

COMMITTEE ON INFORMATION TECHNOLOGY

Budget and Performance Subcommittee

June 5, 2015

1 Dr. Carlton B. Goodlett Place, City Hall, Room 305
San Francisco, CA 94102

Agenda

1. Call to Order by Chair
2. Roll Call
3. Approval of Minutes
4. Discussion: COIT Final Recommendations
5. Discussion: FY16 and FY17 Budget Process Review
6. Discussion: Dig-Once Draft Rules (DT)
7. Project Update: Citywide Website Platform Development – Drupal (DT)
8. Project Update: Fix the Network (DT)
9. Public Comment
10. Adjournment

3. Approval of Minutes

Action Item

4. Discussion: COIT Final Recommendations

COIT Final Recommendations

Final Allocation

Mayor's Budget fully funds COIT Recommended Allocations

Annual Project Allocation

FY 2015-16: \$9.7 Million
FY 2016-17: \$4.8 Million

Major IT Project Allocation

FY 2015-16: \$12.5 Million
FY 2016-17: \$16.9 Million

COIT Final Recommendations

Notable Changes

800 Mhz Public Radio & Public Service Radio Replacement

- FY2016-17: \$11.5M of additional GF support

Fiber

- FY2015-17: Capital Planning will fund \$500K

Dig Once

- FY 2015-16: \$2M (\$0.5M from Capital Planning, \$1.5M in GF)
- FY 2016-17: \$1M (all from Capital Planning)

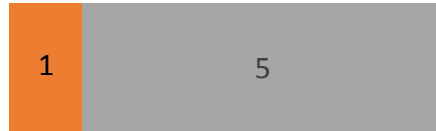
5. Discussion: FY16 and FY17 Budget Process Review

Budget Process Review

Subcommittee Member Responses

6 Responses received

Overall, how well do you think the process was communicated to you?



■ 1 - Not Well ■ 2 ■ 3 - Very Clear

Did you feel adequately prepared to ask insightful questions to presenters?



Were projects adequately evaluated?



■ No ■ Yes

Overall, were you satisfied with the budget review process?



■ No ■ Yes

Budget Process Review

Subcommittee Member Responses

Specific Comments:

- We need more specifics about the particular application or IT solution being proposed. One-pagers were helpful but still too much generic information.
- Bundling of like requests on the same day, e.g. all records retention requests, all disaster preparedness, etc. could be useful. Also a consolidated look at DT systems requests, critical path interdependencies and co-benefits with other citywide and departmental systems would have been helpful.
- Department should provide the priority for each project and the relevance to the other projects if the department submits several projects.
- Would prefer we always see the entire picture of the project, vs. the more discussed GF cost portion. Perhaps we could ask that every presentation and project sheet start with total project cost, sources and uses, then GF vs. non-GF, and then show appropriated to date, again including GF vs. non-GF, along with the needed future appropriation.
- We might want to consider trying a two-step process, i.e. first the proposals are screened and reviewed by the re-constituted Systems Infrastructure Subcommittee, then once technologically sound/approved that SI Subcommittee bundles like proposals and conveys their recommendation along with findings of where we have existing Enterprise Agreements and purchasing efficiencies, to the Budget Subcommittee for financial recommendation.

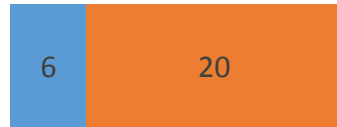
ICT Plan & Budget Process Review

Department Responses

26 responses received

Budget

Overall, were you satisfied with COIT's budget process this year?



■ No ■ Yes

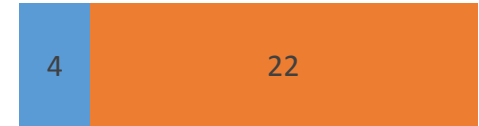
How would you rate the communication from COIT staff on the budget process changes this year?



■ 1 - Not Well ■ 2 ■ 3 - Very Clear

ICT Plan

Did you feel you had an opportunity to participate in the development of the ICT Plan?



Were the goals and priorities of the ICT Plan clearly articulated and defined?



■ No ■ Yes

In your opinion, how useful is the ICT Plan in understanding the direction of ICT in the City?



■ 1 - Not Useful ■ 2 ■ 3 ■ 4 ■ 5 - Very Useful

Overall, are you satisfied with the final ICT Plan product?



■ 1 - Not Satisfied ■ 2 ■ 3 ■ 4 ■ 5 - Very Satisfied

Budget Process Review

Subcommittee Member Responses

Specific Responses:

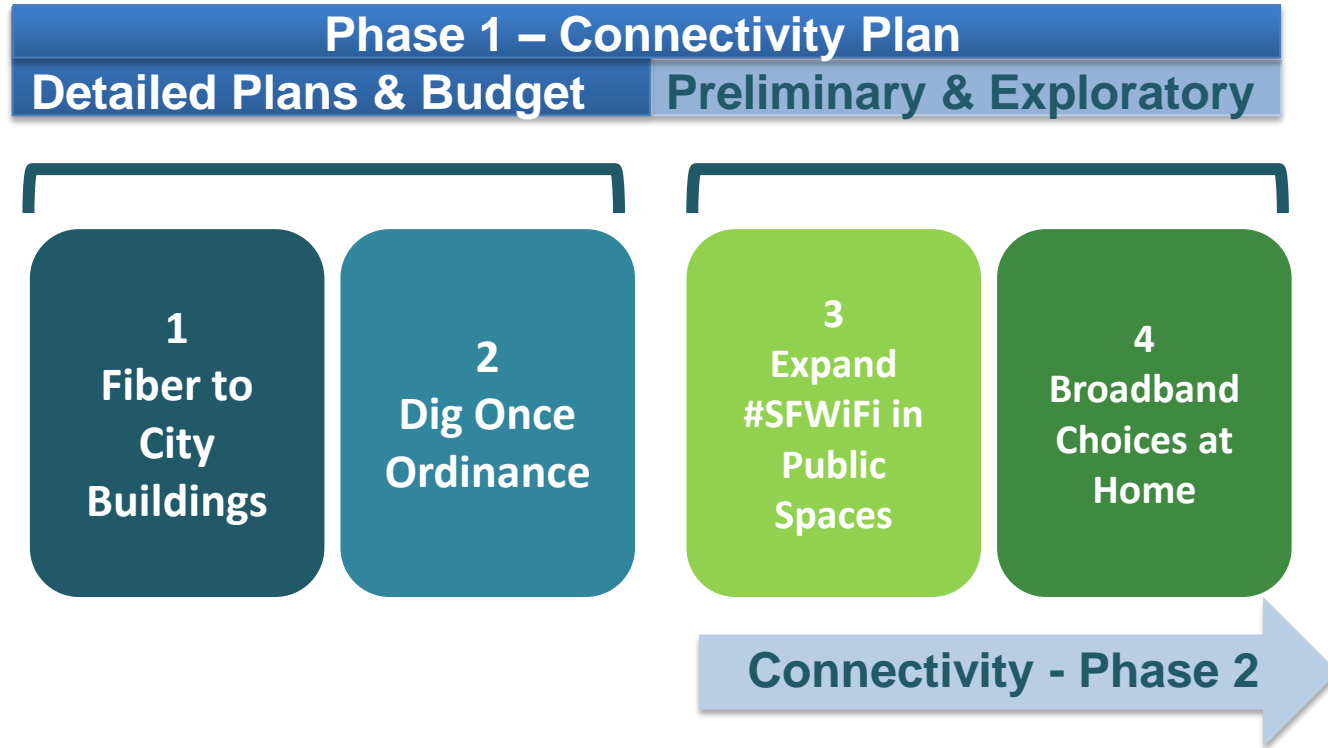
- The plan would be more useful if there were concrete strategies to better address the plan's goals/objectives over the 10-year period. Also, many of the plan's goals/objectives require COIT to take a policy position with input from stakeholders about how to best implement certain strategies, rather than defer policy decisions to the CIO/DT leadership. With a better COIT governance structure and more robust policy-making approach, the ICT plan could be more useful as a living document that lays out a viable path for the City to reach its IT goals and needs.
- There is so much going on IT wise in each Department. The ICT plan does not have all of it. Maybe there could be appendices in the future for each department to submit their forward IT goals.
- Highlighted projects did not always clearly tie back to goals/objectives but read like more of a citywide list of completed IT projects.
- I like the idea of an ICT plan. I think for all these things, they should be much simpler and much higher level. We provide excruciating amounts of detail and then we lost sight of what we are really trying to do. The ICT plan should link to the Mayor's strategy. The department ICT plans should link, in turn, to the overall ICT plan
- The rating system could use more clarification. There were large differences between COIT staff ratings and departmental ratings of some projects, without a clear understanding as to what accounted for the discrepancies. Departmental comments to explain their rating could have been included to provide more context.
- Asking Departments to present on projects that are not yet fully defined because they are seeking funding to get the projects started seem to sometimes be a little hard to accomplish. Bigger Departments or enterprise Departments with well funded IT budgets and staff are able to put these together with no problem. Smaller Departments don't always have the resources to do this.

6. Discussion: Dig-Once Draft Rules

Department of Technology

Dig Once

Connectivity Plan Update – Phase 1



Dig Once Implementation

Dig Once Ordinance No.: 220-14

- Create a process to capture, systematically and promptly evaluate “dig once” opportunities
- Reduce impact on rights of way
- Reduce cost of placing infrastructure
- Increase availability of fiber and communications conduit

Timeline	
• Draft Rules Published	4/24/2015
• Written Comments Due	5/8/2015
• Public Meeting	5/19/2015
• Final Rules	Pending COIT/CPC approval
• Effective Date	8/01/2015

Dig Once

Implementation

Review of Process

- **Engaged consultant to assist with plan**
 - **Meetings with excavators and other stakeholders**
 - **Published drafts for comment**
 - **Conducted group Meetings for Comment**
 - **For more, visit our website:**
- **Today's Presentation**
 - **Participation Criteria**
 - **Satisfying Notice Requirements**
 - **Permit Application**
 - **Standard Specification**
 - **Incremental Cost & Exemptions**
 - **Backlog**

<http://sfgov3.org/index.aspx?page=5358>

Dig Once

Participation Criteria

Ordinance directs DT to participate in Projects only when it is “***both financially feasible and consistent with the City's long-term goals to add City communications infrastructure***”

To determine whether DT's participation is consistent with the City's goals, DT will consider:

- The length of the Project in feet.
- The proximity current to or planned City facilities and/or community anchor locations.
- The presence of existing City Communications Infrastructure in the vicinity of the Project.

To determine whether DT's participation financially feasible, DT will consider:

- physical constraints;
- partners or customers willing to lease access to the City Communications Infrastructure;
- the cost of alternative routes;
- budgetary constraints.

DT may decline to participate in a Project if Applicant demonstrates to DT that DT's participation in the Project would cause Applicant to do one or more of the following:

- Delay a Project that involves Applicant's installation of critical infrastructure;
- Incur costs that render the Project financially infeasible; or
- Assume undue risks that DT's continued use of City Communications Infrastructure

Dig Once

Notice Requirements

Notice will occur through:

**Department of Public Works'
Right-of-Way Management System
Envista (aka Accela)** **OR** **Monthly Meeting**

- DT will communicate its intent to participate in a project through the Right-of-Way Management System
- Applicants that have been notified of DT's participation must provide DT plans at least 14 days prior to applying for an excavation permit
- DT will review plans for compliance with Standard City Communications Infrastructure

Dig Once

Permit Application

- Dig Once does not apply to:
 - Projects less than 900 linear feet
 - Emergencies
 - Directional boring
- An Applicant may apply for a Permit only if:
 - DT has confirmed that Applicant's Dig Once Plans include City Communications Infrastructure
 - DT has declined to participate in the Project
- Concurrent with applying for an excavation permit, Applicant will submit copy of plans to the Dig Once Coordinator
- If the Applicant has not complied with the Dig Once Order, DT will notify DPW and Applicant

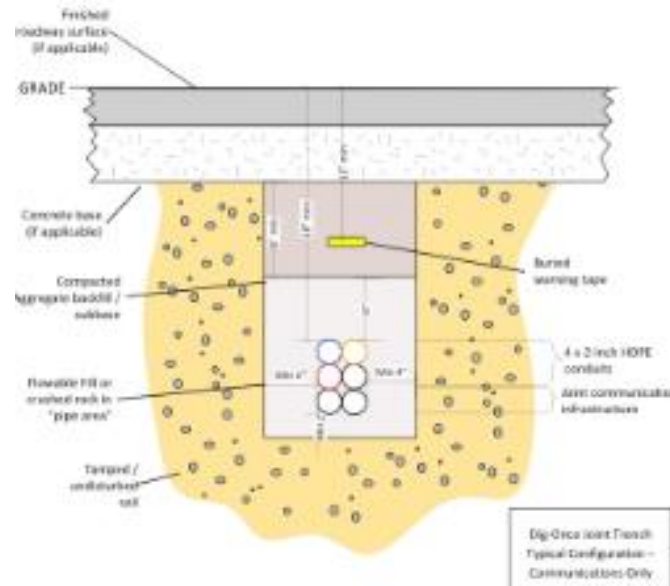
Dig Once

Standard Specification

- Four 2-inch conduit, HDPE SDR 11,
- Composite vaults having dimensions of 30" x 48" x 36" (W x L x D), placed in the sidewalk
- Vaults spaced at intervals of 600 feet or less, typically at the intersection of a city block
- Sweeping conduit bends to allow cable to be pulled without exceeding pull-tension thresholds when placing high-count fiber cables (e.g. 864-count)
- Three Placement Options:
 1. Together with other communications conduit
 2. In the same trench directly above Applicant's infrastructure,
 3. Placed with minimum horizontal offset

Dig Once

Trench Profile



Dig Once

Analyzing Pending Projects

- DT Currently Analyzing Projects in Envista (Accela Right of Way Management)
- List of projects we are currently verifying
 - 20 Projects
 - 24.1 Miles of Conduit
- Create rank order list of projects according to available funding
 - \$2M in FY2015-16
 - \$1M in FY2016-17

Dig Once

Candidate Projects FY 15/16 & 16/17

Lead Utility	Number	Project Name	Length	Cost
MTA	3942	Geary BRT	32852	\$659,000
MTA	3969	Van Ness BRT	14602	\$293,000
MTA	3970	Franklin/Gough Improvements	4865	\$98,000
MTA	3781	Central Subway 3rd Stage -- 4th Street	3727	\$75,000
MTA	3788	Light Rail Transit Geneva/Ocean	6349	\$127,000
MTA	3853	Shotwell 14 to 26th St	2716	\$55,000
MTA	3797	15th Street 22 Fillmore Mission Bay Trolley Extension	3093	\$62,000
MTA	TE0190	F Market and Wharves Extension	1515	\$30,000
		Columbus Avenue Pavement Renovation and Water Main		
Combined	2267J	Replacement	1719	\$50,000
Combined	2652J	19th Avenue Combined City Project	14012	\$408,000
Combined	2291J	Palou Complete Street Project Silver to Crisp	3305	\$96,000
Electric	3874	Junipero Sera (parallel to 19th Avenue project)	8833	\$257,000
Sanitary Sewer	2630J	Lombard Street Sewer Replacement	3827	\$112,000
Water	WD2775	19th Avenue	6075	\$177,000
Water	WD2742	7th Street from Howard Street to 16th Street	1579	\$46,000
		8, 12, and 16-inch Ductile Iron Water Main Replacements on 16th		
Water		from Church to 3rd Streets and Various	4745	\$138,000
Water	WD2739	Castro Street	2830	\$82,000
		12-inch and 16-inch Water Main Replacements on Bush Street		
Water	15-002	from Divisadero to Stockton Street	3431	\$100,000
		8-inch Water Main Replacement on Filbert Street from Baker to		
Water	1314-020	Van Ness Street	2615	\$76,000
		16-inch Water Main Replacement along Bay Street from		
Water	14-017	Embarcadero to Larkin Street (Large Diameter)	2030	\$59,000
Water	WD2736	Folsom Street	2744	\$80,000
Total			127,464	\$3,080,000

Dig Once

Information, Questions?

- Program Website: <http://sfgov3.org/index.aspx?page=5358>
- Program E-mail: Dig.once@sfgov.org
- Contact:
 - Brian.roberts@sfgov.org
 - 415-581-4061

7. Project Update: Citywide Website Development – Drupal

Department of Technology

WCM - Web Content Management

Overview

Overview/Justification

- This initiative consists in the setup & support of a new Web Content Management (WCM) cloud-based solution that will provide the City with 3 substantial benefits:
 - Ability to leverage the flexibility & evolution of Drupal open source cloud solution
 - Ability to offer greater reliability and scalability for all Depts using City's WCM solution
 - Ability to support Depts' requests for websites with custom functionality and design (savings realized as most Depts can avoid purchasing own WCM solution)

Impact

- The current WCM solution will be retired and fully replaced by new solution

WCM - Web Content Management

Pilot

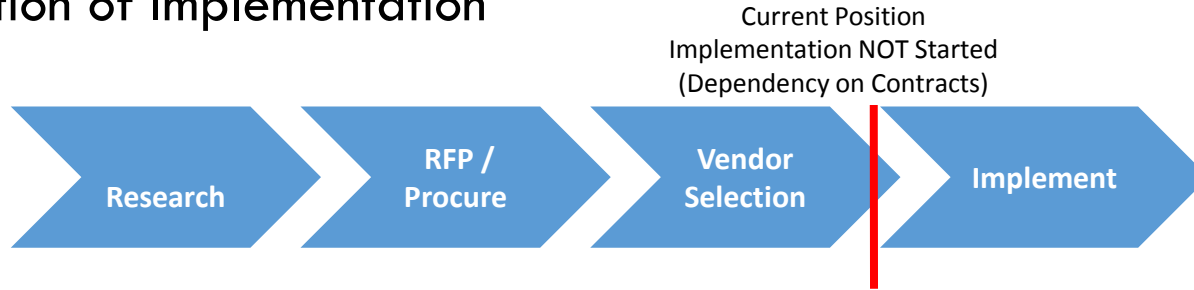
Background Info

- Drupal WCM pilot in 2013-14 (2 RFQs issued in 2012 & 2013 per OCA)
- Pilot covered a dozen of websites (original scope covered 3 websites)
- Pilot Objectives & Lessons Learned
 - **Verify Drupal Scalability** - Initial setup is critical and requires some compromises (100+ sites)
 - **Verify Drupal OP Distro** - OP Distro not a good fit as increases complexity/maintenance costs
 - **Verify Drupal Support Req.** - Support is critical beyond Drupal software; Modern WCM relies on an entire new stack of open source technologies each susceptible to key vulnerabilities

WCM

Current State

Description of Implementation



List of Stakeholders or Collaborating Departments

- City Depts using the City's existing WCM platform
- DT will continue to support all Depts' websites on existing WCM platform
- Depts using existing WCM will have option to select between 2 types of solutions: standard or customized solution (separate project, cost & scope)

RFP Results (RFP Overseen by City's Contract Monitoring Division)

- City received 10 vendor proposals in response to City's WCM RFP issued in 2015 after approval by CMD and Civil Service Commission in 2014
- Evaluation Committee composed of 5 City Depts ranked proposals based on a 4 categories and criteria published in RFP : Qualifications; Quality of solution requirements; Quality of ongoing support requirements; and Cost

Total Cost (Professional Services)

- RFP for 4 year contract for setup and support of cloud-based WCM solution
- Lowest bid for vendor support \$360K/year. Funds for FY 2015-16. Future years requires increase in DT master allocation (from current \$75K/year level)

8. Project Update: Fix the Network

Department of Technology

What Problems are Being Fixed?

Three Real Examples

This is a problem now.

Old firewalls are slowing down network performance for remote users (who use VPN) and limiting capacity for internet use.



This is a problem now.

The data centers are not currently redundant – there is no true real-time failover (resilience) capability to another data center if one is made unavailable.



This is a problem now.

Access to the internet has a single point of failure – there is no true redundancy here.



Fix the Network

Critical network upgrades & maintenance exist as a foundational project in order to address problems business and technical users are facing today

Fix the Network

Summary

The goal is to have a secure, resilient, high-availability network that can scale to accommodate future client applications and to support the growing base of mobile and remote users.

Objectives

- Update legacy network equipment (e.g. routers)
- Optimize network routing (choose best paths)
- Standardize network protocols* (fewer rules)
- Simplify network topology (neater design)
- Enhance security (less intrusion)
- Enable internet failover (no interruption)
- Eliminate single points of failure (no weakest link)

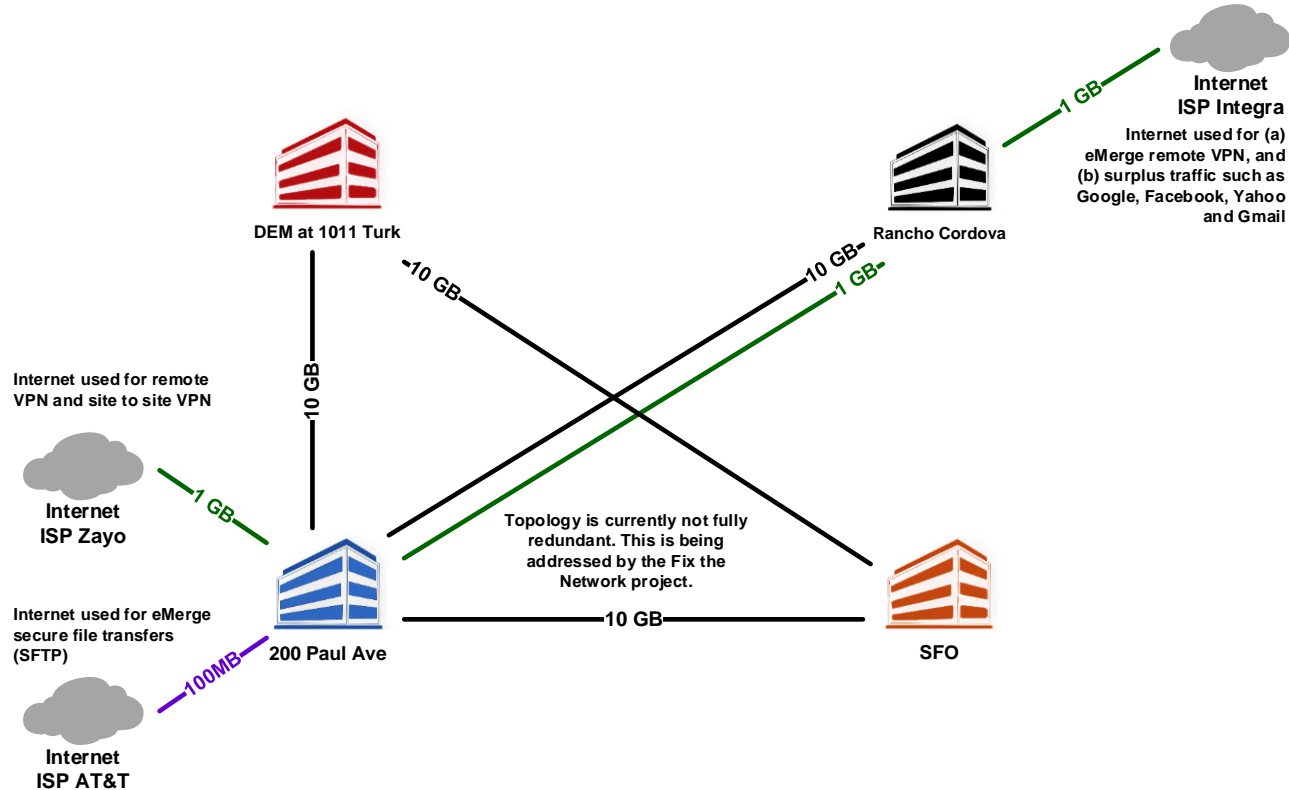
Outcome

- More resilient and secure network (enables re-routing)
- Higher network availability (less downtime)
- Easier maintenance (lower support costs)
- Greater network throughput (e.g. better streaming)
- Standardized network (more plug-and-play)
- Greater capacity for growth (to meet demand)
- Enhanced data & voice quality (clearer phone calls)

* Routing protocols are instructions to city network infrastructure on how to send information around the network.

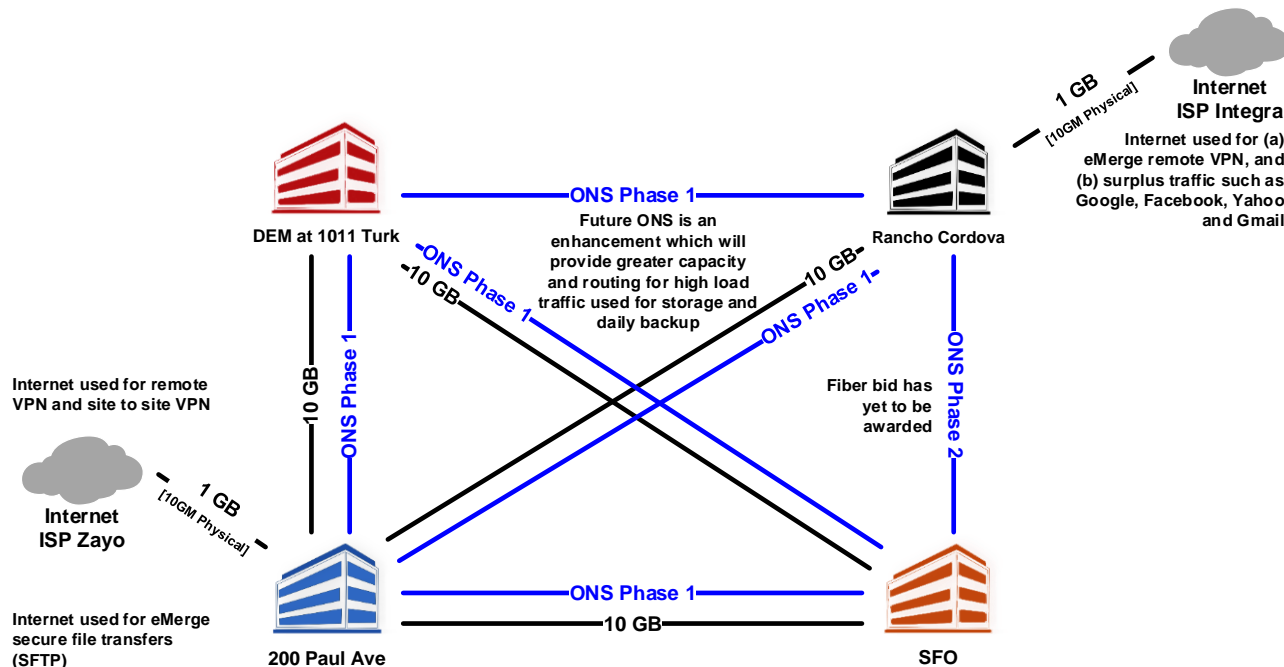
Current State Network

Connecting Data Centers and Internet



Future Target State Network

Connecting Data Centers and Internet



Fix the Network

Spend (Actuals)

The spend this last year has been sourced mostly from COIT funding.

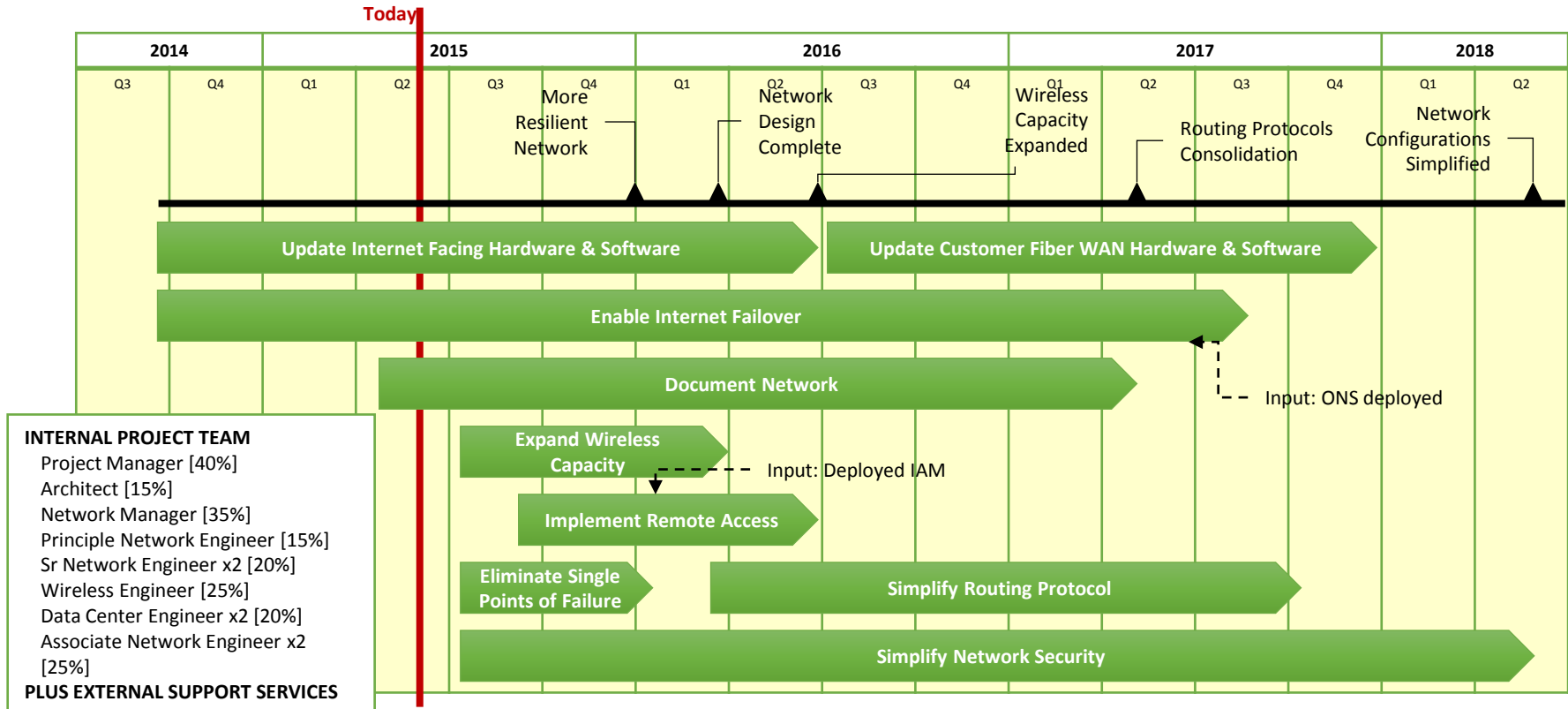
Equipment Pending This/Next Fiscal Yr

ASR 1002

Equipment, Tools and Services	Cost	Origin of Funds
NetBrain <i>(Tool for network discovery, mapping and diagnostics)</i>	\$216,037	COIT
SmartNet <i>(Cisco maintenance)</i>	\$221,369	COIT
ASR 1002 Upgrade (1-10 GB) <i>(Aggregation services router which aggregates multiple WAN connections including encryption and traffic management, and forwards them)</i>	\$64,871	COIT
Firewalls <i>(total of six)</i>	\$1,089,838	13% of this spend was funded through other projects
Firewall Design Services <i>(Cisco consulting services)</i>	\$270,710	100% of this spend was funded through other projects
ACS 5.6 <i>(total of two) replacing ACS 4.2</i> <i>(Access control server platform supporting an identity-based networking solution for Cisco intelligent information networks)</i>	\$60,746	COIT
Wireless Controllers <i>(Device providing visibility, scalability, and reliability needed for highly secure, enterprise-scale wireless networks)</i>	\$895,659	33% of this spend was funded through other projects
Cisco Prime <i>(Network management strategy and product portfolio that simplifies management operations)</i>	\$148,836	COIT
TOTAL	\$2,968,066	\$712,951 was sourced from other projects

Fix the Network

Timeline Based on Preliminary Planning



Fix the Network

Dashboard

Project Description			Fix The Network			Top Risks and Issues		
Update legacy network equipment (e.g. routers)			Recent and Upcoming Activities			Risk #1: Not enough network engineering resources. There are not enough network engineering resources to complete the critical tasks.		
Optimize network routing (choose best paths)			Due	Item	Status	Issue #1: Difficulty finding time for adequate project planning.		
Standardize network protocols* (fewer rules)			01/07/15	FTN Project Charter Signed off	Complete			
Simplify network topology (neater design)			07/30/15	Update Network Hardware/Software	Future Task			
Enhance security (less intrusion)			09/17/15	Migrate off of AT&T IP Service	Future Task			
Enable internet failover (no interruption)			11/17/15	Expand Wireless Capacity	Future Task			
Eliminate single points of failure (no weakest link)			12/29/15	Eliminate Single Points of Failure	Future Task			
			12/30/15	Resilient Network	Future Task			
			02/23/16	Implement Remote Access	Future Task			
			03/15/16	Network Design Complete	Future Task			
			04/14/17	Document Network	Future Task			
			04/26/17	Routing Protocols Simplified	Future Task			
			08/01/17	Enable Internet Failover	Future Task			
			09/25/17	Simplify Routing Protocols	Future Task			
			05/25/18	Simplify Network Security	Future Task			
Overview						Recent Events		
PM	Project Lifecycle	Project Status				1) Migration of SecureFTP, AT&T Public Address and SMTP Mail Relay Underway, 2) Started to-be protocol design sessions; 3) Completed WBS, 4) High-Level Design Complete		
Eddie Eriksson	Planning	Active (Approved)						
Resource Health	Schedule Health	Cost Health						
Green	Green	Green						
Estimate % Complete (PM)						Next Steps		
5%						1) Complete Network Diagram 2) NetBrain end user training; 3) Ongoing To-Be Network Design Sessions, 4) Complete All Equipment Procurements		
Funds Approved								
\$								
2,150,000.00								
Funds Remaining								
\$								
-								

Calendar Review

July-Sept

Next Meetings:

- July 3 – Cancel
- Aug. 7
- Sept. 4

9. Public Comment

10. Adjournment
