



Three Projects to Upgrade Communications Network Systems

Operations, Personnel and Technology Committee

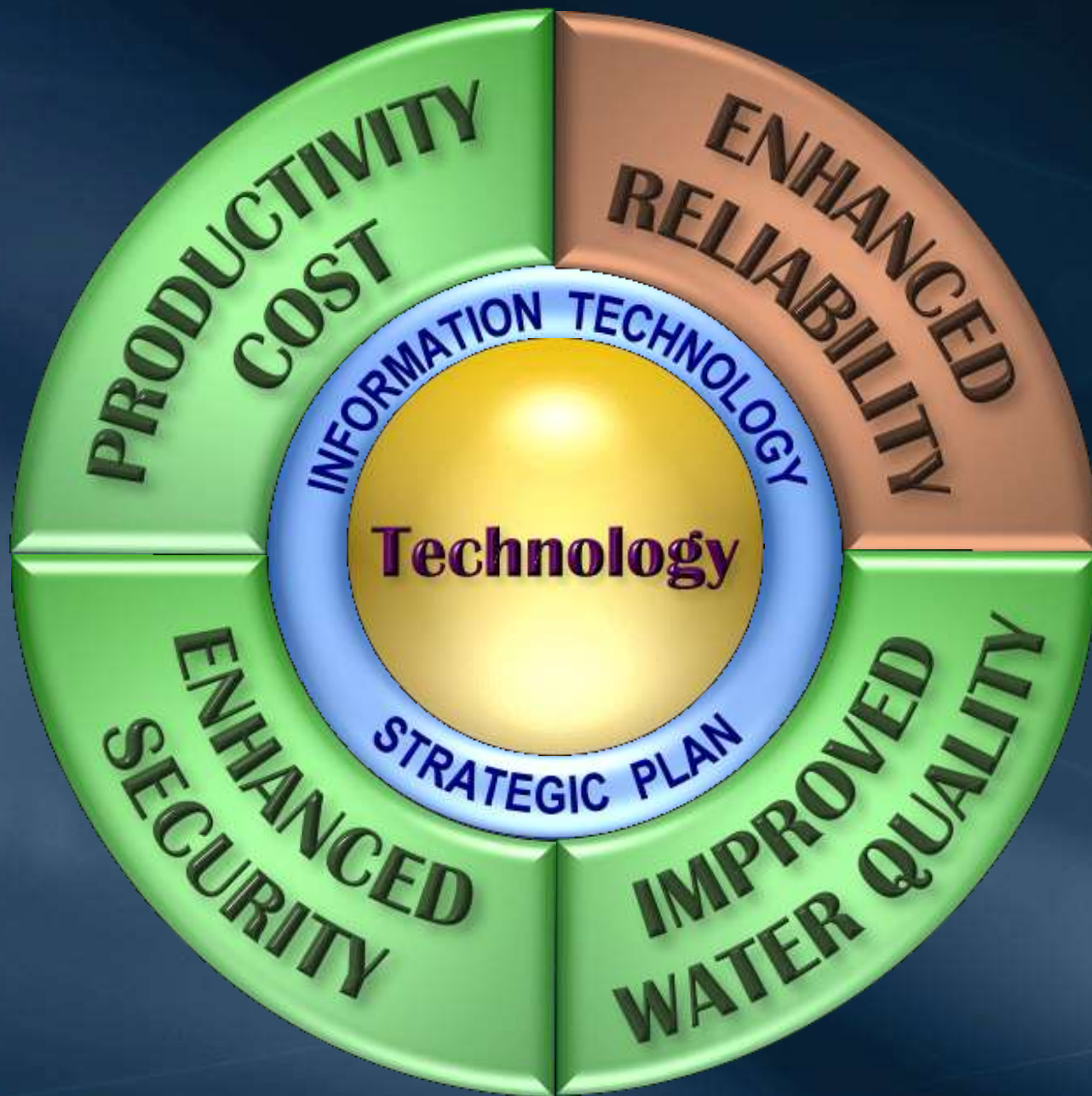
Item 8-6

October 14, 2014

Current Action



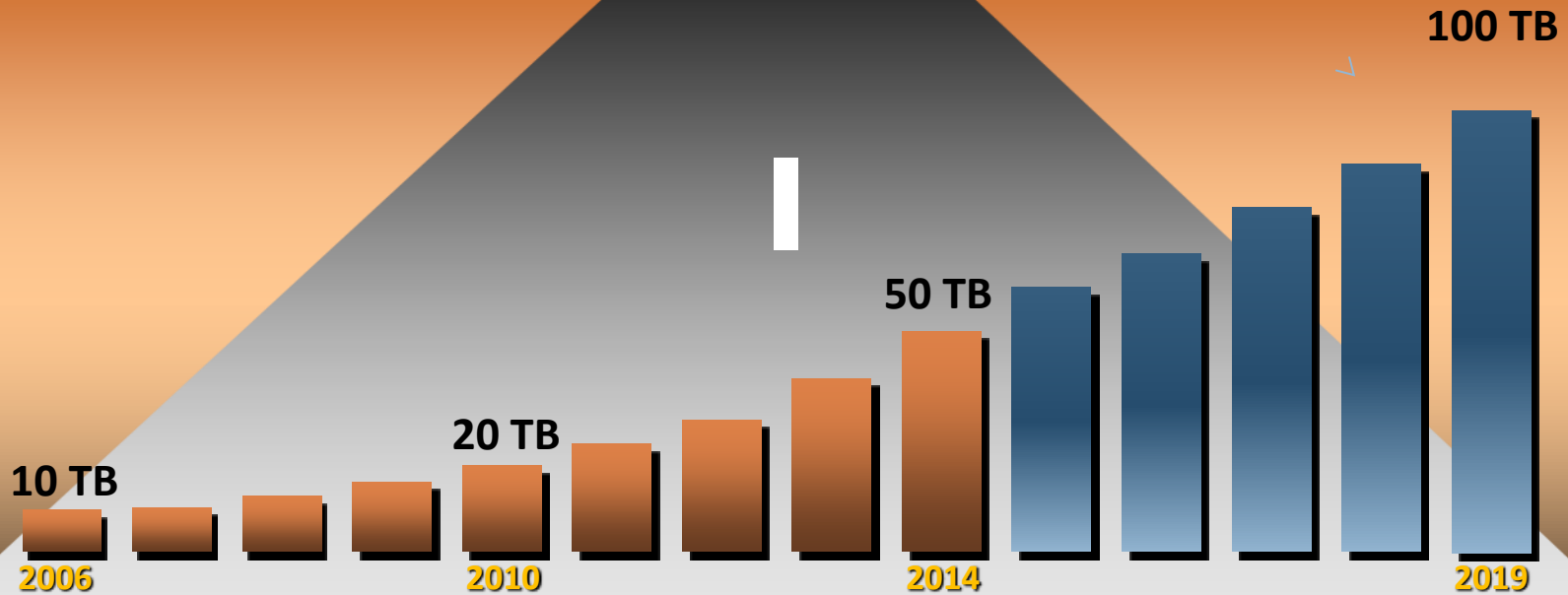
- Appropriate \$6.04 million
- Award \$3,555,971.27 procurement contract to CDW Corp. to supply network equipment
- Authorize final design of network room upgrades at Headquarters Building
- Authorize preliminary design and field assessments of microwave upgrades at remote sites



MWD Network Traffic

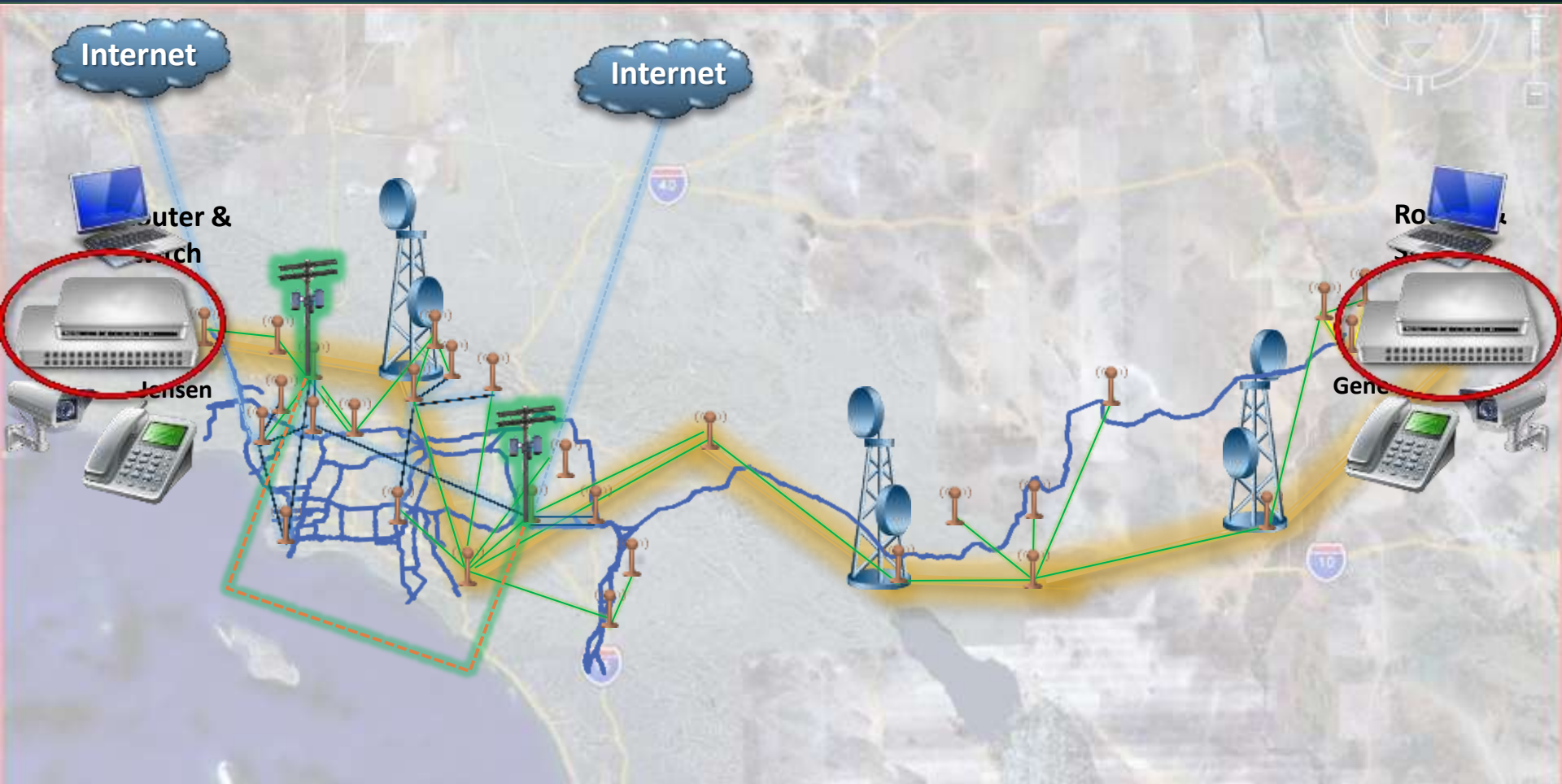
SCADA Data
Security Videos
Business Applications
Enterprise GIS Maps
Engineering Drawings

Email
Internet Usage
Mobile Applications
Web Applications
New Telephone System



INFORMATION HIGHWAY

Metropolitan's Network



2 Internet Paths

73 Microwave Sites

~25,000 End points

29 Backbone Sites

134 Microwave Radios

50 TeraBytes daily

Scope of Phase I

1. Communications Network Hardware Upgrades – Routers and Switches
2. Final Design - Headquarters Network Room Upgrades
3. Preliminary Design - Microwave Radio, Electrical, and Backup Power Systems

Scope of Phase II

1. Final Design of upgrades to field sites
2. Procure and install microwave radios



Project 1 - Network Hardware Upgrades

Routers and Switches \$5.6 million

- Prepare for new phone system and mobile applications
- Enhance reliability - upgrade 376 of 617 devices at end of useful life
- Position network for future demand



Project 1 - Network Hardware Upgrades

Bid Results

Request for Bids No. AB-283336

Bids received:	August 26, 2014
No. of bidders:	11
Low bidder:	CDW Corporation
Low bid amount:	\$3,555,971.27
Range of higher bids:	\$3,567,817 to \$4,679,599
Budgetary cost estimate:	\$3,837,000
Regional Business Enterprise:	Yes

Project 2 - Final Design – Headquarters Network Room Upgrades \$175K

- 12 rooms one on each floor at Headquarters
- Final design for
 - Upgrading air conditioning units, electrical circuits, and uninterruptible power supplies
 - Specifications and construction bid



Project 3 - Preliminary Design - Microwave, Electrical, Backup Power \$265K

- Microwave Radio Upgrades

- 81 radios
- \$165K for preliminary design



- Electrical Grounding Remediation

- 10 sites to improve reliability / safety
- \$50K for assessments



- Battery System Replacements

- 18 sites
- \$50K for assessments



Requested Funds

	Network Upgrade	HQ Final Design	Field Prelim. Design	
Labor				
Project management	\$200,000	\$15,000	\$35,000	
Procure and install network equip.	780,000			
Headquarters final design		30,000		
Permitting and coordination		25,000		
Preliminary design and assessment			140,000	
Professional agreements	190,000	90,000		
Materials				
Switches and routers, test equipment, network tools, racks, cables	3,870,000		65,000	
Remaining budget	560,000	15,000	25,000	
	Subtotal:	\$5,600,000	\$175,000	\$265,000
	Total Amount:	\$6,040,000		

Schedule



Preliminary Design



Final Design



Installation



Construction



Board Action



Completion

Board Options



- Option # 1
 - Adopt CEQA determination that the proposed action is categorically exempt
 - Appropriate \$6.04 million
 - Award a \$3,555,971.27 contract to CDW Corporation
 - Authorize final design network room upgrades at Headquarters
 - Authorize preliminary design and field assessments for microwave upgrades at remote sites

Board Options



- Option # 2
 - Do not proceed with the network upgrades at this time

Staff Recommendation

- Option # 1



