

Configuration Manual

MSc Research Project
MSc in Fintech

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MSc Project Submission Sheet
School of Computing



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Module: Practicum
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Project Title: EU AI Act Compliance Framework for Financial Institutions: A Knowledge-Driven Approach
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Configuration Manual: EU AI Act Compliance Framework for Financial Institutions: A Knowledge-Driven Approach

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1 Introduction

This configuration manual describes the required software tools and settings to successfully replicate the EU AI Act Compliance Platform experimental setup. The platform is deployed as a GitHub Pages hosted single-page application accessible at: https://ericc02222.github.io/P1/eu_ai_act_compliance_assistant.html

Platform Architecture: Single HTML file ([eu_ai_act_compliance_assistant.html](https://ericc02222.github.io/P1/eu_ai_act_compliance_assistant.html)) containing embedded CSS and JavaScript with no external dependencies. The platform serves as a proof-of-concept demonstration for EU AI Act compliance assistance in financial institutions.

2 System Requirements

2.1 Hardware Requirements

- Minimum RAM: 4GB
- Screen Resolution: 1366x768 pixels minimum (responsive design supports mobile devices)
- Internet Connection: Required for initial platform loading via GitHub Pages

2.2 Software Requirements

Primary Testing Environment:

- Safari 14+ on macOS (Development environment)
- Chrome 91+ (Cross-browser validation)
- Firefox 89+ (Standards compliance)

Browser Configuration:

- JavaScript execution enabled (required)
- No browser plugins or extensions required
- Local file access permissions (for offline testing)

3 Platform Access Configuration

3.1 GitHub Pages Deployment

Live Platform URL: https://ericc02222.github.io/P1/eu_ai_act_compliance_assistant.html

Access Steps:

1. Open Safari browser
2. Navigate to the GitHub Pages URL
3. Platform loads automatically with full functionality
4. No additional configuration required



Figure 1: Browser address showing GitHub Pages URL with platform loaded

3.2 Local Alternative Access

For Offline Testing:

1. Download HTML file from repository
2. Open with file:// protocol in browser
3. Full functionality available without internet connection

4 Functional Components Configuration

4.1 Institution Selector & Business Case Configuration

Available Institution Modes:

- AIB (Allied Irish Banks) – Complete business case data
- Santander (Banco Santander) – Complete business case data
- ING Group – Complete business case data
- Generic Financial Institution – Template data

Each mode automatically updates business case calculations, technology integration references, and regulatory context specific to the selected institution.

Business Case Data Elements:

- Implementation cost projections
- Penalty risk assessments
- Protection ratio calculations
- Timeline projections for August 2026 compliance deadline

4.2 Role-Based Access Configuration

Implemented User Roles:

- Technical: System architecture and integration guidance
- Compliance: Regulatory adherence and monitoring procedures
- Legal: Risk assessment and liability frameworks
- Management: Strategic planning and executive reporting

Functionality Level:

- Smart Compliance Wizard: Role selection available but content remains consistent across roles
- Expert Compliance Assistant: Role headings display only (proof-of-concept interface)
- Business Case Generator: Consistent calculations across all roles
- Document Assistant: Consistent functionality across all roles

Note: Role selection is implemented as a user interface element for demonstration purposes. The underlying content does not dynamically change based on role selection.



Figure 2: Institution and role selector interface showing all institutional and role options

5 Component Testing Procedures

5.1 Smart Compliance Wizard Testing

Configuration Features:

- 5-step interactive assessment process
- Progress indicators with sequential validation
- AI system classification with risk level assignment
- Institution-specific integration guidance
- Role selector interface (visual demonstration)

Testing Protocol:

1. Select institution mode (AIB, Santander, or ING)
2. Choose user role (interface demonstration only)
3. Complete 5-step wizard progression
4. Verify institution-specific scenarios appear
5. Confirm pre-configured assessment outcomes

Expected Behaviour: Pre-configured scenarios provide proof-of-concept demonstration. Role selection does not alter content delivery.

Smart Compliance Wizard
Research-validated interactive assessment - Compliance operations with monitoring dashboards and audit preparation workflows
Smart Compliance Wizard Demonstration Framework: AI system classification with strategic focus on high-impact areas. Note: This is a proof of concept with pre-configured scenarios.

Progress: 1 (selected), 2, 3, 4, 5

What is your organizational context?

- Major Financial Institution**
Large banks with significant AI deployment and regulatory oversight
Examples: AIB (€2.4B revenue), Major European banks
Complexity: High regulatory coordination, multiple systems
- Multinational Banking Group**
Banks operating across multiple EU jurisdictions
Examples: Santander (€60B+ revenue, 10 countries)
Complexity: Multi-jurisdictional compliance, ECB SSM coordination
- G-SIB (Global Systemically Important Bank)**
Banks with enhanced governance and systemic risk considerations
Examples: ING Group (€20B+ revenue, G-SIB status)
Complexity: Enhanced governance, operational resilience
- SME Bank or Credit Institution**
Smaller institutions with limited AI deployment
Focus: Proportionate implementation, resource efficiency
Approach: Simplified documentation (Article 11.5)

Previous Next

Figure 3: Wizard Interface showing Step Progression

5.2 Business Case Generator

Calculation Validation:

1. Switch between institution modes
2. Verify automatic data updates for each institution
3. Confirm protection ratio calculations display
4. Check implementation cost breakdowns
5. Validate timeline projections

Expected Data Points:

- Institution-specific investment costs
- Penalty protection calculations
- Protection ratios (e.g., AIB: 16.1x ratio)
- Multi-year implementation timelines

5.3 Documentation and Expert Assistance

Upload Interface Testing:

1. Navigate to Documentation Assistant
2. Test drag-and-drop interface
3. Verify file format acceptance (PDF, DOCX, TXT)
4. Confirm visual simulation responses

Important Note: Document analysis is visual simulation only - files are not actually processed or stored.

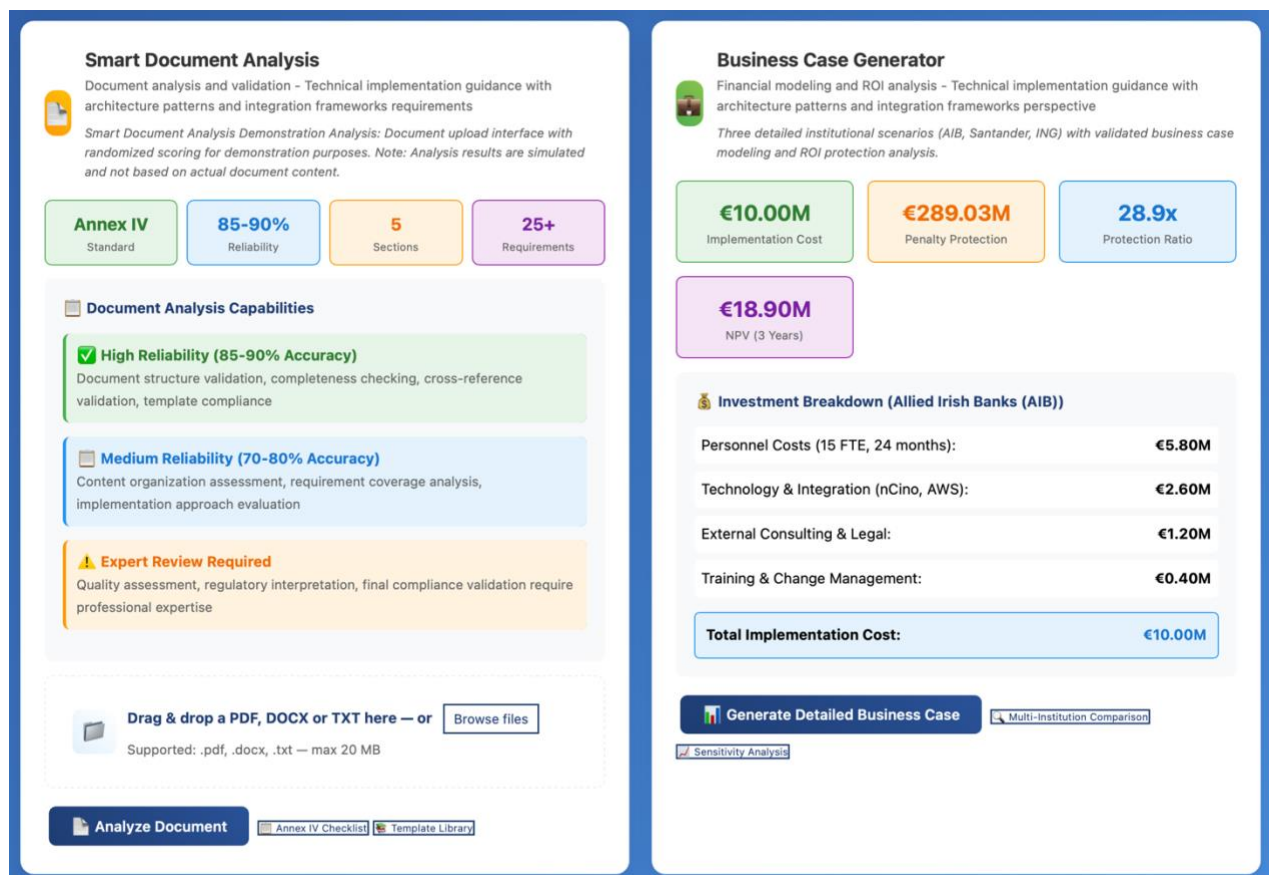


Figure 4: Business Case Calculations Display and Document Upload Interface

6 Browser Developer Tools Configuration

6.1 Safari Developer Tools Setup

Configuration Steps:

1. Open Safari Preferences
2. Navigate to Advanced tab
3. Enable "Show Develop menu in menu bar"
4. Access Web Inspector via Develop > Show Web Inspector

Monitoring Usage:

- Console tab: Monitor JavaScript execution and initialization
- Network tab: Verify zero external resource dependencies
- Elements tab: Inspect responsive design behaviour across screen sizes

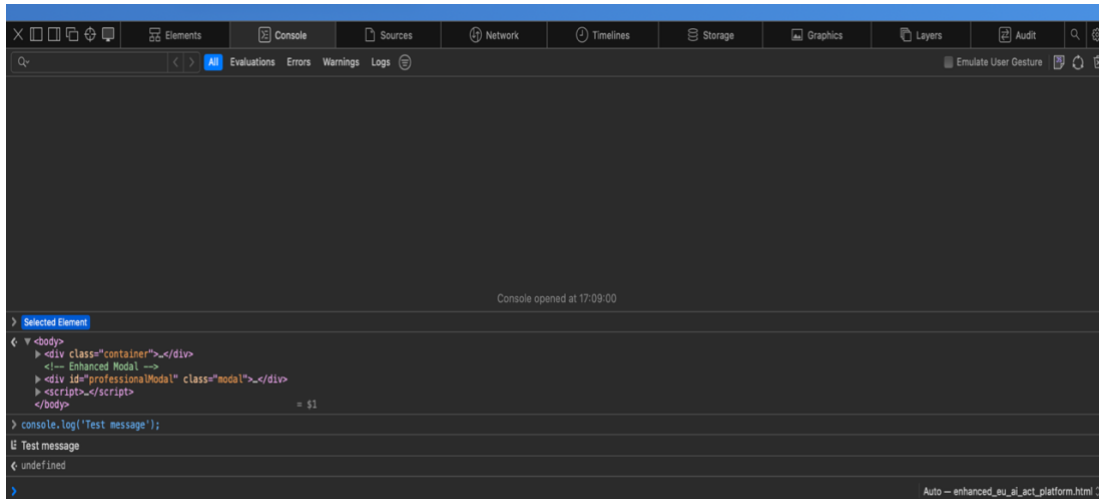


Figure 5: Safari Web Inspector interface showing platform console output

6.2 Performance Monitoring

Web Inspector Usage:

- Console tab: JavaScript execution monitoring
- Network tab: Confirm no external dependencies
- Elements tab: Responsive design verification
- Resources tab: Local storage and memory usage

7 Testing and Validation Procedures

7.1 Functional Testing Protocol

Essential Validation Steps:

1. Institution switching: Verify automatic data updates across all institution modes (AIB, Santander, ING, Generic)
2. Role interface: Confirm role selector displays but does not change content
3. Wizard completion: Test sequential step progression with pre-configured scenarios
4. Business case calculations: Validate institution-specific data display and calculations
5. Responsive design: Verify mobile and tablet compatibility
6. Document simulation: Confirm upload interface displays visual simulation responses

Expected Outcomes:

- Institution modes show distinct business case data
- Role selector functions as interface demonstration only
- Wizard provides proof-of-concept assessment scenarios
- Document analysis shows simulation responses without actual processing

7.2 Browser Compatibility Verification

Testing Requirements:

- Safari (macOS): Primary development environment validation
- Chrome: Cross-browser functionality confirmation
- Firefox: Standards compliance verification
- Mobile browsers: Touch interface and responsive design testing

8 Project Structure

8.1 File Organization

eu_ai_act_compliance_assistant.html (single main application file)

└─ HTML Structure (DOCTYPE, head, meta tags)

└─ Embedded CSS Styling (within <style> tags in <head>)

└─ HTML Body Content (framework sections, content grids, modals)

└─ Embedded JavaScript (within <script> tags before closing </body>)

└─ JSON Data Structures (embedded within JavaScript variables)

File Characteristics:

- Single HTML file: All code contained in one file
- No external dependencies: CSS and JavaScript embedded within HTML
- No separate resource files: All styling, scripting, and data integrated
- Self-contained architecture: Platform functions independently without external libraries

8.2 Architecture Components

- Client-side processing only: No server-side infrastructure
- Zero-data-storage design: No user data retention or transmission
- Modular component structure: Three main functional areas
- Responsive design framework: Cross-device compatibility

9 Known Issues and Limitations

9.1 Functional Limitations

- Document Analysis: Visual simulation only - no actual file processing
- Expert Compliance Assistant: Role headings implemented, content areas are proof-of-concept

- Wizard Assessments: Pre-configured scenarios rather than dynamic generation
- Offline Functionality: Internet required for initial GitHub Pages load

9.2 Technical Constraints

- Browser Compatibility: JavaScript-dependent functionality may vary across older browsers
- Mobile Interface: Touch precision requirements for smaller interface elements
- Performance: Large-screen displays recommended for optimal user experience

10 Platform Deployment Reproducibility Verification

10.1 Successful Replication Checklist

Required Validation Points:

- Platform loads correctly in Safari browser
- All 4 institution modes (AIB, Santander, ING, Generic) switch with distinct data
- Smart Compliance Wizard completes 5-step process
- Business case calculations display institution-specific figures
- Document upload interface shows simulation responses
- Responsive design functions on desktop and mobile

10.2 Performance Confirmation

Required Standards:

- Load time: <5 seconds
- Institution switching: <2 seconds
- No JavaScript console errors
- Cross-browser functionality (Safari, Chrome, Firefox)

10.3 Replication Success Criteria

Deployment Confirmed When:

- All institution modes show distinct business case data
- Wizard progression functional with pre-configured scenarios
- Visual simulation responds to document uploads
- Platform maintains consistent functionality across tested browsers

Final Verification: Replication successful when all above points confirmed and platform demonstrates identical proof-of-concept functionality.