

Tactical Plan Goal

Goals

- Data Center Availability & Risk Assessment - Operate reliable computer room infrastructure which includes space, power, cooling and monitoring that meets or exceeds the Data Center Availability goals documented in Docdb# [3768](#). Use risk assessments on the facility infrastructure and gap analysis on the monitoring systems and identify and initiate corrective measures.
- Capacity Management & Performance Tuning - Meet the requirements for capacity management, ensuring the best possible planning to install and relocate computing equipment within the computer rooms. Pursue the most efficient use of existing infrastructure by optimal management of the implementation, operation and maintenance of cabling, racking, power, electrical distribution, cooling, and floor space allocation in the Data Centers.
- Green, Energy Monitoring & Capacity Planning - Implement new Data Center strategies, industry best practices and execute technical projects that continually improve operational power efficiency. Collect and analyze Data Center power and cooling usage metrics. Identify requirements for infrastructure and operation expansion based on current and projected activity.
- Construction & Improvement Projects - Working with CD, FESS, consultants, and contractors, provide detailed technical input in the planning, design and development of new construction and improvement projects. Perform all work effectively, safely and coordinate to ensure the transition from construction phase to occupancy is planned, efficient and smooth.
- Buildings, Offices & Support Spaces - Provide reliable operation of the FCC, GCC and LCC buildings. Provide a suitable and safe working environment for CD personnel including offices, support areas and public areas. Manage Division offices and support spaces to meet the dynamic requirements of the Division's departments.

Executive Summary of Objectives for FY11

Maintenance/Compliance Drivers

1. Optimize the maintainability of the Data Centers through a comprehensive maintenance program
2. Proactively correct failures and address infrastructure risks and gaps in monitoring to increase the operational availability of the Data Centers
3. Improve in the facility energy monitoring in key areas of the electrical distribution, particularly in FCC
4. Replacement of end-of-life critical electrical and cooling infrastructure through construction and improvement projects
5. Facilitate communication of schedule and plans for installation of computing equipment
6. Provide maintenance and improvements for FCC and GCC buildings and offices. Coordinate with FESS, AD, PPD with WH and LCC
7. Continue to ensure all facility infrastructure has monitoring for failure alerts and the appropriate layers
8. Plan for Lab wide scheduled outages and take the necessary actions to minimize the impact

Upgrades and Enhancement Drivers

1. ARRA FCC3 High Availability Computer Room Project
2. ARRA FCC2 Cooling Upgrade Project
3. Significant addition of electrical distribution in FCC2 to expand available space for racks and be in a position to leverage FCC2 cooling upgrade project
4. UPS battery replacements (CRA)
5. Meet requirements for new computing equipment procurements in the appropriate computer rooms. Relocate specific equipment and retire end of life computing
6. Increase office capacity through negotiations or construction. Continue to make improvements to building general areas and offices.
7. Improve tools & processes for data center capacity management

Strategic Drivers

1. Identify and implement tools & processes for modern Data Center capacity management and planning
2. Document and promote good practices and standards within the Data Centers
3. Increase expertise & depth on the Aperture tool that is leveraged extensively in facility planning, facility capacity management and facility improvement & projects
4. Continue training and increasing depth of expertise on all monitoring systems

5. Continue to develop plans and FESS engineering documentation for capacity & redundancy projects including the next generation high density computer rooms, standby generator for GCC Tape Robot & Network Rooms and GCC Disk Storage room.

Discretionary Project Drivers

1. Re-provision GCC Computer Room A for higher energy efficiency
2. ...

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Activities and Work Definition

Activity = FACILITY OPERATIONS + ES&H / Facility Operations

- Activity type: Service
- Description: Provide services for construction and operation of Data Centers, Buildings and Offices
- Timescale: Continuous
- Metrics: Availability metrics, Data Center infrastructure Efficiency (DCiE) and Power Usage Effectiveness (PUE) efficiency metrics, successful completion of large projects on schedule and on budget

Detailed Tactical Plan Objectives and Priorities

Maintenance and Compliance Drivers

Objectives:

1. Text here...
2. Text here....
3. ...

Assumptions and Risks (may be 2 sections if it makes your points clearer)

1. Text here...
2. Text here...
3. ...

Upgrades and Enhancement Drivers

Objectives:

1. Text here...
2. Text here...
3.

Assumptions and Risks:

1. Text here...
2. Text here...
3. ...

Strategic Drivers

Objectives:

1. Text here...

2. Text here...
3. ...

Assumptions and Risks:

1. Text here...
2. Text here....
3. ...

Discretionary Projects Drivers

Objectives:

1. Text here...
2. Text here...
3. ...

Assumptions and Risks:

1. Text here...
2. Text here...
3. ...

Staffing Issues:

The Facility Operations Department requires 6 FTEs to meet its goals. Maintaining the highly skilled team is required for continued successful facility operations. Data Center space is increasing each year and additional and enhanced services are expected.

There is a growing need for Electrical Engineering expertise to support the Department. We will have to rely upon FESS or a contractor with knowledge and experience in electrical systems found in Data Centers.

The Department is in need of a Python scripiter to support the Sensatronics temperature monitoring system and add new rooms (GCC CRC) as they are commissioned.

Any project to improve the Data Center Capacity Planning tools requires effort from other Departments to define the requirements and interface to existing Division tools.

The Department continues to rely on other Divisions/Sections, external staffing and contractors to provide specific services such as office relocations, snow removal, specific logistics for Division projects.