📋 HC Portal KPB - Development Workplan

> **Dokumen perencanaan pengembangan lengkap untuk deployment ke server internal Kilang Pertamina Balikpapan**

📊 Ringkasan Status Saat Ini

Posisi Pengembangan Website

Aspek	Status	Progress
Frontend UI/UX	☑ Selesai	90%
Navigasi & Routing	☑ Selesai	100%
Role-Based Access Control	☑ Selesai	100%
Authentication System	☑ Selesai	100%
Mock Data	⚠ Perlu Migrasi	Sementara
Database SQL Server	✖ Belum	0%
CRUD Operations	✖ Belum	0%
File Upload System	✖ Belum	0%

Tahap Development: **HIGH-FIDELITY PROTOTYPE → PRE-PRODUCTION**

Website ini saat ini berada di tahap **Prototype** yang sudah sangat matang secara visual dan navigasi. Untuk go-live, diperlukan migrasi ke database production dan implementasi CRUD operations.

🖥 Target Infrastruktur Deployment

Komponen	Spesifikasi	Keterangan
Web App	Windows Server + IIS	On-premise server internal KPB
Server	VM / Server fisik (2 vCPU, 8 GB RAM)	Cukup untuk 400-600 users
Database	SQL Server 2022	Enterprise standard
Storage	TBD dengan Tim Server Admin	Untuk file sertifikat & dokumen
Backup	Manual Backup	Perlu SOP backup rutin
Monitoring	Manual	Rekomendasi: tambahkan logging
SSL	Auto renew	☑ Ready

🗺 Roadmap Development

```
gantt
    title HC Portal KPB - Development Roadmap
    dateFormat YYYY-MM-DD
    section Phase 1
    Database Migration & Setup    :p1, 2026-02-10, 7d
    section Phase 2
    CRUD & Service Layer          :p2, after p1, 10d
    section Phase 3
    File Upload & Storage          :p3, after p2, 5d
    section Phase 4
    Approval Workflow              :p4, after p3, 5d
    section Phase 5
    Testing & UAT                  :p5, after p4, 7d
    section Phase 6
    IIS Deployment                 :p6, after p5, 3d
```

📋 PHASE 1: Database Migration & Setup (7 hari)

Status: CRITICAL | Prioritas Tertinggi

1.1 Persiapan SQL Server 2022

Koordinasi dengan Tim Server Admin KPB:

- ☐ Konfirmasi akses ke SQL Server 2022
- ☐ Buat database baru: `HcPortalDB`
- ☐ Buat SQL user: `hcportal_app` dengan permission yang sesuai
- ☐ Dokumentasi connection string

Connection String Format:

```
Server=<SERVER_NAME>;Database=HcPortalDB;User Id=hcportal_app;Password=
<PASSWORD>;TrustServerCertificate=True;
```

1.2 Migrasi dari SQLite ke SQL Server

Step	Deskripsi	Deliverable
1	Ubah dependency di `HcPortal.csproj`	NuGet package SQL Server
2	Update connection string di `appsettings.json`	Config file
3	Jalankan migrasi EF Core	Schema database
4	Seed data awal (Roles, Users)	Data master

1.3 Entity Models yang Perlu Dibuat

Model	Tabel	Status Saat Ini
`ApplicationUser`	`AspNetUsers`	☑ Sudah ada
`TrainingRecord`	`TrainingRecords`	⚠ Mock data
`CoachingLog`	`CoachingLogs`	⚠ Mock data
`AssessmentSession`	`AssessmentSessions`	⚠ Mock data
`IdpItem`	`IdpItems`	⚠ Mock data
`KkjMatrix`	`KkjMatrices`	⚠ Mock data

1.4 Deliverables Phase 1

- ☐ SQL Server database aktif
- ☐ EF Core migrations berhasil
- ☐ Seed data untuk testing
- ☐ Connection terverifikasi

📋 PHASE 2: CRUD Operations & Service Layer (10 hari)

Status: HIGH | Fondasi Fungsionalitas

2.1 Arsitektur Service Layer

```
Controllers/           → Terima request, panggil service
Services/
├── Interfaces/
│   ├── ITrainingService.cs
│   ├── ICoachingService.cs
│   ├── IAssessmentService.cs
│   └── IIdpService.cs
├── TrainingService.cs
├── CoachingService.cs
├── AssessmentService.cs
└── IdpService.cs
```

2.2 CRUD per Modul

Modul CMP (Competency Management Platform)

Feature	Create	Read	Update	Delete
Capability Records	☑	☑	☑	☑
Assessment	☑	☑	☑	✖
KKJ Matrix	✖	☑	✖	✖

Feature	Create	Read	Update	Delete
Mapping	✗	☑	✗	✗

Modul CDP (Development Platform)

Feature	Create	Read	Update	Delete
IDP Plan	☑	☑	☑	✗
Coaching Log	☑	☑	☑	☑
Progress	✗	☑	☑	✗

Modul BP (Business Partner)

Feature	Create	Read	Update	Delete
Talent Profile	✗	☑	☑	✗
Point System	⚡ Auto	☑	✗	✗
Eligibility	⚡ Auto	☑	✗	✗

2.3 Deliverables Phase 2

- ☐ Service layer terimplementasi
- ☐ CRUD operations berfungsi
- ☐ Form validations (client & server)
- ☐ Error handling & user feedback

📋 PHASE 3: File Upload & Storage (5 hari)

Status: MEDIUM | Fitur Sertifikat

3.1 Koordinasi Storage dengan Tim Server Admin

Pertanyaan untuk Tim Server Admin:

1. Di mana lokasi storage untuk file upload? (Network share / Local disk)
2. Berapa kapasitas yang dialokasikan?
3. Apakah ada kebijakan khusus untuk file PDF/gambar?
4. Bagaimana akses permission dari IIS?

3.2 Implementasi File Upload

Fitur	Format	Max Size	Lokasi
Sertifikat Training	PDF	5 MB	/Uploads/Certificates/
Evidence Assessment	PDF/JPG	10 MB	/Uploads/Evidence/

Fitur	Format	Max Size	Lokasi
Foto Profil	JPG/PNG	2 MB	/Uploads/Profiles/

3.3 Deliverables Phase 3

- ☐ File upload berfungsi
- ☐ Validasi file type & size
- ☐ Storage path dikonfigurasi
- ☐ Integrasi dengan database

📋 PHASE 4: Approval Workflow (5 hari)

Status: MEDIUM | Business Logic

4.1 Alur Approval Berjenjang

```
flowchart LR
    A[User Submit] --> B[Sr. Supervisor]
    B -->|Approve| C[Section Head]
    B -->|Reject| A
    C -->|Approve| D[HC Admin]
    C -->|Reject| B
    D -->|Approve| E[☑ Selesai]
    D -->|Reject| C
```

4.2 Fitur yang Memerlukan Approval

Fitur	Level Approval	Notifikasi
IDP Plan	3 Level	Email/In-app
Training Request	2 Level	Email/In-app
Coaching Log	1 Level	In-app

4.3 Deliverables Phase 4

- ☐ Approval workflow terimplementasi
- ☐ Status tracking per item
- ☐ Notifikasi approver

📋 PHASE 5: Testing & UAT (7 hari)

Status: HIGH | Quality Assurance

5.1 Jenis Testing

Type	Scope	Tool
Unit Test	Services, Validators	xUnit
Integration	API Endpoints	Postman
UAT	User Flow	Manual Testing
Performance	Load Test	JMeter (optional)

5.2 UAT Checklist per Role

Role	Test Case
HC	Section selection, view all workers, export report
Section Head	Team view, approval workflow, dashboard
Sr Supervisor	Unit filter, team management
Coach	Coaching log, coachee progress
Coachee	Personal training, certificates

5.3 Deliverables Phase 5

- ☐ Unit tests passing
- ☐ UAT sign-off dari stakeholders
- ☐ Bug fixes completed
- ☐ Performance acceptable

📋 PHASE 6: IIS Deployment (3 hari)

Status: HIGH | Go-Live

6.1 Pre-Deployment Checklist

Item	Status	Owner
SSL Certificate	☑ Auto renew	Server Admin
IIS Installed	[ ]	Server Admin
.NET 8 Runtime	[ ]	Server Admin
Connection String	[ ]	Developer
App Pool Config	[ ]	Server Admin

6.2 Deployment Steps

```
# 1. Build untuk Production
dotnet publish -c Release -o ./publish
```

```
# 2. Copy ke server
# (koordinasi dengan Server Admin)

# 3. Konfigurasi IIS
# - Buat Application Pool
# - Buat Site baru
# - Bind ke domain/IP internal
```

6.3 Post-Deployment Verification

- ☐ Website accessible
- ☐ Login berfungsi
- ☐ Database terkoneksi
- ☐ File upload berfungsi
- ☐ SSL aktif

⏱ Timeline Summary

Phase	Durasi	Target Mulai	Target Selesai
Phase 1: Database	7 hari	Minggu 1	Minggu 1
Phase 2: CRUD	10 hari	Minggu 2	Minggu 3
Phase 3: File Upload	5 hari	Minggu 3	Minggu 4
Phase 4: Approval	5 hari	Minggu 4	Minggu 5
Phase 5: Testing	7 hari	Minggu 5	Minggu 6
Phase 6: Deployment	3 hari	Minggu 6	Minggu 6
TOTAL	**~37 hari**		**~6-7 minggu**

📝 Action Items Segera

Untuk Developer:

1. ☐ Siapkan script migrasi SQLite → SQL Server
2. ☐ Buat template service layer
3. ☐ Dokumentasi API endpoints

Untuk Tim Server Admin KPB:

1. ☐ Konfirmasi akses SQL Server 2022
2. ☐ Tentukan lokasi storage untuk file upload
3. ☐ Siapkan server Windows + IIS
4. ☐ Install .NET 8 Runtime

Untuk PM/Stakeholder:

1. ☐ Tentukan prioritas modul (full atau phased rollout)
2. ☐ Jadwalkan UAT dengan end users
3. ☐ Siapkan dokumentasi user training

❓ Keputusan yang Perlu Diambil

> [!IMPORTANT] Beberapa keputusan teknis yang perlu segera ditentukan:

1. **Rollout Strategy?**

   - Full implementation (semua modul sekaligus)
   - Phased rollout (CMP → CDP → BP)

2. **Notification System?**

   - Email notification (perlu SMTP server)
   - In-app notification saja
   - Tidak ada notifikasi

3. **Backup Schedule?**

   - Daily
   - Weekly
   - Sesuai kebijakan IT KPB

4. **User Training?**

   - Training langsung
   - Video tutorial
   - Dokumentasi manual

🎯 Success Criteria

Website dianggap **Production-Ready** jika:

- ☐ Semua CRUD operations berfungsi
- ☐ Role-based access control terverifikasi
- ☐ File upload/download berfungsi
- ☐ Approval workflow berjalan
- ☐ Performance acceptable (< 3 detik load time)
- ☐ UAT sign-off dari stakeholders
- ☐ SOP backup tersedia
- ☐ User training completed

Workplan dibuat: 6 Februari 2026 Diupdate terakhir: 6 Februari 2026