CDOS

Project Completion Report

for

The Colorado *"enterprise Facility for Operational Recovery/Readiness/Response and Transition services"*

e-FOR^{3}T

"The prepared survive"

"Our cities must have clear and up-to-date plans for responding to natural disasters, disease outbreaks or terrorist attack."

- President George W. Bush -

Table of Contents

1. Executive Summary 3

1.1 Background 3

1.2 Project Overview 4

2. Achievement of the Project's Objectives 6

2.1 Original Objectives 7

2.2 Performance Against Objectives 8

3. Project Performance 10

3.1 Performance Against Planned Time 12

3.2 Performance Against Planned Cost 13

4. Approved Project Changes 13

4.1 Effects on Original Project Plan 14

4.2 Effects on Business Case 14

5. Project Management Conclusions 14

6. Lessons Learned (recommendations) 14

6.1 Management 15

6.2 Technical 16

6.3 Quality 16

6.4 Major Issues during the Project Lifecycle 16

7. Operations Plan 16

8. Customer Profile 17

9. *e-FOR³T* a Strategic Value 17

10. Follow On Actions 18

11. Post Project Review 19

12. Appendix 1 – Secretary of State News Release *e-FOR³T* 20

13. Appendix 2 – *e-FOR³T* Facility Infrastructure Lease Services 21

14. Appendix 3 – *e-FOR³T* Network Topology 23

15. Appendix 4 – *e-FOR³T* Facility Layout 24

16. Appendix 5 – *e-FOR³T* Governance Model 25

17. Appendix 6 - Tier Classification Chart Infrastructure Performance 30

18. Appendix 7 – State of Colorado *e-FOR³T* DR Facility Evaluation and Selection Team 31

19. Appendix 8 – Key Project Documents and References 32

Project Closure Report

Enterprise Facility for Operational Recovery/Response/Readiness and Transition services

(*e-FOR^{3}T*)

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1. Executive Summary

1.1 Background

State of Colorado Information Technology (IT) systems are vulnerable to a variety of disruptions, ranging from mild (e.g., short-term power outage, disk drive failure) to severe (e.g., equipment destruction, fire, flood, etc.) from a variety of sources such as natural disasters to terrorists actions. While many of the potential vulnerabilities to IT services have been minimized or eliminated through technical, management, or operational solutions and sound risk management practices, it is virtually impossible to completely eliminate all risks, as evident by the events at CDOS in June of 2004. The events experienced by the CDOS demonstrate the need for an effective contingency capability as an essential component for mitigating the inevitable event of system and service unavailability. The development of business continuity and disaster recovery capabilities are essential to the security and fiduciary responsibilities of the State stewards.

Business Continuity and Disaster Recovery planning refers to interim measures to recover business and IT services following an emergency or system disruption. Interim measures may include the relocation of IT systems and operations to an alternate site, the recovery of IT functions using alternate equipment, or the performance of Business and IT functions using manual methods.

An overwhelmingly common misconception about disaster recovery planning existed where it was thought that having a backup strategy, doing backups everyday and running anti-virus software was the same as having a Disaster Recovery Plan. The ***e-FOR^{3}T*** project has created the opportunity to heighten awareness about disaster recovery best practices, as well as offer tangible support for disaster recovery solutions. In March of 2005 the Colorado Information Management Commission (IMC) through the Governors Office of Innovation and Technology (OIT) conducted a survey of the State Agency disaster recovery preparedness. The results of the survey where published in the IMC/OIT document entitled "The Case for an Enterprise Solution Now" The following summarizes the key findings of the survey:

- Disaster recovery survey of all 23 state agencies & none reported complete IT disaster recovery capability.
- Risk was high for all State agencies because disaster recovery capabilities were low.
- Threats were rising & the risk profile was getting worse.
- Majority of agencies were planning &/or seeking individualized rather than collaborative disaster recovery investments.

1.2 Project Overview

The Colorado Secretary of State is responsible for the administration of laws governing business organizations and secured transactions and has constitutional and statutory mandates regarding public records and delivery of related services[1]. In June, 2004, the Department of State (CDOS) experienced a significant interruption in its data center services. Following an extensive outage, testing revealed the presence of "zinc whiskers" – zinc fibers (see example pictured to the right) that can be extruded over time by electroplated metal coatings, such as the coating applied on the electrostatic-dissipating raised floor tiles used in the CDOS data center (for additional details see Colorado Department of State, Decision Item Request FY 2005 - 2006, Information Services Data Center Business Continuity and Disaster Recovery, Dated November 1, 2004 as amended December 9, 2004). The discovery of zinc whiskers in the CDOS data center made the facility unusable for computer operations. In addition the Departments equipment had been internally contaminated and as a result was subject to additional disruptions. This catastrophic event spotlighted a paramount need for an achievable business continuity and disaster recovery capability. While still recovering from the Zinc Whisker event, CDOS constructed a case for developing a reliable, secure, free-standing disaster recovery facility to support the operation of their critical and essential functions. This effort was subjugated by the IMC/OIT assessment of the State Agency's overall disaster preparedness. As discussed and documented, the OIT assessment further revealed that, while many state agencies were aware of the importance of preparing for unanticipated disasters, in fact few practical capabilities existed. Some agencies, mostly those with public safety and first responder responsibilities, had backup equipment that was sometimes located within the same data center that housed their primary computer assets! Most agencies had no physical equipment for contingency use in a disaster, and no real plan for actually recovering from a natural or manmade disaster that might impact their electronic systems and services.

Electron Microscope (SEM) Image of Zinc Whisker-

As discussed above the initial objective of this project was to develop an IT Disaster Recovery capability for the CDOS. However, OIT based on their knowledge, involvement with other Agencies, and supporting survey, presented a case for establishing an enterprise solution as documented in the IMC/OIT publication, "The Case for an Enterprise Solution Now" which demonstrated that the greater good would be served by proposing a solution that encompassed an ***enterprise*** approach to business continuity and disaster recovery services.

The Department of State in 2005 received approval from Joint Budget Committee (JBC) and General Assembly for a line item appropriation from the Department of State Cash Fund in the amount of **$3,559,986** for establishing a State-wide Business Continuity and Disaster Recovery facility. In addition this request appropriated **$2,337,688** in continuation program funding. The proposal for the facility was approved in July of 2005 and at that time it was determined that the Secretary of State would facilitate the project.

The State of Colorado Department of State, with the support of the Office of Innovation and Technology and IMC Enterprise Architecture subcommittee, completed a competitive acquisition process to identify and select a solution to its disaster recovery needs. The CDOS embarked on an acquisition evaluation and selection process designed to address the current and future business needs of State and local government agencies including provision for the continuous modernization of the infrastructure and rapid deployment of new technologies to meet potential demand. The acquisition process evaluated multiple solutions involving the solicitation of 24 Information Technology vendors considered to be leaders in the disaster recovery and hosting industry.

Under the leadership and oversight of the Colorado Commission on Information Management, legislators, executive branch agencies and private businesses, CDOS selected and successfully implemented a strategic solution for disaster recovery known as the ***enterprise Facility for Operational Recovery/Readiness/Response and Transition services,*** hereinto referred to as "***e-FOR^{3}T***". The ***e-FOR^{3}T*** concept provides an enterprise level disaster recovery facility offering an alternative, voluntary solution for business continuity & disaster recovery practices. ***e-FOR^{3}T*** has been architected to provide all participating member agencies with a secure, professionally managed facility including space, power & connectivity to operate their information technology equipment. A critical success factor and innovation behind the ***e-FOR^{3}T*** project is the funding strategy. CDOS, a cash-funded agency, received an initial line item appropriation, as well as continuation program funding from its cash fund, to establish the state-wide facility, infrastructure and operations. Without this unique approach, many of the other agencies would not have had funds available for individual projects.

On May 3, 2006 the Secretary of State announced the selection of ViaWest Internet Services, Inc. as the co-location service provider for ***e-FOR^{3}T*** (see Appendix 1 - Secretary of State News Release ***e-FOR^{3}T***). ViaWest was selected for their innovative and cost effective approach in providing agile and responsive solutions based services as required for addressing the State's multiple Disaster Recovery strategies. In addition to providing the data center facilities for the State of Colorado, ViaWest under the terms of the lease, is providing a suite of managed services. For details see Appendix 3 - ***e-FOR^{3}T*** Facility Infrastructure Lease Services.

ViaWest is a Colorado based company headquartered in Denver; ViaWest has both the breadth of data services and the depth of experience to provide state agencies with leading business continuity solutions. Partnering with ViaWest allows agencies to prepare for emergencies and focus on delivering vital services to its citizens. Since their inception in 1999, ViaWest has been providing co-location, managed hosting and business continuity solutions to thousands of business clients including but not limited to Frontier Airlines, the Denver Broncos, Exclusive Resorts and Chipotle.

[1] Article IV, section 22, Colorado constitution; and § 24-1-101 et seq., C.R.S

2. Achievement of the Project's Objectives

In CY 2006 CDOS initiated project activities to acquire an Information Technology Disaster Recovery facility capable of providing a shared common infrastructure (space, power and connectivity) for supporting open system data center operations for all state agencies to use as augmentation to existing and/or planned Information Technology (I.T.) backup and recovery services. The results of this effort culminated in the establishment of ***e-FOR^{3}T*** **.**

The ***e-FOR^{3}T*** project accomplished its objectives by providing an innovative and flexible solution that allows any participating State agency the ability to decide what method and approach best supports the agency's business continuity strategy while minimizing obstacles pertaining to facility infrastructure, services, and cost. The project employed a collaborative and rigorous selection process, to identify and select a solution that offers an innovative cost effective approach with the flexibility to implement enhanced/innovative solutions in order to address the State's multi tiered and structured approaches to Disaster Recovery.

e-FOR^{3}T accomplishes this visionary and strategic goal by providing an enterprise level disaster recovery facility that augments the State of Colorado's existing DR capabilities. ***e-FOR^{3}T's*** innovative approach offers an alternative, voluntary solution for the States' distributed open systems business continuity/disaster recovery needs. The concept behind ***e-FOR^{3}T*** provides all participating member agencies with a secure, professionally managed facility including space, power & connectivity to operate their information technology equipment. Secretary of State Gigi Dennis acknowledged the achievement in the following quote;

Secretary of State Gigi Dennis during a Tour of ***e-FOR^{3}T***
Also pictured from left to right is CDOS CIO Brian Balay and ***e-FOR^{3}T*** *DR Manager Kristine Champion*

"e-FOR^{3}T" will have an incredibly positive impact on the State. Ensuring computer services and availability of information will help promote e-Government statewide, reinforce our homeland security posture, and help us proactively prepare for unforeseen natural disasters or emergencies."

Below is an expanded list of achievements associated with the ***e-FOR^{3}T*** project:

1. Formed from a partnership between private enterprise and the State of Colorado.
2. Directly supports alignment with the State of Colorado 2006 – 2009 Information and Technology Strategic Plan in the three of the four key initiatives as identified below:
   - Common/Shared Services - Better application of economies of scale and utilization
   - IMC/Governance – Further leveraging our information technology governance structure to assure continuity in planning and controlling the state's investment in information technology
   - Cyber-Security - Improved protection and security/recoverability of information

3. Enterprise Solution that provides uniform application of best practices for operational recovery, readiness & response.
4. State of the art Tier III© - 12,167 sq ft facility including space, redundant power & connectivity.
5. Participating Member Agency Flexibility -- Allows participating member agencies the flexibility to architect their required recovery solutions without being limited by facility and infrastructure issues.
6. Provides a disaster recovery infrastructure that presents a standardized approach to facility infrastructure & operations achieving economies of scale by eliminating possible duplication and redundancies.
7. Reduces barriers to entry for disaster recovery practices by minimizing cost and operational burdens, allowing participating Agency's to focus on the core components, operations, and competencies associated with their disaster recovery program.
8. Extends to participating agencies industry best practices in the management and operations of the facility and infrastructure.
9. Augments the State of Colorado's existing DR capabilities by offering an additional and optional solution for the States distributed open systems business continuity/disaster recovery needs.
10. Award for Business Continuity & Disaster Recovery from International Association of Commercial Administrators (IACA) 5/2006
11. Perpetual funding strategy to maintain the core facility and infrastructure reducing the cost and burden to participating agencies.
12. Promoting and achieving economies of scale through collaboration, consolidation & uniformity of service and infrastructure.

2.1 Original Objectives

The original objective of this project was to develop an Information Technology Disaster Recovery capability that would provide a shared common infrastructure (space, power and connectivity) for supporting open system data center operations for all state agencies to use as a backup for their Information Technology (I.T.) processing needs. The project main deliverable was to obtain approximately 6,500 sq ft of raised floor plus 3500 sq ft of office and administration space (NOC, office space, staging, etc.) for a total of 10,000 sq ft to meet the State's estimated Information Technology Operations recovery needs (see Appendix 4 – Facility Layout).

© 1996, 2001-2006 The Uptime Institute, Inc. (for additional information see Appendix 7)

2.2 Performance Against Objectives

The ***e-FOR³T*** facility surpassed original objectives of the project. The competitive and iterative structure of the RFP/RFI processes promoted an innovative strategy by the proposing vendors. The winning result provides a bundled set of hosting solutions offering the States' participating Agencies a menu of options and services and the flexibility to operate the site as a primary, secondary and/or load-balancing alternate (Hot/Hot). Additional details of the facilities available services can be found in Appendix 2 - Facility Infrastructure Lease Services and Appendix 3 - Network Topology.

One of the key advantages/points concerning ***e-FOR³T*** is best articulated in the following quote from Brian Balay, who is the CIO for the Colorado Department of State:

Brian Balay, CIO
Colorado Department of State

"What this really boils down to is this is a... shared enterprise data center, ViaWest is building it, they own it, but we're the primary tenant. Any State of Colorado government entity is welcomed to come on board, and we'll provide them with cabinets on the floor, electricity to run their (computer) servers, a communications path to the state network. We see cost savings (to the State) through this. We see a lot of benefits from using private industry in this. This is a public-private partnership."

The CDOS took a collaborative & highly effective approach in the process of selecting the successful ***e-FOR³T*** strategy. The CDOS leadership facilitated the process to obtain input & reviews from various sources including:

- Colorado Information Management Commission (IMC)
- Colorado Governor's Office of Innovation & Technology (OIT)
- State-wide CIOs
- Facility evaluation team established which was composed of State IT professionals representing various agencies
- Numerous vendors/contractors to perform facility assessments for co-location services, use of existing or abandoned data center facilities and building/buying/leasing facility
- CDOS staff & contractors

The ***e-FOR³T*** project to date has met all project objectives. Continued monitoring and active involvement on the part of CDOS and ViaWest is imperative to insure the vision and mission of the facility is maintained and that expectations are met.

The competitive processes utilized for this project generated extensive competition, and as a result, the State benefited as demonstrated by the value added service bundled into the States' original requirements. Chart 1 below summarizes the deliverables and areas where the requirements have been exceeded and/or additional value added services have been included as a result of the competitive processes.

Chart 1 – Requirements/Functionality Performance Summary

State Requested Requirements	Meets or Exceeded Requirements	Value Added Services Provided
Data Center Space 6,500 sq ft of Raised Floor (Actual space provided is 6,549)	✓	✓
Office General Support 3,500 sq ft. (Actual space provided is 5,618)	✓	✓
Security (Video Surveillance w/Card Key and Bio-metrics access controls)	✓	
Power and Utilities Services	✓	
HVAC/Environmental Services	✓	
Network Operations Center (NOC)	✓	✓
Telecommunications Network (See Appendix 3 for additional details)	✓	✓
Cable Management		✓
Migration and Transition Support		✓
Tier 1 Disaster Recovery Support		✓

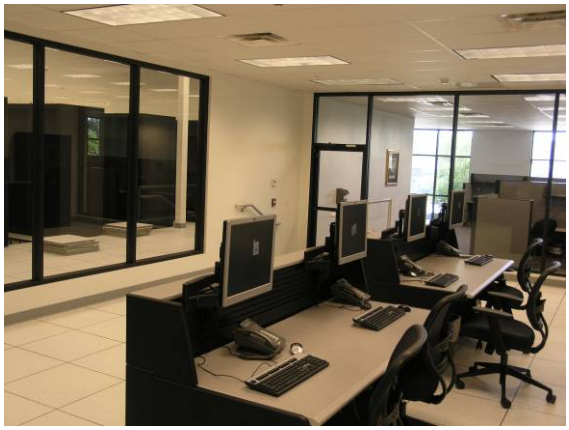
For details on the listed services please see Appendix 2 – ***e-FOR³T*** Facility Infrastructure Lease Services, Appendix 3 - ***e-FOR³T*** Network Topology and/or Reference document entitled State of Colorado and ViaWest Internet Services, Inc. ("ViaWest") Sublease Agreement dated February 28, 2006.

3. Project Performance

The purpose of the facility is to create a common infrastructure that supports data center operations for all state agencies to use as a backup to their current Information Technology (I.T.) processing needs.

The ***e-FOR^{3}T*** project represents a strategic enterprise approach to providing not only a disaster recovery service offering for State Agencies, but also to provide economies of scale through its common shared infrastructure. The project's iterative RFI/RFP processes resulted in an integrated approach utilizing the experience and professional services of private industry to build to specification a State enterprise facility with the benefits of a managed co-location hosting service.

The ***e-FOR^{3}T*** project has met all of its objectives and goals to date and has been recognized by the Governor's Office of Innovation and Technology for its innovative approach, strategic value, and best practices in industry. The publication of the Colorado State Information and Technology Strategic Plan earlier this calendar year by the State of Colorado Chief Information Officer adds additional value to the project as it outlines a program for redefining how the State manages information technology resources to improve service delivery and streamline business operations.



View of ***e-FOR^{3}T Network Operations Center and Raised Floor Area***

One of the key initiatives in this guidance is to have Colorado State Government maximize the value that its technology investment delivers to Colorado citizens and businesses by pursuing four initiatives of which ***e-FOR^{3}T*** plays a vital role in. The key initiatives addresses areas such as: improved security of our information, better integration and access to government services for our constituents, better application of the economies of scale to improve our use of capital, and further leveraging of our IT governance structure to oversee our strategic planning efforts.

e-FOR^{3}T's - 2 Mega Watt Emergency Generator

Of these initiatives the one ***e-FOR^{3}T*** most directly impacts is Common Shared Services. The Strategic Plan provides the direction for the State to consolidate its technology infrastructure and services in order to leverage the economies of scale in the utilization of resources, eliminating unnecessary redundancies, and reducing support cost through standardization. ***e-FOR^{3}T*** provides the infrastructure and best practices to facilitate this strategic direction.

The ***e-FOR³T*** model provides a platform based on a common shared infrastructure applied from an enterprise approach for the uniform and coordinated deployment of information technology continuity solutions.

Project Measures of Success include:

- ***Enterprise Solution*** **–** An enterprise based collaborative disaster recovery facility that maximizes efficiency by providing uniform application of best practices, higher utilization of resources with fewer redundancies, leveraging economies of scale to produce lower unit costs & focused structure of disaster recovery facility service management.

- ***Facility Infrastructure Components*** **–** 12,167 sq ft (see Appendix 4 – ***e-FOR³T*** Facility Layout) facility including space, power & connectivity including: fire detection & suppression systems, UPS & emergency generator, HVAC air conditioning, redundant power, network communications services (MNT & other service provider for redundant capability) and facility monitoring & security.

- ***Participating Member Agency Flexibility*** **–** Allows participating member agencies the flexibility to architect their required recovery solutions.
- ***All State of Colorado Government Entities Invited*** **–** Participation is voluntary for any of these entities (facility vendor agreement also extends negotiated pricing to all government entities, such as local, county, public schools, etc.).
- ***Funding Strategy Approved*** **–** Colorado Department of State utilizing its cash funds to maintain those portions of the disaster recovery infrastructure that are common (and redundant) in facility infrastructure & operations.

The ***e-FOR³T*** vision becoming action by providing all participating Colorado state agencies and departments with a world class facility for the implementation and augmentation of an IT recovery/continuity capability, with the following financial benefits:

- Lower the financial burden for all other state agencies in implementing their disaster recovery capability.
- Accelerate the availability of these foundational components ahead of when each agency could afford to individually acquire the same for themselves.
- Unique source of funds used to maintain the shared foundation of ***e-FOR³T*** facility.

3.1 Performance Against Planned Time

The following chart provides the key milestone dates and the overall performance to the project delivery:

Chart 2 – Milestone Completion

Milestones	Original Date	Actual Date	Variance
Project Kick-off	June 15, 2005	June 15, 2005	0 Days
Release of RFI	August 22,2005	August 22,2005	0 Days
Intent to Respond to RFI	September 2, 2005	September 2, 2005	0 Days
Last day to submit questions	September 16, 2005	September 16, 2005	0 Days
Response to RFI Questions Published	September 23, 2005	September 23, 2005	0 Days
Submission of RFI Responses Due	October 7, 2005	October 7, 2005	0 Days
Notification to Selected Candidates for Site Reviews	October 14, 2005	October 14, 2005	0 Days
Site Reviews Completed	October 24, 2005	November 2, 2005	8 Days
Initial Cost proposals received	November 10, 2005	November 10, 2005	0 Days
Vendor Cost Model Presentations Completed	November 15, 2005	November 15, 2005	0 Days
Completed Phase II Proposal Assessments	November 28, 2005	November 28, 2005	0 Days
Selected Final 2 Vendors and Issued BAFO	December 5, 2005	December 5, 2005	0 Days
Issued BAFO to Finalists (2 vendors)	December 9, 2005	December 9, 2005	0 Days
Received BAFO Proposals	December 15, 2005	December 15, 2005	0 Days
Completed BAFO Review & Selected Finalist	December 20, 2005	December 20, 2005	0 Days
Obtained Approvals to Proceed with Lease	December 28, 2005	February 20, 2005	52 Days
Lease Negotiations Completed	February 22, 2006	February 28, 2006	6 Days
Facility Design & Layout Approved	February 22, 2006	February 22, 2006	0 Days
Lease Signed & Contract Award Final	March 1, 2006	March 1, 2006	0 Days
Facility Build Out Activities	March – June 2006	March – May 2006	-30 Days
Facility Staffed & Operational	June 2006	June 2006	0 Days

Additional comments and clarification: The project manager and CDOS leadership identified early in the project the existence of variables whose impact to the project schedule could not be estimated within a reasonable time reference. Therefore, it was agreed that schedule rebaselines would occur at the point when the variable impacts to the schedule could be better understood and ascertained. The above schedule reflects the final rebaseline for the project. It is important to note that the completion date had not changed from the original baseline nor was it impacted by the internal processes schedule changes.

3.2 Performance Against Planned Cost

As depicted in the project cost chart below the project was completed under budget for the primary facility as specified in the original contract.

Chart 3 – Project Cost Summary

Expenditure	Original Budget	Revised Budget	Final Actual	Variance
Internal Personal Services	**$110,000**	**$110,000**	$109,000	$1,000
External Personal Services (PM)	$250,000	$250,000	$183,000	$67,000
Hardware	$1,000,000	$1,000,000	$1,030,358	($30,358)
Lease Build	$2,200,000	$2,200,000	$2,100,000	$100,000
Total	$3,560,000	$3,560,000	$3,424,453	$137,642

4. Approved Project Changes

The following project changes where made to the ***e-FOR^{3}T*** facility as a result of recommendations received by the Chief Security Officer for the State of Colorado, the project technical consultant and other subject matter experts pertaining to the DR Facility operations and services. The funding for the listed change orders was reutilized from the under runs realized in the primary facility construction.

Chart 4 – Project Change Request Summary

Change Order	Description of Change	Cost
1	Upgrade Physical Security Profile	$ 78,324
2	Telecommunications Equipment	$ 27,966
3	Network Management Equipment	$ 13,100
4	Office area Equipment	$ 6,220
5	Facility Supplies for Operational Readiness	$ 10,000
Total		$ 135,610

4.1 Effects on Original Project Plan

The implemented changes had minimal impact to the project scope and had no impact to the end date or schedule. Since the original scope of work was ahead of schedule the change order activities were completed within the original project schedule for completion.

4.2 Effects on Business Case

The implemented changes are specific to the ***e-FOR^{3}T*** facility security and operational services envelope as originally identified within the project requirements. The security modifications were recommended by the State Chief Information Security Officer (CISO) and other subject matter experts. The remaining changes were operational enhancements discovered during facility reviews which help facilitate Agency services such as; operational transition and level of service. The modifications completed are considered to be best practices in the industry that directly support facility operations and costs of operations; as a result the modifications had no impact to the facility business case.

5. Project Management Conclusions

In general, the RFI/RFP processes and technical build out of the ***e-FOR^{3}T*** physical infrastructure was well managed by CDOS and ViaWest. The functional subject matter expertise necessary to address key operational performance and design criteria for this type of facility, which tend not to be a core competency of the State, were supplemented by additional outsourced services. The phased inspection and acceptance approach conducted by the project manager and CDOS leadership helped to validate quality and conformance to the requirements for the State. The use of outsourced resources proved to be a key component to the projects' success.

6. Lessons Learned (recommendations)

The ***e-FOR^{3}T*** project accomplished many firsts within the State of Colorado, including the speed in which a project of this size and magnitude was visualized, quantified, and executed. The following lessons learned are considered positive communications as to some key observations which contributed to the overall success in the completion of the project within what is considered to be an aggressive timeline.

- Identifying all key organizations and associated roles and responsibilities is critical in all projects. However, when the project calls for a facility lease, extra care and attention should be taken to ensure adequate time allowed in the schedule for project approach, proposal review and coordination with all stakeholders. The following departments should have involvement at the earliest possible time within the project, this is especially important when a facility lease is required:
    - State Buildings
    - Office of the Controller
    - Attorney Generals Office
    - State Financial Administrators
- Facilitation and open communication with all stakeholders such as the CIO Forum, OIT, IMC and associated subcommittees is of crucial importance. This lesson learned is considered to be one of the key contributors to the acceptance and success of the ***e-FOR^{3}T*** project.

- In review of the ***e-FOR^{3}T*** facility and evolution of the facility's mission, the facility could have used a larger conference room area.

6.1 Management

The ***e-FOR^{3}T*** project encountered a minimal number of issues during the project life-cycle. However, the problems that were encountered had the potential to severely impact the project schedule and overall success. The following summarizes the key issues encountered and associated solutions:

Problem: Project variations in potential acquisition strategy (Lease, Purchase, Build) and the associated applicability of the approach resulting in variations of review and approval authority/process.

Solution: The solution to problem involved the identification of the stakeholders involved in the process. Once all stakeholders had been identified, a channel of communication was established to begin the familiarization of the project and the various needs of the stakeholders were identified and addressed.

Problem: The limited availability of key resources that where critical to the final approval process. The Attorney Generals office played a vital roll in the finalization of the lease documents for the ***e-FOR^{3}T*** facility. The limited availability of the resource due to other AG priorities resulted in the potential to delay the project significantly.

Solution: The impact of the resource availability issue was identified early in the project and as a result steps were taken to help mitigate the potential impact. The steps taken early in the project life-cycle included the following:

- Identification of the resource within the AG office that will have responsibility for the negotiation, review and approval process.
- Evolving the identified resource early in the process to familiarize them and to gain their ownership and commitment.
- Expanding the communication plan to include all stakeholders within the AG processes to validate need and schedule, and maintain Agency awareness.
- Take steps to fast track various activities to compress schedule where and when possible, in order to allow for possible resource availability conflicts.

Although the potential problem was identified early in the project, the project was still impacted by the availability of resources to complete the negotiation and finalize the lease. However, due to steps taken during the project life-cycle to fast track and compress schedule activities, the impact was minimized and the project met its delivery schedule. The key of this lesson learned is that had the potential pitfall not have been identified early in the project and the actions listed not been taken to mitigate its impact, a significant delay could have occurred threatening the project.

Problem: Promotion of the project concept, associated services and benefits to the various agencies. Communications throughout the various State Agencies concerning the ***e-FOR^{3}T*** project and availability was limited, a focused effort to spur the adoption rate and facilitate its use as an augmentation to the State of Colorado's information technology disaster recovery capability was needed.

Solution: Project was identified as a strategic value to the State and was listed as one of the key enterprise projects structured under the State's CIO Information Technology Strategic Plan initiatives. In addition, the project established a unique name and marketing plan to facilitate the recognition and understanding of the ***e-FOR^{3}T*** project. The project, through a collaborative process, established and trademarked the name of enterprise Facility for Operational Recovery/Readiness/ Response and Transition services (***e-FOR^{3}T***). The development and trade marking of the ***e-FOR^{3}T*** logo, along with specific recognition events provided by CDOS, has spurred additional interest and branding of the project and its strategic value.

6.2 Technical

There where no technical and/or environmental issues encountered during the project.

6.3 Quality

The primary quality goal(s) for the project was to: Obtain an enterprise level Tier II or higher disaster recovery facility.

The quality goal was realized by utilizing a hybrid approach capitalizing on the best practices and processes of private industry. The ***e-FOR^{3}T*** facility provides a Tier III class facility and associated operations for the State, surpassing our original Tier II quality objective.

6.4 Major Issues during the Project Lifecycle

The following issues where encountered during the project:

- Stakeholder and Customer Communication concerning ***e-FOR^{3}T*** concept and mission.
- Roles and responsibilities regarding project approval processes had some overlap which led to miscommunications and delays in project approval.
- Project communications concerning acquisition strategy (Lease, Purchase, Build) and applicability of approach.
- Communication of cost model associated with the implementation and continued operations of the facility.
- Multiple cost analysis where requested analyzing various scenarios, although the initial cost alternative analysis utilized to justify the decision item had already demonstrated the project ROI.

7. Operations Plan

In order to support the strategic and enterprise value of ***e-FOR^{3}T***, CDOS must continue to staff a functional support organization. As the adoption rate continues additional staffing may be required in order to meet the continuing demand for support services and address customer services issues. Appendix 5 - ***e-FOR^{3}T*** Governance Model outlines and defines the existing functional organization, including assigned responsibilities.

8. Customer Profile

e-FOR³T is an enterprise disaster recovery facility that is dedicated for use by the State of Colorado. The primary purpose is to augment existing Information Technology disaster recovery alternatives for existing State Agencies and associated departments where applicable with options to expand service to county, municipal and local public entities.

9. *e-FOR³T* a Strategic Value

On September 18, 2005 President Bush delivered an address to the nation that was packed with comments that are very familiar to business continuity professionals, but are rarely presented to the general population by a head of state. Here are just a few quotes from the address that stress the importance of planning:

> *"Our cities must have clear and up-to-date plans for responding to natural disasters, disease outbreaks or terrorist attack."*
>
> *"In a time of terror threats and weapons of mass destruction, the danger to our citizens reaches much wider than a fault line or a flood plain. I consider detailed emergency planning to be a national security priority. Therefore, I have ordered the Department of Homeland Security to undertake an immediate review, in cooperation with local counterparts of emergency plans in every major city in America."*
>
> *"Yet the system at every level of government was not well coordinated and was overwhelmed in the first few days. This government will learn the lessons of Hurricane Katrina."*
>
> *"We are going to review every action and make necessary changes so that we are better prepared for any challenge of nature, or act of evil men that could threaten our people."*

And the President was clear regarding executive accountability and readiness:

> *"Four years after the frightening experience of September 11th, Americans have every right to expect a more effective response in a time of emergency. When the federal government fails to meet such an obligation, I as president am responsible for the problem, and for the solution."*

In the case of Hurricane Katrina, the public's reaction regarding the government's response was very negative. Whether in government or in business, unless there is an incentive to plan, or a consequence for failing to plan, we tend not to act. On September 15th, 2005 President Bush issued a clear mandate. The principle behind ***e-FOR³T*** is a key and strategic step in contributing to this important mandate for the State of Colorado.

10. Follow On Actions

The following list of actions is recommended to facilitate the further development of ***e-FOR^{3}T*** as an enterprise resource and to ensure further acceptance with the State Agency community.

#	Action	Who
1.	Review Vendor performance and support for Agency installations	CDOS
2.	Monitor ***e-FOR^{3}T*** activities and coordinate Agency support	CDOS
3.	Hold monthly status and facility operation reviews with ViaWest	CDOS
4.	Continued development and refinement of Governance model for facility operational management.	CDOS/OIT/IMC
5.	Establish and disseminate ***e-FOR^{3}T*** Operations and Security procedures and policies	CDOS
6.	Marketing of ***e-FOR^{3}T*** concept approach and utilizations as it pertains to State Agency and associated policies. • Establish FAQ	CDOS/OIT/IMC
7.	Develop processes for alleviating either actual or perceived barriers to the utilization of ***e-FOR^{3}T.*** • Communicate ***e-FOR^{3}T*** Lease structure which establishes the Terms and Conditions of the Facility as a State-wide initiative (not specific to a single department)	CDOS/OIT/IMC

11. Post Project Review

The following post project actions have been identified in support of the ***e-FOR^{3}T*** program.

Review Date: 02/2007

Review Plan:

I. Review ***e-FOR^{3}T*** agency implementations and schedules.

a. Develop Transition Plans and schedules

II. Review policy and governance effectiveness.

a. Develop iterative processes for feedback and evolution of Model.

III. Review ViaWest service levels for compliance to SLA

a. Ensure measurements and matrix adequately identify key areas of interest.

IV. Assess installed Agency Service Levels and Satisfaction Level

a. Develop feedback mechanism to gather and assess information

V. Marketing of ***e-FOR^{3}T*** facility and effectiveness of communications to various agencies.

VI. Integration of ***e-FOR^{3}T*** enterprise architecture and approach with various State Agency COOP and COG strategies.

12. Appendix 1 – Secretary of State News Release *e-FOR³T*

News Release

SECRETARY OF STATE'S OFFICE SELECTS VIAWEST TO HELP COMPLETE CRITICAL FIRST STEP IN ESTABLISHING THE STATE'S DIASTER RECOVERY FACILITY

For Immediate Release
May 3, 2006

Denver, CO – Secretary of State Gigi Dennis today announced the selection of ViaWest as the co-location service provider for the State of Colorado's Enterprise Facility for Operational Recovery/Readiness/Response and Transition Services (***e-FOR³T***). A key component for establishing this disaster recovery facility was the finalization of the facility lease with ViaWest for the infrastructure and operational services necessary to support the ***e-FOR³T*** mission.

The purpose of the facility is to create a common infrastructure that supports data center operations for all state agencies to use as a backup to their current Information Technology (I.T.) processing needs. The completion of this initial milestone is the first step towards creating a disaster recovery facility for state agency information processing services in the event of an I.T. operational failure or emergency.

"Having a backup facility for our distributed I.T. services will allow the State to keep providing vital services to citizens in case of emergency," Secretary of State Gigi Dennis said. ***e-FOR³T*** will have an incredibly positive impact on the State. Ensuring computer services and availability of information will help promote eGovernment state-wide, reinforce our homeland security posture, and help us proactively prepare for unforeseen natural disasters or emergencies."

The contract recently received approvals from the Secretary of State, Attorney General, and State Controller. After a rigorous selection process, ViaWest was chosen for its flexibility in providing enhanced solutions and the ability to meet the State's Disaster Recovery requirements. In addition to providing the data center facilities for the State of Colorado, ViaWest is offering a suite of managed services including firewall services, system and database administration, monitoring and data protection services to meet the strict security and performance needs of ***e-FOR³T***.

"Entering into a partnership with the State of Colorado to create a state-of-the-art disaster recovery facility is a significant milestone for ViaWest," said Roy Dimoff, CEO, ViaWest. "Over the years, we have built a reputation for I.T. expertise, flexibility and reliable services which are all important for ensuring the success of ***e-FOR³T***. Our team proved its ability to think outside the box to develop an innovative solution that fits the State's requirements. We are looking forward to working with the State on this important project."

The Joint Budget Committee (JBC) and General Assembly approved the proposal for the facility in 2005 and determined the Secretary of State would facilitate the project. The start up funding for the project is derived from the Secretary of State's cash fund and it is anticipated continual funding for the project will be available from the Secretary of State's office. Any participating agency will need to provide their computer equipment and each agency will decide what method of computer disaster recovery best supports their agencies business continuity plan.

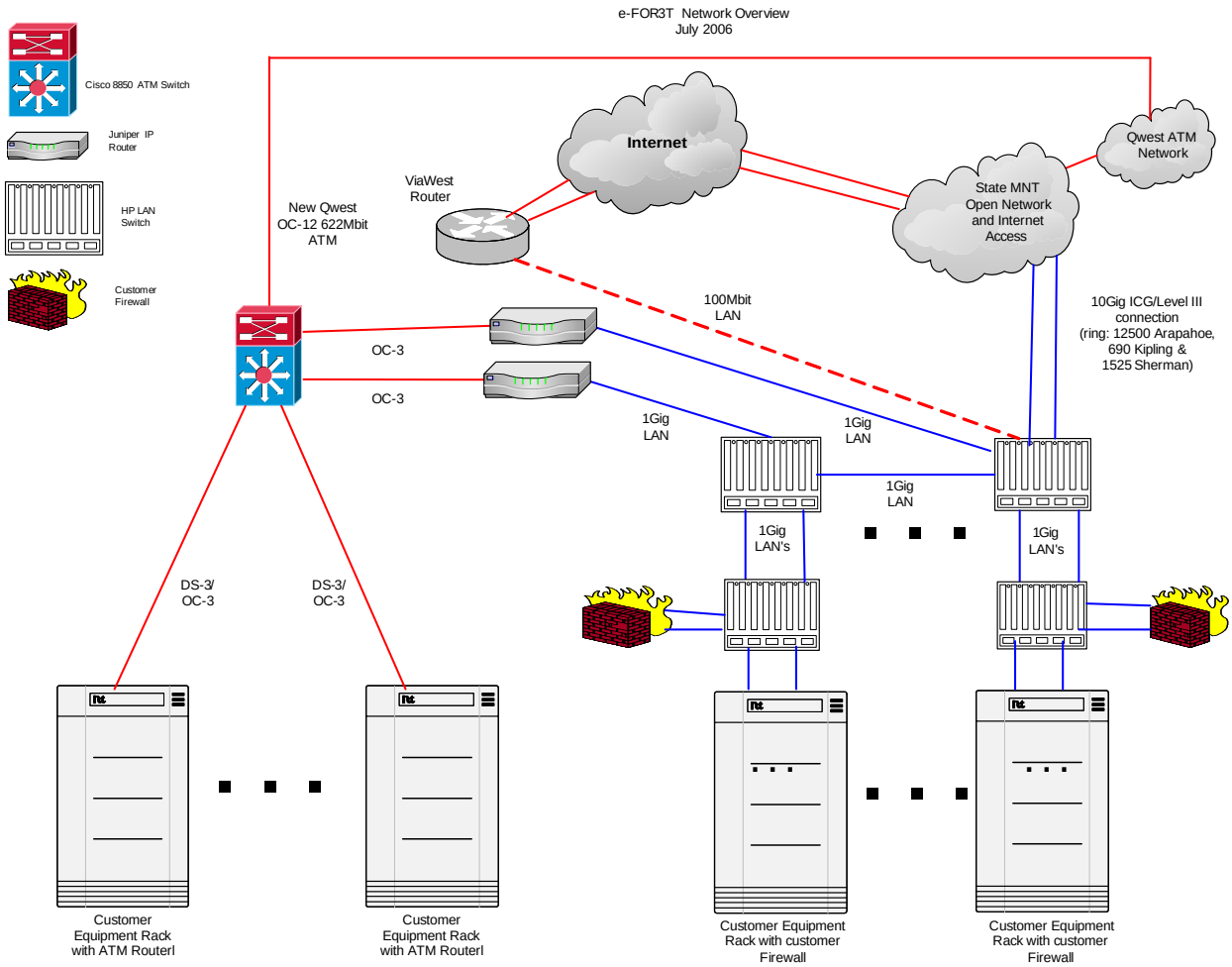
The facility is anticipated to be available to provide services to state agencies by June 30, 2006.

13. Appendix 2 – *e-FOR³T* Facility Infrastructure Lease Services

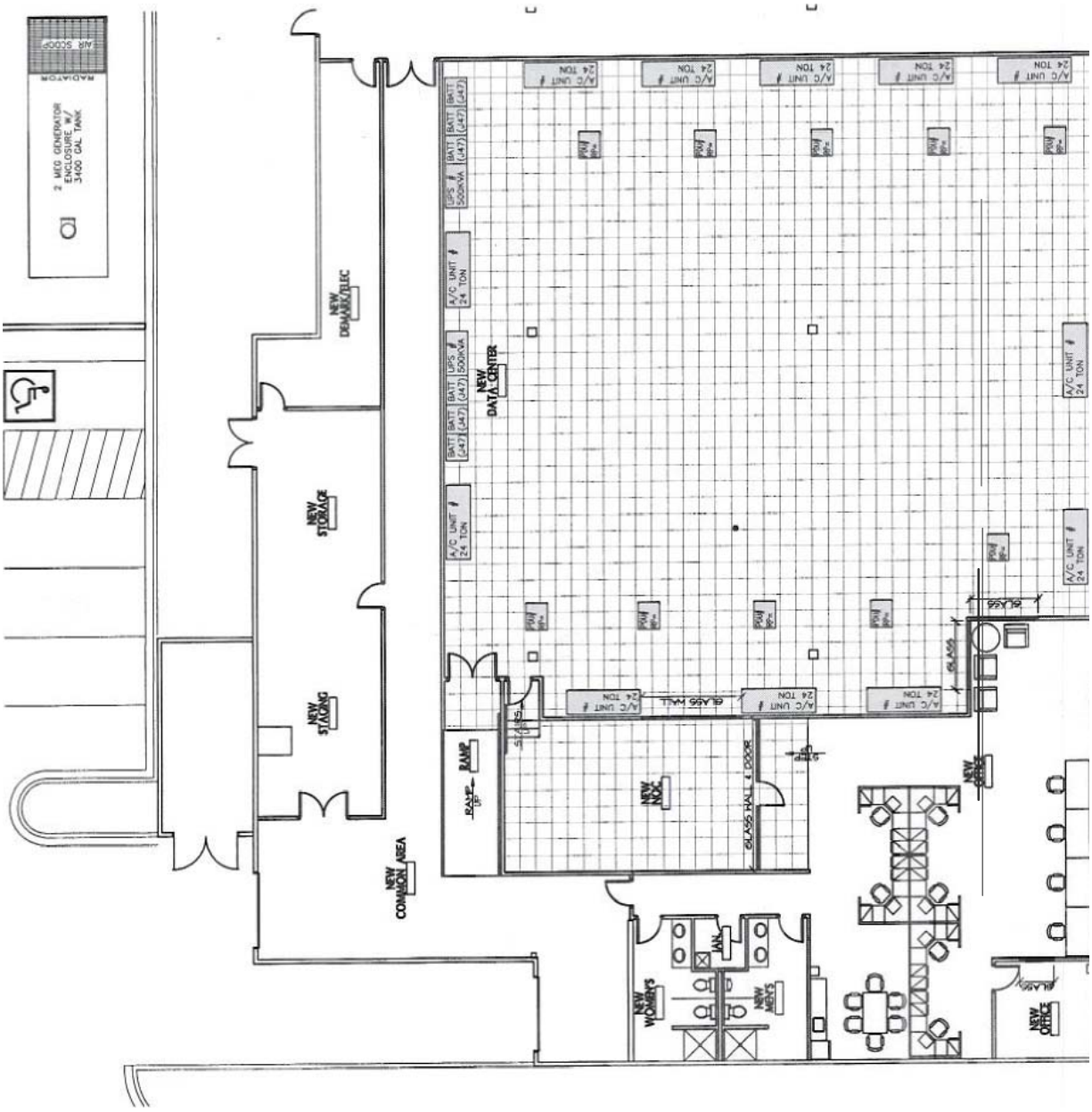
Category of Service	FUNCTIONAL INFRASTRUCTURE SUPPORT SERVICE DETAILED
Office Space/State Network Operations Center (NOC)	• 3500 Square Feet fully furnished (Workspace, Desks, Workstations, Phones, and related connectivity) • Shared use of facilities management and trouble ticket tracking portal for NOC operations • Metrics – server availability monitoring and reporting
Server Center Space	• 6500 + Square Feet Raised Floor • Individually Locking (front and rear) cabinets • Private Cages as required
Security	• 24x7x365 magnetic card key access with secondary pin code (biometrics optional) • Shared use of 24x7x365 on-site facility providers staffed Network Operations Center, Digital motion activated security cameras and intercoms
Fire Detection & Suppression	• Certified incipient smoke detection (VESDA) • Certified data center smoke detection system • Clean agent fire extinguishers placed throughout facility • Dual-Interlock Pre-Action dry pipe sprinkler system
Power and Utilities	• Facility Power, delivery, infrastructure • UPS systems • 2 Megawatt diesel generator(s) • ATS (Automatic Transfer Switch) • Multiple redundant Power Delivery Units (PDU) • Dedicated ground and associated industry standard facility services
HVAC/Environmental Design	• AC Services as needed to support State Environmental requirements • Anti-static raised flooring with designated power runs and cooled air delivery
Network Operations Center (NOC)	• Use of three, mirrored Network Operation Center • Use of shared staff 24x7x365 by experienced facility provided engineers available for 'Remote hands' service described below. • Monitor both local and regional networks including POPs, telecom facilities, routers, servers, and customers' infrastructure including event notification and ticket tracking • Shared use of Remote Hands capabilities available 24x7x365 – This allows the state to use shared facility personnel to perform basic tasks as instructed by state engineers. • Shared Use of facility providers data center change log portal access for change control management tracking
Cable Management	• Provides all cabling for each agency deployment • Cable is tagged and documented
Telecommunications Network	• Telecommunication Infrastructure • Redundant fiber optic networks delivered with secure conduit and separate entrance facilities • MNT connection services available from T1 to OC48 and Gigabit Ethernet

Category of Service	FUNCTIONAL INFRASTRUCTURE SUPPORT SERVICE DETAILED
Migration and Transition Support	• Staffing and resources for physical migration • Documented processes and procedures • Conduct initial site audit • Develop preliminary plan with state agency personnel • Perform plan simulation to identify weakness • Execute and document new infrastructure environment • Perform post-transition analysis and review both internally and externally. This is a one time effort to verify that all equipment is running and installed per state instruction to meet standards of state ***e-FOR³T*** management. • Relocation and Stand-up of Agency Hardware
Tier 1 Disaster Recovery Support	• **Primary Recovery Facility disaster recovery support** • Tape backup (automated) • Off-site tape vaulting • Remote hands - This allows the state to use facility personnel to perform basic tasks as instructed by state engineers. • DSL with static IPs • Dial-up with static IPs • MNT network failover • Overflow data center and office space • Private Network Transit (PNT) - Private backbone connection between Denver and Alternate Site (includes switches and firewalls) • Replication – Facility engineering will assist in set-up, manage and monitor data replication between Denver Facility and Alternate site. • MNT network failover to redundant IP network • Insurance – Coverage for State Assets

14. Appendix 3 – *e-FOR³T* Network Topology



15. Appendix 4 – *e-FOR³T* Facility Layout



16. Appendix 5 – *e-FOR³T* Governance Model

STATE OF COLORADO

Enterprise Facility for Operational Recovery Readiness Response & Transition services

Governance for Colorado's Enterprise Facility for Operational Recovery Readiness Response & Transition services (*e-FOR³T*)

Vision/Charter/Purpose:

The ***e-FOR³T*** activity is operated as a cooperative agreement between the Colorado Secretary of State's Office and participating member agencies (any State of Colorado Departments or Agencies) that need a secure, professionally managed facility that provides space, power and connectivity to operate their respective information technology equipment and supporting operational services.

Mission and Description:

The ***e-FOR³T*** facility is an enterprise level disaster recovery facility with approximately 6,500 sq ft of raised floor space to support the State's currently estimated needs for information technology recovery operations. The purpose of ***e-FOR³T*** is to operate as a disaster recovery operations center for each Participating Member Agency's information technology assets. Since the primary purpose is to support IT recovery operations, it contains an additional 5,600 sq ft for general support (NOC, office space, staging, etc.). This space provides the office space to "flex" non-core space to support disaster recovery operations, along with limited day-to-day operations.

In alignment with the Information and Technology Strategic Plan initiative 3: Common / Shared Services, the ***e-FOR³T*** facility is operated and funded to provide each agency with space, power and connectivity to support their individual information technology needs.

State Oversight:

The State of Colorado will establish a Governing Board whose purpose will be to provide governing principles and operational policies for the State. The Governing Board shall:

- Exercise state-wide sponsorship, governance and oversight of the States facility operations, budgets, budget reporting, agency utilization and deployments.
- Perform a strong customer advocate role to ensure the vendor(s) continuously provide responsive service to the various State agencies.
- Provide centralized lease management and oversight to monitor adherence to standards, terms and conditions in support of the various State Agencies and to validate uniformity of service.
- Establish minimum standards for the provisioning and operation of all equipment located and operated within the facility.
- Ensure that all participating agencies will be treated as equal partners in this cooperative.

Governing Board Participants:

The ***e-FOR³T*** Governing Board shall consist of the following three levels of participation:

1. Executive Steering Committee
2. Task Force
3. Primary Agency

1. **Executive Steering Committee:**

- Secretary of State CIO (Primary Agency, Budget Authority)
- State CIO
- CIO Forum Delegate

The Executive Steering Committee is responsible for providing strategic direction to the task force cooperative. This includes reviewing and approving applications from public but non-state agencies concerning utilization of the ***e-FOR³T*** facility and services. This group will meet semi/annually to review ***e-FOR³T*** operations and performance metrics from the past year. Strategic guidance will be offered to ensure successful and continued smooth operation of the facility in meeting the Information Technology needs of the State of Colorado and its citizens.

2. **Task Force:**

- Secretary of State CIO
- Dept of Personnel & Administration DoIT
- Dept of Public Safety
- Dept of Regulatory Agencies
- Dept of Law

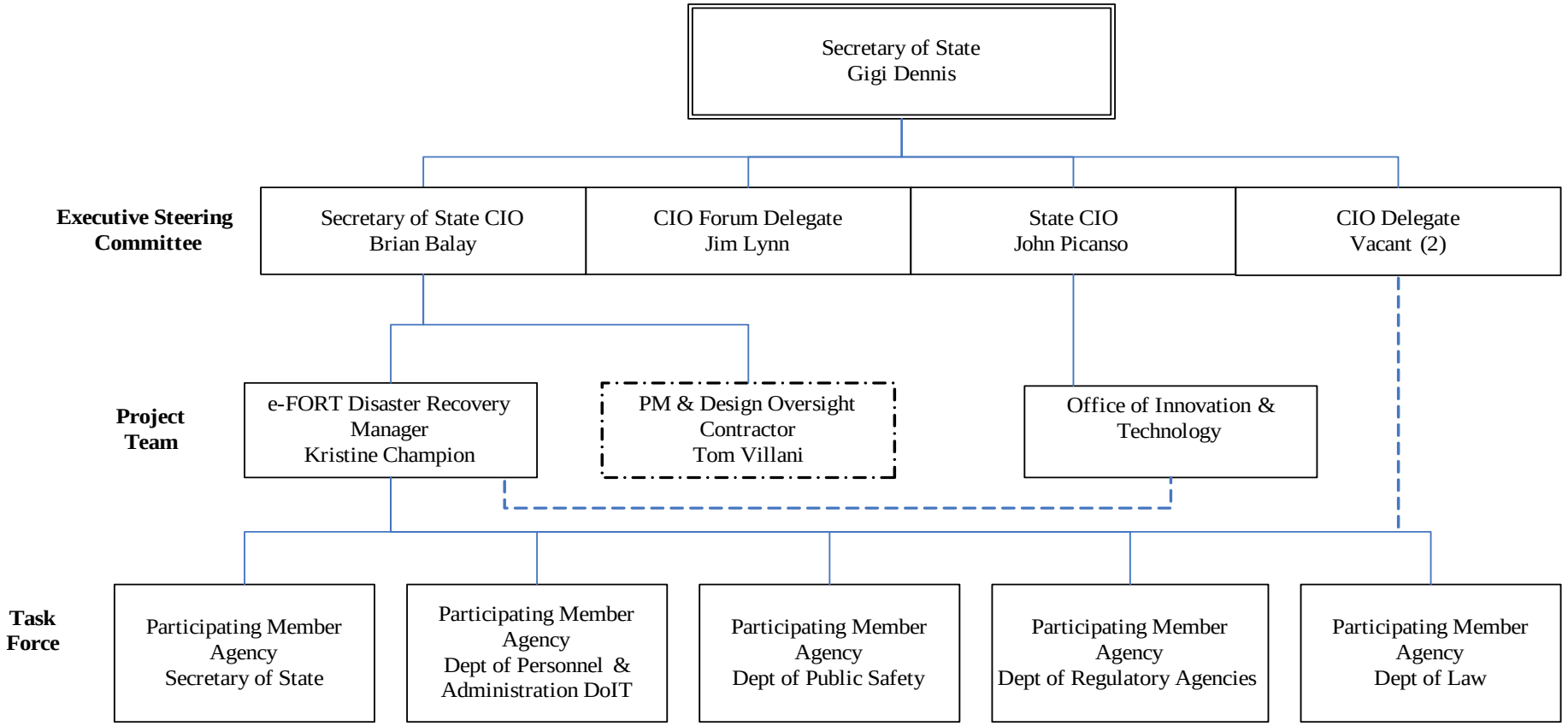
The Task Force is responsible for providing ***e-FOR³T*** policy, standards and operational guidance. The Task Force will meet bi-monthly or more often if required. Depending on the issues involved, the task force is responsible for all non-operational communication between the cooperative and the vendor. Task Force members may or may not be the respective Agencies CIO's, however, any substitutes must be empowered to speak for their respective CIO's and be appointed to represent their Agencies "long-term." The task force will strive to ensure that industry best practices are implemented and followed to ensure the safe and smooth operation of the facility. This task force will be responsible to review each Agency's Information Technology disaster recovery plan to ensure that the operations and the facility can support the Agency if needed.

3. **Primary Agency:**

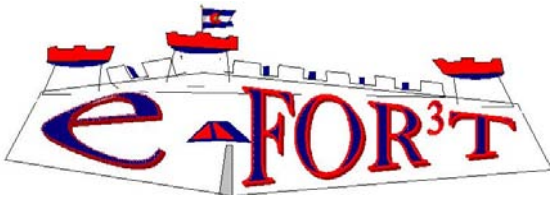
- Secretary of State (SOS)
- Secretary of State CIO
- ***e-FOR³T*** Staff

The Primary Agency is responsible for budget preparation, submission and execution as well as primary operational guidance and direction. This Agency is responsible for providing direction to the ***e-FOR³T*** staff in exercising their day-to-day responsibilities. The ***e-FOR³T*** staff is responsible for the daily communications and coordination activities between State Agencies and the vendor's staff. The SOS CIO will be responsible for ensuring that all concerns about policies, operations, etc from participating Agencies will be addressed to the Executive Board, Task Force and ***e-FOR³T*** staff as needed. This individual will be responsible for addressing the issues surfaced at the proper level.

Statewide Disaster Recovery Facility Cooperative Organization



STATE OF COLORADO



Enterprise Facility for Operational Recovery Readiness Response & Transition services

MEMORANDUM OF UNDERSTANDING (MOU)

Between

Colorado's Enterprise Facility for Operational Recovery Readiness Response & Transition services (*e-FOR³T*) and

[Insert Participating Member Agency]

PURPOSE & SCOPE

The purpose of this MOU is to clearly identify the responsibilities of each party as they relate to ***e-FOR³T*** operation. The ***e-FOR³T*** activity is operated as a cooperative agreement between the Colorado Department of State and participating State of Colorado Agencies that need a secure, professionally managed facility that provides space, power and connectivity to operate their respective information technology equipment.

***e-FOR³T* RESPONSIBILITIES**

- Power (up to 120 Watts per square foot & 2 independent circuits in each cabinet)
- Space (***e-FOR³T*** has leased dedicated & contiguous floor space for State of Colorado assets)
- Connectivity (necessary equipment to connect Agency circuit to MNT network)
- Office area shared phone/computer systems with internet access available on a first-come, first serve basis
- Providing the standards and guidance that will govern the conduct of all participating agencies and staff
- State ***e-FOR³T*** staff coverage for normal operations on 8x5 schedule

***e-FOR³T* VENDOR RESPONSIBILITIES**

- Provide two independent electrical circuits along with fiber connectivity to each rack
- Proactive data center facility and infrastructure maintenance
- Cleaning services to the common areas within ***e-FOR³T*** facility
- Monitoring dual authentication security system and fire alarm system
- Monitoring power, backup power and cooling systems as needed (data center scanning with infrared heat-detection equipment to identify abnormal temperature indications and power utilization audits of all power delivered within data center)
- 7x24x365 Network Operations Center (NOC)
- 7x24x365 attended security access
- Pre-negotiated prices for services not included or provided by the ***e-FOR³T*** cooperative
- Asset and performance metrics
- Adequate supplemental insurance

e-FOR³T PARTICIPATING MEMBER AGENCIES RESPONSIBILITIES

- Individual circuit charges
- Any expenses incurred on their behalf not covered by the ***e-FOR³T*** lease agreement
- Day-to-day operation of Agency owned equipment, including firewalls
- Verification of Agency owned equipment operations
- Submit & maintain current listing of a primary & a backup agency employee that are authorized to access ***e-FOR³T*** facility on the agencies behalf via access badge. Participating member agencies also have remote access privileges via 10 DSL & 10 dial-up with static IPs from the facility provider.
- Create & maintain current notification lists with ***e-FOR³T*** staff
- Maintain cleanliness & operational appearance of Agency racks/equipment
- Participating Member Agencies are responsible for the actions and conduct of their staff and authorized vendors and must follow all the Sublease Agreement Premises Rules (Exhibit E). Any actions that put the cooperative facilities and assets at risk will not be tolerated.
- Participating Member Agencies will be responsible for troubleshooting their equipment and taking necessary steps to resolve equipment/connectivity issues.
- Participating Member Agencies using the ***e-FOR³T*** facility for primary/production technology equipment may be asked to move equipment to their Agency's primary facilities if space is needed for another Agency to move their disaster recovery technology equipment into the ***e-FOR³T*** facility.
- Participating Member Agencies will be responsible for providing the ***e-FOR³T*** staff with documented procedures such as "system re-boots" and minor diagnostic trouble shooting procedures of all actions the Agency would like the ***e-FOR³T*** staff to assist in. **NOTE:** Any actions taken by the ***e-FOR³T*** staff at the request of the agency will not incur any liability upon the ***e-FOR³T*** cooperative.
- All pre-owned equipment will be cleaned by a certified technology cleaner prior to receiving the item on the ***e-FOR³T*** receiving dock

MINIMUM EQUIPMENT & SOFTWARE STANDARDS

- All pre-owned equipment will be certified by the owning agency that the equipment is free of all contaminants (i.e. zinc whiskers etc.)
- Participating Member Agencies will be responsible for ensuring their equipment's operating systems are properly patched. Equipment that is determined to be an active security threat will be remedied to remove any risk to other Participating Member Agencies.
- Each Participating Member Agency will be responsible to validate to the ***e-FOR³T*** staff that all software in use by an Agency at the facility is legally owned and maintained.
- No potentially dangerous equipment or hazardous materials will be allowed in the facility (i.e. fire hazard, electromagnetic, etc.)
- No Participating Member Agency employee will be allowed to inspect or work on any equipment that does not belong to that Agency without **prior** coordination with the ***e-FOR³T*** staff **and** the owning agency.
- All equipment will be unpackaged and inspected for cleanliness in the loading dock or staging area prior to the equipment entering the data center. No shipping or packaging material will be allowed in the data center.

Department of State		**[Insert Participating Member Agency]**	
Signature	Date	Signature	Date

17. Appendix 6 - Tier Classification for Infrastructure Performance

Widely accepted within the uninterruptible industry, The Uptime Institute's© Tier Performance Standards are an objective basis for comparing the capabilities of a particular design topology. The Uptime Institute (www.uptimeinstitute.com) created the Tier Classification system as a benchmark for reliable data center infrastructure design. The Tier level classifications are briefly summarized below:

Tier I: A single path for power and cooling distribution, without redundant components, providing 99.671% availability

Tier II: A single path for power and cooling distribution, with redundant components, providing 99.741% availability

Tier III: Multiple active power and cooling distribution paths but only one path active, redundant components, concurrently maintainable, providing 99.982% availability

Tier IV: Multiple active power and cooling distribution paths, redundant components, fault-tolerant, providing 99.995% availability

Note: Concurrent maintenance is a big part of the Tier-3 and Tier-4 classifications. In server hardware terms, it means you can replace power supplies or upload software without turning it off. The Uptime Institute's definition extends that idea to infrastructure.

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18. Appendix 7 – State of Colorado *e-FOR³T* DR Facility Evaluation and Selection Team

Name	Title/Functional Responsibility
Brian Balay	Chief Information Officer Colorado Department of State
Guy Mellor	Deputy Director, Division of Information Technologies, Department of Personnel and Administration
Charles Boyle	Deputy Chief Information Officer Colorado Department of Public Safety
Patti Duncan	Network Services Manager Department of Regulatory Agencies Information Technology Services
Kristine Champion	LAN Services Supervisor Department of Regulatory Agencies Information Technology Services
Phil Bisant	Manager of Network Development and Operations Department of Personnel & Administration Division of Information Technologies
Tom Villani	Wyant Data Systems, Inc. DR Consultant and Project Manager ***e-FOR³T***

19. Appendix 8 – Key Project Documents and References

1. Colorado Department of State, Decision Item Request FY 2005 - 2006, Information Services Data Center Business Continuity and Disaster Recovery, Dated November 1, 2004 as amended December 9, 2004.
2. Governor's Office of Innovation and Technology, Information Technology (IT) Project - IMC Recommendation, dated 11/19/2004.
3. State of Colorado Communications and Information Technology Disaster Recovery, "The Case for an Enterprise Solution Now" from Commission on Information Management (IMC)/Governor's Office of Innovation and Technology (OIT) dated March 2005
4. State of Colorado request for a Best and Final Offer for the enterprise Facility for Operations Recovery/Readiness/Response and Transition services ***(e-FOR^3 T)*** project
5. State of Colorado Request for Information (RFI) Enterprise Disaster Recovery Facility, dated August 17, 2005
6. State of Colorado Response to Responder Questions, dated September 23, 2005
7. State of Colorado Presentation and Evaluation RFI/RFP Supplement, dated October 25, 2005
8. ViaWest Proposal and Response State of Colorado request for a Best and Final Offer for the enterprise Facility for Operations Recovery/Readiness/Response and Transition services ***(e-FOR^{3}T)*** project
9. ViaWest Proposal and Response to State of Colorado Request for Information (RFI) Enterprise Disaster Recovery Facility, dated August 17, 2005
10. State of Colorado 2006 Information and Technology Strategic Plan (2006-2009), Revised February 2006.
11. Letter to Mr. Bob Jaros, Controller Office State of Colorado, entitled: State of Colorado Enterprise Facility for Operational Recovery/Readiness/Response and Transition services Cost Analysis, dated February 15, 2006
12. State of Colorado and ViaWest Internet Services, Inc. (“ViaWest”) Sublease Agreement dated February 28, 2006.
13. ViaWest Internet Services, Inc. 12500 E Arapahoe Rd, Suite C Centennial Colorado 80111, Expansion as Built Plans, dated 05-24-2006.
14. Computer Sites, Inc. ViaWest/State of Colorado Construction Turnover and Facility Completion Documents, dated 05-24-2006.