TAQATHON 2025 - STUDENT BRIEF

About the TAQATHON

TAQATHON is a hands-on innovation challenge co-organized by TAQA Morocco and 1337 Coding School (UM6P). It is designed to bring together the technical creativity of 1337 students and the operational needs of a leading industrial energy company. The goal is to create a functional prototype (Proof of Concept - POC) to address a real-world issue faced by TAQA Morocco teams in their daily operations.

This edition focuses on building a digital solution for managing critical anomalies in industrial units. Students will explore ways to streamline the current process, improve prioritization, and enhance traceability and learning.

Why This Challenge Matters

In complex industrial environments like those of TAQA Morocco, managing anomalies is essential for ensuring equipment availability, operational performance, and safety. Today, the tracking of these anomalies is often fragmented and lacks centralization. TAQA wants to move towards a more structured and efficient system that allows for better decision-making and operational excellence.

Your Challenge

Your mission is to design and develop a prototype of a digital tool that helps TAQA Morocco manage technical anomalies more effectively. This means:
- Collecting anomaly data from different sources
- Evaluating how critical they are
- Tracking progress on resolving them
- Linking them to planned maintenance periods
- Capturing and sharing insights and lessons learned

The prototype should be clear, user-friendly, and designed to support real industrial workflows.

Core Functionalities (Mandatory)

All participating teams must implement the following features in their prototype:

1. **Centralized Anomaly Registration and Display**
   - An interface to log anomalies from various sources (e.g., Oracle, Maximo, Excel).
   - Fields include: title, description, type, related equipment, date, origin, and responsible person…
2. **Criticality Assessment**
   - A field that supports assessing anomaly severity using simplified criteria (e.g., safety, availability, urgency).

- o Optional use of machine learning to suggest criticality level, with manual override possible.
3. **Status Tracking**
   - o Update status of each anomaly (e.g., new, in progress, resolved).
   - o Ability to add comments and attach documents (e.g., reports, images).
4. **Return of Experience (REX)**
   - o A structured space to write and store feedback and observations after resolving an anomaly.
   - o Attach files such as PDFs, summaries, or photos.
5. **Link to Maintenance Windows**
   - o Each anomaly should be linked to a planned or opportunity-based maintenance window.
6. **Filtering and Sorting Tools**
   - o Ability to filter and sort anomalies by various parameters like equipment, date, criticality, and status.

Value-Added Functionalities

Teams are encouraged to add the following features:

1. **Change History Tracking**: Maintain a log of changes made to each anomaly's details or status.
2. **Dashboard with Key Indicators**: Provide a simplified dashboard showing KPIs (e.g., number of open anomalies, average resolution time).
3. **Archived Anomalies with REX**: Include access to past anomalies and their associated Return of Experience entries.

Expected Outcome

At the end of the TAQATHON, each team should be able to present a working prototype that demonstrates how their solution can:
- Improve visibility and tracking of anomalies
- Support better decision-making in maintenance operations
- Enhance collaboration between operational teams
- Offer a scalable base for future development

Approach

Focus on building a clear and structured solution, using technologies you're comfortable with. Collaboration, user understanding, and clean design will make a major difference. Make sure your prototype meets all core functionalities. Optional features are welcome.

This is your opportunity to contribute to a real industrial innovation. Take it seriously, work with commitment, and use the challenge as a chance to grow your skills, showcase your capabilities, and make an impact.