City of Bellevue

Enterprise Technology Strategic Plan

2009 - 2012

INFORMATION TECHNOLOGY DEPARTMENT

CITY OF BELLEVUE WASHINGTON

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I. Introduction and Overview:

The City of Bellevue Information Technology Department (ITD) last updated its Enterprise Strategic Plan in 2005, in preparation for the City's move into its new City Hall facility. With that effort successfully completed, the City of Bellevue must now refocus on the strategic technology issues that will face the organization in the 2009 to 2012 time horizon. This strategic planning effort is undertaken with the purpose of positioning the City of Bellevue to effectively meet these emerging technology needs and challenges.

A. The ITD Mission:

The Information Technology Department's new mission statement is:

Inspire, Innovate and Deliver

The stated mission focuses ITD on those qualities necessary to meet the technology and business challenges in upcoming years: Inspired leadership in technology and operations; a commitment to innovation within the organization, and the delivery of systems, products, and services that will enable the City of Bellevue to effectively deliver on its broader mission.

B. City of Bellevue Mission, and Values:

The broader organizational mission, values and initiatives help define and shape the enterprise technology roadmap. Each of these has a technology component that can contribute to the successful achievement of the broader organizational mission, values and goals.

These are:

City of Bellevue Mission	Provide exceptional customer service, uphold the public interest, and advance the Community Vision.
City of Bellevue Vision	Be a collaborative and innovative organization that is future focused and committed to excellence.
City of Bellevue Core Values	• Exceptional public services • Stewardship • Commitment to employees • Integrity • Innovation

C. City of Bellevue Strategic Initiatives:

Bellevue Mobility – focused on creating a healthy, balanced transportation system that better reflects Bellevue's emerging urban environment. A fundamental change in community orientation is required. The longtime focus on one-occupant cars must give way to a preference and use of alternative modes such as buses, carpools, walking, biking, and emerging mass transit options.

Environmental Stewardship - focused on developing a community whose decisions and actions explicitly integrate and balance economic, ecological and social impacts, with the stated goals of: working toward sustainable operational practices; engaging employees, residents and businesses in sustainable practices; and building on Bellevue's reputation as an environmental innovator and leader

Long-Range Financial Planning – focused on identifying major trends and other factors that will influence service and capital needs through the year 2020; creating a financially sustainable model that will allow the city to deliver services and to invest in capital priorities for the foreseeable future; and facilitating the policy discussions of future operating and capital investment priorities.

One City - focused on establish a cohesive framework within which the organization can manage change, continuously improve performance, and quickly adapt to challenges and opportunities as they emerge.

II. ITD Assessment and Positioning for the Future

A. ITD SWOT Analysis

The aim of any SWOT analysis is to identify the key internal and external factors that are important to achieving the objective:

- Strengths: attributes of the organization that are helpful to achieving the objective.
- Weaknesses: attributes of the organization that are harmful to achieving the objective.
- Opportunities: external conditions that are helpful to achieving the objective.
- Threats: external conditions which could do damage to the business's performance.

STRENGTHS	WEAKNESSES
• Proven governance process in place • Reputable IT operations • Experienced Management Team • Staff with good skills, good morale and continuing to learn • Committed to performance excellence • Stable budgets that have allowed us to be forward-thinking • Seen as a regional leader in IT • Willing to leverage our competencies, services and infrastructure to enhance our partnerships	• Reliance on third-party service providers for critical service, such as phone, connectivity, application support and enhancement • Communication with stakeholders and users needs improvement • Ability and capacity to respond to accelerating change within the industry as well as the organization • Ability to standardize and document environment is historically weak • Coordinating department's business processes with application functionality enterprise-wide.
OPPORTUNITIES	**THREATS**

• Align with new City mission and vision
• Need to support new City Initiatives
  • One-City Initiative Planning
  • Environmental Stewardship Initiative
  • Performance Excellence Program
  • Downtown Mobility
  • Long Range Financial Planning
• Bellevue citizens and business expect a high level of performance in government services
• New tools, social media as framework for building stronger relationships and communities of interest to enhance two-way community engagement capabilities
• Response to threats can emerge as opportunities for growth and learning
• Leverage performance improvement efforts in the organization to institutionalize and link ITIL improvements and more tightly align business/technology planning and service delivery
	• Accelerating rate of increase in digital information, archiving and new technologies drive complexity and increasing inter-relationships in the technical and business environment
	• Pressure from recruitment, retention, and demographic changes.
	• Climate change
	• The increasing social inequity related to technology – between demographics as well as governments
	• Security threats and cyber crime
	• Economic crisis
	• Increasing complexity in the technical environment challenges existing staff to think differently and do business differently.

B. ITD Technology Portfolio

IT maintains a slate of projects that includes: existing projects that are funded and resourced and that are already on the work plan; new projects, not yet initiated, that are approved and for which funding and resources have been secured, and; identified future projects for which there is an articulated need, but without secured funding or dedicated resources. (see Appendix D)

The ITD project slate and technology portfolio is dynamic. New projects are routinely added as part of the bi-annual budget process. Off budget cycle projects are added and adjustments made as new urgent priorities assert themselves (as described in Appendices B and C).

C. Technology Trends

The City of Bellevue's strategic initiatives and the Information Technology Department's strategic direction in the coming years will be influenced, impacted, and shaped by forces and trends outside our control.

These include:

- Explosion of information will mean that the digital universe will increase six fold by 2010. That means nearly 20 million times the information in all books ever written. Increasing creation and interactivity and the blurring of boundaries between commercial services/products and corporate network (Web 2.0). Demand is growing to build visualization and sensory aspects into computing environment with media-rich files.

- Gen Y/Millennials bring behaviors and expectations into the work force that will increase the need for more connectivity and collaboration and less boundaries. This intersection of changes in technology and social behavior raises a number of organizational issues: privacy, security, data ownership, the boundaries between work and life

- The internet emerges as a platform for computing. Trends toward cloud computing and software as a service will continue to grow. Multi-tenancy hosting and web based applications will become the norm. There is an ongoing opportunity to leverage the provision of services to smaller cities while reducing our costs and narrowing the technology gap.

  Computing power of PCs will exceed the human brain and interfaces will evolve to rapidly include voice and touch. These capacity leaps enable significant advances in scenario running, modeling, gaming, interactive planning, and virtualization.

- Increased bandwidth demands – HDTV, on-demand videos, gaming, self-generation of videos and photos, online meetings, training and conferences, interactive collaboration with the community

III. Plan Elements: Strategic Categories, Key Objectives and Actions

ITD has adopted a strategic planning structure based on Strategic Categories, Key Objectives, and Actions that will allow for easy periodic updates as these plan elements are accomplished or changed over time. These plan elements are:

A. Enterprise Technology Strategic Categories

The strategic technology categories that shape the Enterprise Technology plan are driven by the City of Bellevue's Core Values, its identified Strategic Initiatives and the by the strategic planning and visioning taking place on the department level. Each of the Strategic Categories below is intended to address and advance the organizations overall strategic direction and goals.

I. Operational Resiliency - *The ability of the organization to recover and continue operations following a significant disruption or failure.*

Operational Resiliency is grounded in the City's Core Values of Exceptional Public services and Stewardship. It addresses the needs of the departments to continue to provide essential and necessary services and to continue operations following a significant event. This includes the need to quickly have systems back up and running so as to be able to deliver services, produce and provide critical information and recover records as need.

II. Workforce Mobility - *Provide and support the technology solutions that harness the benefits, savings, and service improvement of a mobile workforce.*

Increasingly, both the community and the City's workforce need and expect access to necessary information wherever and whenever it is needed. The City's Core Values of Innovation and Exceptional Public Service and the Environmental Stewardship Initiative support this Strategic Category.

The needs expressed include: the ability of workers in the field to access and update network files and data; to collaborate effectively with co-workers and stakeholders; the ability of citizens to receive and submit information using smart phones and various mobile and wireless devices, the creation of the mobile office and work place; enabling and facilitating telework and telecommuting options. This is succinctly summed up as meeting future mobility needs by creating and supporting an Anywhere, Anytime, Any Device environment.

III. Business Optimization - *Reduce cost, enhance application and infrastructure flexibility, virtualization, improve energy efficiency, and enhance operational management.*

Leveraging the maximum benefit and utility out of existing systems, increasing interoperability between systems, improving efficiencies, reducing costs and management overhead will require innovation, long range planning, and a continued commitment to both financial and environmental stewardship.

The City's investment in systems and technologies will be further maximized as we introduce tools to enable and enhance performance management and measurement through the presentation of data as useful information via dashboards, reporting and interactive collaboration tools.

IV. Community Building - *Provide the technology and support to fully engage employees and the community, facilitate engagement and collaboration*.

New technologies will expand opportunities to engage employees and the community. The communication tool chest will expand to include video podcasts, use of social media sites with tools chosen to meet specific business strategies, enhanced use of collaboration tools such as SharePoint, and the use of social networking to build and support new levels of community engagement and interaction.

V. Leadership - *Advance regional partnership in areas that benefit from standardized service delivery and economies of scale.*

Innovative leadership, both internally and externally, will require expanding and deepening our partnership relationships within the organization and across regional boundaries. Opportunities to share both infrastructure and services will be further pursued.

The business operations within the City will increasingly become more transparent and more outcome drive through the integration of technologies that enable both better analysis and reporting.

Enterprise Technology Strategic Plan Matrix

	Strategic Categories	Key Objectives		Action Strategies	
	What are the 5 to 7 big areas where we need to focus our energies and resources in the next 3 - 5 yrs?	What are the 2 or 3 we can do in the next 3 - 5 yrs that will move us forward in each of the Strategic Categories?		What specific actions are we going to commit to that will allow us to meet this Key Objective that will produce progress in this particular Strategic Category?	
I	**Operational Resiliency**	A	A Resilient City of Bellevue Network	1	Develop Data Center Outside of Region
				2	Proactive Emergency Management / Disaster Recovery Initiative
	The ability of the organization to recover and continue operations following a significant disruption or failure.	B	A Resilient Regional Network	3	Complete Regional Fiber Consortium Infrastructure
				4	Expand Collocation with Regional Partners
		C	Continuous Security Improvement	5	Achieve and Maintain PCI Compliance
				6	Deliver Effective Training and Develop Active Awareness of Risks

II	**Workforce Mobility**	A	Expand Telecommute / Telework Options	1	Develop Necessary Policies and Procedures
				2	Enable and Deploy Required Technologies
	Provide and support the technology solutions that harness the benefits, savings and service improvement of a mobile workforce	B	Enable the Mobile Field / Remote Office in Alignment with Department Needs	3	Become Device Agnostic / Diverse
				4	Expand Access to and Availability of Mobile Technologies
		C	Expand the Wireless City	5	Fully Leverage the Potential of the Intelligent Transportation System Network
				6	Expand BellevueCONNECT

III	**Business Optimization**	A	Implement Performance Management Methodologies to Drive Continuous Improvement	1	Develop Performance Dashboards as Reporting and Feedback Mechanism(s)
				2	Develop and Measure Relevant KPI
	Reduce cost, enhance application and infrastructure flexibility, virtualization, improved energy efficiency, and enhance operational management.	B	Expand Green IT	3	Create Green Data Center
				4	Increase Energy Efficiency and Reduce Required Consumption
		C	Drive Operational Efficiencies	5	Develop Application Road Maps
				6	Leverage Enterprise Systems
				7	Proactively Engage Organization thought Consulting Services

IV	**Community Building**	A	Enable Full 2-Way Interactive Engagement	1	Develop Web 2.0 Capabilities
				2	Capture Benefits of Social Networking Technologies
	Provide the technology and support to fully engage employees and the community through technology systems that business collaboration strategies.	B	Link Appropriate Tools to Distribute Business Strategies to Maximize Success	3	Develop Policies and Procedures Around New Business Structures
				4	Make Project Management Visible to Public
		C	Enhance Government Transparency	5	Develop and Utilize Multiple Inputs for Feedback
V	**Leadership**	A	Advance Internal and External Partnerships	1	Clarify Relationships as Partners not Customers
				2	Revise Business Processes for Increased Transparency
	Advance regional partnerships in areas that benefit from standardized service delivery and economies of scale.	B	Pursue Opportunities for Shared Services and Shared Infrastructure	3	Integrate Technology with Business Processes to Drive Outcomes
		C	Support and Enable Organization Development	4	Use Consultive Relationship to Expanded Vision of What's Possible
				5	Eliminate System Barriers and Integrate Business Processes

Appendix A - Technology Governance and Decision Making

1. IT Guiding Principles

The following guiding principles are applied throughout the IT governance and decision making process. The IT guiding principles outline the organization's preferred direction. The purpose of the IT guiding principles is to ensure that strategies, policies and practices are aligned and support the overall business objectives of the City.

a. Information Technology solutions are driven by business needs.

- Support the service delivery and strategic direction of the City
- Partner with business units to select best technology options to address business needs
- Pursue regional partnerships in areas that benefit from standardized service delivery and cost savings

b. We manage the enterprise portfolio with a view towards consolidation and reducing redundancy in data, processes, and systems.

- Use off-the-shelf solutions when feasible and leverage existing applications, systems and infrastructure when investing in new solutions
- Evaluate business processes for consolidation and alignment before automation is applied

c. We treat information as a strategic asset.

- Provide timely access to information to support decisions
- Establish effective policies and procedures to reduce data redundancy, increase data quality, and implement appropriate protection of data (security, privacy, archiving, backups, etc.)

d. Innovative, but proven, technologies are implemented.

- Early-adopters of technologies, but not bleeding edge
- Carefully consider risks and rewards when investing in technology
- Seek long-term, entrepreneurial partnerships with vendors and other partners

e. IT systems shall comply with the City's standards, architecture, and methodologies.

- Preference for systems that adhere to industry standards and open architectures
- Protect systems and data through effective security
- Regularly review standards to respond to changing technology climate

2. IT Governance Process

The City's IT governance process sets the framework for the decisions on IT strategic direction, policies, and investments. The key body in the governance process is the IT Governance Committee (ITGC). ITGC is made up of representatives from departments and is chaired by the Chief Information Officer. ITGC receives direction from the City's Leadership Team (LT), which is composed of department directors and the City Manager. LT is guided by the City Council's priorities and direction.

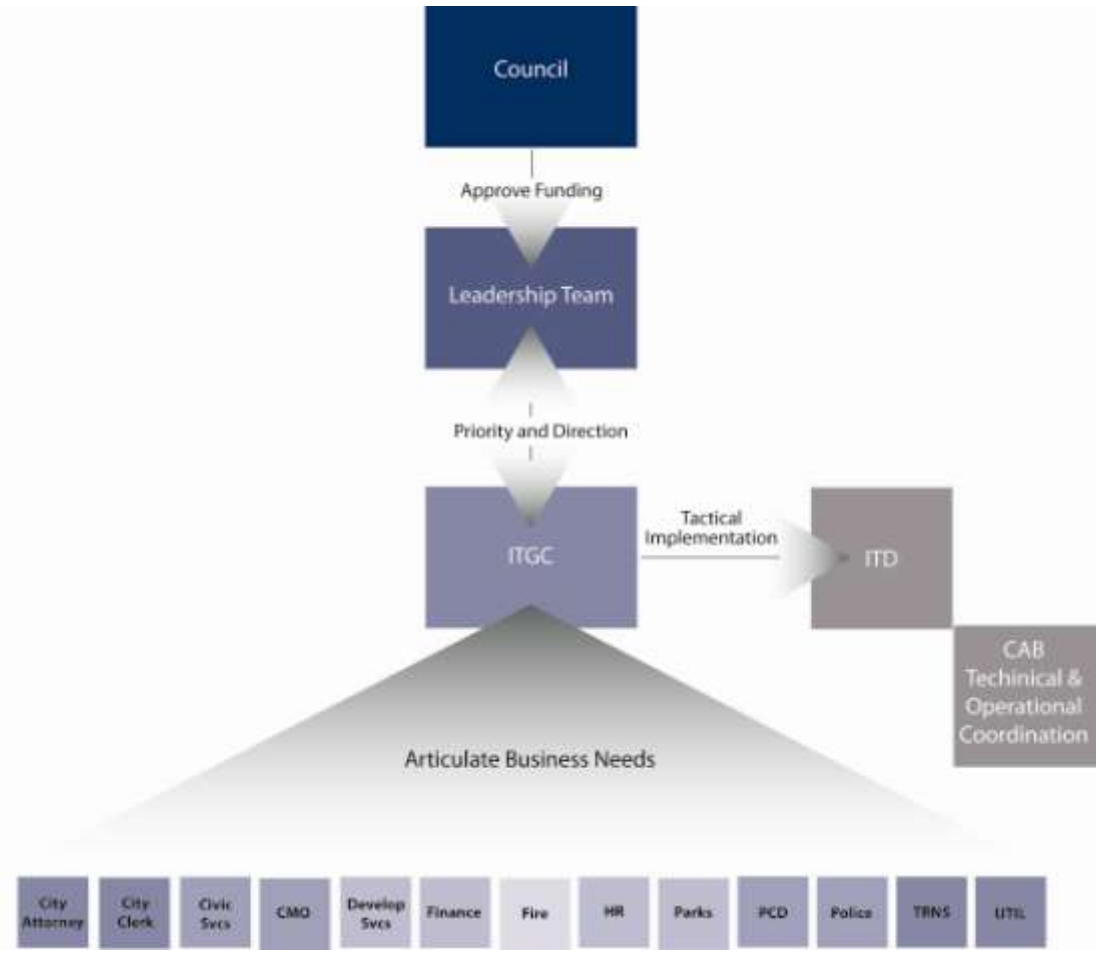


Diagram 1: IT Governance Process

The Change Advisory Board (CAB) includes members from all departments, was created to ensure the proper technical and operational coordination exists between stakeholders across the organization. Roles & Responsibilities for ITGC and CAB are as follows:

Roles and Responsibilities – ITGC and CAB

ITGC	CAB
Policy Direction based on IT Guiding Principles	Raise policy questions for consideration by ITGC
Portfolio Management	Policy Implementation • Development of operational procedures for implementation of ITGC policy decisions
Resource Coordination: Enterprise-wide	Change Management and Coordination • Improve communication with departments about IT-related changes • Minimize risk through improved risk assessment
Information Sharing and Communication Coordination • Communicate to the Departments • Coordinate with Departments, other stakeholders	Service Level Management • Improved communication regarding ITD service portfolio • Identification of special departmental needs and those not adequately met
Project Evaluation and Prioritization • Use of Project Overview Statements (POS) to review and discuss: – Scope, logic, complexity and risk – Enterprise impacts to resources, operations, and cross-department implications – City and eGov projects that impact the Organization – Debriefs to understand successes, challenges, and to improve in the future	Work Plan Management • Alignment of resources and scheduling at an operational level • Alignment of business schedules with roll out of new application.

Appendix B – Technology Project Approval and Governance

The project approval decision making process works as follows (see Diagram 2 below):

- Ideas or requests for IT projects generally begin in departments to address a business need. ITD and department staff work in partnership to scope an IT project and define needed resources. Projects that fit within existing ITD services and work programs do not need to elevate to ITGC, but are scheduled by ITD for completion.

- If a project is a large investment, requires additional resources, or is highly visible, ITGC reviews it for prioritization. The prioritized list of IT projects is typically developed as part of the bi-annual budget process, but individual projects do come up outside of the budget process. These out-of-cycle projects are handled on a case by case basis to make sure they fit with the existing approved IT program.

- During bi-annual updates, the recommended IT program is presented to LT for guidance and budget recommendations.

- Projects that are large investments or involve external partnerships are presented to Council for funding approval.

- Once approved at the appropriate levels, ITGC directs ITD to begin the project implementation process. ITD and departments must work collaboratively to successfully complete projects.

Once a project is approved it starts through the project life cycle. It receives oversight and governance by various entities. (see Diagram 3 below)

- The IT Project Manager and the Business Unit Manager work in tandem to ensure the success of a project. They oversee all activities of the project team. This is accomplished through the detailed Project Plan.

- The IT Project Manager reports project results to the Steering Committee.

- All medium to large projects have a Steering Committee. The Steering Committee reports project status to the Information Technology Governance Committee (ITGC).

Diagram 2: Technology Project Approval

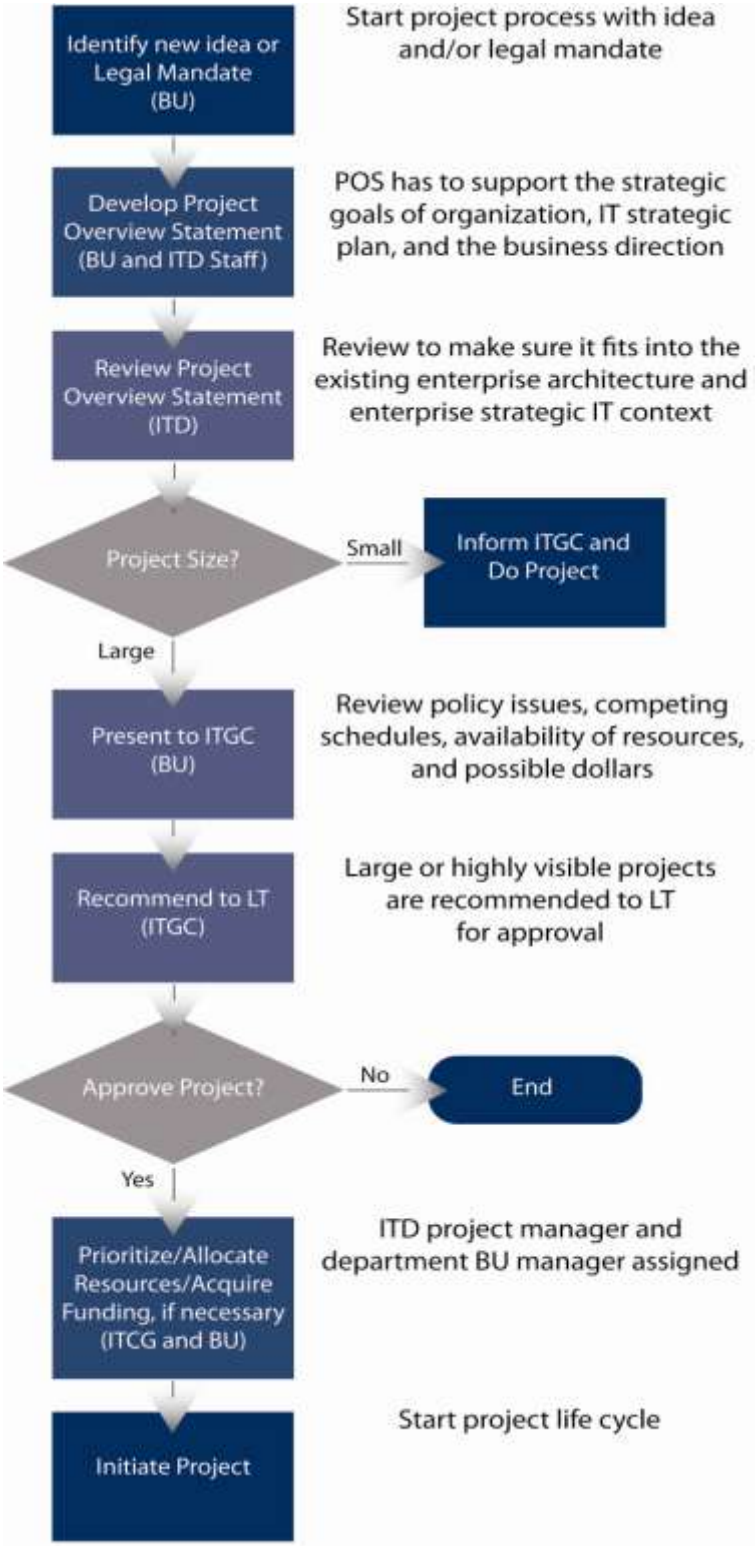
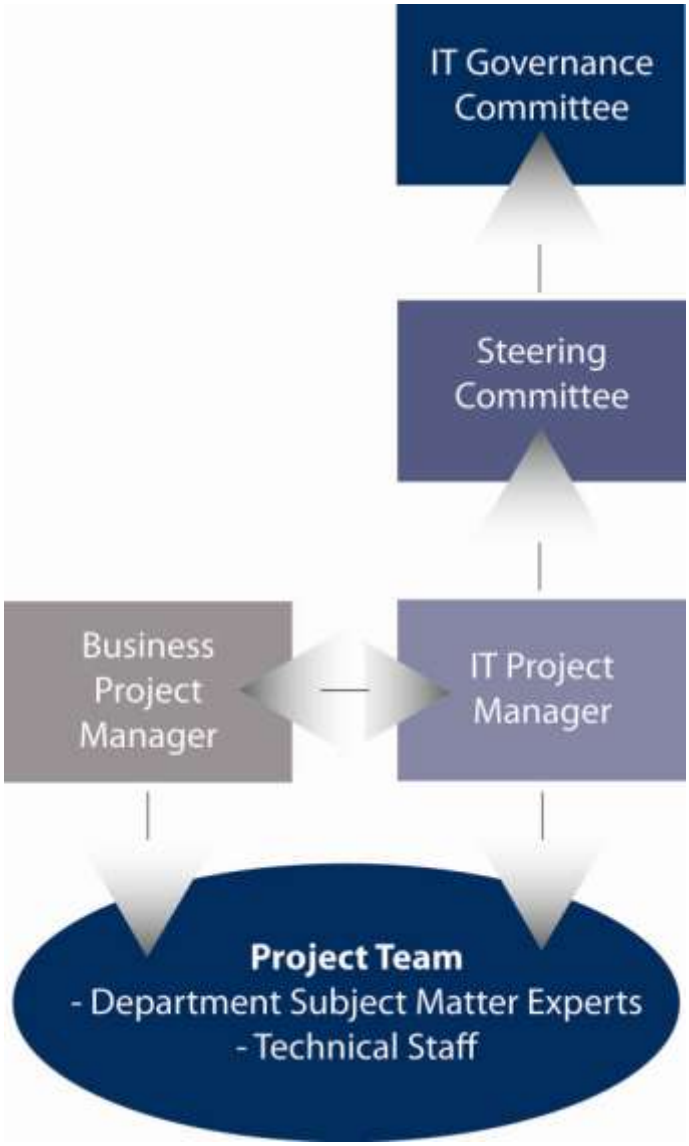
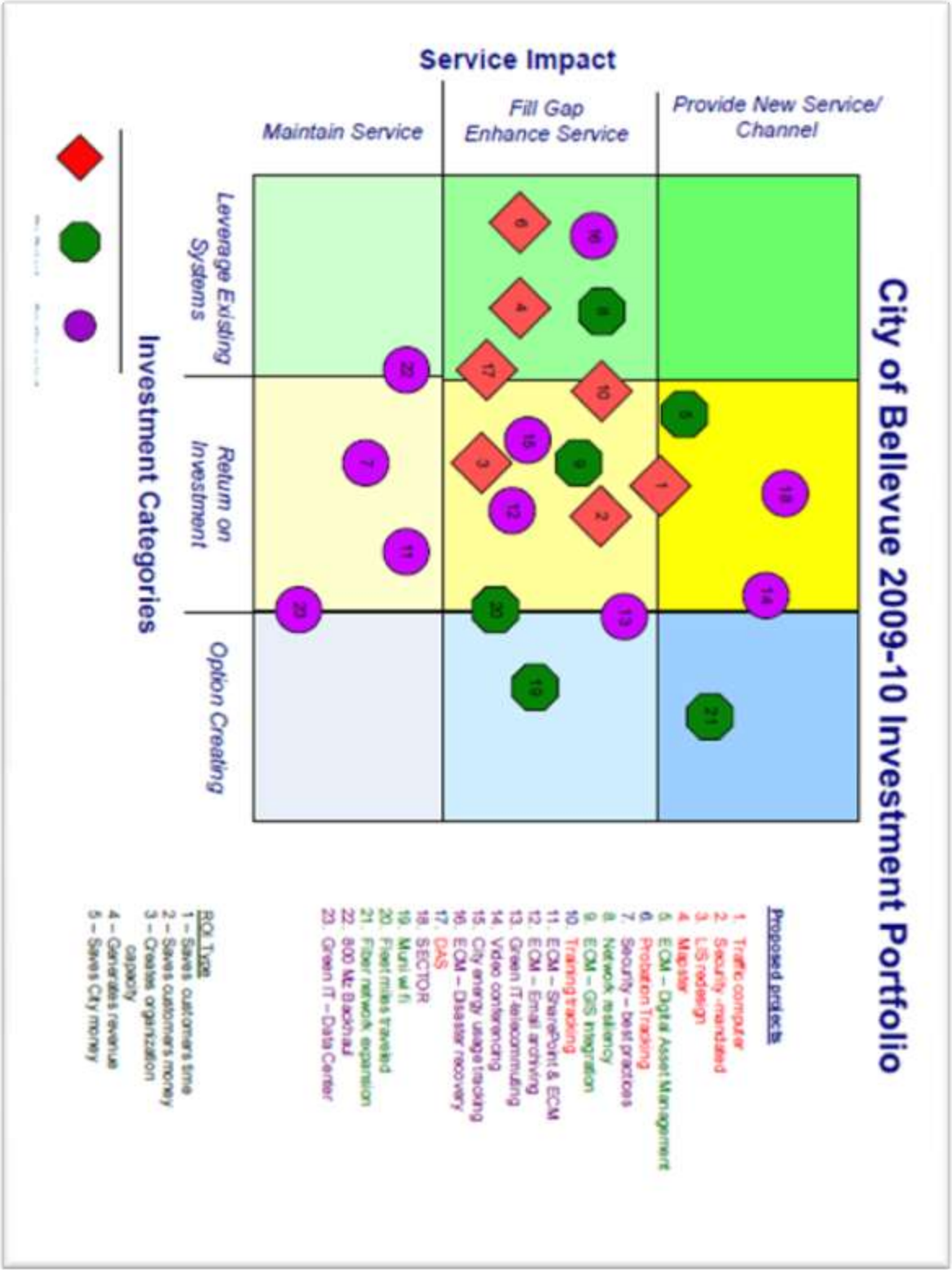


Diagram 3: Project Oversight and Governance.



Appendix C

Diagram 4: Investment Portfolio



Appendix D - Enterprise Architecture

The Enterprise Architecture serves as a roadmap, guiding future technology investments and identifying gaps in the IT infrastructure. The Enterprise Architecture can be used to target investments in improving technology commonality, data sharing, application development, and on-going operations. The Enterprise Architecture is composed of four major layers. (see Diagram 5 below)

The Physical IT Infrastructure

This layer provides the foundation on which applications run. This includes the network (both wired and wireless), servers, PCs and other devices. It also includes enabling technologies, such as web, integration and database technologies.

Enterprise Applications

These applications are in common use throughout the organization. These robust applications can meet the performance demands of the enterprise and fill many needs. These applications are rigorously selected to ensure that they are enterprise-grade. Included in this layer are the Finance and HR System, e-mail, GIS and Office suite. Additional applications are proposed to manage the following functions - document management, asset management/maintenance management, and customer relationships.

Department Applications

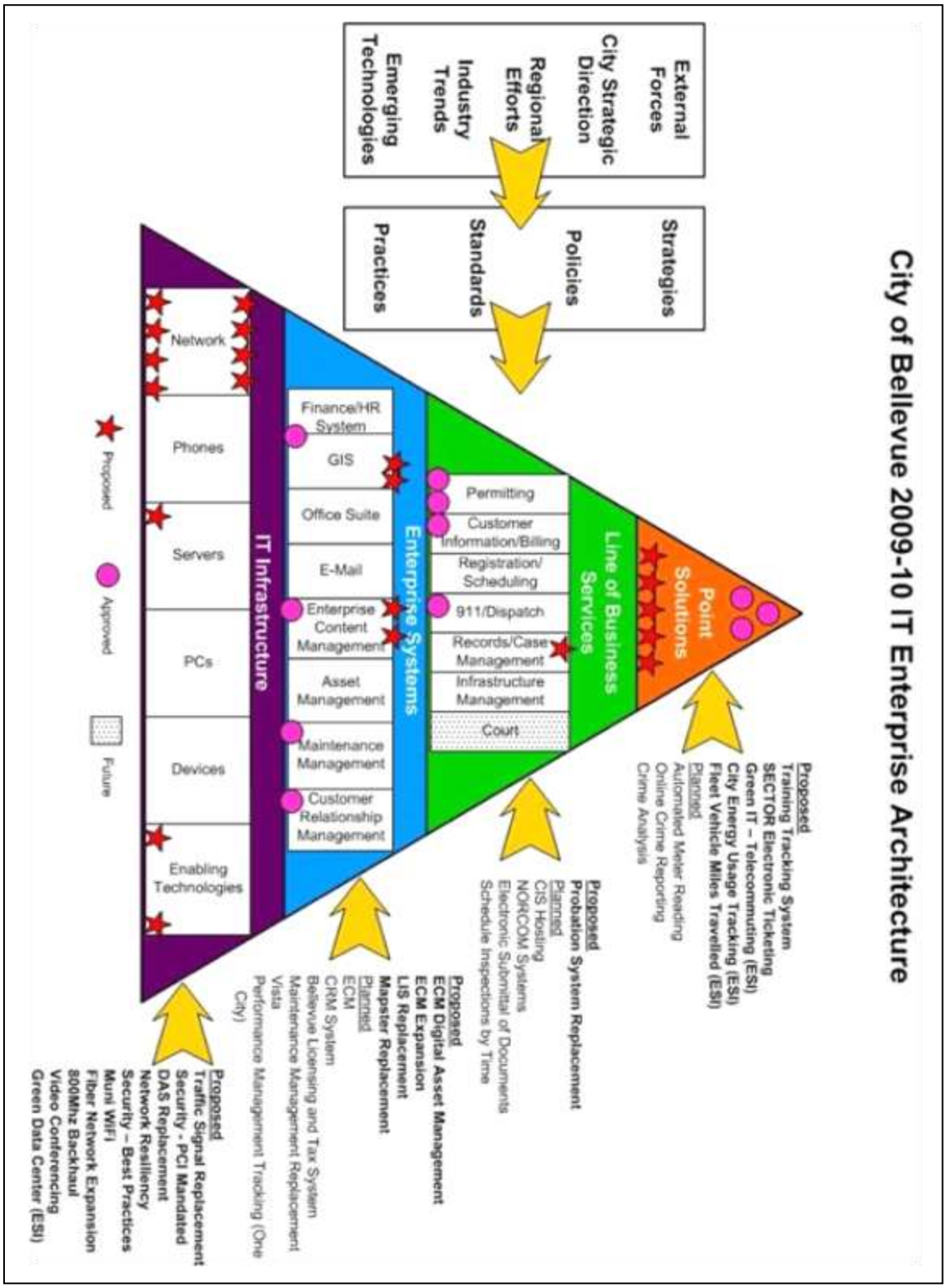
This set of applications serves specific line of business functions. They are typically used by one or more departments. Many of these applications have been in use for many years and a few have recently been replaced. A potential addition to this layer is a court system if the City must take over the municipal court function from King County.

Small Applications

These applications are developed or acquired to meet unique needs that cannot be met through enterprise or department applications. It could involve a new application or building web or wireless modules to enhance an existing application.

The Enterprise Architecture is guided by the strategies and policies set by ITGC and the standards and practices set by ITD. ITGC updates strategies every two years and adopts policies as needed. Strategies and polices are set as a response to external forces such as changes to the City's strategic direction and taking advantage of new technologies. Standards and practices are regularly reviewed to keep pace with industry trends.

Diagram 5: Enterprise Architecture


City of Bellevue 2009-10 IT Enterprise Architecture
External Forces
City Strategic Direction
Regional Efforts
Industry Trends
Emerging Technologies
Strategies
Policies
Standards
Practices
Point Solutions
Line of Business Services
Enterprise Systems
IT Infrastructure
Permitting
Customer Information/Billing
Registration/ Scheduling
911/Dispatch
Records/Case Management
Infrastructure Management
Court
Finance/HR System
GIS
Office Suite
E-Mail
Enterprise Content Management
Asset Management
Maintenance Management
Customer Relationship Management
Network
Phones
Servers
PCs
Devices
Enabling Technologies
Proposed
Approved
Future
Proposed
Training Tracking System
SECTOR Electronic Ticketing
Green IT – Telecommuting (ESI)
City Energy Usage Tracking (ESI)
Fleet Vehicle Miles Travelled (ESI)
Planned
Automated Meter Reading
Online Crime Reporting
Crime Analysis
Proposed
Probation System Replacement
Planned
CIS Hosting
NORCOM Systems
Electronic Submittal of Documents
Schedule Inspections by Time
Proposed
ECM Digital Asset Management
ECM Expansion
LIS Replacement
Mapster Replacement
Planned
ECM
CRM System
Bellevue Licensing and Tax System
Maintenance Management Replacement
Vista
Performance Management Tracking (One City)
Proposed
Traffic Signal Replacement
Security - PCI Mandated
DAS Replacement
Network Resiliency
Security – Best Practices
Muni WiFi
Fiber Network Expansion
800Mhz Backhaul
Video Conferencing
Green Data Center (ESI)

Appendix E - ITD Security Policy Framework

City of Bellevue Information Security Program

Security Vision and Philosophy

The information that is transmitted, processed and/or stored on City of Bellevue (City) information systems and networks is of great value to the City; it is a high priority for the City to appropriately protect the confidentiality, integrity and availability of such information. The foundation of an effective information security program is built on strong information security policies that balance information security requirements with the functionality needed for City operations.

The City's information security policies define high level requirements for using and managing City information systems, data and network resources and protecting them from service disruption, misuse or unauthorized access. The City's information security policies represent the combined efforts of the City's Information Technology Department (ITD), Human Resources Department (HR), Legal Department, Information Technology Governance Committee, and user communities.

Information Security Program

The City is committed to delivering high quality services to its citizens. Doing so, it may collect, process, transmit and/or store sensitive information in order to perform its mission. All information that is transmitted, processed and/or stored on City information systems and networks must be appropriately protected by City employees, contractors, vendors and service providers in accordance with well-defined information security policies, standards and procedures.

The City's management is committed to developing, implementing, and maintaining appropriate information security policies, standards and procedures in order to ensure integration of information security with the City's mission, overall strategy, risk posture and to comply with applicable regulatory requirements. Via active oversight by the City Manager's Office or its designated representative, there will be effective management and monitoring of information security risks, delineation of accountability for information security, and implementation of processes and infrastructures necessary to identify, monitor, and appropriately control information security risks on a continuous basis.

The City will maintain an information security program to appropriately control risks to the City's information systems, data and network resources. This program will document minimum standards of behavior for staff, contractors, vendors, and service providers and include clear guidance for City day-to-day operations.

City management and staff will follow the information security principle of "that which is not explicitly allowed is explicitly denied." The City will also follow the principle of "defense in depth." As justified by risk assessment, City information

systems, data and network resources will be protected by multiple layers of security controls. The City will consistently monitor and enforce compliance with its information security policies.

All City management and staff share in the responsibility to our citizens to ensure that appropriate information security controls are implemented and that information security remains a constant priority.

Information Security Program Administration

The City's Chief Information Security Officer (CISO) will develop the City's information security policies. The policies will be reviewed and approved by the City's Information Technology Governance Committee (ITGC) prior to implementation. All policies will be reviewed annually and updated or revised as necessary. All policies are subject to review by the ITGC, internal and external auditors, as well as regulators.

Sanctions for Policy Violation

Employee failure to comply with the City's information security policies may result in disciplinary action up to and including termination.