Enhancing Hard Facility Management Efficiency - A PUA Case Study

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By

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SUMMARY

Digital Transformation in Facility Management at Pharos University (PUA)

The transition to digital from paper-based systems for facility management (FM) is an important item towards operational effectiveness, cost saving, and sustainability. This report focuses on Computer-Aided Facility Management (CAFM) systems in Pharos University (PUA), clarifying the procedure of data acquisition, automation, and implementation in small scale (maintenance sector). Below is a general summary of the study purposes, methodology, results, and suggestions.

1. Introduction

University facility management involves the maintenance of assets, equipment, and infrastructure to run at their optimal level. Traditional paper-based processes are susceptible to inefficiencies, errors, and delays. The present study examines the shift towards digital FM solutions specifically CAFM systems like SAP, Oracle, and CMMS to streamline operations at PUA.

The Study Comprises the Collection and organization of data for maintenance and assets and create a sample excel sheet for data collection and analysis and Interim solutions in the shape of automation tools Excel sheet implementation strategies towards CAFM software. And the Future upgrades, including predictive maintenance and AI implementation.

2. Methodology

The research utilized a systematic method:

Data Collection: Collected equipment information (name, type, location, serial number) and maintenance history (dates, expenses, technicians).

The Sources for data collection: paper records, personnel interviews, and physical walks, The used tools: Electronic forms (Google Forms, Excel) for systematic data capture and Coding scheme for equipment (e.g., ENG-AC-001 for Engineering Department Air Conditioner #1).

Data Organization: Created hierarchical Excel spreadsheets for:

Asset classification (by department/function).

Maintenance records (cost, intervals, spares).

Calculation (e.g., maintenance cost, response time).

Future CAFM Integration: Defined requirements for scalable CAFM software (e.g., simple-to-use interface, automatic notifications).

Recommended programming languages SAP, CMMS AND IBM Maximo).

3. Findings and Conclusion

Efficiency Gains Quicker access to data: Digital records reduce retrieval time by 70% over paper logs. Computer programmed Workflows: Automated Excel formulae for costs and maintenance schedules minimized manual effort by 50%.

Cost Savings Paper Usage Reduced: Digitization minimized paper costs by 80%. Preventive Maintenance: Maintenance interval monitoring minimized emergency repairs and run to fail by 30%.

Challenges: Staff Resistance: 40% of staff found it hard to use new tools due to lack of training. lack of data: some data are not available Data Accuracy: Errors were encountered early in the manual data migration process.

The Sustainability Benefits and Recommendation

Reduced Waste: Paperless systems were consistent with PUA's sustainability goals.
Energy Efficiency: Suggested Internet of things integration can save energy by 15%.
The recommendation for Implementation Strategies
In Short-Term Solutions implement Excel/Google Sheets: Short-term solutions for centralization of data. And do Training Programs: Employee workshops to introduce workers to digital tools.
In long term for PUA: Adopt CAFM Software: Invest in platforms like IBM Maximo or SAP. Enhance Training: Regular training sessions.
Monitor KPIs: Track parameters like maintenance downtime and cost savings.