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AlixPartners' Hand-Over Strategy Presentation to the Governing Board

Puerto Rico Electric Power Authority

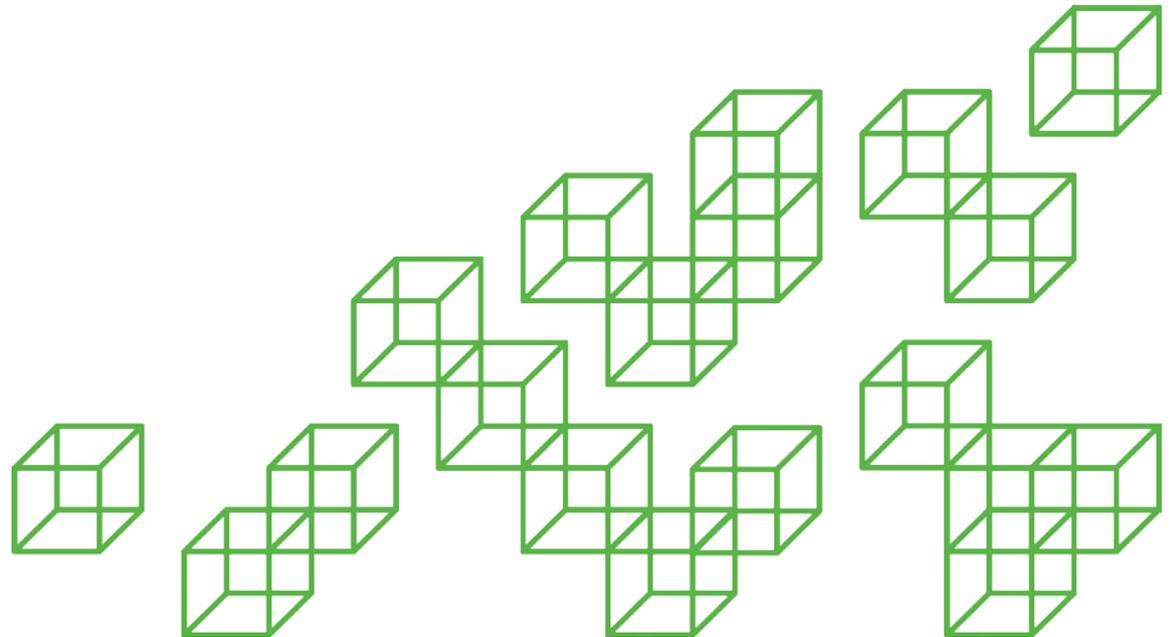


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Objective and Structure of the Document

Operational Restructuring Work Streams

- As part of PREPA's transformation, AlixPartners has been working alongside PREPA Management on multiple work streams with the goal of improving PREPA's operations and achieving one-time and recurring cash savings
- The objective of this document is to present to PREPA's Board the actions taken by AlixPartners to ensure the continuity and sustainability of the operational changes made and the improvements achieved: "Hand-Over Strategy"
 - Operational improvement work streams to be eventually driven by PREPA without AlixPartners' support
- For each Operational Work Stream the following information is provided:
 - Brief description of the Work Stream and the operational issues addressed
 - Results achieved and changes implemented in PREPA's operations
 - Strategy implemented for continuity and sustainability:
 - Knowledge transfer and employee training
 - New or updated processes and procedures developed and documented
 - Tools, systems and dashboards implemented
 - Key Follow-Through Actions
 - PREPA resources responsible for continuity of the work stream

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Fuel, Generation and Safety

Fuel Sales and Operations Planning

Fuel Inventory Controls

Fuel Sourcing Process

Forced Outages

Spinning Reserves

Safety

Fuel Sales and Operations Planning (S&OP)

Developed a process and tools to more accurately plan fuels and capitalize dispatch opportunities

Description

- Daily and weekly cadence to develop a collaborative fuels forecast with input from Generation, Dispatch and fuels that optimizes inventory levels
- Create the information sharing process that helps identify dispatch opportunities from commodity arbitrage in dual fuel units and using optional PPA capacities

Results Achieved and Changes Implemented

- Developed a process and tools to facilitate communication and planning between key stake holders
- Delivered inventory optimization one time savings of \$36M by ensuring product is delivered in the right quantity and timing to match dispatch plans
- Enabled the identification and capture of dispatch optimization opportunities by closely monitoring commodity fluctuations and ensuring fuels supply plans accommodated the opportunities

Continuity and Sustainability Strategy

Procedures

- Implemented S&OP process with cadence, roles & responsibilities and meeting agendas-objectives

Training

- Knowledge transfer achieved through hands-on coaching and support of the generation, dispatch and fuels team on the new process

Tools

- Implemented forecasting tool leveraging 13 week dispatch runs to translate them into fuel requirements and automatically suggesting fuel orders
- Implemented S&OP process effectiveness dashboard that monitors the accuracy of the dispatch plans and the order fulfillment process on a weekly basis
- Transferred the tool and dashboard preparation to the fuels team to ensure continuity and sustainability of the benefits

Resources

- Need to designate manager responsible for Fuels to cover key employees retiring on 12/31

Key Follow-Through Actions

- Ensure that weekly meeting cadence continues under any scenario

Fuel Inventory Controls

Developed a process and tools to control and monitor fuel inventory reconciliation process

Description

- Implemented industry standard fuel inventory controls across the generation fleet. This included reconciling tank movements at standard temperature against the installed meters (micro-motions)
- This included keeping reconciliation records in PREPA's corporate ERP (Oracle - Asset Suite)

Results Achieved and Changes Implemented

- Changed the fuel inventory reconciliation from using the tank movement to determine consumption to using meters to validate movements
- Changed volumetric inventory records from dispersed Excel spreadsheets to using the official system of record (Corporate ERP)
- Implemented monthly dashboard to monitor deviations and effectiveness of controls
- Diagnosed preliminary deviations with visits to key plants

Continuity and Sustainability Strategy

Procedures

- Implemented a new reconciliation process and supported IT to create a fuel reconciliation manual
- Implemented and tracked action plans to reduce inventory deviation levels

Tools

- Implemented standard fuel reconciliation format for all the generation plants
- Automated the tank strapping tables and temperature corrections for each tank at the plants to facilitate reconciliation and prevent errors

Training

- Trained each of the plants in the use of the reconciliation tools and coordinated training on the use of Oracle Asset Suite for each of the end users

Resources

- Need to designate manager responsible for Fuels to cover key employees retiring on 12/31

Key Follow-Through Actions

- Ensure timely entry of reconciliation data by the end users to prevent reconciliation issues
- Enforce controls: Discourage any general ledger manual inventory adjustments, perform regular audits, check regularly g/l balances to physical inventory to prevent end of period adjustments

Fuel Sourcing Process

Changed the way fuel sourcing is done from public tenders to RFP

Description

- Implemented the use of RFP to source fuel for the main power plants
- This change allows the ability to negotiated financial terms in light of PREPA's financial situation
- Established new market contacts to attract new reliable potential suppliers

Results Achieved and Changes Implemented

- Delivered \$31M in annual fuel savings for FO and Diesel and an additional \$33M in annual natural gas purchases (based on future curves at the time of the negotiation)
- Additionally increased the credit terms for FO from 30 to 62 days and increased the credit from ~\$112M to \$250M
- Increased the credit terms for Diesel from \$30 to \$45M with the same 60 day terms

Continuity and Sustainability Strategy

Process and Training

- Developed strategy to negotiate supply contracts for FO and Diesel
- In the process of changing the Diesel supply chain infrastructure to allow the participation of additional suppliers (convert the Palo Seco tank R3 to Diesel and relocate the diesel receipt point to allow ocean tanker discharge)
- Worked with the fuels team in developing negotiating strategy, approach and script
- Always develop a negotiation strategy to engage suppliers leveraging PREPA strengths

Resources

- Need to designate manager responsible for Fuels to cover key employees retiring on 12/31

Key Follow-Through Actions

- Ensure that tank R3 conversion is completed and ready by July 2017 when the new contract would start
- Launch Diesel RFP January 2017 and FO RFP March 2017
- Continue discussions with GNA to get more NG for Costa Sur at a lower price but maintain flexibility so PREPA can consider other supply options when AOGP comes online in 2019

Forced Outages (“FO”)

Implementation of identified operational measures that can be taken to mitigate forced outages

Description

- Analysis of major FO events were performed with the head of Generation, plant, conservation and maintenance managers to determine the root cause of the FO events and identify operational measures to reduce their occurrence
- Monthly meeting with maintenance managers to review and analyze causes of previous FO, plan future outages, review status of operational measures and the exchange of ideas, best practices and knowledge across the plants

Results Achieved and Changes Implemented

- Established manufacturer’s and in-house trainings
- Supported the implementation of the reliability-centered maintenance (RCM) program
- Supported the preparation of a plan to contract third-parties to accelerate repairs of base units
- Developed procedures and guidance for RCM
- Developed FO report with statistics by unit and system
- Working with maintenance managers to update asset bill of materials and close the material catalog

Continuity and Sustainability Strategy

Procedures

- Developed a document that provides information, guidance and direction for establishing a predictive / preventive maintenance program, bills of materials and training courses
- Supported the hire of new engineers to support the RCM planning process

Resources

- Victor Morales, Generation Director

Key Follow-Through Actions

- Continue offering external and in-house training courses to strengthen the team’s knowledge, skills and abilities
- Continue scheduling monthly meetings between the maintenance managers to be used as planning and for best practices sharing forum
- Prepare the FO report with statistics by unit and type of causes to be used in the monthly maintenance managers meeting. The report is being transitioned to the Generation team
- Piloting the RCM program at Aguirre power plant managed by a third party
- Consider hiring a third party expert to execute predictive / preventive maintenance tools (i.e. ultrasound, vibration)

Spinning Reserves (“SR”)

Implementation of economic dispatch strategy that takes advantage of its rapid-start units to reduce synchronize reserve

Description

- A SR model was developed, in conjunction with the Generation team, to estimate the decrease in fuel cost consumption by provisioning a lower level of online SR during peak hours while ensuring that the electric system is operated at the prescribed level of reliability
- Monthly savings are determined by the level of SR during peak hours which is set by assessing the reliability of the system

Results Achieved and Changes Implemented

- From December 2015 to October 2016, estimated pass-through savings of \$13.4mm in fuel consumption have been obtained^[1]
- Implementation of SR dashboard to provide senior management with visibility on progress made
- Drafted the procedure that sets forth criteria for the establishment and administration of the operating SR

Continuity and Sustainability Strategy

Procedures

- Developed SR procedure with input from Generation and dispatch

Tools

- Developed model to demonstrate that Optimal SR levels can be maintained under seasonal load levels
- Continue updating the SR dashboard tool to monitor the levels of the synchronized SR and calculate the estimated savings

Resources

- Edwin Adorno, Dispatch Superintendent

Key Follow-Through Actions

- Continue with the daily implementation of the SR strategy, while considering: unit availability (outages and limitations), demand load, fuel oil inventory, Mayaguez available capacity, and MATS compliance
- Continue to discuss and follow up the SR strategy in the daily conference calls set with Generation and Fuels
- Continue to reinforce the SR targets with dispatch team
- Continue to monitor dispatch opportunities from PPA's vs own generation not just for spinning reserves but also to capitalize optimization benefits

[1] Due to short term limitations of Mayaguez units, SR targets have been temporarily revised upwards reducing the monthly cost savings

Safety

Support with the implementation and follow up of safety recommendations by safety expert

Description

- Support the Safety Division working group with the implementation of a proactive safety culture that uses leading metrics and indicators to drive decisions and keeping safety as top of mind

Results Achieved and Changes Implemented

- Creating individual trackers to monitor the progress and ensure the implementation activities related to safety improvements, recommendations and other short term initiatives
- Monthly dashboards provide senior management with visibility on progress made and ensure that safety improvement remains front of mind
- Developed Safety Business Case and Safety Medium-Term Plan (18 months) reviewed with PREPA BoD, CEO and union leaders

Continuity and Sustainability Strategy

Procedures

- Safety medium term plan template that can be updated to continue the safety culture transformation
- Amended existing procedures to include process changes
- Multiple training sessions facilitated by DuPont on safety culture transformation

Tools

- Developed safety action tracker to monitor implementation of key safety actions from audit and high potential accidents
- Update the safety dashboard report with key metrics and trends which allow management to view and understand how well the safety systems are working

Resources

- Yenissa Salvá, Health and Safety Division Head

Key Follow-Through Actions

- Continue managing the implementation of the recommendations resulting from DuPont's assessments and the safety culture transformation through the update of a master tracker
- Continue working with the safety expert on the implementation steps for critical Operational Hazards and Safety Leadership Skills



2

Customer Service

Collections for Active Clients

Administration of Deposits & Insured Bonds

Account Maintenance and Billing Quality

Administration of Law 33 /57 Customer Objections

Technical Services and Field Activity

Municipalities Billing and Collections (CILT)

Enhanced Performance Tracking

Improved Customer Experience

Call Center Improvements

Collection from Inactive Accounts

Collections for Active Clients

Focus on collection from clients with active contracts with PREPA, private and governmental, to improve PREPA cash position on a sustainable basis

Description

- Ineffective collections practices and acceptance of non-payment resulting in gov. past dues in excess of \$255 M
- Delays in execution of service suspensions with residential and wholesale customers
- Deficient billing practices and customer communication leading to high balances in dispute spanning multiple years
- No collections effort on severely past due accounts

Results Achieved and Changes Implemented

- Implemented rigorous collections program with Corporations and Agencies, using service suspensions to drive collections and sign payment plans
- Collected 120% of amounts invoiced to Gov. customers over the last 12 months, Past due balances have improved by \$70M
- Streamlined and enforced service suspension program, special programs (i.e. residential housing, Top-20 by Region), increasing cash collections by ~\$65M

Continuity and Sustainability Strategy

Procedures & Training

- Created and rolled-out new procedure for collection from general and governmental clients including municipalities, hospitals and public housing
- Created CILT investigation procedures to identify for profit operations (CILT exclusions) of municipalities
- Created new procedure for negotiation and signing of payment plans
- Implemented new process to reconcile, resolve and collect billing objections with government customers
- Employees trained in all new procedures

Tools

- Rolled-out reporting templates to follow up on collection actions of largest government accounts
- Implemented on-line tool to track top 60 largest debtors per district, per client category and suspension activity

Resources

- New business leader: Oscar Bernazard
- Assigned dedicated team focused 100% on collections

Key Follow-Through Actions

- Complete permanent appointment of Oscar Bernazard and create permanent organization (with HR)
- Automate creation of collection letters
- Contract Credit Information Agency

Administration of Deposits & Insured Bonds

PREPA may request clients to pay deposit or present insured bond (“fianza”) to secure payment for energy consumption

Description

- Dispersed responsibility for requesting deposit/ insured bond
- No regular review of client payment history or current consumption to adjust level of security
- Missing systematic revision of insured bond expiry dates
- Underscored clients with bad payment history expose PREPA to financial losses in case of disconnection or bankruptcy

Results Achieved and Changes Implemented

- Defined deposit/ insured bond request criteria
- Implemented program of deposit / insured bond review prioritizing business clients with bad payment history. Close to 2,000 accounts with issues reviewed and acted upon during first 2 months of the project: send customer letters, invoice deposit, execute bonds
- Verified with insurance companies and updated in CC&B expiration dates of insured bonds
- Centralized process of insured bond execution in case of clients disconnection or bankruptcy
- Optimized resources allocation by creating dedicated, centralized team responsible for deposit / insured bond administration, reducing number of staff involved in the process and simplifying work in district offices

Continuity and Sustainability Strategy

Procedures & Training

- Created new procedure of deposit/ insured bond request, review and execution; replacing four previous procedures with one simplified and adjusted for current IT tools
- Centralized team trained in the new procedure

Tools

- Parametrized and rolled-out an internal (CC&B based) credit scoring system identifying clients with bad payment history and suggesting deposit increase based on current consumption
- Created centralized system of collection of all insured bond data

Resources

- New business leader: Oscar Bernazard, Yazmin Navedo
- Created dedicated team focused on review, update and execution of deposits/ insured bonds

Key Follow-Through Actions

- Publish procedure
- Enforce deposit and bond invoicing and service suspension in case of non-payment
- Create organization (with HR) to permanently transfer employees
- Ensure IT reports are generated timely to keep team’s pipeline of work

Account Maintenance and Billing Quality

No meter reads, billing estimates and billing errors are among the main reasons contributing to higher non-technical loss, lower collections, invoice objections and clients dissatisfaction with PREPA services.

Description

- Deficient billing practices and customer communication leading to high balances in dispute spanning multiple years and involving significant amount of PREPA resources
- Deficient meter maintenance practices, increasing numbers of meters with reading issues (end-of -life)

Results Achieved and Changes Implemented

- Implemented daily routine of work on billing estimates and errors correction achieving over 50% reduction
- Created daily (per cycle) follow up on no-reads focusing on largest clients
- Optimized resources allocation by creating dedicated, centralized team focused on billing correction
- To improve quality of reading and reduce number of no reads implemented series of initiatives:
 - installation of 15,000 smart meters (Echelon)
 - recycling of inactive meters
 - exchange 2G communication cards in MV90 remote reading meters
 - replacement of primary manual reading meters with GE remote reading meters
- Presented successful written testimony to Energy Commission to defend meter budget and AMI project

Continuity and Sustainability Strategy

Procedures

- Implemented (to be documented) process of:
 - Daily follow up on billing errors, reading rejections and billing estimates with reading
 - Daily follow up on no reads for manual and remote reading meters
 - Inactive meter recycling
 - identification of optimal neighborhoods to deploy new meters (concentration end-off life meters)

Tools

- Created daily report and on-line tool to track estimates, billing errors and no-reads

Training

- Trained employees in new procedures and IT tools

Resources

- New business leader: William Rivera
- Centralized responsibility and resources focused on correct billing under one division

Key Follow-Through Actions

- Reorganize management of meters: inventory, replacement and recycling program, new installations
- Complete formal process documentation
- Formalize new organization (with HR) to permanently transfer employees
- Ensure resolution of billing issues with Echelon meters as additional implementations proceed

Administration of Law 33 /57 Customer Objections

According to law 33 customer may object invoice which stops PREPA from collecting the amount disputed

Description

- Accumulation of Act 33-driven past-due balances
- Limited information flow between district offices and headquarter led to many cases being not processed according to deadlines established by law, delays in collections and potential losses to PREPA
- New regulation (law 57) creates risk of potential losses to PREPA if it does not meet deadlines

Results Achieved and Changes Implemented

- Identified open cases and created system to track progress for largest clients (Primary)
- Reduced backlog of law 33 objections from \$43 to \$18m
- Implemented process and organized resources dedicated to review and timely response to clients objections
- Assisted in selection of third law 33 Examiner to reduce the backlog at level 3
- Supported the successful resolution of long-standing dispute with Aerostar (\$24M collection)

Continuity and Sustainability Strategy

Procedures

- Created new procedure to clarify objections of general and governmental clients according to law 57 and guidelines issued by the Energy Commission

Tools

- Created customer friendly, easily accessible on-line tool to pay or object invoice
- Created simplified on-line tool for district office employees to register client's objection with no need to review documentation and creating case in CC&B
- Created centralized system of collection of all clients' objections and automatic review of the the timeliness of the objection

Training

- Developed new business leaders and trained employees in new procedures and IT tools

Resources

- New business leader: Darleen Fuentes
- Consolidated resources focused on processing objections to ensure timely review and optimal allocation of work

Key Follow-Through Actions

- Publish procedure
- Launch on-line tool on web-page
- Constant monitoring of adherence to legal deadlines

Technical Services and Field Activity

Field activities of customer service focus on meters and “last mile” distribution network. Timely processing of field activities is critical for correct billing and non-technical loss reduction.

Description

- Accumulation of Primary field orders backlog to over 1,000 and limited prioritization of critical orders
- Unequal performance of Technical Service across regions and district offices
- Lack of performance tracking tool for field and back office staff
- Limited resources pooling
- Paper based, work intensive process of dispatching, reporting and closing field orders

Results Achieved and Changes Implemented

- Implemented process to prioritize, schedule and track execution of field Primary customer orders by Region
- Reduced backlog of Primary clients open orders by over 50% through combination of office and field work
- Implemented process to perform periodic checks, calibration and repairs in metering equipment in wholesale customers (reviewed over half of top 20% clients)
- Developed weekly tracking of field orders processing

Continuity and Sustainability Strategy

Procedures

- Implemented process to prioritize, schedule and track execution of field Primary customer orders by Region
- Implemented process to perform periodic checks, calibration and repairs in metering equipment in wholesale customers
- Drafted flexible job description for field staff and defined negotiation strategy with union to allow better resource allocation

Tools

- Created tracking system for Primary clients field orders
- Developed and automated weekly performance report
- Completed feasibility study & technical specification for mobile tool for field service orders, reducing back-office workload and allowing real time job allocation

Training

Developed new business leaders and trained employees in new procedures and IT tools

Resources

- Business leader: Victor De Castro

Key Follow-Through Actions

- Formally agree with UTIER on new job description
- Launch pilot of mobile tool (with IT)
- Complete formal documentation of the new processes
- Roll-out final automation solution (tablets)

Municipalities Billing and Collections (CILT)

IPREPA has the right to bill energy consumption to municipalities in the following cases: for-profit operations (CILT exclusions) and consumption over CILT Maximum Cap established by new Energy Commission rules

Description

- Need to quickly implement new rules from the Energy Commission regarding CILT and billing / collections to Municipalities
- Ensure that \$20M in annual revenue included in PREPA's revenue requirement from CILT collections are achieved
- Leverage new centralized processes being developed for billing and collections from General and Government Customers

Results Achieved and Changes Implemented

- Created new set of procedures for billing, management of objections and management of exclusions
- Set-up initial inventory of CILT exclusions in CC&B
- Developed program of meetings with municipalities to resolve disagreements
- Started billing municipalities for profit facilities on July 1, 2016, at a pace of \$2M per month

Continuity and Sustainability Strategy

Procedures

- Implemented process to identify , manage and report CILT exclusions and Consumption Cap calculation
- Implemented CILT and "for profit" exclusions objections process for municipalities
- Drafted municipalities collection process
- Defined technical requirements for monthly, quarterly and annual CILT reporting as required by EC rules

Training

Employees trained on new procedures, use of reports

Tools

- Created automated daily collection report on CILT exclusions
- Created centralized system of administration of all municipalities' objections and simplified on-line tool for district office employees

Resources

- New business leader: Cynthia Morales

Key Follow-Through Actions

- Complete balance transfer and print new invoices with updated balances
- Continue reviewing objections
- Set up CILT reporting in CC&B
- Enforce new registration process for CILT exclusions to start January 1st, 2017 per new EC rules

Enhanced Performance Tracking

Define set of Key Performance Indicators, set corporate and personal targets, automatize calculation and improve communication of performance

Description

- Improve accountability and performance of the Customer Service Organization, by addressing the following issues:
 - No clear performance measurement criteria and definition of priorities
 - Limited, delayed, top down feedback to leaders and supervisors on operational performance
 - Limited performance data available monthly and on historic basis only, poor data quality
 - Reactive management to urgent problems, lack of consistent focus on improving critical metrics

Results Achieved and Changes Implemented

- Developed real-time KPI Dashboard with multiple KPI's by Region and District available to personnel in regions
- Graphical, relevant dashboard created existing PREPA software and IT resources to ensure future maintainability
- Achieved sustainable culture change:
 - Implemented periodic performance review of regions and districts to track underperforming areas, request improvement plans, re-allocate resources
 - Defined clear communication to managers and supervisors of goals, numeric targets, priorities and performance gaps

Continuity and Sustainability Strategy

Procedures

- Implemented process of periodic performance review of regions and districts
- Implemented automated process of KPI reporting
- Implemented process to ensure data quality, timeliness and relevance of performance metrics being reported

Tools

- Created real-time KPI Dashboard with multiple KPI's by Region and District allowing for timely performance communication, geographic and historic trend performance comparison

Training

- Regional Managers, District Managers and Business manager trained in the use of on-line tool, analyzing performance and developing improvement plans

Resources

- New business leader: Rose Jusino
- Set up business controller function responsible for review and communication of performance metrics

Key Follow-Through Actions

- Move from monthly to weekly performance calls with districts/ regions
- Transition leadership of the calls to Regional Managers
- Continue review accuracy of reports

Improved Customer Experience

Reposition current PREPA Customer Service organization from processing customer transactions to truly serving PREPA's, clients, while improving the productivity and quality of back office processes

Description

- Start changing current customer's perception of bad and expensive service
- Long wait times in commercial offices above 30 min.; Long lead time to address customer service issues
- Customers visiting offices for routine transactions that can be done electronically (payments)
- Complexity of work in the district office (multitasking), priority given to transaction processing

Results Achieved and Changes Implemented

- This program is actually in its launching phase, but its successful implementation is critical to PREPA
- Completing centralization of billing and most collections back-office functions to move workload and free-up resources in the offices to focus on customer care
- Created customer friendly, easily accessible on-line tool to pay or object invoice
- Drafted technical requirements to upgrade mobile payments web-page
- Launching programs to:
 - Increase use of electronic transactions (KIOSKs)
 - Change focus of employee training to customer care
 - Upgrade Q-matic system to measure actual customer wait times and service satisfaction

Continuity and Sustainability Strategy

Procedures

- Update, simplify and reduce number of customer service procedures from current 104

Tools

- Implemented customer friendly, easily accessible on-line tool to pay or object invoice

Resources

- New business leader: Dwight Rodriguez

Key Follow-Through Actions

- Reach out to HR to design new training curriculum for district office employees focused on customer care
- Roll-out training program to all Commercial Office employees, including District Managers, Supervisors and office employees
- Continue promoting the use of electronic, self-service transactions among customer base:
 - Complete implementation of new mobile payments web-page currently in development phase
 - Launch pilot of upgraded Q-matic solution
 - Select district offices to put computers and service person (supervisor) to support clients with on-line tool
- Kick off RFP for KIOSK's

Call Center Improvements

PREPA's Call Center is a key component of the customer's perception of PREPA's service quality

Description

- Improve the performance of the PREPA's Call Center as one of the key channels of communication between PREPA and its customers
- Effectively implement Call Center 3rd party services for routine calls, while maintaining PREPA's internal Call Center for highly specialized services
- Mitigate risks due to employee attrition and reduce costs

Results Achieved and Changes Implemented

- Reduction in average wait time in the Call Center from 22 minutes to 12 minutes
- Introduced performance metrics and provided visibility and feedback to supervisors and agents
- Delivered employee training, improved Call Center IT infrastructure and processes
- Increase in use of 3rd party services to 37 seats, eliminating lag in transfer of the calls
- Supported vendor negotiation to resolve contractual and non-payment issues, maintain uninterrupted service and extend contract to allow for formal RFP process
- Successfully completed RFP for new 3 year contract, awarded to Atento, approved by the BoD. Plan to address 80% of call volume to 3rd party. Currently negotiating contract and developing transition plan to new operating model

Continuity and Sustainability Strategy

Procedures:

- Updated Call Center scripts and call handling and escalation protocols
- Developed RFP document, leading evaluation and selection process

Tools

- Implemented weekly performance dashboard
- Implemented new agent computer interface

Training

- Delivered Supervisor and Agent training in the new processes and tools

PREPA Resources:

- Dwight Rodríguez and Vernice Fuentes (Call Center Manager)
- It will be key to designate a full-time relationship / operations lead to manage the contract with the 3rd Party Call Center

Key Follow-Through Actions

- Supervise closely the transition of services, holding the vendor accountable to service level commitments, managing costs and ensuring full realization of the vendor's value added proposal
- Manage the gradual transition of Call Center representatives to other positions in Customer Service
- Implement vendor continuous improvement program

Collection from Inactive Accounts

PREPA performed no collection activities on inactive accounts (service permanently suspended for non-payment)

Description

- PREPA has a portfolio of 100,000+ inactive accounts, with a nominal value of +\$140M and aging from 6 mos. To 5+ years, where no collection activity was being performed
- Collection on inactive accounts is done through external Collection Agencies
- This is an entirely new process for PREPA, developed from scratch

Results Achieved and Changes Implemented

- **Phase 1** (Initiated on: Aug/15): Referred +\$54M in inactive accounts. Recovered ~\$3.8M.
- **Phase 2** (Initiated on: Oct/Dec 2016): Referred +\$82M in inactive accounts. Recovered ~\$212k up to date (very recent start, starting collection curve)
- **Phase 3** (Projected Start: Feb/2017) Will refer ~\$18M in new inactive accounts
- Involved running two RFP processes, designating and training a dedicated team, developing new processes and going through the learning curve with the external agencies and 3rd party personnel
- It is now a consolidated process that is being handed-over to PREPA, as there is still a significant portfolio to collect, plus new accounts becoming inactive as normal course of business

Continuity and Sustainability Strategy

Procedures:

- Monitoring of monthly recovery results and agency performance
- Reconciliation of payments received, agency billing and agency payments
- Extraction and scrubbing of new quarterly batches of inactive accounts to Collection Agencies
- Resolution of Agency questions on customers, invoice balances, payment plans, etc.

Tools:

- Implemented performance dashboard to track key agency recovery metrics

Training

- Business Leader: Oscar Bernazard
- Dedicated team trained, Agency relationship transferred

PREPA Resources:

- The Account Collection team is now fully responsible for all steps for both the internal process and maintaining the relationship with the Collection Agencies

Key Follow-Through Actions:

- Continue delivering batches of inactive accounts to all three collection agencies
- Keep monitoring agency performance
- Embed the process into new centralized collections process to ensure uninterrupted collections flow

3

Energy Theft

Reduction in Energy Theft

Lead Generation System

Case Administration Process and System

Reduction in Energy Theft

Significantly increased effectiveness in identifying, pursuing and collecting theft cases and reducing non-technical loss

Description

- PREPA's non-technical losses were in excess of ~6.4% of net generated energy, which translates to overall losses of \$337M at the prevailing \$0.26 cents rate at that time (Source: PREPA Planning)
- Constant growth of NTL in the 2004-2014 period, from 3.3% to 6.4%
- Energy Theft is the major contributor to NTL
- Energy Theft work stream tasked with implementing systems, processes and organizational changes needed to increase the number of energy theft cases identified, settled, collected and turned into regular customers going forward

Results Achieved and Changes Implemented

- NTL reduced from 6.4% in FY 2014 to 4.855% in December 2016, for recurring annual savings to customers in excess of \$70M at current rates
- Cash recoveries for past consumption on track to reach \$20-\$22M in FY17
- Significantly stronger and more effective ICEE organization in place:
 - New leadership and streamlined organization
 - Added and trained needed field and back-office resources
 - Implemented new sophisticated information technology to identify theft suspects and manage cases quickly and more productively

Continuity and Sustainability Strategy

Procedures

- Implemented new lead generation , case administration and work order creation processes
- Implemented KPI performance reporting updated in real time and on-demand

Tools

- New Lead Generation System (see slide 25)
- Updated Case Administration System (see slide 26)

Resources & Training

- Business Leader: David Meléndez
- External recruiting and training (internal) of 20 new field investigation resources
- Internal recruiting and training of 10 additional customer facing administrative personnel
- More than 50 management and employees trained in 2 live sessions in the use of the new systems and processes

Key Follow-Through Actions

- Ensure effective and productive integration of new resources
- Ensure vehicles and technical equipment is available for field investigators
- Centralization of back-office functions
- Continuous training, ensure adherence to the use of new systems and processes
- This work stream has effectively been transitioned back to PREPA

Lead Generation System

Implementation of machine learning software to detect theft. ICEE Analytics 2.0

Description

- Implement new information technology to systematize the identification of theft leads to feed to the field investigation teams
- Leverage available historic raw customer consumption data and raw data on past theft cases
- Theft cases were identified based on visible evidence, leading to sub-optimal results where no visible evidence was available
- Theft cases were not prioritized based on estimated amounts of electricity stolen

Results achieved and Changes Implemented

- Implemented new lead generation system across all ICEE organization
- Significantly increased the number of qualified, higher probability leads that are efficiently turned into work orders / routes for field investigators, key point to ensure productive work for new 20 employees added to field investigation teams
- Centralized and automated the data collection and lead identification process saving PREPA employees time and ensuring process longevity

Continuity and Sustainability Strategy

Procedures

- Created detailed manual that documents the lead detection software and provides flexibility to PREPA employees to manage the software
- Key issues documented include:
 - Software code for the algorithm
 - Algorithm data sources and output
 - Timing of when the algorithm runs and updates data sources

Tools

- The ICEE Analytics 2.0 algorithm including backup databases with the ability to auto-refresh data sources and theft leads
- The algorithm has been built into a revised version of CUCOH and integrated into regular PREPA processes

Resources & Training

- Business Leader: David Meléndez
- Trained PREPA IT and business (cross functional) resources on ICEE Analytics 2.0 usage

Key Follow-Through Actions

- Continued supervision of correct use of system and adherence to processes
- Ensure IT embraces maintenance and improvements to the system

Lead Generation System

Implementation of machine learning software to detect theft. ICEE Analytics 2.0

An analytical approach: machine learning algorithms

Predicting future event is part science, part art – ICEE Analytics 2.0 is a complex algorithm to unearth non-linear signals behind a meter tampering or irregular situations

It looks at **historical patterns** of detected energy theft cases to understand when another client might be in an irregular situation



The output is an assigned **score** to each account stating the **likelihood** of stealing electricity

Model overview

Geographical Information



Consumption patterns



Census and Demographics



Historical cases



Machine Learning Model

Score Likelihood of theft for each account

Account	Score
912341	0.90
324123	0.87
235232	0.73
399421	0.60
123953	0.43
235924	0.32
846502	0.20
834182	0.10
434943	0.05

Backlog of qualified leads (20+% probability) to generate work orders for field investigators

Case Administration System and Process

Implementation of improved system and process for back-office management of theft cases

Description

- Back-office processes in ICEE were manual and local software designed to track productivity statistics was not used
- CUCOH software for ICEE was not user friendly and was time inefficient. Users had a number of redundant steps throughout the process
- The existing process did not provide intelligence to meter investigators (consumption data)

Results Achieved and Changes Implemented

- Developed new processes to automate the process of lead assignment, routing of meter investigators and statistics.
- Process reduced the time taken to send a team to investigate leads from 60 minutes to 15 minutes
- New process requires usage of new Cucoh tool, thus ensuring compliance
- ICEE organization understands the value of using technology to increase effectiveness and productivity, becoming a more sophisticated, data and fact driven team

Continuity and Sustainability Strategy

Procedures & Training

- Implemented new process to create work orders for field investigators and organize lead batches by route
- All PREPA employees provided thorough training including live demos, one on one instruction and written documentation for the new software
- New processes developed for key employees including administrative employees and meter investigators

Tools

- New CUCOH software
- New databases with the ability for superior information for lead identification (customer billing patterns / likelihood of theft / consumption etc...) and automated data reporting.
- New set of management reports that break data by meter investigator, region , employee and time to identify cases causing issues quickly

Resources

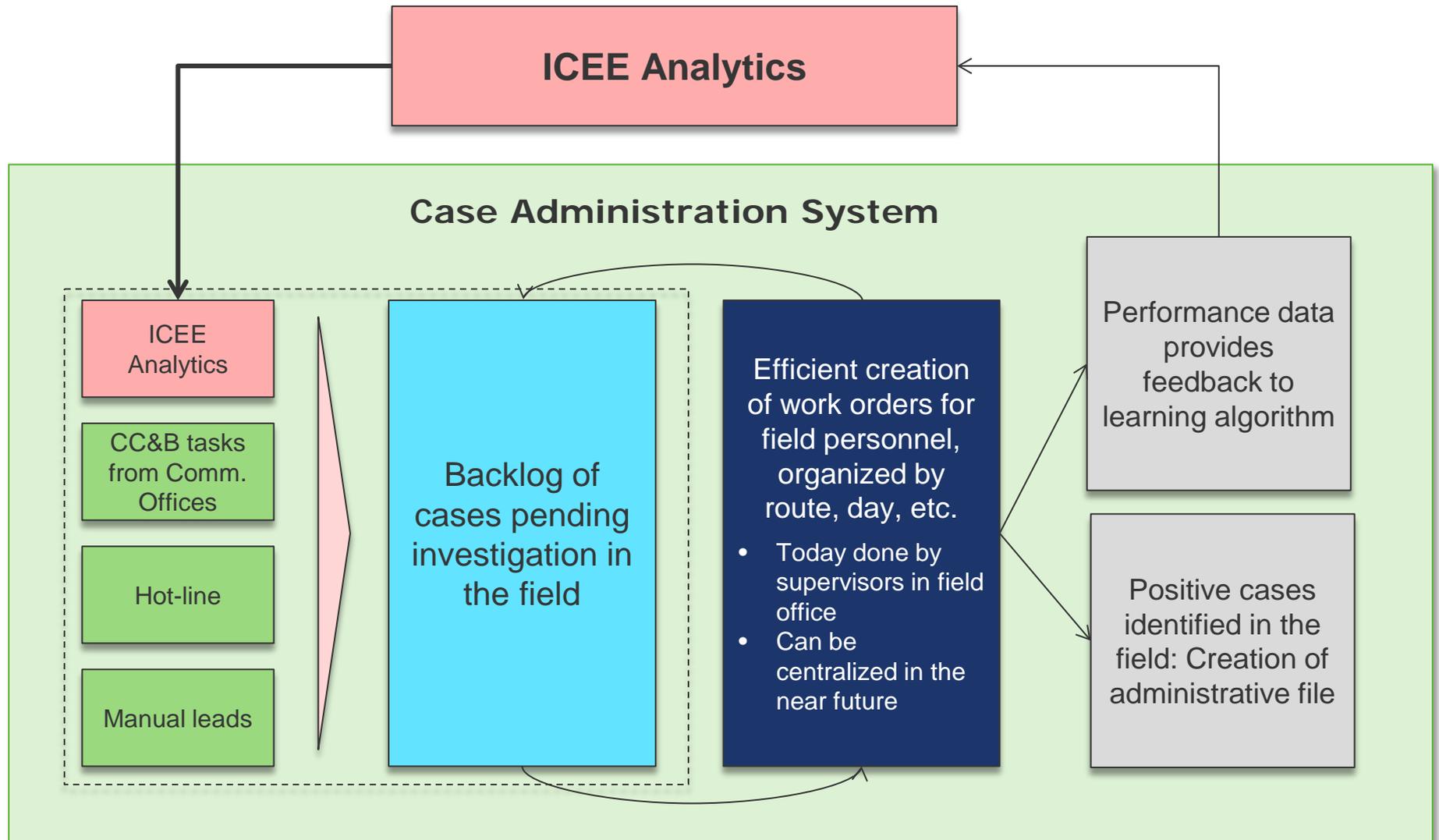
- Business Leader: David Meléndez

Key Follow-Through Actions:

- Enforce utilization of the system in the field
- Consider centralization of lead generation and work order creation and assignment process
- Continue adding customer facing personnel freed-up with the CS reorganization project

Case Administration System and Process

Implementation of improved system and process for back-office management of theft cases





4

Health Benefits

Active Employees

Retired Employees

Active Employees

Changes to the Health Plan to reduce costs and waste, improve plan utilization

Description

- Medical benefits costs set to increase for both active and retired employees
- PREPA's medical benefits significantly above comparable Government Corporations, based on benchmark study performed at the start of the project
- Above market utilization of pharma and medical services, based on data supplied by Triple-S (plan administrator) and Myriad (PREPA's broker)

Results Achieved and Changes Implemented

- Assisted in selection of the new broker for Active Employees Health Plan (RFP approved by the Board) and renegotiations of the contract with the Plan Administrator (approved by the Board)
- Introduced service level metrics and performance reporting
- Concluded 2013-14 audit of active employees health plan for ~\$3M cash reimbursement
- Implemented changes to Active Employees Health Plan for \$6M annual savings and improved utilization controls
- Proposal for an additional \$4M savings through changes in co-pays and co-insurance to be implemented in the future
- No significant union issues through the Health Benefits changes

Continuity and Sustainability Strategy

Procedures

- Documented procedure of recovery losses from abuse of Health Plan
- Formalized Active Employees Health Plan coverage, minimum performance indicators and penalties establishing guidelines for future selection of Plan Administrator

Tools

- Developed tool to track Health Plan savings initiatives
- Defined KPI's and established monthly KPI reporting

Resources & Training

- Leader: Belkin Nieves & Sandra Medina
- Trained PREPA Health Benefits Team in using the savings tracking tool and analyzing monthly KPI reporting
- Transferred know-how to PREPA Health Benefits Team related to new contract extension negotiations

Key Follow-Through Actions

- Kick off RFP process to select Plan Administrator when current contract expires in June 2017
- Continue review of monthly KPI's and savings
- Consider increase in co-pays and co-insurance, as presented to PREPA's Board in spring of 2016, for additional \$4M savings and improved utilization

Retired Employees

Changed Health Plan Administrator to reduce costs and improve service to members

Description

- Medical benefits costs set to increase by \$9 million, with the main burden placed on the contribution of retired employees
- PREPA's contribution to the Plan set to increase from \$24M paid in 2014
- Entrenched vendor, refusing to negotiate better costs or to be held accountable for service performance

Results Achieved and Changes Implemented

- Conducted a competitive RFP to select a new Plan Administrator, business awarded to MMM, only company in PR with 4 Service Stars awarded by CMS
- Achieved savings to PREPA of \$4M per year, with minimal increase to member contributions and no changes in coverage
- Introduced performance metrics and periodic reporting with HR management
- Transition of services to new Administrator with no significant service impact. Supported HR service level improvement initiative in month 9 of the contract
- Prevailed in a court challenge by incumbent vendor
- Supported negotiations for one year contract extension with MMM at minimal cost increase (vs. \$2M contractual increase). Approved by BoD for calendar 2017

Continuity and Sustainability Strategy

Procedures

- Created relationship framework to manage Administrator performance
- Supported sourcing and contracting process, supported new negotiations for contract extension with minimal price increase

Tools

- Implemented new reporting to track escalation and resolution of open issues with members
- Defined KPI's and established monthly KPI reporting

Resources

- Business leader: Belkin Nieves & Sandra Medina
- Transferred know how to PREPA Health Benefits Team related to new contract extension negotiations

Key Follow-Through Actions

- Continue tracking performance KPI's and holding bi-monthly meetings with Administrator's senior management to resolve lingering service issues
- Improve engagement of Plan members in preventive care and learning activities
- Ensure program utilization and other metrics support cost containment or cost decreases for 2018 renewal, take necessary measures to ensure future cost containment



5

Fleet and Inventory

Fleet Management

Purchasing and Inventory

Fleet Management

KPI development and tracking, reduction in the overall size of the fleet, fleet investment plan, maintenance contract

Description

- In coordination with the fleet division management and shop supervisors, developed a plan to streamline the maintenance process, improve fleet operational statistics, and improve vehicle safety
- Also, worked to quantify and remediate the overall mechanic shortfall and develop a long term fleet investment plan designed to better align the age and size of PREPA's fleet to industry standards

Results Achieved and Changes Implemented

- Development and implementation of a KPI dashboard and weekly reporting process
- Streamlining of the fleet parts purchasing and warehousing process and establishment of coordination protocols between shop and warehouse supervisors
- Removal of ~350 underutilized and costly vehicles from the fleet resulting in ~\$8.5mm of annual savings
- Implementation of a parts purchasing contract with Navistar resulting in ~\$200k in savings and significant operational efficiencies
- Conduct of fleet maintenance and repair services management RFP

Continuity and Sustainability Strategy

Procedures & Tools

- KPI development and reporting tool (excel)
- Navistar parts purchasing process map and invoice receipt and payment process
- Fleet investment planning and budgeting tool

Training

- Fleet division management has been trained on the development of the weekly KPI dashboard and reporting pack and is currently managing the process end to end
- Shop supervisors have been trained on Asset Suite as well as the parts ordering process
- Fleet division management were integral members of the RFP evaluation committee and are fully knowledgeable of the process to date

Resources

- Roberto Betancourt Administration and Infrastructure Director), Edgardo Vazquez Baes, Ramon Caldas, Juan Rovira

Key Follow-Through Actions

- Finalize vehicle purchasing process
- Finalize Fleet RFP evaluation process
- Implement contract and monitor performance

Purchasing and Inventory

Requisition screening, inventory management and warehouse coordination, EDE/MRO RFP

Description

- In conjunction with the materials management division, worked to streamline the requisition approval and purchase order process, improve inventory management, decrease the amount of material inventory, and stop unnecessary purchases
- Also, work with counsel to admit language to Act 4-2016 to enable PREPA to run RFPs for material purchasing contracts and execute an RFP for the purchase of EDE/MRO materials

Results Achieved and Changes Implemented

- Development and implementation of a purchasing KPI dashboard and weekly tracking process
- Decrease in overall inventory values of ~\$32mm
- Training of warehouse supervisors and personnel on the use of the Asset Suite technology as well as industry best practices
- Establishment of an inventory and requisition control team
- Development and implementation of a weekly requisition screening tool and process
- Execution of the EDE/MRO RFP and evaluation process

Continuity and Sustainability Strategy

Procedures and Tools

- Weekly requisition control process
- Weekly purchase order tracking tool and process
- Monthly inventory management KPI dashboard

Training

- Knowledge Transfer: Materials Management Division leadership has been involved in the planning and execution of all improvement initiatives executed to date and is currently managing all processes with the exception of 1) the EDE/MRO process and 2) the weekly requisition screening process
- Warehouse supervisor and staff training – Asset Suite and inventory management process
- Requisition control and coordination training

Resources

- Roberto Betancourt, Ramon Caldas (Administration and Infrastructure)

Key Follow-Through Actions

- Sign and implement EDE/MRO contracts approved by the Governing Board on January 24, 2017
- Closely track performance during contract set-up, focusing on achieving projected cost savings and service level targets



6

Program Management Office

Program Management Office

Project Management Office for High Priority Projects

Create a Program Management Office to support the Executive Director's high priority projects

Description

- Set-up of a Project Management Office to track the Executive Director's high priority projects, with responsibilities including:
 - Project consolidation and rationalization
 - Information gathering, analysis & reporting
 - Conflict resolution
 - Communication with Board of Directors key external interested parties
 - Provide input for budget and investment planning
- Foster a higher accountability for project results among senior managers, by providing transparent reporting to Executive Director
- Set-up senior management periodic review sessions

Results achieved and Changes Implemented

- Developed extensive documentation on critical projects, creating and structuring project data that did not exist before the PMO
- Created an initial PMO practice at PREPA, with a group of trained individuals in the Directorates and Executive Directorate Office
- Culture Change: Increased transparency and accountability for project delays, budget overruns, risks and successes

Continuity and Sustainability Strategy

Processes & Tools:

- Created new set of PMO artifacts and processes to create, gather, report and update project information
- Implemented process flows between Directorates and Executive Office
- Implemented periodic executive reviews
- Created extensive documentation on critical projects that must be kept updated

PREPA Resources:

- In October 2016 this process was transitioned to Alvin Roman, responding directly to the Executive Director
- We understand a new structure will be assigned to lead this work stream within PREPA

Key Follow-Through Actions:

- Assign a full time FTE to serve as Project Management leader reporting directly to the Executive Director
- Continue with periodic (weekly and bi-weekly) reporting from PMO liaisons on each Directorate's high priority projects
- Continue with information gathering through PMO templates and reporting from PMO liaisons
- Extend PMO methodology to internal projects in the Directorates
- Ensure proper alignment between PMO projects and Capital Budget for FY18 budgeting process



7

Transmission & Distribution Assessment

T&D Assessment

Transmission & Distribution Assessment

At the request of the Board of Directors, AlixPartners performed an Assessment of the T&D function and created a set of recommendations and an implementation plan

Description

- PREPA's Board wanted to identify critical issues in the T&D function and to have specific recommendations and an action plan to address them
- AlixPartners conducted a four week diagnostic and planning project, working with the T&D management team
- Results of the project were presented to the Board in December, 2015

Results Achieved and Changes Implemented

- Assessment findings:
 - Outages twice as long as in peer utilities, trending worse
 - Spending per customer lags comparable coastal utilities
 - Sub-optimal staff utilization
 - Minimal preventative maintenance
 - Little to no insight into future work backlog
 - Maintenance backlogs (vegetation, poles, overall repair work) chronically large compared to typical practice and growing rapidly
 - Failure to maintain vegetation and poles results in hurricane damage risk 3-5 times higher than Florida Power and Light saw in 1992 and 2005
- Report also identified 4 critical internal barriers:
 - Fire-fighting culture
 - Union friction and inflexibility
 - Overwhelmed supervision
 - Tyranny of the Urgent

Continuity and Sustainability Strategy

Processes

- T&D Planning Framework can be re-used in an annual planning T&D exercise by the Director and his team

Resources

- Faustino González, T&D Director

Key Follow-Through Actions

- Complete RFP to outsource vegetation trimming to a 3rd party provider
- T&D Improvement Plan identified 4 key recommendations:
 1. Address the "desganche" backlog, by sourcing 3rd party services, releasing 90-120 FTE's of line crew effort – status: in implementation
 2. Implement a taskforce to address repair backlog, by reassigning construction staff, bringing in retired employees and completing consolidation of dispatch
 3. Improve line repair crew efficiency, by implementing a flexible crew model, improving work planning and measuring crew productivity and performance
 4. Culture change initiatives, establishing District metrics and incentives based on safety, reliability and productivity; restarting hiring in critical positions once productivity baseline is established; investing in technology and tools and re-establishing a preventative maintenance program
- Recommendations 2, 3 and 4 above require accelerated implementation, given the linesmen and supervisors retirement risk



8

IT Improvements and New Rate Implementation

Provisional Rate Implementation

Permanent Rate Implementation

CC&B Environmental Improvements

Technical Infrastructure Improvements

IT Security Improvements

Provisional Rate Implementation

As part of the rate case filing, scoped and implemented a new provisional rate, improved customer care and billing system deployment processes and implemented an agile project management methodology.

Description

- Implement a 'Provisional Rate' value across all rate schedules ensuring correct billing and reporting
- Track collections of Provisional Rate in order to generate reporting capabilities not previously existent (Cash Accounting)
- Create adequate development /testing environments and software release processes in order to improve Customer Care and Billing system quality and stability

Results Achieved and Changes Implemented

- Implemented new provisional rate in 30 days from notification date to live release, worth \$18M in additional cash.
- Implemented new documentation standards for design and configuration of software changes (Scope Document)
- Generated a Rapid Prototyping methodology that allowed to identify issues in advance (iterative development)
- Automated configuration deployment process and tools (Configlab) implemented
- Implemented agile tools and processes for change management and project management to increase system quality
- Generated a Lessons Learnt document list with follow-up actions to be implemented before permanent rate implementation project

Continuity and Sustainability Strategy

Tools / Processes

- Agile Project management methodology for task management automated test case management, and defect tracking
- Templates for Scope definition and Test cases
- Oracle ConfigLab software for configuration and release management

Training

- ConfigLab deployment process and usage (Oracle)

Resources

- Hiram Medero (CIO), Carmen Flores (Customer Service Director), Gregory Rivera (Planning), Marieolga Anglero (Finance)
- Outside contractors from Oracle

Key Follow-Through Actions

- Continue the use of Agile Methodologies for Project management and development tasks
- Create a CC&B UAT environment
- Stabilize CC&B Development/QA/Prod environments
- Increase testing efforts before any move to production
- Use ConfigLab for deployment of new functionalities into the different environments
- Ensure dedicated expert PMO to enforce deadlines, resource commitments and overall project progress

Permanent Rate Implementation

Scoped and implemented a new Rate Structure, continued to use the documentation standards and assessed CC&B upgrades and improvement on environments.

Description

- Implement the new 'Rate Structure', ensuring correct billing, reporting, and reconciliation with the provisional rate
- Plan and test "adjusted" provisional rate to be implemented by Feb 1st to reduce the reconciliation effort
- Incorporate to the Gap Analysis the response of the Rate Case order by PREC dated 1/10/2017 and subsequent clarifications
- Adhere to development, testing and release management processes defined for this project to ensure quality of the software to be released in production

Results Achieved and Changes Implemented

- Generated a Scope Document with required changes based on Rate Case Filing, PREC Rate Orders, and Q&A sessions with stakeholders (including Jan 10th response analysis)
- Gathered AS-IS, Conducted gap analysis, and created TO-BE state for the following (in progress)
 - Customers Invoices
 - GL Accounts and distribution codes
 - Changes to several reports
 - Rate Structure
- Created Proof of Concept for Proposed Rate Structure prior to the PREC response on Jan 10th
- Implemented project specific Kanban Board and Scrum sessions for project and requirements management
- Implemented the "Adjusted Provisional Rate" in all environments pending the final value to release to production

Continuity and Sustainability Strategy

Tools / Processes

- JIRA Kanban Board and Backlog management including tasks and defects
- Templates for Scope Definition and Test Plan
- The above artifacts are designed to be used in all future major changes to CC&B

Training

- Trained Customer Service Group on the use of JIRA Board and Task management
- ConfigLab deployment process and usage (Oracle)

Resources

- Hiram Medero (CIO), Carmen Flores (Customer Service Director), Gregory Rivera (Planning), Marieolga Anglero (Finance), Outside contractors from Oracle

Key Follow-Through Actions

- Complete the scope and requirements definition, design, test, and implement the new Rate structure
- Complete TO-BE state for the work in progress
- Release to Production the 'Adjusted' provisional rate
- Continue the use of Jira suite of tools for Project management, defect tracking, and test case management
- Increase testing efforts before any move to production
- Ensure dedicated expert PMO to enforce deadlines, resource commitments and overall project progress
- Continue Oracle subject matter expert engagement with the implementation
- Do not underestimate the complexity of this change

Information Technology Assessment

At the request of the Board of Directors, AlixPartners performed an Assessment of the IT function and created a “Go Forward Plan” addressing the areas that needed most urgent attention

Description

- PREPA’s Board wanted to identify critical issues in the IT function and to have specific recommendations and an action plan to address them
- AlixPartners conducted a five week diagnostic and planning project, working with Hiram Medero and his team
- Results of the project were presented to the Board in October, 2015

Results Achieved and Changes Implemented

- Assessment focused in 5 critical areas:
 - IT Organization and Leadership
 - Application Portfolio
 - Technical Infrastructure
 - IT Security
 - IT Governance & Processes
- Final report included the following topics:
 - IT critical issues, focusing on basic, foundational areas and operational risks
 - Detailed recommendations, with a focus on immediate implementation in 6 and 12 months time horizon
 - Implementation Plan, Resource Plan and Capital and Operational Budgets needed to support the project
- Board decided to implement the recommendations of the Plan , starting in Q2 2016

Continuity and Sustainability Strategy

Processes

- IT Planning Framework can be re-used in an annual planning IT exercise by CIO and his team

Resources

- Hiram Medero, CIO

Key Follow-Through Actions

- IT “Go Forward Plan” identified 5 key recommendations:
 1. Standardize Customer Care and Billing - today in progress, co-existing with the rate implementation projects, that is the highest priority at this point (see other slides in this section)
 2. Improve Network, Application and Data Security - first phase implemented, subsequent phases must be implemented by PREPA with external specialist help. Other implementations in this area: Network Operations Center, centralized help desk and ticket system, IT requirements management process, Disaster Recovery Center in Aguirre
 3. Outsource IT data centers to co-location facility - in implementation, contract with PREPA.Net approved by the Board), migration of services to cloud in progress
 4. Improve Ad Hoc reporting capability (implementation not started, KPI Dashboard developed for Customer Service, database issues still unresolved)
 5. Standardize Work Order to Repair Process (implementation not started)

CC&B Improvements (Infrastructure, Tools, and Processes)

Addressed Critical CC&B environment related issues to increase system quality and uptime as well reduce change management risks as a result of planned provisional rate, permanent rate and SPV projects

Description

- Provide a stable CC&B infrastructure environment for proper system testing, configuration Management, and deployment Management
- Enhance CC&B system testing capabilities
- Implement and socialize agile project management processes and methodologies

Results Achieved and Changes Implemented

- Procured new hardware and created the new User Acceptance Testing Environment for CC&B
- Stabilized CC&B development / testing environments by synchronizing all environments with the production configuration and data
- Configured CC&B Development / QA / UAT environments and conducted environment assessment by Oracle experts
- Implemented JIRA Service Desk and Jira Agile to standardize defect tracking, change management, and project management processes for CC&B
- Ensured Customer Service and IT teams use the ConfigLab process for deploying changes to the different environments
- Built a RACI Matrix for deployment and configuration management (Configlab) to identify roles and responsibilities of the teams involved

Continuity and Sustainability Strategy

Tools / Processes

- JIRA Service Desk, Jira Agile
- Oracle Configlab for configuration and release management

Training

- Trained Customer Service on the use of JIRA Service Desk and Agile methods using task management
- ConfigLab deployment process and usage (Oracle)
- RACI Matrix for Configlab Release

Resources

- Hiram Medero (CIO), Carmen Flores (Customer Service Director), Outside contractors from Oracle

Key Follow-Through Actions

- Critical to review people's access/permissions on CC&B environments, specifically Production environment and revoke unneeded access.
- Prevent changes to production without the use of Configlab
- Procure JIRA (or alternative) test case management tool
- Review Oracle Technical assessment of CC&B development / QA / UAT environments, prioritize and implement recommendations
- Complete CC&B Production environment assessment, review and implement recommendations from Oracle
- Plan the upgrade to Oracle CC&B v2.5
- Continue the use of Jira suite of tools for Project management, defect tracking, and test case management
- Increase testing efforts before any move to production
- Ensure dedicated expert PMO to enforce deadlines, resource commitments and overall project progress

IT Technical Infrastructure Improvements

Move on-premise IT Data Centers to a Co-location facility while leveraging public cloud where possible

Description

- Reduce risk of critical system outages at the Santurce datacenter, due to deterioration of physical facilities and environmental (HVAC, power supply, cabling)
- Develop migration strategy and detailed plan to use co-location services and cloud services to move applications and services out of Santurce datacenter
- Develop disaster recovery plan for all critical applications
- Implement effective monitoring of infrastructure problems and service levels

Results Achieved and Changes Implemented

- Implementing plan to migrate critical applications to a co-location facility (PREPANet)
- Implementing plan to migrate desktop Microsoft Office to Microsoft Office365 in the cloud – ~25% complete
- Completed Proof of Concept to migrate Citrix infrastructure to Cloud (IaaS – Infrastructure as a service)
- Disaster Recovery data center for several critical apps including CCB in Aguirre is operational
- Implemented new Network Operations Center (NOC), monitoring software, and IT help desk
- Supporting PREPA in the negotiations with PREPA.Net, including scope, pricing and service levels

Continuity and Sustainability Strategy

Processes

- Developed migration strategy document and plan
- Defined and documented scope of services, pricing and service levels negotiation strategy with PREPA.Net, with detailed reviews and comments to contractual documentation to be negotiated with PREPA.Net

Resources

- Hiram Medero, CIO
- Francisco Ramos, Ariel Rodríguez (Informática)
- It is imperative that PREPA engages outside expert help to support the detailed migration plan and testing before migration and cut-over of critical applications is attempted

Key Follow-Through Actions

- Obtain agreement on the Scope of Work (SOW) for Co-location services with PREPA.Net
- Continue progress in Data Center Migration planning for all applications using phased approach
- Complete Microsoft Office migration to the Microsoft Office 365 cloud
- Complete migration of desktop virtualization infrastructure to Cloud (IaaS - Infrastructure As A Service)
- Continue planning to migrate PREPA portals and other virtual environments to the Microsoft Azure cloud
- Migration planning and execution
- Complete Disaster Recovery site testing and implementation

Information Technology Security Improvements

Implementation of hardware and software tools, process changes, and IT security organization to reduce risk to PREPA's Infrastructure, systems, and data

Description

- Implement basic IT security controls lacking at PREPA
- Prevent unauthorized access to PREPA IT network, Systems, and hosting facilities to minimize risk of data theft and system downtime
- Create IT Security organization responsible for monitoring and responding to security threats
- Create security policies for stricter controls and access to critical company assets
- Plan and launch Phase II of the project, based on a 3rd party detailed analysis and penetration test

Results Achieved and Changes Implemented

- Identity Management : implementation of strong passwords, periodic password change, consolidation of three active directories into one for identity management
- Network security improvements: implementation of three Palo Alto firewalls and proxy server technology, process to alert, report and manage security incidents using monitoring tools
- Improve controls on sensitive data : Process to identify, manage and protect Personal Identifiable Information (PII, PCI) of customers and employees
- Improve cyber security: Conducted third-party (Optiv Security) penetration testing and network security architecture review to identify other potential threats to PREPA infrastructure. Reports are under review by Hiram Medero. Report not shared with AlixPartners team

Continuity and Sustainability Strategy

- IT leadership team has been involved in planning and execution of Phase-I of these initiatives but has not actively managed them. Several third party resources were used for PMO, security vulnerability assessment, firewall installation/configuration, and network monitoring tool configuration

Training

- IT staff was trained in several tools including Palo Alto firewall, HP network monitoring, Project server and general PMO using JIRA suite
- IT Security team was trained in PII and PCI requirements

Key Follow-Through Actions and Resources

- Complete review of the Optiv Security assessment report and prioritize/implement the recommendations - Hiram Medero
- Finish implementation of self service password reset tool – Ariel Rodriguez (PREPA)
- Prioritize and implement PII recommendations for Top 10 critical applications – Outsource
- Consider investing into a SIEM tool to provide real-time analysis, protection, and reporting of all intrusions – Outsource
- Consider outsourcing IT security to a managed security third party provider
- Continue to outsource PMO office for critical projects

9

Organizational Development

Succession Planning

KPI Meritocracy and Performance Management

Organizational Blueprint

Succession Planning

Create a Plan to address the impending retirements of employees in critical operational positions

Description

- Retirement of 1,100 employees after passage of Act 66 created operational issues and highlighted lack of preparedness
- No succession plans in place at PREPA, reactive approach regarding leadership development
- Over 1000 currently staff eligible for retirement; many in critical positions
- Retirement system vulnerable and retirement levels sensitive to any changes
- All of the above created the need to develop a success plan and associated methodology in anticipation of additional waves of retirements of experienced employees

Results achieved and Changes Implemented

- Identified most critical retention risks in T&D, Generation and Customer Service (covers approx. 80% of the workforce)
- Developed risk reduction plan via Identified successors for 50% of the critical roles and alternative strategies for 40% of the critical roles (these are yet to be implemented)
- Developed and implemented a hiring plan that brought 60 new hires into PREPA to the core operational Directorates

Continuity and Sustainability Strategy

Processes & Tools:

- Created succession plan process and templates with HR and the Directorates, to identify critical positions, succession candidates and define succession activities to prepare for the transition
- Created hiring plan process and templates to ensure business-driven hiring plan decisions

PREPA Resources:

- HR Director: Belkin Nieves
- Process transitioned to HR organization

Key Follow-Through Actions:

- Keep succession plan updated
- Continued execution of training, job rotation and like actions included in the plan to prepare new leaders for succession jobs
- Execute periodic very focused hiring plans to ensure new leadership infusion and new viewpoints in PREPA's leadership
- Maintain succession planning as a key are of visibility to the Executive Director and the Board
- Ensure Directorates are responsible for their succession plans. HR is a facilitator, plans are the responsibility of the operational areas

KPI Meritocracy and Performance Management

Start creating a culture of accountability and incentives based on objective business performance

Description

- Significant instability, low accountability and lack of leadership from top management
- Leaders and managers are placed in positions based on political affiliation vs. job qualifications
- Outdated job descriptions and limited use of performance KPI's
- No formal performance management process: management expectations are not clear, no clarity on priorities and performance metrics, no meaningful feedback on performance provided
- Managers have little incentive to assume higher responsibilities and progress in their careers

Results achieved and Changes Implemented

- Identified KPIs (PREPA-wide and individual Directorates)
- Commenced KPI data gathering and built report template
- Piloted performance management with Senior Staff; Defined PREPA-wide competencies and collected senior staff self-evaluations
- Built online performance evaluation tool to capture evaluations and support a broader roll-out (scope includes competency evaluations only at this stage)

Continuity and Sustainability Strategy

Processes & Tools:

- Created KPI Dashboard with most relevant performance metrics PREPA-wide and by Directorate
- Agreed on calculation formulas and data sources for all KPI's
- Gathered historical information, defined targets for each metric and started pilot report
- Defined information update process with Directorates, Finance and Executive Office
- Defined competencies for management positions
- Created performance evaluation templates, based on competencies and operational results

PREPA Resources:

- Executive Director and Executive Office
- Finance Director to gather, verify and report KPI's

Key Follow-Through Actions:

- Process was effectively transitioned to PREPA and it provides a valuable basis to implement a performance driven culture
- Maintain KPI dashboard alive and use the process for reporting in Staff Meetings and to Board of Directors
- Consider implementation of system of incentives and consequences linked to the results of the performance evaluation

Organizational Blueprint

Streamline and right-size PREPA's organization to improve effectiveness and productivity

Description

- Highly silo' d, highly traditional bureaucracy
- Overly staffed with non-value added administrative personnel
- Over sized executive directorate and executive team
- Shortages in a limited number of specific technical skill areas
- The above issues indicated the need to streamline PREPA's organizational structure, simplify areas and reporting relationships and resize the organization according to actual operational needs

Results achieved and Changes Implemented

- Analyzed organizational inefficiencies:
 - Spans of control and management layers
 - Line positions vs. support and administrative positions
 - Job descriptions "cartas de deberes" in key operational positions (Generation, T&D, Customer Service)
- Defined key organizational / operational roles
- Redesigned current directorate structure
- Designed new / streamlined governance and decision processes
- Some recommendation of the plan have been implemented
- Included some of the new governance principles in Act 4 to make changes more permanent
- Supported new Board of Directors definition and selection process

Continuity and Sustainability Strategy

Processes & Tools:

- Detailed Organization Blueprint report developed and shared with Board of Directors, Executive Director and HR Director

PREPA Resources:

- Executive Director and Executive Office
- HR Director

Key Follow-Through Actions:

- Process was effectively transitioned to PREPA and it provides a valuable basis for the implementation of organizational changes and the recommendations included in the report
- Update the organization sizing exercise for critical operational positions in the Generation, T&D and Customer Service Directorates
- Develop concrete plans to move qualified employees from non-operational Directorates to the core Directorates, developing training schools, limited outside hiring and outsourcing to 3rd parties to facilitate the transition
- Change to process-centric organization successfully started as a Pilot in Customer Service. Need to complete the change to permanent organization after legislative freeze expires in July 2017



10, 11, 12, 13

Financial Restructuring-Related Work Streams

- 10. Cash Flow Model
- 11. SPV Infrastructure and Depository Agreement
- 12. Rate Case for the PR Energy Commission
- 13. PROMESA Fiscal Plan

Cash Flow Model

Develop and manage thirteen week cash flow forecast model

Description

- Develop and manage cash flow forecast model to gain a view on the short and long term liquidity
- Manage weekly creditor calls to discuss actual results and provide operational clarity for any events with a cash impact
- Preparation of new budgets covering the next 13-week period
- Generate weekly and monthly Flash Report for Board of Directors, senior management and other constituencies (AAFAF, Creditor Advisors)

Results Achieved and Changes Implemented

- As per the RSA, AlixPartners has been supporting PREPA to provide to creditors weekly variances and reporting updates to the 13-week cash flow statement
- Support establishing a disbursement control system to identify vendor payments that are critical to run the business

Continuity and Sustainability Strategy

- On October 5th, 2016, we commenced weekly meetings to educate the PREPA Finance and Treasury teams on Microsoft excel and modeling skills
- Every week thereafter, we provided the PREPA Finance and Treasury team with excel cash flow modules designed to train them on key cash flow modeling concepts. We also held in person training sessions to review the modules
- Technical areas covered include Excel formulas, cash flow forecasting, AR and AP roll-forward methodology, and cash conversion cycle calculations, among others
- PREPA Resources
 - Jose Hernández Colón – Treasurer
 - Marieolga Anglero Bruno – Interim Controller

SPV Infrastructure and Depository Agreement

Contract depository & calculation agents, implement cash management process changes per Servicing Agreement

Description

- Conduct RFP or direct negotiation processes and contract third parties to serve as the depository agent, calculation agent, and auditor of the SPV as defined by the Servicing Agreement and RSA.
- Re-design the flow of PREPA's collected revenues to satisfy the requirements of the Servicing Agreement, Depository Agreement, and RSA
- Implement changes to PREPA's billing system required to satisfy the requirements of the Servicing Agreement

Results achieved and Changes Implemented

- Conducted informational sessions with four Puerto Rico based banks to discuss their level of interest in serving as the Depository Agent
- Educated PREPA personnel on the terms of the Servicing and Depository Agreements
- Designed a 'flow of funds' to include the Depository Agent and SPV that satisfies pertinent requirements
- Conducted initial coordination with Technology on the billing system changes that will be required
- Created a Scope Document to reflect a Gap Analysis on the current Billing system including Collections

Continuity and Sustainability Strategy

- AlixPartners has taken the lead on these efforts to date, but PREPA Treasury, Finance, and Technology have been involved in all facets of the work completed and are educated about the process
- **Key Follow-Through Actions**
 - Obtain agreement from creditors on a solution to the existing challenge created by the RSA's mandate that the Depository Agent be a non-Puerto Rican bank. To date, no non-Puerto Rican banks have expressed interest in the role
 - Finalize disclosure documents (processed predominantly managed by Norton Rose and PMA)
 - Finalize technology and reporting change requirements and prepare for the implementation of those changes
- **PREPA Personnel**
 - Jose Hernández Colón – Treasurer
 - Marieolga Anglero Bruno – Finance
 - Jannette Colon – Customer Service
 - Francisco Ramos – Information Technology
 - Gregory Rivera - Planning

Rate Case for the PR Energy Commission

Financial analysis and process design in support of the SPV and permanent rate petition and FRM proposal

Description

- Conduct business planning and financial modeling in support of the FY17 revenue requirement
- Drafted responses to over 200 requests for information from the Energy Commission and coordinated the review and approval of the responses across multiple PREPA divisions
- Collaborated with R3, Navigant, and Cleary to design an appropriate formula ratemaking mechanism ('FRM')
- Prepared multiple witnesses including PREPA's Executive Director and Chief Restructuring Officer for their in-person testimony in front of the Energy Commission

Results achieved and Changes Implemented

- Obtained Energy Commission approval for the structure of the PREPA Revitalization Corporation ('PREPARC')
- Obtained Energy Commission approval for the implementation of an increased permanent base rate, formula rate mechanism, and various other operational changes required to transform PREPA into a sustainable utility
- Filed Motions to Reconsider on key Energy Commission decisions that are not agreed including; PREPA's Integrated Resource Plan, formula rate mechanism, governance framework, and others

Continuity and Sustainability Strategy

- AlixPartners has worked closely with the Planning Division, R3, Navigant, and Cleary to craft and coordinate communications and financial analyses that are presented to the Energy Commission
- PREPA Planning is knowledgeable about all aspects of AlixPartners involvement in this work stream up to this point. Effective continuity will be a matter of burden sharing amongst PREPA and its remaining advisors
- **Key Follow-Through Actions**
 - Continue to communicate with the Energy Commission on the Motions to Reconsider that are currently pending (IRP, permanent rate, FRM)
 - Prepare for the next rate case filing which will likely be required in mid to late 2017. This rate case filing will be required to be much more detailed than previous filings
- **PREPA Personnel**
 - Gregory Rivera – Planning

PROMESA Fiscal Plan

Manage and coordinate all inputs in development of a comprehensive Fiscal Plan report per PROMESA

Description

- Develop and manage PREPA’s requirement, under PROMESA as a covered territorial instrumentality, to prepare a Fiscal Plan
- Coordinate and obtain necessary operational, financial and legal information from PREPA resources and retained outside professionals to provide a basis for full compliance and certification with PROMESA

Results Achieved and Changes Implemented

- Constructed draft report detailing actions and methods taken to achieve fiscal responsibility and access to capital markets through an appropriate mix of structural reform, fiscal adjustment and debt restructuring
- Developed sections to report outlining specific progress achieved in the following Core Transformation Areas: Sustainable Capital Structure; Governance & Legal Reform; Internal Cost Savings & Efficiencies; Adequate Infrastructure Plans; New Rate Structure; and Employee Benefit and Pension Funding
- Produced detailed 10-Year financial statement projections underpinning Fiscal Plan, inclusive of all key assumptions and supportable analytical metrics

Continuity and Sustainability Strategy

- Incorporated checklist within report to present compliance with pre-established fiscal plan requirements
- Maintained financial projection excel-based model to support PREPA forward-looking outlook and strategies
- Created all underlying source files for presentational charts and financial graphs within Fiscal Plan report

PREPA Resources:

- All draft Fiscal Plans (most recent version: January 17, 2017) produced to Javier Quintana and PREPA’s BoD
- Fiscal Plan draft versions also shared with AAFFAF, Transition Committee and PROMESA Oversight Board

Key Follow-Through Actions:

- Assign Lead to coordinate internal PREPA review and ultimate OB recommendations , and manage process to obtain necessary approvals and final certification
- Update report and financial projections, as necessary, with respect to final outcome on following key areas:
 - Executed RSA deal with creditors
 - Implementation of Title III or Title VI
 - AOGP project timing and financing
 - Any pension plan changes and funding adjustments