**Functionalities Required for the IvE Design Challenge: Information Management System**

Hello Innovator!

We are so excited that you have shown interest in participating in this Design Challenge. We have highlighted the functionalities we would like for the Information Management System, but before that please note the following:

* We will be awarding cash prizes to the top 3 teams.
* By participating in this challenge, you acknowledge that, should your Management System win, apart from receiving your prize you could be engaged further to develop a functional system that will be used in the Design Studio. Should you choose to accept this engagement you will receive compensation for the system you develop.
* Individual applications will not be accepted. We will only be accepting submissions of applications with two team members.
* We will be hosting a virtual info-session on **12th February 2025** at 7pm to clarify any information that is unclear.
* The finale of the Design Challenge will be on the **7th March 2025** at the IvE Design Studio at Chandaria Business Incubation and Innovation Centre, Kenyatta University. All participating teams will showcase the functionalities of their systems during this event, and the winning teams will be awarded.

**Functionalities** for an **Offline Information Management System (OIMS)** for the **Kenyatta University Design Studio**, with integrated links to the **Cezeri Lab** and the **MedTech Lab**:

### **1. User Management**

* **Role-based Access Control**
  + Admin: Full control over the system.
  + Technicians: Manage inventory and equipment logs.
  + Students: Limited access for project management and resource booking.
  + Lab Managers (IvE, Cezeri & MedTech): Access shared functionalities across labs.
* **User Authentication & Profiles**
  + Login credentials.
  + Role-specific dashboards.

### **2. Inventory Management**

* **Equipment and Tools Tracking**
  + List of equipment/tools with status (available, in use, maintenance)
  + Unique identification for each item (e.g., barcode/QR codes).
* **Maintenance Scheduling**
  + Automated reminders for preventive maintenance.
  + Maintenance logs and history for equipment.
* **Asset Sharing Between Labs**
  + Integration to track assets shared between the Design Studio, Cezeri Lab, and MedTech Lab.

### **3. Project Management**

* **Project Tracking**
  + List of active, pending, and completed projects.
* **Resource Allocation**
  + Schedule and reserve equipment, tools, or workspaces.
  + Conflict detection (e.g., overbooking of machines).
* **Documentation Management**
  + Store project files, reports, and diagrams offline.

### **4. Workspace and Equipment Booking**

* **Booking System**
  + Reserve equipment, machines, and lab spaces in advance.
* **Time Slot Allocation**
  + Assign time slots for equipment usage.
* **Usage Logs**
  + Track who used which equipment, when, and for how long.

### **5. Integration with Cezeri Lab and MedTech Lab**

* **Shared Inventory Management**
  + Cross-lab visibility of tools, equipment, and consumables.
* **Data Syncing**
  + Automatic offline syncing of data across labs when connected to a local server.

### **6. Backup and Data Security**

* **Offline Data Storage**
  + Store all information on local servers.
* **Data Backup**
  + Automated offline backups with restore options.
* **Data Encryption**
  + Secure sensitive data with encryption.

If you have any questions, kindly reach out to [ive@ku.ac.ke](mailto:ive@ku.ac.ke). If you are still interested in participating in the Design Challenge, kindly sign up for the infosession here: [IvE Design Challenge Infosession](https://docs.google.com/forms/d/1qYcPxxw91Fjks5m846GVATWotdVW9HlhlEdta-DTbYA/preview)