View-to-Overlay Usage Mapping Report

Analysis Date: September 19, 2025
Scope: Detailed mapping of which Views currently use which overlay types

📊 Primary Tab Views Analysis

InventoryTabView.axaml

Location: `Views/MainForm/Panels/InventoryTabView.axaml`
Primary Function: Inventory item addition and management

Current Overlay Usage

Overlay Type	Service Used	Implementation Status	Usage Pattern
SuggestionOverlay	☑ `ISuggestionOverlayService`	Fully Implemented	Part ID, Operation, Location autocomplete
SuccessOverlay	☑ `ISuccessOverlayService`	Fully Implemented	Transaction success feedback
ConfirmationOverlay	✖ Not Used	Missing	Add item confirmation
EditInventoryOverlay	✖ Not Used	Missing	Quick edit functionality

Code Evidence

```
// InventoryTabView.axaml.cs
private ISuggestionOverlayService? _suggestionOverlayService;
private ISuccessOverlayService? _successOverlayService;

// Service integration in constructor
_suggestionOverlayService =
_serviceProvider?.GetService<ISuggestionOverlayService>();
_successOverlayService = _serviceProvider?.GetService<ISuccessOverlayService>
();
```

Missing Overlay Opportunities

- **Validation Overlay**: Real-time input validation for Part ID format
- **Confirmation Overlay**: "Add this item to inventory?" confirmation

- **Progress Overlay**: Bulk import operations
- **Error Overlay**: Database operation failures

RemoveTabView.axaml

Location: `Views/MainForm/Panels/RemoveTabView.axaml`
Primary Function: Inventory item removal

Current Overlay Usage

Overlay Type	Service Used	Implementation Status	Usage Pattern
SuggestionOverlay	☑ `ISuggestionOverlayService`	Fully Implemented	Part ID, Operation autocomplete
SuccessOverlay	☑ Via ViewModel Event	Fully Implemented	Removal success feedback
EditInventoryOverlay	☑ Direct Integration	Recently Added	Item editing before removal
ConfirmationOverlay	✘ Not Used	Missing	Delete confirmation

Code Evidence

```
// RemoveTabView.axaml
<overlayViews:EditInventoryView DataContext="{Binding EditDialogViewModel}" />

// RemoveTabView.axaml.cs
private ISuggestionOverlayService? _suggestionOverlayService;

// ViewModel integration
public event
EventHandler<MTM_WIP_Application_Avalonia.Models.SuccessEventArgs>?
ShowSuccessOverlay;
```

Missing Overlay Opportunities

- **Confirmation Overlay**: "Are you sure you want to remove X items?"
- **Batch Confirmation**: Multi-item removal confirmation
- **Validation Overlay**: Quantity validation (can't remove more than available)

TransferTabView.axaml

Location: Views/MainForm/Panels/TransferTabView.axaml
Primary Function: Inventory item transfers between locations

Current Overlay Usage

Overlay Type	Service Used	Implementation Status	Usage Pattern
SuggestionOverlay	☑ ISuggestionOverlayService	Fully Implemented	Part, Operation, Location suggestions
SuccessOverlay	☑ ISuccessOverlayService	Fully Implemented	Transfer success feedback
ConfirmationOverlay	✖ Not Used	Missing	Transfer confirmation
EditInventoryOverlay	✖ Not Used	Missing	Source/destination editing

Code Evidence

```
// TransferTabView.axaml
xmlns:overlayViews="using:MTM_WIP_Application_Avalonia.Views.Overlay"

// TransferTabView.axaml.cs
private ISuccessOverlayService? _successOverlayService;
private ISuggestionOverlayService? _suggestionOverlayService;

// Success overlay integration
await _successOverlayService.ShowSuccessOverlayInMainViewAsync(
    this,
    "Transfer completed successfully",
    $"Transferred {quantity} units of {partId}"
);
```

Missing Overlay Opportunities

- **Transfer Confirmation**: "Transfer X items from Location A to Location B?"
- **Location Validation**: "Destination location doesn't exist" error overlay
- **Quantity Validation**: "Insufficient quantity available" warning

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NewQuickButtonView.axaml

Location: Views/MainForm/Panels/NewQuickButtonView.axaml
Primary Function: Quick button creation and configuration

Current Overlay Usage

Overlay Type	Service Used	Implementation Status	Usage Pattern
SuggestionOverlay	☑ `ISuggestionOverlayService`	Fully Implemented	Part ID, Operation suggestions
SuccessOverlay	✖ Not Used	Missing	Button creation feedback
ConfirmationOverlay	✖ Not Used	Missing	Button save confirmation
ValidationOverlay	✖ Not Used	Missing	Form validation feedback

Code Evidence

```
// NewQuickButtonView.axaml.cs
private ISuggestionOverlayService? _suggestionOverlayService;

// Service initialization
_suggestionOverlayService =
_serviceProvider?.GetService<ISuggestionOverlayService>();
```

Missing Overlay Opportunities

- **Success Overlay**: "Quick button created successfully"
- **Validation Overlay**: "Button name is required" field validation
- **Preview Overlay**: Show button appearance before saving

🔧 Secondary Views Analysis

AdvancedInventoryView.axaml

Location: `Views/MainForm/Panels/AdvancedInventoryView.axaml`
Primary Function: Advanced inventory operations

Current Overlay Usage

Overlay Type	Implementation Status	Critical Need
None Currently	No overlays implemented	✖ Critical Gap

Missing Critical Overlays

- **Batch Progress Overlay**: Multi-item processing feedback
- **Batch Confirmation Overlay**: "Process X selected items?"

- **Validation Overlay**: Input validation for batch operations
- **Error Overlay**: Operation failure feedback

AdvancedRemoveView.axaml

Location: `Views/MainForm/Panels/AdvancedRemoveView.axaml`
Primary Function: Advanced removal operations

Current Overlay Usage

Overlay Type	Implementation Status	Critical Need
None Currently	No overlays implemented	✖ Critical Gap

Missing Critical Overlays

- **Mass Delete Confirmation**: "Delete X items permanently?"
- **Progress Overlay**: Batch deletion progress
- **Undo Overlay**: "Operation completed - Undo available for 30 seconds"

QuickButtonsView.axaml

Location: `Views/MainForm/Panels/QuickButtonsView.axaml`
Primary Function: Quick button management and execution

Current Overlay Usage

Overlay Type	Implementation Status	Need Level
None Currently	No overlays implemented	◍ Medium

Missing Overlays

- **Button Delete Confirmation**: "Delete this quick button?"
- **Execution Success**: "Quick button action completed"
- **Edit Confirmation**: "Save changes to this button?"

🎨 Special Purpose Views

MainView.axaml

Location: `Views/MainForm/Panels/MainView.axaml`
Primary Function: Main container and navigation

Current Overlay Usage

Overlay Type	Implementation Status	Notes
ThemeQuickSwitcher	☑ Implemented	Theme selection overlay
Global Overlays	☑ Container Role	Hosts other view overlays

Missing Overlay Opportunities

- **Global Error Overlay**: Application-level error handling
- **Connection Status**: Database connectivity indicator
- **Feature Tour**: New user onboarding

PrintView.axaml

Location: `Views/PrintView.axaml`
Primary Function: Print operations and layout

Current Overlay Usage

Overlay Type	Implementation Status	Notes
Loading Indicators	☑ Basic Implementation	Simple loading states

Missing Critical Overlays

- **Print Progress Overlay**: Job progress with cancellation
- **Print Settings Overlay**: Quick settings adjustment
- **Print Preview Overlay**: Enhanced preview options

🛠 Supporting Views

SettingsForm Views

Overlay Usage: Minimal - primarily static configuration

Missing Opportunities

- **Settings Validation**: "Invalid configuration" overlays
- **Save Confirmation**: "Settings saved successfully"
- **Reset Confirmation**: "Reset all settings to default?"

ThemeEditor Views

Overlay Usage: Theme resource integration only

Missing Opportunities

- **Theme Preview Overlay**: Live theme preview
- **Export Confirmation**: "Export theme as..."
- **Validation Overlay**: Color contrast warnings

📋 Usage Pattern Analysis

High Usage Views (3+ Overlay Types)

1. **RemoveTabView**: SuggestionOverlay + SuccessOverlay + EditInventoryOverlay
2. **TransferTabView**: SuggestionOverlay + SuccessOverlay (+ missing confirmations)
3. **InventoryTabView**: SuggestionOverlay + SuccessOverlay (+ missing validations)

Medium Usage Views (1-2 Overlay Types)

1. **NewQuickButtonView**: SuggestionOverlay only
2. **MainView**: ThemeQuickSwitcher only
3. **PrintView**: Basic loading only

Zero Usage Views (Critical Gaps)

1. **AdvancedInventoryView**: No overlays (batch operations need)
2. **AdvancedRemoveView**: No overlays (safety confirmations needed)
3. **QuickButtonsView**: No overlays (management feedback needed)
4. **Settings Views**: No overlays (validation needed)

🎯 Prioritized Integration Plan

Phase 1: Safety Critical (Week 1)

1. **AdvancedRemoveView**: Add delete confirmation overlays
2. **AdvancedInventoryView**: Add batch operation confirmations
3. **All Views**: Add global error overlay integration

Phase 2: User Experience (Week 2)

1. **InventoryTabView**: Add validation and confirmation overlays
2. **TransferTabView**: Add transfer confirmation overlays
3. **NewQuickButtonView**: Add success and validation overlays

Phase 3: Polish (Week 3)

1. **QuickButtonsView**: Add management operation overlays
2. **PrintView**: Enhanced progress overlays
3. **Settings Views**: Add validation and confirmation overlays

This mapping reveals that **60% of views have inadequate overlay coverage**, with advanced operation views completely lacking critical safety overlays.