Pinellas County

Business Technology Services

Strategic Business Plan 2015

Prepared by the Strategic Leadership Team

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

April 2015

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INTRODUCTION

Business Technology Services (BTS) Department, as the county leaders in Information Technology, exists to provide world class customer service and technology solutions to real business problems and opportunities while partnering with all county departments to be the "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 and all Pinellas County Citizens.

BTS is striving to become a true Bi-Model technology model. Mode one takes the stability and reliability of our infrastructure and core applications to keep legacy systems running at high availability for all users. Mode two incorporates flexible and rapid delivery of systems and applications to meet faster customer solutions needs. Bi-Model technology allows BTS to act as a utility while also enabling BTS to quickly react and deliver new solutions to business needs faster.

The purpose of our Strategic Planning Process is to determine how we can provide the greatest business value to our customers. Business Technology Services recognizes both Business Strategies and Technology Strategies within our yearly strategic plan. As part of the yearly 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, partners and stakeholders.

The Strategic Planning Process also determines how we can provide the greatest business value to our customers. We recognize the critical need for effective collaboration and partnership across all county departments to help us identify specific business requirements and industry trends that are affecting our customers' businesses. We use this valuable insight to determine how best to apply internal or contracted resources to meet the business objectives and desired outcomes.

BTS remains committed to the success of our customers, partners and stakeholders, 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.

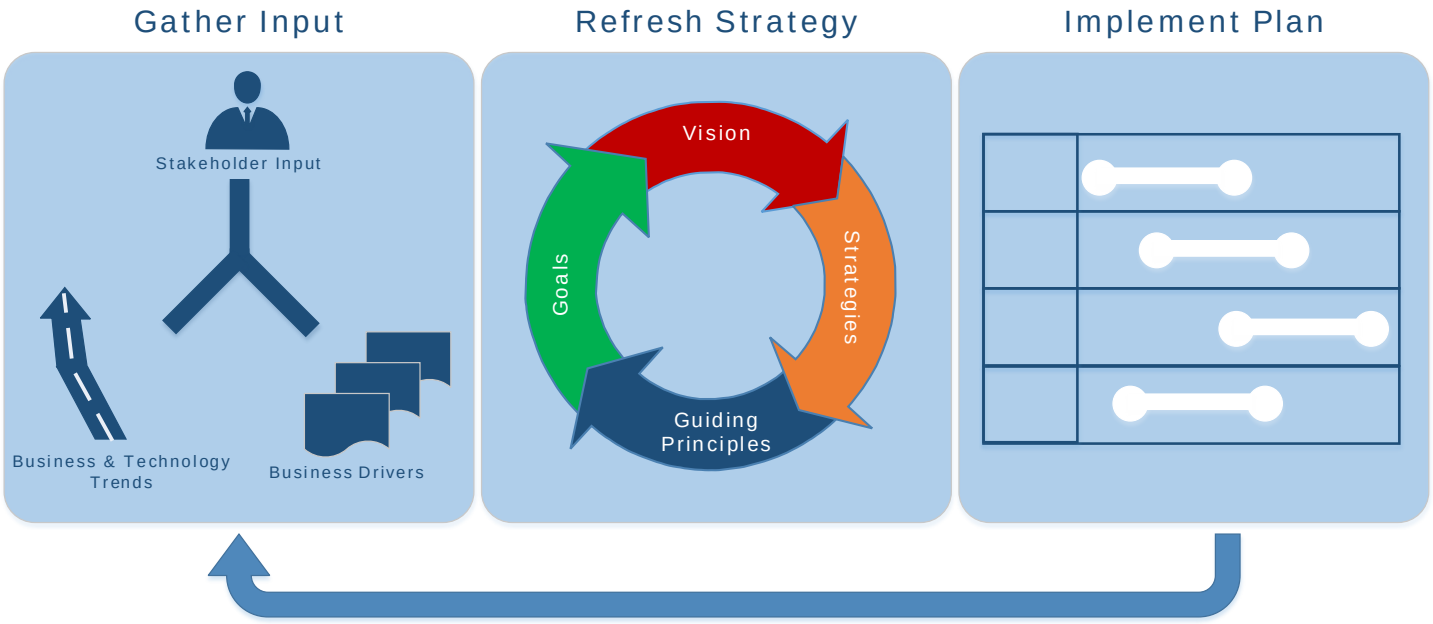
On behalf of the Business Technology Services Department, we would like to present this Strategic Plan and we thank you for the opportunity to serve you and the citizens of Pinellas County.

Sincerely,

Martin P. Rose
Chief Information Officer
Business Technology Services

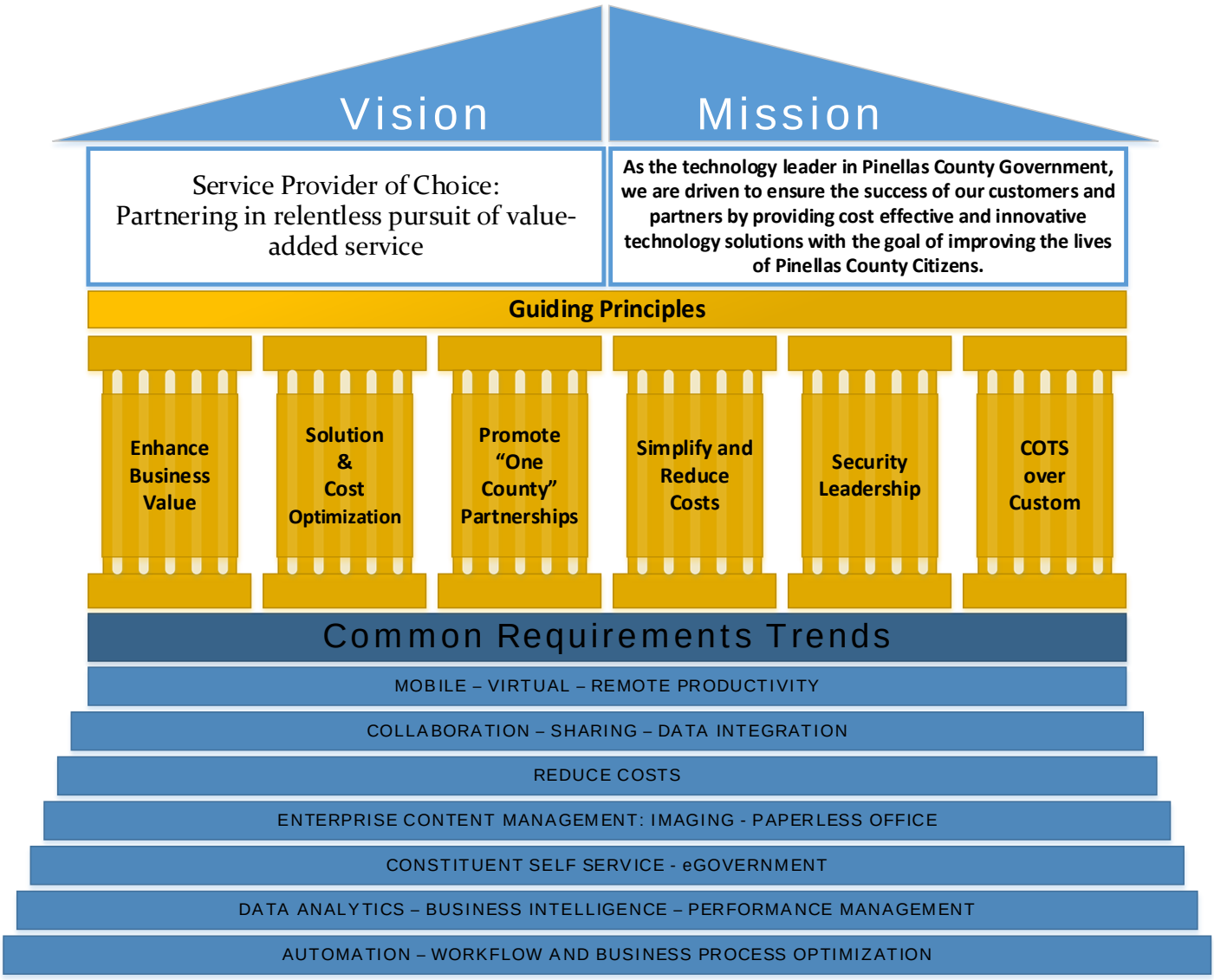
STRATEGIC PLANNING PROCESS

BTS starts the strategic planning process by gathering input from a variety of sources. BTS gathers stakeholder input from the BTS Board and many other departmental representatives through the Business Relationship Management (BRM) process and the Common Requirements Vision survey. Business drivers are identified through this process and considered as additional input. Lastly, business trends and technology trends are gathered as additional inputs to the planning process. All of the inputs are used to develop the strategy and update the BTS vision, strategies, guiding principles, and goals. BTS then executes the plan throughout the year. The process is started over again using knowledge obtained during the execution of the plan and new inputs gathered as part of the new planning cycle.



BTS STRATEGIC FRAMEWORK

The Business Technology Services strategic plan is based on a strategic framework consisting of the vision and mission statements, guiding principles and common requirements trends. The guiding principles support the BTS vision and mission by defining the core values that guide BTS in fulfilling the mission. Common Requirements Trends further guide BTS strategy by proving a foundation of what is important to the BTS Board and stakeholders.



BTS STRATEGIC SUMMARY

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 time frame. BTS has created a one page summary which is an attempt to provide an overview of this year's strategic projects, business strategies, and technology strategies.

<table>
<tr><th colspan="2">2015 BTS Strategic Summary</th></tr>
<tr><td>Strategic Projects</td><td>➢ Enterprise Asset Management (EAM)
➢ JUSTICE ccms Imaging Gap (360 replacement)
➢ Accela Automation
➢ Application Portfolio Modernization</td></tr>
<tr><th>Business Strategies</th><th>Technology Strategies</th></tr>
<tr><td>➢ Citizen Engagement
➢ Business Value (TCO)
➢ Business Relationship Management
➢ Rapid Application Delivery
➢ End-User-Experience
➢ Platform Agnostic Application Delivery
➢ Application Portfolio Management
➢ Enhance Security Oversight & Awareness
➢ IT Governance
➢ Invest in Talent and High Performance Organization</td><td>➢ Cloud Computing and Private Cloud
➢ Application Portfolio Modernization
➢ Mobility and Wireless Connectivity
➢ Business Intelligence and Dashboards
➢ Preparing to Replace Aging Cable Plant
➢ Collaboration (UC, IM, Video, WebEx…)
➢ Microsoft Products and Enterprise Agreement
➢ Virtualization (Server, VDI, Applications…)
➢ Tapeless Backups
➢ Security Technologies</td></tr>
</table>

BTS BUSINESS STRATEGIES

BTS is constantly evolving its business strategies to improve service delivery and improve internal processes. The following are the significant business strategies BTS has adopted to enhance our ability to deliver quality services to our customers.

CITIZEN ENGAGEMENT

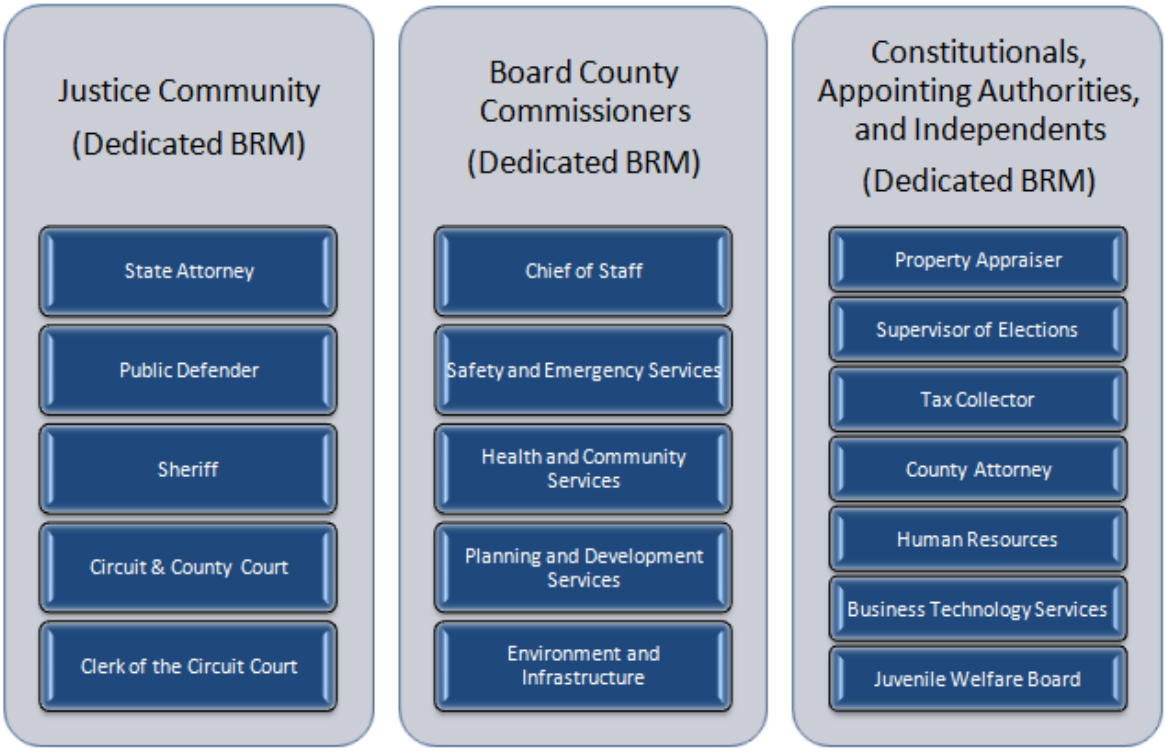
The terms eGovernment, digital government or connected government have been used for several years to represent the shift from operating government in a traditional way to operating government in the information age, interacting with the citizens in a more collaborative and efficient manner. To keep pace with citizen expectations and the latest technology trends, counties are evolving and enhancing the constituent's experience. BTS is focusing on four key areas to increase citizen engagement: Transparency, Collaboration, Communications and Online Services. Providing county constituents access to more information and financial data promotes transparency of government which builds trust in the county leadership. Using Cloud-based tools such as SeeClickFix, we are able to gather valuable information from citizens about problems within the county infrastructure, which helps the county improve service via improved dialog, transparency, partnerships and maintenance of infrastructure. By providing valuable communication vehicles such as E-TownHall, citizens can more effectively connect with county leadership on important topics via interactive technology. Lastly, through online services across county government, citizens are able to get better, faster, and more cost effective services online, on-demand via self-service. As a result, Pinellas County is one of the first counties in the United States to be officially designated by the Public Technology Institute as a Citizen Engaged Community, and BTS will continue to lead technology efforts that cultivate citizen engagement.

BUSINESS VALUE

The vision of BTS is to "partner in the relentless pursuit of value-added service". Adding value to the business speaks to the very reason any Information Technology (IT) organization exists. BTS strives to add value to the business by providing cost effective and innovative technology solutions that solve business problems or enhance business processes. BTS recognizes that business value for Pinellas County has many forms such as financial value, citizen or constituent value, employee value, or societal value. All BTS projects or initiatives should be supported by a business case that factors in the forms of business value and provides a Total Cost of Ownership (TCO) analysis. When performing TCO analysis it is important that BTS put technology projects in business terms and relate functionality in terms of business outcomes. All investments in BTS services should be transparent to the Stakeholders. When stakeholders can clearly see the cost of services they can take a more active role in cost savings and make informed choices.

BUSINESS RELATIONSHIP MANAGEMENT

Business Relationship Management (BRM) is a widely used strategy to enhance partnerships between service providers and customers. Over the last several years, BTS has developed a BRM strategy and process to enhance customer partnerships. This has primarily been through the use of the leadership team operating as part-time relationship managers while balancing the demands of their primary role. BTS recognizes the importance of establishing and maintaining a business relationship with our customers. To meet the business objective, BTS has reorganized and created a dedicated BRM group that will focus solely on establishing business relationships with customers to ensure BTS understands our customers and their business needs. BTS will partner with customers to ensure high levels of customer satisfaction, establish a constructive relationship, identify changes to the customer environment that could impact services provided by BTS, and ensure BTS services is meeting the demands of our customers. The figure below describes the layout of the BRM team. There will be one dedicated BRM for each of the domains listed below: Justice Community, Board County Commissioners, and Constitutionals, Appointing Authorities, and Independents.



RAPID APPLICATION DELIVERY

BTS recognizes the growing requirements and accelerated need for technology solutions from the business and has dedicated a team to focus on rapid delivery of technology solutions. Many agencies and departments are striving to deliver their services more effectively and efficiently by leveraging technology solutions. The creation of this team allows BTS to add value to the business by delivering

small to medium solutions in a shorter timeframe. Creating a rapid application delivery team within the BTS department allows for two streams of work, traditional and fast. The traditional stream will focus on long-term COTS implementations that typically last for more than 6 months and require a more robust project management and development process. The fast stream (the rapid application delivery team) will focus on small to medium projects that can be completed using a more streamlined development process and completed in a much shorter timeframe than projects that the traditional stream of work would be handling.

END-USER-EXPERIENCE

Evolving the end user experience in a way that enhances productivity and overall user satisfaction is a key strategy for BTS. The end user experience can be everything BTS provides that the end user experiences such as; the office experience with workstations and applications, the mobile experience and applications, video and audio conferencing, the remote access experience and just as important the experience we provide the citizens and constituents through our public and self-service offerings. A Chief Technologist has been assigned to lead this effort and will create the detailed strategy and oversee the process of evolving the products and services provided by BTS with a focus improving the end user experience.

PLATFORM AGNOSTIC DELIVERY

Web application technologies have diversified in recent years, and there is no longer a strong market leader for web browsers, web frameworks, and other associated technologies. In addition, mobile technologies have matured, with modern phone and tablet devices able to access web functionality in virtually the same way as traditional desktop PCs. Users now expect that the web-based applications that they use and rely on will continue to function and provide value regardless of web browser, operating system, or device. This is an important factor for internal applications due to initiatives such as BYOD (Bring Your Own Device) as well as to help minimize application modernization efforts, and even more important for external applications, in which Pinellas County has little control over how citizens and external agencies choose to access web applications.

To meet this new landscape, delivered solutions will be as platform agnostic as possible, so that these solutions can function identically regardless of the technologies used to access them. Developed solutions will focus on platform agnostic technologies, such as increased usage of HTML5 and Service-Oriented Architecture techniques, as well as decreased usage of technologies that require specific platforms or configurations, such as browser plug-ins (Flex, Silverlight), software frameworks (Applets, ActiveX), or specific browsers or browser versions. In addition, procured solutions should use this strategy as a guiding factor in making technology decisions to ensure that the solution will be durable regardless of future technology trends.

APPLICATION PORTFOLIO MANAGEMENT

Enabling the County to advance to new platforms such as tablet PCs, mobile devices, and faster operating systems is imperative now and through the next three years. Every application has a lifecycle and creating a roadmap that includes an end of supportability/life date and a strategy must be in place to either migrate or eliminate that application from the portfolio. The entirety of the BTS-supported application portfolio must be analyzed and plans developed for transitioning to modern, sustainable technologies. A repeatable methodology has been developed to analyze the County's application portfolio each year to assess what actions will be needed to manage the technical quality and total cost of ownership versus business value of each application. Emphasis must be placed on this initiative to assure stakeholders are not held back from taking advantage of newer efficiencies and technology platforms.

The Application Portfolio Management process assesses key factors such as operational performance, security risk analysis, and impact to business processes to determine the business value and technical quality for each application in the portfolio. This analysis also provides a visual mechanism to identify clusters of similar applications for future consolidation and migration to common, enterprise-wide products. Ultimately, the process categorizes each application into one of four groups to determine a high-level strategy for each application in the portfolio:

- Invest: applications that provide high business value and have good technical quality. These applications will remain an active part of the portfolio, and should be actively enhanced to increase their value and usage.
- Migrate: applications that provide high business value, however the technical quality is low which makes them difficult and more expensive to maintain. These applications should be modernized and migrated to another technology or platform.
- Tolerate: applications with relatively low value to the business, but cause few technical concerns or problems. These applications will remain in the environment for usage but have no emphasis on future investment or enhancement.
- Eliminate: applications which no longer provide sufficient business value and have low technical quality, and should be evaluated for retirement.

ENHANCE SECURITY OVERSIGHT & AWARENESS

Protection of the County's critical systems and sensitive data is paramount. BTS is the custodian of much of the County's systems and information assets. As such, it is imperative that BTS strive to protect and maintain the confidentiality, integrity and availability of these important assets. Following recommendations from our 3rd party security assessment conducted in 2013, BTS has increased dedicated security staff to four full time equivalents (FTEs). With the new resources in place, BTS will enhance security oversight and overall security awareness over the next year. The following is a list of some of the initial areas of focus.

SECURITY MANAGEMENT FOCUS AREAS:

- Create information asset inventory and data classification with agreed upon risk scoring to assist in prioritization of protection efforts.
- Increase the capability to provide baselines, trends and benchmarks to enable better decision making.
- Provide better reporting for data owners.
- Integrate security into projects by partnering on the solutions development life cycle (SDLC).
- Determine the policy standards that are consistent with local government and adopt as the framework.
- Seek solutions to create segregation of duties which will reduce the potential for fraud and misuse.

IT GOVERNANCE

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. New emphasis will be put toward Service Strategy, Service Design, Continual Service Improvement, and Organizational Change Management practices to support Cost Recovery on the ongoing evolution of Business Technology Services.

THESE DISCIPLINES INCLUDE:

- Information Technology Infrastructure Library (ITIL)
- Project Management Body of Knowledge (PMBOK)
- Enterprise Planning and Architecture Strategies (EPAS)
- Solution Development Life Cycle (SDLC)
- Enterprise Security Policy
- Service Level Agreements (SLA)
- Performance Management / Goals & Objectives
- Organizational Change Management (OCM)

INVESTING IN TALENT AND HIGH PERFORMANCE ORGANIZATION

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. We are a continually learning organization, continually evolving and staying apprised and ahead of business and technology trends. 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. Additionally, as the next wave of mobility and cloud technologies emerges, stakeholders and customers will require

training to assure they get the maximum benefits from new business processes and efficiencies. BTS recently completed equity adjustments based on a salary study and reorganized to better align with 2014 Strategic Business Plan. Attracting and retaining new talent continues to be a challenge for BTS. Reducing the dependency on contract staff and staff augmentation contracts will be a focus for the next couple of years. BTS is seeking to create a partnership with HR to fund a position that will focus on and facilitate the recruitment of high quality talent.

TECHNOLOGY STRATEGIES

Each year BTS identifies and selects technologies that support the vision and mission of the department as Service Provider of Choice. BTS selects the technologies by evaluating the business trends, industry trends and best practices along with the business drivers which creates a desired future state.

CLOUD TECHNOLOGY AND PRIVATE CLOUD

As public and private cloud offerings continue to grow, BTS will begin implementing and brokering contracts for cloud services as a strategy to reduce costs while increasing capabilities. The need to develop competency in cloud services brokerage is imperative to negotiate cloud service level agreements and protect the confidentiality, integrity, and availability of this method of delivering technology. BTS is investigating potential opportunities to leverage the Cloud. An immediate opportunity where cloud technologies may be able to improve service delivery and reduce costs is Interactive Voice Response (IVR).

In-house private cloud tools and streamlined service delivery should also be invested in to provide BTS customers with secure multi-customer and single-customer environments. Investing in and leveraging robust engineered systems as well as other best of breed technologies will allow BTS to create a "County Cloud" providing software as a service (SaaS) and platform as a service (PaaS) capabilities to current and potentially new customers.

APPLICATION PORTFOLIO MODERNIZATION

Applications will be identified for modernization through the Application Portfolio Management process. These legacy applications will include applications that provide high business value but have low technical quality as well as applications relying on technologies which have been targeted for retirement on the BTS Technology Roadmap.

Legacy applications will be modernized using one of these general approaches, while considering high-level guiding principles such as "COTS Over Custom" and "Simplify and Reduce Complexity":

- COTS: Identify and purchase a modern commercial system which meets the same or similar requirements as the legacy application.
- Custom: Utilize modern rapid application development technologies and processes, such as Oracle Application Development Framework, to develop a new custom application which meets the same requirements as the legacy application.
- Consolidation: If BTS already supports a modern COTS or Custom solution whose requirements are similar to the legacy application, the legacy users may be transitioned to the modern solution to meet their requirements. This may also require enhancing the modern solution via vendor engagement or custom development so that it can meet all necessary requirements.

MOBILITY AND WIRELESS CONNECTIVITY

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. A BYOD usage and security policy must be developed that enables this new style of working while still maintaining the security and protection of the County's information assets. Based on the policy, the ability to centrally manage devices may need to be put in place to ensure security for the network and County data assets are not compromised. An investment in a Mobile Device Management (MDM) technology will need to be made over the next year. BTS is focusing on technologies that secure delivery and storage of data and applications rather than the traditional MDM technologies that focus on managing the endpoint.

BUSINESS INTELLIGENCE AND DASHBOARDS

Business Intelligence (BI) is a set of business practices and technologies that aim to support data-driven decision making. Pinellas County has invested in a market-leading business intelligence and performance measurement platform for the enterprise: Oracle Business Intelligence Enterprise Edition (OBIEE). Fully engaging the capabilities of this tool will be transformational in improving the information readily available to decision makers. A unique capability of this tool is the ability to federate data across multiple data sources, enabling it to be used across the enterprise as an ad-hoc reporting and dash boarding tool. This creates the ability to create reports and dashboards that include data from multiple sources which in the past would have had to be reported on separately or manually combined. In addition, BI tools empower the users to create their own reports and be more proactive in their decision making process, with the help of KPI's, Scorecard and Dashboard boards.

AREAS OF GROWTH:

- BCC Performance Management, Executive Scorecard and Dashboard
- Financial, Procurement, Projects and HR dashboards to help in better decision making process
- CHEDAS BI reporting solution

PREPARING TO REPLACE AGING CABLE INFRASTRUCTURE

A County wide inventory is being conducted to determine the type, age and quantity of the cabling plant. Many buildings have cable that was installed over 15 years ago and will soon not support the speed and throughput of newer technologies such as video-conferencing, distance learning, and mass collaboration. This 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 1-3 years.

COLLABORATION (UC, IM, VIDEO, WEBEX…)

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. In addition, many agencies are looking to avoid travel and yield efficiencies by leveraging video conferencing and technologies. Analysis is underway to determine the most cost effective method of enabling capabilities and the development of a business case will need to be completed.

MICROSOFT PRODUCTS AND ENTERPRISE AGREEMENT

Microsoft Office and collaboration tools have become so foundational in day to day business and office productivity. After buying out of the Microsoft Enterprise Agreement (EA) several years ago the County has leveraged the currently owned versions of Microsoft applications and operating systems and augmented licensing as needed. In order to maintain vendor support and compatibility with other commercial-off-the-shelf products within the County, it is now time to reinvest and establish a new EA with Microsoft. A significant investment will be needed to establish a new EA and will be required in this next budget year because of end of life for Microsoft products. Some additional strategies being considered with this Agreement are end-point protection, virtualization, mobility, increased SharePoint functionality, email compliance, operating system licensing compliance, and video conferencing. If funding is approved, all options will be considered to maximize the benefit and value to the County.

VIRTUALIZATION (SERVER, VDI, APPS…)

Virtualization and consolidation will continue to be key strategies to increase efficiencies and reduce costs. An effort will be underway to evaluate tools that will be able to quickly provision and deploy systems and lay the foundation for Platform as a Service (PaaS). In addition, increased virtualization will make Disaster Recovery for those systems more efficient and cost effective.

New trends in mobility will also make Desktop Virtualization (VDI) and Application Virtualization a top priority to deliver applications with less dependency on device compatibility and help support a "work from anywhere" culture. The new Emergency Operations Center will rely on VDI for desktop delivery. Other projects such as Enterprise Asset Management and GIS may have a need for Application Virtualization. Our current VDI and Application Virtualization products will be evaluated for what best fits the County's needs going forward.

TAPELESS BACKUP

Having efficient electronic access to data is becoming a need due to the increasing Business demand to backup and restore larger quantities of data. Speed, reliability, and security have become major factors to consider. Technologies such as snapshots, de-duplication, and replication are making backups to a Co-location or the Cloud a more feasible option when compared to the labor intensive tape backup solutions. BTS is currently implementing an Amazon AWS cloud backup strategy. This includes an on-premise SteelStore appliance that includes advanced compression, deduplication, network acceleration and encryption features.

SECURITY TECHNOLOGIES

Complementing the business strategy of "Enhancing Security Oversight & Awareness" is the need to invest in security technologies that will reduce risk and guarantee confidentially, integrity and availability. BTS will invest in vulnerability management software to capture and quantify risk from a vulnerability standpoint. Additionally, increasing the visibility of malicious activity is a primary strategy for BTS. Investment in host based and network based intrusion detection as well as centralized logging and correlation is needed over the next year to provide BTS the ability to see the threats in real time and respond. The mobility, coloration, and "bring your own technology" trends create additional need to security tools such as Mobile Device Management that will allow the secure delivery of information and applications to various devices both County and non-County without increasing exposure and risk. Reducing potential risk and exposure internally by investing in data masking technologies is another effort underway this year. Masking Personally Identifiable Information (PII), Credit Cards, and other sensitive data in development and test instances is being investigated. Also in alignment with the 3rd party assessment, BTS is developing a strategy to segment the network to create access control boundaries between County agencies. This strategy reduces impact when or if a security breach occurs by limiting the effect of the breach to a single agency. Investment in powerful firewalls capable of providing this access control without unreasonably increasing the management burden is key to the success of this strategy.

COMMON REQUIREMENTS TRENDS

Trend	Description
Mobile, virtual, and remote productivity	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 with a variety of devices and platforms. Agencies also wish to reduce transportation, training, and meeting costs by using video, telephone, online meetings and other collaboration & communication tools.
Current State	**Future State**
➢ VPN (Virtual Private Networking) ➢ Mobile Internet/Email/Calendar ➢ Network Connectivity Services ➢ Telephone ➢ Internet ➢ Wireless Network ➢ Online Collaboration ➢ Wireless and Broadband Connectivity ➢ Fixed Location Video Conferencing ➢ Telephone Conferencing Bridge ➢ Software-based and IP Telephony ➢ Virtualized Application ➢ Web-based Virtual Education and Training ➢ Thin Client	➢ Expanded Video Conferencing Service and Electronic Meeting Service ➢ Expanded Web-based Virtual Education and Training ➢ Bring Your Own Device policy ➢ Handheld, Mobile Computing ➢ External Chat ➢ Expanded Thin Client and Web Client (web enabled applications) ➢ Portal Services ➢ Expanded Collaboration Software ➢ Expanded Telecommuting ➢ Location Aware Services ➢ Mobile Device Management ➢ Mobile applications including Data Collection ➢ HTML5 Applications ➢ Unified Communications

Trend	Description
Collaboration, sharing, and data integration	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.
Current State	**Future State**
➢ Email/Calendaring ➢ Website Hosting ➢ Network Connectivity ➢ Telephone ➢ Internet ➢ Wireless Network ➢ Collaboration Software ➢ File and Print ➢ Instant Messaging ➢ Web-based Information Subscription Services ➢ Extranet ➢ Web-based Survey Tools ➢ Telephone Conferencing Bridge ➢ Software-based and IP Telephony ➢ eTown Hall Meetings	➢ Expanded Video Conferencing ➢ Web-based Virtual Education and Electronic Meeting ➢ Enhanced Web-based Surveys ➢ Bring Your Own Device policy ➢ Unified Citizen Portal ➢ Application Integration ➢ Data Integration ➢ Enhanced mobile computing ➢ Web 2.0 Initiatives ➢ 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 ➢ Location Aware Services ➢ Constituent Relationship Management ➢ Unified Communications ➢ Upgrade Office Productivity Suites

Trend	Description
Reduce Costs	Fiscal responsibility is a common priority and agencies need to balance budget constraints with the ability to deliver new services and maintain sustainability of existing services.
Current State	**Future State**
➢ Technology Consolidation ➢ Server Virtualization ➢ Service Management ➢ Strategic Planning and Consulting ➢ Enterprise Architecture ➢ Identity Management ➢ Extensive Utilization of Web Environment to Citizens ➢ In-house PC Services, Leasing and Support, Remote Desktop Support ➢ IP Telephony and Stipend Program ➢ Application Virtualization ➢ Telephone Conferencing Bridge ➢ Metro-Ethernet ➢ Aerial Oblique Photographs for Property Appraisals ➢ Fixed Location Video Conferencing	➢ Cloud Services ➢ Expanded Video Conferencing (Internal/External) ➢ Web-based Virtual Education and Electronic Meeting Service ➢ Web-based Training ➢ Bring Your Own Device policy ➢ Rapid Application Development Tools ➢ Release Management ➢ Software License Compliance Management – Enterprise Service ➢ Technology Asset Management – Enterprise Service ➢ Identity-driven workflow and provisioning ➢ Service-Oriented Architecture ➢ Reusable/Modular/Object-Oriented Design and Development ➢ Expanded Utilization of Web ➢ Paperless initiative ➢ Technology Standardization ➢ Automated Vehicle Dispatch Routing

Trend	Description
Enterprise Content Management (ECM): Imaging, Document Management, Paperless Office	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.
Current State	**Future State**
➢ Document Imaging ➢ Document Workflow ➢ Electronic/Desktop-based Fax ➢ Extensive Utilization of Internet, Intranet and Collaboration Software for Electronic Sharing of Information ➢ Electronic Timesheets and Payroll Remittance Advice ➢ Electronic/Desktop-based Fax ➢ E-Filing	➢ Expanded Document Imaging ➢ Expanded Document Workflow ➢ Image Heritage Village Archive/Collection for Public View ➢ Image Human Resources files ➢ Document Storage and Retention Policies Documentation Needed ➢ Electronic Availability of County Records to Citizens ➢ Enterprise Workflow Solutions and Business Process Management Tools ➢ Stored docs central repository ➢ Expanded Collaboration Software ➢ Digital Signatures

Trend	Description
Customer Self-Service / eGovernment	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.
Current State	**Future State**
➢ Internet Web Sites ➢ Public Records ➢ 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 ➢ Outward-facing Web Services for Self-service Functionality for 3rd Party Usage ➢ Civic Issue Tracking\311 ➢ Call Recording and Callback	➢ Unified County Citizen Web Portal Integrating All Agencies' Services ➢ Expanded Outward-facing Web Services for Self-service Functionality for 3rd Party Usage ➢ Web 2.0 Initiatives and Online Community Services (forums, newsgroups, mailing lists, wiki, blog, Twitter, social networking mash-ups) ➢ Mash-up Applications ➢ Electronic Availability of County Records to Citizens ➢ Service Catalog ➢ Expanded Public Record View/Print ➢ Common Point-Of-Sale and Online Shopping Cart Services, PCI requirements, and ePay overhaul ➢ Constituent Relationship Management ➢ Expanded Civic Issue Tracking\311 ➢ Dynamic User Experience ➢ Expanded Call Recording and Callback

Trend	Description
Data mining, data analysis, and performance measurement	Information is our most valuable asset. Business Intelligence provides the tools and systems that play a key role in the strategic planning processes of an organization. New and better ways to interrogate and report information is required for better, faster business decisions.
Current State	**Future State**
➢ Business Intelligence ➢ Data Marts ➢ Data Warehouse ➢ Dashboards ➢ Data Analysis Tools ➢ Report Writing ➢ Localized and Ad Hoc Web-based Analytics ➢ Localized and Ad Hoc Web-based Reporting (Application Specific)	➢ Predictive Analysis Tools ➢ Increased Utilization of Web Analytics to Support/Validate Paperless and Self-service Initiatives ➢ Expanded Ad-hoc Reporting Capabilities ➢ Data Catalog ➢ Expanded Dashboards ➢ Unstructured\Semi-structured Data Analysis Tools ➢ Data Collection and Aggregation ➢ Big Data

Trend	Description
Automation, workflow, and business process optimization	County agencies need new, better ways to improve work processes and increase efficiency. Business process analysis and automation of key processes are required.
Current State	**Future State**
➢ Identity Management ➢ Process Improvement Program ➢ Workflow Solutions and Business Process Management Tools	➢ Business Process Analysis/Reengineering ➢ Business Process Management Systems ➢ Business Process Modeling ➢ Continual Service and Process Improvement Program ➢ Identity-driven workflow and provisioning of services ➢ Expand Workflow Solutions and Business Process Management Tools ➢ Improved Process Metrics-gathering and Reporting ➢ Digital Signatures ➢ Service Catalog

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 2014 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.

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

April, 2015

Business Technology Tools

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

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)
- Bug Tracking Tools

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

Networking/Security

- Wide Area Network
- Unified Communications: Phone, Voice Mail, ACD, CCC, etc.
- Firewall
- Network Core Routing & Switching
- Interactive Voice Response
- Anti-Spam
- Network Content Switching & Load Balancing
- Video Conferencing & Collaboration
- Web & Network Content Filtering
- Virtual Private Network, Remote Meeting & Gate-to-gate VPN
- Wake On LAN
- Host-based & Network Intrusion Detection & Prevention
- Wireless Network
- Security Event Management, Log Management
- IP Address Management (DHCP, DNS)

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)
- Mobile devices and Mgmt
- Server Virtualization & VM Management
- Desktop and Server Management Service(s)
- Virtual Desktop Infrastructure
- Operating System and Suite Patch Management
- Application Virtualization
- Enterprise Anti-Virus/Malware

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

April , 2015

Business Technology Tools

- Service Desk r12
- CA CMDB r12
- SolarWinds, Dynatrace
- Splunk
- Oracle Project Manager, Clarity
- CA Service Catalog
- CA Workflow
- Oracle Enterprise Manager 12c
- SQL Server Mgmt Studio, Idera SQL Tools
- UPK Self Training Tool, OLM

Application Development

- Java EE7, Java SE8, HTML5
- Jdeveloper, Visual Studio, Dreamweaver, Visual CSS
- Oracle Application Development Framework
- Ivy/Maven, Hudson, Weblogic Deployment Tool
- Subversion (SVN)
- Oracle Application Testing Suite, Siteimprove
- Oracle 12c, SQL Server 2014, ESSbase 11
- OBIEE 12c, Hyperion
- Crystal Reports, BI Publisher, SSRS, SQLPlus
- SharePoint 2013
- Weblogic 12c, IIS 8, Oracle HTTP Server
- Oracle SOA Suite, Enterprise Service Bus
- SQL Developer Data Modeler, SQL Plus, SQL Svr Mgmt Studio
- PL/SQL, SQL, T-SQL
- Oracle E-Business Suite R12
- ESRI ArcGIS Server, ArcGIS Online, Pictometry-EFS
- eTX HEMI, Oracle Data Integrator, SSIS
- Automate BPA Server, Campaign Enterprise
- Application Xtender
- Bugzilla
- Additional roadmap detail on scripting and other tools can be found in the BTS Technology Roadmap at http://intraweb.co.pinellas.fl.us/bts/BTSRoadmap.pdf

Authentication & Authorization Technologies

- Novell Identity Manager (IDM)
- Active Directory (Windows)
- eDirectory (Novell's IAM)
- Cisco ACS, Cisco ISE, SecureAuth
- Oracle Internet Directory (OID)
- Oracle Access Manager (OAM)

Networking/Security

- Metro-E, Dark Fiber
- Unify VOIP, OpenScape, ASC Recording and Survey
- Palo Alto, Cisco ASA Firewall
- 1GB to Desktop (core sites). 1GB & 10GB+ to server
- Voice XML, Interactive Voice response TBD
- Barracuda Anti-Spam
- F5 BIG-IP
- Polycomm Video Bridge, Unify UC, Skype for Bus.
- Palo Alto Web & Network Content filtering
- Juniper VPN, Juniper Secure Meeting, Cisco Gate-to-gate
- Vpro
- Suricata, OSSEC, Host-based Intrusion Detection
- Cisco Wireless
- Splunk (Security Event Management)
- Infoblox IPAM

Server/Desktop

- Windows 2012 & RHEL 7
- Windows 10
- SAN (Compellent), Invicta
- Windows 2012
- Internet Explorer 11
- Tivoli, backup to disk, Veeam, Cloud Svcs
- Exchange 2013\ Office 365, Exchange 2013 Compliance
- Office 2013
- Windows Tablets
- ESXi
- Microsoft System Center Configuration Manager, SALT
- Virtual Desktop Infrastructure\VM View
- Windows Server Update Service
- VMWare Thinapp, Microsoft App Virtualization
- Trend Micro Office Scan AV or SC Endpoint Protection

APPENDIX A: BTS TECHNOLOGY ROADMAP (EXAMPLE)

Full Roadmap found online:

http://sharepoint1-vm.co.pinellas.fl.us/bts/BTS%20Enterprise%20Documents/BTS%20Technology%20Roadmap%202015.docx

Legend

Invest / Deploy
Maintain / Support
Migrate / Eliminate
End of Sustainability

High Level Category	Technology Solution	2015				2016				2017				2018				2019				2020				2021			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Unified Enterprise Justice Management System	Odyssey 2014																												
	Odyssey 2015																												
	Odyssey 2016																												
	Odyssey 2017																												
	Odyssey 2018																												
	Odyssey 2019																												
	Odyssey 2020																												
	Odyssey 2021																												
Enterprise Work Order & Asset Management	Cityworks																												
	Maximo 4.x																												
	Maximo 6.x																												
	Agile Assets																												
Performance Measurement & Business Intelligence	OBIEE 11g																												
	OBIEE 12c																												
	Hyperion 12																												
	CA Business Intelligence																												
Enterprise Paperless and Content Services	TBD																												
Enterprise Geographic Data Services	ArcGIS for Server 10.2																												
	ArcGIS for Server 10.3																												
	ArcGIS for Desktop 10.2																												
	ArcGIS for Desktop 10.3																												
	ArcGIS Online																												
	ArcGIS for Collector																												
	Operations Dashboard																												
	Pictometry - EFS																												
	ArcGIS Viewer for Flex																												
	WebApp Builder																												

APPENDIX B: 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, and 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

Service Name	Description
Business Intelligence	Includes OBIEE\Hyperion
Clerk Imaging	Includes document scanning, archival, retrieval, and workflow processing for Clerk's Probate, Official Records, Traffic, Accounting, and Criminal depts. Provides reporting services for the Financial Division. Provides public image retrieval for Probate, Traffic, and Official Records images
Infrastructure	Includes all hardware and OS software for Custom IT Services. Also includes all SAN storage and backup equipment for every BTS service
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. Includes associated hardware.
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

APPENDIX C: CUSTOM BUSINESS SERVICES

Service Name	Description
BCC Custom IT Service	Includes development and database labor support for In-house developed and COTS applications
DEI Custom IT Service	Includes IT field services and development and database labor support for In-house developed and COTS applications
Clerk Custom IT Service	Includes development and database labor support for In-house developed and COTS applications
Community Development	Includes development and database labor support for In-house developed and COTS applications
Courts Custom IT Service	Includes development and database labor support for In-house developed and COTS applications
JWB Custom IT Service	Includes IT field services and infrastructure labor support
MedExam Custom IT Service	Includes development and database labor support for In-house developed and COTS applications
SOE Custom IT Service	Includes IT field services, database, and infrastructure labor support
Sheriff Custom IT Service	Includes development and database labor support for In-house developed and COTS applications

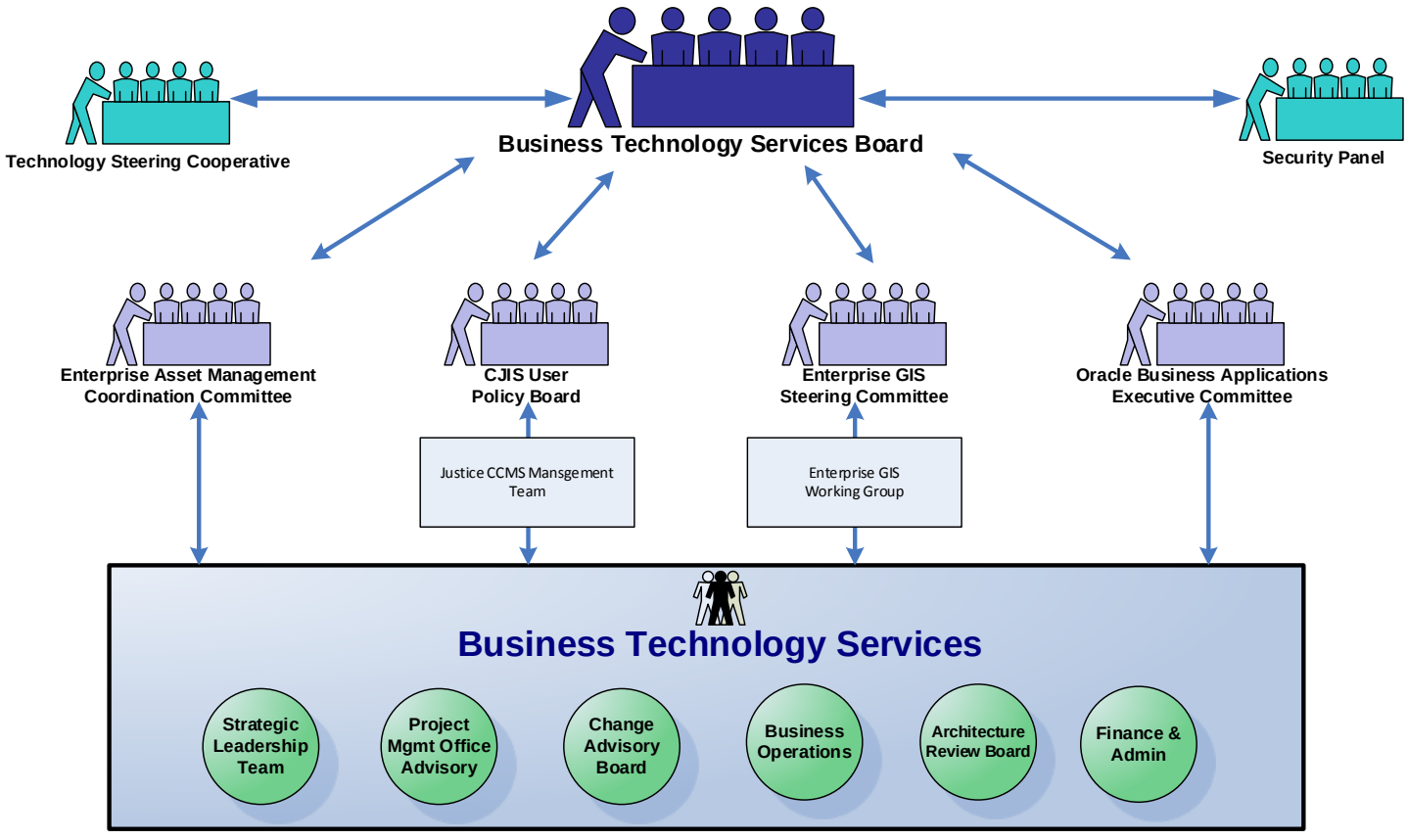
APPENDIX D: GOVERNANCE – SUCCESSFUL LEADERSHIP THROUGH COLLECTIVE GUIDANCE

Background

BTS is the champion for a formal, business-led Executive Leadership framework that ensures technology projects are business driven, collaborative, foster partnerships, and give 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.



APPENDIX E: GUIDING PRINCIPLES

Guiding Principles
1. Enhance Business Value
2. Solution and Cost Optimization
3. Promote "One County" Partnership
4. Simplify and Reduce Complexity
5. Provide Secure and Available Business Solutions
6. Prefer COTS Over Custom Development (reuse, buy, then build)

ENHANCE BUSINESS VALUE

RATIONALE:

- Everything BTS does should be tied back to the business and provide business value by either solving a business problem or enhancing a business process.
- Through Business Relationship Management (BRM) BTS must proactively identify opportunities to add business value.
- BTS shouldn't have to be asked for solutions.

IMPLICATIONS:

- BTS projects and initiatives should be communicated in business terms.
- Functionality and requirements should be related back to business outcomes.
- BRM's should become a resource for gathering future business opportunities.

SOLUTION AND COST OPTIMIZATION

RATIONALE:

- BTS will gain credibility by always optimizing solutions to meet the requirements the most cost effective manner.

- The County and BTS budget will benefit in the long run when optimum solutions are selected.
- Requirements must be gathered and used to determine the optimum solution for particular business need.

IMPLICATIONS:

- BTS will partner with the customer to understand the business value of all solutions.
- All solutions should be selected based on business value and cost.
- BTS will select right solution, the right size, at the right cost for the business need.

PROMOTE "ONE COUNTY" PARTNERSHIP

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 and simplifies citizen interaction with 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.

ALL DECISIONS MUST BE FISCALLY RESPONSIBLE.

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 financially viable equivalents that may reduce total cost of ownership are available.

BALANCE QUALITY WITH SUSTAINABILITY.

RATIONALE:

- We must be the best we can afford to be while avoiding incurring additional ongoing cost, where possible, to avoid negatively impacting a sustainable future.
- Excellence is expected in everything BTS does.
- Excellence does not mean perfect.

- 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

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.

PROVIDE SECURE AND AVAILABLE BUSINESS 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.
- 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.
- A combination of processes and tools are needed.
- 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.

PREFER 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.