



SmartCampus IoT

Intelligent Facility Management for the Future of Education

Universiti Teknologi Malaysia (UTM)

University Campuses are Leaking Money



Energy Waste

Air conditioning and lighting left active in empty lecture halls contribute to massive, avoidable electricity bills.



Reactive Repairs

Facilities are only fixed after they break, causing class disruptions and higher emergency repair costs.



Security Gaps

Limited security personnel cannot monitor every corner of a large campus like UTM 24/7 effectively.

The "Brain" of the Building

SmartCampus Ecosystem

A comprehensive IoT platform combining wireless sensors, a central gateway, and an AI-powered dashboard.

- **Automated Control:** Motion sensors cut power to empty rooms.
- **Predictive Maintenance:** AI detects equipment anomalies early.
- **Real-Time Alerts:** Instant notifications for security breaches.



From Sensor to Insight



1. Detect

Wireless sensors monitor occupancy, temperature, and energy consumption in real-time.



2. Analyze

Data is sent to the cloud where AI algorithms identify patterns and usage anomalies.



3. Act

System triggers automated responses (AC off) or alerts facility managers via the app.

Proven at UTM

Pilot Project Results

Currently deployed at the Faculty of Engineering as a Final Year Project.

- Successfully monitored 12 classrooms.
- Detected over 50 instances of energy waste per week.
- Validated sensor reliability with 99.8% uptime.
- Scalable to all 20 public universities in Malaysia.

Financial Impact

30%

Reduction in Monthly Operational Costs

By automating AC and lighting controls based on real-time occupancy, the system pays for itself within 12 months.

Sustainable B2B Model



Hardware Sales

One-time installation fee for wireless sensors and LoRaWAN gateways.

Retrofit-friendly design requiring no drilling.



SaaS Subscription

Monthly recurring revenue for dashboard access, AI analytics, and mobile alerts.

Tiered pricing based on campus size.

Competitive Advantage

Feature	Industrial Giants (Siemens)	Manual Labor	SmartCampus IoT
Cost	High CapEx	High OpEx (Salaries)	Affordable
Installation	Complex Renovation	N/A	Plug & Play (Wireless)
Predictive AI	✓	✗	✓
Local Support	✗	✓	✓

Accelerating Deployment (CIP SPARK)



■ Product Dev (60%)

■ Pilot Expansion (30%)

■ Operations/IP (10%)

Funding will transition the prototype to industrial-grade hardware and expand the pilot to 3 full buildings.

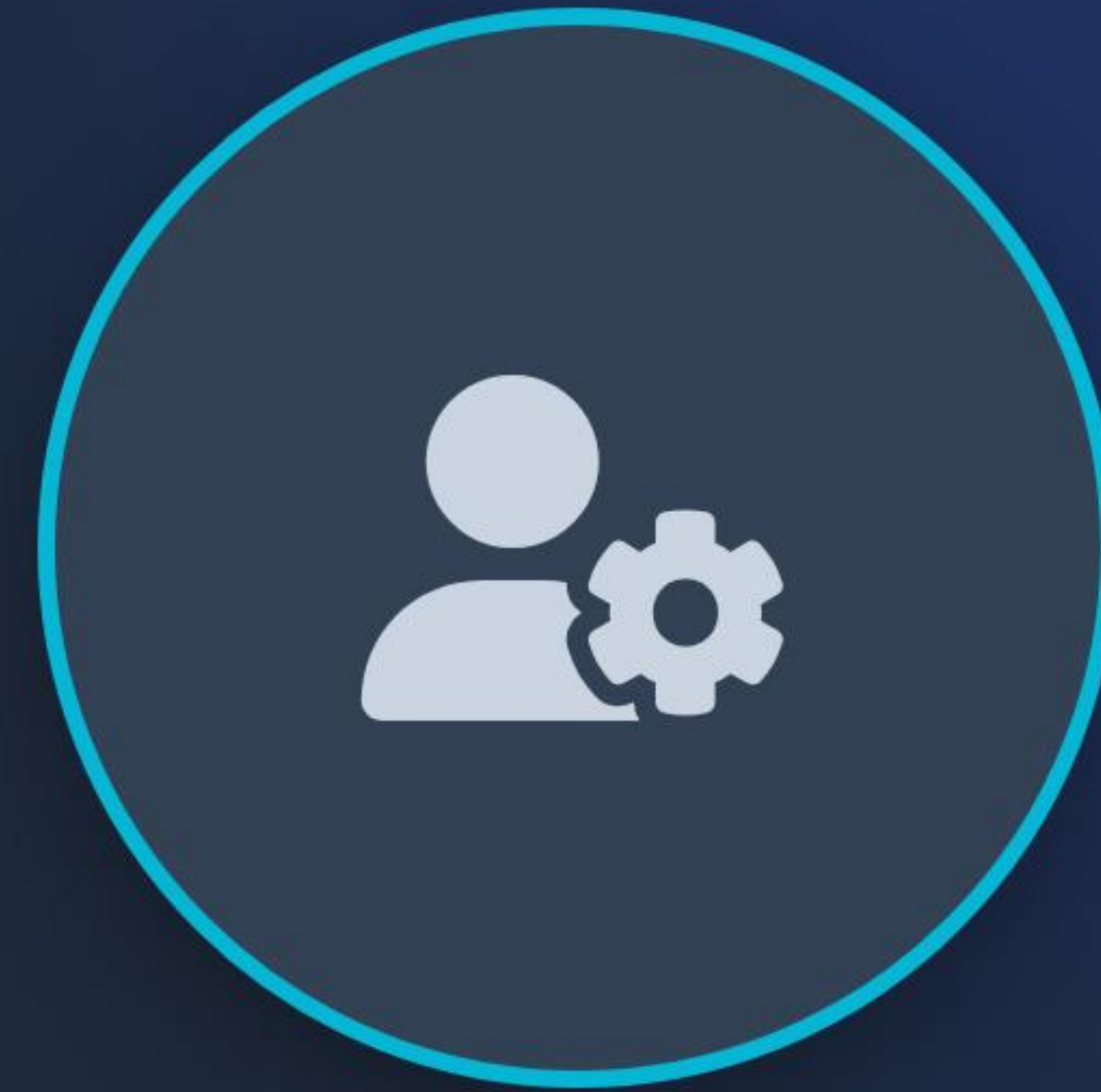
The Team



[Your Name]

Tech Lead

Full Stack Developer & IoT Architecture



[Teammate Name]

Operations Lead

Hardware Integration & Data Analysis

Let's Build a Smarter Future

We are ready to scale. Join us.



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Image Sources



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