

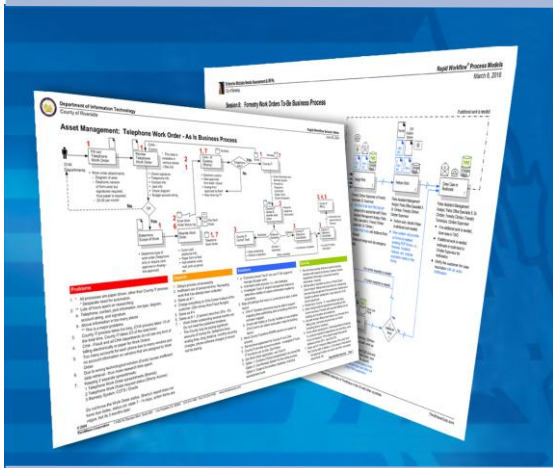
Rapid Workflow®

Problems, Impacts,
Solutions, Benefits



IT Strategic Plan: Phase 2
Costa Mesa

ITSP Implementation Roadmap
September 8, 2026



**38
YEARS**

Thought Leadership, Exceptional
Performance & Results since 1987



ThirdWave Corporation
Information Systems Intelligently Applied
12100 Wilshire Blvd. Suite 800
Los Angeles, CA 90025
www.ThirdWaveCorp.com
310.804.7565



Contents

Information Technology Strategic Plan: Implementation Roadmap

Section 1	Introduction	1
1.1	Introduction to the ITSP Implementation Roadmap.....	1
1.2	ITSP Vision, Mission and Values	2
1.3	ITSP Roadmap Framework	3
1.4	ITSP Roadmap Objectives.....	3
1.5	ITSP Roadmap Guiding Principles	3
Section 2	ITSP Initiatives.....	6
2.1	Technology Initiatives	6
2.2	Prioritization Criteria & Process	7
	Figure 2.2.1: ITSP Implementation Roadmap Initiative Prioritization Criteria	7
	Figure 2.2.2: Prioritized ITSP Implementation Roadmap Initiatives	8
Section 3	Budget Estimate.....	10
3.1	Budget Overview.....	10
3.2	ITSP Initiative Investment	11
	Figure 3.2.1: ITSP Implementation Roadmap 5-Year Estimated Investment.....	12
3.2.1	Budget Footnotes.....	13
3.2.2	To Be Determined Initiatives	15
	Figure 3.2.2.1: High Priority To Be Determined Initiatives.....	15
	Figure 3.2.2.2: To Be Determined Initiatives	16
Section 4	5-Year ITSP Roadmap.....	17
4.1	ITSP Implementation Roadmap Principles	17
4.1.1	Technology Implementation Principles	17
4.2	5-Year ITSP Implementation Timeline.....	19
	Figure 4.2.1: Overall 5-Year Implementation Roadmap	20
4.2.1	Implementation Roadmap Footnotes.....	21
Section 5	City & Customer Benefits.....	24
5.1	ITSP Roadmap Benefits	24
	Figure 5.1.1: ITSP Potential Quantitative & Qualitative Benefits.....	25
5.1.1	Implementation Roadmap Benefit Footnotes	26
Section 6	Next Steps.....	28
6.1	Adoption & Funding	28

Section 1 Introduction



1.1 Introduction to the ITSP Implementation Roadmap

This document provides the City a five-year IT Strategic Plan Implementation Roadmap (ITSP Roadmap), including the prioritized phased and implementation of Information Technology initiatives. The ITSP addresses the acquisition and implementation of strategic business technologies, in addition to addressing the sustainability of the ITSP Roadmap with IT human resources.

The IT Strategic Plan document articulates “what” should be undertaken. This document is a management tool that defines “when” ITSP Roadmap initiatives might be carried out and at what investment.

As with any planning document, the ITSP Roadmap should be revisited and refreshed on a yearly basis. Updates should consider changing circumstances in a variety of areas: e.g., City organization, community demographics, emerging Information Technologies, and fluctuations in the state of the economy.



The following pages lay out a pragmatic ITSP Roadmap that will ensure the successful deployment of initiatives, reflects sound investments in technologies, and addresses the following:

- The criteria used to prioritize ITSP Roadmap Initiatives;
- Implementation Roadmap over a 5-year timeline; and,
- Resources required to sustain the ITSP implementation.

1.2 ITSP Vision, Mission and Values

The following outlines the City's ITSP Roadmap vision, mission and values:

Vision

Provide a comprehensive roadmap fostering the use of proven state-of-the-practice Information Technologies in the most strategic, innovative, cost effective and efficient manner possible to support internal City operations, extraordinary customer service delivery, civic participation and community wellbeing.



Mission

Ensure IT investments and strategic business technologies are customer focused, sound, and deliver the highest possible value to the City and its constituents.

Implementation Values

ITSP initiatives are guided by three values integral to everything the IT organization does:

- Excellence:** Lead with a clear vision, communicate, form partnerships, and take full ownership and responsibility in fulfilling our mission. Our information technology work is relevant, timely, and delivered with superior customer service that reflects our commitment to collaboration and the highest standards of quality.
- Transparency:** Uphold a standard of transparency, accountability, and reliability. We conscientiously run our IT operations to promote a City workforce that is worthy of the public trust.
- Innovation:** Constantly seek new ways to accomplish our work through efficiencies and collaboration to generate extraordinary transformative results. We are dedicated to delivering creative, innovative and forward-looking technology solutions.

1.3 ITSP Roadmap Framework

The ITSP Roadmap fosters a transformative framework for how the City leverages its Information Technologies, embracing Information Technology as a strategic enabler, embedding it as a critical and fundamental component in all the City does. The City will continue to ensure the application of Information Technologies stays aligned with, and supportive of, efficient and responsive delivery of services to all City's customers – residents, businesses, and visitors.

By aligning Information Technology in support of the City's business and service delivery processes, the City will become a more agile organization better able to support the Costa Mesa community. Moreover, the ITSP Roadmap will allow the City to leverage existing and emerging technologies. Through investment in technology, the City will develop and implement innovative and cost-effective approaches for improving the quality and delivery of municipal services.

1.4 ITSP Roadmap Objectives

The objectives of the ITSP Roadmap are to:

- Develop a high performance and reliable Citywide IT infrastructure to support the dynamic requirements of the City;
- Align the City's IT initiatives with the City's strategic plans while ensuring the City's responsibilities and priorities are recognized and taken into account;
- Invest in IT systems based on a rational and impartial assessment of both quantitative and qualitative benefits, and a realistic assessment of project costs, benefits, and risks;
- Reduce the cost of operations and service delivery, while improving the quality of services delivered to customers through responsible IT investment;
- Deliver IT services, internally to the City and externally to the residents of the City in a cost-effective manner.

1.5 ITSP Roadmap Guiding Principles

ThirdWave recommends the City adopt a set of guiding principles related to the implementation of Information Technologies. Some of the following have not been in place due to the City's size and limited number of resources.

ThirdWave recommends the following principles be adopted for implementing the ITSP Roadmap:



1. Leadership	Embrace technology as a strategic enabler and utilize IT to improve the way all City staff perform their jobs and deliver services to residents and businesses.
2. Communications	Foster effective communications between the City and the public to keep all parties, e.g., residents, business and visitors, informed on the progress of ITSP initiatives. The City will keep the public informed on the use of technology in the City via its website, and other means.
3. IT Governance	Adopt a formal management process to ensure that IT initiatives across all City Divisions are properly vetted by the IT organization for consistency with the ITSP Roadmap, IT industry best practices, emerging trends, are fiscally sound, and are effective in improving operating efficiencies and customer service prior to proceeding with them.
4. Enterprise Approach	Encourage an enterprise approach when procuring, implementing and managing the City's Information Technologies. The City will utilize state-of-the-practice technology ensuring investments are effectively leveraged across Divisions, business units and customers while employing economies of scale wherever possible. Information Technologies will foster cost containment and/or the highest return on investments possible.
5. Accountability	Create an environment that encourages accountability through service level agreements, performance measures/metrics, and individual responsibility, including the City IT staff and contracted service providers.
6. Proven Technology	Implement contemporary, but proven, technologies that maximize future options by emphasizing open standards. Applications should use Commercial Off-the-Shelf software wherever possible, and should be web based, wireless ready, employing a Service Oriented Architecture, and GIS compatible, where appropriate and applicable.
7. Efficiencies	Decisions regarding funding for future technology initiatives should be based on a Business Process Improvement assessment using a formal and standard Continuous Improvement methodology. The resulting data will be used to produce a comprehensive business case that takes both tangible and intangible costs and benefits of the project into account.

-
- | | |
|---------------------------------|--|
| 8. Strategic Investments | IT assets, systems, skills and support operations will be viewed as strategic investments that are critical in attaining internal City-wide business operational effectiveness and external service delivery objectives. |
|---------------------------------|--|
-
- | | |
|------------------------|--|
| 9. Partnerships | The City will maintain partnerships with outside Information Technology firms, consultants and regional government organizations to undertake collaborative efforts in the provision of information and services, and obtain expert advice and knowledge of IT trends. |
|------------------------|--|
-
- | | |
|--------------------------|---|
| 10. Accessibility | Implement Information Technology that provides all internal and external customers easy and timely access to online information and services. The City will strive to make data available for the benefit of the public subject only to the need to protect the privacy of individuals. |
|--------------------------|---|
-

Section 2 ITSP Initiatives



2.1 Technology Initiatives

The IT Strategic Plan document identifies management, business process and technology solutions for enhancing the City and its service delivery environment over the next five to ten years.

The initial list of potential ITSP Roadmap initiatives was consolidated, reduced and prioritized in this document, bringing the final number to **thirty (30)** technology initiatives, with an additional 34 to be determined initiatives. The final list offers a list of actionable recommendations related to five Information Technology categories: infrastructure, hardware, departmental software, enterprise software, IT operations and management policies and practices.



Some solutions in the IT Strategic Plan document not contained in this document include operational and/or policy recommendations related to the use, operation and management of the City's IT portfolio. These are activities the IT organization is chartered to provide on an ongoing basis.

IT solutions identified in the requirements definition phase of the project were vetted to produce the final list used in the prioritization process. Information Technology initiatives are described in some detail in the IT Strategic Plan document, Findings and Recommendations section, which will act as a reference document over the five-year duration of the ITSP Roadmap.

2.2 Prioritization Criteria & Process

The ITSP Roadmap initiatives were processed through a prioritization model that include a range of performance parameters aligned with common municipal business objectives and tangible internal/public benefits.

The criteria were used by the City/ThirdWave Project Team to identify a preliminary sorting of initiatives. A final prioritization was carried out which takes into account technology prerequisites, related applications, optimum sequencing of IT initiatives and investment balancing.



The figure below describes the criteria employed to prioritize ITSP Roadmap initiatives, using a weighted rating system as described below.

Figure 2.2.1: ITSP Implementation Roadmap Initiative Prioritization Criteria

Business Case Benefit Rating

- | | |
|------------------|--|
| 5 High: | Provides significant benefit to internal operating efficiencies, and extraordinary customer service. |
| 3 Medium: | Provides some benefit to internal operating efficiencies and very good customer service. |
| 1 Low: | Provides limited benefit to internal operating efficiency and good customer service. |

Prioritization Application of Criteria

1. Internal or External ITSP Requirements

- The number of times an initiative was identified in the requirements definition phase of the project, including the Rapid Workflow® workshops, Management Interviews, Online Staff Survey, and/or IT Focus Groups;
- Provides the architecture and infrastructure required to implement other key projects;
- Facilitates collaboration; and/or
- Provides an enterprise solution, highly leverageable, benefiting the City as a whole.

2. Improved Staff Productivity

- Staff time savings;
- Fosters internal operating efficiencies;
- Improves organizational practices, aligning them with enterprise/departmental goals;
- Enhances the ability to share data.

3. Improved Customer Services

- Significantly improves customer service;
- Provides online 24/7 convenience;
- Provides web-enabled services for faster/easier service to the public.

4. Cost Savings

- Provides the potential for hard dollar savings;
- Potential deferred expenses;
- Provides cost avoidance opportunities.

5. Revenue Generation

- Provides potential of increased revenues where the City collects fees for services.

Figure 2.2.2 below provides a list of the final technology initiatives identified in the prioritization process, grouped into yearly phases for management consideration and budgeting. Some of the initiatives listed below were broken out into phased deployments; therefore, the number of initiatives shown below and the actual number of initiatives in the implementation may differ. The primary entity responsible for each initiative, e.g., City IT, Vendor, or Consultant is also shown. **It bears noting that even when an external resource carries out an initiative, IT Staff will still need to provide oversight, which will impact the workload of the IT organization.**

Figure 2.2.2: Prioritized ITSP Implementation Roadmap Initiatives

Legend:

Type of Initiative		Primary Responsible Party:	
M	Management Initiatives	City IT	Policies, practices, system deployments
O	IT Operations	Vendor	Systems Implementations / Integration
INF	Infrastructure Systems	Consultant	Assessments, Planning, Training
HW	Hardware	Integrator	Development / Interfaces
D SW	Departmental Software		
E SW	Enterprise Software		
W	Web Services		

YEAR 1	Initiative		Responsible
1.	INF 3.1	HP Core Switches: City Hall	Vendor
2.	HW 3.1	Council Chambers AV	Vendor
3.	INF 3.2	HP Core Switches: PD	Vendor
4.	INF 6	Communications Raised Floors Replacement	Vendor
5.	INF 7	Replace Existing Firewalls	Vendor
6.	HW 1.1	PD Nimble SAN Replacement	Vendor

YEAR 2		Initiative	Responsible
7.	INF 9	PD Enterprise Servers Replacement	City IT
8.	HW 4	Public Safety Mobile Data Computers	City IT

YEAR 3		Initiative	Responsible
9.	INF 8	Dispatch Systems	Vendor
10.	INF 10	City Hall Enterprise Servers Replacement	City IT
11.	HW 1.2	City Hall Nimble SAN Replacement	City IT

YEAR 4		Initiative	Responsible
12.	HW 2.1	PC/Laptop Replacement Program	City IT
13.	INF 5.1	Meraki Wireless Upgrade	City IT
14.	M 1.1	Staff: Public Safety App Analyst	City IT
15.	INF 4	Implement SIEM System	Vendor
16.	E SW 4	Laserfiche Expansion & Adoption Plan	Consultant
17.	E SW 3	CIP Project Management Software	Vendor
18.	HW 3.2	Council Chambers AV	Vendor
19.	D SW 1	Public Works AutoCAD Software	City IT

YEAR 5		Initiative	Responsible
20.	D SW 3	Mobile Device Management Software (MaaS360)	City IT
21.	INF 1	City Hall + PD Multi Factor Authentication	Vendor
22.	E SW 1	Citizen Request Management	Vendor
23.	E SW 6.1	AI Tools	City
24.	E SW 5	DocuSign	City IT
25.	INF 2	City Hall EOC and PD UPS	City IT
26.	D SW 2	Business Opening Application	Vendor
27.	M 1.2	Staff: TESSA App Analyst	City IT
28.	E SW 2	City Council Initiative Tracking	Vendor
29.	INF 5.2	Meraki Wireless Upgrade	City IT
30.	INF 11	Redundant Internet	Consultant

A detailed description of each strategic initiative listed above is provided in the *IT Strategic Plan* document.

Section 3 Budget Estimate



3.1 Budget Overview

The budget estimate reflects a comprehensive analysis, drawing on specific data collected in the course of the ITSP Implementation Plan project. It provides a management planning and budgeting tool. While every effort has been made to project the approximate cost of the proposed ITSP initiatives (i.e., gross order of magnitude estimates), the City should be aware that technology hardware and software vendor prices vary widely, both in pricing models, product suites, bundling, hosting, and maintenance options.



Moreover, the cost of implementation vendors/systems integrators can vary even more than system vendors, depending on the geographic location, size of the firm, overhead costs, business model and even the state of the economy.

The following pages provide high level budget estimates, or investment requirements, for a phased 5-year implementation of the City's ITSP Implementation Plan. It should be noted that the budget estimate represents gross level of effort estimates using the most currently available data; **it does not represent a price quote**. Furthermore, the budget estimates do not include detailed and/or total training costs, data conversion costs, systems integration and other system related costs. These costs can only be developed after a detailed specification and scope of work has been articulated.

High level budget estimates have been determined by:

- Applying industry best practice estimating for the implementation of Information Systems;
- Past experience carrying similar IT initiatives;
- Data provided by the City, based on staff research; or
- Data researched by ThirdWave.

All proposed solutions identified in the ITSP Roadmap should be thoroughly reviewed and go through formal planning and development of project requirements, specifications, and preliminary work breakdown structures, resource allocation planning and development of MS Project Schedules prior to the issuance of solicitation documents or internal implementation by the City's IT organization.

3.2 ITSP Initiative Investment

ThirdWave recommends that Information Technology assume a level of strategic importance at the City, and that an IT Internal Service Fund be established (if one does not already exist) to successfully execute and sustain the implementation of the ITSP Roadmap. The figures on the following pages provide high level investment requirements for a phased multiple year implementation of the City's ITSP Roadmap.



A "0" cost indicates work carried out by City staff or no net maintenance and support costs are required, typically because the ITSP initiatives does not involve software purchases or related maintenance costs.

ITSP Initiative Types

- M: Management: initiatives related to the adoption of policies and practices, staff resources, or investments in training.
- OPS: Operational: initiatives related to the ongoing duties of the IT organization.
- INF: Infrastructure: initiatives related to networks, communications, or associated components.
- HW: Initiatives related to servers, personal computers, laptops, tablets, mobile devices and peripheral.
- D SW: Departmental Software: application software proving functionality need by a department or more.
- E SW: Enterprise Software: application software proving functionality need by all City departments, typically related to Enterprise Resources Planning solutions.
- WEB: Web Service or online applications.

Figure 3.2.1: ITSP Implementation Roadmap 5-Year Estimated Investment

IT Strategic Plan Budget						
YEAR 1		YR 1	YR 2	YR 3	YR 4	YR 5
1	HP Core Switches: City Hall	500,000	0	0	0	
2	Council Chambers AV	200,000	0	0	0	
3	HP Core Switches: PD	500,000	0	0	0	
4	Comms. Raised Floors Replacement	50,000	0	0	0	
5	Replace Existing Firewalls	200,000	0	0	0	
6	PD Nimble SAN Replacement	250,000	0	0	0	
		1,700,000	0	0	0	
YEAR 2		YR 1	YR 2	YR 3	YR 4	YR 5
7	PD Enterprise Server Replacement		700,000	0	0	
8	Public Safety Mobile Data Computers		1,000,000	0	0	
		0	1,700,000	0	0	
YEAR 3		YR 1	YR 2	YR 3	YR 4	YR 5
9	Dispatch Systems			400,000	0	
10	City Hall Enterprise Servers Replacement			1,050,000	0	
11	City Hall Nimble SAN Replacement			250,000	0	
		0	0	1,700,000	0	
YEAR 4		YR 1	YR 2	YR 3	YR 4	YR 5
12	PC/Laptop Replacement Program				481,500	
13	Meraki Wireless Upgrade				158,000	
14	Staff: Public Safety App Analyst				225,000	
15	Implement SIEM System				105,000	
16	Laserfiche Expansion & Adoption Plan				450,000	
17	CIP Project Management Software				70,000	
18	Council Chambers AV				200,000	
19	Public Works AutoCAD Software				10,500	
		0	0	0	1,700,000	
YEAR 5		YR 1	YR 2	YR 3	YR 4	YR 5
20	Mobile Device Mgmt Software (MaaS360)					9,990
21	City Hall + PD Multi Factor Authentication					120,000
22	Citizen Request Management					575,000
23	AI Tools					200,000
24	Docusign					100,000
25	City Hall EOC and PD UPS					225,000
26	Business Opening Application					43,000
27	Staff: TESSA App Analyst					225,000
28	City Council Initiative Tracking					60,000
29	Meraki Wireless Upgrade					42,000
30	Redundant Internet					100,000
		0	0	0	0	1,699,990
		1,700,000	1,700,000	1,700,000	1,700,000	1,699,990
					5 Year	8,499,990
					Average	1,699,998

ITSP Implementation Roadmap

3.2.1 Budget Footnotes

The footnotes below provide a synopsis of assumptions for each of the ITSP initiatives listed over the 5-year timeline. The foregoing assumes all projects deployments will be preceded by the development of formal functional and technical requirements, development of a comprehensive Request for Proposal document where appropriate and will utilize competitive solicitation processes to contain costs where the initiative will be carried out by a third party.

YEAR 1

1. INF 3.1 **HP Core Switches: City Hall:** This cost entails hardware installed by a vendor.
2. HW 3.1 **Council Chambers AV:** This cost reflects professional services to perform requirements definition, functional and technical specifications for a formal solicitation process, systems and professional implementation services. This initiative will require the participation of City subject matter experts.
3. INF 3.2 **HP Core Switches: PD:** This cost entails hardware installed by a vendor.
4. INF 6 **Communications Raised Floors Replacement:** This cost entails installation carried out by a vendor.
5. INF 7 **Replace Existing Firewalls:** This cost entails software and hardware installed by a vendor.
6. HW 1.1 **PD Nimble SAN (Storage and Network) Replacement:** This cost entails hardware installed by a vendor.

YEAR 2

7. INF 9 **PD Enterprise Server Replacement:** This cost entails hardware installed by IT Staff.
8. HW 4 **Public Safety Mobile Data Computers:** This cost entails hardware installed by IT Staff.

YEAR 3

9. INF 8 **Dispatch Systems:** This cost entails software and hardware installed by a vendor.
10. INF 10 **City Hall Enterprise Server Replacement:** This cost entails hardware installed by IT Staff.
11. HW 1.2 **City Hall Nimble SAN (Storage and Network) Replacement:** This cost entails hardware installed by a vendor.

YEAR 4

12. HW 2.1 **PC/Laptop Replacement Program:** This reflects the cost of hardware, and this work will be carried out by City IT staff.
13. INF 5.1 **Meraki Wireless Upgrade:** This reflects the cost of hardware and this work will be carried out by City IT staff.
14. M 1.1 **Staff: Public Safety App Analyst:** This cost reflects staff resources.
15. INF 4 **Implement SIEM (Security Information and Event Management) System:** This cost entails software and hardware installed by a vendor.
16. E SW 4 **Laserfiche Expansion & Adoption Plan:** This cost reflects professional consulting services provided by a consultant or systems integration firm.
17. E SW 3 **CIP Project Management Software:** This cost reflects professional services to perform requirements definition, functional and technical specifications for a formal solicitation process, systems and professional implementation services. This initiative will require the participation of City subject matter experts.
18. HW 3.2 **Council Chambers AV:** This cost reflects professional services to perform requirements definition, functional and technical specifications for a formal solicitation process, systems and professional implementation services. This initiative will require the participation of City subject matter experts.
19. D SW 1 **Public Works AutoCAD Software:** This initiative entails the cost of software.

YEAR 5

20. D SW 3 **Mobile Device Management Software (MaaS360):** This initiative entails the cost of software.
21. INF 1 **City Hall + PD Multi Factor Authentication:** This cost entails software and hardware installed by a vendor.
22. E SW 1 **Citizen Request Management:** This cost entails software installed by a vendor.
23. E SW 6.1 **AI Tools:** This cost entails software and professional services.
24. E SW 5 **DocuSign:** This initiative entails the cost of software.
25. INF 2 **City Hall EOC and PD UPS (Uninterrupted Power Supply):** This cost reflects professional services to perform requirements definition, functional and technical specifications for a formal solicitation process, systems and professional implementation services. This initiative will require the participation of City subject matter experts.
26. D SW 2 **Business Opening Application:** This cost reflects professional services to perform requirements definition, functional and technical specifications for a formal solicitation process, systems and professional implementation services. This initiative will require the participation of City subject matter experts.

27. M 1.2 **Staff: TESSA App Analyst:** This cost reflects staff resources.
28. E SW 2 **City Council Initiative Tracking:** This cost entails software and hardware installed by a vendor.
29. INF 5.2 **Meraki Wireless Upgrade:** This reflects the cost of hardware and this work will be carried out by City IT staff.
30. INF 11 **Redundant Internet:** This cost entails software and hardware.

3.2.2 To Be Determined Initiatives

The following figures provide a list of key initiatives identified in requirements definition. They are grouped under the heading TBD, to be determined as funding becomes available. For a description of these initiatives, see the IT Strategic Plan document.

The table below identifies the City's seven highest-priority TBD projects to be delivered as funding becomes available.

Figure 3.2.2.1: High Priority To Be Determined Initiatives

TBD Projects			Cost	Maintenance	Subtotal
1.	TBD 1	CAD Redundancy	2,050,000	500,000	2,550,000
2.	TBD 2	City Hall IT Generator	350,000	0	350,000
3.	TBD 3	CMMS	400,000	50,000	450,000
4.	TBD 4.1	Centralized Software Training	100,000	0	100,000
5.	TBD 5	VMware Redundant Server Farm	1,000,000	500,000	1,500,000
6.	TBD 6.1	Council Chambers AV	200,000	0	200,000
7.	TBD 6.2	Council Chambers AV	200,000	0	200,000
TOTAL			\$4,300,000	\$1,050,000	\$5,350,000

The table on the following page provides a list of future initiatives identified as lower priority than those presented above. The cost column represents implementation and maintenance costs.

Figure 3.2.2.2: To Be Determined Initiatives

TBD Projects			Cost
8.	TBD 7	Fleet Management	80,000
9.	TBD 8.1	AI Tools	100,000
10.	TBD 9	CAD System (\$3,000,000 already budgeted)	0
11.	TBD 10	Staff: Laserfiche - AssetWorks App. Analyst	225,000
12.	TBD 8.2	AI Tools	200,000
13.	TBD 13	Real Time Information Center (to be determined)	0
14.	TBD 14	Help Desk Ticketing System	90,000
15.	TBD 15	Facilities Management - AssetWorks Module	20,000
16.	TBD 16	TESSA Customer Portal/Reporting	200,000
17.	TBD 17	Website and 311	200,000
18.	TBD 11	Staff: Database Administrator	250,000
19.	TBD 18	Conference Room Equipment	70,000
20.	TBD 19	Employee Information Application	80,000
21.	TBD 20	IT Requirements Definition	10,000
22.	TBD 12	Staff: ERP Application Analyst	225,000
23.	TBD 21	City Access Control Systems	500,000
24.	TBD 22	Enterprise VOIP Telephony	350,000
25.	TBD 23.1	PC/Laptop Replacement Program	225,000
26.	TBD 23.2	PC/Laptop Replacement Program	675,000
27.	TBD 23.3	PC/Laptop Replacement Program	450,000
28.	TBD 23.4	PC/Laptop Replacement Program	450,000
29.	TBD 4.2	Centralized Software Training	50,000
30.	TBD 4.3	Centralized Software Training	150,000
31.	TBD 4.4	Centralized Software Training	150,000
32.	TBD 4.5	Centralized Software Training	150,000
33.	TBD 6.3	Council Chambers AV	561,250
34.	TBD 24	Implement GIS Master Plan	500,000
TOTAL			\$5,961,250

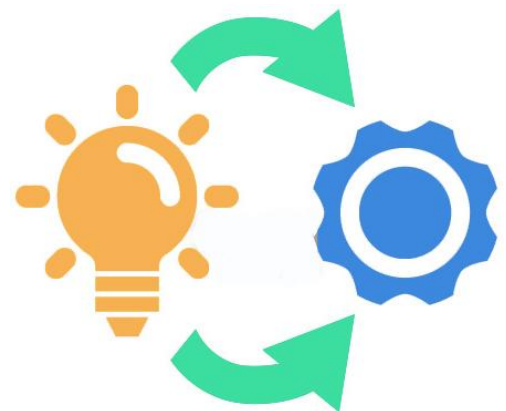
Section 4 5-Year ITSP Roadmap



4.1 ITSP Implementation Roadmap Principles

The ITSP Roadmap illustrates the prioritized sequencing and projected timelines for strategic initiatives over a 5-year period. The Roadmap represents the logical and well-planned implementation phase of the IT Strategic Plan.

The yearly ITSP project schedules reflect the final priorities identified as of this writing. However, it bears noting that this Roadmap is a living document. As a planning and implementation document, **this document should be reviewed on a yearly basis, and adjusted as the City's organization needs, financial position, technologies emerge, and the City's Information Technology portfolio changes.**



4.1.1 Technology Implementation Principles

The ITSP Roadmap adheres to a framework comprised of a number of general operating principles, as outlined in the following page:

1. *Build a solid and secure infrastructure foundation.*

The ITSP Roadmap assumes that the City's network and communications infrastructure is sound and secure, allowing for the deployment of various strategic technologies. This is a prerequisite to the deployment of departmental and enterprise applications.

2. *Focus on economies of scale in the investment and deployment of initiatives.*

For instance, the implementation of an Enterprise Resource Planning (ERP) system will meet the needs of *several departments*; an Online Payments application can be used to address several online payment requirements across numerous departments and applications.

3. *Recognize deployment prerequisites.*

The ITSP Roadmap recognizes that deployment of certain solutions requires up-stream system preparation, i.e., upgrading the City's network, ubiquitous remote Wi-Fi access to data for City staff working in the field, and so on. In some cases, this may require the City to acquire enabling hardware and/or software technologies either in-house or through "cloud-based" service providers.

4. *Utilize parallel deployment approaches to fast-track initiatives.*

To the extent possible, based on available resources, some ITSP Roadmap initiatives will occur in parallel using appropriate IT staff resources and/or service providing firms to execute IT projects and initiatives. **It bears noting that even with an external resource carries out an initiative, IT Staff will still need to provide oversight, which will impact the workload of the IT organization.** However, multiple enterprise systems should not be deployed at the same time as that might unnecessarily tax the workload of existing City IT staff and end users.

5. *Use IT best practices for the execution and management of ITSP Roadmap initiatives.*

All development and implementation projects will use formal industry standard PMBOK® (the Project Management Institute's *Project Management Body of Knowledge*) Project Management methodology and a uniform Enterprise Architecture, Structured Development Life Cycle (SDLC) methods, development tools and databases. The ITSP assumes IT staff have been trained in project management fundamentals.

6. *Allocate sufficient IT resources to ensure sustainability.*

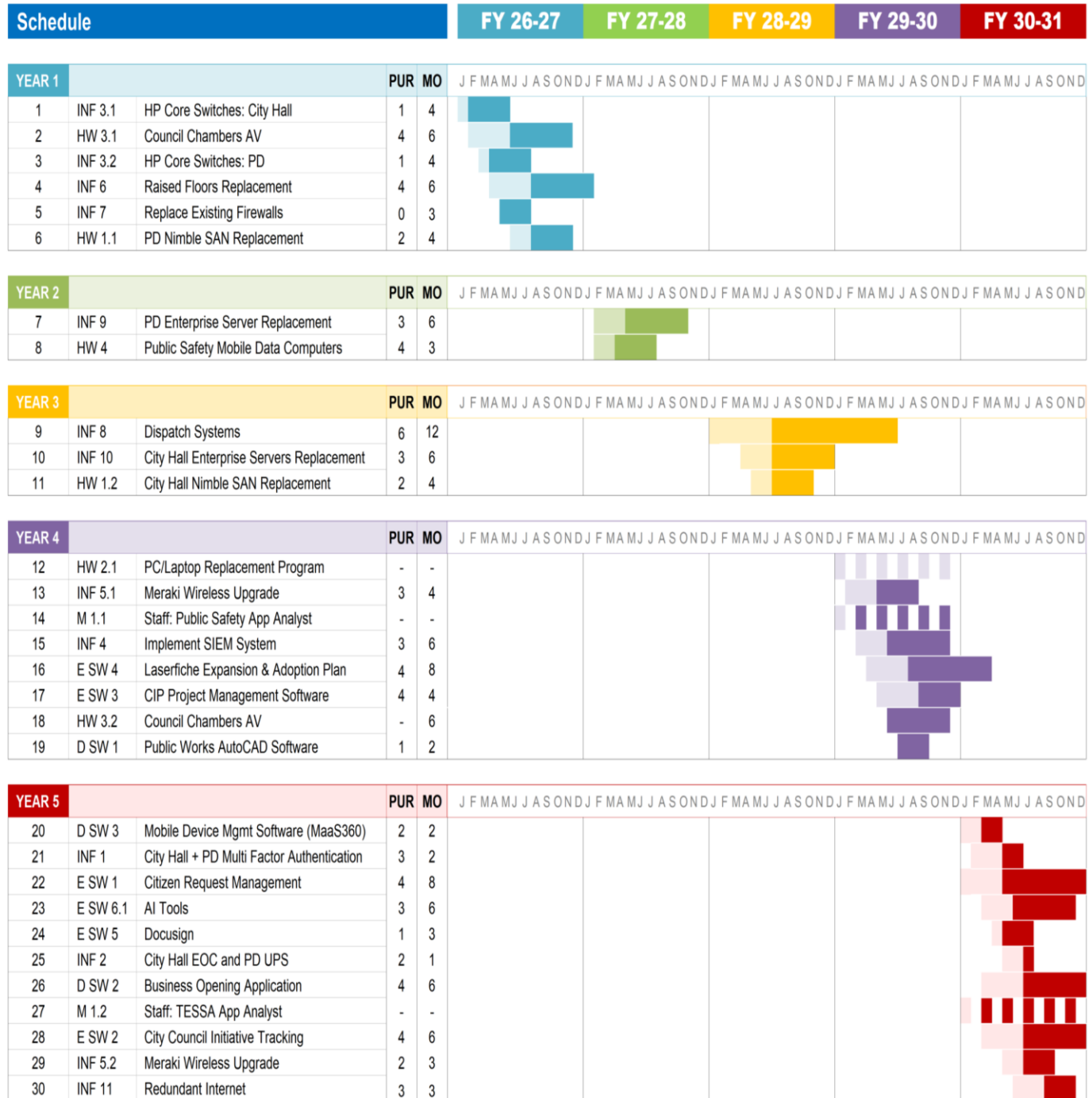
The ITSP Roadmap currently includes ITSP initiatives of varying scale and complexity over the next several years. This represents a significant workload for the IT organization – on top of existing IT projects and ongoing IT operational activities. The ITSP implementation will require the City to place a high level of importance on IT staff resource allocation (City staff, contractors and/or consultants) to successfully deploy and effectively sustain the IT Strategic Plan.

4.2 5-Year ITSP Implementation Timeline

The figure on the following page (4.2.1) provides an overview of the proposed 5-year ITSP Roadmap. In general, the 5-year plan follows the prioritization identified in Section 2 of this document. The following should be noted:



- **Projects requiring requirements definition/IT Governance and/or a solicitation process are shown with a light-colored bar preceding the solid dark color bar**, which indicates the deployment timelines. ITSP Roadmap initiatives that require a solicitation process tend to be the larger and more complex projects. These projects will generally be carried out by external professional resources supported by internal City IT staff/subject matter experts.
- Projects anticipated to be carried out by existing IT staff resources without a solicitation phase are shown with a solid bar indicating approximate deployment timelines. (The solid bar indicates the projected implementation timelines, not the upfront requirements definition and solicitation timelines.)
- From a planning perspective, the solicitation timelines are important because they imply:
 - A formal requirements definition effort;
 - The formation staff resources for the development of RFP documents;
 - The formation of end user evaluation/selection committees;
 - The assignment of appropriate IT staff resources for the execution of the initiatives;
 - The assignment of appropriate City staff backfilled resources for the execution of large IT projects, i.e., Enterprise Resource Planning solutions; and
 - The identification of appropriate Change Management activities.
- Ongoing ITSP Roadmap initiatives are shown with a dashed line.
- The number in the column titled “MO” indicates the approximate number of months estimated to carry out an initiative.
- **The timing of ITSP Roadmap initiatives is subject to change based on the availability of funding**, either at the department or enterprise level.
- **The ITSP Roadmap proposed here is not cast in concrete** and should be reviewed on a yearly basis, revised and adjusted as appropriate.

Figure 4.2.1: Overall 5-Year Implementation Roadmap


4.2.1 Implementation Roadmap Footnotes

The numbers shown in the “MO” column in the figure above indicates an estimated number of months for the implementation of an ITSP initiative, shown with the dark colored bar. It does not include the front-end work to develop requirements or carry out a solicitation which will extend the overall project duration.

Implementation Assumptions:

The footnotes below provide a synopsis on the implementation approach for each of the ITSP initiatives listed over the 5-year timeline. The number in parenthesis indicates the estimated duration of each initiative in months. The foregoing project timelines assume all project deployments will use formal PMBOK™ Project Management and Change Management Best practices.

YEAR 1		
1.	INF 3.1	HP Core Switches: City Hall: This assumes a 4-month timeline for City IT staff to purchase & Vendor to install systems.
2.	HW 3.1	Council Chambers AV: This assumes a 4-month timeline to develop detailed technical and functional requirements, RFP and go through a formal procurement process to procure a system solution, followed by a 6-month timeline to deploy.
3.	INF 3.2	HP Core Switches: PD: This assumes a 4-month timeline for City IT staff to purchase & Vendor to install systems.
4.	INF 6	Communications Raised Floors Replacement: This assumes a 4-month timeline to develop detailed technical and functional requirements, RFP and go through a formal procurement process to procure a system solution, followed by a 6-month timeline to deploy.
5.	INF 7	Replace Existing Firewalls: This assumes a 3-month timeline for Vendors to provide professional services.
6.	HW 1.1	PD Nimble SAN (Storage and Network) Replacement: This assumes a 2-month timeline required by City IT staff to purchase & a 4-month timeline to install systems.
YEAR 2		
7.	INF 9	PD Enterprise Servers Replacement: This assumes a 3-month timeline required by City IT staff to purchase & a 6-month timeline to install systems.
8.	HW 4	Public Safety Mobile Data Computers: This assumes a 4-month timeline required by City IT staff to purchase & a 3-month timeline to install systems.

YEAR 3

9. INF 8 **Dispatch Systems:** This assumes a 6-month timeline to develop detailed technical and functional requirements, RFP and go through a formal procurement process to procure a system solution, followed by a 12-month timeline to deploy.
10. INF 10 **City Hall Enterprise Servers Replacement:** This assumes a 3-month timeline required by City IT staff to purchase & a 6-month timeline to install systems.
11. HW 1.2 **City Hall Nimble SAN Replacement:** This assumes a 2-month timeline required by City IT staff to purchase & a 4-month timeline to install systems.

YEAR 4

12. HW 2.1 **PC/Laptop Replacement Program:** This is an ongoing project.
13. INF 5.1 **Meraki Wireless Upgrade:** This assumes a 3-month timeline for City IT staff to purchase & a 4-month timeline to install systems.
14. M 1.1 **Staff: Public Safety App Analyst:** This entails the recruitment and hiring of IT staff and will be an ongoing initiative.
15. INF 4 **Implement SIEM (Security Information and Event Management) System:** This assumes a 3-month timeline to develop detailed technical and functional requirements, RFP and go through a formal procurement process to procure a system solution, followed by a 6-month timeline to deploy.
16. E SW 4 **Laserfiche Expansion & Adoption Plan:** This assumes a 4-month timeline to retain a Consultant and an 8-month timeline to complete this initiative.
17. E SW 3 **CIP Project Management Software:** This assumes a 4-month timeline to develop detailed technical and functional requirements, RFP and go through a formal procurement process to procure a system solution, followed by a 4-month timeline to deploy.
18. HW 3.2 **Council Chambers AV:** This is an ongoing project.
19. D SW 1 **Public Works AutoCAD Software:** This assumes a 1-month timeline required by City IT staff to purchase & a 2-month timeline to install systems.

YEAR 5

20. D SW 3 **Mobile Device Management Software (MaaS360):** This assumes a 2-month timeline required by City IT staff to purchase & a 2-month timeline to install systems.
21. INF 1 **City Hall + PD Multi Factor Authentication:** This initiative assumes a 3-month timeline to develop detailed technical and functional requirements, RFP and go through a formal procurement process to procure a system solution, followed by a Systems Integrator deployment estimated to take 2 months.
22. E SW 1 **Citizen Request Management:** This assumes a 4-month timeline to develop detailed technical and functional requirements, RFP and go through a formal procurement process to procure a system solution, followed by an 8-month timeline to deploy.
23. E SW 6.1 **AI Tools:** This assumes a 3-month timeline required by City IT staff to purchase & a 6-month timeline to install systems.
24. E SW 5 **Docusign:** This assumes a 3-month timeline by City IT staff to complete this initiative.
25. INF 2 **City Hall EOC and PD UPS (Uninterrupted Power Supply):** This assumes a 2-month timeline required by City IT staff to purchase & a 1-month timeline to install systems.
26. D SW 2 **Business Opening Application:** This initiative assumes a 4-month timeline to: develop detailed technical and functional requirements, RFP and go through a formal procurement process to procure a Business License solution, followed by a Systems Integrator deployment estimated to take 6 months.
27. M 1.2 **Staff: TESSA App Analyst:** This entails the recruitment and hiring of IT staff and will be an ongoing initiative.
28. E SW 2 **City Council Initiative Tracking:** This assumes a 4-month timeline to develop detailed technical and functional requirements, RFP and go through a formal procurement process to procure a system solution, followed by a 6-month timeline to deploy.
29. INF 5.2 **Meraki Wireless Upgrade:** This assumes a 2-month timeline for City IT staff to purchase & a 3-month timeline to install systems.
30. INF 11 **Redundant Internet:** This initiative assumes a 3-month timeline to: develop detailed technical and functional requirements, RFP and go through a formal procurement process to procure a Business License solution, followed by a Systems Integrator deployment estimated to take 3 months.

Section 5 City & Customer Benefits



5.1 ITSP Roadmap Benefits

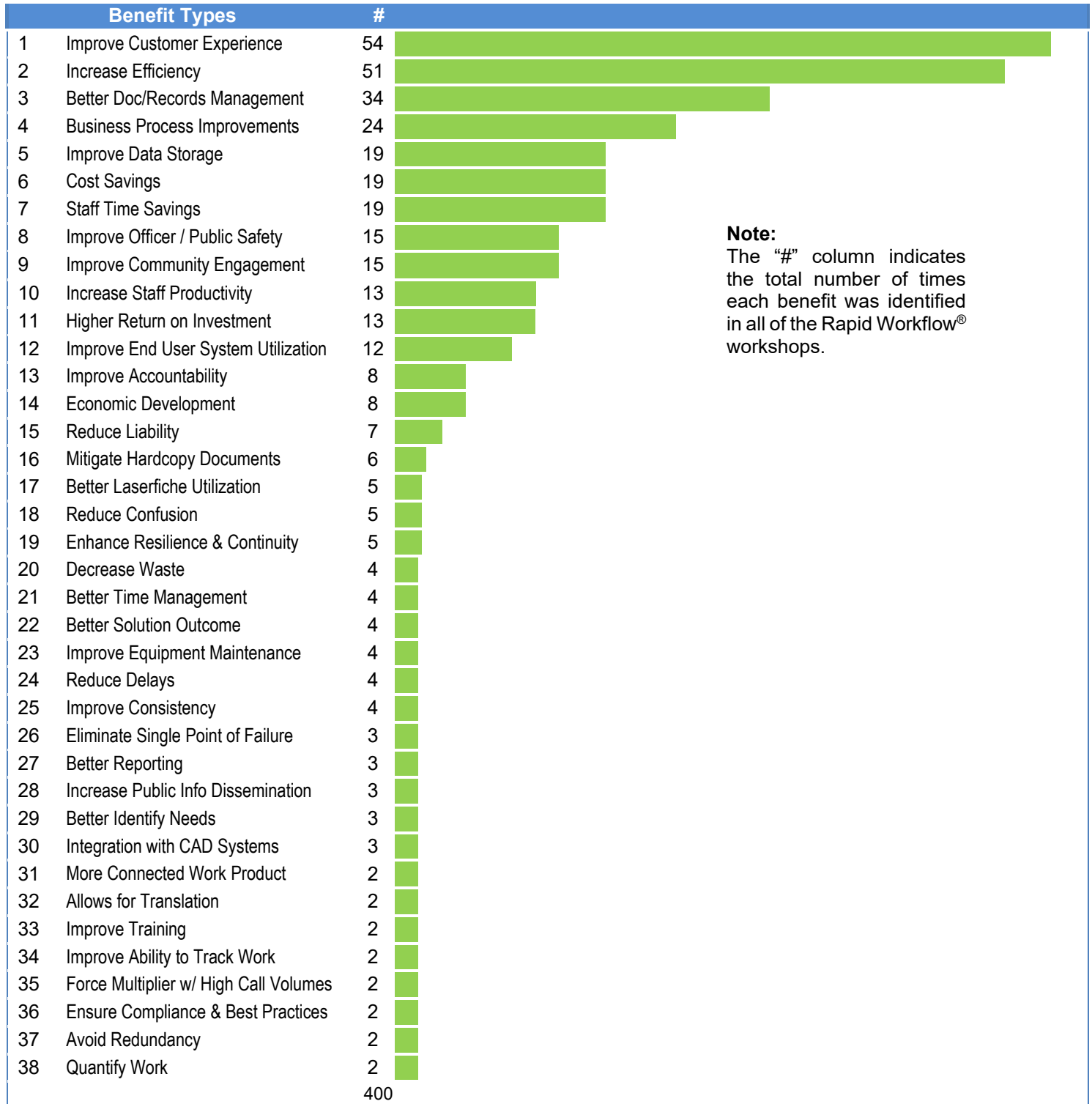
The ITSP identified numerous quantitative and qualitative benefits, offering opportunities for enhancing internal operations and service delivery to the public. **Four hundred (400) potential benefits, from thirty-eight types (38) of benefits**, were identified in eleven (11) mission critical business processes mapped in Rapid Workflow® workshops. This represents an **average of 10.5 business process/service delivery benefits per workshop**.



While the benefits were not quantified (e.g., there is no measure of benefits in terms of dollars) the list below provides a general indicator on the magnitude of the opportunity. It is notable that the top 5 benefits to be derived from implementing the ITSP include:

- Improve Customer Experience
- Increase Efficiencies
- Better Document/Records Management
- Business Process Improvements
- Improve Data Storage

The figure on the following page, *Figure 5.1.1: Summary of Potential Citywide Benefits*, provides a compiled list of sorted ITSP Implementation Roadmap benefits identified by City staff and management if the ITSP initiatives were implemented. The bar chart illustrates the thirty-eight (38) most mentioned potential benefits.

Figure 5.1.1: ITSP Potential Quantitative & Qualitative Benefits


5.1.1 Implementation Roadmap Benefit Footnotes

1. Improve Customer Experience

Execution of the ITSP Roadmap will improve the levels of customer experience, internally amongst City staff and externally to the Costa Mesa community. Internally, the ITSP will foster workflow automation, mitigate disparate systems and data, and information will be processed electronically instead of in hardcopy. Externally, City staff will use automation to gather and process public requests for services, including providing online services and e-commerce, providing convenient access to city services. In both cases, workplace automation replaces the need to manually access, process and/or manage information with hardcopy documents.

2. Increase Efficiency

Execution of the ITSP Roadmap will further the efficient use of staff time, in terms of executing common work tasks, looking for information, not re-keying data into redundant systems, and/or looking for (and gathering) information from numerous disparate systems. Execution of the ITSP Roadmap will improve staff productivity by fostering a workplace where more can be done with existing staff resources. It bears noting that this does not equate to reduced staffing, but rather existing staff will do more work in less time, resulting in enhance customer service.

3. Better Document/Records Management

The adoption and funding of the ITSP Roadmap will produce an enterprise-wide document management strategy and roll out that will allow the City make the best, most optimum use, of existing electronic document management systems. This will foster the ability to find documents related to internal operations and service delivery in a convenient and expeditious manner.

4. Business Process Improvement

The adoption and funding of the ITSP Roadmap will provide significant opportunity to streamline the execution of City work activities in many areas. The ITSP will foster the introduction of workflow automation provided in most of the proposed software solutions, and the opportunity to optimize outdated business processes. This will result in faster responses and resolution to customer requests, complaints, and expedited execution of internal City operations and enhanced service delivery and customer experience for community members.

5. Improve Data Storage

Funding the ITSP includes both the adoption of emerging technologies which offer inherently more intelligence and also promote the adoption of best practices related to information management, storing, accessing and leveraging information across the enterprise, e.g., across department for different purposes by on the department or staff leveraging it.

6. Cost Savings

Implementing the ITSP Roadmap will reduce City's operating costs in several areas for example: the amount of hardcopy documents, duplicate staff work, wasted staff time, the cost of driving back and forth to City facilities by field staff, and eliminating redundant software maintenance costs for redundant software. Constituents will also see cost savings by accessing City information and services online, without having to drive to the City to receive services or gather information. The introduction of contemporary hardware also offers energy cost savings.

7. Staff Time Savings

Funding the ITSP Roadmap will allow for better use of staff time and time-savings; given the resource challenges small cities face, getting more productive outcomes with the same number of staff may mitigate the need for more staff across the City. The implementation of the ITSP Roadmap will allow existing City staff to better meet service demands of the City's customers.

8. Improve Officer/Public Safety

Funding the ITSP Roadmap will allow for improved officer and public safety, in addition to promoting continuity of service, consistent dispatching, continuity of operations, faster access to emergency systems, and faster, more accurate responses to emergencies.

9. Improve Community Engagement

Implementing the ITSP Roadmap will improve community perception, responsiveness and engagement. Several of the initiatives are public facing, e.g., customer relationship management which will improve customer service, facilitate streamlining business licensing and the establishment of new businesses, and improve customer experience.

10. Increase in Staff Productivity

Approving and funding of the ITSP Roadmap will allow the City to re-envision its internal operations and mission critical business processes, and how services are provided to the public. Implementing contemporary technologies will allow developing and adopting productive processes, practices and technologies, including economies of scale. The ITSP will mitigate or eliminate disparate and duplicate systems

The benefits identified above, and the remaining quantitative and qualitative benefits not shown here, provide a compelling business case for approving and funding the City's ITSP Roadmap.

Section 6 Next Steps



6.1 Adoption & Funding

Based on the voluminous amount of data collected from City staff and management, the findings and recommendations of the ITSP Implementation Roadmap, and the opportunities for making substantial progress in the use of emerging Information Technologies, ThirdWave recommends that the City approve and fund the ITSP.

Doing so will result in business process improvement, increased operational efficiencies, and enhanced service delivery to residents, businesses and tourists to the City, while containing operational costs.

Adoption of the ITSP represents a substantial opportunity to position the City in terms of emerging automation and enhanced sustainability for the next 5 to 10 years.



NEXT STEPS