

## OIM Executive Suite - Fully Offline PWA

### Complete Progressive Web App for Offshore Operations Management

Version: 2.0.0

Platform: Universal (iPad, iPhone, Android, Desktop)

Status:  Production Ready

---

#### What's Included

This complete PWA package contains:

#### Core Application Files:

1. **index.html** - Main application (updated with PWA support & responsive design)
2. **service-worker.js** - Offline caching (lightweight, no heavy CDNs)
3. **manifest.json** - PWA configuration (installable on all devices)

#### Reusable Components:

4. **components/txt-export.js** - Universal TXT export with iOS compatibility
5. **components/pdf-annotator.js** - PDF drawing/annotation with Apple Pencil support

#### Documentation:

6. **README.md** - This file (complete guide)
  7. **DEPLOYMENT.md** - Step-by-step deployment instructions
  8. **USAGE.md** - User guide for offshore operations
- 

#### Key Features

-  **Fully Offline** - Works without internet after first visit
-  **Installable** - Add to home screen on all devices
-  **Responsive** - Optimized for iPad, iPhone, Android tablet/phone, Desktop
-  **Portrait Optimized** - Default orientation for mobile devices
-  **Apple Pencil Support** - Drawing & annotation in share.html
-  **Data Export** - JSON (existing) + TXT (new) exports
-  **iOS Compatible** - Special handling for Safari quirks
-  **Subdirectory Support** - Works in GitHub Pages subdirectories

**Auto-Update** - Prompts when new version available

**Offline Indicator** - Shows connection status

---

## **Required Folder Structure**

Deploy with this EXACT structure:

your-deployment-folder/

```
└── index.html           ← Main app (updated)
    ├── service-worker.js   ← Service worker (lightweight)
    ├── manifest.json       ← PWA manifest
    └── components/
        ├── txt-export.js    ← TXT export utility
        └── pdf-annotator.js  ← PDF annotation tool
    └── icons/              ← PWA icons (optional but recommended)
        ├── icon-72x72.png
        ├── icon-96x96.png
        ├── icon-128x128.png
        ├── icon-144x144.png
        ├── icon-152x152.png
        ├── icon-192x192.png
        ├── icon-384x384.png
        └── icon-512x512.png
    └── pages/               ← All module pages
        ├── OIM Assist.html
        ├── operation.html
        ├── key_equipment.html
        ├── my_kpi.html
        └── handover.html
```

```
|── meme.html  
|── share.html  
|── safety.html  
|── calculator_failplay.html  
|── turnaroundapp.html (optional)  
└── analytics.html (optional)
```

---

## Quick Start Deployment

### Option 1: GitHub Pages (Recommended)

**Perfect for offshore use - free, reliable, HTTPS**

1. Create new GitHub repository
2. Upload ALL files maintaining folder structure
3. Go to Settings → Pages
4. Source: Deploy from branch main / Root
5. Wait 1-2 minutes for deployment
6. Access at: [https://\[username\].github.io/\[repo-name\]/](https://[username].github.io/[repo-name]/)

### Subdirectory Support Built-In:

- PWA automatically detects path
- No configuration needed
- Works in any subdirectory

### Option 2: Local Server (USB/Offline)

**For testing or offline-only deployment**

1. Copy entire folder to USB drive
2. Use Python: `python -m http.server 8000`
3. Or use any local web server
4. Access at: `http://localhost:8000`

### Option 3: Custom Domain

**Your own hosting**

1. Upload to your web server
  2. Ensure HTTPS is enabled (required for PWA)
  3. Maintain folder structure
  4. Access via your domain
- 

## **Installation Guide**

### **On iPad (iOS/iPadOS):**

1. **Open in Safari** (must be Safari, not Chrome)
2. Tap the Share button (box with arrow)
3. Scroll down and tap "Add to Home Screen"
4. Edit name if desired
5. Tap "Add"
6. App icon appears on home screen

**Pro Tip:** Once installed, the app runs in standalone mode without Safari UI.

### **On iPhone (iOS):**

Same steps as iPad above. The app automatically adjusts for iPhone screen size.

### **On Android (Phone/Tablet):**

#### **Chrome:**

1. Open PWA in Chrome browser
2. Tap menu (:) → "Add to Home Screen"
3. Confirm installation
4. App icon appears

**Or:** Look for install banner at bottom of screen and tap "Install"

### **On Desktop (Windows/Mac/Linux):**

#### **Chrome/Edge:**

1. Open PWA in browser
2. Look for install icon (+) in address bar
3. Click install

4. App opens in standalone window

**Or:** Menu → "Install OIM Executive Suite"

---

### **First-Time Setup (Important!)**

**Before going offshore, follow these steps:**

#### **Step 1: Visit with Internet**

Open the PWA while connected to internet. This allows:

- Service worker to register
- All pages to cache
- CDN resources to download
- Icons to load

#### **Step 2: Navigate All Modules**

**Critical:** Click through EVERY module at least once:

- OIM Assistant
- Field Operations
- Key Equipment
- My KPI
- Handover Management
- Performance Grid
- Knowledge Sharing
- Safety Management
- Calculator Tools
- (And any other modules you have)

This caches each module for offline use.

#### **Step 3: Test Offline Mode**

1. Turn OFF WiFi/mobile data
2. Close and reopen the PWA
3. Try navigating between modules

4. Test data entry and export
5. Verify everything works

## **Step 4: Install on All Devices**

Install on every device you'll use offshore:

- Work iPad
  - Personal iPad
  - iPhone
  - Backup tablet
  - Laptop
- 

### Offline Usage

#### **What Works Offline:**

- All 11 modules (after initial cache)
- Data entry and forms
- localStorage (data persists)
- JSON export/import
- TXT export (new feature)
- PDF viewing (share.html)
- Drawing/annotation (share.html)
- Calculations
- All UI features

#### **What Doesn't Work Offline:**

- X Initial service worker registration
- X Modules not visited during setup
- X External websites/links
- X Features requiring API calls

#### **Offline Indicator:**

When offline, you'll see:  **Offline Mode** at top of screen

---

### Data Export Features

### **JSON Export (Existing - Preserved):**

- All modules keep their existing JSON export
- Use for: Data backup, system restore, data transfer
- Format: Machine-readable structured data
- iOS Compatible: Yes (with minor UI adjustments)

### **TXT Export (New Feature):**

- Human-readable text format
- Use for: Reports, sharing, reading
- Format: Formatted text with headers and sections
- iOS Compatible: Yes (special handling)

### **How to Use TXT Export:**

```
// In any module, add this to your export button:
```

```
<script src="../components/txt-export.js"></script>
```

```
// Then call:
```

```
exportToTXT(yourData, 'report-name', {  
    title: 'HANDOVER REPORT',  
    formatStyle: 'structured' // or 'simple'  
    sections: [  
        { title: 'Safety', key: 'safety' },  
        { title: 'Operations', key: 'operations' }  
    ]  
});
```

---

### **PDF Annotation (share.html)**

The share.html module now has drawing/annotation capabilities:

#### **Features:**

-  Freehand drawing

-  Highlighter
-  Eraser
-  Color selection
-  Undo
-  Save annotation as image

### **Apple Pencil Support:**

- Pressure sensitivity
- Palm rejection
- Smooth strokes
- Natural writing feel

### **Usage:**

1. Open PDF in share.html
2. Toolbar appears at bottom
3. Select tool (pen/highlighter/eraser)
4. Draw on PDF
5. Save annotation

### **Integration:**

```
<script src="../components/pdf-annotator.js"></script>

<script>
const annotator = new PDFAnnotator('pdf-container');

const toolbar = createAnnotationToolbar(annotator);

document.body.appendChild(toolbar);

</script>
```

---

### **Updates & Maintenance**

#### **Automatic Updates:**

- PWA checks for updates automatically

- Prompt appears when new version available
- User clicks "OK" to update
- Page reloads with new version

### **Manual Update:**

1. Change version in service-worker.js:
2. const CACHE\_VERSION = 'oim-suite-v2.0.1'; // Increment
3. Redeploy files
4. Users get update prompt on next visit

### **Cache Management:**

Clear cache if needed:

```
// In browser console:
```

```
navigator.serviceWorker.getRegistrations().then(registrations => {
  registrations.forEach(r => r.unregister());
});

caches.keys().then(keys => {
  keys.forEach(key => caches.delete(key));
});

// Then reload page
```

---

## **Troubleshooting**

### **PWA Won't Install:**

**Problem:** Install option not appearing

**Solution:**

- Ensure HTTPS (or localhost)
- Check manifest.json is accessible
- Try different browser
- Clear cache and retry

### **Service Worker Not Registering:**

**Problem:** "Service Worker registration failed"

**Solution:**

- Check browser console for errors
- Verify service-worker.js path
- Ensure HTTPS (required except localhost)
- Check file permissions

**Modules Not Loading Offline:**

**Problem:** "Page not found" offline

**Solution:**

- Visit ALL modules while online first
- Check browser console for cache errors
- Verify folder structure matches exactly
- Try clearing cache and re-caching

**iOS Download Issues:**

**Problem:** Files won't download on iOS

**Solution:**

- TXT export handles this automatically
- File opens in new tab
- Tap "Share" → "Save to Files"
- Or content copies to clipboard

**Offline Indicator Not Showing:**

**Problem:** Can't tell if online/offline

**Solution:**

- Check browser console for connection status
- Try toggling airplane mode
- Indicator appears at top when offline

---

## Browser Compatibility

**Fully Supported:**

- iOS Safari** 11.1+ (iPhone/iPad)
- Chrome** 45+ (Android/Desktop)
- Edge** 79+ (Desktop)
- Firefox** 44+ (Desktop)
- Samsung Internet** 4+ (Android)

#### **Limited Support:**

- Opera Mini** - No service worker support
- UC Browser** - Limited PWA features

#### **Not Supported:**

- Internet Explorer** - No PWA support
  - Very old browsers** - Upgrade recommended
- 

### **Best Practices**

#### **Before Offshore:**

1. Deploy to stable URL (GitHub Pages recommended)
2. Test on ALL devices you'll use
3. Visit every module while online
4. Test offline mode thoroughly
5. Backup any critical data
6. Note the PWA URL (bookmark it)

#### **During Offshore:**

1. Use installed PWA (don't use browser)
2. Export data regularly (JSON backup)
3. Keep devices charged
4. Avoid clearing browser data
5. Use TXT export for sharing reports

#### **After Offshore:**

1. Sync data if using multiple devices
2. Export final reports

3. Check for PWA updates

4. Clear old data if needed

---

## Performance Tips

### **Faster Loading:**

- Install as PWA (runs standalone)
- Close unused browser tabs
- Clear old cache periodically
- Ensure adequate device storage (100MB+)

### **Better Offline Experience:**

- Visit all modules before going offline
- Export data regularly as backup
- Test offline mode while onshore
- Keep PWA updated

### **Battery Optimization:**

- Use dark mode if available
  - Reduce screen brightness
  - Close app when not in use
  - Avoid excessive animations
- 

## Support & Help

### **Common Issues:**

#### **"Add to Home Screen" missing:**

- Must use Safari on iOS (not Chrome)
- Must have HTTPS
- Try refreshing page

#### **Data not persisting:**

- Check if in Private/Incognito mode (won't work)

- Ensure localStorage not disabled
- Check device storage space

### **Slow performance:**

- Clear old cache
- Close other apps
- Restart device
- Check available RAM

### **Debug Mode:**

Open browser console (F12) to see:

- Service worker status
  - Cache status
  - Connection status
  - Error messages
- 

## **Security & Privacy**

### **Data Storage:**

- All data stored locally on device
- No cloud sync (unless you enable it)
- localStorage is device-specific
- Export/import for data transfer

### **Offline Operation:**

- No data sent to servers when offline
- All processing happens on device
- Data only leaves device when YOU export it

### **HTTPS Requirement:**

- PWA requires HTTPS (security)
- GitHub Pages provides this automatically
- Protects data in transit

---

## Version History

### v2.0.0 (Current)

- Full PWA implementation
- Offline capability for all modules
- Responsive design (all devices)
- Apple Pencil support (share.html)
- TXT export utility
- iOS compatibility improvements
- Subdirectory path support
- Auto-update system

### v1.0.0 (Original)

- Basic HTML application
  - Individual module functionality
- 

## License & Credits

© 2025 Aziz Mohamad

Enterprise Solutions Division

PETRONAS - Platform Production Department A

**For:** Offshore Installation Manager (OIM)

**Platform:** Irong Barat A, B, C

**Purpose:** Operations & Information Management

---

## Ready to Deploy!

**Your PWA is production-ready.** Follow the Quick Start guide above and you'll be operational in minutes.

**Questions?** Check DEPLOYMENT.md for detailed step-by-step instructions.

**Need help?** Review TROUBLESHOOTING section or check browser console for errors.

**Good luck offshore! Stay safe!**  

---

*Last updated: December 11, 2025*

*Documentation version: 2.0.0*