

Under the patronage of **HRH Prince Khalid Al-Faisal**
Advisor to the Custodian of the Two Holy Mosques & Governor of Makkah Region



المؤتمر الدولي الثاني والعشرون لإدارة الأصول والمرافق والصيانة
The 22nd International Asset, Facility & Maintenance
Management Conference

Digitization - Excellence - Sustainability

Using Digital Technology in Medical Devices within the Standards of Facility Management and Safety FMS in Healthcare

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26-28 January 2025

The Ritz-Carlton Jeddah, Kingdom of Saudi Arabia

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Arab Asset, Facility and Maintenance Management Council

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FMS

Facility Management & Safety

- Building Safety
- Security
- Hazardous Materials & Waste Disposal
- Emergencies
- Fire Safety
- Medical Equipment
- Utility Systems

Medical Equipment

FMS.25 The hospital has a biomedical equipment plan to ensure that the medical equipment are regularly monitored, maintained, and ready for use.

- FMS.25.1 The hospital has adequate number of qualified biomedical staff.

Medical Equipment

FMS.25 The hospital has a biomedical equipment plan to ensure that the medical equipment are regularly monitored, maintained, and ready for use.

- FMS.25.2 There is a written biomedical equipment plan that covers the following:
 - FMS.25.2.1 A comprehensive inventory of medical equipment with their corresponding locations.
 - FMS.25.2.2 Preventive maintenance program that conforms with the manufacturer's instructions.

Medical Equipment

FMS.25 The hospital has a biomedical equipment plan to ensure that the medical equipment are regularly monitored, maintained, and ready for use.

- FMS.25.2.3 The program specifies, for each equipment, the frequency of checks, methods of checks, acceptance criteria, and actions to be taken in the event of unsatisfactory results.

Medical Equipment

FMS.25 The hospital has a biomedical equipment plan to ensure that the medical equipment are regularly monitored, maintained, and ready for use.

- FMS.25.2.4 The program includes the process for investigation and follow-up of equipment failure that addresses reporting of failure, immediate remedial actions, assessment of the failure effect on reported results and services (needs alignment), and requalification of the equipment.

Medical Equipment

FMS.25 The hospital has a biomedical equipment plan to ensure that the medical equipment are regularly monitored, maintained, and ready for use.

- FMS.25.2.5 Electrical safety testing for patient related equipment.
- FMS.25.2.6 History record for the maintenance schedule, failure incidence, and repairs done.

Medical Equipment

FMS.25 The hospital has a biomedical equipment plan to ensure that the medical equipment are regularly monitored, maintained, and ready for use.

- FMS.25.3 Technical service manuals for all equipment are available at the biomedical workshops.
- FMS.25.4 Operator manuals are available at all departments using the equipment.

Medical Equipment

FMS.25 The hospital has a biomedical equipment plan to ensure that the medical equipment are regularly monitored, maintained, and ready for use.

- FMS.25.5 The hospital ensures that all maintenance works are conducted by qualified and trained staff.

Medical Equipment

FMS.25 The hospital has a biomedical equipment plan to ensure that the medical equipment are regularly monitored, maintained, and ready for use.

- FMS.25.6 Equipment maintenance and repairs are documented to help in the decision making for replacement.

Medical Equipment

FMS.25 The hospital has a biomedical equipment plan to ensure that the medical equipment are regularly monitored, maintained, and ready for use.

- FMS.25.7 Investigation procedures conform to manufacturer's instructions.
- FMS.25.8 There is an equipment recall system that is implemented.

Medical Equipment

FMS.25 The hospital has a biomedical equipment plan to ensure that the medical equipment are regularly monitored, maintained, and ready for use.

- FMS.25.9 Each department has a back-up or alternative for each critical equipment to cover for prolonged downtime.
- FMS.25.10 Preventative Maintenance data are used for upgrading/replacing of equipment.

Medical Equipment

FMS.26 The hospital has policies and procedures that support the medical equipment management program.

- FMS.26.1 There is a policy to perform inspection on all new equipment for conformity before commissioning including those brought for "demos".

Medical Equipment

FMS.26 The hospital has policies and procedures that support the medical equipment management program.

- FMS.26.2 There is a written policy for tagging medical equipment as follows:
 - FMS.26.2.1 Preventive maintenance with testing date and due date.
 - FMS.26.2.2 Inventory number.
 - FMS.26.2.3 Removal from service.
 - FMS.26.2.4 Electrical safety check.

Medical Equipment

FMS.26 The hospital has policies and procedures that support the medical equipment management program.

- FMS.26.3 There is a policy for removal of equipment from service.
- FMS.26.4 There is a policy to address agent or contractor repairs.

Medical Equipment

FMS.26 The hospital has policies and procedures that support the medical equipment management program.

- FMS.26.5 There is a policy to eliminate the use of extension cords.
- FMS.26.6 There is a policy to restrict the use of cellular phones in the intensive care units, operating room, and cardiology units, as needed.

Medical Equipment

FMS.27 Hospital staff are trained on safe operation of medical equipment.

- FMS.27.1 Hospital staff are trained to operate safely all medical equipment.
- FMS.27.2 The training includes physicians, nurses, and paramedics.

Medical Equipment

FMS.27 Hospital staff are trained on safe operation of medical equipment.

- FMS.27.3 The training considers the following:
 - FMS.27.3.1 New equipment.
 - FMS.27.3.2 Staff transferred from a department to another.
 - FMS.27.3.3 New staff hired.
 - FMS.27.3.4 Recurrent misuse of equipment.



Menu.

- Objectives & Benefits
- System Primary modules
- Recommended Criteria's, Merits and KPIs
- Business Intelligent Dashboard

Objectives & Benefits

Build up your objectives and benefits that provide the optimal solution:

- Advanced & modern Management
- International Standards
- Local and regional requirements
- QA and KPI criteria
- Operational and financial criteria
- Simplification
- Customization
- Integration
- Remote & Cloud Access
- Mobility
- Bilingual
- Reduce cost by 10% up to 15%
- Support other than Maintenance.
- Facilitate Safety and Performance etc....
- Manage labor and parts productivity
- Expose performance indicators such as: MT, MTBF, MTTR, TP, MEL, WOP
- Pre-planning & Quality improvements
- Accreditations.
- Out-of-the-box reports
- business intelligence Dashboard
- Continuous development

System Primary modules & profiles

Search for system that provide full solutions to your O&M business needs.

- Index File
- Asset Management
- Corrective Maintenance
- Preventive Maintenance
- Supply Chain
- Stock Control
- Purchasing
- Sub-contracts
- Projects Management
- Installation Planning
- Operation Module
- Training and Continuous Education
- Quality Assurance and KPI
- Powered with AI/Predictive Maint.
- Finance for Maintenance
- Human Resources
- Services Sales
- Equipment Tracking
- Employees Evaluation
- Service Provider Evaluation
- Maintenance Program Evaluation
- CRM/End User Satisfaction
- Dashboard Live, Benchmarking
- Archiving
- GPS
- Messages Platform
- QRS
- Powered with Mobile app

Highly Recommended Criteria's, Merits and KPIs



Beyond Traditional KPI:

- Max, Min and average DT
- PM performance meter
- MEL, Man power load
- MTBF, MTTR
- Maintenance – V –
Equipment cost



Beyond Traditional Benchmarking:

- Black, Whit OR Grey
- Repair, PM
- Employee
- Service Provider



Beyond Traditional Quality Control:

- Manage QA Criteria
- User Errors
- Incidents Related to Equipment
- Misused, Missing
- DT- V – TP
- Due PM failure
- No. of failure per equipment

Highly Recommended Criteria's, Merits and KPIs



Beyond Traditional Operation:

- Operating Contracts, Contracts Budget
- Supply Chain, Inventory
- High Risk



Beyond Traditional Priorities :

- Class, WOP
- Tolerance Period
- Risk Factor
- Power Load



Beyond Traditional Cost Management:

- Asset cost, Depreciated Value
- Man Power
- Repair cost, PM cost
- Parts consumption
- Revenue growth

Business Intelligent Dashboard



Benefits

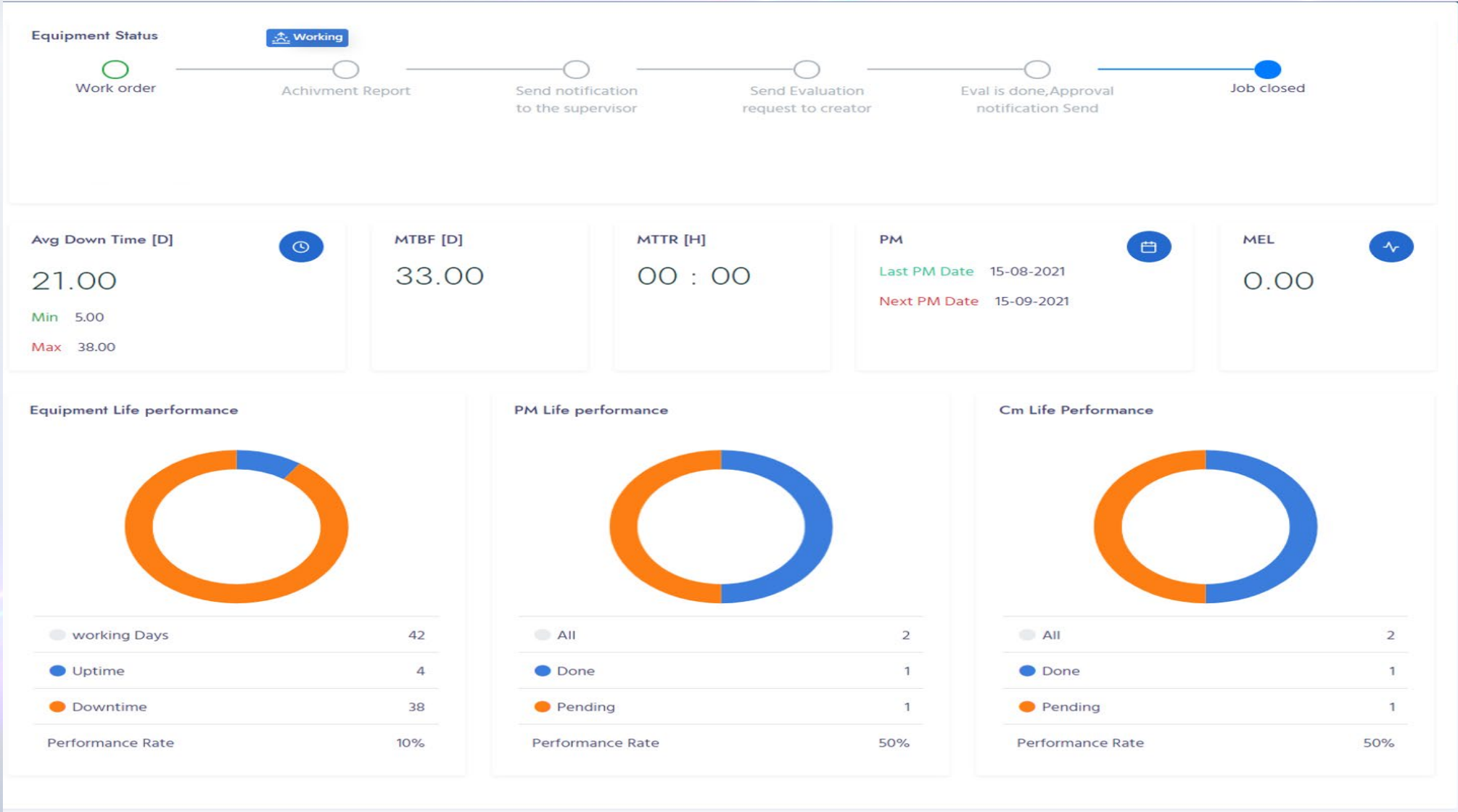
- Monitor multiple matrices at once.
- Easy accessibility to data.
- Easy to read,
- Valuable reports
- Better decision making
- Accelerate growth / Reduce cost
- Increase motivation, coordination, compliance



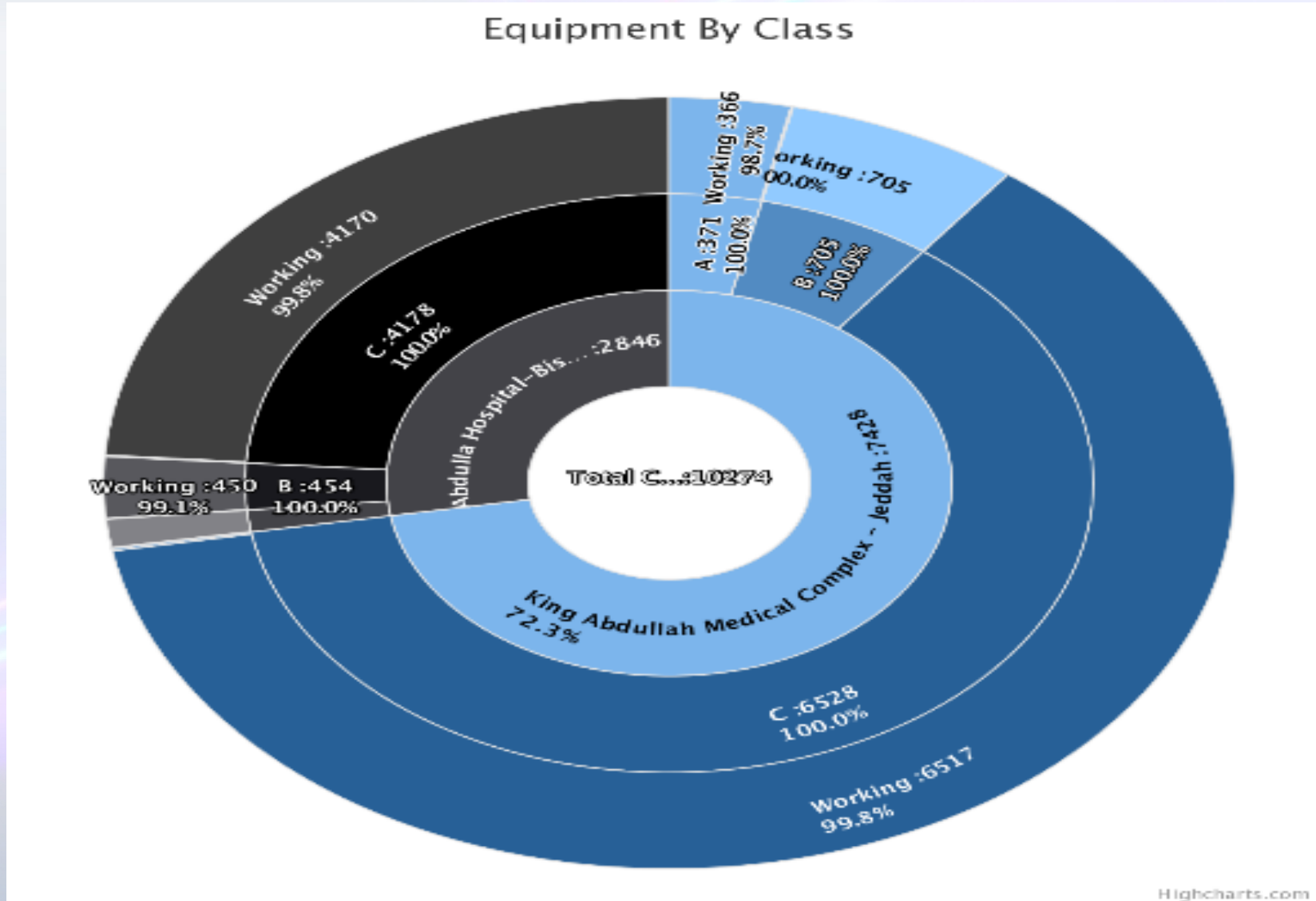
Type

- Operational KPI Dashboard
- Maintenance KPI Dashboard
- Finance KPI Dashboard
- Risk & Safety Dashboard
- Marketing & Sales Dashboard
- HR Dashboard
- CRM & QA Dashboard
- Strategy Dashboard

Business Intelligent Dashboard Example



Business Intelligent Dashboard Example



Business Intelligent Dashboard Example

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OMS

Equipment Count By Category

Category	Count
ELECTRICAL	5
MECHANICAL	8
CIVIL	5
ELECTRONICS	10
AGRICULTURE	2
HVAC	3
PRINTER	5
MIS	3
CLEANING	2
AC	2

Highcharts.com

Work Orders Count

Kingdom of Saudi Arabia

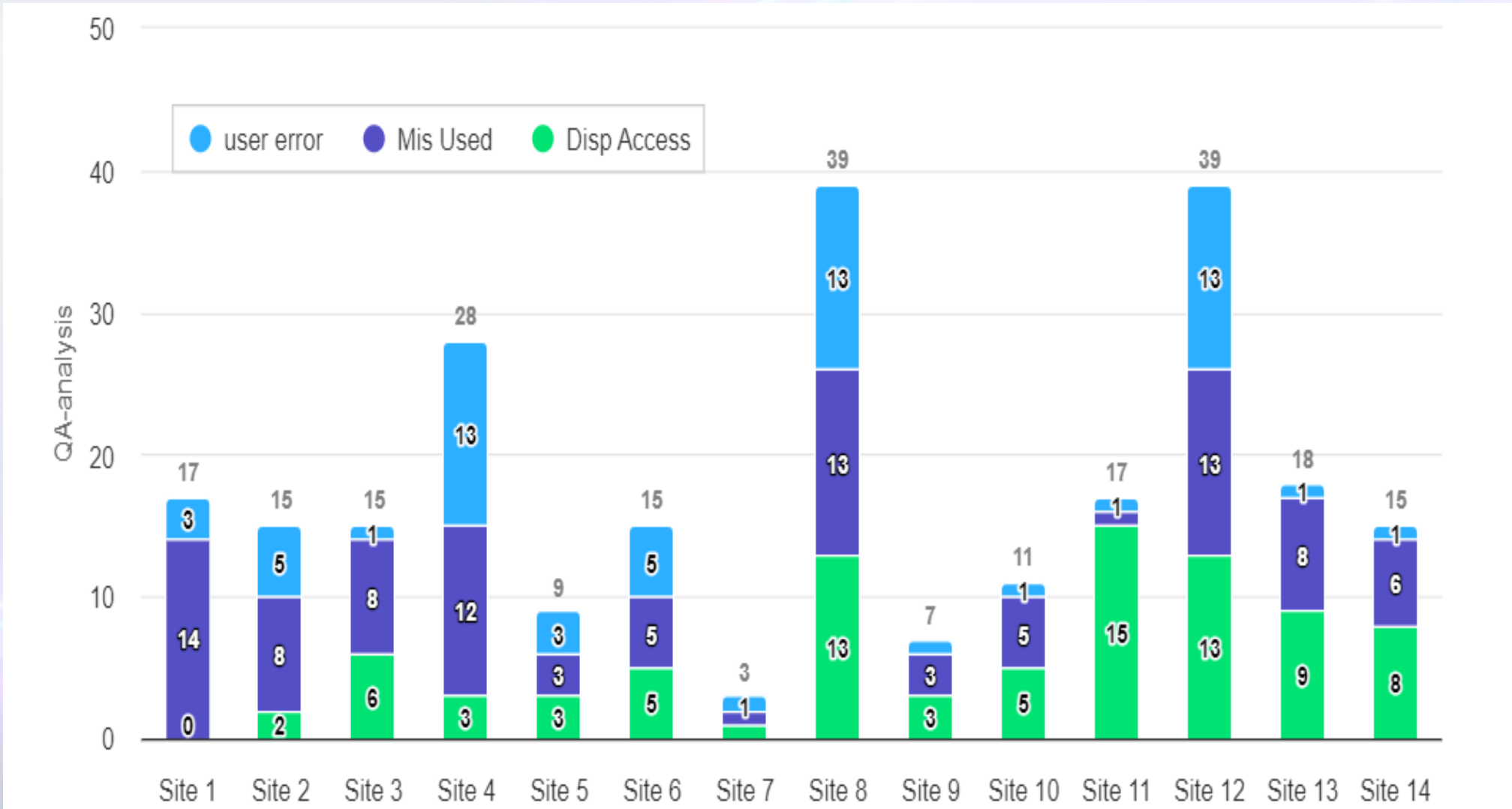
Total Count	57
Repaired	56
Pending	1
Performance Rate	98.2%

HighchartsM.com © Natural Earth

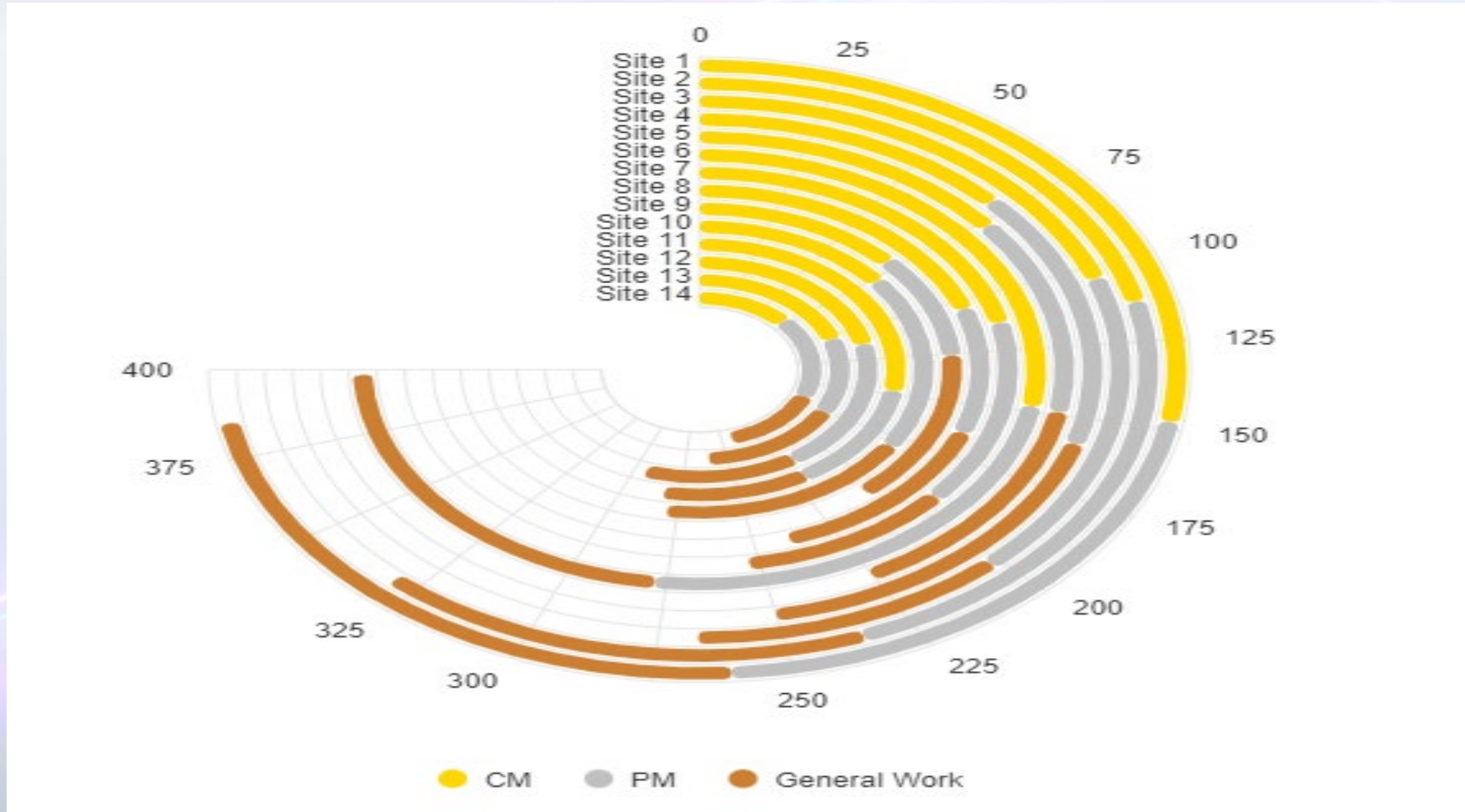
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Business Intelligent Dashboard Example



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