

IT Initiatives & Proposed FY 2012-2017

# TECHNOLOGY IMPROVEMENT PLAN

Prince William County, Virginia



Information Technology - December 07, 2010

# Agenda

- IT Steering Committee (ITSC) – IT “Governance”
  - Role of IT Steering Committee in determining needs, priorities and the most effective way to meet the County’s technology needs
- Technology Improvement Plan (TIP)
  - Systems
  - Systems Maintenance
  - Infrastructure Upgrades

# IT Steering Committee – IT “Governance” Now in Place

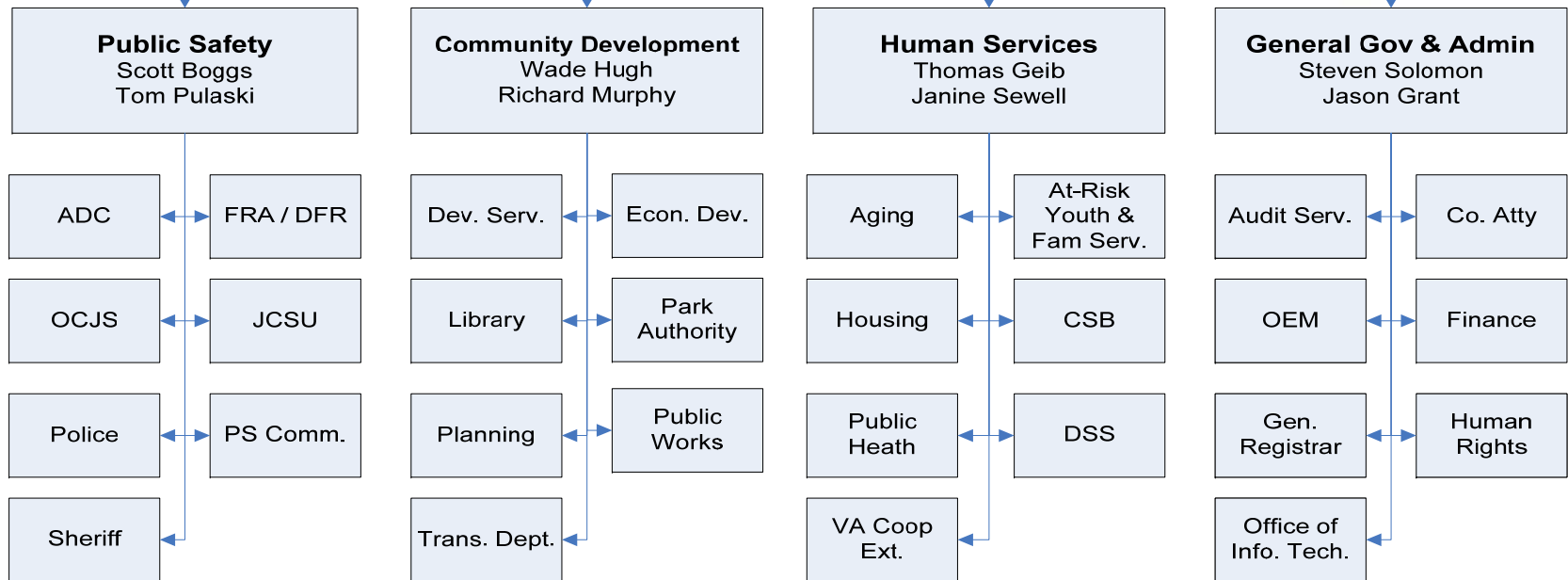
- Modeled in fashion of Budget Congress
  - Functional work groups & members
    - Public Safety (2)
    - General Government (2)
    - Community Development (2)
    - Human Services (2)
- Charter with Roles & Responsibilities
  - Transparent, Inclusive & Sustainable
- Ongoing TIP will be the most visible result

# IT Steering Committee – Up & Running

- Examines and prioritizes technology project needs across all agencies and functions
- Recommends Information Technology (IT) Hardware and Software projects to CXO in annual TIP.
- Determines impacts of these recommendations to the current technology project portfolio.

# Guiding Public Service (GPS)

## IT Steering Committee



# Technology Improvement Plan:

- ❑ Details the technology deployment needs of the County with individual project cost and timeframes
- ❑ Recommends proactive strategies for critical technology systems
- ❑ Uses logic for systems refreshment / replacement:
  - Strategic needs of the community and/or organization
  - Risk matrix:
    - ◇ System no longer supported by vendor
    - ◇ Exceeds industry standards for replacement
    - ◇ Legal changes drive new system requirements
    - ◇ Technology has improved and offers greater capabilities / efficiencies (Return On Investment)
    - ◇ Infrastructure Security and/or Reliability

# Technology: Systems FY12 - 17

TIP: SYSTEMS		Already Appropriated	FY12	FY13	FY14	FY15	FY16	FY17	TOTAL
PS	800 MHz Radio Communication System	\$ 245,000	\$22,000,000						\$22,245,000
PS	Computer Aided Dispatch System (CAD)	\$ 150,000	\$ 6,100,000						\$ 6,250,000
PS	Public Safety Records Management System		\$ 125,000	\$ 6,107,000	\$ 4,157,000				\$10,389,000
PS	Public Safety Voice Logging System			\$ 100,000		\$ 750,000			\$ 850,000
PS	E-911 Call Trunking System	\$ 750,000		\$ 100,000		\$ 750,000			\$ 1,600,000
PS	ADC Information Management System		\$ 90,000			\$ 1,000,000			\$ 1,090,000
PS	Sheriff Information Management System			\$ 200,000					\$ 200,000
HS	Community Services Info Mgmt System			\$ 1,400,000					\$ 1,400,000
HS	Social Services Information System				\$ 400,000				\$ 400,000
CD	Land Use Information System	\$ 4,000,000							\$ 4,000,000
CD	Development Services Queuing System		\$ 350,000						\$ 350,000
GG	Geographic Information System		\$ 183,000		\$ 170,000		\$ 170,000		\$ 523,000
GG	Human Resource Information System (HRIS)	\$ 544,000							\$ 544,000
GG	Real Estate Assessments System	\$ 700,000							\$ 700,000
GG	Tax Administration System	\$ 2,000,000							\$ 2,000,000
GG	Financial Information Management System		\$ 300,000		\$10,000,000				\$10,300,000
GG	MS Share Point		\$ 200,000						\$ 200,000
GG	Enterprise Policy Management System			\$ 200,000					\$ 200,000
GG	Email Upgrade		\$ 200,000	\$ 200,000					\$ 400,000
GG	MS Windows 7 / Office 2010		\$ 194,447						\$ 194,447
<b>Total Systems:</b>		<b>\$ 8,389,000</b>	<b>\$29,742,447</b>	<b>\$ 8,307,000</b>	<b>\$14,727,000</b>	<b>\$ 2,500,000</b>	<b>\$ 170,000</b>	<b>\$ -</b>	<b>\$ 63,835,447</b>

# FY12-17 TIP – Public Safety Systems

- 800 MHz Radio Communication System: (\$22,245,000) – FY12**

*Towers and Infrastructure that support 4,000 County subscriber radios – Total funding of \$22M is available and secure*

- Competitive procurement process will be utilized to:
  - Replace/refresh system because support for current system ends in 2012
  - Assure interoperability between internal and external agencies
  - Allow for addition of center dispatch consoles, greater capacity, and tower sites to support a growing PWC

# FY12-17 TIP – Public Safety Systems

- **Computer-Aided Dispatch System (CAD): (\$6,250,000) – FY12**

*Hardware and software that processes citizen's emergency calls and dispatches Police, Fire and EMS personnel – Total funding of \$6M is available and secure*

- Current system is 12 years old and exceeds replacement standards
- Interfaces with Police & Fire records management systems, mobile data and 800MHz

# FY12-17 TIP – Public Safety Systems

- **Public Safety Records Management System: (\$10,389,000) – FY13 and FY14**

*Hardware and software that manages public safety agency incident and service transaction data, creates statistical reports, and processes critical information for reporting to local, state and federal agencies*

- Existing system is 10 -11 years old exceeding standards
- Records management system provides required data collection for mandatory state reporting and interfaces with the County CAD system

# FY12-17 TIP - Public Safety Systems

- **Public Safety Voice Logging System: (\$850,000) – FY13 and FY15**

*Hardware and software that records all emergency and non emergency calls into the 911 center, as well as all radio traffic on police, fire and rescue radio channels*

- Exceeds replacement standards in FY16
- Systems at both the primary communications center (Owens building) and backup site (Western District station)

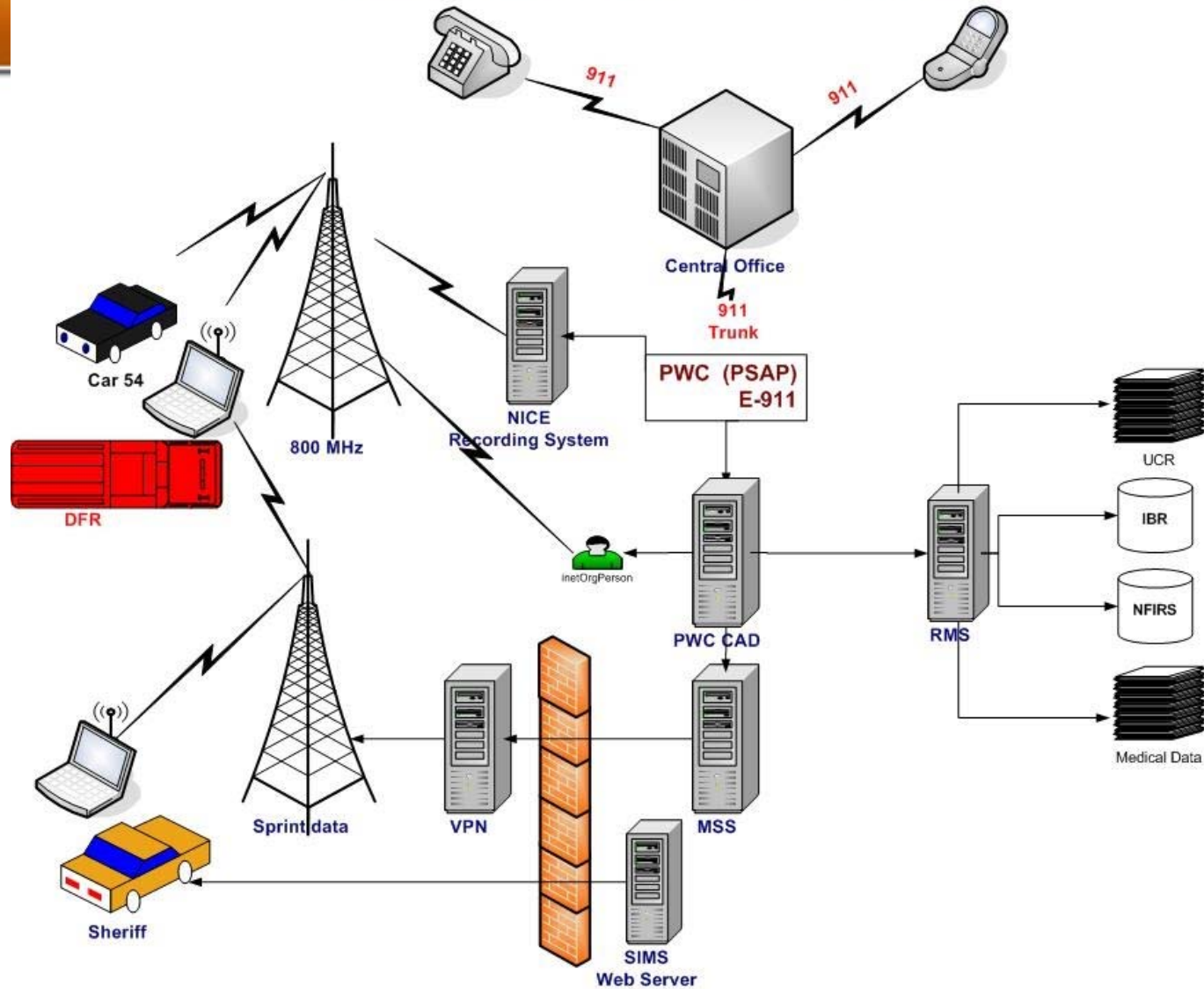
# FY12-17 TIP - Public Safety Systems

## □ **E-911 Call Trunking System: (\$1,600,000) – FY13 and FY15**

*Hardware and software that receives emergency calls from citizens*

- \$750K project refreshment currently underway
- Existing system is 8 years old which exceeds standards

# PUBLIC SAFETY TIP SYSTEMS



# FY12-17 TIP Public Safety Systems

## □ **Adult Detention Center Information Management System:** **(\$1,090,000) - FY12 and FY15**

*Hardware and software that manages booking, digital photos, intake & release data, arrest charges, and sentence information for inmates*

- Refreshment: FY12 (\$90K) and Replacement: FY15 (\$1M)
- Replacement based on end-of-life cycle
- Replacement cost estimate (\$1M) is in early planning stages and could change

# FY12-17 TIP - Public Safety Systems

## □ **Sheriff Information Management System: (\$200K) - FY13**

*Hardware and software that logs, tracks, and maintains records for service of civil and criminal process*

- Current application was custom developed for the Sheriff's Office by a contractor and IT Staff
- In FY13, system will exceed replacement standard – Sheriff and IT will be looking into an off-the-shelf application solution

# FY12-17 TIP - Human Services Systems

## □ **Community Services Information Management System:** **(\$1,400,000) – FY13**

*Hardware and software that manages patient scheduling, clinical documents, clinical evaluation notes, and patient medical records*

- State Reporting/ Funding - Generation of required State Activity Reports that result in release of State Funding for PWC Community Services
- System will reach end of life in FY13
- Upgrade/Replacement cost analysis and issuance of RFP

# FY12-17 TIP - Human Services Systems

## □ **Social Services Information System: (\$400,000) – FY14**

*Hardware and software that manages client contacts and case information*

- Current system approaching end-of-life cycle
- Enhanced system will meet state reporting requirements

# FY12-17 TIP - Community Development Systems

## □ **Land Use Information System: (\$4,000,000) - FY11**

*Hardware and software that manages land, building development and code enforcement information*

- The current system was installed in 1999, upgraded in 2004, and upgraded again in 2010 to make it fully supported until early 2013 to allow time to find and implement a replacement system
- RFP for replacement system on the street

# FY12-17 TIP - Community Development Systems

## □ **Development Services Customer Service Queuing System:** **(\$350,000) – FY12**

*Hardware and software used to queue and route customers to the appropriate service counter for assistance. This automated mechanism manages customer flow throughout the development process.*

- Used by all of the agencies' customer service counters, including Development Services, Planning, GIS, Fire Marshal's Office and Public Works Environmental Services.
- Current system is 4 years old and will industry exceed standard for replacement
- Only new web-based system will be supported on Windows 7 OS.

# FY12-17 TIP - General Government Systems

## □ **Geographic Information System : (\$523,000)**

*Base map upgrades including digital data acquisition and aerial photography*

- Digital data acquisitions in FY12 (\$183K), FY14 (\$170K) and FY16 (\$170K)
- Land detail is maintained and updated in the County's Geographic Information System (GIS) on a defined schedule
- New data layers will support the data requests of the Comprehensive Plan

# FY12-17 TIP - General Government Systems

## **Human Resource Information System (HRIS):** **(\$544,000) – FY11**

*Hardware and software that manages the County's Human Resource and Payroll Information*

- Replacement/Refreshment already funded in FY10 (\$544K)
- Enhances Internal Controls with Tiered Security Access
- HRIS Version 4.1 is the current standard and has all modules and capabilities needed by County
- Upgrade to 4.1 will be implemented in January 2011

# FY12-17 TIP - General Government Systems

- **Real Estate Assessments System: (\$700,000) - FY10**

*Hardware and software that manages mass appraisal of property information*

- Existing system installed in 1998 and no longer supported after July 2010
- Go live in Summer 2011

# FY12-17 TIP - General Government Systems

## **Tax Administration: (\$2,000,000) - FY11**

*Hardware and software that manages the tax billing and collection information*

- Existing system installed in 1999
- In planning phase

# FY12-17 TIP - General Government Systems

## □ **Financial Information Management System: (\$10,300,000) –** FY12 and FY14

*Hardware and software that manages accounting, budgeting, procurement and capital asset information*

- Replacement/Refreshment: FY12 (\$300K) and FY14 (\$10M)
- The County's Financial Management System was implemented in 1998, the last upgrade was 2007
- Vendor has no plans to further upgrade the current system software and technical support is decreasing
- End of life for current system projected for FY13
- Initial research is being conducted for potential systems with the capacity to expand to full Enterprise Resource Planning System with additional funding

# FY12-17 TIP - General Government Systems

- **MS SharePoint: (\$200,000) – FY12**

*Hardware and software that form the framework for a redesign of the County's current websites – external and internal*

- Improve and enforce standard content uniformity in order to enhance communications with citizens and employees

# FY12-17 TIP - General Government Systems

## **Enterprise Policy Management System: (\$200,000) – FY13**

*Using enterprise software to standardize and manage all of the County's internal personnel, financial, and administrative policies*

- Currently used by Police through grant acquisition
- Strengthens Internal Controls

# FY12-17 TIP - General Government Systems

## □ **Email Upgrade: (\$400,000) – FY12 and FY13**

### *Evaluation of Industry Best Business Practices*

- This project will begin the work of investigating and implementing additional features to the County's email architecture including:
- e-Discovery to respond to FOIA requests
  - ◇ e-Retention to provide consistent and reliable retention of emails in compliance with mandated requirements
  - ◇ e-Restoration in order to allow for individual user/individual email restorations
  - ◇ High availability of the email services

# FY12-17 TIP - General Government Systems

- **MS Windows 7 Operating System Upgrade and MS Office 10: (\$194,447) – FY12**

*Desktop technology refresh with encryption*

- Windows 7 Operating System and Office 10 Deployment
- Hardware upgrades necessary - more memory and other system requirements for PCs

# Technology: Cost of Ownership

SYSTEM MAINTENANCE AGREEMENTS		Already Appropriated	FY12	FY13	FY14	FY15	FY16	FY17	TOTAL
PS	800 MHz Radio Communication System				\$ 722,000	\$ 750,880	\$ 780,915	\$ 812,152	\$ 3,065,947
PS	Computer Aided Dispatch System (CAD)				\$ 812,000	\$ 844,480	\$ 878,259	\$ 913,390	\$ 3,448,129
PS	Public Safety Records Management System					\$ 1,737,520	\$ 1,807,021	\$ 1,879,302	\$ 5,423,843
PS	Public Safety Voice Logging System							\$ 15,000	\$ 15,000
PS	E-911 Call Trunking System						\$ 10,000	\$ 10,000	\$ 20,000
HS	Community Services Info Mgmt System			\$ 60,000	\$ 63,000	\$ 66,150	\$ 69,458	\$ 72,930	\$ 331,538
HS	Social Services Information System				\$ 41,664	\$ 43,123	\$ 44,632	\$ 46,194	\$ 175,613
CD	Land Use Information System			\$ 200,000	\$ 54,000	\$ 57,000	\$ 60,000	\$ 63,000	\$ 434,000
CD	Development Services Queuing System		\$ 5,300	\$ 5,600	\$ 5,800	\$ 6,100	\$ 6,400	\$ 6,800	\$ 36,000
GG	Geographic Information System			\$ 4,320	\$ 4,320	\$ 4,320	\$ 4,320	\$ 4,320	\$ 21,600
GG	Human Resource Information System (HRIS)			\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 100,000
GG	Real Estate Assessments System		\$ 54,000	\$ 54,000	\$ 54,000	\$ 58,500	\$ 64,200	\$ 70,000	\$ 354,700
GG	Tax Administration System		\$ 17,000	\$ 17,000	\$ 17,000	\$ 17,000	\$ 17,000	\$ 17,000	\$ 102,000
GG	Financial Information Management System					\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 3,000,000
<b>Total Maintenance:</b>		\$ -	\$ 76,300	\$ 360,920	\$ 1,793,784	\$ 4,605,073	\$ 4,762,205	\$ 4,930,088	\$ 16,528,370

# FY12-17 TIP – Systems Maintenance

- **Critical application system maintenance costs**
  - Information technology to track and pay all maintenance costs for key systems
  - Tracking total cost of ownership for technology systems

# Technology: Infrastructure

INFRASTRUCTURE UPGRADES		Already Appropriated	FY12	FY13	FY14	FY15	FY16	FY17	TOTAL
PS	Radio Services Generators		\$ 34,000						\$ 34,000
PS	Camp 26 Acquisition		\$ 30,000						\$ 30,000
PS	DFR Base Station Transmission Line		\$ 11,000						\$ 11,000
PS	Fire Station Alert Encoder Refresh			\$ 32,000					\$ 32,000
PS	HVAC Annex Units (Ind Hill)		\$ 26,000						\$ 26,000
PS	Radio Services Monitors		\$ 109,000						\$ 109,000
PS	800MHz Dispatch Center Console Refresh		\$ 68,800						\$ 68,800
PS	Radio Subscriber Radios		\$ 64,250						\$ 64,250
PS	Microwave Test Equip		\$ 78,000						\$ 78,000
PS	Microwave Outer Rings Refresh	\$ 943,000							\$ 943,000
PS	Radio UPS System			\$ 158,000					\$ 158,000
GG	Telecom 911 Emergency Notification		\$ 164,000						\$ 164,000
GG	INET Infrastructure		\$ 929,968						\$ 929,968
GG	PBX (Voice Development)			\$ 100,000					\$ 100,000
GG	VDI (Virtual Desktops)		\$ 300,000					\$ 554,212	\$ 854,212
GG	DR / Business Continuity			\$ 300,000		\$ 560,000	\$ 555,195		\$ 1,415,195
<b>Total Upgrades:</b>		<b>\$ 943,000</b>	<b>\$ 1,815,018</b>	<b>\$ 590,000</b>	<b>\$ -</b>	<b>\$ 560,000</b>	<b>\$ 555,195</b>	<b>\$ 554,212</b>	<b>\$ 5,017,425</b>

Already  
Approp.

# FY 12-17 TIP – Infrastructure Upgrades

## Radio Infrastructure Improvements: (\$661,050)

- FY 12 (\$471K) and FY13 (\$190K)
- Generator and Equipment Replacements: The existing generator at Public Safety Dispatch Center is well beyond its life expectancy as is other critical equipment needed to maintain operations
- Land Purchase: Camp 26 Radio Tower Site from VA Dept. of Corrections

# FY 12-17 TIP – Infrastructure Upgrades

- **I-NET Equipment Replacement and Upgrade: (\$929,629) – FY12**
  - Phase I of this project replaces Optical I-Net Network equipment with newer, more efficient equipment that will reduce power consumption, cooling and annual maintenance costs by approximately \$100k
  - Phase II of this project provides greater redundancy in the PWC I-Net Core that will provide greater bandwidth dedicated to major County facilities (Owens, Ferlazzo and Western District Police Station)
  - Funded with Cable TV Franchise Fees

# FY 12-17 TIP – Infrastructure Upgrades

## **Voice System Architecture: (\$100,000) – FY13**

*Analysis of alternative service delivery (HUCS, QMOE)*

- This project will begin ongoing development and upgrade requirements of the voice architecture. This includes the PBX systems, voicemail, contact center, and conference bridges.

# FY 12-17 TIP – Infrastructure Upgrades

## □ **Virtual Desktop Infrastructure (VDI): (\$300,000) – FY12**

*Return On Investment prototype for strategic desktop deployment*

- This project will begin the initiative to design and implement a virtual desktop infrastructure within areas of the County.
- VDI allows for simpler provisioning of new desktops and has potential to save money for the County over traditional desktops

# FY 12-17 TIP – Infrastructure Upgrades

## □ **Telecom 911 Emergency Notification (\$164,000) – FY12**

*Provides phone caller location for emergency calls in county buildings*

- The PWC multi-line telephone systems may support several buildings with one main system. In order for first responders to locate a 911 caller, we will implement a solution to provide more specific location information to the 911 Center.

# FY 12-17 TIP – Infrastructure Upgrades

- **Disaster Recovery/Business Continuity (\$300,000) – FY13**  
*Virtual Servers, Virtual Data Center, COOP*
  - Information Technology business continuity includes multiple projects to make critical systems redundant and reliable.
  - Plan Involves: additional facilities, generators, HVAC systems, fire suppression systems, battery plants, servers, data network components, and application development are required for a comprehensive business continuity development plan.

# FY 12-17 TIP – Infrastructure Upgrades

## □ **Microwave Equipment Refresh (\$943,000) – FY10**

*Replace Equipment in Outer Rings as it Reaches End-of-Service Life*

- Project is underway to replace equipment in two outer rings

# FY12-17 TIP Investment by Category

TIP SUMMARY	Already Appropriated	FY12	FY13	FY14	FY15	FY16	FY17	TOTAL
<b>Systems:</b>	\$ 8,389,000	\$ 29,742,447	\$ 8,307,000	\$ 14,727,000	\$ 2,500,000	\$ 170,000	\$ -	\$ 63,835,447
<b>Maintenance:</b>	\$ -	\$ 76,300	\$ 360,920	\$ 1,793,784	\$ 4,605,073	\$ 4,762,205	\$ 4,930,088	\$ 16,528,370
<b>Infrastructure:</b>	\$ 943,000	\$ 1,815,018	\$ 590,000	\$ -	\$ 560,000	\$ 555,195	\$ 554,212	\$ 5,017,425
<b>Total:</b>	\$ 9,332,000	\$ 31,633,765	\$ 9,257,920	\$ 16,520,784	\$ 7,665,073	\$ 5,487,400	\$ 5,484,300	\$ 85,381,242

# Unfunded Needs

UNFUNDED IT INITIATIVES		Already Appropriated	FY12	FY13	FY14	FY15	FY16	FY17	TOTAL
PS	HVAC Units (Remote Sites)						\$ 210,000		\$ 210,000
PS	Radio - Direction Finder				\$ 15,000				\$ 15,000
PS	Microwave Central Rings Refresh				\$ 1,970,000				\$ 1,970,000
PS	NetBoss Server Refresh							\$ 25,000	\$ 25,000
PS	Microwave Spur to WD Station				\$ 420,000				\$ 420,000
PS	Microwave Spur Links Refresh					\$ 500,000			\$ 500,000
PS	E-911 Maintenance						\$ 625,000		\$ 625,000
GG	Performance expanded (ERP)				\$ 5,000,000	\$15,000,000			\$20,000,000
GG	Performance expanded maintenance					\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 6,000,000
GG	Share Point Business Continuity				\$ 800,000				\$ 800,000
GG	PBX (Voice Development)							\$ 1,440,000	\$ 1,440,000
GG	VDI (Virtual Desktops)				\$ 1,808,000	\$ 440,000	\$ 440,000		\$ 2,688,000
GG	DR / Business Continuity				\$ 825,000			\$ 2,600,000	\$ 3,425,000
<b>Total Unfunded:</b>		\$ -	\$ -	\$ -	\$10,838,000	\$17,940,000	\$ 3,275,000	\$ 6,065,000	\$ 38,118,000

# Questions?

