**Maintenance Technician**

**User Stories:**

1. As a maintenance technician, I want the system to automatically generate a service ticket for the caused errors and warning messages and send them to the Engineer at Service Provider.
2. As a maintenance technician, I want to use an application to report machine issues as tickets to the Engineer, even during odd hours.
3. As a maintenance technician, I want to explain the issue to Engineers where exactly the issue has occurred within the machine.
4. As a maintenance technician, I want to categorize the urgency of the issue when reporting it to the engineer.
5. As a maintenance technician, I want to categorize the severity of the issue when reporting it to the engineer.
6. As a maintenance technician, I want to attach relevant photos to the issue description for better understanding.
7. As a maintenance technician, I want to provide a detailed description of the problem in a text format.
8. As a maintenance technician, I want to get a notification if the raised ticket is viewed by the Engineer.
9. As a technician, I want to receive an estimated time for the Engineer's initial response.
10. As a technician, I want to receive notifications for any updates made by the engineer regarding my reported issue.
11. As a technician, I want the engineer to provide a detailed analysis of the issue and potential causes in a knowledge database.
12. As a technician, I want access to a knowledge base for common machine issues and solutions that can be solved before reaching the Engineer.
13. As a technician, I want to receive regular updates from Engineer on the resolution progress for long-standing issues.
14. As a technician, I want the engineer to provide preventive maintenance recommendations for the machine to operate effectively.
15. As a technician, I want the system to notify me of any scheduled maintenance or downtime for the machine.
16. As a technician, I want the system to notify me when my reported issue is marked as resolved by the engineer.
17. As a technician, I want the ability to reopen a closed issue if the problem persists.
18. As a technician, I want to receive alerts for critical issues that require immediate attention.
19. As a technician, I want to know if the Engineer understood the issue in the machine that I described through the application.

**Features to be implemented based on Maintenance Technician User Stories:**

Represented in this colour.

Features already available in X4 Assert Performance Platform:

1. Automatic Service Ticket Generation:

* Generate tickets for errors and warnings.
* Send tickets to the Engineer automatically.

1. Mobile Application for Issue Reporting:

* Provide a mobile app for issue reporting.
* Allows reporting during odd hours.

1. Report the issue more precisely:

* Provide a Questionnaire form (Machine Name/ID, Location of the Machine, Location within the machine, Your Observations, Your Actions, automatically fill with current data and time) to the Maintenance Technician to explain the problem in detail.

1. Issue Urgency Categorization:

* Enable technicians to categorize issue urgency.
* Urgency is categorized based on time-sensitivity decided by the Maintenance technician and decides which issue must be corrected first for the issues in same category.

1. Issue Severity Categorization:

* Allow technicians to categorize issue severity.
* Critical issue, Major Issue and Minor Issue.

1. Photo Attachment for Issue Description:

* Allow technicians to attach photos and videos to issue descriptions.

1. Text-based Problem Description:

* Provide a text input for detailed problem descriptions.

1. Ticket View Notification:

* Notify technicians when their ticket is viewed.

1. Estimated Response Time:

* Provide an estimated time for Engineer's initial response.

1. Update Notifications:

* Notify technicians with updates on reported issues.

1. Detailed Analysis and Knowledge Database:

* Allow Engineers to provide detailed analyses.
* Maintain a knowledge base for common issues.

1. Access to Knowledge Base:

* Provide technicians access to a knowledge base providing the error and warning messages with an error code/ID.

1. Progress Updates for Long-standing Issues:

* Regularly update technicians on issue resolution.

1. Preventive Maintenance Recommendations:

* Allow Engineers to provide preventive recommendations after analysing different parameters in the machine.

1. Scheduled Maintenance Notifications:

* Notify technicians of scheduled maintenance or downtime.
* Possibility to set schedule maintenance inside the application.

1. Resolution Notification:

* Notify technicians when issues are resolved.

1. Reopen Closed Issues:

* Allow technicians to reach out Engineers if there is still a problem and reopen closed issues.
* Sending message to Engineers after the issue resolved and later reopening the ticket if there is still an issue.

1. Alerts for Critical Issues:

* Send alerts for critical issues to Engineers through an Email or Teams.

1. Issue Understanding Confirmation:

* Provide a confirmation mechanism for issue understanding.
* Confirmation through chat.

**Engineer: (Engineer at Service Provider)**

**User Stories:**

1. As an Engineer, I want to know the warranty period of the provided Machine to figure out which service must be offered to the Customer.
2. As an Engineer, I want to get the clear description of the issue, photos, and videos to understand the issue thoroughly.
3. As an Engineer, I want to be notified of the urgency and severity categorization made by the maintenance technician for prioritizing service requests.
4. As an Engineer, I want the error messages, warning messages and issues to be given with error codes/IDs to identify the issue and communicate about it clearly with the maintenance technician.
5. As an Engineer, I want to confirm the understanding of the reported issue with the maintenance technician to ensure alignment on the problem statement.
6. As an Engineer, I want the option to engage in live chat or real-time communication with the maintenance technician to seek immediate clarification.
7. As an Engineer, I want to receive a notification when the maintenance technician updates any additional information or updates regarding the reported issue.
8. As an Engineer, I want knowledge database of any previous issues or resolutions related to the reported issue to resolve the common issues.
9. As an Engineer, I want to receive notifications and have the capability to reopen a closed ticket when a maintenance technician identifies a persistent problem that requires attention.
10. As an Engineer, I want to view a summary dashboard of all open service tickets, prioritized by urgency, to efficiently manage workload.
11. As an Engineer, I want to receive notifications about scheduled maintenance or downtime for machines serviced by the organization.
12. As an Engineer, I want to be alerted of critical issues to my email or teams that require immediate attention, ensuring prompt response and resolution.
13. As an Engineer, I want to track and analyse the frequency of specific machine issues reported by different technicians to identify common trends.
14. As an Engineer, I want to provide the status of the issue to maintenance technician, for the process to be smooth.
15. As an Engineer, I want to analyse the issue and notify the service needs to be offered through remote service or Onsite.
16. As an Engineer, I want to upload all the corrections information into a knowledge database for smooth handling of repeated issues.
17. As an Engineer, I want to visualize the trends of different parameters to analyse the data and perform predictive maintenance to the machine.

**Features to me implemented based on the User Stories of Engineer at Service Provider:**

Represented in this colour.

Features already available in X4 Assert Performance Platform:

1. Warranty Information:

* Display the warranty period of the provided machine inside the questionnaire form.

1. Issue Description and Media Attachments:

* Allow maintenance technicians to provide a clear description of the issue.
* Support photo and video attachments for better understanding.

1. Urgency and Severity Notifications:

* Notify the engineer of urgency and severity categorization made by the maintenance technician.
* Prioritize service requests based on urgency and severity levels.

1. Error Messages with Codes/IDs:
   * + Display error messages, warning messages, and issues with associated error codes/IDs.
2. Confirmation of Issue Understanding:
   * + Provide a mechanism for the engineer to confirm understanding of the reported issue with the maintenance technician.
3. Live Chat or Real-time Communication:
   * + Implement live chat or real-time communication for immediate clarification between the engineer and maintenance technician.
4. Notification of Updates:
   * + Notify the engineer when the maintenance technician updates additional information or provides updates regarding the reported issue.
5. Knowledge Database:
   * + Maintain a knowledge database of previous issues and resolutions related to reported problems.
     + Enable engineers to access this database for efficient issue resolution.
6. Reopening Closed Tickets:

* Allow maintenance technicians to reopen closed tickets for persistent problems.
* Notify the engineer when a closed ticket is reopened.

1. Summary Dashboard:

* Display a summary dashboard of all open service tickets, prioritized by urgency, for efficient workload management.

1. Scheduled Maintenance Alerts:

* Provide notifications to engineers about scheduled maintenance or downtime for machines serviced by the organization.

1. Critical Issue Alerts:

* Send alerts to the engineer's email or collaboration platform (e.g., Microsoft Teams) for critical issues that require immediate attention.

1. Trend Analysis:

* Enable tracking and analysis of the frequency of specific machine issues reported by different technicians to identify common trends.

1. Status Communication:

* Allow engineers to provide the status of the resolved or in-progress issue to the maintenance technician for smooth communication.

1. Remote or Onsite Service Analysis:

* Analyse reported issues to determine whether remote service or onsite support is required.

1. Knowledge Database Update:

* Allow engineers to upload correction information into the knowledge database for handling repeated issues efficiently.

1. Data Visualization and Predictive Maintenance:

* Visualize trends of different parameters to analyse data.
* Implement predictive maintenance features based on trend analysis for proactive issue resolution.