# Item 2: Strategic Plan Update

*Betty Day*
Vice President, Business Planning and Integration
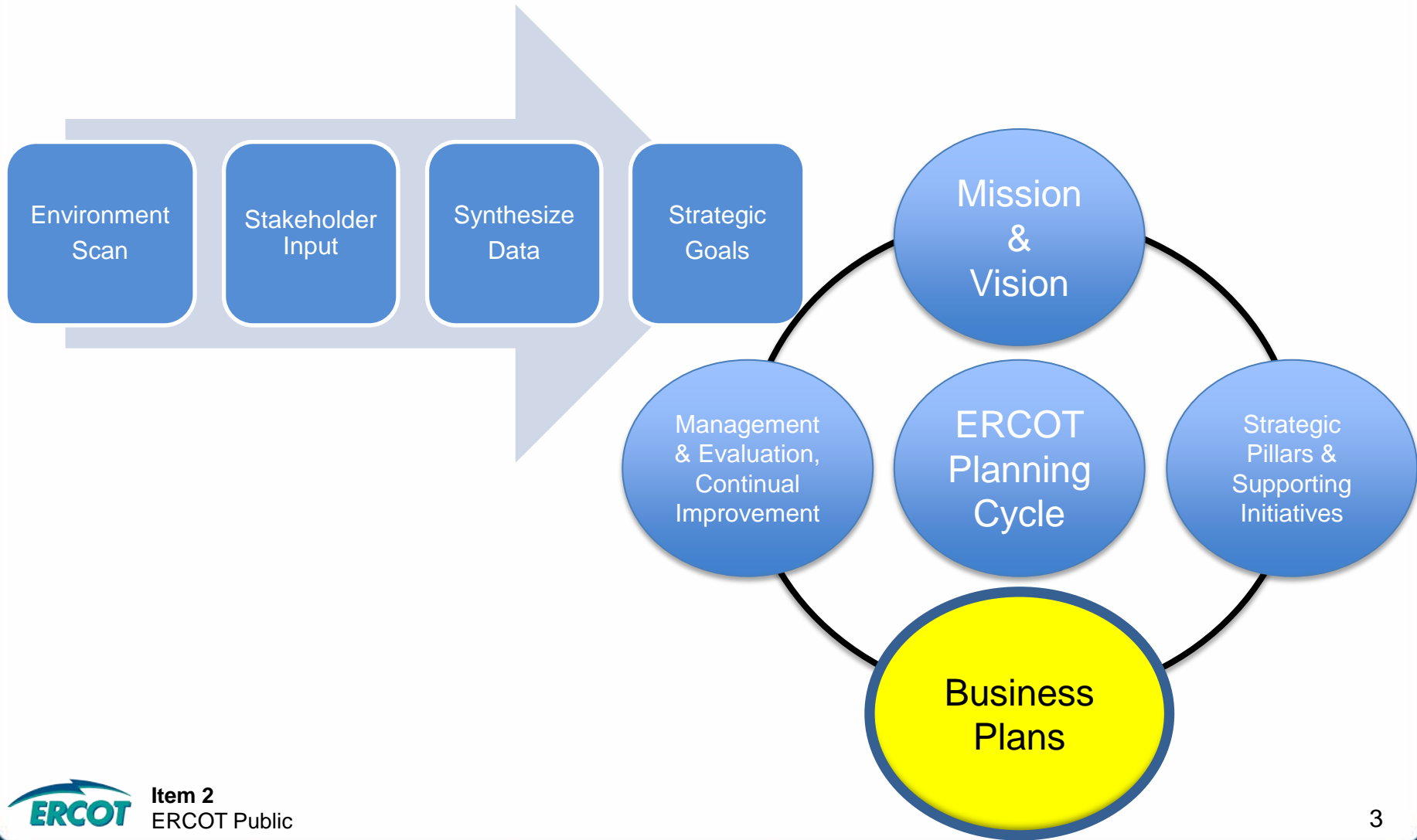
Board of Directors Meeting
ERCOT Public
October 13-14, 2014

# Agenda

- Strategic Planning Process Review

- Introduction of Business Plans

- Key Strategic Activities

  - Operational Reliability

  - Flexible Market Design

  - Data Transparency and Access

  - Committee Strategic Alignment

- Next Steps

# Strategic Planning Process Review

# Introduction of Business Plans

# Operational Reliability

- Strategically adapt to changing Resource mix

- Facilitate transmission planning and improvements (i.e., work with PUCT on Subsynchronous Oscillation, large merchant DC Tie requirements, etc.)

- Improve generation interconnection process

- Implement Outage Scheduler enhancements

- Explore Demand Response and distributed energy resource opportunities

- Implement the IT Roadmap

- Implement the Critical Infrastructure Security Roadmap

- Enhance Talent Management Process
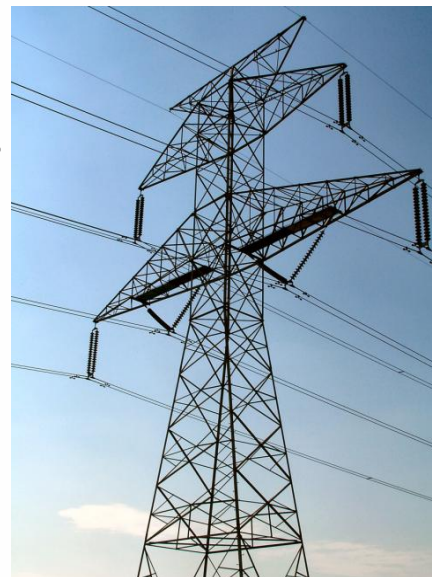
# Flexible Market Design

- Implement system changes to improve scarcity pricing during Energy Emergency Alert (EEA), Emergency Response Service (ERS)/Load Resource deployment

- Work with stakeholders to explore Real-Time Co-optimization

- Evaluate multi-interval Security Constrained Economic Dispatch (SCED)

- Improve management of system changes through IT automation and Release Management practices

# Data Transparency and Access

- Initiate Enterprise Content Alignment Program (ECAP) to provide accurate and consistent management of content through ERCOT access points

- Improve communication consistency of Grid conditions

- Develop data services to support long-term needs of Market Participants

- Implement Governance Risk and Compliance tool in support of operating controls and procedures

# Committee Strategic Alignment

- Further develop and enhance the ERCOT strategic and business planning processes

- Streamline Other Binding Documents process

- Implement approach for measuring post-project benefits

- Maintain Executive level representation at TAC and Director/Manager level representation at subcommittees

# Next Steps

- Work with taskforce of HR&G Committee to review and update 2015 KPIs

- Provide six month updates to the Board on Strategic Activities

- Work with HR&G Committee to define the 2015 Strategic Planning process

- Strengthen integration of the Strategic Plan, Business Plan, and Budget processes
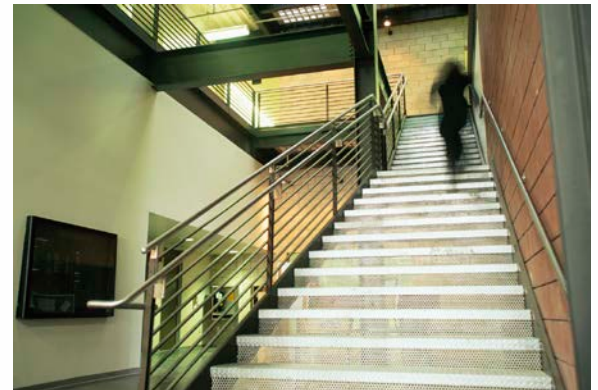
# APPENDIX
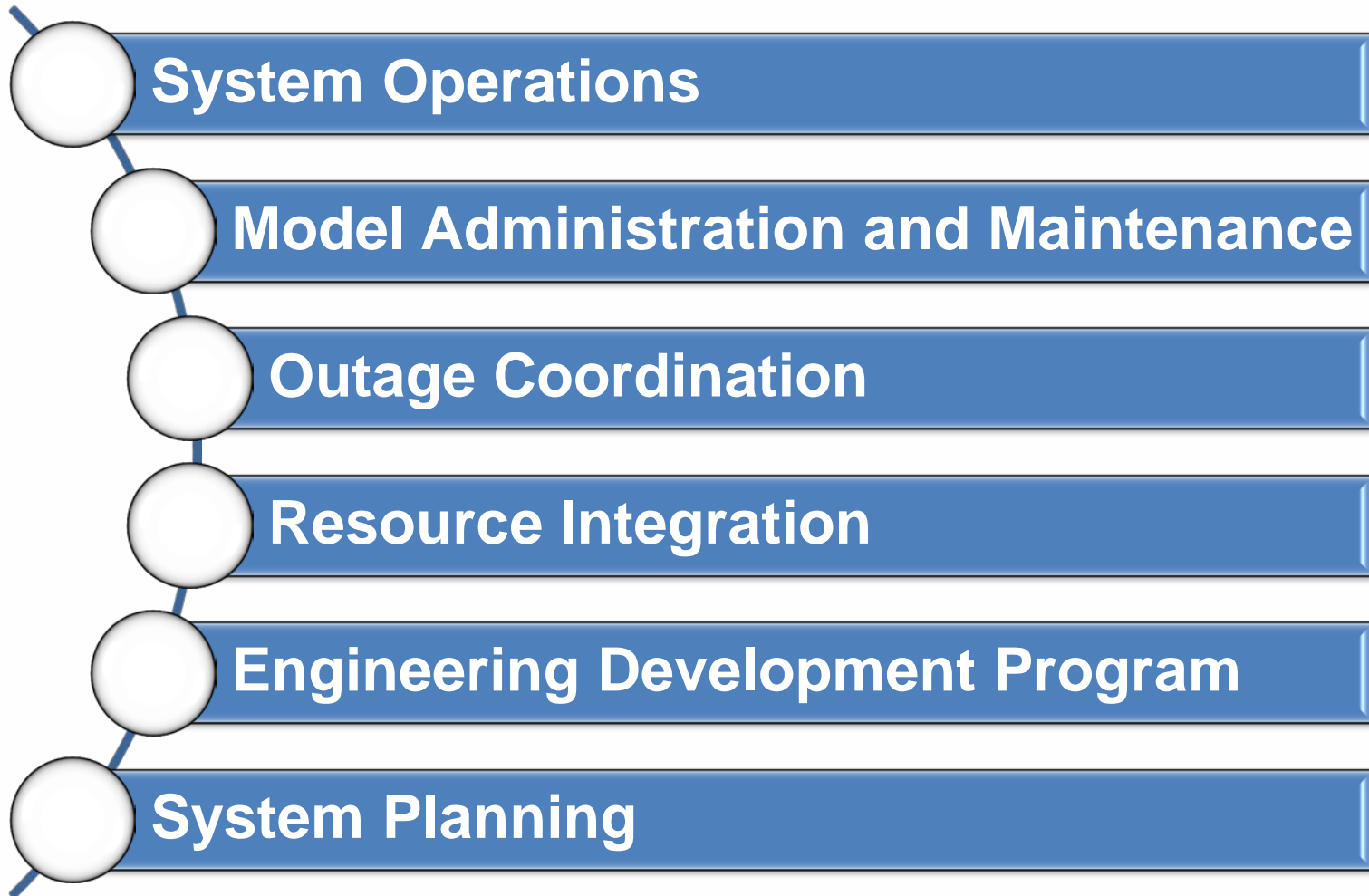
# Division Initiatives
(provided for information only)

# GRID PLANNING & OPERATIONS

- System Operations
- Model Administration and Maintenance
- Outage Coordination
- Resource Integration
- Engineering Development Program
- System Planning

# System Operations

- **Develop consolidated approach to managing operational risks of uncertain renewable output, weather, load, etc.**
  - Complete Taylor Control Room Upgrade.
  - Develop procedures for and staff renewables/risk desk in control room.
  - Implement ERCOT Reliability Assessment Tool (ERAT).
  - Implement NPRRs to provide monitoring, modeling and other data, as appropriate, for non-traditional resources.
  - Develop tools and techniques for forecasting, analyzing and monitoring Distributed Generation, etc.
  - Modify Ancillary Service Methodology to account for insights learned from Future Ancillary Service Team (FAST).
- **Implement coordinated voltage/reactive management.**
  - Implement Voltage Support Service (VSS) tool - Phase I and procedures.
  - Develop VSS Tool - Phase II with Reliability Unit Commitment (RUC)-like look-ahead for reactive devices.
  - Implement tool and procedures for management of Subsynchronous Oscillation (SSO).
- **Enhance emergency operations preparedness.**
- **Enhance situational awareness tools and overall data visualization.**
  - Develop holistic visualization plan for control room.
  - Formalize "express lane" concept with IT for tool development and approval.
  - Implement new PI Architecture.
  - Implement improved PI/Igrid displays.
  - Operational display and alarming from phasor measurement technology on test basis.
  - Implement procedures to use phasor information.
  - Enhanced effort to coordinate with Transmission Operators on voltage profiles.

## System Operations continued

- **Implement new Ancillary Services framework to efficiently meet system needs with changing resources.**
  - Continue FAST work on Inertia Service.
- **Formalize process improvement based on enhanced event/near-miss analysis.**
  - Implementation of continuous improvement framework for process improvement.
  - Implement automated reporting of common data for event analysis.
- **Implement strategy for use of phasor measurement technology.**
- **Evaluate information provided to Market Participants for relevancy and continued improvement.**
  - Revisit requirements and delivery mechanism(s) of Daily Grid Operations Report.
  - Posting of aggregate generation that is off but available in market facing displays.
- **Implement tool to support Protocol/Operating Guide traceability and compliance.**
- **Improve cascading analysis.**
- **Implement development program for Operators.**

## Model Administration and Maintenance

## Outage Coordination

## Resource Integration

## Engineering Development Program

### Model Administration and Maintenance

- Perform upgrade to Network Model Management System (NMMS).
- Evaluate Common Information Model (CIM) Post Processor and Contingency Generation.
- Create Wind-powered Generation Resource (WGR) Group for Generation Resource Energy Deployment Performance (GREDP) and Base Point Deviation evaluation.
- Evaluate process to incorporate new resource types into ERCOT systems.
- Complete Planning Site transition to Market Information System (MIS).
- Enhance Market Participant/Resource Registration qualification and certification processes (MP Online).
- Perform CIM maintenance for new technologies.
- Provide topology data necessary to support market activities.
- Evaluate standardization of one-line production.
- Evaluate system changes for Real-Time Reserve Price Adder Based on Operating Reserve Demand Curve (ORDC).
- Develop new database load report.
- Incorporate CIM attributes in CAD mapping of ERCOT system.
- Update Distribution Generation and Demand Response information in model.

### Resource Integration

- Update Distribution Generation and Demand Response information.
- Evaluate ability for new technologies to provide Ancillary Services.
- Develop transmission access contour map.
- Standardize Generation Interconnection or Change Request (GINR) database.
- Perform NMMS upgrade.
- Develop SSO Screening tool.
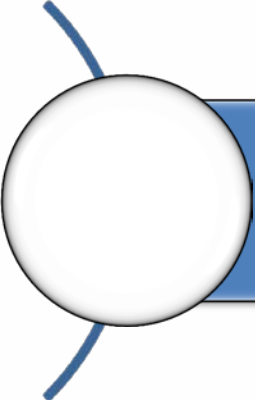
### Engineering Development Program (EDP)

- Continue to mature the curriculum of the program.
- Update Distribution Generation and Demand Response information.
- Develop new EDP Supervisor.
- Perform modeling activities.
- Review curriculum modules.
- Evaluate competencies defined and developed within the program.
- Evaluate program/curriculum milestones.

### Outage Coordination

- Implement enhancements to Outage Scheduler.
- Incorporate new processes for approving outages in the Valley.
- Develop SSO Screening tool.
- Complete Planning and Operations Information (POI) transition to MIS.
- Implement SCR774, Enhancements to Outage Scheduler and Reports.

# System Planning

## System Planning

- Continually improve load forecasting processes and tools to reflect changing market conditions.
- Support regulatory initiatives associated with resource adequacy:
    - Examine utilization of a one event in ten years criteria to develop a target reserve margin.
    - Revision market rules related to DC Ties, multiple Points of Interconnection, and switchable generation.
- Analyze aging resource portfolio and potential requirements.
- Continue to assess the potential impacts of environmental regulations.
- Examine generation deliverability.
- Incorporate natural gas infrastructure issues into planning and operations.
    - Develop criteria for natural gas pipeline contingencies in planning studies.
    - Incorporate gas curtailment impacts into seasonal analysis.
- Participate in ongoing review and improvement of transmission planning criteria.
    - Participate in Stakeholder discussions around Planning criteria and implement approved changes.
    - Develop methodology for incorporating probabilistic analysis into Planning studies.
    - Explore economic impact of transmission outages in the transmission planning process.
- Review planning process and assumptions.
- Develop new resource adequacy reports and tools that provide information regarding viability of existing and future resource technologies.
    - Enhance Capacity Demand and Reserves (CDR) report to include scenario analysis with possible impacts of market conditions and regulatory changes.

# COMMERCIAL OPERATIONS

**Wholesale Market Operations**

**Market Design, Development and Analysis**

**Market Credit**

**Client Services**

**Settlement Operations**

**Retail Operations**

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ERCOT

15

## Market Design, Development and Analysis

## Wholesale Market Operations

### Wholesale Market Operations

- **Congestion Revenue Rights (CRR):**
  - Automate CRR dashboard metrics, market reports, auction report validations, operational task notifications and logs.
  - Revise CRR credit calculations and payments (NPRR484, Revisions to CRR Credit Calculations and Payments, Phase 1b).
  - Increase CRR auction transaction limits.
  - Enhance bilateral CRR interface.
  - Create CRRAH digital certificate role with read only access.
  - Design CRR shift factors report.
- **Demand Integration**
  - Develop/add support for Load Resource subject matter expertise.
  - Improve processes for performing event performance analysis.
  - Implement new ERS procurement methodology.
  - Implement loads in SCED/ALR (Aggregate Load Resource) participation in Non-Spin Responsive Reserve Service NSRS.
  - Implement ERS weather-sensitive loads and evaluate results prior to submitting additional modifications.
  - Implement ERS and Load Resource reporting requirements as defined by NPRR491, Updated Demand Response Information for ERCOT.
  - Support FAST efforts for loads to participate in the AS markets.
  - Evaluate scarcity pricing during EEA ERS/Load Resource deployment.
  - Provide reports that meet the needs of Market Participants.
- **Day Ahead Market**
  - Explore restricting 0 MW bids in the Day Ahead Market.
  - Create tools to reduce time on day ahead market data verification.
  - Implement NPRR515, DAM Self-Commitment of Generation Resources.
  - Evaluate potential DAM credit exposure framework modification.
  - Implement NPRR439, Updating a Counter-Party's Available Credit Limit for Current Day DAM.

### Market Design, Development and Analysis

- **Market Development**
  - Analyze changing environmental regulations.
  - Explore additional Demand Response opportunities.
  - Increase ability for loads to participate in the AS market.
  - Implement a market solution for Fast Response Regulation as a Service.
  - Lead Future Ancillary Services Team and facilitate stakeholder involvement.
  - Lead internal effort to analyze and quantify retail demand response and price responsive load.
  - Engage bilaterally on a regular basis with MPs on strategic market issues.
  - Develop expertise in costs for new and emerging technologies.
    - Identify new technologies.
    - Define characteristics.
    - Model in NMMS.
    - Integrate with downstream systems.
- **Market Design and Analysis**
  - Increase situational awareness through dashboards and other daily analytics, including recommendations for improved Board reporting.
  - Implement system changes for Real-Time Reserve Price Adder Based on ORDC to Improve scarcity pricing and incent resource adequacy.
  - Ensure continued system availability and support by completing the technical refresh of the Market Management System (MMS).
  - Implement system changes for Load Resource Participation in SCED.
  - Develop Protocols to implement a market solution in response to PUCT instruction to solve price reversal issues.
  - Raise System Wide Offer Cap (SWOC) and define Value of Lost Load (VOLL).
  - Evaluate multi-interval SCED.
  - Evaluate impact of higher SWOC on credit and collateral requirements.
  - Evaluate real-time co-optimization which may include multi-interval SCED.
  - Develop ERCOT Scarcity Outlook Tool (ESOT).

## Market Credit

## Client Services

### Market Credit

- Review of credit formulas/parameters to find opportunities to: improve transparency, tailor to counterparties, increase variability – seasonal based exposure methodology, counterparties with no load or generation, variable M1 (credit risk multiplier), reduction of cure period, incremental exposure for Providers Of Last Resort (POLRs).
- Develop proxy credit rating/expected loss metric to evaluate market impact of NPRRs/initiatives.
- Review of market credit insurance.
- Review credit risk indicators proactively.
- Revise collateral requirements concerning CRR auctions.
- Evaluate potential Day Ahead Market credit exposure framework modification.
- Evaluate impact of higher system wide offer caps on credit and collateral requirements.
- Review of ERCOT discretionary items available to the management of market credit.
- Consolidate Other Binding Documents.

### Client Services

- Transition of ERCOT's Market Information Repository (MIR) to Information Content Exchange (ICE).
- Decommission ERCOT's POI and transition to the MIS.
- Support assessment of needs and development of alternate data delivery and access as well as analytic methods.
- Develop data services to support long-term needs of Market Participants.
- Enhance Market Participant/Resource Registration qualification and certification processes; MP Online.
- Assess Market Participant communication needs and implement improvements.
- Improve documentation of procedures for market communications and Market Participant Identity Management (MPIM).
- Implement process to regularly assess satisfaction with services and receive feedback on needed improvements:  Market Participant Surveys.
- Implement Customer Relationship Management (CRM) capabilities and collaboration tools to improve issue resolution, tracking, reporting and root cause analysis.
- Enhance development of Account Managers to stay abreast of market changes and deliver best in class service.

# Settlement Operations

## Settlement Operations

- Support ERCOT effort to define and implement improved integration testing strategy.
- Ensure capability to work remotely.
- Continue to evolve cross functional expertise in teams.
- Evolve our Culture of Protocol Compliance.
- Support ERCOT initiative to define process, procedure, and rule changes necessary for market continuity.
- Support division objective for a better definition of use of our alternate data center.

- **Settlement Metering**
  - Redesign ERCOT-Polled Settlement (EPS) Metering Database.
  - Rewrite and refresh the Renewable Energy Credit (REC) technical foundation.
  - Upgrade EPS Meter Data Acquisition software.
  - Evaluate mapping of each EPS meter to a defined telemetry point in support of data estimation.
  - Support Advanced Metering System (AMS) Data Initiative.
  - Support efforts for NOIE Load Zone data synchronization
  - Enable remote loading of EPS meter data to settlement system for business continuity.
  - Support Distributed Generation Steering Committee efforts.

## Settlement Operations continued

- **Settlements & Billing**
  - Partner with Market Design & Development to develop expertise in costs for new and emerging technologies.
  - Work with stakeholders to identify gaps and enhance verifiable costs calculation.
  - Reduce or eliminate dependency on manual processes.
  - Increase situational awareness through dashboards and other internal daily analytics.
  - Participate in internal efforts to review the broader ERCOT invoicing practices and determine if any efficiency or usability enhancements are merited.
  - Implement the settlement system rewrite.
  - Implement system changes for real-time reserve price adder based on ORDC to improve scarcity pricing.
  - Support changes for Load Resource Participation in SCED.
  - Reduce Real-Time Market Settlement Timeline to Operating Day Plus Five.
  - Implement revisions to CRR Credit Calculations and Payments within Settlements and Billing.
  - Revise Real Time Energy Imbalance and RMR Adjustment Charge.
  - Support projects for the following Revision Requests:
    - NPRR493, Half-Hour RUC Claw-back.
    - NPRR467, Balancing Account Resettlement Due to DAM Resettlement.
    - NPRR485, Clarification for Fuel Adder Provisions.
    - NPRR487, Quick Start Generation Resource (QSGR) Dispatch Adjustment.
    - NPRR553, Monthly Block Load Transfer(BLT) Payment and Charge for Presidio Exception.
    - NPRR580, Establishment of a Rolling Congestion Revenue Right (CRR) Balancing Account Fund.

# Retail Operations

**Retail Operations**

- Identify, recommend and initiate opportunities for improvement of the Registration and Certification (Flight) process.
- Complete remaining items related to SCR756, Enhancements to MarkeTrak Application.
- Reduce cost associated with switch and POLR notifications.
- Implement improvements to processes and channels for reporting retail data performance in order to eliminate redundancies, make the data meaningful for the audience, and mitigate risk of inconsistencies in reported data.
- Identify areas of Protocols where NPRRs are needed for additional clarity or transparency.
- Support efforts to improve requirements for Retail Operations.
- Support ERCOT initiative to define process, procedure, and rule changes necessary for market continuity.
- Continual evolution of cross functional expertise in teams.
- Support efforts to define and implement improved integration testing strategy, and architecture that better simulates production retail systems.
- Support IT evaluations of a replacement for the EDI translation and mapping system.
- Support discussions of data needs for improved support of retail market business processes.
- Support ERCOT effort to define and implement improved integration testing strategy ("testing project").
- Ensure capability to work remotely.
- Support efforts to identify and meet retail market training needs.
- Provide support for Sharyland Transition to competition.
- Support Advanced Metering System (AMS) Data Initiative.
- Evolve our Culture of Protocol Compliance.

# BUSINESS PLANNING & INTEGRATION

**Enterprise Risk Management and Strategic Analysis**

**Program Management Office**

## Enterprise Risk Management and Strategic Analysis

## Program Management Office

### Enterprise Risk Management and Strategic Analysis

- Establish foundation for robust enterprise risk management program.
- Further develop and advance the ERCOT strategic plan.
- Improve ERCOT business continuity plans.
- Develop record retention policy in alignment with corporate records retention objective.
- Develop an internal collaborative website presence for departmental and company access of shared documents.
- **Improve market rules processes**.
  - Review alternate tool-sets.
  - Develop annual Working Group/Subcommittee leadership training.
  - Review current training materials and update as needed.
  - Restructuring of Other Binding Document process.
  - Review and revision of Market Rules procedures.

### Portfolio Management and Business Analysis

- **Portfolio Management and Business Analysis**
  - Revise Impact Analysis template to provide more detailed labor estimates and allow for a more seamless flow into project schedules.
  - Enhance the integration of User Experience function into projects involving significant user interface changes.
  - Enhance the integration of Business Analyst function into projects providing value add to requirements and use cases.
  - Continue to enhance Program Management Office (PMO) reporting capabilities and reduce manual maintenance by exploring tool-sets.
  - Implement an enhanced internal collaborative website for improved navigation and user experience.
  - Enhance project status reporting process to increase time effectiveness of Project Managers.
  - Produce a monthly PMO operations for budget, change controls and project status.
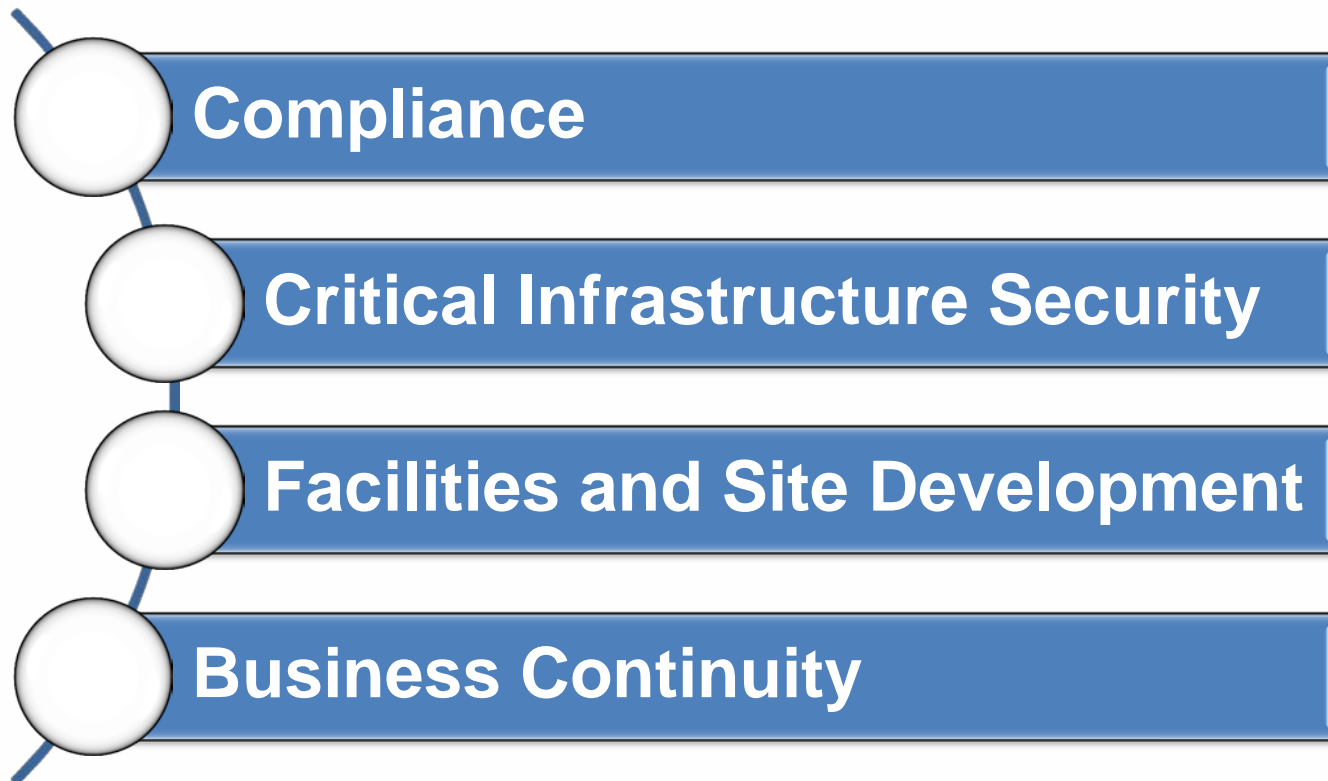  - Implement approach for measuring post-project benefits.
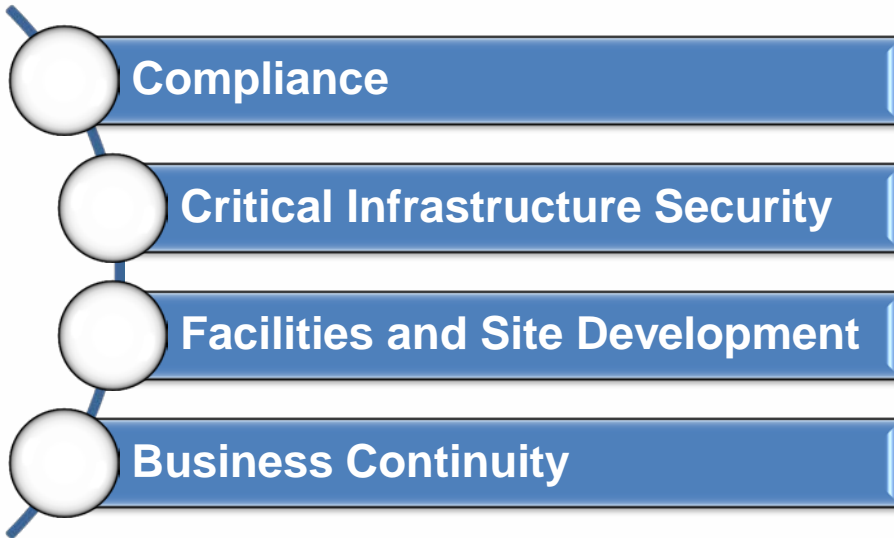- **Project Management**
  - Implement an enhanced internal collaborative website site for improved navigation and user experience.
  - Improve service delivery to business lines.
  - Draft new project documents that address traceability and communications planning.
  - Partner with IT to explore implementation of various Software Development Lifecycle (SDLC) development processes.
  - Modify project manager staffing to support strategic project services.
  - Lead effort to evaluate/implement PMO process improvements.
  - Formalize an onboarding/new hire orientation class and supporting materials.
- **Release Management**
  - Integrate Release Management into current Change and Configuration Management process.
  - Improve release communications to stakeholders.
  - Provide release and testing dashboards to stakeholders.
  - Establish Release Management & Integrated Testing reporting tools.
  - Establish enterprise wide release and testing processes and procedures.
  - Implement improved tools and processes for managing testing environments.

# COMPLIANCE, SECURITY AND FACILITIES

**Compliance**

**Critical Infrastructure Security**

**Facilities and Site Development**

**Business Continuity**

## Compliance

## Critical Infrastructure Security

## Facilities and Site Development

## Business Continuity

### Compliance

- Implement Compliance Governance Risk and Compliance (GRC).
- Initiate new Protocol and Operating Guides compliance initiative.
- Transition and implementation of changes for NERC CIPv5 compliance.
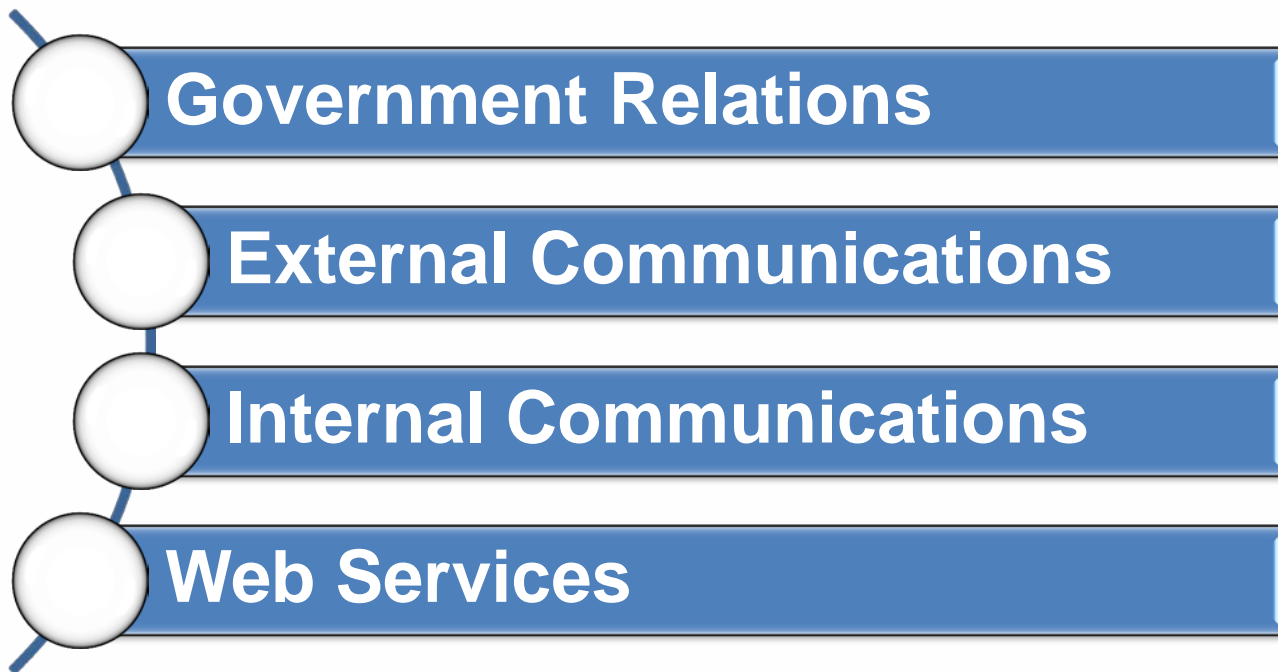- Improve toolset for metrics and reporting analysis.

### Critical Infrastructure Security

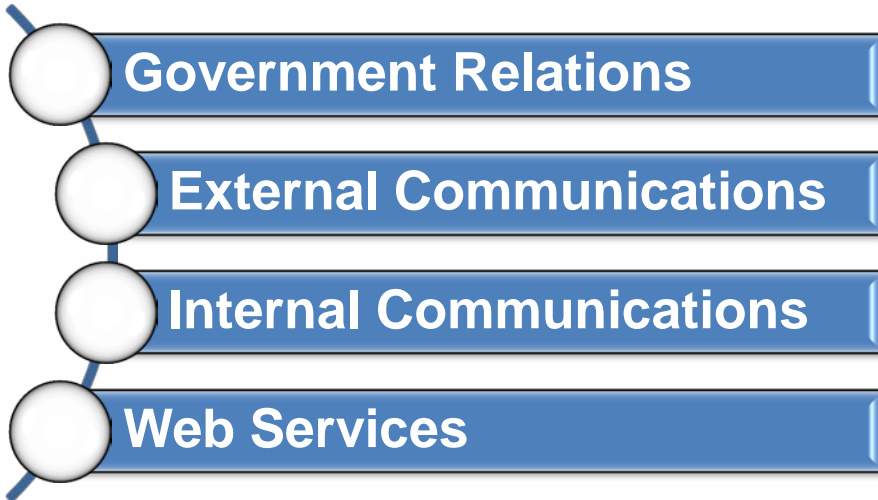- Implement the Critical Infrastructure Security Roadmap.

### Business Continuity

- Conduct peer reviews and recommend improvements.
- Develop command center response capability.
- Strengthen coordination with the State Operations Center.
- Identify and establish necessary staffing levels.

### Facilities and Site Development

- **Data Center Management**
  - Evaluate data center growth and asset replacement.
  - Enhance Facilities Monitoring Systems.
  - Enhance facilities efficiency and reporting capability.
  - Replace aging equipment with more efficient systems.
  - Increase integration between IT asset accounting, procurement and Facilities applications.
- **Facilities**
  - Perform audio visual upgrades to TCC1 conference rooms.
  - Upgrade TCC1 safety equipment.
  - Evaluate implementing on-site storage.
  - Implement Control Room Upgrade.
  - Implement facilities enhancements.
  - Evaluate facility needs and develop Facilities Roadmap.

# CORPORATE COMMUNICATIONS

- **Government Relations**
- **External Communications**
- **Internal Communications**
- **Web Services**

## Government Relations

## External Communications

## Internal Communications

## Web Services

### Government Relations

- Engage at the federal level as ERCOT continues to participate in and be affected by policy initiatives such as climate change, gas/electric coordination, etc.
- Rebrand all ERCOT informational materials to improve consistency of visual design.

### External Communications

- Implement out-of-ERCOT-hosted "blacksite" that remains functional on the Web if www.ercot.com is non-operational.
- Rebrand all ERCOT informational materials to improve consistency of visual design.
- Respond to requests for new and interactive visual materials at all levels of the company.

### Web Services

- Procure an Enterprise-wide Content Management System (CMS) capable of meeting ERCOT's (both the company and the market) existing and expanding content needs.
- Update and improve the ERCOT mobile app, "Energy Saver" to ensure that it stays current and continues to appeal to users in the ERCOT footprint.
- Perform an enterprise-wide and www.ercot.com visual redesign.
- Rebrand all ERCOT informational materials (including digital) to improve consistency of visual design.

### Internal Communications

- Improve quality of employee meetings through additional audio/visual resources.
- Respond to requests for new and interactive visual materials at all levels of the company with additional graphic design resources.
- Rebrand all ERCOT informational materials to improve consistency of visual design.

# LEGAL

**Corporate Governance**

**Regulatory and Litigation**

**Records/Information Management**

**Business Process Risk & Controls**

## Corporate Governance

**Corporate Governance**

- Improve delivery timeliness and quality for Board Materials.
- Explore options for electronic voting by corporate members for required elections and approvals.

## Regulatory and Litigation

**Regulatory and Litigation**

- Develop "on call" relationships with outside counsel for state and federal court actions and federal regulatory proceedings.
- Complete an assessment of ERCOT antitrust risks and revise antitrust training and corporate standards in accord with the risk assessment.

## Records/Information Management

**Records/Information Management**

- Implement life-cycle management of all unstructured information and classification of ERCOT Records that contain an essential business purpose.
- Apply changes to internal collaborative website necessary to have it serve as effective portal for Records & Information Management (RIM).
- Implement retention policy.

## Business Process Risk & Controls

**Business Process Risk & Controls**

- Participate in development of Governance, Risk & Compliance (GRC) framework and tools
- Oversee annual SSAE 16 audits, and process for retaining the firm to conduct the audits

# HUMAN RESOURCES

**Human Resources**

**Training and Professional Development**

## Human Resources

## Training and Professional Development

### Human Resources

- Acquire or expand use of Human Resource Management System (HRMS) to include career development and succession planning.
- Expand/improve recruiting initiatives.
- Complete the Total Rewards Project.
- Improve Awards & Recognition Program.
- Acquire an Human Resource Information System (HRIS).

### Training and Professional Development

- Acquire new Learning Management System (LMS).
- Acquire new multi-level E-Learning System.
- Create Market e-learning courses that keep pace with the Protocol Revision Process.
- Convert contractor led courses to in-house branded courses.
- Create in-house professional development courses geared to ERCOT skill-base.
- Provide training on MIS and data exchange reporting and systems.

# FINANCE AND TREASURY

**Treasury**

**Accounting and Budget**

**Contract Administration and Procurement**
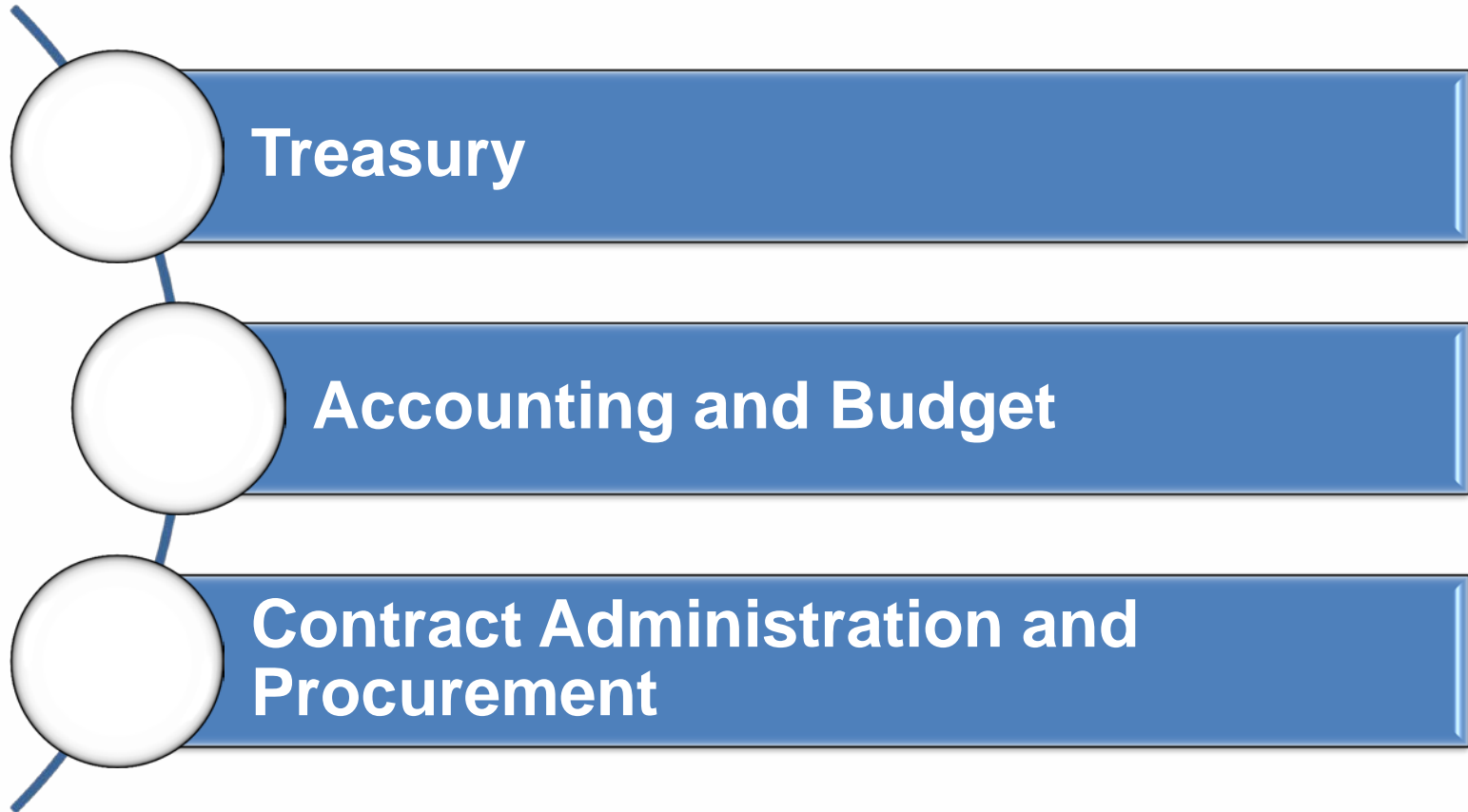
## Treasury

## Accounting and Budget

## Contract Administration and Procurement

### Treasury

- Review Protocols and edit as necessary (implement prepay Protocol).
- Review Insurance program with deductibles and policy limits.
- Implement rolling 12 month cash flow.
- Implement enhanced payment processes.
- Implement banking improvements, enhancements or cost savings.
- Implement Treasury Workstation.
- Evaluate Cyber Insurance.
- Perform Legal insurance review.

### Contract Administration and Procurement

- Replace or upgrade the Enterprise Resource Planning (ERP) system.
- Implement the Contract Lifecycle Management (CLM) project.
- Gain greater contract and supplier management efficiency.

### Accounting and Budget

- Develop enhanced position tracking.
- Develop 24 month rolling budgets/forecasting and 5 year projections.
- Implement technology solution to eliminating double entry.
- Enhance and automate Budget to Actual reporting and forecasting.
- Develop consolidated invoicing process.
- Evaluate capitalization threshold revisions.
- Evaluate minor capital ownership.
- Implement Automated Clearing House (ACH) payments to vendors.
- Develop monthly Pro Forma financials, including Profit & Loss, Balance Sheet and Statement of Cash Flows.
- Standardize Return On Investment (ROI), Net Present Value (NPV) and Cost Benefit Analysis (CBA) analyses.
- Develop standardized balanced scorecards.
- Perform comprehensive evaluation of ERCOT's software suite for financial use.
- Replace or upgrade the ERP system.
- Utilize existing or new Business Intelligence products for financial purposes.
- Consolidate Accounting and Budget tasks in master workflow to ensure completeness.
- Implement Financial Close & Reporting task management software.
- Implement Purchase Order Matching.
- Eliminate spreadsheets or mitigate risk by implementing a spreadsheet control solution.
- Develop record retention plan and process.

# INTERNAL AUDIT

## Internal Audit

# Internal Audit

## Internal Audit

- Review current procedures/processes and update as necessary.
- Retain the current Internal Audit Department Career Track, reward and recognize superior employee performance, develop realistic and effective annual performance goals for staff, and manage the Department in a flexible (work/life balance) and professional manner.
- Maintain the current ongoing Internal Audit Department Quality Assurance and Improvement Program, and ensure that Department procedures and practices (1) adhere to the Institute of Internal Auditors' Professional Practices Framework and (2) stay current with any new developments / practices in the Internal Audit profession.
- Ensure that development of the annual internal audit plan is aligned with ERCOT's Enterprise Risk Management Program, includes audits requested by management and the F&A Committee, and is fully supported by ERCOT Executive Management and the F&A Committee. Internal Audit will continue to work with management in ensuring that internal audit activities add value to the organization.
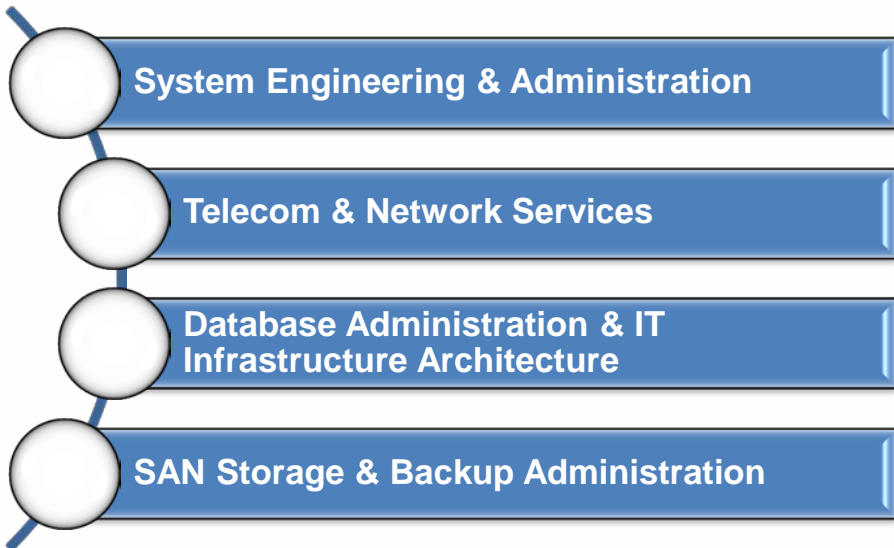
# INFORMATION TECHNOLOGY

System Engineering & Administration

Telecom & Network Services

Database Administration & IT Infrastructure Architecture

SAN Storage & Backup Administration

EMMS Development

Common Platforms

Enterprise Information Services

Commercial Services

Corporate Applications

Console Operations

Change & Configuration Management

IT Integration Support Services

EMMS Production Support

Enterprise Architecture and Cloud & IT Automation

IT Strategic Services

BITS Program

* Initiatives applicable across IT division:
- Implement IT Roadmap.
- Support IT Transformation effort.

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34

**System Engineering & Administration**

**Telecom & Network Services**

**Database Administration & IT Infrastructure Architecture**

**SAN Storage & Backup Administration**

**System Engineering & Administration (SE&A)**

- Systems Automation, Virtualization and Platform Refresh.
- Evaluate and increase capacity.

**Telecom and Network Services**

- Evaluate growth capacity needs.
- Centralized/Automated configuration management and reporting.
- Improve process to manage versions across devices.

**SAN Storage & Backup Administration**

- Develop improved and targeted monitoring alerts
- Enhance Operations Troubleshooting Checklist/Artifact Template and playbooks.

**Database Administration and IT Infrastructure Architecture**

- Continue to enhance disaster recovery and business continuity application management.

**EMMS Development**

**Common Platforms**

**Enterprise Information Services**

**Commercial Services**
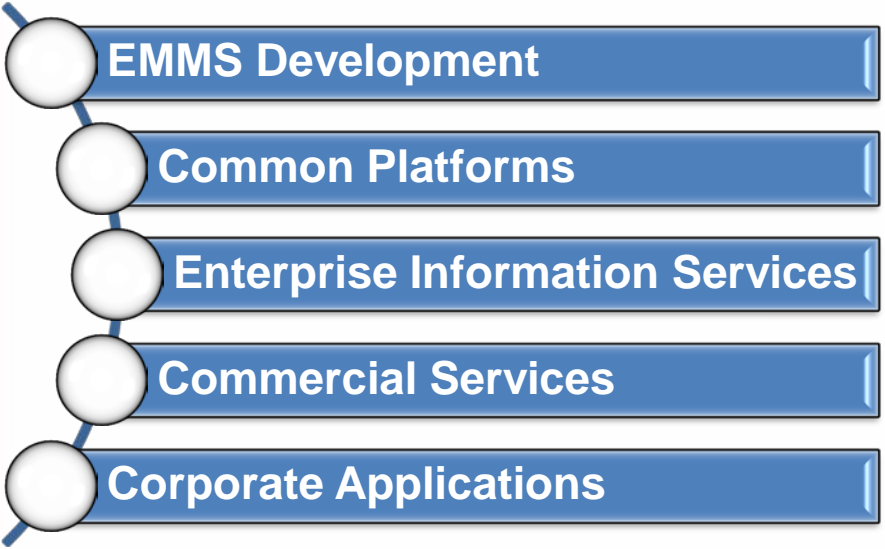
**Corporate Applications**

**EMMS Development**
- Continue to evaluate and improve vendor management relationships.

**Common Platforms**
- Evaluate application portfolio against Automation efforts to define approach.
- Define Service Catalog and expand offerings.
- Gather requirements for evaluation and rework of ERCOT SDLC.
- Define scenarios where use of a platform outside of the standards is appropriate and evaluate additional platforms as necessary.
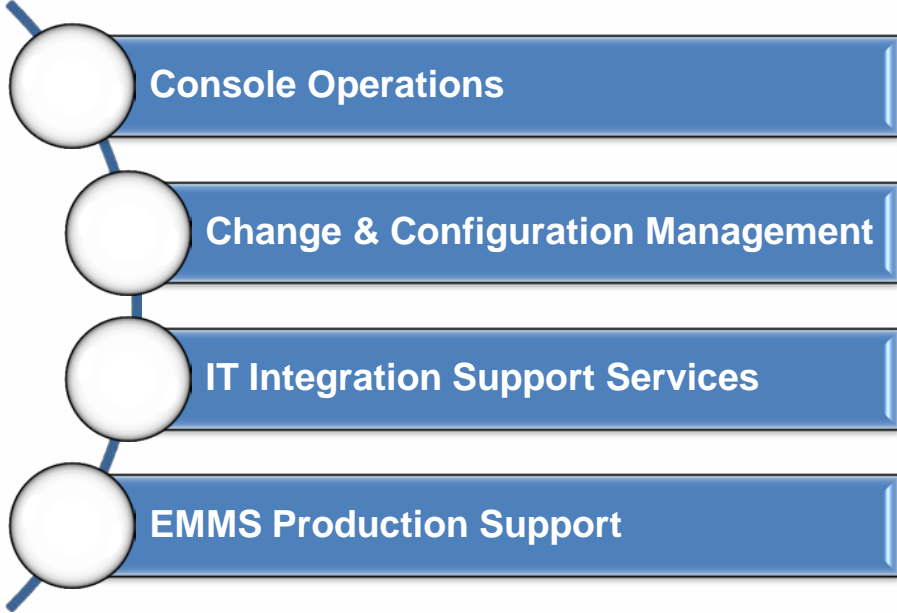
**Commercial Services**
- Implement Settlements Rewrite project effort.
- Implement SCR756, MarkeTrak Enhancements.

**Corporate Applications**
- Deploy Electronic Communications Enhancements.
- Implement Capital Efficiency & Enhancement Request (CEER) efforts.
- Evaluate and implement improvements to Role Access Management.

**Enterprise Information Services**
- Implement Enterprise Data Warehouse (EDW) platform transition.
- Implement CEER efforts.

**Console Operations**

**Change & Configuration Management**

**IT Integration Support Services**

**EMMS Production Support**

**Console Operations**
- Perform Desktop hardware refresh.

**Change and Configuration Management**
- Evaluate and implement improvements to Access Management.
- Define and implement IT Change Management Process effort.

**IT Integration Support Services**
- Deploy Centralized Application Log Management (CALM) phases.
- Replace Operations Monitor with other tools.
- Review & improve outage communication process.

**EMMS Production Support**
- Implementation of NERC BAL-TRE-001 Regional Standard.
- Implement High Availability Environment for load forecasting.
- Participate on the effort to implement CREZ Voltage Control and Coordination - Phase 2.

**Enterprise Architecture and Cloud & IT Automation**

**IT Strategic Services**

**BITS Program**
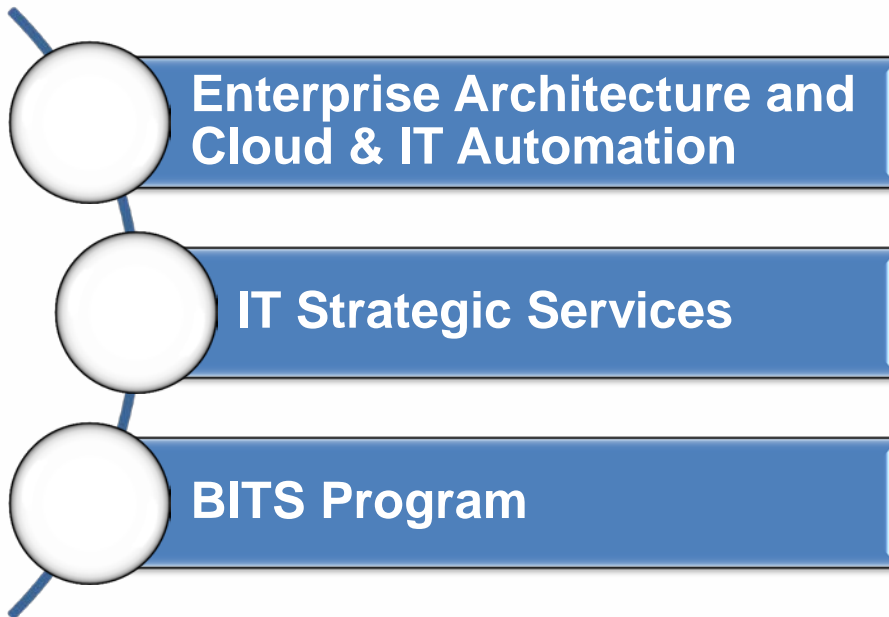
**Enterprise Architecture and Cloud & IT Automation**
- Lead IT Transformation effort.
- Evaluate Current Systems Management Solutions.

**IT Strategic Services**
- Continue to manage and improve the IT Strategic Plan.
- Define and implement a portfolio approach to Technical Foundation - includes O&M and capital efforts.

**BITS Program**
- Define Building Information Technology Staff (BITS) Program.
- Evaluate intern program for incorporation with BITS Program.
- Evaluate Cross Training Engagement (CTE) program for incorporation with BITS Program.
- Establish BITS Plus program.
- Research IT education and development goals for incorporation with BITS Plus.

**Item 2**
ERCOT Public