

Setiap stage ECO dapat memiliki approval templates dengan tipe mandatory, optional, atau comment-only. Stage advance diblokir sampai semua mandatory approvals terpenuhi.

Approval Mechanism

Auto-Generate — _create_approvals() membuat approval records + mail activities

Stage Gating — Stage advance diblokir jika mandatory approvals belum complete

User Restriction — approve/reject hanya untuk users di template.user_ids

Stage Transition — Moving stage menutup processed approvals, menghapus pending

Mail Activities — Auto-create todo activities untuk approvers

Approval Types

Mandatory — Harus approve sebelum stage bisa di-advance. is_approved = (status == 'approved')

Optional — Boleh approve tapi tidak blocking. is_approved selalu True

Comment — Hanya komentar, tidak men-pengaruhi approval status

Constraint — User tidak boleh assign lebih dari sekali per stage

Dynamic Stage Workflow

Framework stage configurable untuk ECO — dengan Python hooks, server actions, RBAC groups, dan approval template integration.

Dynamic Stage Features

Configurable per Model — Stage independen untuk xerpium.plm.eco

Python Hooks — enter_method dijalankan saat record masuk stage

Server Actions — ir.actions.server otomatis pada stage enter

RBAC Groups — group_ids membatasi siapa bisa move ke stage

Native State Sync — Auto-sync stage ↔ state field (confirmed/progress/done)

Back Navigation — allow_back untuk stage mundur (configurable)

Approval Templates — approval_template_ids pada stage (via xerpium_dynamic_stage_plm)

Default Stage — is_default auto-assign saat record baru

PLM Document System

xerpium.plm.document — sistem dokumen polimorfik yang dapat menempel pada ECO, BOM, Product, atau routing operation.

File (PDF, Images)

Upload via ir.attachment

Mimetype auto-detect

Copy pada BOM revision

Cover image untuk ECO

External Link

Google Slides, external URL

widget="url" di form

action_open_link()

No file upload needed

Text Note

Plain text content

Inline editing di form

Quick notes / instructions

No attachment required

Document Features

Polymorphic — res_model + res_id, attach ke model apapun

Kanban View — Card render berbeda per doc_type (file/link/text)

Operation Documents — bom_operation_id untuk SOP per operation

Sync on Apply — _sync_operation_documents() copy dokumen ke new BOM

Cover Image — displayed_image_id untuk ECO cover

Copy with Attachment — copy() duplicate ir.attachment untuk file-type

Multi-Company — company_id isolation

BOM & Product Versioning

Sistem versioning terintegrasi untuk BOM dan Product — setiap ECO apply dapat menaikkan versi secara otomatis.

PLM KPI Dashboard

xerpium_dashboard_plm — Dashboard KPI dengan 6 widget, dual data source (ORM + SQL), auto-refresh setiap 5 menit.

Dashboard Features

Auto-Refresh — 300 detik (5 menit) refresh interval

Auto-Apply Filters — Filter otomatis saat dashboard dibuka

Dual Source — ORM source (ECOs, BOMs, Products) + SQL source (aggregates)

Green Theme — Tema warna hijau konsisten dengan PLM branding

Global Dashboard — visible ke semua PLM users

Built on Dashboard Studio — vit_dashboard_studio infrastructure

Integrasi Cross-Module

PLM terintegrasi penuh dengan ekosistem manufaktur XERPIUM.

PLM ↔ Manufacturing (MRP)

Create ECO from MO — One-click dari Manufacturing Order

MO ↔ ECO — production_id link, eco_ids pada MO

BOM Version Control — ECO apply activate new BOM version

Operation Sync — Dokumen SOP sync ke new BOM operations

Work Center Documents — mrp.routing.workcenter.document_ids

PLM ↔ Product

Product Version — product.template.version auto-increment

ECO History — eco_ids & action_view_ecos() pada product form

ECO Notebook — Tab ECOs di product form

Document Attach — Spec sheet, datasheet per product

PLM ↔ Dashboard Studio

KPI Dashboard — vit_dashboard_studio hosting

ORM + SQL Sources — Dual data source

Auto-Refresh — 5 minute interval

Chart Types — Tile, Pie, Line, dll

PLM ↔ Dynamic Stage

Configurable Stages — Data-driven, tidak hard-coded

Approval Templates — approval_template_ids pada stage

Python Hooks — enter_method per stage

RBAC Groups — group_ids per stage

State Sync — Auto-sync stage ↔ native state

PLM ↔ Mail Thread

Chatter — Full audit trail per ECO

Mail Activities — Auto-generate todo untuk approvers

Mail Alias — Email ke alias auto-create ECO

CC Tracking — mail.thread.cc inheritance

PLM ↔ Multi-Company

Company Isolation — Record rule per company_id

Company on ECO — company_id field dengan default

Company on Document — Multi-company document isolation

Company on ECO Type — Per-company type configuration

Security & Access Control

Two-tier access control dengan multi-company isolation dan granular per-model permissions.

Record Rules

Multi-Company ECO — company_id in user's company_ids

Multi-Company Document — company_id isolation untuk documents

User ECO Rule — R W C, no delete untuk PLM Users

Manager ECO Rule — Full CRUD untuk PLM Managers

Model Arsitektur PLM

7 model PLM + 4 inherited model dengan integrasi penuh ke MRP ecosystem.

Xerpium ERP — xerpium.com

Hubungi kami untuk demo gratis

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