Pinellas County
Business Technology Services
[DRAFT]
Strategic Business Plan 2012
Version 1.0

Prepared by the Strategic Leadership Team

Partnering to provide the solutions most important to our Customers' Business

April 2012

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Revision History

Release	Date	Release Reason - Description of Change(s) - Author
1.0	4-6-2012	Initial DRAFT

Introduction

The Business Technology Services (BTS) Department exists to enable the business with speed and scale, and to provide solutions to real business problems and opportunities in pursuit of customer satisfaction as a "Service Provider of Choice".

Under the direction of the BTS Board, BTS collaborated and partnered with Constitutional Officers, BCC Agencies, and the Courts to enable business strategies that have enhanced the mission of Pinellas County Government. Internal centers of competency were developed to maintain and protect information assets, ensure business continuity, and leverage financial resources through shared business services and a new Cost Recovery model. In answer to citizen demands for more responsive and self service government, we implemented strategies that have enabled more ubiquitous access to public information. Business process disciplines in the areas of strategic planning, project management, and service management best practices have matured and continue to add significant value to county operations in the form of cost effective service delivery and support. Major initiatives progressed in accordance with project schedules relating to Health & Human Services, Criminal Justice, GIS, Asset Management, Finance, Human Resources, Budgeting, and Purchasing. The continued expansion of Internet services and the adoption of Web 2.0 technologies have enabled e-Town Hall meetings for proactive citizen engagement while promoting world-wide branding, greater government transparency and positive economic impact. These initiatives continue to transform the way citizens interact with government, essentially shifting from citizens 'consuming government' to citizens 'participating *in* government'.

As part of the Strategic Planning Process, BTS developed, updated, and refined a Common Requirements Vision (CRV) that documents current business trends and the collective interests of our customers. In addition to validating many of the previous trends, several new emphasis from our customers' perspective emerged including Wi-Fi Connectivity and Mobility, Social Media and Mass Collaboration, GIS, Constituent Relationship Management (CRM) / 311, and Cloud Services.

Primary Strategic and Recurring Priorities include: Enhancing and Maintaining the Production Environment, Business Process Disciplines, Application/Data Portfolio Management and Service Modernization/Mobility, and Investing in Talent Management and High Performance Organization.

Major Projects include: JUSTICE$_{ccms}$, OPUS, CHEDAS, Enterprise GIS (EGIS), and Enterprise Asset Management (EAM).

Major Business Strategies include: Cost Recovery Model, Enterprise Content Management (ECM), Elimination of Online Public Records Fees, Oracle Unlimited License Agreement, Leverage Business Intelligence Application, Cloud Computing Services, Mobile Computing and Wireless Connectivity, Social Media and Mass Collaboration, Constituent Relationship Management (CRM)/311, Enterprise Call Center Management, Application/Data Portfolio Management and Service Modernization/Mobility, PCI Compliance and Secuirty Vulnerability Assessment, Enterprise Office/Collaboration Applications, and the Aging Cable Infrastructure.

The purpose of our Strategic Planning Process is to determine how we can provide the greatest business value to our customers. Our goal is to be the Service Provider of Choice, and we seek to identify and pursue only those opportunities that will enhance the mission of Pinellas County Government by enabling the business strategies of most importance to our customers.

To accomplish this, we recognize the critical need for effective collaboration and partnership to help us identify specific business requirements and industry trends that are affecting our customers' businesses. We have used this valuable insight to determine how best to apply our resources to meet the business objectives and desired outcomes.

BTS remains committed to the total success of our customers, and will continue to provide experienced professionals, innovative business solutions, and core enterprise technologies that enable the business to better serve the citizens of Pinellas County.

On behalf of the Business Technology Services Department, thank you for the opportunity to serve you and the citizens of Pinellas County.

Sincerely,

Paul F. Alexander III
Executive Director, Business Technology Services

Vision & Mission Statements

VISION

Service Provider of Choice:
Partnering in relentless pursuit of value-added service

MISSION

Specializing in leadership within Pinellas County Government, we are driven to ensure the total success of our customers through the provision of experienced professionals, innovative business solutions, and core enterprise technologies that meet their critical business drivers.

We value the contribution of our employees as a core competency, and are committed to recruit, develop, reward, and retain personnel of exceptional ability, character, and dedication.

Enterprise Services and Accomplishments

Enterprise Business Services

The BTS Board has promoted and approved the following set of Business Services aligned with the Cost Recovery model, thus far, to allow for transparent accounting of Enterprise and Customer Services provided by the BTS Department.

Service Name	Description
County Web	Internet/Intranet hosting. Internet domain management, availability monitoring & reporting. Internet, Intranet & Extranet contributor training, support & licensing; backup/archiving; search engines. Centralized publishing & file management. Enterprise SharePoint hosting. Extranet SharePoint management. Web forms/surveys. Streaming video infrastructure & support. Internet Public notice calendaring.
Customer Support Center (CSC)	Includes incoming contacts, infrastructure monitoring, ticket creation, first level resolution or escalation, Incident tracking, tape management and loaner equipment services.
EGIS Bureau	EGIS Service Bureau maintains EGIS data for Pinellas County.
EGIS Technical	Includes In-house developed and COTS GIS applications, databases and associated hardware.
Enterprise Asset Management (EAM)	Includes In-house developed and COTS (Maximo and Agile Assets) applications, databases and associated hardware.
Email	Includes individual, group and facility Email and calendar accounts, Sunshine law compliance for archiving and retrieval and Business Continuity.
Justice	Serves the Pinellas portion of the 6th Judicial Circuit for the Criminal, Civil, Juvenile, Probate & Traffic Courts.
Network	Includes Internet Access, Wide Area Network (WAN), Local Area Network (LAN), 100Mb at the port and Business Continuity
Oracle eBusiness	Includes Self Service, Human Resources, Payroll, Time Keeping, Benefits, Learning Management, Purchasing, Projects Costing, Budgeting, Performance Scorecard Reporting, Accounts Payables, Accounts Receivables, Fixed Assets, Bank Reconciliations, General Ledger, User Productivity Kit, Business Intelligence Enterprise Reporting
Personal Computing	PC Image creation, testing & maintenance for all PC models. Base software lifecycle management. Packaging of customer software for distribution. Maintenance of distribution software tools.
Security	Includes Anti-Virus, Anti-Spam, Firewall, Content filter, Identity Management, Directory services, Forensics, Risk assessments, Remote Access, PCI quarterly scans and Log Management.
Telephone	Includes phones, phone numbers, voicemail, caller ID, call waiting, local and LD calling and Business Continuity.

Enterprise Project Accomplishments

JUSTICE _{ccms}

For over 30 years Pinellas County pioneered the development and operation of a consolidated criminal justice system that has been regarded as the "Gold Standard" system of record by the Courts, Public Defender, State Attorney, Sheriff, Clerk of the Courts and many other agencies, partners and citizens. We have set a very high standard in terms of operational efficiency and service levels. The Justice project will rely on the continuation of these strong stakeholder partnerships and collaboration as we transition to a commercial-off-the-shelf, vendor-supported solution. The planned transition will involve a massive data migration effort, the reengineering of many complex systems interfaces, transformation of business processes and change management and staff training efforts.

OPUS

The OPUS project challenged the status quo in looking for opportunities to re-engineer business processes to improve operational efficiencies in the areas of Finance, Human Resources, Budgeting and Procurement. Implementation of Oracle products in these areas now lay a foundation upon which the County can leverage as part of a continuing process improvement process for years to come. Some of the early benefits of the project are being realized including the retirement of non-integrated systems, elimination of duplicate data entry, improved reporting, and consolidated routine business processes. The strategic significance of Business Intelligence tools will enable County leaders and managers to track key performance indicators in real time. These tools will further enable data-driven decision making for more responsiveness to the dynamic business environment we operate in.

CHEDAS

BTS has collaborated with Health & Human Services (HHS) to implement CHEDAS, a new commercial off the shelf (COTS) solution developed by Civic Health who is a leading vendor of medical and social services solutions. The shared business objective of the CHEDAS project is to ensure that vital benefits services are efficiently delivered to citizens during difficult economic times where there is increased demand for social services. CHEDAS will replace numerous legacy systems and extensive manual processes with a streamlined and automated workflow-driven integrated system. It will be used to manage services, medical records and financial business processes. In addition, CHEDAS will leverage advanced imaging and reporting capabilities to provide greater insight to service trends and patterns for data-driven business decisions. CHEDAS will also provide seamless integration between HHS and their extensive network of medical service provider partners, and clients will be able to access CHEDAS for self service resources over the internet. The advanced and updated mobile medical unit is able to use a mobile version of the CHEDAS platform when delivering medical services throughout the County to provide services wherever they're needed.

Enterprise GIS (EGIS)

The Pinellas County Enterprise GIS initiative provides a collaborative framework for all County stakeholders to replace multiple legacy GIS with a new state-of-the-art GIS from the world's leading GIS vendor ESRI. The EGIS approach will enable the County to provide more reliable GIS services to extensive user communities including employees, municipal partners and citizens. These new GIS services will be available across all computing platforms ranging from traditional desktop computers to the latest mobile smart phones and tablets. The ESRI-based GIS system will also leverage and compliment other Enterprise systems such as the County's Oracle databases, Oracle Business Intelligence tools and work order and asset management systems such as MAXIMO.

An EGIS Service Bureau has been established to maintain critical GIS data on behalf of stake holders who do not have GIS resources. The EGIS Bureau has adopted established best Quality Assurance practices to ensure a high level of confidence in the County's GIS data. Current efforts are also underway for a significant upgrade to the technology infrastructure in support of the new software. In addition, EGIS web based GIS services will be made available through the ESRI licensing agreement to all County municipalities enabling seamless sharing of important GIS based data.

Enterprise Asset Management (EAM)

A number of BCC organizations rely heavily upon Asset and Work Order Management (EAM) automation to support many critical business processes and citizen services. The existing user community is in excess of 800 users, and has leveraged EAM systems for several years, however, the primary EAM system, MAXIMO, is outdated and a number of other EAM systems may be consolidated and retired for overall efficiency improvements. The EAM initiative will focus on the deployment of the latest version of MAXIMO as a consolidated EAM for use by all users. The upgrade will take advantage of the County's prior investments in MAXIMO software licenses to minimize the upgrade costs. Stake holders include various DEI groups, Real Estate Management, Parks and Conservation Services and Fleet Management. The upgraded implementation will extend the use of MAXIMO to field based employees enabling real time data entry of work order activity and asset conditions. The field based systems will incorporate the use of Global Positioning (GPS) and bar code scanning and digital cameras to streamline and improve engineering operations. EAM will also provide improved management insight into key performance metrics and will facilitate the use of predictive analysis models and Business Intelligence to develop more accurate capital investment programs and budgets.

Stakeholder Accomplishments

In addition to established Enterprise Services and Major Project efforts, BTS worked on focused business enablement efforts with our stakeholders, including the highlighted examples below:

Board of County Commissioners' Departments – Partnered with BCC to establish a backup data center at the Emergency Responder Building (ERB) to ensure critical systems continuity in the event of incidents that may disable the County's primary data center. Partnered with numerous BCC Departments to enable office relocations and closures. Established mobile computer based training equipment and wireless networks at several training rooms. Assisted Emergency Management Administration (EMA) to establish an alternate Emergency Operations Center and upgraded critical EMA support systems. Supported the consolidation of Sheriff and Fleet Management Fuel System. Supported office relocation for Building and Development Review Services and the implementation of a new customer service system. Implemented new printer and PC leasing policies saving over $1 million annually. Upgraded Computer Aided Design and Drafting (CADD) systems to support critical engineering design activities including data sharing with partners and consulting engineers. Implemented centralized BTS CADD support model ensuring that the County's CADD investment is well maintained and that the end user support requests are resolved efficiently. Supported a major SAP (DEI Customer Information and Billing System) upgrade. Partnered with DEI to configure and implement Oracle Business Intelligence based Executive Dashboard prototypes. Supported the implementation of various Scale House automation systems. Collaborated with the County Administrator and Communications on numerous Gov 2.0 initiatives including several eTownHall events, the implementation of the "See Click Fix" application and other enhancements to the County's web. These efforts won various awards such as the Sunny Award for Government transparency and the Best of the Web award for the Center for Digital Government.

Clerk of the Circuit Court – Partnered with the Clerk and other stakeholders to implement progressive "paperless" and content management solutions across several court areas including criminal and probate. Assisted with new State mandated "eFiling" initiatives. Supported the office relocation of the Inspector General's organization. Continued to support and enhance the Clerk's mainframe based web services. Implemented system changes and enhancements to ensure compliance with all legislative mandates. Supported the implementation and upgrade of new foreclosure automation solutions to provide improved citizen access to information. Partnered with the Clerk to provide additional payment options both online and through the Clerk's network of payments partners.

Sixth Judicial Circuit Courts – Assisted with technical infrastructure updates, moves, and installations at St. Petersburg Judicial tower during remodel. Improved operational redundancy with uninterruptable power supply (UPS) upgrades for key communication infrastructure.

Tax Collector – Assisted with technical infrastructure updates, moves, and installations at Star Center for relocation of Missouri office. Enhanced functionality of telephone survey system to track individual representatives rather than group metrics for improved management.

<u>Supervisor of Elections</u> – Established Service Level Agreement for managing technical operations to provide ongoing technical support services. Updated aging technical infrastructure for key systems. Provided onsite and remote systems support for 3 elections. Improved phone and network redundancy and capacity in support of elections.

<u>Property Appraiser</u> – Partnered to establish EGIS Governance Committee with the Property Appraiser assuming the role of EGIS Chairperson. Jointly established the EGIS Service Bureau to support County wide GIS data maintenance. Acquired county wide aerial imagery that enabled property valuation processes to be streamlined. Implemented systems redundancy at the Emergency Responder Building to provide continuity of operations for critical systems.

<u>State Attorney's Office</u> – Upgraded Productivity Suite software licensing to new version. Assisted with migration and modernization of file and print services to new Windows platform. Improved operational redundancy with uninterruptable power supply (UPS) upgrades for key communication infrastructure.

<u>Public Defender</u> – Refreshed Microsoft Office Productivity suite to latest version, Office 2010, in preparation for the new Justice System. Enabled newly installed Windows 7 workstations to leverage video visitation system as well as Court TV functionality. Refreshed Open Office suite to solved\ compatibility issues with Windows 7 and Dougdocs.

<u>Sheriff</u> – Provided upgrade for networking infrastructure and uninterruptible power supply (UPS) equipment at Criminal Justice Center and Sheriff's Administration Building. Planned and coordinated network cable infrastructure installation for Tech Services Building. Updated Crime Viewer application to allow for automated email subscription for citizens. Supported the consolidation of Sheriff and Fleet Management Fuel Systems.

<u>Juvenile Welfare Board (JWB)</u> – Established Service Level Agreement for managing technical operations to provide ongoing technical support services. Transitioned JWB's data center from hosted to onsite, improved file and print services, and improved operational redundancies.

Common Requirements Trends and Future State

Introduction

Each year, BTS works with County Agencies, Constitutionals, and the Courts to determine the business drivers, industry trends & best practices, and environmental trends that will affect them over the coming 1-3 years. The results of this analysis is a set of common requirements that BTS considers when planning its strategic response to what the County Agencies, Constitutionals, Courts, and BTS will need over that same time frame.

Additionally, BTS will carry over strategic and recurring priorities from the previous year. We have dubbed these recurring priority and carry over items, "The Short List".

Primary Strategic & Recurring Priorities

BTS PRIORITIES – "THE SHORT LIST"	
Enhance & Maintain the Production Environment	
Major Projects	JUSTICE $_{ccms}$, OPUS, CHEDAS, Enterprise GIS (EGIS), Enterprise Asset Management (EAM)
Business Disciplines	• Strategic Planning • Security Management • Project Management • Service Management
Application Portfolio Management & Service Modernization	
Investing in Talent and High Performance Organization	

Major Project Descriptions

Project Name	Description
OPUS	The goal of OPUS is to implement an integrated countywide financial platform that supports all aspects of the County's financial and Human Resource operations. The OPUS project represents a collaboration among stakeholders from all across the County and is governed and influenced by the Oracle Business Applications Executive Committee (OBAEC), the OPUS Project Sponsors Committee, and the Core Project Management Team under the guidance of the Business Technology Services (BTS) Board. BTS offers project management, technical and business architecture, implementation and support resources, and actively participates in OBAEC and OPUS Project Sponsors Committees
JUSTICE $_{ccms}$	The JUSTICE $_{ccms}$ replaces the legacy CJIS platform for the County. Project success will be measured by the new system's ease of use, navigation consistency, ability to support and accommodate changing business needs and legal mandates, and the capability to interface with other databases and software. CJIS User Policy Board Members include the Pinellas County Clerk of the Court, the State Attorney-Sixth Judicial Circuit, the Public Defender-Sixth Judicial Circuit, the Chief Judge-Sixth Judicial Circuit, the Trial Courts Administrator-Sixth Judicial Circuit, the Pinellas County Sheriff, one Pinellas County Commissioner, and three local Law Enforcement Chiefs. In addition to the Board Members, the Justice Project is guided by the Justice Management Team, which includes representation of CJIS User Policy Board Members, Business Technology Services (BTS), and a Justice Project core team that is comprised of a Project Sponsor, Coordinator, Project Manager and Analyst.
CHEDAS	CHEDAS supports Health & Human Services' need to redesign business processes and replace their current case and medical management systems with a fully integrated suite of products that will: reduce manual processing time, reduce service delivery costs, maximize staff efficiencies, offer enhanced eligibility review, self sufficiency planning, performance outcome tracking, ad hoc reporting, and interfaces to OPUS for finance. The system will also support data-driven decision making, standardize data exchange with partners, and reduce risk for HIPAA compliance. BTS offers program management, technical and business architecture, implementation and support resources, and actively participates in the CHEDAS Management Team.
Enterprise Asset Management (EAM)	The goal for an Enterprise Asset Management offering is to upgrade and unify the work order and asset management systems currently on various platforms throughout the County to a common, vendor-supported version to ensure business continuity and agility to make improvements quickly. Current focus is on the Maximo platform. Maximo currently exists in 3 different versions (v4, v5, v6) in use in BCC departments. Enterprise Maximo would bring the entire platform to the current supported version 7+. In March 2012, County agencies, within and beyond the BCC came together at the SPC Epicenter Collaborative Labs to establish a Vision and next steps for creating a holistic EAM approach that integrates Enterprise GIS and Business Intelligence platforms.
Enterprise GIS (EGIS)	This program focuses on a "One County" approach to citizen engagement and transparency of services using all County geographic information systems and geographic data sets to maximize County benefit. The establishment of a GIS Steering Committee, chaired by the Property Appraiser, and a GIS Services Bureau will set ongoing work priorities, GIS standards, provide guidance for GIS projects, and secure funding for GIS initiatives.

Strategies, Recurring Priorities, and Ongoing Best Practices

Enhance & Maintain the Production Environment

Technology is a critical component of business optimization and quality service levels. As such, BTS considers building and maintaining quality technology environments as a top priority. Availability, business continuity, disaster recovery, security, and total cost of ownership are forethoughts in all system designs.

Business Process Disciplines – Driving Business Decisions:

BTS blends a series of best practice disciplines for leading and managing the County's business technology investments. The combinations of these best practices is the foundation for enabling BTS to be agile, cost-effective, and achieve our vision of being the "Service Provider of Choice" for Pinellas County business technology services.

These Disciplines include:

- Information Technology Infrastructure Library (ITIL)
- Project Management Body of Knowledge (PMBOK)
- Enterprise Planning and Architecture Strategies (EPAS)
- OPUS and Clarity Timekeeping
- Software Development Life-cycle (SDLC)
- Enterprise Security Policy
- Service Level Agreements (SLA)
- Performance Management / Goals & Objectives

Application Portfolio Management & Service Modernization

Early focus on Application Portfolio Management will be to inventory County applications and databases to analyze total cost of ownership, future state readiness for mobile platforms, and business intelligence uses. Detailed description can be found in the "BTS Major Business Strategies & Initiatives" later in this document.

Investing in Talent and High Performance Organization

As the Service Provider of Choice, BTS values the contribution of our employees as a core competency, and we are committed to recruit, develop, reward, and retain personnel of exceptional ability, character, and dedication. Our people are our service and to keep pace with constant changes in technology and the high level of expertise required, continual investment in education is imperative.

Governance – Successful Leadership Through Collective Guidance

Background
BTS is the champion for a formal, business-led Governance framework that fosters partnership, guidance, and communication around Business and Information Technology investments. The BTS Governance framework is designed to increase collaboration and partnerships between all stakeholders. Governance provides Senior County Executives with a formalized management structure that enables them to ensure that investments and the engagement of limited staffing resources are aligned with stakeholder business objectives. Governance encourages Executives to consider implications both vertically within their own domain and horizontally across the broader County organizational landscape to make the best possible investments on behalf of our citizens.

Pinellas County Governance Overview
The following diagram illustrates the overall BTS Governance framework and identifies the key Governance committees that have been established to date.
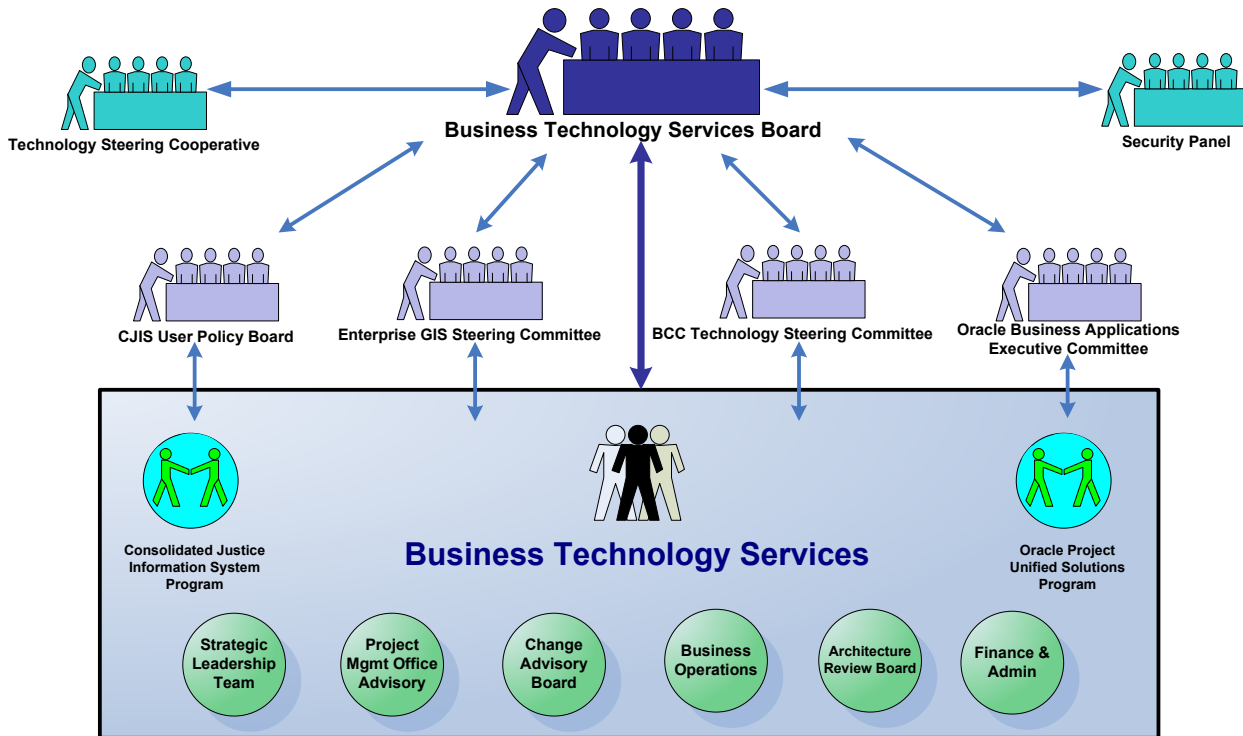
Governance Successes
- OBAEC Executives provide leadership for the County's Oracle eBusiness implementation project "OPUS". This project has redefined many County wide financial, procurement, and human resource processes that will result in greatly improved operational efficiency and significant cost reductions. In addition, the OBAEC Executives, in partnership with BTS, have supported the elimination of several legacy technology platforms.
- The CJIS User Policy Board has developed a very progressive project strategy that will replace a legacy, custom Criminal Justice system with a fully integrated commercial platform. This initiative will streamline and automate County services for citizens. The new

JUSTICE $_{ccms}$ platform will provide the County with a very cost-effective, long-term solution built for easier maintenance, integration, and agility.

- The BCC Technology Steering Committee (BCC TSC) represents stakeholders from over 30 BCC Departments. The Committee's stewardship enables a large volume of technology requests to be assessed and prioritized. The BCC TSC has sponsored the introduction of a formal Business Case and ROI assessment for all technology initiatives to assure alignment in consideration of the best possible investments.
- Geographic Information Systems (GIS) is recognized as a critical business and technology service to the County. The Enterprise GIS (EGIS) Steering Committee has been charged with developing and implementing a strategic plan that will guide County GIS investments to best benefit all stakeholders. EGIS has been instrumental in the procurement of County wide aerial images and is leading an Enterprise GIS Bureau benchmark effort to measure the quality, cost, and efficiency improvement potential of a centrally managed GIS resource pool.

Future Governance Opportunities

The County's BTS Governance structure has matured and is widely recognized as an effective business best practice. Emerging future-state Governance opportunities include:

- Enterprise Content Management (ECM) for guiding electronic content, imaging, paperless, and automated workflow initiatives
- Constituent Relationship Management (CRM) for guiding County wide social networking and unified citizen engagement efforts that present a "One County" view
- Enterprise Asset Management (EAM) for guiding common asset management practices and technology platforms that streamlines work order management and reduces technical complexity

Common Requirements Trends

Each year, Common Requirements gathering is done using BTS Business Relationship Managers (BRMs), via questionnaires and one-on-one interviews with our customers.

From these common requirements, BTS derives the future state and business strategies needed to achieve business goals for our customers. From the future state, BTS initiates the creation of processes, technologies, services, projects and programs to respond directly to customer needs.

Note that the future state is a guideline, or *potential* future state, that is not intended to be fully realized. Each future state item must be considered and justified via business case and/or customer approval. Steering committees such as the BCC Technology Steering Committee, Justice Management Team, Oracle Business Applications Executive Committee (OBAEC), and the Technology Steering Cooperative will provide additional guidance on which future state items provide the most value to their represented interests. As future state items become implemented, standard BTS policies and procedures will be followed to ensure quality and fiscal responsibility.

How to read the "Common Requirements Trends":

TREND	CURRENT STATE	FUTURE STATE
Mobile, virtual, and remote productivity	• VPN (Virtual Private Networking) Services • Email Services • Network Connectivity Services • Telephone Services • Cell Phone Services • Internet Services • Wireless Network Services • Online Collaboration Services • Wireless and Broadband Connectivity Services • Fixed Location Video Conferencing • Mobile Internet/Email/Calendar Services • Telephone Conferencing Bridge Service • Software-based and IP Telephony	• Video Conferencing Service • Web-based Virtual Education and Electronic Meeting Service • Web-based Training • Increased Wireless Access • Broadband wireless Service • Handheld, Mobile Computing • Thin Client and Web Client Services • Portal Services • Expanded Collaboration Software Services • Virtualized Application Services • Expanded Telecommuting Services • Location Aware Services
DESCRIPTION		
As part of their efforts to reduce operational costs and improve service efficiency, County agencies have identified the need to enable employees to easily and cost effectively work from remote, field-based and mobile locations. Agencies also wish to reduce transportation, training, and meeting costs by using video, telephone, online meetings and other collaboration & communication tools.		

TREND	CURRENT STATE	FUTURE STATE
Collaboration, sharing, and data integration	- Email Services - Website Hosting Services - Network Connectivity Services - Telephone Services - Cell Phone Services - Internet Services - Wireless Network Services - Collaboration Software Services - File and Print Share Services - Application Development Services - Database Administration Services - Document Management Services - Instant Messaging Services - County Justice Information System Services - Project Management Office Services - Collaboration Software Services - Web-based Information Subscription Services - Extranets Services - Web-based Survey Tools Services - Telephone Conferencing Bridge Services - Software-based and IP Telephony - OPUS	- Video Conferencing Services - Web-based Virtual Education and Electronic Meeting Service - Web-based Training - Increased Wireless Access - Unified Citizen Portal to County Services - JUSTICE ccms - Application Integration Services - Data Integration Services - Mobile computing - Web 2.0 Initiatives (Cloud Computing - The Internet as a Platform - eTown Hall Meetings) - Public Safety Complex (PSC) Co-location - Online Community Subscribed Services (forums, newsgroups, mailing lists, wiki, blog, twitter, social networking mash-ups) - RSS/Atom Feeds - Mash-up Application Services - Portal Services - Expanded Collaboration Software Services - Location Aware Services
DESCRIPTION		
County agencies are commonly looking for more ways to easily and seamlessly share information – within agencies, inter-agency, externally with other counties, and interacting with citizens. Agencies are asking for more ways to engage with each other and citizens via the Internet. Sharing information is called out as one of the most prolific trends across all agencies. Additionally, social networking is a common, worldwide trend where more citizens are interacting with each other via technology with an expectation that governments will follow suit.		

TREND	CURRENT STATE	FUTURE STATE
Reduce Costs **DESCRIPTION** Fiscal responsibility is a common priority and as budget reductions and recession dramatically impacts the world economy, agencies need to balance workforce reductions with the ability to continue to deliver services.	- Technology Consolidation - Server Virtualization Services - Service Management - Change Management - Configuration Management - Business Continuity and Disaster Recovery Management - Service-Level Management - Financial Management - Problem Management - Strategic Planning and Consulting Services - Enterprise Architecture Services - Identity Management Services - Extensive Utilization of Web Environment to Citizens - In-house PC Services, Leasing and Support, Remote Desktop Support - Eliminate Large Scale Printing for Electronic/Paperless Service - IP Telephony and Stipend Program - Application Virtualization Services - Telephone Conferencing Bridge Service - Metro-Ethernet Service - OPUS	- Continued Technology Consolidation - Video Conferencing Service - Web-based Virtual Education and Electronic Meeting Service - Web-based Training - Rapid Application Development Tools - Service Management - Release Management - Software License Compliance Management – Enterprise Service - Technology Asset Management – Enterprise Service - Identity-driven workflow and provisioning of services - Service-Oriented Architecture - Reusable/Modular/Object-Oriented Design and Development - Expanded Utilization of Web - Paperless initiative combined with PDF print driver on every machine - Technology Standardization - Automated Vehicle Dispatch Routing

TREND	CURRENT STATE	FUTURE STATE
Green Initiatives **DESCRIPTION** Many trends overlap with Green initiatives. For example, paperless office qualifies as Green, some mobile and remote technologies and collaboration technologies eliminate the need to drive to central locations for meetings/information sharing, etc. Trends such as Automation and Collaboration may also blend with Reduced Costs. Green Initiatives are called out here that can explicitly reduce consumption, waste, and environmental impact. Pinellas County was the First Government in the State to Achieve the "Green Local Government" Distinction in 2007.	• Server Virtualization Services • Pinellas County Government Green Local Government Distinction • Extensive Web Presence Distributes Government Information Electronically, On-demand. • All HP PC equipment is Energy Star Certified • Cell Phone Recycling Program • Cardboard for all PCs, Laptops and Servers Recycling Program • Batteries for UPS, Cell Phones and Laptops Recycling Program • Energy-saving Awareness Program • Server Consolidation to Virtual Machines • Technology Consolidation • Eliminate Large-scale Printing within BTS and the BCC • Purchase EnergyStar Certified equipment and use via manufacturer recommendation • Printer Management • Recycle Toner Print Cartridges	• Paperless Office • Charge back printer management services (per page costing) • Free PDF Writer Initiative • Workstation power management profiles to reduce power consumption • Web-based Virtual Education and Electronic Meeting Service • Establish supportable Green Policy • Expand Opportunities to Deliver Information Paperless via the Web • Expand Collaboration and Mobile Computing Services • Continue Current Recycling Programs • Replace older technology with more energy efficient technology • Continue Hardware/Software Consolidation/Virtualization • Work from Anywhere Mobile Offices • Automated Vehicle Dispatch Routing

TREND	CURRENT STATE	FUTURE STATE
Enterprise Content Management (ECM): Imaging, document management, paperless office	• Document Imaging Services • Document Workflow Services • Electronic/Desktop-based Fax Services • Extensive Utilization of Internet, Intranet and Collaboration Software Services for Electronic Sharing of Information • OPUS • JUSTICE $_{ccms}$ • CHEDAS • Electronic Payroll Remittance Advice • Electronic/Desktop-based Fax Services	• Document Imaging Services • Document Workflow Services • E-Filing Services • Image Heritage Village Archive/Collection for Public View • Image Human Resources files • Aerial Oblique Photographs for Property Appraisals • Document Storage and Retention Policies Documentation Needed • Potential Mandated Electronic Availability of County Records to Citizens • Eliminate Large-scale Printing and Replace with Online, Paperless • Free PDF Writer Initiative • Enterprise Workflow Solutions and Business Process Management Tools • Stored docs central repository • Expand Collaboration Software Services
DESCRIPTION		
County agencies and departments wish to replace traditional paper-driven processes with electronic equivalents. Electronic storage and retrieval may eliminate the need for expensive physical warehousing, record retention, and disposal. Electronic Filing (E-Filing) is a pending mandate coming from the state and other agencies where electronic interaction will be required to replace paper-based systems.		

TREND	CURRENT STATE	FUTURE STATE
Customer Self-Service / eGovernment	- Internet Web Sites - Public Records View Services - Self-service Payment Websites - Interactive Voice Response Systems - Payment Kiosks - Third-party Payment Providers (such as paying Traffic tickets at Amscot) - Internet Web Sites with extensive self-service capabilities for transactions, reservations, subscription services, video on-demand, mapping on-demand, automated request/feedback forms, access to data deeds, etc - OPUS - JUSTICE ccms - CHEDAS	- Unified County Citizen Web Portal Integrating All Agencies' Services - Outward-facing Web Services for Self-service Functionality for 3rd Party Usage - Web 2.0 Initiatives (Cloud Computing - The Internet as a Platform, E-town Hall Meetings) - Online Community Services (forums, newsgroups, mailing lists, wiki, blog, twitter, social networking mash-ups) - RSS/Atom Feeds - Mash-up Application Services - Potential Mandated Electronic Availability of County Records to Citizens - Service Catalog - Expanded Public Record View/Print Ability - Common Point-Of-Sale and Online Shopping Cart Services
DESCRIPTION		
County agencies are asking for additional options to allow internal and external customers to help themselves to County services. Emphasis is on more citizen engagement mechanisms and transparency of all County services. Self-service web-based portals and new, expanded data access methods will allow anyone requiring services or information new ways to access those services. This may further reduce costs and aligns with pending legislation mandating electronic access to County information sources.		

TREND	CURRENT STATE	FUTURE STATE
Data mining, data analysis, and performance measurement	- Report Writing Services - Localized and Ad Hoc Web-based Analytics - Localized and Ad Hoc Web-based Reporting (Application Specific)	- Business Intelligence Services - Data marts - Data Warehouse - Executive dashboards - Data Analysis tools - Predictive Analysis tools - Increased Utilization of Web Analytics to Support/Validate Paperless and Self-service Initiatives - Expanded Ad-hoc Reporting Capabilities - Data Catalog
DESCRIPTION		
Information is our most valuable asset. New and better ways to interrogate and report information is required for better, faster business decisions.		

TREND	CURRENT STATE	FUTURE STATE
Automation, workflow, and business process optimization	- Identity Management Services - Service Catalog Services - Process Improvement Projects and Services - Business Process Re-engineering	- Identity-driven workflow and provisioning of services - Business Process Modeling - Business Process Analysis/Reengineering - Business Process Management Systems - Continual Service and Process Improvement Program - Enterprise Workflow Solutions and Business Process Management Tools - Improved Process Metrics-gathering and Reporting - Rapid Application and Solution Development Methods - Smaller Solution and Development Focus Teams
DESCRIPTION		
County agencies need new, better ways to improve work processes and increase efficiency. Business process analysis and automation of key processes are required.		

Strategic Guideposts

Combining recurring strategies and priorities with current trend analysis, BTS derives high-level strategies, or planning guideposts, that assist in decision making. Newly initiated and in-flight projects and programs should reference the trends, strategies and BTS high-level principles (see Appendix A) throughout their life cycle to ensure alignment.

2012 Strategies	Strategy Description
Promote "One County"	Encourage the growth of cross-agency communication, improve business relationships and communicate with a consistent voice to our citizens, empowering the citizens to deal with a proficient "One County".
Government Access / Service Delivery	Increase the variety of ways to conduct business with the County, providing effective, convenient, and transparent 24x7 service delivery opportunities.
Business Continuity / Disaster Recovery	Maximize the County's ability to ensure the continuity of critical business operations in the face of unforeseen events, based on analysis of risk. Standardize the documentation of services, processes and the means by which institutional knowledge is captured and transferred.
Collaboration	Continue to foster and grow collaboration and information sharing, leveraging information assets to improve the quality and timeliness of decision-making and to bridge gaps between information resources internally and for citizens, ensuring that information is more accessible.
Business Process Improvement	Optimize business processes to streamline operations and improve solution delivery, providing efficient, value-added, cost effective customer satisfaction using process metrics to support measurement and continuous improvement.
Consolidate and Simplify	Reduce unnecessary complexity and redundancy throughout the County by enabling consolidated services and by simplifying new and existing solutions where appropriate, following best practices.

BTS Major Business Strategies & Initiatives

Cost Recovery – The Transition from Cost Allocation to Cost Recovery

Previous Cost Allocation accounting methodologies were confusing to some customers and sometimes inadequate for transparently tracking consumption of business and IT services in a way that was easily understood.

The Cost Allocation methodology had three fundamental challenges:
1. Accounting for service usage was two years in arrears and this accounting was used for future state budget allocations and requests. With technology needs and technology possibilities changing rapidly, it was difficult to equate the usage from two years ago to future budget needs for each customer.
2. Metrics used for calculation relied on personal computing and/or staff counts to distribute costs across consumers rather than reflect actual service consumption per service and customer. This made it difficult for consumers to make decisions about changes in their service or service levels provided.
3. Capturing projected funding needs for technology and Service upgrades was not reported or built into the ongoing costs of the technology or Service refresh, resulting in large capital investment requests at 3-5 year intervals.

The new Cost Recovery methodology begins the transition away from Cost Allocation. Cost Recovery looks to address the three challenges above by:
1. Projecting an accurate cost per service for the year, recognizing variances and making adjustments within one year.
2. Providing measures directly related to service consumption that will be continually compared to industry standards to assure cost effectiveness. The cost of the service and who consumes that service will be clear.
3. Including the cost of technology refresh needs into the overall cost of the Service to level out ongoing cost requests to keep the Service up-to-date and competitive with industry standards and business needs.

Cost Recovery requires that BTS become more disciplined than ever with resource management, project management, and program/service budgeting to adequately and efficiently manage actual cost for Services provided by BTS.

## Cost Recovery Conceptual Model – Desired State:
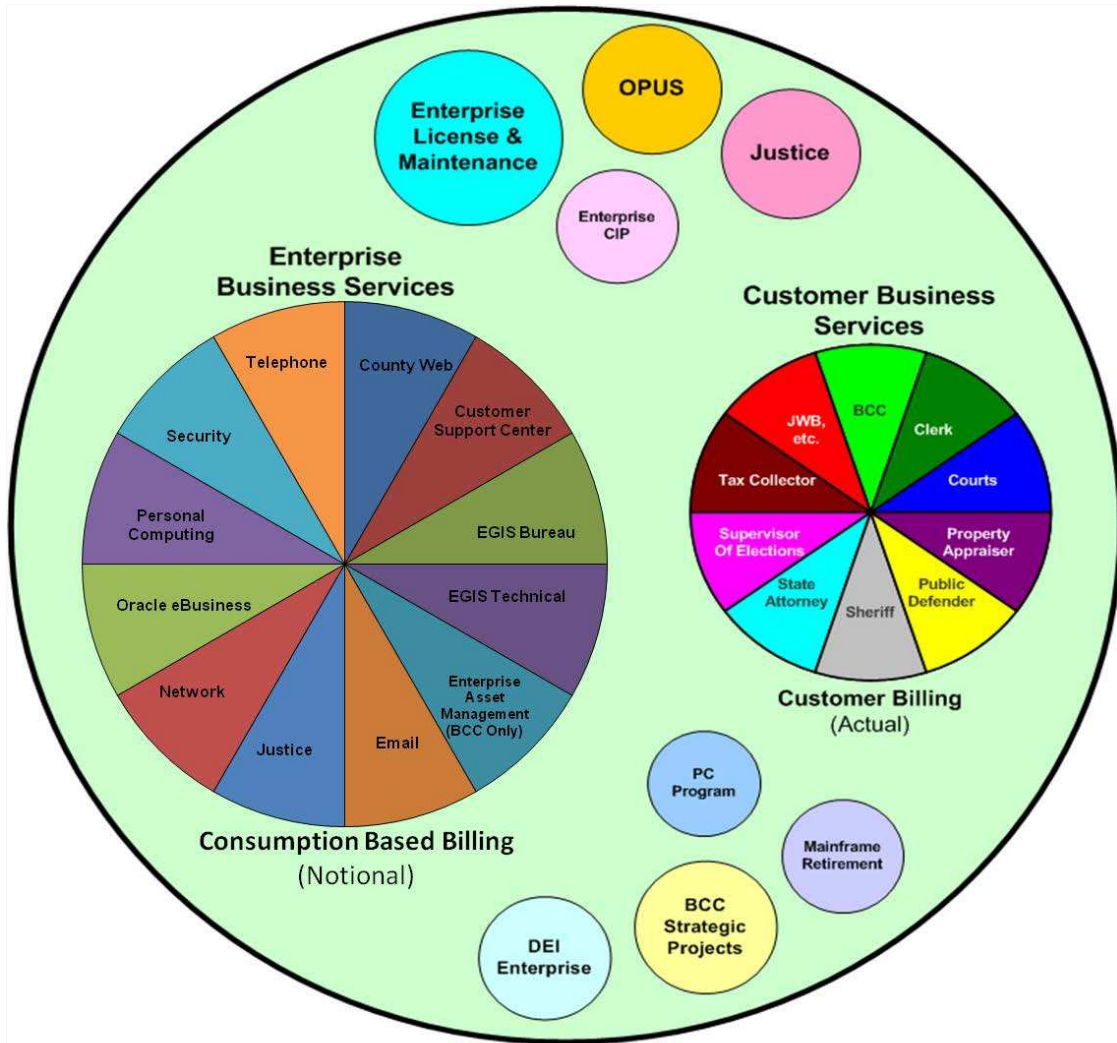
Mobile Computing and Wireless Connectivity

By 2015, Gartner and other leading IT research groups estimate that smartphone and tablets will sell more devices than laptop and PC sales. In 2011, tablet sales increased over 250%, introducing another 63 million tablets to the mainstream. Business trends with "bring your own device" (BYOD) and cloud-based services will continue to heavily influence the trend away from laptop and PC productivity to a "work from any device, anywhere" culture in the next generation of workforce. As this worldwide technology trend continues, it is imperative that Pinellas County be poised with the wireless networking foundation to support the new, innovative ways to leverage these multi-function, small form-factor devices to increase communication and productivity. An enterprise-scale wireless initiative should be implemented to support the continuing influx of new, mobile devices.

Social Media & Mass Collaboration

Facebook, Twitter, and other social networking sites have brought "social media" and associated technologies to the mainstream consciousness in recent years, but government sectors have struggled to take these platforms beyond marketing and communication tools to tap into the collective genius of the citizenry. To move from marketing via social media to fully realizing the potential of mass collaboration, where communities actively participate in government rather than just consuming government services, new business initiatives must emerge to define and drive 'purpose'. Defining 'purpose' around mass collaboration efforts establishes 'why' a community would come together to collaborate using social media tools. Gov 2.0, Smart Government, and CRM/311 initiatives will have inevitable touch points into social media and mass collaboration efforts. Expertise in mass collaboration theory may emerge in County business areas and BTS should be poised to assist, guide, and take advantage of new ways to serve constituents. (see: "The Social Organization: How to Use Social Media to Tap the Collective Genius of Your Customers and Employees" by Anthony J. Bradley and Mark P. McDonald)
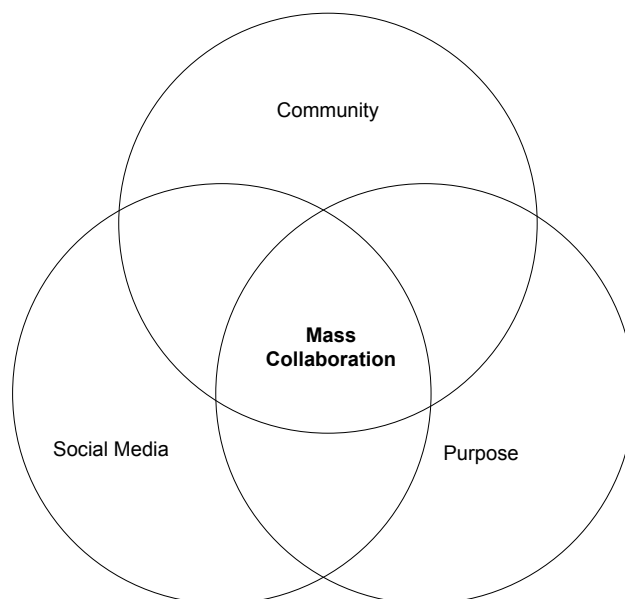
Cloud Computing

Cloud computing includes any subscription-based or pay-per-use service that, in real time over the Internet for public cloud offerings or on the County network for private cloud offerings, extends information technology's existing capabilities. This means that services can be increased on demand without investing in new infrastructure, increasing staff, or software licensing. BTS will continue to survey, increase, and mature cloud-based computing offerings as part of an ongoing strategy to reduce costs while increasing capabilities. The need to develop competency in cloud services brokerage will become imperative to negotiate cloud service level agreements and protect the confidentiality, integrity, and availability of this new method of managing technology.

Application Portfolio Management & Service Modernization

Application Portfolio Management (APM) is the effort and ongoing program to justify and measure the benefit of each business and technology application, compared to its total cost for maintenance and operations. Primary goals of APM are to create transparency of the current application and database inventory, measure resource consumption needed to maintain the application, and aid in developing key application strategies, such as planning efforts to modernize applications for current platforms.

Key activities and factors influencing the need for Application Portfolio Management & Service Modernization:
- Need to gather and maintain a complete and accurate application and database inventory across all departments and agencies.
- Need to identify redundant applications and data sets, and clarify authoritative owner of data to remove duplication of data management and leverage existing enterprise applications.
- Need to quantify the stability, maintainability, and Total Cost of Ownership (TCO) for applications. As technologies evolve, the cost of older applications increases, while application agility (ability to change) decreases.
- New platforms such as smartphones and tablet PCs will outsell laptop and PC sales. Consumer expectations, from both citizens and BTS customers, will be that they can use these newer technologies to interact with existing systems.
- New cloud services and paradigm shifts to Platform as a Service (PaaS), Software as a Service (SaaS), Infrastructure as a Service (IaaS) and service-oriented architecture (SOA) will become the norm, requiring flexibility and interoperability of existing applications.
- Commercial-off-the-shelf (COTS) applications will evolve at an increasing pace with increasing expectation to leverage application programming interfaces (APIs) to share functions and data rather than writing new code and functions.
- County Mainframe System Retirement: In June 2010, the BTS Board and BTS, in collaboration with its customers, determined that it was best to continue hosting the County Mainframe in-house with a formalized retirement project effort defined and managed to ensure a well-planned exit from providing mainframe services over the

next 2-3 years. It is critical to analyze existing mainframe applications to develop an adequate migration strategy.

- Enterprise GIS: The Enterprise GIS Committee has chosen ESRI's ArcGIS platform as the foundation for Pinellas County GIS. A formal strategy is required to move from existing MapGuide technology to ArcGIS.
- Migrating to Oracle Application Development Framework (ADF): As a result of organic growth and team consolidations, BTS manages applications written in nearly a half-dozen different programming languages. Migrating in-house applications to a common ADF platform will streamline support, provide code consistency, lower training costs, and speed-up overall development time.

Oracle Unlimited License Agreement - The Significance of Scaling Up by January 2014

To fully leverage the Oracle Unlimited License Agreement (ULA) negotiated as part of the OPUS Project implementation, BTS and the County must prepare and formalize a plan to expand implementation and usage of Oracle products covered under that agreement. This will require time commitment from stakeholders to analyze future needs, investment dollars for hardware to support the products, and BTS staffing time to accomplish this effort before the terms of the ULA 'lock-in' and finalize coverage and ongoing maintenance costs in January 2014.

Business Intelligence

Business intelligence is a set of business practices and technologies that aim to support data-driven decision making. Pinellas County has invested in two market-leading business intelligence and performance measurement platforms for the enterprise: Oracle Business Intelligence Enterprise Edition (OBIEE) and Hyperion Financial Management. Fully engaging these tools and data-driven decision processes will be transformational in improving the information readily available to decision makers.

Enterprise Content Management (ECM)

Encompassing 'paperless' efforts that include scanning, document management, records management, enterprise search, workflow/business process management (BPM), collaboration, and web content management, the goal for this program is to take a "One County" approach to how the County captures, manages, stores, retrieves, preserves, and delivers content internally and to citizens.

The top 5 business drivers for ECM efforts are:
1. Improving operational efficiencies.
2. Providing more efficient information sharing.
3. Improving the quality of decision making.
4. Reducing costs.
5. Ensuring records retention compliance, transparency, and effective reporting.

ECM is a business and management discipline with a tightly integrated software suite that requires input and participation from many stakeholders to be successful. As such, this strategy will require identification of key stakeholders and a governance body to guide and oversee the investment in this effort.

Real Estate Management, in partnership with many content management stakeholders and a 3rd party assessment group, studied current physical storage and records management practices in their "Records Management and Retention Study" (Feb. 2009 – July 2010). In their findings, the potential for significant savings was identified with an initial focus on eliminating physical storage needs in lieu of electronic equivalents. Current ECM-related projects include the Clerk's Paperless Project that eliminates paper as well as improves and streamlines Clerk processes. Other enterprise projects such as OPUS, JUSTICE $_{ccms}$, and CHEDAS intrinsically eliminate the need for paper records and may play part in the overall ECM effort.

Constituent Relationship Management (CRM) and 311

Year over year, an analysis of common requirements from BTS stakeholders reveals a trend and request for more ways to interact with the citizens we serve in a common, seamless way. Best practice methodologies for constituent (sometimes called 'customer') relationship management (CRM) have been developed and implemented in many municipalities to provide quick, easy access to government services and information while providing high-quality customer service. This strategy will require governance, evaluation and pursuit of an enterprise CRM practice throughout the county to potentially reduce overall customer service costs while increasing the quality of customer service.

Enterprise Call Center Management

Pinellas County manages more than 500 Automated Call Distribution (ACD) phones across 40 customer/citizen call centers. New tools are needed to manage the call center workforce with a focus on quality management, efficient staffing, customer satisfaction surveys, and business intelligence. Call Center Management platforms provide the foundation and tracking capabilities for supporting enterprise-level Constituent Relationship Management (CRM) and County 311 capabilities when coupled with a comprehensive CRM program. Pinellas Enterprise Call Center Management tools must support the new VoIP infrastructure and provide open interoperability with Business Intelligence and CRM initiatives.

PCI Compliance and Security Vulnerability Assessment Audits

During the FY2011/12 planning cycle, BTS budgeted for a 3rd party security assessment of overall security practices as well as a focus assessment on PCI compliance. Independent validation of information security risks by a qualified third party is recommended and endorsed by the County Security Panel and approved as an ongoing best practice by the BTS Board. BTS performs periodic, internal security risk assessments, however, 3rd party validation is needed to ensure compliance with data protection laws and acts such as the Health Insurance Portability and Accountability Act (HIPAA) and the Payment Card Industry (PCI) Digital Security Standards (DSS) required for processing of credit and debit card transactions for our citizens. BTS completed a large project to mitigate the risk associated with credit card transactions, however, an independent assessment has not been done to

validate Pinellas County's compliance with PCI Digital Security Standards. After the audit is complete, remediation of vulnerabilities will be necessary to mitigate discovered, high-risk vulnerabilities.

Elimination of Online Public Records Fees

The BTS Board, on January 20, 2011, unanimously supported and voted for the elimination of Online Public Records Fees beginning Oct. 1, 2012. This will result in an approximate loss of $500,000 for the County and will require the BTS Board to address the deficit created. BTS will need to review and possibly re-architect the Public Records solution to accommodate the free version of this service as potential usage increases and data mining and web-crawler technology may adversely impact records availability and system performance. The JUSTICE $_{ccms}$ project will also heavily influence the future state of public records availability methods and must be considered during transition to the free service offering.

Preparing to Replace Aging Cable Infrastructure

Planning must begin to develop a funding strategy to replace the aging network cabling infrastructure throughout the County enterprise. The need for additional speed and throughput to support newer technologies such as video-conferencing, distance learning, and mass collaboration coupled with a continuing increase of 'connected' devices across the enterprise will push and possibly exceed current capacities. Additionally, as copper and fiber optic cabling ages, the potential for unplanned outages and higher maintenance costs increases. Preparing to update and replace the network cabling (cable plant) infrastructure will become increasingly imperative over the next 3-5 years.

Refresh Enterprise Office and Collaboration Applications

A significant investment may be required in the next 3-5 years to update licensing for current Office Productivity and Collaboration software. To maintain vendor support and compatibility with other commercial-off-the-shelf products within the County, new software versions may be required. Planning and research will begin this year to explore business options leveraging cloud-based, mobile-friendly alternatives that may eliminate or reduce the overall total cost of ownership of this type of software.

Future State Technical Architecture

The Enterprise Planning and Architecture Strategies (EPAS) process used by BTS creates architecture viewpoints. Architecture viewpoints are simplified perspectives and views of the composition of complex systems. EPAS recognizes four different architecture viewpoints:

- **Business Architecture** – this viewpoint puts business processes in visual form to describe how the business process works with information and technology to deliver business capabilities. Example documents include business process swim lane diagrams, business and functional requirements documentation, organization charts, business units interaction diagrams and unified modeling language (UML) documentation.
- **Information Architecture** – defines information assets, the flow of information (origin and destination), and the composite views of information required for decision making. Example documents include information flow diagrams, entity-relationship modeling and diagrams (ERMs and ERDs), and unified modeling language (UML) documentation.
- **Technology Architecture** – defines standard technology products, configurations and services, and how they interoperate. Example documents include future state technical architecture, topology drawings, unified modeling language (UML) documentation, and configuration management database(s).
- **Solution Architecture** – this view considers where relevant subsets of business, information, and technology intersect with one another to describe the overall solution.

For the 2012/2013 planning cycle, BTS developed an updated future state technical architecture one-page diagram to describe a high-level technical target state. This diagram provides guidance to various stakeholders, including staff participating in gap analysis, to develop a road map to the future state.

The diagrams on the proceeding pages are presented with two views. The first Technical Architecture view, titled "BTS Future State Technical Architecture (2-3 years Target)", uses the technology product name with the vendor or manufacturer specific terminology. The second view, titled ""BTS High-Level Future State Architecture (2-3 years Target)", maps directly to the first view but uses the generic technology terminology to describe the type or intent of product.

*Note: The Enterprise Project technologies are typically composed of multiple technology components or suite of products that could occupy entire pages on their own, so these are presented by their project names rather than the underlying parts.

BTS Future State Technical Architecture (2-3 years Target)

Server/Desktop

- Windows 2008, *IX (RHEL 6, UNIX)
- Windows 7
- SAN (Compellent)
- Windows File & Print
- Internet Explorer 9
- Tivoli, Windows ASR (Backup & Recovery)
- Exchange 2010, Communicator 2007, C2C
- Office 2010
- Cloud Productivity Services?
- ESX vSphere 5
- ZENworks Configuration Management (ZCM)
- Virtual Desktop Infrastructure
- Windows Server Update Service
- ZENworks Application Virtualization
- Trend Micro AV

Networking/Security

- Metro Ethernet
- Siemens VOIP (Unified Communications)
- CheckPoint, Cisco ASA Firewall
- Cisco Core Router, Switches
- Syntellect IVR, VXML
- Barracuda Anti-Spam
- F5 BIG-IP
- Polycomm Video Bridge, Siemens UC
- Palo Alto Firewall Content Filtering
- Juniper VPN, Juniper Secure Meeting, Cisco Gate-to-gate
- Vpro
- SNORT, OSSEC, AlienVault Host-based Intrusion Detection
- Aruba Wireless Access Points
- Splunk (Security Event Management)
- Infoblox IPAM

Enterprise Projects

- Justice ccms
- Maximo
- Hyperion Business Intelligence (BI)
- Enterprise Content Management (ECM)
- Enterprise Geographic Information System (GIS)

Business Technology Tools

- Service Desk r12
- CA CMDB r12
- Spectrum
- SolarWinds/Splunk
- Clarity r12, Oracle Project Manager
- CA Service Catalog
- CA Workflow
- Oracle Enterprise Manager 11g
- Microsoft Systems Center Operations Manager (SCOM)

Application Development

- Java
- JDeveloper 11g
- Oracle Application Development Framework, JavaServer Faces
- Ivy/Maven
- Subversion (SVN)
- JUnit, Oracle Application Testing Suite
- Oracle 11g, SQL Server 2008
- OBIEE 11g, Hyperion, BOBJ
- Crystal Reports, Crystal Server
- SharePoint 2010
- Weblogic 11g, IIS
- WebLogic UDDI 2.0 Server
- Oracle SQL Developer, SQL Developer Data Modeler
- PL/SQL
- Oracle E-Business Suite R12
- ESRI ArcGIS Server
- eTX HEMI
- Automate BPA Server
- Case360, Execute360, Application Xtender

Authentication & Authorization Technologies

- Novell Identity Manager (IDM)
- Active Directory (Windows)
- eDirectory (Novell's IAM)
- RADIUS
- Oracle Internet Directory (OID)
- Oracle Access Manager (OAM)

BTS High-Level Future State Architecture (2-3 years Target)

Server/Desktop

- Server Operating System(s)
- Desktop/Laptop Operating System
- Storage Area Network
- File Sharing, Storage & Print Services
- Web Browser(s)
- Backup & Recovery
- Enterprise Email, Instant Messaging, Compliance
- Productivity Suite(s)
- Cloud Productivity Suite, file share/ storage & email
- Server Virtualization & VM Management
- Desktop Management Service(s)
- Virtual Desktop Infrastructure
- Operating System and Suite Patch Management
- Application Virtualization
- Enterprise Anti-Virus/Malware

Networking/Security

- Ethernet Metropolitan Area Network
- Unified Communications: Phone, Voice Mail, ACD, etc.
- Firewall
- Network Core Routing & Switching
- Interactive Voice Response, Voice XML
- Anti-Spam
- Network Content Switching & Load Balancing
- Video Conferencing
- Web & Network Content Filtering
- Virtual Private Network, Remote Meeting & Gate-to-gate VPN
- BIOS Level Remote Management
- Host-based & Network Intrusion Detection & Prevention
- Wireless Access Point (WAP)
- Security Event Management, Log Management
- IP Address Management (DHCP, DNS)

Enterprise Projects

- Unified Enterprise Justice Management Service
- Enterprise Work Order & Asset Management
- Performance Measurement & Business Intelligence
- Enterprise Paperless and Content Services
- Enterprise Geographic Data Services

Business Technology Tools

- Business Technology Work Order, Asset, and ITIL Management
- Technology Configuration Management Database
- Network and System Fault Management
- Network and System Trend Analysis
- Technology Project Management
- Business Technology Service Catalog
- CA Integration and Product Workflow
- Oracle ERP, (OPUS) Management Tool(s)
- Microsoft Server Management Tool(s)

Application Development

- Development Language(s)
- Development Tool(s)
- Development Framework(s)
- Software Project and Dependency Management Tool(s)
- Development Version Control
- Quality Assurance Automation
- Database(s)
- Business Intelligence Tool(s)
- Ad Hoc Reporting Tool(s)
- Online Collaboration Portal
- Web Application and Web Content Server(s)
- Web Services Registry
- Database Design/ Development Tool(s)
- Database Development Language(s)
- Core ERP Platform
- Geographic Information System Platform
- Data Integration Tool(s)
- Business Process Automation Tool(s)
- Content Management System(s)

Authentication & Authorization Technologies

- Identity & Access Management (IAM)
- Windows Integrated Directory Service
- Identity & Access Management Core Directory
- Secure Authentication, Authorization, & Accounting
- Oracle Integrated Directory Service
- Application Access Management Service

Appendix A: High-Level Principles

1.   Promote "One County" Collaboration.

Rationale:
- BTS is committed to the success of others and promotes this philosophy for all.
- Promote a "One County" holistic approach to service provision while respecting the autonomy of Constitutionals, Agencies, and the Courts.
- Autonomy at the local and state levels is necessary to facilitate the unique purpose of an Agency, Constitutional Officer or the Courts.
- A holistic approach promotes trust, collaboration and cooperation throughout the enterprise.
- This approach minimizes redundancy and complexity, enabling enterprise transparency and agility, providing a single face to government.
- This approach is consistent with the BTS Board Interlocal Agreement.
- Be common when you can … be different when you need to be.

Implications:
- It is essential that Constitutionals, Agencies and the Courts collaborate, participate and commit to the discipline and guiding principles of a Federated Governance Model.
- Regulatory compliance is a top priority.
- A holistic approach requires open and constant communication that may result in longer decision-making cycles that extend the implementation time for solutions.
- Consistency and commonality will allow for agility, minimizing integration complexity.
- Trust, communication and credibility are critical to success.
- Commit to the success of others.

2.   Cost Matters.

Rationale:
- Cost Recovery discipline must be applied to all BTS efforts.
- The Cost Allocation Method should be discarded for a model shaped from the current enterprise, in alignment with ITIL Finance Management best practices.
- Transparency of the cost of all investments and services provided is imperative.
- When stakeholders can clearly see the cost of services they can take a more active role in cost savings and make informed choices.
- All initiatives should be supported by a business case and if the solution or service is not aligned to the business, it should not be done.
- Negotiations around costs, efforts to reduce costs wherever possible, and the lowest prices for the best solutions are expected.
- Notional billing will allow for stakeholders to take advantage of common enterprise investments without additional cost and enable more equitable accounting for costs.

Implications:
- A BTS Finance sub-committee is established to report to the BTS Board and provide guidance and collaboration with BTS Finance staff.
- All BTS staff must diligently and accurately track all costs for investments and services provided.
- All BTS staff must be actively involved in budget, finance, and cost recovery processes with a focus on cost reduction and best pricing.

- Based on long-term viability and fiscal responsibility, specific projects may not be eligible to begin or continue to completion based on financial analysis.
- Business sponsorship involvement is required to identify and justify business value of new and ongoing investments and services.
- The expense of ongoing maintenance and technology refresh costs will be incorporated into the cost recovery model to guarantee budgetary funds are available.
- Combine and collaborate whenever possible to realize economy of scale savings.
- Legacy solutions and technology will be replaced when cheaper, financially viable equivalents that reduce total cost of ownership are available.

3. Quality in Everything.

Rationale:
- Excellence is expected in everything BTS does.
- In the face of competition, BTS desires to distinguish itself and to be recognized by our customers as the Service Provider of Choice.
- Quality of workmanship in products and services is the distinguishing factor in business.
- The public expects more efficient and responsive government with quality services.
- Agencies demand quality, customer-centric service and business solutions.
- Quality encourages a favorable public image.

Implications:
- Accountability for excellence to ourselves and to our customers must be entrenched in our culture.
- Establish a culture of quality and continuous process improvement.
- Commit to the success of others.
- Internal and external cultural changes are required.
- The pursuit of excellence and the desire to be progressive comes with a price. All personnel must be responsible for effectively using resources and leveraging assets for achieving appropriate levels of competency.
- Don't let "perfection" get in the way of "better". – Roger Goodell

4. Simplify and Reduce Complexity.

Rationale:
- Reduction of unnecessary complexity or duplicity may make solutions easier to use, maintain, and support, potentially reducing costs.
- Easier to understand and communicate.
- Allows focus on core competencies.
- Provides consistency, stability, and helps improve continuity.
- Reduces unnecessary redundancy.

Implications:
- Combine what should be combined, separate what should be separated, and eliminate what can be eliminated.
- Simplicity requires the reduction or elimination of the unessential.
- Simplifying solutions must be balanced against purpose, goals, and functionality to ensure we deliver usability.
- Reduce abstract language, jargon, or wordiness internally and especially with customers.
- Internal and external cultural changes may be required.
- Focus on what is probable or likely, not all possibilities.

- Customize as a last resort.
- Retire legacy solutions when outdated or overly complex.
- Re-engineer and challenge the 'status quo' to reduce complexity and duplication of effort wherever it occurs throughout the County.

5.   C.I.A., Continuity, and Recovery in All Solutions.

Rationale:
- Confidentiality, Integrity, and Availability (CIA) of information assets are vital security issues for the enterprise.
- Availability, responsiveness, and protection of mission-critical systems are to be embedded in all solutions.
- Continuity of business services and timely recovery of services are expected for all solutions.
- Proactive management of BTS is a necessity utilizing both tools and process.
- Customers expect more efficient and responsive government that is there when called upon for service - building trust through BTS responsiveness, reliability and agility.

Implications:
- BTS support and delivery foundation needs to be in place.
- Internal and external collaboration is required.
- C.I.A., Continuity, and Recovery discipline must be embedded in all solutions as a forethought.
- Accurate and detailed Risk Management is required, with a comprehensive inventory of our assets.
- Disaster Recovery plans need to be fully developed, communicated, and funded.
- Business Continuity plans need to be defined and funded for all solutions.
- Operational redundancy needs to be in place and funded where required.
- This strategy can potentially involve more complex design and cost for redundancies - slowing down system upgrades and product deployments.
- All hardware and software systems require a defined "Maintenance Window".
- Change Management maturity is required to mitigate unnecessary risk to the production environment.

6.   COTS Over Custom (Reuse, Buy, then Build).

Rationale:
- When planning a project or defining a solution: analyze reuse, then buy, then build.
- Analysis before reusing solutions or components must ensure that reuse is the best option, especially when options for reuse involve technologies or processes that no longer align with future state plans.
- This approach should minimize duplicity and complexity, enabling enterprise transparency and agility.
- Leverage commercial off the shelf (COTS) packages that incorporate industry standards and best practices.

Implications:
- Customize as a last resort.
- The Reuse option should be based upon sound analysis and require minimal customization. Plan for reuse as a forethought, not an afterthought.
- Reusing existing solutions or components should be considered for technologies or processes that are aligned with future state architectures, but reuse should not occur for solutions or components that are identified as outdated or costly to continue maintaining.
- Retire legacy solutions when outdated.
- This approach will exercise efficiencies, shorter time to market and fiscal responsibility.

- Preparation of a detailed business case will be provided as justification for an intended solution.
- BTS staff must become integration specialists, creating middleware options for connecting disparate systems.
- COTS applications must have API, web service, and/or other service-oriented architectures to allow interoperability and integration.
- The analysis required for building a solution is pre-empted if Reuse or the Buy options are viable.

7. Go Green.

Rationale:
- Reduce paper, consumables, waste, energy consumption, and environmental impact to save costs.
- Aligns with Pinellas County Sustainability principles and Pinellas "First Green County" achievement (http://www.pinellascounty.org/sustainability/history.html)
- Protects health and global standard of living.
- Positive leadership role for coworkers and citizens that shows good financial stewardship.
- Leverages existing technology to reduce physical consumption.

Implications:
- Reduced power consumption saves on electricity bills, reduces heat in the workplace and data center, and decreases air pollution.
- Reduced printing can save significant tax payer dollars spent on paper, ink/toner, and waste disposal.
- Purchase devices that are EnergyStar compliant. Consider power consumption and power management for all electronic devices.
- Leverage or reuse existing equipment before considering new purchases based on cost analysis for effective use.
- Consider options for reuse and disposal methods when products have reached end-of-life for business purposes.
- Recycle paper, manuals, and packaging whenever possible.
- Make more resources electronically available, replacing manual and paper-based methods when possible.
- Must measure and monitor use for accountability.

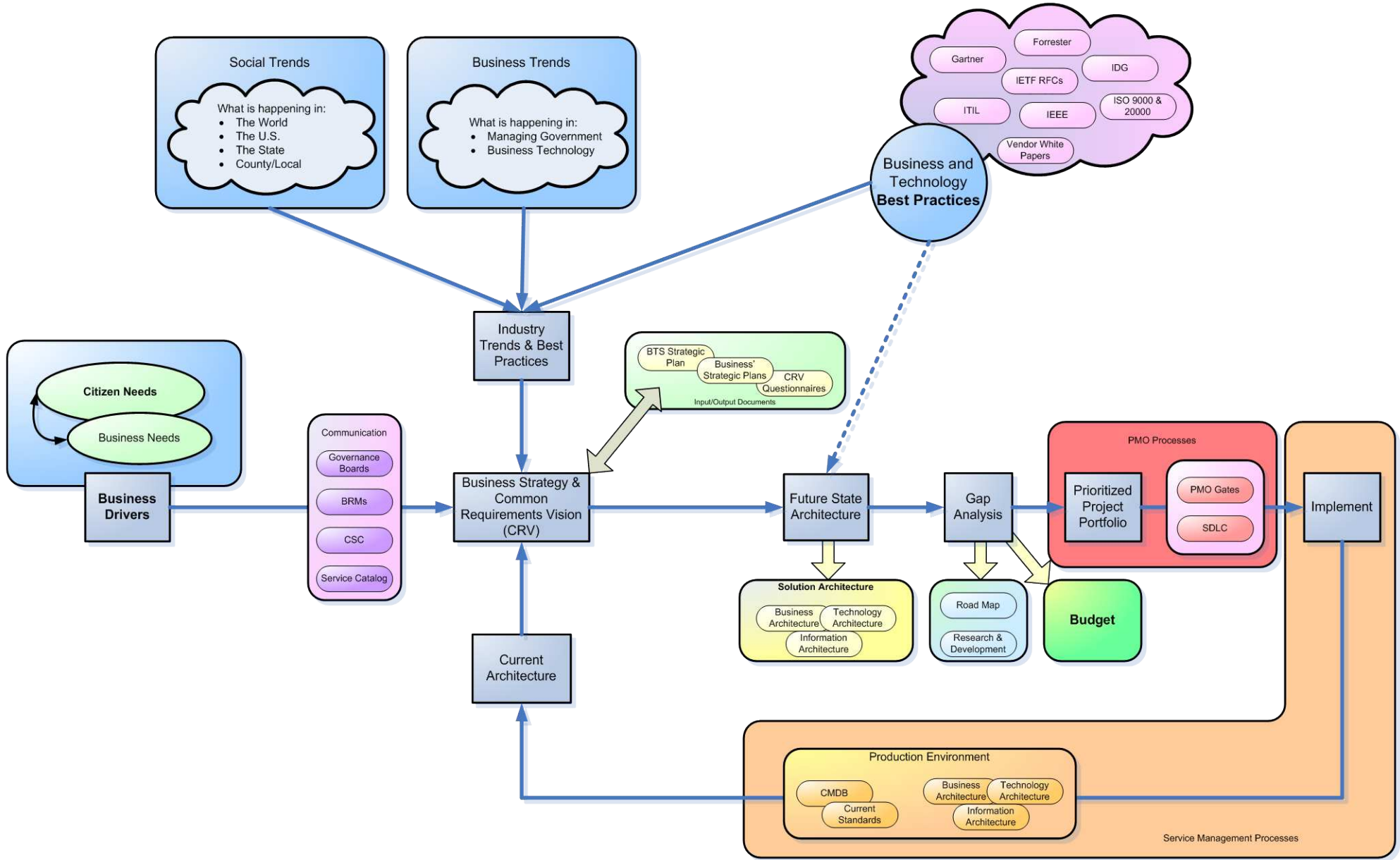| High-Level Guiding Principles |
| --- |
| 1. Promote "One County" Collaboration |
| 2. Cost Matters |
| 3. Quality in Everything |
| 4. Simplify and Reduce Complexity |
| 5. C.I.A, Continuity, and Recovery in All Solutions |
| 6. COTS Over Custom (Reuse, Buy, Build) |
| 7. Go Green |

Appendix B: Capital Improvement Plan (10 Year Projection Estimates)

Category	Fiscal Year 12/13	Fiscal Year 13/14	Fiscal Year 14/15	Fiscal Year 15/16	Fiscal Year 16/17	Fiscal Year 17/18	Fiscal Year 18/19	Fiscal Year 19/20	Fiscal Year 20/21	Fiscal Year 21/22
End Of Life										
Storage	$250,000.00	$340,000.00	$50,000.00	$0.00	$300,000.00	$650,000.00	$350,000.00	$0.00	$490,000.00	$0.00
Network	$466,940.00	$466,940.00	$704,764.00	$784,540.00	$425,340.00	$132,765.00	$16,740.00	$381,940.00	$268,740.00	$16,740.00
Server	$87,112.00	$110,112.00	$189,612.00	$680,112.00	$241,112.00	$87,112.00	$161,312.00	$236,676.00	$498,612.00	$241,112.00
OPUS	$219,309.72	$219,309.72	$219,309.72	$219,309.72	$219,309.72	$219,309.72	$219,309.72	$219,309.72	$219,309.72	$219,309.72
Production Growth										
Storage	$212,181.47	$321,312.36	$170,991.10	$181,250.56	$192,125.60	$203,653.13	$215,872.32	$228,824.66	$242,554.14	$257,107.39
Network	$208,941.68	$109,080.52	$111,262.13	$113,487.37	$115,757.12	$118,072.26	$120,433.70	$122,842.38	$125,299.22	$127,805.21
Server	$49,999.33	$51,499.31	$53,044.29	$54,635.62	$56,274.69	$57,962.93	$59,701.82	$61,492.87	$63,337.66	$65,237.79
	Fiscal Year 12/13	**Fiscal Year 13/14**	**Fiscal Year 14/15**	**Fiscal Year 15/16**	**Fiscal Year 16/17**	**Fiscal Year 17/18**	**Fiscal Year 18/19**	**Fiscal Year 19/20**	**Fiscal Year 20/21**	**Fiscal Year 21/22**
Yearly Total	$1,494,484.20	$1,618,253.91	$1,498,983.24	$2,033,335.27	$1,549,919.12	$1,468,875.04	$1,143,369.56	$1,251,085.63	$1,907,852.75	$927,312.11
10 Year Total	$14,893,470.84									

Appendix C: "EPAS Process Expanded View"

BTS Enterprise Planning and Architecture Strategies (EPAS) – Expanded View

Thursday, April 15, 2010

Social Trends

What is happening in:
- The World
- The U.S.
- The State
- County/Local

Business Trends

What is happening in:
- Managing Government
- Business Technology

Gartner · Forrester · IDG · IETF RFCs · ITIL · IEEE · ISO 9000 & 20000 · Vendor White Papers

Business and Technology **Best Practices**

Industry Trends & Best Practices

Input/Output Documents: BTS Strategic Plan · Business' Strategic Plans · CRV Questionnaires

Citizen Needs / **Business Needs**

Business Drivers

Communication: Governance Boards · BRMs · CSC · Service Catalog

Business Strategy & Common Requirements Vision (CRV)

Current Architecture

Future State Architecture

Gap Analysis

PMO Processes: Prioritized Project Portfolio · PMO Gates · SDLC

Implement

Solution Architecture: Business Architecture · Technology Architecture · Information Architecture

Road Map · Research & Development

Budget

Service Management Processes

Production Environment: CMDB · Current Standards · Business Architecture · Technology Architecture · Information Architecture

BTS Strategic Planning Process