

## TIDE SCHEDULE - TO9

### GUI:

#### **Milestone 1: Sept 2023 – Dec 2023**

- Derive architecture and Infrastructure baseline requirements for AI & Cloud
  - Mockups and Wireframes
- JWICS Tech Risk Assessment
- Framework for front-end & back-end deployment

#### **Milestone 2: Jan 2024 – March 2024**

- Start Initial phase for web development using *Python, Django, and PostgresQL*
  - Start TIDE website in Django
  - Convert DB to PostgreSQL:
    - Implement CRUD functionality
  - Implement Authentication and Authorization baselines:
    - Row Level Security
    - Adding Usernames & Password logins for each user type
    - Approve Access Request
    - TIDE Access
    - AO Access
  - Creating Documents Process:
    - Upload intelligence/documents to S3 bucket
    - View Intel Documents
  - UI Development:
    - Classification banner
    - Warning Banner
    - Logout Screen
    - Add Side Menu
    - Update Top Menu
    - Show Grid View
    - Add Threat Resource Map
  - Infrastructure:
    - Add all tables to the REST API

#### **Milestone 3: April 2024 – June 2024**

- Continue with Web UI & AI Development using feedback from customer
  - Admin:
    - View all users
  - Authentication/Authorization:
    - Limit use of web-app by role
    - Restrict documents by clearance levels
    - Access Guide / Tips for Request Justifications

- Documents:
  - Cover image for document & store it
  - Comment on documents
  - Add upload document feature to 'Uploads Folder'
  - Allow private notes on documents
  - Prevent duplicates
  - Show all comments
  - Sort favorites to top of list
  - Setup advance query feature to sort intel by date/time
- Groups
  - Add users in a group
  - Group Messages
  - Group Folders
  - User invitations to groups
- DevOps
  - Add SSL certificate to Docker Image
  - Setup AWS DevOps
- UI
  - Support dialog
  - Support page
  - About dialog
  - Update profile
  - Profile page
  - Messages page
  - Notifications page
  - Advance search
  - About Page
  - Admin page
  - Themes Page
  - Access Requests Page
- Messages
  - Message Board
  - Send message to other users
  - Shared documents message
- Notifications
  - New intelligence reports alert
  - Email preferences for notifications
  - Received notification within the app that documents with matching tags have been added/uploaded
  - Access request approval/denial
- Tags
  - Add/Delete Tag to AO
  - Add tags to Programs/Systems

#### **Milestone 4: July 2024 – Sept 2024**

- Final web development stages:
    - Authentication/Authorization:
      - Login with JWICS, CAC SIPR, CAC NIPR
    - Infrastructure:
      - Feature
      - Validation for all documents to match S3 buckets
    - UI
      - Branding
      - Light/Dark themes
    - Admin
      - View database changes
      - View access logs
    - Cybersecurity
      - Log all accesses
      - Cross Domain Solutions for file transfer
      - Application logging
      - AWS logging
      - Trim Access Logs
      - AWS secret manager for DB passwords
    - Docs
      - Viewing activity for documents
      - Related Programs
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#### **AI:**

##### **Milestone 1: Current AI Tool Feature Integration with UI**

**Timeline: April 2024 - May 2024 (2 months, 4 Sprints)**

Tasks:

1. Setup and Initial Integration (May 2024):
  - Integrate existing AI tools and Streamlit App with the TIDE UI.

##### **Milestone 2: Conduct Demos and Collaboration Sessions**

**Timeline: June 2024 - August 2024 (3 months, 6 Sprints)**

Tasks:

1. Collaboration and Feedback Collection:
  - Conduct demos and collaboration sessions with TETRA AOs and analysts.
  - Gather and analyze feedback from stakeholders.
  - Refine and update AI tool features based on feedback.

### **Milestone 3: Ability to Extract Images and Data from Documents**

**Timeline: June 2024 - July 2024 (2 months, 4 Sprints)**

Tasks:

1. Feature Development (June 2024):
  - Incorporate capabilities for figure extraction.
  - Implement the ability to extract images from documents.
2. Integration and Testing (July 2024):
  - Integrate these features with the TIDE UI.
  - Conduct initial testing and validation.
  - Ensure visual output is compatible with UI.

### **Milestone 4: Develop Test Bed Architecture and Metrics for Model Evaluation**

**Timeline: August 2024 - October 2024 (3 months, 6 Sprints)**

Tasks:

1. Test Bed Development:
  - Set up initial architecture in a standalone AWS account with no network access.
  - Develop testing scenarios and metrics.
  - Test containerization of code, loading in the test bed environment.
  - Execute tests on the TIDE prototype and review results.
  - Configure resources to replicate the development system.
  - Develop test bed architecture.
  - Develop testing scenarios and metrics.
  - Test containerization of code, loading in the test bed environment.
  - Execute tests on the TIDE prototype and review results.
  - Create test harnesses to verify input/outputs of all functions.
2. Metrics and Automated Testing:
  - Develop automated tests corresponding to standard practices.
  - Implement grading systems for all AI features.
  - Create a dashboard for evaluating metrics.
  - Verify the system in the Pre-Deployment test bed.

### **Milestone 5: Add User Feedback/Reinforcement Layer to Train and Optimize Models**

**Timeline: September 2024 - November 2024 (3 months, 6 Sprints)**

Tasks:

1. Reinforcement Layer Development (September - October 2024):
  - Develop a reinforcement layer incorporating user feedback and 'likes'.
  - Implement reinforcement layer metrics and bias oversight.
  - Add and verify error handling mechanisms.
2. Optimization and Refinement (November 2024):

- Measure timing metrics and identify areas to make code more efficient.
- Narrow down features to those with the best performance.
- Verify architecture and models in the pre-deployment test bed.

## **Milestone 6: Continuous AI Tool Integration with UI**

### **Timeline: Ongoing (Throughout 2024 and 2025)**

#### Tasks:

##### 1. Continuous Integration and Deployment:

- Regularly integrate AI tools with the UI as features are tested and validated.
- Ensure seamless updates and maintenance of the TIDE ecosystem.
- Conduct periodic reviews and updates based on user feedback and system performance.

##### 2. Regular Feature Enhancements:

- Enhance AI tools regularly with input from stakeholders.
- Engage with stakeholders to gather feedback and prioritize feature enhancements.
- Implement iterative improvements to meet evolving user needs and ensure the system stays up-to-date with the latest AI capabilities.

#### **Summary Timeline for AI:**

1. April - May 2024: Current AI Tool Feature Integration with UI
2. June - August 2024: Conduct Demos and Collaboration Sessions
3. June - July 2024: Ability to Extract Images and Data from Documents
4. August - October 2024: Develop Test Bed Architecture and Metrics for Model Evaluation
5. September - November 2024: Add User Feedback/Reinforcement Layer to Train and Optimize Models
6. Ongoing (Throughout 2024 and 2025): Continuous AI Tool Integration with UI, with Regular Enhancements Based on Stakeholder Input

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#### **Other Additional Tasks Without Epics:**

##### **Jan 2024 – March 2024:**

- Initial TIDE Logo Planning and Designing
- User guide in development process
- UI Phase 1 Testing
  - Security requirements
  - AI Model accuracy
- Demo to customer to show GUI and AI in late March
  - No integration for the GUI and AI capabilities

##### **April 2024 – June 2024:**

- UI Phase 2 Testing:
  - Security requirements
  - User functionality with integration built-in

- AI Model accuracy
  - Customer feedback
- Demo to AO(s) and Analysts and get feedback on usability in May
  - GUI and AI integration capabilities
- Initiate Beta Testing / Get BETA Testers
- Prep JWICS documentation and start the process for C2s
- Cybersecurity: Stress Testing Phase 1 – as development is occurring

**July 2024 – Sept 2024:**

- Cybersecurity: Final Phase of Stress Testing
- Risks overview and mitigation for JWICS
- Change Management Steering Group Development
- User guide organized and finalized
- AI Trend Analysis Phase 1 – *Proof of Concept*
- BETA Testing Event in July
- Action Report & Recovery
- Finalize TIDE 1.0 & Transfer to JWICS