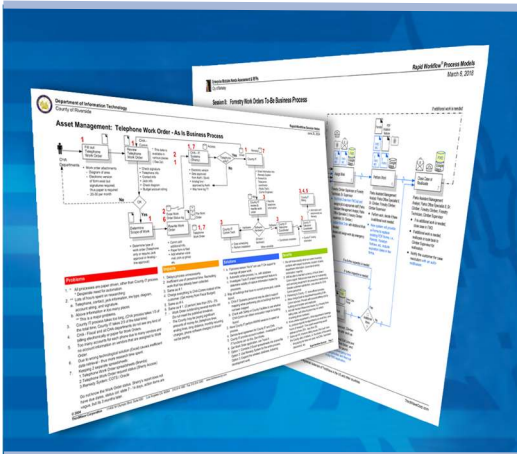


Rapid Workflow[®]

Problems, Impacts, Solutions, Benefits



CITY OF
CHULA VISTA

Proposal for City of Chula Vista Information Technology Strategic Plan & Roadmap

January 24, 2023

35 YEARS

Thought Leadership, Exceptional
Performance & Results since 1987



ThirdWave

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





ThirdWave

January 24, 2023

Jose Cisneros
IT Director
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 91910
jcisneros@chulavistaca.gov

Subject: ThirdWave Proposal

Reference: City of Chula Vista Information Technology Strategic Plan telephone conversation on January 18, 2023

Dear Mr. Cisneros,

It was a pleasure speaking with you and your staff on January 18 regarding your IT organization and the City's Information System's needs. Per your request, ThirdWave is pleased to submit this professional services proposal to produce an Information Technology Strategic Plan (ITSP). This proposal represents a supremely qualified firm offering the following:

- ***A nationally recognized firm specializing in Information Technology Strategic Plans (ITSPs) for the public sector, e.g., 15% of all cities in California*** have retained ThirdWave to produce their ITSPs. These include 6 of the largest 10 cities in the state and 7 of the 11 largest cities in the US. Our vast body of work spans 35 years for small, medium and large cities (e.g., Austin, Berkeley, Pasadena, Sacramento, San Jose, Los Angeles, Las Vegas; the Counties of Galveston and Fort Bend, TX, Stanislaus and Orange, CA, Missoula, MT; State agencies such as CalSTRS, DOIT, DEQ, MT; and federal agencies such as NOAA, MD). We have carried out 170 (one-hundred and sixty-eight) government ITSPs in 27 states, from Alaska to New York and Calgary, Canada to Galveston, Texas.
- ***IT Strategic Planning thought leadership and innovation.*** ThirdWave is the only firm in the US with an ITSP methodology rigorous enough to be patented: Rapid Workflow^{®1}. Our ITSPs focus on management, operational and technology needs as performance parameters, and are consistently recognized as comprehensive, thorough and exceptional by our clients. We employ a combination of interviews, focus groups, online surveys, and business process mapping workshops to produce strategic functional and technical requirements, aligned with our client's vision and strategies.
- ***A long and consistent track record producing ITSPs that get adopted and funded.*** Exceedingly rare in the IT industry, 98.2% of the ITSPs we have produced (167 out of 170) have been approved, funded and implemented. This is unequaled by any firm in the US IT industry. This has resulted in business process improvement, increased operational efficiencies, and enhanced service delivery.
- ***An expert team member to address the risk assessment and detailed review of potential cybersecurity threats: Altius IT (Subcontractor).*** Although ThirdWave can carry out high level cyber security assessments, in response to the City's interest for a cyber assessment, we have teamed with our strategic partner Altius, who offers a full range of asset protection, security audit, and risk management services. Founded in 1993, Altius Information Technologies, Inc. is a California Corporation. Over 1,000 organizations have relied on their expertise to help develop and implement strategies to reduce risks.
- ***Disciplined, robust PMBOK[™] Project Management with a track record of 98% project completion on or under schedule/budget:*** The proposed ThirdWave Project Manager, Roy Hernandez, has 35 years of experience managing approximately three-hundred (300) successful enterprise local government IT projects, many multi-million dollars in size. He is the author of the book, PMBOK[™] Project Management Essentials for Successful Project Delivery, and has taught the PMI PMBOK methodology to our clients for 22 years.

1. *ThirdWave Rapid Workflow Process Modeling[®]* - Patent Registration No. 2,873,704 with the US Patent and Trademark Office, also a registered trademark of ThirdWave Corporation in the United States and other countries.

35
YEARS

Thought
Leadership,
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Performance &
Results since
1987



ThirdWave

January 24, 2023

Jose Cisneros
IT Director
City of Chula Vista

Subject: ThirdWave Proposal

Reference: City of Chula Vista Information Technology Strategic Plan & Roadmap

- **A viable firm with expertise in all government Information technologies and IT Operations.** We have expertise with a broad range of IT, e.g., networking/communications infrastructure, security, hardware, Enterprise Applications (Finance, HR), departmental applications (GIS, Asset Management, etc.) and have received national/international AIIM awards for Enterprise Content Management System implementation projects over \$1,000,000. ThirdWave is also an expert with E-Government applications. Our ITSPs provide pragmatic, actionable recommendations, detailed budget estimates supported by a compelling business case.
- **A well thought out and detailed project work plan and reasonable timeline:** We have developed a detailed statement of work and MS Project Schedule. The workplan and schedule clearly illustrate all project phases, tasks, subtasks, corresponding deliverables, and start/end dates. It also indicates tasks where City staff will review/comment on deliverables, a built-in quality control mechanism to ensure resource allocation planning and desired outcomes.
- **A firm who represents the best interest of our clients:** ThirdWave is a completely objective and independent consulting firm. We do not sell anything or have relationships of any type with any hardware, software or hosting vendors. We represent the best interest of our clients – not computer vendors.
- **A project team with peerless credentials, experience and professional qualifications.** The proposed project team is made up of a seasoned technical professionals who will perform the work for the entire duration of the project.

The person whose signature appears on this proposal is authorized to bind our firm into contractual agreements and is the person questions or correspondence should be directed to. The proposal and cost schedule shall be valid and binding for ninety (90) days following the date of this document and will become part of the contract that is negotiated and executed.

ThirdWave is an expert and leading ITSP advisory firm in the US, with an unrivaled industry reputation. We offer demonstrated competence, professional qualifications, and most importantly, a proven award-winning capability. As the City moves forward with this important project, our firm is poised and ready to deliver.

We look forward to providing the same level of success to the City of Chula Vista as we have done for our other 170 IT Strategic Planning customers. We anxiously await the opportunity to address any questions you may have in a shortlist interview. Thank you!

Sincerely,

Roy Hernandez
President / CEO
Roy.hernandez@thirdwavecorp.com

35
YEARS

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Leadership,
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Table of Contents

Transmittal Letter

Section 1	Vendor Information	1
1.1	Company Overview.....	1
	Figure 1.1.1: ThirdWave Areas of Expertise and Core Competencies ...	2
	Figure 1.1.2: ThirdWave’s Project National Presence.....	2
1.2	Only Patented Government Strategic Planning Methodology	3
	Figure 1.2.1: Rapid Workflow Process Modeling®: Patent Registration No. 2,873,704, US Patent and Trademark Office	3
	Figure 1.2.2: ThirdWave’s Thought Leadership Qualifications	4
Section 2	Proposal.....	5
2.1	Approach & Methodology	5
	Figure 2.1.1: ThirdWave’s Triangulation Framework© 1989	6
	Figure 2.1.2: ThirdWave Waterfall Best Practice ITSP Approach.....	7
	A. Management Interviews	7
	B. Information Technology Focus Groups	8
	C. Online Surveys.....	8
	D. Patented Business Process Analysis	8
2.2	Work Plan	9
	Phase 0 Project Management	9
	Phase 1 Discovery	10
	Phase 2 Assessment.....	14
	Phase 3 IT Strategic Plan & Roadmap	20
2.3	Project Schedule.....	24
	Figure 2.3.1: Preliminary Project Schedule	25
2.4	Altius Information Technologies, Inc. (Subcontractor)	27
	2.4.1 Company Background	27
	2.4.2 Nationally Recognized Leadership	27
	2.4.3 Expert Authority.....	27
	2.4.4 Product & Services.....	27
	Figure 2.4.4.1: Altius IT’s Safeguards	28
	Figure 2.4.4.2: Cyber Security Certifications	28
Section 3	Team Qualifications & Resumes	29
3.1	ThirdWave Team of ITSP Experts	29
	Figure 3.1.1: Project Organization Chart.....	29
	Figure 3.1.2: Key Project Staff Experience & Expertise	30
3.2	Resumes.....	32
3.2.1	Resumes of Key Staff	32



Section 4 Cost Proposal..... 53

4.1 Fixed Fee Cost Proposal 53
Figure 4.1.1: Cost Summary 53

4.2 Detailed Payment Schedule 54
Figure 4.2.1: Detailed Payment Schedule..... 54

Section 5 References..... 56

5.1 Specialist in Government IT Strategic Planning 56
Figure 5.1.1: Partial List of Government ITSP Projects 57

5.2 Client References..... 58

5.2.1 City of Ventura: Information Technology Strategic Plan & Roadmap..... 58

5.2.2 City of Berkeley: Digital Strategic Plan & Roadmap 59

5.2.3 Golden Gate Bridge Highway & Transportation District: IS Strategic Plan & Roadmap..... 60

5.2.4 City of Costa Mesa: IT Strategic Plan & Roadmap 62

5.2.5 City of Pasadena: Digital Strategic Plan & Roadmap and Refresh 63

5.2.6 City of Sacramento: Digital Strategic Plan & Roadmap and Refresh..... 65

Section 6 Attachments 68

6.1 Sample Documentation 68

Figure 6.1.1: Staff Rating of Overall Condition of Information Systems..... 69

Figure 6.1.2: Staff Rating of Most Needed IT Improvements..... 69

Figure 6.1.3: Staff Rating of Important for Website to Provide Online Services..... 70

Figure 6.1.4: IT Staff Focus Group Problem Statement Dashboard .. 70

Figure 6.1.5: Management Interview Data: IT Staffing, Training & Budget Ratings 71

Figure 6.1.6: Management Team Technology Challenges 72

Figure 6.1.7: Rating of Emerging Technologies 73

Figure 6.1.8: IT Staffing, Knowledge and Resources Allocation 74

Figure 6.1.9: Sample Rapid Workflow® As-Is Business Process Map..... 75

Figure 6.1.10: Sample City of Costa Mesa ITSP Table of Contents 78

Figure 6.1.11: ITSP Roadmap 5 Year Estimated Investment 82

Figure 6.1.12: Sample 5 Year ITSP Roadmap 83

Figure 6.1.13: Sample Summary of Projected ITSP 5-Year Investment for Elected Officials..... 84

Section 1 Vendor Information



1.1 Company Overview

ThirdWave is a privately held California Corporation established in 1987, headquartered in Los Angeles (www.ThirdWaveCorp.com). ThirdWave has always been, and continues to be, a profitable and debt-free company. In the past, we have had offices in Los Angeles, San Jose, Las Vegas, and Tampa. The Los Angeles office has been our headquarters for 35 years. The principals of the firm are Roy Hernandez, President and Sergio Hernandez, Executive Vice President.

ThirdWave Corporation is a full-service Management Advisory/Systems Integration firm providing a broad range of professional and technical services. Our mission is to address a need with expertise, optimize the effective use of computer tools, and work with end users to ensure success. We offer a breadth and depth of expertise in several core competencies, and lessons learned from working with approximately 300 government agencies.



ThirdWave's Los Angeles Office

Our firm's extraordinary track record of accomplishment is attributed to our passionate commitment to the success of our clients, professional integrity, and technical excellence. Consequently, we have received numerous clients, national, and international industry recognition awards. Working in S.W.A.T-team fashion, our staff members have established a track record for achieving extraordinary results in record time. Our company motto is as pragmatic as our philosophy: "**No excuses, just results!**"

The figure on the following page provides a list of the professional services we provide.

Figure 1.1.1: ThirdWave Areas of Expertise and Core Competencies

<p>Rapid Workflow®</p> <ul style="list-style-type: none"> • Business Process Improvement • Rapid Workflow® Mentoring • Rapid Workflow® Certification Training • Rapid Workflow® Licensing 	<p>Business/IT Strategic Plans</p> <ul style="list-style-type: none"> • Enterprise IT Strategic Plans • Cost/Benefit Analysis • Project Management Office • Enterprise Architecture • Standards and Best Practices 	<p>Enterprise Resource Planning</p> <ul style="list-style-type: none"> • Legacy ERP Assessments • ERP Process Mapping • ERP Requirements Definition • ERP RFP & Procurements • ERP Project Implementations
<p>Procurement Services</p> <ul style="list-style-type: none"> • Requirements Definition • Functional & Technical Specs • RFP Development • Solicitation Process Facilitation • Contract Negotiation 	<p>Project Management Office</p> <ul style="list-style-type: none"> • Project Specification & Planning • Resource Allocation Planning • PMBOK Project Management • Vendor Management • Contract Administration 	<p>Enterprise Content Management</p> <ul style="list-style-type: none"> • Award Winning ECMS Strategic Planning & Deployment • ECMS Application Development • Automated Workflow, e-Forms, e-Signatures, App. Integration
<p>Web/e-Government Services</p> <ul style="list-style-type: none"> • E-Government Strategic Plans • Web Service Delivery Apps • E-Commerce Applications • Website/ASP Development 	<p>Development Services</p> <ul style="list-style-type: none"> • Software/DB Development • Languages: AJAX, VB, .NET, C#, C++, Java, J2EE, VB, SQL • DB: Oracle, SQL Server, Access, MySQL, DB2 	<p>GIS Services</p> <ul style="list-style-type: none"> • GIS Consulting • GIS Strategic Planning • Web-enabled GIS Apps • GIS Integration • GIS Staff Outsourcing

ThirdWave has carried out IT projects for transportation, city, county, state and federal clients in 27 states of the U.S., as illustrated in the figure below.

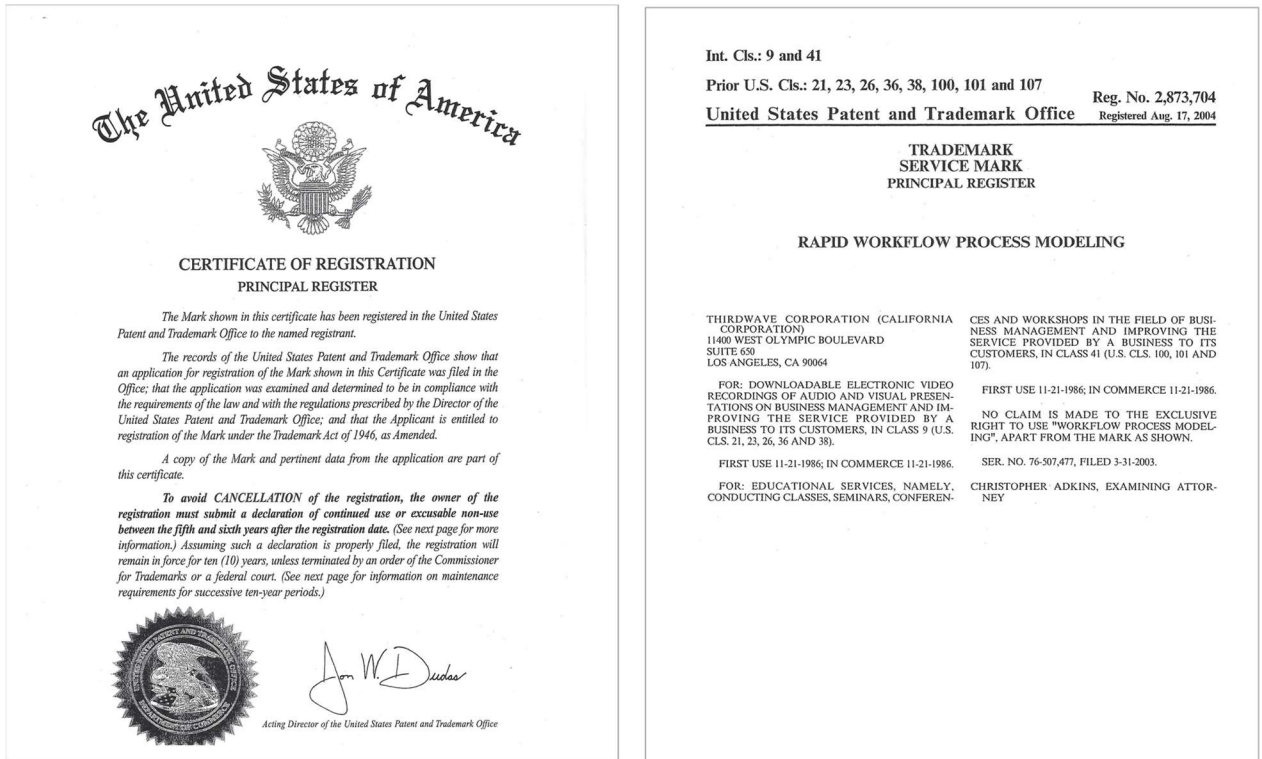
Figure 1.1.2: ThirdWave’s Project National Presence



1.2 Only Patented Government Strategic Planning Methodology













ThirdWave's President/CEO is the inventor of the only patented government strategic planning methodology in the US/world: **Rapid Workflow Process Modeling®**. Rapid Workflow® is a structured methodology to identify business process, procedural, operational, and Information Technology improvement opportunities. The Patent is shown below.

Figure 1.2.1: Rapid Workflow Process Modeling®: Patent Registration No. 2,873,704, US Patent and Trademark Office



The figure in the following page illustrates examples of ThirdWave thought leadership and innovations in the IT space.

Figure 1.2.2: ThirdWave’s Thought Leadership Qualifications

Unique Qualifications	Experience & Expertise	ThirdWave Corp	Other Vendors
<p>1</p> 	<p>Professional Thought Leadership & Methodology There is only one firm in the US with a rigorous and patented requirement gathering/strategic planning methodology specifically designed for government: ThirdWave Corp. (The Six Sigma patent is for product design and Lean is for manufacturing processes.)</p>		
<p>167</p> 	<p>Experts in Government IT Strategic Plans & Roadmaps With 167 successful IT Strategic Plans carried out, we are one of the premier IT Strategic Planning experts in the US. We are specialists in developing custom-tailored IT roadmaps for local, county, state and federal agencies, e.g., 70 cities in California: Los Angeles, San Francisco, Palo Alto, Sacramento, San Jose and every City in Silicon Valley, Berkeley, Pasadena, Long Beach, and other states: Austin, Galveston, Fort Bend, and Philadelphia, and States of California, Montana, and federal agencies such as NOAA.</p>		
<p>35</p> 	<p>Corporate Viability & Nationally Recognized Expertise ThirdWave is a viable business providing IT Strategic Planning services to government for 35 years. Our projects have produced business process improvement, lower operating costs, and enhanced customer service; in short - transformational change, for more than three decades.</p>		
<p>1989</p> 	<p>Strategic & Trusted Partner Due to our performance, ThirdWave has become a strategic and trusted partner to our clients. After we deliver IT Strategic Plans our clients routinely retain ThirdWave to provide additional professional services: IT classification studies, RFP development, solicitation facilitation, act as Project Manager on ITSP initiative implementations, etc. We have 10 – 20-year relationships with many of our clients performing multiple projects of various types.</p>		
<p>4,300</p> 	<p>Unequaled Body of Work with Business Process Mapping ThirdWave has held 4,300 As-Is/To-Be Rapid Workflow® workshops to articulate the unique IT needs of each department for small and large cities, counties, states and federal agencies in 27 states and Canada. The data from this gap analysis method informs the IT Strategic Plan with responsive and actionable recommendations. (See 80 customer testimonials on Rapid Workflow® on our website.)</p>		
<p>15, 7, 7</p> 	<p>Unsurpassed Thought Leadership in IT Strategic Planning ThirdWave is a leader in the US based on the number and size of cities that have retained us:</p> <ul style="list-style-type: none"> • 15% of all cities in California • 7 of the 10 largest cities in California • 7 of 11 largest cities in the US 		

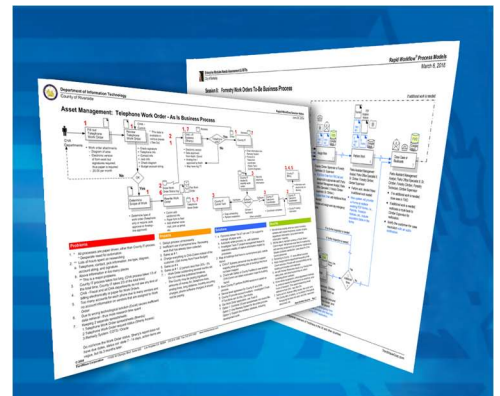
Section 2 Proposal



2.1 Approach & Methodology

Our understanding of the City's ITSP project is based on 35 years of specialization providing IT Strategic Plans and Roadmaps for **170 (one hundred and seventy)** city, county, state and federal agencies throughout the US and Canada. ThirdWave will employ a comprehensive, patented approach relying on the collection, assessment and synthesis of various data sets.

Our methodology encompasses a comprehensive evaluation of current IT services and IT organizational structure and resources relative to supporting core business functions, processes and systems. Our ITSP projects adhere to the following critical success factors:

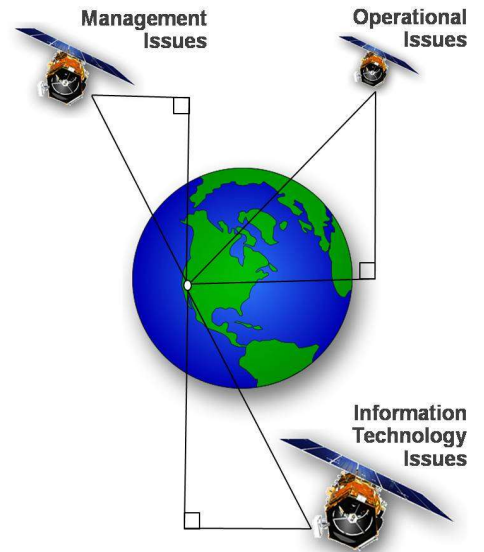


- Employ a comprehensive enterprise discovery, requirements definition and recommendations methodology addressing management, operational and technology needs to support core business functions, business processes, and extraordinary service delivery.
- Use a participatory process to engage stakeholders, foster buy-in and build consensus.
- Identify emerging strategic technologies to effectively support business process improvement, foster customer access and transparency, and enhanced service delivery, while improving internal operating efficiencies.
- Build a compelling business case to ensure technically viable and financially sound investments in IT initiatives funded by executive management and elected officials.

ThirdWave’s ITSP method ensures that all customer concerns are addressed by employing a highly effective **Strategic Planning Triangulation Framework**® to articulate a comprehensive business/IT strategy. A contemporary metaphor is Global Positioning Systems using bearings from three satellites in space to calculate a precise location on earth. Our approach triangulates on all key facets of the organization, and its community, to get a crisp definition of requirements to produce responsive strategic enterprise actionable recommendations.

Figure 2.1.1: ThirdWave’s Triangulation Framework © 1989

- Management:** Address business unit missions, business architecture, governance structure, management policies, strategic planning, fiscal/staff resource allocation, and meeting community needs.
- Operational:** Address streamlined business processes, methods and procedures, and service delivery tools required by staff to provide extraordinary services.
- Technology:** Address strategic Information Technologies with the appropriate architecture, IT organizational structure, staffing, knowledge, skills and abilities, standards and best practices.

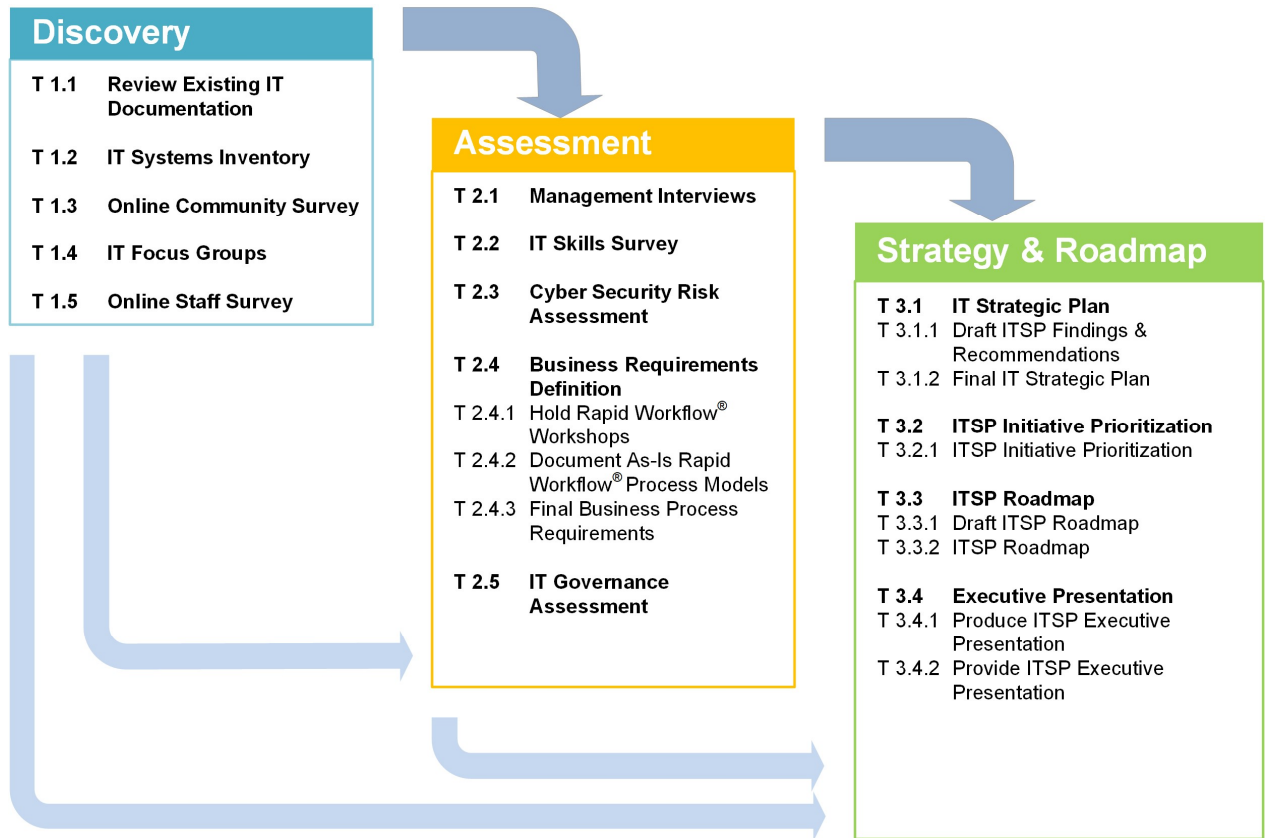


Triangulation:

Triangulation refers to a technique where two or more research methods are employed. It refers to multimethod research in which quantitative and qualitative analytical methods are combined to provide a more complete set of findings than could be arrived by the application of one method alone. The term implies the validation of findings by cross-checking one perspective with another.

Additionally, ThirdWave borrows principles from several leading best practices: S. Spewak’s Enterprise Architecture Planning method, the Zachman Framework and TOGAF. These methodologies all share a common thread: **they focus on business requirements as the primary determinants of ITSP initiatives.** This is why our patented Rapid Workflow® methodology is a critical component of our ITSP methodology – and the key to the success of all ITSP and Implementation Roadmaps we have produced.

Figure 2.1.2: ThirdWave Waterfall Best Practice ITSP Approach



Data driven method from previous tasks informs the next phase/task, and ultimately, the IT Strategy.

ThirdWave’s ITSP methodology has been recognized as one of the most comprehensive and successful in the IT industry. Our approach is based on a proven methodology: a thorough assessment of business/services delivery needs as the precursors of a responsive ITSP, a participatory process to build stakeholder consensus and management support, supported by a compelling business case. This is why our patented ITSP methodology is the most successful in the US as measured by adoption and funding.

The following pages provide brief descriptions of specific activities in our approach.

A. Management Interviews

Management interviews gather business data from the management perspective, which is different than operating and IT staff. (This is the Management piece of the Triangulation Framework.) Management interviews focus on solutioning current/projected business and service delivery challenges and the most significant business challenges facing each department for the next three to five years. This helps build management consensus and support for the ITSP and ultimately-- funding of the ITSP.



B. Information Technology Focus Groups

IT Focus Groups are carried out to gather technology data from IT staff/management who are familiar with the organization's systems, issues and opportunities. The focus is getting a first-hand description of specific technology challenges. IT Focus Groups explore developing, implementing, and maintaining high-quality business enabling technology solutions that provide secure, reliable and timely collection, storage and access to information. The IT Focus Groups address four significant areas:

- Infrastructure: Networking/Communications
- Hardware: Data Center, Hardware, Peripherals
- Software: Departmental, Enterprise, Web-enabled Applications & Databases
- Sustainability: Staff Skills, Knowledge & Abilities, Policies & Practices Operations Maintenance, Cyber Security, Disaster Recovery and Help Desk

This is the Technology piece of the Triangulation Framework.



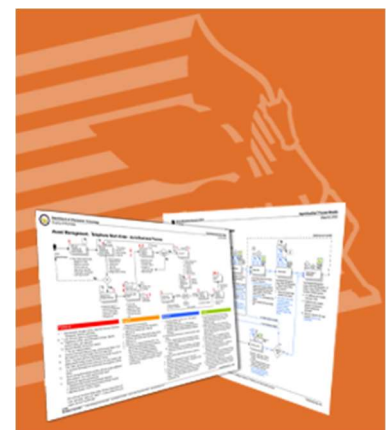
C. Online Surveys

One of the critical success factors of an ITSP is to gather input from as many stakeholders as possible, i.e., internal and external IT customers. An efficient, cost-effective method to accomplish this is to use easy-to-use custom tailored online surveys. ThirdWave will use online surveys designed to address requirements from all staff and management. The benefit of online surveys is that they allow all stakeholders to become engaged without having to personally meet with them, saving considerable amount of time and containing project costs.



D. Patented Business Process Analysis

ThirdWave's patented Rapid Workflow® methodology is employed to carry out business process analysis of core business functions to identify operational and service delivery needs – and the technologies to effectively support them. Rapid Workflow® is a structured gap analysis methodology used to identify strategic Information Technology opportunities through business process analysis and solution development. It uses structured business process mapping workshops to produce functional and technical requirements. Rapid Workflow® provides the synthesis of optimized business practices with responsive IT solutions.



2.2 Work Plan

The following pages describe the project work plan for executing the City’s ITSP. Most tasks/subtasks in the following work plan will produce a deliverable, e.g., a workshop, meeting, document, presentation, etc. On tasks where the deliverable is a document, ThirdWave will provide an electronic copy either in MS Word, Excel spreadsheet, PDF, or as specified by City.

Some key draft deliverables will be provided to the City Project Manager for review and comment by appropriate staff. City review and comment subtasks are denoted with the prefix “City.” Obtaining City’s review and comments on key deliverables is a risk management and quality control technique that will ensure the desired results are obtained.



The following provides a description of the proposed scope of work and project deliverables, which will generally be provided virtually.

PHASE 0 PROJECT MANAGEMENT

Task 0.1 Project Kick-off Meeting

This task will entail holding a project kickoff meeting with City and ThirdWave’s Project Team. A PowerPoint presentation will be produced to review the project goals and objectives. We will walk through the project plan, deliverables, and project schedule, ThirdWave/City responsibilities, and the PMBOK™ project management protocol to ensure desired outcomes and a successful IT Strategic Plan.

Assumptions:

1. All department heads and IT staff will attend the kick-off meeting. It is important that key stakeholders receive an overview of the project.
2. If possible, the project’s executive sponsor should initiate this meeting, along with the City Project Manager, to underscore the importance of the project.
3. This meeting will last an hour.

Deliverable 0.1: Project Kick-off Meeting

Task 0.2 Ongoing Weekly Meetings

This task will entail holding weekly meetings to plan and coordinate of project tasks between the City and ThirdWave Project Managers.

Deliverable 0.2: Project Coordination

Task 0.3 Monthly Status Reports

This task will entail providing written monthly progress reports to City’s Project Manager outlining the status of the project. Monthly Status Reports will include:

- Description of progress made during the reporting period
- Deliverables completed and delivered during the reporting period
- Outstanding issues and recommendations for resolution (if any)



- Scope, cost and schedule integrity status

Deliverable 0.3: Monthly Status Reports

PHASE 1 DISCOVERY

Task 1.1 Review Existing Documentation

This task entails reviewing existing documents related to City Information Systems to establish a baseline understanding of the technology environment. Documents will include the review of the following:

- City Budget
- IT and City Org charts and classifications
- Previous IT Strategic Plans (if any)

Assumptions:

- Reference documents will be provided to ThirdWave on the same day as the Project Kick-off Meeting or within the first week of the project.
- This task will not produce a deliverable.

Deliverable 1.1: Review Existing Documents

Task 1.2 IT Systems Inventory

This task will entail developing an IT Systems inventory spreadsheet and providing it to the City Project Manager for data collection **by appropriate City IT staff**. The City may already have an inventory of systems; however, this spreadsheet is specifically structured to work with ThirdWave’s strategic planning methodology. The survey will contain: Technology Type, Manufacturer, infrastructure, hardware, peripherals, software and purchase dates (if known), which will be referenced in subsequent tasks.

Deliverable 1.2: App. Portfolio & Systems Inventory Spreadsheet

City 1.2 File Out IT Inventory Spreadsheet

This task will entail the City’s Project Manager providing the IT Inventory spreadsheet to appropriate staff to be filed out. Unless otherwise agreed, this will be done in two weeks.

Deliverable 1.2: Application Portfolio & Systems Inventory

Task 1.3 Online Community Survey

Task 1.3.1 Develop & Provide Online Community Survey

This task will entail developing and posting an online survey for the City’s constituents (residents, businesses and visitors). The public online survey will provide the public the opportunity to provide input on the City’s:

- Services, service delivery, and the customer experience
- Website content and user friendliness
- Online service delivery



The information gathered will be useful for the City's planned IT initiatives. ThirdWave will work with the Project Manager and IT Director to finalize the online survey questions to ensure it is custom-tailored to the City. ThirdWave will use SurveyMonkey™ for the online survey.

Assumptions:

1. A SurveyMonkey™ link will be provided to the City's Project Manager.
2. A link will be prominently placed on the City's website homepage encouraging all City staff to take the survey.
3. The online survey will collect data for two (2) weeks.

Deliverable 1.3.1: Online Staff Survey

City 1.3.1 Post Online Survey

This task will entail the City's Project Manager providing the survey to the appropriate City IT staff, so that they can post it on the City's **Website**. Unless otherwise agreed, the online survey will collect data for the time specified in the MS Project Schedule.

City Deliverable 1.6.1: Public Response to ITSP Survey

Task 1.3.2 Compile Public Online Survey Data

This task will entail compiling the data collected in the online survey and producing a summary of findings. This information will be referenced in subsequent project tasks.

Deliverable 1.3.2: Customer Survey Findings

Task 1.4 IT Focus Groups

Task 1.4.1 Hold IT Focus Groups

This task will entail holding four 2-hour focus groups with the IT manager and staff to gather data related to the state and challenges with existing information systems. This task will also use IT industry standards to perform risk assessment and gap analysis of the City IT organization, its service delivery model, and requirements to enhance both. The workshops will address the following:

1. Infrastructure

- Network Infrastructure and wireless, review the network design for systems and data safeguards against a catastrophic event or security breach
- Voice and Data Telecommunications
- Network/Cyber Security

2. Hardware

- Servers and Server virtualization
- Storage and Backups
- Desktop/Laptops
- Mobile Devices: Smart Phones, Laptops, Tablets
- Peripherals: Copiers, Scanners, Multi-function

3. Application/Database Software

- Databases
- Application Software portfolio
 - Enterprise Software
 - Department Software
 - Web Enabled Applications
- Application Integration

4. Best Practices

- IT Governance
- Requirements Definition
- Project Planning & Procurement
- Project Management
- System Administration
- Change Management
- Policies and Procedures
- Business Continuity and Disaster Recovery
- Help Desk: system and ticketing process

The workshops will be facilitated in a focus group format with IT staff responsible for each of the topics covered. The following data will be collected for each of sessions listed above:

- Challenges: anything inhibiting the effective operation, support and/or maintenance of City information systems
- Impacts: to the operating effectiveness of the IT organization
- Solutions: for each respective issue, i.e., technology, process or policy
- Benefits: of implementing the proposed solutions identified in each focus group

A summary of workshop findings will be produced and provided to the City for IT staff's review and comments. The data collected will be used to inform the ITSP in Phase 3.

Assumptions:

1. *Participants will be highly knowledgeable and experienced in the technologies being addressed.*
2. *More than one person will participate in each focus group.*

Deliverable 1.4.1: Hold IT Focus Groups

City 1.4.1 Review & Comment

This task will entail the City reviewing the draft deliverable and providing suggested revisions within three days, if applicable. Comments not received within 3 business days from transmittal to the City will be deemed to not have any revisions.

Deliverable 1.4.1: Comments

Task 1.4.2 IT Focus Group Findings

This task will entail incorporating suggested revisions, as applicable.

Deliverable 1.4.2: IT Focus Group Findings



Task 1.5 Online Staff Survey

Task 1.5.1 Develop & Provide Online Staff Survey

This task will entail developing an internal City survey providing staff the opportunity to provide input on the City’s existing and required systems, and the IT organization’s capability to support them. The online staff survey will address:

- The state of existing information systems
- Department Information Technology requirements
- Public Facing Online Self-Service Applications
- Related IT support capabilities and processes
- End user training
- IT Help Desk
- Most significant service delivery challenge
- Most significant Information Technology challenge

ThirdWave will work with the City’s Project Manager to finalize the online Survey Monkey survey questions to ensure it is custom-tailored to the City.

Assumptions:

1. A link will be placed on the City’s Intranet website and a notice will be issued encouraging all teachers to take the survey.
2. A SurveyMonkey™ link will be provided to the City’s Project Manager.
3. The online survey will collect data for two weeks.

Deliverable 1.5.1: Online Staff Survey

City 1.5.1 Post & Fill Out Survey

This task will entail the City’s Project Manager providing the survey link to post or distribute to City staff. Unless otherwise agreed, the online survey will collect data for two weeks.

Deliverable 1.5.1: Staff Take the Survey

Task 1.5.2 Compile Staff Survey Data

This task will entail compiling the data collected in the online survey and producing a summary of findings. The findings from this deliverable will be referenced and inform Phase 3.

Deliverable 1.5.2: Online Staff Survey Findings



PHASE 2 ASSESSMENT

Task 2.1 Management Interviews

Task 2.1.1 Hold Management Interviews

This task will entail holding thirty (30) minute interviews with department heads to get a management perspective of general organizational, operational and technology challenges facing City departments. Management interviews will gather high level business and service delivery requirements not identified in the IT Focus Groups or Rapid Workflow® business process workshops. Issues to be discussed include:

- The most significant operational/service delivery challenges in next 3 - 5 years
- The most significant IT challenges facing the City’s ability to effectively support its mission, i.e., technology, staff training, etc.
- The need to adopt emerging technologies
- The adequateness/responsiveness of the IT organization

The interview questions will be provided to City’s management team in advance so that they can gather their thoughts and answers prior to the interviews. For the purposes of this proposal, ThirdWave has assumed holding seventeen (17) management interviews with the following:

1.	Animal Care	1
2.	City Attorney	1
3.	City Clerk	1
4.	City Manager.....	1
5.	Community Services	1
6.	Development Services	1
7.	Economic Development	1
8.	Engineering.....	1
9.	Finance	1
10.	Fire	1
11.	Human Resources	1
12.	Information Technology.....	1
13.	Library	1
14.	Parks & Recreation	1
15.	Police	1
16.	Public Works	1
17.	Sustainability.....	1
	Total	17

Responses will be documented and provided to department heads for review and editing.

Assumptions:

1. City’s Project Manager will be responsible for scheduling the interviews per the MS Project Schedule.

Deliverable 2.1.1: Management Interviews



City 2.1.1 Review & Comment

This task will entail the management interviewees reviewing the draft interview notes and providing comments/suggested revisions. Unless otherwise agreed, the review and comments will be provided within 5 business days. Comments not received after 5 business days from transmittal to the City will be deemed to not have any revisions.

Deliverable 2.1.1: Comments

Task 2.1.2 Incorporate Management Comments

This task will entail incorporating the management team’s comments to produce the final management interviews summary deliverable. The findings from this deliverable will be referenced and inform the ITSP Roadmap in Phase 3.

Deliverable 2.1.2: Management Requirements Findings

Task 2.2 IT Skills Survey

Task 2.2.1 Develop & Provide IT Skills Survey

This task will entail a review and evaluation of current IT staff knowledge, skills and abilities in a number of IT areas. An IT staff skills survey will be produced and provided to City for IT staff to provide input on their skill sets. The survey will be designed to address the skills of IT staff in the IT organization.

The following information will be gathered:

- Name
- Classification
- IT Group
- IT System Responsibilities
- Proficiency Areas for each IT Position (to be finalized with the City IT Manager)

The task will baseline the knowledge, skills, and abilities of existing IT staff to gauge the ability of the IT organization’s ability to sustain future Information Technologies identified in this project. The data from this task will be used to produce recommendations in Task 3, related to the IT organization, level of staff, and placement of staff to support the future needs of the City.

Deliverable 2.2.1: IT Skills Assessment Survey

City 2.2.1 Fill Out Survey

This task will entail the City Project Manager providing the electronic Excel survey to City IT staff. The online survey will collect data for 5 business days.

Deliverable 2.2.1: IT Staff Respond to Survey

Task 2.2.2 IT Skills Survey Summary

This task will entail compiling the data collected in the IT Skills Survey. This information will be referenced in the recommendations made in Task 3, IT Strategic Plan and Roadmap.

Deliverable 2.2.2: Summary of Findings



Task 2.3 Cyber Security Risk Assessment

Task 2.3.1 Cyber Security Risk Assessment

This task will entail a formal risk assessment beginning by identifying and classifying IT related assets that provide value to the organization. This will be accomplished by providing the City a template to be filled out, providing the following information:

- Facilities
 - Physical facilities
 - Data centers
 - Physical security systems
 - Important physical assets (off-site storage)
 - Environmental assets (electricity, cooling)
- Human Resources
- Intellectual Property
- Communications
- Network Infrastructure
 - Network devices
 - Network services
 - Server
 - Storage
 - Network peripheral
- Software Applications
- Data
- Workstations

Once the assets have been identified, we will identify threats to the assets. Threats can be unintentional or intentional and may include:

- Natural threats (acts of God)
- Accidental or unintentional threats (e.g., worker illness, equipment failure)
- Intentional threats such as asset theft and asset tampering (e.g., malicious damage, terrorism)

One or more specific vulnerabilities will be identified for each threat. Vulnerabilities may be based upon location, employee skill sets, network access controls, network monitoring, etc. Examples of vulnerabilities include lack of employee security related education, user knowledge, security functionality, poor password selection by employees, etc. A risk assessment summary that identifies the process used to identify assets and related risks that have a critical impact on objectives will be produced.

Assumptions:

1. *These services will be provided virtually.*

Deliverable 2.3.1: Cyber Security Risk Assessment



Task 2.3.2 Cyber Security Risk Analysis

Once assets, threats, and vulnerabilities are identified, this task will evaluate the potential impact or loss on the organization. Examples included the impact on the ability to perform services and meet deadlines. It also includes a negative impact on revenue and other factors such as damage to the City’s image and reputation.

Once the threats are identified, the likelihood (probability) of occurrence will be identified for each specific type of vulnerability. The analysis of the vulnerability’s impact on your organization will consider the vulnerability as well as controls that mitigate or reduce the risk. This task will identify Preventive, Detective, and Controls to treat the risks. A summary will identify the impact on the organization, taking into account the asset’s value, specific vulnerability, and probability of the event.

Deliverable 2.3.2: Cyber Security Risk Analysis

Task 2.3.3 Cyber Security Risk Action Plan

This task will entail preparing a risk action plan gap analysis that includes a prioritized summary of recommendations to treat risks identified in the risk assessment and risk analysis tasks.

- Risk Assessment: identifies assets, threats to the assets, and vulnerabilities that exist as a result of the threats
- Risk Analysis: – an analysis of vulnerabilities, risk treatment controls and safeguards

Deliverable 2.3.3: Cyber Security Risk Action Plan

Task 2.4 Business Requirements Definition

Task 2.4.1 Hold Rapid Workflow® Workshops

This task will entail holding virtual business requirements workshops for key mission critical business processes to identify department and cross functional business/technology requirements. Working with business process stakeholders, as-is business process workshops will review and identify functional and technical requirements and opportunities to streamline/enhance service delivery and improve operational cost effectiveness. The agenda for the workflow sessions will include the following:

1. ***Produce an as-is business process model***, a high-level map of existing business process steps and operational workflows. The process model will include process steps, a brief description of activities, staff, information systems used (applications, platforms, DB, inputs/outputs) and documents/data created, processed and/or stored.
2. ***Identify problem statements***, which will include existing management, operational and/or Information Technology disablers, e.g., business process bottlenecks, inefficiencies, disconnects, or inhibitors to providing superior business performance and/or customer service. Working with subject matter experts, anything that inhibits the efficient and effective execution of a business process will be identified and noted on the process map.



3. **Identify the impacts of each problem**, quantitative and qualitative, e.g., duplication of effort, redundant costs, time inefficiencies, document processing delays, system performance, poor customer service, etc.
4. **Identify potential solutions**, including Networking Communications Infrastructure, Commercial/Public Voice & Data Communication systems, Hardware (servers, workstations, peripherals, mobile devices), Software (office automation, departmental systems, and/or enterprise systems), e-Government (online web-enabled applications), Databases, Systems Integration, Maintenance (Security, Disaster Recovery, and Sustainability (knowledge, skills and abilities, training), outsourcing, etc., as applicable. Other solutions identified will include management policy and operational/business process improvement initiatives.
5. **Identify potential benefits**, including qualitative and quantitative benefits of the proposed technologies solutions if implemented. Benefits will be identified at several levels as appropriate; e.g., within a section or division for the business process being examined, or the City as a whole. This information will serve as the basis for identifying potential efficiency gains and prioritizing IT initiatives in Phase 3, ITSP Roadmap.

Departments	No. of Workshops
1. Animal Care	1
2. City Attorney	1
3. City Clerk	1
4. City Manager.....	1
5. Community Services	1
6. Development Services	1
7. Economic Development	1
8. Engineering.....	3
9. Finance	2
10. Fire	2
11. Human Resources	2
12. Information Technology.....	0
13. Library.....	1
14. Parks & Recreation	1
15. Police.....	2
16. Public Works	3
17. Sustainability.....	1
Total	24

Assumptions:

1. *ThirdWave will work with the City to determine the final department business processes.*
2. *Workshops will typically last 3 to 4 hours, depending on the complexity of the business process being modeled.*



3. *To maximize project resources, and contain the project timeline, the City will schedule two (2) workshops per day Monday through Thursday until all workshops have been completed. Our project schedule assumes 3 weeks for this task.*
4. *The City Project Manager will start scheduling working sessions after the Management Interviews, per the published MS Project Schedule.*
5. *Workshop participants will be highly knowledgeable and experienced in the business processes being modeled. There should be sufficient participants in the workshops to address the entire business process.*
6. *To gather a complete data set, participants will attend the entire workshop.*

Deliverable 2.4.1: Rapid Workflow® Workshops

Task 2.4.2 Document As-Is Rapid Workflow® Process Models

This task will include documenting the business, functional, and technical requirements data collected in the workshop, including the following:

- List of attendees in the Rapid Workflow® session
- High Level As-Is Business Process Map
- Problem Statements
- Impact Statements
- Solution Statements
- Benefit Statements

The session notes will be provided to the City Project Manager for distribution to participants of each group for review/comments.

Deliverable 2.4.2: Draft Rapid Workflow® Process Maps

City 2.4.2 Review & Comment

This task will entail workshop participants reviewing the draft Rapid Workflow® and providing comments/suggested revisions. Unless otherwise agreed, the review and comments will be provided within the turn-around time specified in the final Project Schedule, i.e., 5 business days.

Deliverable 2.4.2: City Comments

Task 2.4.3 Final Business Process Requirements

This task will entail incorporating the City's comments to produce the final business process map deliverable. The findings from this deliverable will be referenced in producing the recommendations made in the ITSP Roadmap in Phase 3.

Deliverable 2.4.3: Final Rapid Workflow® Workshops



Task 2.5 IT Governance Assessment

Task 2.5.1 Hold IT Governance Workshop

This task will entail holding a workshop with the City’s leadership team and the IT Director in two parts. Part 1 will evaluate the City’s current Information Technology governance process, related roles and responsibilities, The second part of the workshop will identify the future state IT governance that best meets the City’s needs, including governance process, policies, practices, participants and their associated roles and responsibilities.

Deliverable 2.5.1: Hold IT Governance Workshop

City 2.5.1 Review & Comment

This task will entail the City reviewing the draft deliverable and providing comments and suggested revisions. Comments will be provided within the turn-around time specified in the final Project Schedule.

Deliverable 2.5.1: Comments

Task 2.5.2 Final IT Governance Findings

This task will entail incorporating the City’s comments to produce the final IT Governance deliverable. The data collected in this deliverable will inform Task 3 Information Technology Strategic Plan.

Deliverable 2.5.2: IT Governance Recommendations

PHASE 3 IT STRATEGIC PLAN & ROADMAP

Task 3.1 Information Technology Strategic Plan

Task 3.1.1 Draft ITSP Findings & Recommendations

This task will entail producing a 5-year IT Strategic Plan. The following provides a typical table of contents from an ITSP; however, the final ITSP will be custom tailored to the specific and unique needs of the City, as applicable:

Executive Summary

1. Introduction and Methodology

- 1. Goals & Objectives
- 2. ITSP Vision

2. Assessment

- 2.1 Management Interviews
- 2.2 IT Staff Focus Group
- 2.3 IT Staff Skills Survey
- 2.4 Staff Online Survey
- 2.5 Rapid Workflow® Business Process Workshops
- 2.6 Leading Technology Initiatives

3. Recommendations

3.1 Technology Recommendations

- Infrastructure
 - Network Infrastructure
 - Telecommunication Infrastructure
 - Data Center(s)
- Hardware
 - Servers: Application, database and web servers
 - Computers: desktops, laptops
 - Mobile devices
 - Peripherals
- Application/Database Software
 - Department Software
 - Enterprise Software: Finance, HR, GIS, ECMS
 - Website & E-Government: Online Service delivery
 - Integrated Systems
- Cyber Security Risks
 - Cyber Security Risk Management

3.2 Operational Recommendations

- System Administration
- Policies and Procedures
- Business Process Improvement
- Business Continuity and Disaster Recovery
- Cyber Security
- Help Desk & Reporting

3.3 Management Recommendations

- Staffing and Organizational Structure
 - Staff Levels
 - Skill Levels (KSAs)
 - IT Staff Training
 - Organizational Structure
 - Succession Plan
- IT Governance Best Practices
- Project Management Best Practices
- Change Management Best Practices

Assumptions:

1. *This draft deliverable will be transmitted in MS Word for the City's review and comments using Track Changes.*

Deliverable 3.1.1: Draft IT Strategic Plan

City 3.1.1 Review & Comment

This task will entail the City reviewing the draft deliverable and providing comments and suggested revisions. Unless otherwise agreed, the review and comments will be provided within the turn-around time specified in the final Project Schedule, i.e., 10 business days.

Deliverable 3.1.1: City Comments



Task 3.1.2 Final IT Strategic Plan

This task will entail incorporating the City’s comments to produce the final ITSP report. ITSP initiatives identified in this deliverable will form the basis for developing the final ITSP Roadmap.

Assumptions:

1. The final ITSP will be provided in MS Word and PDF files.

Deliverable 3.1.2: IT Strategic Plan

Task 3.2 ITSP Initiative Prioritization

Task 3.2.1 ITSP Initiative Prioritization

The task will entail running the ITSP initiatives identified in previous task through a prioritization model, which includes a range of weighted performance parameters aligned with the City’s business strategy, business objectives, and tangible internal/public benefits. This is an iterative process: ThirdWave will do the first cut and do the second cut with the City’s Project Manager via an online Zoom working session. A final cut will be produced after the budget estimate has been completed. Typical prioritization criteria used by ThirdWave includes the following, although these can be modified if the City desires:

Prioritization Criteria

1. Times identified in the ITSP project (Rapid Workflow® workshops, survey, focus groups and management interviews)
2. Improved Customer Services
3. Cost Savings/Cost Avoidance
4. Business Process Improvement
5. Potential revenue generation

Deliverable 3.2.1: ITSP Initiative Prioritization

Task 3.3 ITSP Roadmap

Task 3.3.1 Draft ITSP Roadmap

This task will entail articulating the overall business and technology implementation roadmap that is technologically strategic, financially responsible, and sustainable. The document will contain a 5-year plan for implementing a prioritized list of ITSP initiatives, including the acquisition and implementation of strategic business technologies and/or professional services. The ITSP will provide recommendations for short-term transitions as well as long-term strategic direction.

The previous task (the ITSP) will articulate the “what”, this task will articulate “when” ITSP initiatives will be deployed and a rough order of magnitude budget estimates. The ITSP Implementation Roadmap will address the following:

- Prioritized ITSP Initiatives
- ITSP 5-Year Budget Estimate by year (total cost of ownerships of one-time professional services costs, one-time systems costs, one-time software costs and ongoing software maintenance costs)
- ITSP Implementation Timeline

- ITSP Benefits

The Draft ITSP Implementation Roadmap will be provided to the City for review and comments.

Assumptions:

1. *ThirdWave will work with the City to identify quantity assumptions.*
2. *Gross Suggested Retail Pricing will be used for all costs, unless systems costs relate to existing systems where the City has existing relationships/contracts with vendors, in which case existing pricing structures will be used.*
3. *This task will produce high level rough order of magnitude budget estimates, not price quotes.*
4. *An electronic copy of the ITSP Implementation Roadmap Excel spreadsheet will be provided to the City for review and comments.*

Deliverable 3.3.1: Draft ITSP Roadmap

City 3.3.1 Review & Comment

This task will entail the City reviewing the draft deliverable and providing comments and suggested revisions. Unless otherwise agreed, the review and comments will be provided within the turn-around time specified in the final Project Schedule, e.g., 10 business days.

Deliverable 3.3.1: City Comments

Task 3.3.2 ITSP Roadmap

This task will entail incorporating City comments to produce the final enterprise ITSP Roadmap deliverable. The final ITSP Roadmap will be provided as MS Word and PDF files.

Deliverable 3.3.2: ITSP Roadmap

Task 3.4 Executive Presentation

Task 3.4.1 Produce ITSP Executive Presentation

This task will entail producing an executive level presentation of the ITSP Roadmap for the City's leadership team. This presentation will be provided to the City's project team and department heads for review, comments and revisions.

Deliverable 3.4.1: ITSP Executive Presentation

Task 3.4.2 Present ITSP Executive Presentation

This task will entail providing an onsite presentation to City executives/elected officials.

Deliverable 3.4.2: Present ITSP Executive Presentation

2.3 Project Schedule

ThirdWave will use formal MS Project Schedule best practices to manage the City's ITSP project. The preliminary MS Project Schedule, Figure 2.3.1 on the next page, **reflects an overall completion timeline of 5-months**. Wherever possible, tasks have been planned in parallel to compress the project schedule in an effort to shorten the project duration as much as possible.



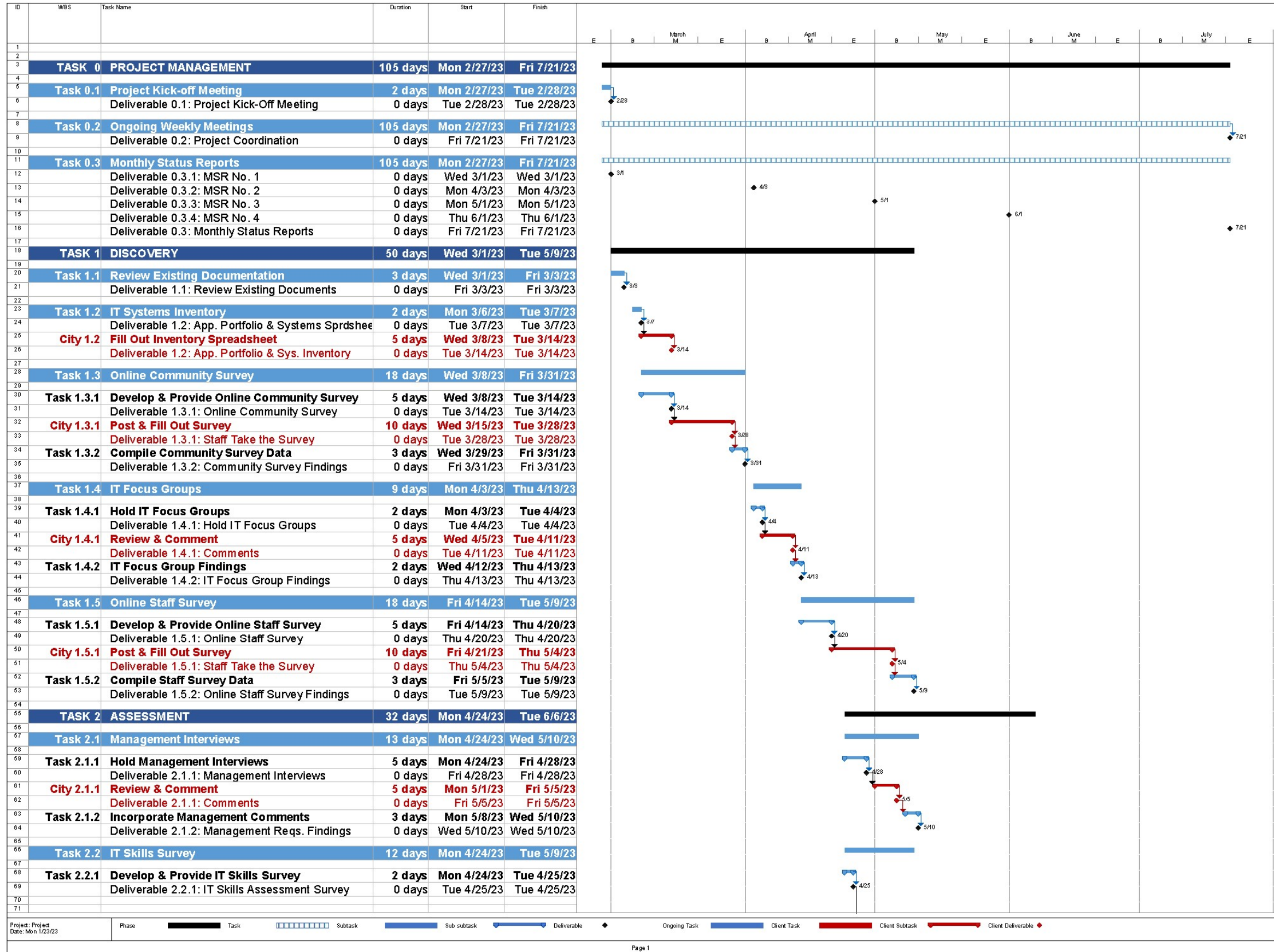
The following MS Project Schedule indicates City tasks, e.g., the review and comment of deliverables, denoted with the prefix "City." The time allotted for the turnaround of draft deliverables is shown in red on the Project Schedule, typically 5 to 10 working days, unless otherwise mutually agreed to.

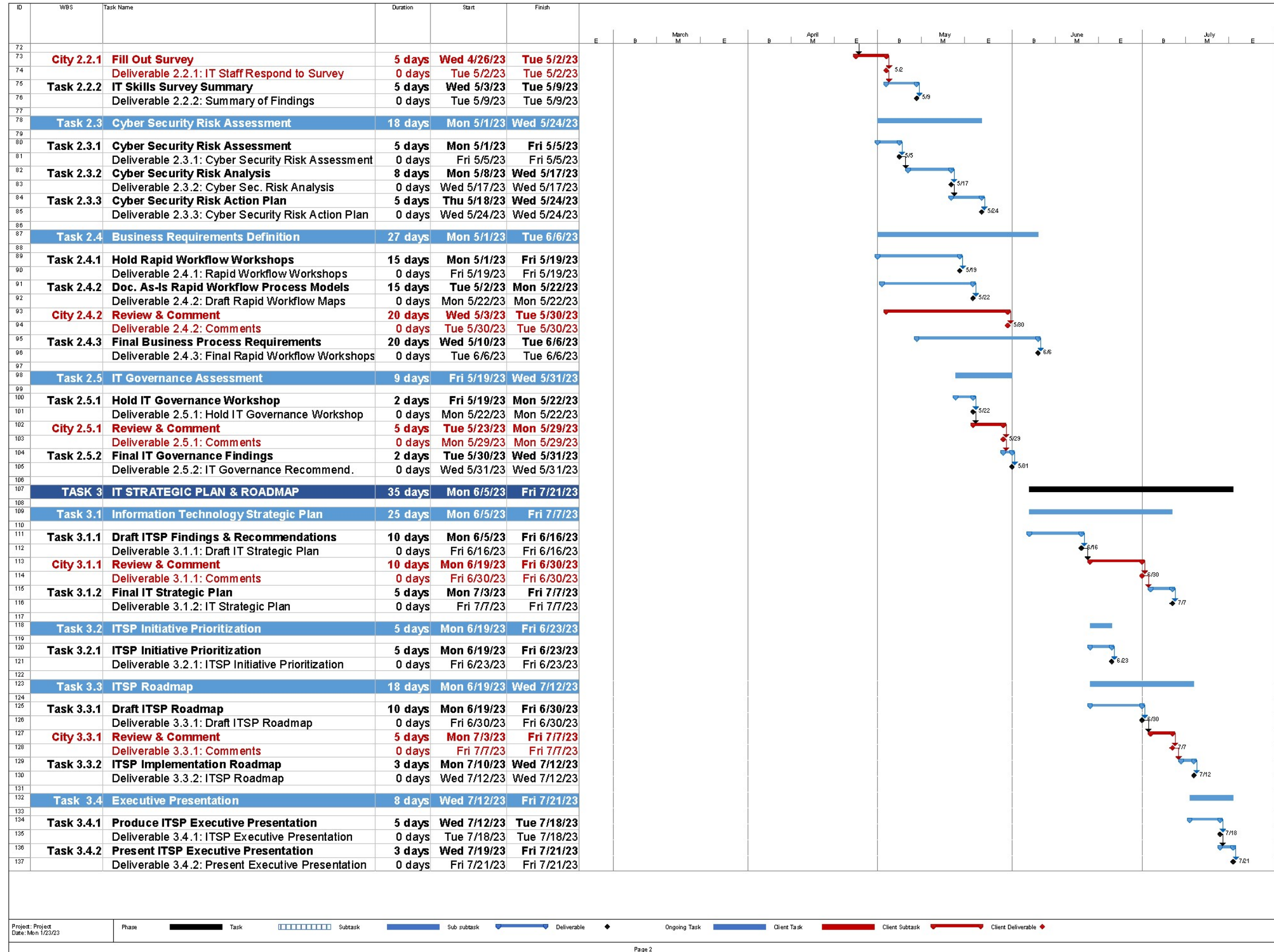


The MS Project Schedule will be used as a point of reference against which the progress of the project will be tracked and managed. **The MS Project Schedule will be reviewed, revised and finalized in contracts negotiation, and will be adjusted in collaboration with the City's Project Manager, when a notice to proceed is provided by the City.**



**Figure 2.3.1:
Preliminary Project
Schedule**





2.4 Altius Information Technologies, Inc. (Subcontractor)

Given the requirement for a cyber risk assessment of the City's cyber security and potential cyber threats, ThirdWave has added our cyber security partner to our project team.

2.4.1 Company Background

Altius Information Technologies, Inc. (Altius IT) is a California Corporation providing IT security audits, security consulting, compliance, and risk management services. Founded in 1993, they have helped over 1,000 organizations develop and implement their strategies to reduce risks. Altius means "higher" and it embodies their philosophy of providing higher level network security audit, risk management, assessment, and security consulting services.



2.4.2 Nationally Recognized Leadership

Elected by our peers into leadership roles, they are experienced information security auditors and have served on the Boards of Directors of international and national associations, including:

- International Association of Professional Security Consultants
- NetTeCH nationwide association of IT companies
- Association of Professional Consultants
- Technology Professionals Association

2.4.3 Expert Authority

As a leading authority, their track record of helping organizations manage risks has been featured on national television and in over 40 publications. Please visit www.altiusit.com/news.htm to view televised clips and articles. Project team member CVs are included in this proposal.

2.4.4 Product & Services

Altius IT offers a full range of asset protection, security audit, and risk management services. Their IT audit, network security audit, and penetration tests review administrative, physical, and technical controls that identifies threats and protects systems and data. Altius uses a 50-point network security plan, which provides a 360-degree view of risks including technical, physical and administrative safeguards.

Figure 2.4.4.1: Altius IT's Safeguards

Technical Safeguards	Physical Safeguards	Administrative Safeguards
<p>External and internal IT security audit evaluation of:</p> <ul style="list-style-type: none"> • Firewalls • Network Infrastructure • Logical Access Controls • Servers • Security Protection Systems • Anti-malware • Ransomware • Backups • Wireless Networks 	<p>Physical controls over network equipment and data including:</p> <ul style="list-style-type: none"> • Data centers • Server Rooms • Cameras • Physical Access Controls 	<ul style="list-style-type: none"> • Policies • Procedures • Plans • Forms • Security Training Materials • Incident Response Plans • Business Continuity • Cyber Insurance • Any related documents

Altius IT reports provide specific recommendations and detailed steps clients can take to address any identified security vulnerabilities. After delivery of reports, Altius IT provides three months of free support to answer any questions clients may have. This ensures security vulnerabilities are properly mitigated or eliminated. Altius IT are experts equipped with various certifications, including:

- Certified Information Systems Auditor (CISA)
- Certified in Risk and Information Systems Controls (CRISC)
- Certified Penetration Tester (CPT)
- Certified Ethical Hacker (CEH)

As an IT security audit company with Certified Information Systems Auditors, they can provide an Auditor Opinion Letter stating systems meet security and compliance requirements.

Figure 2.4.4.2: Cyber Security Certifications



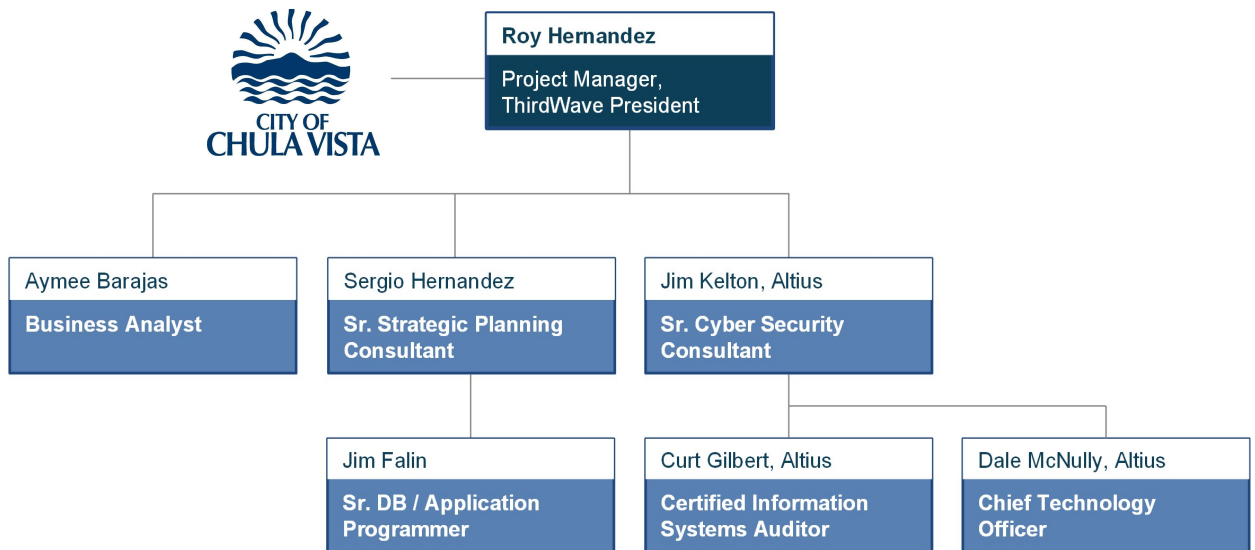
Section 3 Team Qualifications & Resumes



3.1 ThirdWave Team of ITSP Experts

ThirdWave recognizes that a large part of the success of any project is the team carrying out the work. The City’s ITSP engagement will be carried out by a team of technical professionals with peerless credentials, including a highly experienced Project Manager and seasoned senior IT consultants. The following figure illustrates the proposed ThirdWave project team.

Figure 3.1.1: Project Organization Chart



IT Team

Cyber Security Team

Figure 3.1.2: Key Project Staff Experience & Expertise

Project Staff	Education/Experience	Professional expertise, experience and role
<p>Roy Hernandez Project Manager/ Enterprise Architect</p>	<p>BA Architecture with Honors, University of California, Berkeley MA Architecture, UC Berkeley Harvard Graduate School of Design, Computer Aided Design University of Boulder, IT PMBOK™ Project Management</p> <p>Previous experience:</p> <ul style="list-style-type: none"> • ThirdWave Corp. • IBM Information Systems Group, Los Angeles • IBM General Products Division, San Jose • K+CZL Architects • Vandersen’s Construction • Oakland City Planning Dept. 	<p>With 35 years of IT experience, Roy Hernandez is an accomplished Project Manager, Enterprise Architect and IT Consultant. He has successfully managed close to 300 major government IT projects including 158 IT Strategic Planning projects. He is recognized as a thought leader in the US with regards of IT Strategic Planning. He authored and teaches courses on Rapid Workflow® Business Process Improvement and PMBOK™ Project Management methodologies.</p> <p>Roy will serve a dual role on the project as the Project Manager and Enterprise Architect. He will be responsible for project delivery and be involved throughout the project on all tasks and task deliverables.</p>
<p>Sergio Hernandez Sr. IT Consultant</p>	<p>BA, Social Sciences, University of California, Berkeley</p> <p>IT experience:</p> <ul style="list-style-type: none"> • ThirdWave Corp. 	<p>Sergio Hernandez has 33 years’ experience in IT Strategic Planning for local, county, state, and federal clients. Sergio’s role on the project will be to participate and provide oversight and quality assurance review in the production of all task deliverables. He will also play a key role in developing the final IT Strategic Plan deliverables.</p>
<p>Aymee Barajas Business Analyst</p>	<p>BS, Management and Business Economics, University of California, Merced</p> <p>Experience:</p> <ul style="list-style-type: none"> • ThirdWave Corp., Business Analyst • UC Merced, Housing & Residence Life, Graphic Designer • UC Merced, ASUCM, Social Media Account Manager (Social Media Marketing Platforms) 	<p>Ms. Barajas has 5 years of experience in IT Strategic Planning. She is an expert on Rapid Workflow® and has also designed and developed major corporate websites. She has worked on 19 IT Strategic Planning projects including the Golden Gate Bridge Highway & Transportation District, cities of Sacramento, Berkeley, Costa Mesa, Milpitas, Indio, Lancaster, and East Valley Water District. She has produced more than 100 (one hundred) Rapid Workflow® process maps. Aymee’s role on the project will be to participate on all project tasks and deliverables.</p>



<p>Jim Falin Sr. Web Developer</p>	<p>AA Engineering AA Electronics Technology</p> <p>IT experience:</p> <ul style="list-style-type: none"> • ThirdWave Corp. • Echo Associates • Grapevine Networking, Inc. • AICS • CC Industries, • Van Haverbeke Corp • McDonnell Douglas 	<p>Jim Falin has over 35 years of experience in Web / Software Development. His career has focused on large scale enterprise web development and integration projects. He has extensive experience and expertise developing web-enabled applications, web services, Enterprise Application Integration, and web applications interfaced with legacy systems, e.g., ERP systems and databases.</p> <p>Jim will be responsible for addressing technology issues and Enterprise Application Integration recommendations in the Technology Roadmap.</p>
<p>Jim Kelton, Managing Principal Altius</p>	<p>M.S., University of Arizona, MIS, Graduated First in Class</p> <p>B.A. University of Arizona, Accounting and Finance</p>	<p>Mr. Kelton is a risk management and IT security consultant with 30 years of risk assessment, security management, and technical experience. He serves as Managing Principal of Altius IT, served as a board member of the International Association of Professional Security Consultants (IAPSC), and is past Chairman of the Cybersecurity Special Interest Group (SIG). Mr. Kelton will be the lead on the risk assessment task and reports.</p>
<p>Curt Gilbert, Certified Information Systems Auditor Altius</p>	<p>B.A., University of Kansas, Personnel Administration</p> <p>M.M.A., Marine Corps Command and Staff College</p>	<p>Mr. Gilbert has over 27 years of management and technical experience. He is an experienced leader with enterprise risk management, risk reduction, audit, and assessment experience. Mr. Gilbert will participate on the risk assessment task and reports.</p>
<p>Dale McNulty, Chief Technology Officer Altius</p>	<p>Ph.D., University of California Irvine, Information and Computer Science</p> <p>MBA, University of Southern California (USC)</p> <p>M.S., University of California Irvine, Computer Science</p> <p>B.S., University of Wisconsin (Madison), Computer Science</p>	<p>Dr. McNulty has over 25 years of experience as a hands-on Chief Information Security Officer including nine years managing the infrastructure and information security for a global organization with over 30 domestic and international offices. He is a board member of the Orange County Information Systems Security Association. Mr. McNulty will participate on the risk assessment task and reports.</p>

3.2 Resumes

The City's IT Strategic Plan project will be carried out by a team of highly experienced technical professionals. The skills and experience of our team will allow ThirdWave to provide the same extraordinary results on the City's project as we have done for all of our clients over the last 35 years.



3.2.1 Resumes of Key Staff

The following pages provide professional resumes of our project team.

ROY R. HERNANDEZ, Project Manager/Enterprise Architect

EDUCATION

MA Architecture	University of California, Berkeley CA
BA Architecture, with Honors	University of California, Berkeley CA
CADD Systems for AEC	Harvard Graduate School of Design, Cambridge MA



CERTIFICATES

Project Management (PMBOK™)	University of Colorado, Boulder CO
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PROFESSIONAL

Mr. Hernandez is President of ThirdWave Corporation, a company dedicated to the intelligent application of information systems. He has been a leader in the effective use of computers for 34 years. His achievements for building successful Information Systems Programs by integrating technical, operational and management issues are widely recognized. Acknowledged in the IT industry for his expertise and long-standing involvement with the government community, Mr. Hernandez has been appointed to numerous government advisory boards, including:

California Information Technology Commission Appointee: Established under the mandate of Senate Bill 1, Chapter 508 (1995) and reenacted by Assembly Bill 1686 (1999), this State of California commission acted as one of the principal advisory bodies to the Director of the Department of Information Technology (DOIT) on the State's IT issues.

Prior to ThirdWave, Mr. Hernandez was a technology expert with IBM Headquarters' Information Systems Group for 4 years, where he provided pragmatic IT solutions to Fortune 500 companies. He also produced national marketing programs, marketing training and trade shows. Before marketing, Mr. Hernandez pioneered Automated Mapping/Facilities Management (AM/FM) programs for 4 years at IBM's largest plant site in San Jose (6.5 million sq. ft. of facilities). The innovative CADD application had 130 design professionals on the system. He is the author of the *Facilities Design Handbook* (1982), the first book written on the use of Computer Aided Design for large scale Architecture, Engineering and Construction Management projects, which became the best practice standard for all IBM sites worldwide.



Information Technology Strategic Plans

The following projects addressed some or all of the following: Organizational Architecture, Enterprise Business/Technology Needs Assessment, Rapid Workflow® Business Process Reengineering, Requirements Definition, Implementation Planning, Budget Estimates, RFP/Procurement Process Assistance, and Contract Negotiation for the upgrading, replacement or introduction of IT. These projects addressed management (organization staffing), operational (process) and technology issues (infrastructure, Networking Communications, Office Automation, Enterprise Applications (all addressed ERP, ECMS, Public Safety, and Public Work)), E-Government Applications, Organizational Change/Change Management, Staffing, Training, Cost/Benefit Analysis, and Implementation Roadmaps:

1. City of Berkeley
2. City of Carlsbad
3. City of Cathedral City
4. City of Centennial, CO
5. City of Corona
6. City of Coronado
7. City of Costa Mesa
8. City of Culver City
9. City of Fairfield
10. City of Fresno
11. City of Glendale
12. City of Goleta
13. City of Indio
14. City of Lancaster
15. City of Las Vegas, NV
16. City of Las Vegas, Water Pollution Control Facility, NV
17. City of Los Angeles, Public Works
18. City of Los Angeles, Bureau of Sanitation
19. City of Los Angeles, Dept. of Water & Power
20. City of Los Angeles, Port of Los Angeles
21. City of Milpitas
22. City of Newport Beach
23. City of Palm Spring Fire Department
24. City of Palm Spring Police Department
25. City of Pasadena
26. City of Pearland, TX
27. City of Philadelphia, PA
28. City of Port Hueneme
29. City of Portland, Police Bureau
30. City of Sacramento
31. City of San Carlos
32. City of San Diego
33. City of San Jose
34. City of San Jose (ITSP for New City Hall)
35. City of Santa Ana
36. City of Santa Cruz
37. City of Sausalito
38. City of Ventura
39. City of Westlake Village
40. County of Los Angeles Public Health
41. County of Riverside Bioterrorism
42. County of Riverside Community Health Agency



- 43. County of Stanislaus ICJIS (Integrated Criminal Justice Information System)
- 44. County of Stanislaus ITSP
- 45. California DOIT
- 46. California Teachers' Retirement System
- 47. Cendant Corporation
- 48. Central Contra Costa Sanitary District
- 49. Chevron
- 50. Eastern Municipal Water District
- 51. General Motors, MI
- 52. Golden Gate Bridge Highway & Transportation District
- 53. Helix Water District
- 54. HP
- 55. Kimley-Horn/Port of San Diego Regional Fiber Master Plan
- 56. Las Vegas Water Pollution Control Facility
- 57. Los Angeles World Airports (All 4)
- 58. Novato Sanitary District
- 59. Pasadena Water & Power
- 60. Port of San Diego
- 61. Port of San Diego Asset Management Master Plan
- 62. Port of San Diego BITS Organization Strategic Plan
- 63. San Diego Unified Port District
- 64. Silicon Valley Intelligent Transportation System Master Plan (13 cities/2 counties)
- 65. Southern California Association of Governments
- 66. State of Montana, Department of Environmental Quality, MT

GIS Strategic Plans

- 67. City of Anchorage, AK
- 68. City of Las Vegas, NV
- 69. City of Los Angeles, Community Redevelopment Agency
- 70. City of San Diego, RUIS
- 71. City of Tacoma, WA
- 72. County of Nye - Department of Planning, AZ
- 73. County of Pierce, WA
- 74. County of Stanislaus ITSP
- 75. Community Transit, WA
- 76. Los Angeles Department of Transportation
- 77. Los Angeles Department of Water & Power
- 78. Los Angeles County MTA (Metropolitan Transportation Company)
- 79. Nye County Department of Planning
- 80. Orange County Transportation Authority
- 81. Port of San Diego
- 82. SCAG (Southern California Association of Governments)

Enterprise Content Management System Strategic Plans

The following projects addressed some or all of the following: Enterprise Needs Assessment, Rapid Workflow® Business Process Reengineering, Requirements Definition, Implementation Plan, Cost/ Benefit Analysis, Budget Estimates, RFP Development, and Procurement Process Assistance for the deployment of Enterprise Content/Records Management Systems. Projects included ECMS solutions, including some or all of the following: Imaging, Content Management, Records Management, Web Content Management, Automated Workflow, E-Forms/E-Signatures and Integration with existing ERPs and enterprise applications.



83. California Dept. of Water Resources
84. CalSTRS (California State Teachers' Retirement System)
85. City of Brookfield, WI
86. City of Burbank
87. City of Carlsbad
88. City of Las Vegas
89. City of Los Angeles
90. City of Long Beach
91. City of Ontario Municipal Utility Company
92. City of Sacramento
93. City of Santa Ana
94. City of San Carlos
95. City of Santa Monica
96. City of Stockton
97. City of Long Beach
98. City of Los Angeles Fire & Police Pensions
99. City of Pasadena
100. County of Fort Bend, TX
101. County of Galveston, TX
102. County of Missoula, MT
103. County of Riverside
104. County of San Bernardino
105. County of Santa Clara
106. HECO (Hawaiian Electric Company)
107. Helix Water District
108. Inland Empire Utility District
109. Las Vegas Water Pollution Control Facility, NV
110. Los Angeles County Metropolitan Transportation Authority
111. Los Angeles Department of Fire/Police Pensions
112. NOAA (National Oceanic Atmospheric Agency)
113. Orange County Sanitation District
114. Portland Police Bureau Records Divisions, OR
115. Lockheed
116. State of Montana, Department of Environmental Quality, MT
117. State of Montana, Department of Information Technology, MT
118. AMD (Advanced Micro Devices)

Business Process Reengineering/Improvement Projects

119. City of Berkeley
120. City of Centennial
121. Calif. Council of Planning Directors
122. City of Los Angeles Housing Authority
123. City of Merced
124. City of Modesto
125. City of Pasadena
126. City of Pasadena Employee Benefits As-Is and To-Be's
127. City of San Jose
128. City of Stockton
129. City of West Hollywood
130. City of West Sacramento
131. Coldwell-Banker



- 132. County of Merced
- 133. County of Riverside
- 134. County of Riverside, Bioterrorism Unit
- 135. County of Riverside, Community Health Agency
- 136. County of San Joaquin
- 137. County of Stanislaus
- 138. LA County Economic Development
- 139. LA County Metropolitan Transportation Authority
- 140. Los Angeles World Airports (LAWA) Procurement Process BPR Strategic Plan
- 141. LA Housing Authority
- 142. LA Family Housing: Finance
- 143. LA Family Housing: Facilities Maintenance & Operations
- 144. Placer County, Auburn
- 145. Placer County, Lake Tahoe
- 146. Port of San Diego
- 147. Port of San Diego RWPM Facilitator/Certification Training
- 148. San Gabriel Valley Council of Governments
- 149. Southern California Association of Governments
- 150. Equity Title Company
- 151. North Island Federal Credit Union

E-Government Strategic Plans & Website Assessments

- 152. City of Airdrie, Alberta, Canada
- 153. City of Austin, TX
- 154. City of Berkeley
- 155. City of Carlsbad
- 156. City of Indio
- 157. City of Las Vegas, NV
- 158. City of Palo Alto
- 159. City of Pasadena
- 160. City of Sacramento
- 161. City of San Carlos
- 162. City of San Jose E-Government Strategic Plan
- 163. City of San Jose Work2Future Strategic Plan
- 164. California DOIT
- 165. California Energy Commission
- 166. LA Economic Development Corporation
- 167. OCTA (Camm Net)
- 168. Port of San Diego
- 169. State of Montana, Department of Environmental Quality, MT
- 170. Work 2 Future (City of San Jose/California Employment Development Department)

Enterprise Resource Planning (ERP) / Enterprise Asset Management Engagements

The following projects addressed some or all of the following: Enterprise Needs Assessment, Rapid Workflow® Business Process Reengineering, Requirements Definition, Implementation Plan, Budget Estimates, RFP Development, system evaluation, selection, contract negotiation and implementation project management for the deployment of ERP Systems, one or more of the following: Finance, HR, Utility Billing, Procurement, Asset Management, Land Management, etc.



1. City of Corona	2022	Finance & HR ERP RFP
2. City of Berkeley	2022	Hazardous Materials Management RFP
3. Central Contra Costa Sanitary District	2021	Utility Billing System,
4. City of Port Hueneme	2021 - 2022	Finance, HR, Utility Billing ERP RFP
5. City of Costa Mesa	2020 - 2021	Finance & HR ERP RFP
6. City of Centennial	2019 - 2020	Asset Management RFP
7. City of Berkeley	2018 - 2019	Five ERP RFPs
8. City of Centennial, CO,	2017	Finance & HR ERP
9. City of Costa Mesa	2019	ERP Technical & Functional Requirements
10. Helix Water District	2016	Finance ERP Phase 2 & 3
11. Helix Water District	2015	ERP Phase 1 Project Management Office
12. Helix Water District	2014	Utility Billing ERP RFP 1
13. City of Pasadena	2012	ERP RFP Requirements

PROFESSIONAL EXPERIENCE

ThirdWave Corporation	1987 - present	President/CEO, Enterprise Architect
IBM Corporation	1980 - 1987	
Information Systems Group:	1984 - 1987	Advisory Marketing/ Systems Engineer
General Products Division:	1980 - 1984	Advisory Architect/Construction Manager
KCZ-L Architects & Planners	1979 - 1980	Job Captain
Vanderson's Construction	1978 - 1979	Arch. Designer & Construction Manager
City of Oakland, Planning Department	1977 - 1978	Planner II

INDUSTRY RECOGNITION & AWARDS

- Latino Coalition/AFLAC Civic Awards for Hispanic Small Businesses, to honor Hispanic business leaders throughout the United States for community service. (March 21, 2007)
- AIIM-GLA Appreciation Certificate for "Outstanding services not only to the Chapter but the entire information and image management industry." 2002
- AIIM International 2001 Channel Connection Award for "Innovative Document Management, New York, NY, for Innovation Government ED/CM Projects over \$1,000,000.
- FileNet UserNET 2001, Best Enterprise Content Management System Solution, 2nd Place/ Honorable Mention
- State of California Information Technology Commission appointee, from DOIT
- Stanislaus County Special Recognition Award from the CEO for the County IT Strategic Plan, 2000

GUEST SPEAKING AT NATIONAL & UNIVERSITY IT CONFERENCES

11.19	California State University, Fullerton Mihaylo College of Business and Economics, Department of Management	<i>Enterprise Architecture & Organizational Structures</i>
4.18	California State University, Fullerton Mihaylo College of Business and Economics, Department of Management	<i>Applied Business, Economic and Entrepreneurial Strategies</i>
3.17	California State University, Fullerton Mihaylo College of Business and Economics, Department of Management	<i>Applied Business, Economic and Entrepreneurial Strategies</i>
9.16	California State University, Fullerton Mihaylo College of Business and Economics, Department of Management	<i>Applied Business, Economic and Entrepreneurial Strategies</i>



6.15	Southern California Latino Policy Center 21st Century Cities & Schools, Ca; State LA	<i>IT Strategic Planning: Roadmap to Becoming a Leading Digital City</i> , Summer 2015 Latino Policy Forum, Wired Cities Panel,
10.13	State of Montana Technology Conference	<i>Rapid Workflow®: Enterprise Architecture Tool</i>
4.11	University of California, Berkeley	Guest Lecturer, <i>Web Design</i>
11.06	International Accounts Payable Professionals	<i>Rapid Workflow®: High Performance Work Service Delivery</i>
11.05	California Association of Non-Profits (LA/SF)	<i>Time-savings/Revenue Generating Websites</i>
5.03	CA Council Planning Directors Assoc.	<i>Rapid Workflow®: High Performance Work Systems & Service Delivery</i>
10.01	FileNet UseNet Conference, Las Vegas	<i>City of Carlsbad e-Government EDM</i>
11.00	California Transit Association Conference, LA	<i>E-Procurement in the New Millennium</i>
10.00	University of California, Irvine	Guest Lecturer, <i>Building B2B Networks</i>
3.00	Santa Monica College School of Business	<i>Cool Careers in for the New Millennium</i>
11.99	34th Annual California Transit Association Fall Conference, Oakland CA	<i>Online Procurement for the Next Millennium, DBE Program Workshop</i>
6.99	Bridging the Gap, Trends Affecting Small Business Contracting with Transit Agencies	<i>Technology Trends in Procurement</i>
9.96	ORACLE in Government Technology, Phoenix	<i>Orange County Transportation Authority</i>
3.96	San Mateo County ORACLE Technology Day	<i>The Virtual City™, Enterprise IT</i>
5.95	European Union International Conference on The Internet, Helsinki, Finland	<i>Enterprise GIS in Local Government</i>
4.95	Ports '95, Tampa, FL	<i>Leveraging the Internet for Small Businesses</i>
4.93	NCGA, Philadelphia, PA	<i>Port of LA Automated Inspection Program</i>
3.92	NCGA, Anaheim, CA	<i>Practical Multimedia Applications</i>
4.91	NCGA, Chicago, IL	<i>Animation/Multimedia in Business</i>
5.90	HP Government Solutions, Costa Mesa,	<i>CAD for Wastewater Projects</i>
5.90	HP Government Solutions, Los Angeles,	<i>GIS: A Paradigm for Synthesis/Success</i>
6.88	AEC Systems Show, Chicago, IL	<i>GIS: A Paradigm for Success</i>
4.87	American Society Plant Engineers, Tacoma, WA	<i>Optical Scanning Systems</i>
		<i>CAD & Facilities Management</i>

INVENTOR, PATENT HOLDER

Rapid Workflow Process Modeling® Patent Mark Registration No. 2,873,704 with the US Patent and Trademark Office, a registered trademark of ThirdWave in the US/other countries.

AUTHOR

PMBOK Project Management Essentials Skills, Tools and Techniques for Successful Project Delivery, © ThirdWave 1999 (original version), current Version 8.1 © 2020

Rapid Workflow Process Modeling® Process Management Analysis for High Performance Work Systems & Service Delivery, © ThirdWave, 2009

Facilities Design Handbook **IBM**, © March 1983, First book on Computer Aided Design & Drafting systems for large scale AEC projects.

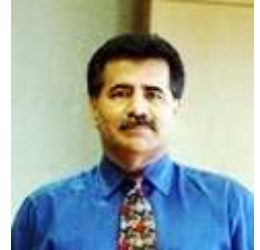
SERGIO HERNANDEZ, Sr. IT Consultant

EDUCATION

BS Social Sciences University of California, Berkeley

TRAINING CERTIFICATES

Rapid Workflow® Business Process Design Certified
ORACLE – e Business Suite / CRMS Oracle, El Segundo, CA
Microsoft Advanced Word 2000 New Horizons, Los Angeles, CA
ORACLE Financials ORACLE Business Practices



PROFESSIONAL EXPERIENCE

Mr. Hernandez is a Sr. IT Consultant of ThirdWave Corporation; a company dedicated to the intelligent application of information systems. Over the last 32 years, Mr. Hernandez has been responsible for a broad set of business functions at ThirdWave. As the Director of Sales, he was responsible for Hardware/Software sales and support for all ThirdWave Federal and State government accounts. As an IT Consultant, his roles have included: IT Strategic Planning, Business Process Improvement/Reengineering, Systems Integration and Software Development. As a Project Coordinator, he is responsible for project staff coordination and supervision, QA/QC on project deliverables, resource allocation, and project cost controls.

Sergio works closely with ThirdWave Project Managers to assure the production of quality deliverables, tracks project scheduling and staff resource availability, implements timely invoicing mechanisms, is responsible for contracts administration. He acts as the back-up person to Project Managers on projects he is assigned to, providing constant client access to a ThirdWave Manager on ED/RMS projects.

ThirdWave Corporation, Executive VP/COO, Business Operations **1988 - present**

Have held several management positions on the direct and indirect sides of the organizations, including the following management positions:

- Project Coordinator on various project including Business Process Re-engineering, IT Consulting, Software development, Electronic Document/Records Management, Imaging and GIS projects
- Manager, Director Marketing/Sales, Government and Federal Accounts
- Imaging/Electronic Document/Records Management Supervisor, providing direction to technical staff
- Trade Show Manager, planned, coordinated and managed trade show exhibits and demonstrations

SAMPLE PROJECTS

Information Technology Master Plans

The following projects addressed some or all of the following: Organizational Architecture, *Enterprise Business/Technology Needs Assessment*, **Rapid Workflow® Business Process Modeling**, *Requirements Definition, Implementation Planning, Budget Estimates, RFP Development, Procurement Process Assistance, and Contract Negotiation* for the upgrading, replacement or introduction of IT found in a government environment. These projects address management (organization, staffing), operational (process) and technology issues (infrastructure, Networking Communications, Office Automation, Enterprise Applications (**all addressed ERP**, Enterprise Asset Management, CRM, ECMS, Public Safety, and Public Work), E-Government Applications, Organizational Change/Change Management, Staffing, Training, Budget Estimates, Cost/Benefit Analysis, and Implementation Plans:



1. City of Berkeley
2. City of Carlsbad
3. City of Cathedral City
4. City of Centennial, CO
5. City of San Carlos
6. City of Corona
7. City of Coronado
8. City of Costa Mesa
9. City of Culver City
10. City of Fairfield
11. City of Fresno
12. City of Glendale
13. City of Goleta
14. City of Indio
15. City of Lancaster
16. City of Las Vegas, NV
17. City of Las Vegas, Water Pollution Control Facility, NV
18. City of Los Angeles, Public Works
19. City of Los Angeles, Bureau of Sanitation
20. City of Los Angeles, Dept. of Water & Power
21. City of Los Angeles, Port of Los Angeles
22. City of Milpitas
23. City of Newport Beach
24. City of Palm Spring Fire Department
25. City of Palm Spring Police Department
26. City of Pearland, TX
27. City of Pasadena
28. City of Portland, Police Bureau
29. City of Sacramento
30. City of San Carlos
31. City of San Jose (ITSP for New City Hall)
32. City of Santa Ana
33. City of Santa Cruz
34. City of Sausalito
35. City of Ventura
36. City of West Hollywood
37. City of Westlake Village
38. County of Los Angeles Public Health
39. County of Riverside Bioterrorism
40. County of Riverside Community Health Agency
41. City of Sausalito
42. County of Stanislaus ICJIS (Integrated Criminal Justice Information System)
43. County of Stanislaus ITSP
44. California Energy Commission
45. California DOIT
46. California Teachers' Retirement System (CalSTRS)
47. Cendant Corporation
48. Chevron
49. Eastern Municipal Water District
50. East Valley Water District
51. General Motors
52. Golden Gate Bridge Highway & Transportation District



- 53. Helix Water District
- 54. HP
- 55. Kimley-Horn/Port of San Diego Regional Fiber Master Plan
- 56. Los Angeles County Immunization
- 57. Los Angeles World Airports (All 4)
- 58. Port of San Diego
- 59. Port of San Diego Asset Management Master Plan
- 60. Port of San Diego BITS Organization Strategic Plan
- 61. San Diego Unified Port District
- 62. Silicon Valley Intelligent Transportation System Master Plan (13 cities/2 counties)
- 63. Pasadena Water & Power
- 64. State of Montana, Department of Environmental Quality, MT

IT / E-Government Strategic Plans, Website Assessment & Redesign

- 65. City of Airdrie, Alberta, Canada
- 66. City of Austin, TX
- 67. City of Berkeley
- 68. City of Carlsbad
- 69. City of Las Vegas, NV
- 70. City of Palo Alto
- 71. City of Pasadena
- 72. City of Sacramento
- 73. City of San Carlos
- 74. City of San Jose E-Government Strategic Plan
- 75. City of San Jose Work2Future Strategic Plan
- 76. California DOIT
- 77. California Energy Commission
- 78. LA Economic Development Corporation
- 79. OCTA (CAMP NET)
- 80. Port of San Diego
- 81. State of Montana, Department of Environmental Quality, MT
- 82. Work 2 Future (City of San Jose/California Employment Development Department)

GIS Strategic Plans

- 83. Anchorage Water & Wastewater Utility
- 84. City of Las Vegas
- 85. City of Los Angeles, Community Redevelopment Agency
- 86. City of San Diego, RUIS
- 87. City of Tacoma, WA
- 88. County of Nye - Department of Planning, WA
- 89. County of Pierce, WA
- 90. County of Stanislaus ITSP
- 91. Community Transit
- 92. Los Angeles Department of Transportation
- 93. Los Angeles Department of Water & Power
- 94. Los Angeles County MTA (Metropolitan Transportation Company)
- 95. Orange County Transportation Authority
- 96. Port of San Diego
- 97. SCAG (Southern California Association of Governments)



Business Process/Improvement Projects (As-Is & To-Be Process Mapping & Recompensates)

- 98. Calif. Council of Planning Directors
- 99. City of Los Angeles Housing Authority
- 100. City of Merced
- 101. City of Modesto
- 102. City of Pasadena
- 103. City of Pasadena Employee Benefits As-Is and To-Be's
- 104. City of Philadelphia
- 105. City of San Jose
- 106. City of Stockton
- 107. City of West Hollywood
- 108. City of West Sacramento
- 109. Coldwell-Banker
- 110. County of Merced
- 111. County of Placer, Community Development Department, Auburn
- 112. County of Placer, Community Development Department, Lake Tahoe
- 113. County of Riverside
- 114. County of Riverside, Bioterrorism Unit
- 115. County of Riverside, Community Health Agency
- 116. County of San Joaquin
- 117. County of Stanislaus
- 118. LA County Economic Development
- 119. LA County METRO
- 120. Los Angeles World Airports (LAWA) Procurement Process BPR Strategic Plan
- 121. Port of San Diego
- 122. Port of San Diego RWPM Facilitator/Certification Training
- 123. SGAG
- 124. Equity Title Company
- 125. North Island Federal Credit Union

Enterprise Content Management System Strategic Plans

The following projects addressed some or all of the following: Enterprise Needs Assessment, Rapid Workflow® Business Process Reengineering, Requirements Definition, Implementation Plan, Cost/ Benefit Analysis, Budget Estimates, RFP Development, and Procurement Process Assistance for the deployment of ECMS Systems. Projects included ECMS solutions, including some or all of the following: Imaging, Content Management, Records Management, Web Content Management, Automated Workflow, E-Forms/E-Signatures and Integration with existing ERPs and enterprise applications.

- 126. California Dept. of Water Resources
- 127. CalSTRS (California State Teachers' Retirement System)
- 128. City of Carlsbad
- 129. City of Las Vegas, NV
- 130. City of Los Angeles
- 131. City of Long Beach
- 132. City of Sacramento
- 133. City of Santa Ana
- 134. City of San Carlos
- 135. City of Santa Monica
- 136. City of Stockton
- 137. City of Long Beach
- 138. City of Los Angeles Fire & Police Pensions



- 139. County of Fort Bend, TX
- 140. County of Galveston, TX
- 141. County of Missoula, MT
- 142. County of Riverside
- 143. County of San Bernardino
- 144. County of Santa Clara
- 145. HECO (Hawaiian Electric Company), HI
- 146. Helix Water District
- 147. Inland Empire Utility District
- 148. Las Vegas Water Pollution Control Facility, NV
- 149. Los Angeles County Metropolitan Transportation Authority
- 150. Los Angeles Department of Fire/Police Pensions
- 151. NOAA (National Oceanic Atmospheric Agency). MD, AK, HI, CA, MA, MD, FL
- 152. Orange County Sanitation District
- 153. Portland Police Bureau Records Divisions, OR
- 154. Lockheed
- 155. State of Montana, Department of Environmental Quality. MT
- 156. State of Montana, Department of Information Technology. MT
- 157. AMD (Advanced Micro Devices)

Enterprise Resource Planning (ERP) / Enterprise Asset Management Engagements

The following projects addressed some or all of the following: Enterprise Needs Assessment, Rapid Workflow® Business Process Reengineering, Requirements Definition, Implementation Plan, Budget Estimates, RFP Development, system evaluation, selection, contract negotiation and implementation project management for the deployment of ERP Systems, one or more of the following: Finance, HR, Utility Billing, Procurement, Asset Management, Land Management, etc.

1. City of Corona	2022	Finance & HR ERP RFP
2. City of Berkeley	2022	Hazardous Materials Management RFP
3. Central Contra Costa Sanitary District	2021	Utility Billing System,
4. City of Port Hueneme	2021 - 2022	Finance, HR, Utility Billing ERP RFP
5. City of Costa Mesa	2020 - 2021	Finance & HR ERP RFP
6. City of Centennial	2019 - 2020	Asset Management RFP
7. City of Berkeley	2018 - 2019	Five ERP RFPs
8. City of Centennial, CO,	2017	Finance & HR ERP
9. City of Costa Mesa	2019	ERP Technical & Functional Requirements
10. Helix Water District	2016	Finance ERP Phase 2 & 3
11. Helix Water District	2015	ERP Phase 1 Project Management Office
12. Helix Water District	2014	Utility Billing ERP RFP 1
13. City of Pasadena	2012	ERP RFP Requirements

CONTINUING EDUCATION

ORACLE – e-Business Suite/CRMS	Oracle, El Segundo, CA
Microsoft Advanced Word 2000	New Horizons, Los Angeles, CA
3COM Training	3COM Sales Seminar/Product Training
Accounting Fundamentals, MS Excel	Fred Pryor Resources, Inc., Los Angeles, CA
Payroll Processing for Windows	ADP Payroll Training, Sherman Oaks, CA
ORACLE Seminar 1996	ORACLE Business Practices, Sales, Product Features
Animator Studio & 3D Studio Multimedia	Autodesk, Sausalito, CA
AutoCAD R12, CAD Camp '94	Autodesk, Sausalito, CA

AYMEE BARAJAS, Business Analyst

EDUCATION

BS Management and Business Economics University of California, Merced

CERTIFICATIONS

Rapid Workflow® Business Process Design Certified

PROFESSIONAL EXPERIENCE

Ms. Barajas is an accomplished graphic design and writer. She has extensive experience as a visual design consultant who has collaborated with professional in producing a wide variety of written and electronic materials. She is highly experienced with social media platforms/systems and graphic design software packages.



ThirdWave Corporation, Business Analyst

May 2018 - present

SAMPLE PROJECTS

Information Technology Master Plans

The following projects addressed some or all of the following: Organizational Architecture, Enterprise Business/Technology Needs Assessment, Rapid Workflow® Business Process Reengineering, Requirements Definition. These projects address management (organization, staffing), operational (process) and technology issues (infrastructure, Networking Communications, Office Automation, Enterprise Applications (all addressed ERP, ECMS, Public Safety, and Public Work), E-Government Applications, Organizational Change/Change Management, Staffing, Training, Cost Benefit Analysis, and Implementation Plans:

1. City of Burbank
2. City of Corona
3. City of Costa Mesa
4. City of Fairfield
5. City of Fresno
6. City of Indio
7. City of Lancaster
8. City of Milpitas
10. City of Pearland, TX
11. City of Port Hueneme
12. City of Philadelphia
13. City of Sacramento
14. City of Ventura
15. Golden Gate Bridge, Highway & Transportation District
16. East Valley Water District
17. Helix Water District
18. Novato Sanitary District



Rapid Workflow® Business Process Improvement

1. LA County METRO
2. City of Berkeley
3. City of Centennial
4. LA Family Housing
5. City of Sacramento

Enterprise Content Management Assessment

1. Orange County Sanitation District
2. City of Brookfield, WI
3. City of Ontario/Ontario Municipal Utility Company

Project Management or Project Management Training

1. Southern California Association of Governments
2. San Gabriel Valley Council of Governments
3. City of Concord

ERP Assessments, Requirements, Procurement, Contract Negotiation & Project Management

Developed and documented detailed enterprise needs assessments, Rapid Workflow® Business As-Is (existing) and To-Be (future state) process maps, functional and technical requirements, reporting, data/data migration, systems interfaces for all departments for new ERP software. ERP engagements include Implementation Planning, Budget Estimates, RFP/Procurement Process, ERP software selection, and Contract Negotiations, in addition to acting as the Project Manager delivering successful ERP implementations.

1.	City of Corona	2022	ERP Finance & Human Resources As-Is and To-Be Process mapping, Functional and Technical Requirements, RFP, Procurement, & Contract Negotiation
2.	City of Berkeley	2022	Toxics Materials Management System: As-Is and To-Be business process mapping.
3.	Central Sanitary District	2021	ERP Customer Billing System: As-Is and To-Be business process mapping, Functional and Technical Requirements,
4.	City of Port Hueneme	2021	ERP Finance & Human Resources As-Is and To-Be Process mapping, Functional and Technical Requirements, RFP, Procurement, & Contract Negotiation
5.	Costa Mesa	2020	ERP Finance & Human Resources As-Is and To-Be Process mapping, Functional and Technical Requirements, RFP, Procurement, & Contract Negotiation
6.	City of Centennial, CO	2020	ERP Asset Management As-Is and To-Be Process mapping, Functional and Technical Requirements, RFP, Procurement, & Contract Negotiation
7.	Costa Mesa	2019	ERP System Procurement Technical & Functional Requirements
8.	LAC MTA	2019	ERP Functional & Technical Requirements
9.	City of Berkeley	2018	Work Orders, Asset Management ERP Requirements, ERP RFP Development, Procurement and Contract Negotiations
10.	City of Berkeley	2018	Real Property/Lease Management ERP Requirements, ERP RFP Development, Procurement and Contract Negotiations
11.	City of Berkeley	2018	Fleet Management ERP Requirements, ERP RFP Development, Procurement and Contract Negotiations



- 12. City of Berkeley 2018 Zero Waste Management ERP Requirements, ERP RFP Development, Procurement and Contract Negotiation
- 13. City of Berkeley 2018 Performance & Learning Management ERP Requirements, ERP RFP Development, Procurement and Contract Negotiations
- 14. City of Berkeley 2018 Business Licenses ERP Requirements, ERP RFP Development, Procurement and Contract Negotiations

Web Consulting, Design & Development

- 1. City of Indio Website Redesign Assessment & RFP Development
- 2. City of Palo Alto Website Redesign Assessment & RFP Development
- 3. ByDESIGN, A journal for Exceptional Achievement Website Design & Development
- 4. ThirdWave Corporate Website Design & Development

University of California, Merced, Housing and Residence Life, Graphic Design Intern 2016
Designed/produced inclusive graphics including flyers, logos, booklets, snapchat filters, and shirts. Consulted and collaborated with professional and student staff in producing marketing materials. Served as an advisor to other staff in the area of graphic design.

University of California, Merced, ASUCM 2016
Managed various social media accounts, helped maintain organization’s identity, and responded to comments and messages. Assisted in the marketing of events through the use of various social media platforms. Designed/produced marketing collateral and snapchat filters with the consultation of fellow board members.

SOFTWARE

- Graphics Tools: Adobe Photoshop CS6 (9 years), Adobe Illustrator (2 years), Jasc Photoshop Pro (2 year), Photofiltre (2 years)
- Microsoft Office: Word (10 years), Excel (7 years), PowerPoint (7 years), Visio (2 years), MS Project (1 year)
- Social Media Platforms: Facebook, Instagram, Twitter, and LinkedIn
- Business Process Imp.: Rapid Workflow® Process Modeling

TRAINING

- PMBOK Project Management Training
- ThirdWave Rapid Workflow® Process Model

JIM FALIN, Senior Programmer

EDUCATION

AA, Engineering
AA, Electronics Technology

As a Sr. Software/Web Applications Developer, Mr. Falin has been involved in the design, development and implementation of commercial and custom developed applications for 30 years. He has also participated in all IT Strategic plans carried out by ThirdWave since 2000.



PROFESSIONAL EXPERIENCE

ThirdWave Corporation

2000 – Present

IT Strategic Planning

- CalSTRS Business Process Reengineering Strategic Plan
- City of Airdrie, Alberta, Canada
- City of Austin IT/E-Government Strategic Plan
- City of Corona IT/E-Government Strategic Plan
- City of Lancaster IT Strategic Plan
- City of Las Vegas IT/E-Government Strategic Plan
- City of Las Vegas Water Pollution Control Facility IT Strategic Plan
- City of Pasadena IT Strategic Plan
- City of Sacramento IT/Web Governance Structure Strategic Plan
- City of San Jose IT/E-Government Strategic Plan
- County of Riverside, Bio-Terrorism Preparedness & Response Strategic Plan
- County of Riverside, BPI/Rapid Workflow Process Modeling® Training
- County of Riverside, CHA Information Technology, Asset Management BPR
- County of Riverside, CHA, PMBOK Project Management Training
- Galveston County, Texas, ECMS/IT Strategic Plan
- Los Angeles World Airports (LAWA) Procurement Process/IT Strategic Plan
- Missoula County Montana, ECMS/IT Strategic Plan
- RAND CORPORATION IT Strategic Plan
- Silicon Valley Intelligent Infrastructure System Infrastructure Master Plan
- Stanislaus County Integrated Criminal Justice Information System Feasibility Study
- Stanislaus County E-Government/IT Strategic Plan
- State of California Department of Information Technology E-Government/IT Strategic Plan

Application Development

- **ThirdWave 2013 Corporate Website:** Development of a completely new website for the firm.
- **CASA Alumni Website, College of Environmental Design, UC Berkeley:** (casa-ucberkeley.org), Developed an interactive website allowing UC Berkeley Alumni post networking information/content and do professional networking and e-commerce.



- **Orange County Transportation Authority CAMM NET/ERP Enterprise Application integration:** (octa.net/cammnet), Designed/developed of an interface between OCTA's online procurement system and a new ERP Financial System. The interface automatically downloads awarded contracts from the CAMM NET Contract Awards Module into the Budget Module of the new ERP, encumbering funds from the appropriate budget item.
- **Portland Police Bureau Online Field Reporting Application:** Developed a browser-based application used by officers in the field (in patrol cars and notebook computers) in support of standard city/state crime reports. The manual business processes were re-engineered to use an application built on Adobe's eForms/Form Server technology. This application will be used by 1,250 Police Officers, Detectives and Records Management staff at the city, in addition to the law enforcement agencies of eight surrounding cities. Technologies include extensive use of XML based objects in support data movement from servers to active police cars in real time via the Bureau's radio network.
- **City of Pasadena Website Assessment, Redesign, Development and Governance:** Managed a project to completely redo all of the departmental web sites. Worked closely with City executives and technical committees to build consensus on a consistent and professional redesign. Defined City's new Internet Service Delivery Strategy.
- **National Oceanic & Atmospheric Agency (NOAA) EDMS Strategy:** Participated on a project to develop an enterprise-wide Electronic Document/Records Management strategy for this Federal Agency. Developed a Web based document search and retrieve application. The EDMS strategy and implementation plan was developed for a 4,000-person organization comprised of 12 Regional/Science Centers located throughout the US.
- **City of Long Beach, Enterprise-wide Electronic Document Management Program Implementation/Public Access Web Interface:** Database/application programming in support of property modifications in the City's FileNET Document Management system (a technique unsupported by the FileNET system), including Web enabling public searches for specific City information with document retrieval from the FileNET database.
- **City of Carlsbad, Enterprise-wide Electronic Document Management Program Implementation/Public Access Web Interface:** Database/application programming in support of property modifications in the City's FileNET Document Management system (a technique unsupported by the FileNET system), including Web enabling public searches for specific City information with document retrieval from the FileNET database.
- **Stanislaus County Integrated Criminal Justice Information System (ICJIS):** Managed a project to design and develop an enterprise web enabled ICJIS for the Sheriff's Department, District Attorney, and Public Defender, in addition to the Courts and the 911 system. This \$1,500,000 Java/J2EE suite of applications will be the first truly integrated ICJIS developed in California.
- **Los Angeles County, Department of Health Services, Immunization Program:** Configure IPsec application servers and database server, followed up with a security audit on the file system, IIS Web server, and MS SQL database server.
- **Han Padron Associates Website, New York:** With offices located in several continents, HPA is the third largest marine structural engineering firm in the US. This project entailed the redesign of a dated corporate website in addition to the development of a database driven content management feature allowing authorized staff to update content dynamically from any office throughout the world.
- **Center for the Improvement of Child Caring (CICC) Web enabled Application & Portal:** CICC is a private, nonprofit community service, training and research corporation, and a major organizer of a nationwide Effective Parenting Movement to improve the overall quality of child rearing and child caring in the United States. This site includes e commerce (B2B, B2C) and a semi artificial intelligence child development diagnosis module titled The Discovery Tool™.



- **Orange County Transportation Authority Online Purchasing Web Site Development:** (octa.net/cammnet), design/development of an enterprise-wide online government purchasing web site for the 4th largest transit agency in the US. Responsible for developing several modules, e.g., Solicitation Posting, Vendor Registration, Automatic vendor Notification, Online Bidding, Contract Award/Posting, DBE Certification, Contract Compliance and special events posting. This site allows OCTA Contract Administration and Materials Management to streamline its procurement processes.

Enterprise Resource Planning

1. Central Contra Costa Sanitary District (2021)
ERP Customer Billing System
2. City of Port Hueneme (2021-2022)
3. City of Costa Mesa (2020 – 2021)
4. City of Centennial, Enterprise Asset Management (2019 – 2020)
5. City of Berkeley, Enterprise Asset Management (2018-19)
6. City of Centennial, CO, Finance ERP (2017)
7. Helix Water District, Finance ERP Phase 2 & 3 (2016)
8. Helix Water District ERP Phase 1 Project Management Office (2015)
Acted as the PMO on the 14-month, \$3,200,000 ERP implementation. A rare occurrence in ERP deployments, the project came in on schedule and \$100,000 under budget.
9. Helix Water District, Utility Billing ERP RFP 1 (2014)
10. City of Pasadena, ERP RFP Requirements (2012)

EMPLOYMENT HISTORY

ThirdWave Corporation	2000 – Present	Sr. Web Developer
Echo Associates	2000 – 2000	TERP Lead Programmer
Grapevine Networking, Inc.	1995 – 1999	Sr. Programming Engineer
AICS	1993 – 1995	Sr. Programmer/Consultant
CC Industries	1986 – 1987	Sr. Engineer
Van Haverbeke Corp.	1980 – 1986	Programmer
Mcdonnell Douglas	1973 – 1980	Programmer

TECHNOLOGIES SUPPORTED

- Web Development: C#, ASP.NET (v2.0, 1.1, 1.0), ASP, COM, DLL, Web DLL, ActiveX, CGI, Web Applications, ISAPI, TCP/IP, Microsoft IIS6/5/4
- Programming: C#, VB.NET, VB6/5/4, VC++, VB Script, Java 1.1, 1.2, JavaScript, Visual Interdev, HTML, XML (Microsoft IE5/6 and XMLDOM), MS Access, SQL Server, Transact SQL (SQL Server 2005,2000,7), C, C++, Crystal Reports, Visual Studio 2005/2003
- Other Technologies: VB.NET/VB Applications, VB COM, EXE, Applets, TCP/IP (Winsock), ADO, RDO, ODBC, Oracle 8/9, SQL Server 2005/2000/7, Embedded control, Visual Source Safe (V6.0, Administrator)
- Operating Systems: W2k3



JIM KELTON, Managing Principal, Altius IT

EDUCATION

MS MIS, Graduated First in Class University of Arizona
BA Accounting and Finance University of Arizona

CERTIFICATIONS

Certified Information Systems Auditor (CISA™)
Certified in Risk and Information Systems Controls (CRISC™)
Certified in the Governance of Enterprise IT (CGEIT™)

PROFESSIONAL

Mr. Kelton is Managing Principal of Altius IT, a state-of-the-art IT security audit and risk management consulting firm dedicated to the advancement of business and IT services. Recently Mr. Kelton has consulted with organizations on security, information asset protection, risk management, and compliance.

Jim Kelton is a risk management and IT security consultant with 30 years of risk assessment, security management, and technical experience. He serves as Managing Principal of Altius IT, served as a board member of the International Association of Professional Security Consultants (IAPSC), and is past Chairman of the Cybersecurity Special Interest Group (SIG).

AREAS OF EXPERTISE

- IT security audits and assessments
- Risk management, risk treatment, and risk reduction strategies
- Third-party system audits, security best practices
- Security regulations and compliance requirements
- Compliance audits and protection of information assets and sensitive data

ACHIEVEMENT HIGHLIGHTS

- Board of Directors of International Association of Professional Security Consultants
- Chairman Cybersecurity Special Interest Group (SIG)
- Certified Information Systems Auditor
- Certified in Risk and Information Systems Controls
- Certified in the Governance of Enterprise IT
- Featured on *MSNBC* and in over 40 publications including *The Wall Street Journal*, *Business Week*, *USA Today*, *Los Angeles Times*, and others
- Past Chief Information Officer (CIO) of subsidiary of Philip Morris (1979 – 1993)
- Graduated 1st in class from a Top 5 MIS University (*US News and World Report*)
- Instructor at the University of Arizona (MIS department)



CURT GILBERT, Project Manager, Altius IT

EDUCATION

BA Personnel Administration University of Kansas
MMA Marine Corps Command and Staff College

PROFESSIONAL

Mr. Curt Gilbert has over 27 years of management and technical experience. He is an experienced leader with enterprise risk management, risk reduction, audit, and assessment experience.

Mr. Gilbert serves as an Altius IT Project Manager responsible for client engagement and relationship management including project planning, on-site security audits, and management of resources to bring about the successful completion of specific project goals and objectives. His experience in the areas of planning, organizing, directing, and controlling helps ensure Altius IT projects remain on schedule and on budget.

Prior to joining Altius IT, Mr. Gilbert served as a Captain in the U.S. Navy where amongst numerous assignments he was responsible for network management and physical security. He served in the Pentagon as the manager of the National Military Command Center and was later responsible for the overall assessment and certification of over 20,000 systems and personnel in Japan.

AREAS OF EXPERTISE

- Risk management, risk treatment, and risk reduction strategies
- IT security audits and assessments
- Security regulations and compliance requirements
- Physical security audits and assessments
- Security best practices
- Enterprise risk management, audits, and assessments
- Management of on-site assessments and deliverables
- IT project planning, execution, and monitoring
- Client engagement and relationship management
- Understanding of the business environment to ensure necessary controls

ACHIEVEMENT HIGHLIGHTS

- Network security audits and compliance assessments
- On-site project management, interfacing with clients, problem resolution, project deliverables
- Responsible for facility infrastructure and information systems at National Military Command Center



DALE MCNULTY, Chief Technology Officer, Altius IT

EDUCATION

PhD Information and Computer Science	University of California, Irvine
MBA	University of Southern California
MS Computer Science	University of California, Irvine
BS Computer Science	University of Wisconsin (Madison)

PROFESSIONAL

Dr. McNulty has over 25 years of experience as a hands-on Chief Information Security Officer. He has over nine years of experience managing the infrastructure and information security for a global organization with over 30 domestic and international offices. He is a board member of the Orange County Information Systems Security Association.

He is experienced in network infrastructure security mechanisms. His expertise in managed information security and networked environments helps organizations achieve a higher security return on investment over traditional approaches.

AREAS OF EXPERTISE

- Security auditing and compliance
- Information security, cyber security, access controls
- Security protection mechanisms: firewalls, VPNs, VLANs, IDS/IPS
- Penetration testing, packet sniffing
- Vulnerability and threat analysis and recommendations
- Risk assessment, risk analysis, and risk treatment
- Incident response planning
- Conceptualization, design, and implementation of a new technology
- Architect network solutions (cloud, LANs, WANs, intranets, hybrids)
- System administration and monitoring applications
- Programming and application development

ACHIEVEMENT HIGHLIGHTS

- Ph.D. Information and Computer Science
- Orange County Information Systems Security Association (ISSA-OC) Board of Directors
- Network and server hardening and intrusion detection and protection
- Security auditing and compliance
- Firewalls, routers, SQL Server, Exchange Server, Sharepoint Server

Section 4 Cost Proposal



4.1 Fixed Fee Cost Proposal

This cost estimate is based on the City’s organizational structure and the IT department’s make up. As such, this project estimate is open for further discussion, clarification, and adjustment during contract negotiations, should it be necessary.

Upon mutual agreement on the final Scope of Work and deliverables, professional services will be provided on a fixed-fee, deliverable-based, Professional Services Agreement.

The following provides a summary of costs.

Figure 4.1.1: Cost Summary

Phase 0	Project Management	10,720
Phase 1	Discovery	10,320
Phase 2	Assessment	45,375
Phase 3	IT Strategic Plan & Roadmap	29,581
Total Cost		\$ 95,996





4.2 Detailed Payment Schedule

The following figure provides a cost proposal including a detailed breakdown of project costs, deliverable and payment schedule.

Figure 4.2.1: Detailed Payment Schedule

Phase	Description	Subtask	Task	Phase
PHASE 0	PROJECT MANAGEMENT			10,720
Task 0.1	Project Kick-off Meeting		1,570	
	Deliverable 0.1: Project Kick-Off Meeting			
Task 0.2	Ongoing Weekly Meetings		7,950	
	Deliverable 0.2: Project Coordination			
Task 0.3	Monthly Status Reports		1,200	
	Deliverable 0.3: Monthly Status Reports			
PHASE 1	DISCOVERY			10,320
Task 1.1	Review Existing Documentation		1,102	
	Deliverable 1.1: Review Existing Documents			
Task 1.2	IT Systems Inventory		461	
	Deliverable 1.2: Application Portfolio & Systems Inventory Spreadsheet			
Task 1.3	Online Community Survey		2,986	
Task 1.3.1	Develop & Provide Online Community Survey	1,273		
	Deliverable 1.3.1: Online Community Survey			
Task 1.3.2	Compile Community Survey Data	1,714		
	Deliverable 1.3.2: Online Community Survey Findings			
Task 1.4	IT Focus Groups		2,785	
Task 1.4.1	Hold IT Focus Groups	1,463		
	Deliverable 1.4.1: Hold IT Focus Groups			
Task 1.4.2	IT Focus Group Findings	1,323		
	Deliverable 1.4.2: IT Focus Group Findings			
Task 1.5	Online Staff Survey		2,986	
Task 1.5.1	Develop & Provide Online Staff Survey	1,273		
	Deliverable 1.5.1: Online Staff Survey			
Task 1.5.2	Compile Staff Survey Data	1,714		
	Deliverable 1.5.2: Online Staff Survey Findings			
Phase 2	ASSESSMENT			45,375
Task 2.1	Management Interviews		3,807	
Task 2.1.1	Hold Management Interviews	3,015		
	Deliverable 2.1.1: Management Interviews			
Task 2.1.2	Incorporate Management Comments	792		
	Deliverable 2.1.2: Management Requirements Findings			



Task 2.2	IT Skills Survey	5,290
Task 2.2.1	Develop & Provide IT Skills Survey.....	2,204
	Deliverable 2.2.1: IT Skills Assessment Survey	
Task 2.2.2	IT Skills Survey Summary.....	3,086
	Deliverable 2.2.2: Summary of Findings	
Task 2.3	Cyber Security Risk Assessment	11,513
Task 2.3.1	Cyber Security Risk Assessment.....	2,673
	Deliverable 2.3.1: Cyber Security Risk Assessment	
Task 2.3.2	Cyber Security Risk Analysis.....	6,262
	Deliverable 2.3.2: Cyber Security Risk Analysis	
Task 2.3.3	Cyber Security Risk Action Plan.....	2,578
	Deliverable 2.3.3: Final Cyber Security Risk Action Plan	
Task 2.4	Business Requirements Workshops	22,562
Task 2.4.1	Hold Rapid Workflow® Workshops.....	11,840
	Deliverable 2.4.1: Rapid Workflow® Workshops	
Task 2.4.2	Document As-Is Rapid Workflow® Process Models.....	9,279
	Deliverable 2.4.2: Draft Rapid Workflow® Models	
Task 2.4.3	Final Business Process Requirements.....	1,443
	Deliverable 2.4.3: Business Process Gap Analysis	
Task 2.5	IT Governance Assessment	2,204
Task 2.5.1	Hold IT Governance Workshop.....	1,102
	Deliverable 2.5.1: Hold IT Governance Workshop	
Task 2.5.2	Final IT Governance Findings.....	1,102
	Deliverable 2.5.2: IT Governance Recommendations	
Phase 3 IT STRATEGIC PLAN & ROADMAP		29,581
Task 3.1	Information Technology Strategic Plan	12,344
Task 3.1.1	Draft ITSP Findings & Recommendations.....	9,528
	Deliverable 3.1.1: Draft IT Strategic Plan	
Task 3.1.2	Final IT Strategic Plan.....	3,086
	Deliverable 3.1.2: IT Strategic Plan	
Task 3.2	ITSP Initiative Prioritization	1,102
Task 3.2.1	ITSP Initiative Prioritization.....	1,102
	Deliverable 3.2.1: ITSP Initiative Prioritization	
Task 3.3	ITSP Roadmap	10,500
Task 3.3.1	Draft ITSP Roadmap.....	7,414
	Deliverable 3.3.1: Draft ITSP Roadmap	
Task 3.3.2	ITSP Roadmap.....	3,086
	Deliverables 3.3.2: ITSP Roadmap	
Task 3.4	Executive Presentation	5,635
Task 3.4.1	Produce ITSP Executive Presentation.....	3,707
	Deliverable 3.4.1: ITSP Executive Presentation	
Task 3.4.2	Provide Executive Presentation.....	1,928
	Deliverable 3.4.2: Provide Executive Presentation	
Total Cost		\$ 95,996

Section 5 References



5.1 Specialist in Government IT Strategic Planning

ThirdWave is a subject matter expert specializing in government IT Strategic Planning, and a recognized innovator and long-standing thought leader in the US. Our references include **170 (one-hundred and sixty-seven)** other city, state and federal agencies throughout the US and Canada.

Data shows the most successful IT assessments are those that articulate **actionable recommendations supported by a compelling business case** needed for approval and funding. Our ITSP projects tie initiatives to quantitative or qualitative benefits to the organization and/or the community these agencies serve. Unparalleled in the IT industry in the US, **98.2% (167 out of 170) of ITSPs** we have presented to leadership teams and elected officials have been approved and funded, an unparalleled statistic by any firm of any size in the US.

The figure on the following page illustrates a partial list of successful ITSP projects we have carried out, indicating the comprehensiveness of our approach.

This is followed by customer reference information and customer testimonials.



5.2 Client References

5.2.1 City of Ventura: Information Technology Strategic Plan & Roadmap

Ivijan Day, MPP
Management Analyst II
Finance and Technology
City of Ventura
805.654.7733
iday@Cityofventura.ca.gov



Duration: November 5, 2020 – June 10, 2021
Customer Reference:



06.25.2021

Ivijan Day
Management Analyst II
City of Ventura
501 Poli Street
Ventura, CA 93002

To whom it may concern:

The City of Ventura highly recommends working with ThirdWave Corporation for any Information Technology related strategic projects.

ThirdWave helped the City successfully complete the first comprehensive Citywide Information Technology Strategic Plan. This five-year plan was approved by our City Council and acts as a living document that can be adjusted annually by the IT Governance Committee. The plan articulates a vision and a roadmap for the effective use of technology, and I am confident that this plan and the work completed by ThirdWave will help support the complex work of the City. The plan was developed in close collaboration with the City Departments and ThirdWave.

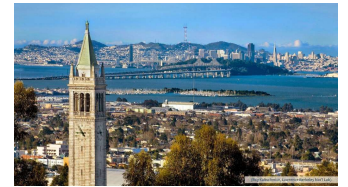
It was a pleasure working directly with Roy Hernandez from ThirdWave on this project and other City staff members had an extremely positive experience working with Roy throughout the duration of the project. The project was completed 100% remotely due to the pandemic and the overall communication and coordination from Roy and his team was excellent, which is incredibly important when working and collaborating on such a critical project. Throughout the project, Roy was also extremely knowledgeable about Information Technology systems and software and incredibly skilled in strategic planning as well as project management. The final Strategic Plan produced by ThirdWave exceeded all expectations and I am certain that any organization can benefit tremendously from working with ThirdWave.

Please do not hesitate to reach out to me directly (805) 654-7733 if you have any questions. It was truly a great experience working with ThirdWave on this project and I am happy to discuss further.

Sincerely,
Ivijan Day
Management Analyst II City of Ventura

5.2.2 City of Berkeley: Digital Strategic Plan & Roadmap

Savita Chaudry (former CIO, now at City of Fairfield)
Director, Department of IT
Finance Department/General Services Division
City of Berkeley
2180 Milvia Street, 3rd Floor
Berkeley, CA 94704
707.428.7582
schaudhary@fairfield.ca.gov



Duration: May 2016 – October 2016

Customer Reference:

December 1, 2020

To Whom It May Concern:

I am writing to recommend the services of ThirdWave Corporation (“ThirdWave”). The City of Berkeley has worked directly with Roy Hernandez and his team at ThirdWave since 2016 on multiple large Citywide and department level projects. Briefly, these projects include:

1. Needs Assessment and Project Management Services for the City’s Enterprise Resource Planning (ERP) software and neighboring applications—discovery, business requirements, RFP development, and vendor analysis
2. Established a five-year Digital Strategic Plan for the City of Berkeley
3. Established a Technology Service Fund for the City’s IT Department
4. Training and certifying City staff to use the Rapid Workflow® methodology

Each of these projects were high-priority, high-risk, and overdue at the City of Berkeley. ThirdWave delivered their services on schedule and on budget, and consistently exceeded the scope of work to ensure the City received clear documentation, accurate feedback, and quality analysis in support of each project. This included as many in-person one-on-one meetings as the City needed, late-night phone calls to review RFPs and business analysis documentation, as well as in-person support at our City Council meetings.

The five-year Digital Strategic Plan that ThirdWave produced was not your average mission statement and SWOT analysis, but an invaluable artifact that documents actionable technology projects, their timeline, and estimated budget. The City was able to use this breakdown developed by ThirdWave to transparently request funding and provided a structure by which we can provide updates to our community.

The Rapid Workflow® methodology used and taught by ThirdWave is also highly effective. After experiencing Roy's fluid and clear Rapid Workflow® sessions, he seamlessly taught our staff how to execute the Rapid Workflow® methodology to document business, technical, and functional solution requirements. To this day, staff continues to save the City thousands of dollars across multiple large Citywide projects by defining their requirements before procuring technology solutions, and we continue to bring back Roy to certify new IT staff in the Rapid Workflow® methodology.

The most critical component of ThirdWave's value to the City is the collaborative relationship they were able to create with our departments. Roy and his team at ThirdWave were and continue to be responsive to the City's specific needs. ThirdWave has not only completed a successful scope of work with the City of Berkeley, and has become a trusted resource and partner with the City of Berkeley. Thank You!

Sincerely,
Savita Chaudhary
Director of Information Technology
City of Berkeley

5.2.3 Golden Gate Bridge Highway & Transportation District: IS Strategic Plan & Roadmap

Fang Lu
CIO
Golden Gate Bridge
915 I Street, 3rd Floor
Sacramento, CA 95814
MMacGunigal@Cityofsacramento.org
916.808.7998
Duration: March 15 – July 15, 2020
Customer Reference:



To Whom it may concern:

ThirdWave performed an IS Strategic Plan for GGB and completed the work on time and on budget. The initiative took 5 months during the COVID-19 pandemic and a lot of things changed. Roy, ThirdWave consultant, was not able to travel on site during the lockdown. This would normally have caused issues or challenges, but looking back, none of this affected the project. The team sustained the work

quality, made sure of their availability, achieved great engagement with GGB staff, and delivered a great outcome. Overall, it was a great success. Plan was adopted by the GGB eTeam as of July 15th, 2020. As the GGB CIO, I was extremely impressed with the work ThirdWave delivered.

Quality of the work product

All together ThirdWave delivered a total 152 pages of two volumes of GGB IS Strategic Plan, another 55-page booklet for Rapid Workflow Diagrams, one comprehensive spreadsheet for all IS projects, 5-year prioritization and funding needs, and a 37-slide presentation. The amount of work was tremendous. All products were high quality and all information was captured thoroughly and accurately from a series of activities: a GGB District-wide survey, 8 management interviews, 4 IS focus group workshops, and 18 Rapid Workflow workshops. Everything in the documents is backed up with detailed information provided by District staff – from the executive level to SMEs. Information was documented, organized and graphically analyzed where appropriate. This made it easier to read and understand what the information means. The tremendous number of details captured in the Plan are also helpful for seeing where the analysis and recommendations came from. I've received positive comments from the GGB eTeam executives for the rigorous methodology ThirdWave used and the outcome. We now have a good Plan and a guideline for IS to march down the road in the next 5 years.

Rapid Workflow® Process Mapping

Overall ThirdWave conducted 18 Rapid Workflow® workshops for GGB. 34 staff attended these workshops with 64 attendances that many attended more than one. The workshops were extremely helpful for understanding the business' ask. They captured 'as-is' business processes for business requests that weren't captured before. We now have a booklet that anytime down the road any of us can refer to for any of those processes. Detailed impact and benefits were discussed and documented, which can help conduct a future ROI analysis if needed. Staff was very engaged through the exercise. The Rapid Workflow® methodology is a thorough and mature process. It does the legwork for future IS work based on identified requirements. The data collected paves the road for either an RFP or initiating a project. What staff liked about it, other than the fact that they felt heard during the exercise, was that they didn't have to do any pre-work or after-work for these workshops. It usually takes 5-10 minutes for people to be fluent with it, but it was quite natural. 16 out of 18 workshops were finished on time and wrapped up successfully. Two needed follow-ups, mostly because of additional areas that needed to be addressed. Overall, the Rapid Workflow® process mapping was an effective methodology and a big help for me and IS to understand the Business' ask, and a big help to business units for documenting and organizing their requirements.

Project Management, Communication and Coordination

Being the CIO of GGB, I saw the need for me to take on the role of the Project Manager for the IS Strategic Plan. Working with Roy through the whole exercise

I'd say that I like what I've seen for how Roy and ThirdWave managed the project and conducted their communication and coordination. The ThirdWave team is very responsive. The team came up with a thorough project timeline, and did a good job following the timeline. All communications were professional and well thought out. Roy does a great job managing and facilitating meetings and workshops. My IS team is very vocal and has a lot of thoughts and feedback, which I appreciate. Roy handles his interactions very well which is not always easy. It all comes from his decades of years of experiences.

Keeping the project on schedule

The ThirdWave team, and Roy, did a good job keeping the project on schedule. With the big impact of the COVID-19 pandemic, the project finished only 2 weeks later than the original timeline. The quick turnaround time and a lot of after-work-hours and weekend time from Roy and Amy, Business Analyst, definitely contributed to the on-time delivery of work.

This is one of the best delivered projects I've seen and a great relationship I've built with Roy and Amy, working together through this project. I enjoyed working with them. The team is flexible, responsive, and professional.

Roy provided a lot of great input for me for all things considered with strategic planning. I was able to leverage their decades of experiences and make decisions on how to move forward with GGB IS in a great manner. I also appreciate that Roy always provides a well-balanced input and feedback when I discussed GGB IS challenges with him. This helped me form a good vision and strategy leading the IS team and delivering the best service to District customers. I'd definitely recommend this firm and the team to my industry peers and other organizations.

Fang Lu | Chief Technology Director
Golden Gate Bridge, Highway & Transportation District
flu@goldengate.org

5.2.4 City of Costa Mesa: IT Strategic Plan & Roadmap

Steve Ely
Information Technology Director
Information Technology
City of Costa Mesa
77 Fair Drive, Costa Mesa, CA 92626
714.7544891
steve.ely@costamesaca.gov

Duration: April 2018 – April 2019
Customer Reference:



August 13, 2019

To whom it may concern:

Please allow this letter to serve as my recommendation for Roy Hernandez and his company, ThirdWave Corporation.

It was a genuinely pleasurable experience working with ThirdWave. For the past year, Costa Mesa IT department has worked with ThirdWave Corporation to assist us with the department's strategic plan initiative. ThirdWave's strategic planning experience made it a very reliable partner for us. The IT Department looked for a provider that would assist us in writing a strategic plan. Among the vendors that could possibly meet our needs, the IT department selected ThirdWave through a request for proposal process. As expected, ThirdWave brought expertise in strategic planning and project management.

Part of the project was to hold Rapid Workflow workshops to gather mission critical business functions for each City department. Over thirty business process-modeling workshops were held with each stakeholder to capture our business and service delivery challenges, and to highlight where we could improve through policy change. With this book of processes, all departments will be able to articulate our business and technical functions for any subsequent projects.

ThirdWave remained flexible through the entire information gathering process. As workshop dates and times changed, ThirdWave was able to work with other departments to fill the gaps.

I highly recommend ThirdWave Corporation for your Strategic Planning initiatives. The IT department of the City of Costa Mesa had an excellent experience with them. The strategic plan will be a blueprint of IT initiatives for many years to come.

Sincerely,
Steven Ely
Information Technology Director

5.2.5 City of Pasadena: Digital Strategic Plan & Roadmap and Refresh

Phillip LeClair
Chief Information Officer
Department of Information Technology
City of Pasadena
100 North Garfield Avenue, N123
Pasadena, CA 91109



Duration: Digital Strategic Plan Refresh July 2017 - Jan. 2018
Original Digital Strategic Plan 2011





Customer Reference:

To Whom it May Concern:

The City of Pasadena engaged with ThirdWave to conduct a technology needs assessment and develop a comprehensive 5-Year IT Strategic Plan. The project was completed successfully, on-time and on-budget. The project steering committee, which included a cross section of City department heads and the City Manager's office were happy with ThirdWave's performance and thoroughly impressed with the amount of work completed and associated documents produced from the engagement.

No formal changes were made to the original contract. ThirdWave was able to meet the City's aggressive time schedule. Additional assessment and analysis work were added under a separate agreement, including additional Rapid Workflow sessions and an evaluation of IT staffing levels.

Roy Hernandez was the face of the project and worked with the project steering committee exclusively. Frank De Windt participated in many of the Rapid Workflow sessions and individual interviews. Other ThirdWave staff participated behind the scenes and were not typically on-site. Overall, the project committee was thoroughly impressed with Roy and Frank's depth and breadth of technology knowledge and experience and were beyond satisfied with their service.

The IT Strategic Plan offered by ThirdWave is different than a typical IT Strategic Plan in that it produces actionable projects and initiatives centered on delivering value to the departments/agencies of your organization. The Rapid Workflows will be one of the most valuable artifacts produced because it shows the current state of your business processes from end-to-end and is a necessary step in any business process transformation.

We wish we could hire Roy and ThirdWave to be on staff with our City permanently. Since the original engagement we have brought ThirdWave back to conduct additional Rapid Workflow sessions and help our customers define their requirements before acquiring technology solutions.

Roy Hernandez and the entire ThirdWave staff were professional, detailed and insightful throughout the engagement. Use the Rapid Workflow[®] process everywhere you can to document business processes from a business centric view. The sessions encourage cross functional collaboration, uncover immediate improvement opportunities, potential technology solutions and benefits.

Phillip Leclair
Chief Information Officer
City of Pasadena

Additional Follow-up Projects

Our partnership with the City of Pasadena (which began in 1999 to redesign the City's Website) continued after completing the City's Digital Strategic Plan.

1. Pasadena Water & Power DSP (2013)

Due to our outstanding performance, ThirdWave has been awarded a second contract to produce a DSP for the Pasadena Water & Power.

2. City of Pasadena Enterprise Content Management System Requirements & RFP Development (2012)

ThirdWave was retained to articulate functional and technical content management requirements for all City departments. This project included the development of an enterprise taxonomy culminating in the production of a Request for Proposal for an Enterprise Content Management System.

5.2.6 City of Sacramento: Digital Strategic Plan & Roadmap and Refresh

Maria MacGunigal
CIO
915 I Street, 3rd Floor
Sacramento, CA 95814
916.808.7998
MMacGunigal@Cityofsacramento.org

Ignacio Estevez
Project Manager
915 I Street, 3rd Floor
Sacramento, CA 95814
916.808.7349
IEstevez@Cityofsacramento.org

Duration: April 30 – May 30, 2020, DSP Refresh
April 20, 2016 – November 20, 2016, DSP Refresh
October 15, 2013 – July 2014, original DSP



Customer Reference:

June 2, 2014

To Whom it may concern,

ThirdWave recently completed the development of the City of Sacramento's Digital Strategy that serves as the framework for how technology services will be managed and delivered throughout City. ThirdWave was selected for this project over three other proposals due to their comprehensive project management methodology and information gathering approach, 25 years of experience in developing strategic plans, and past proven track record with other City of Sacramento projects. Included under the project were 30 business process workshops, IT focus groups, executive management interviews, IT staff skills assessment, and on-line staff survey.

Working under an aggressive timeline, ThirdWave delivered the project on-time and exceeded project expectations. Among the several information gathering exercises performed by ThirdWave, their patient Rapid Workflow® business process workshops were instrumental in providing a self-contained assessment of specific business challenges that addressed problems, impacts, solutions and



benefits. This unique process helped identify business inefficiencies that formed the basis of the Digital Strategy recommendations and technology initiatives to address these issues. ThirdWave’s unmatched data driven process and technical experience provided a foundation for supporting the formal project recommendations and implementation plan developed from the project.

In summary, I am extremely pleased with the services provided by ThirdWave. Their vast experience in developing organizational IT strategic plans came shining through in delivering an exceptional product that the City will benefit from for years to come. Roy, you and ThirdWave team are truly remarkable and have been a pleasure to work with. Thank You!

Sincerely,
Maria MacGunigal
Chief Information Officer
City of Sacramento

Additional Follow-up Projects

1. Digital Strategic Plan Five Year Refresh (2020)

The purpose of the City of Sacramento Digital Strategic Plan (DSP) 5-Year Refresh project is to apply metrics for a post implementation assessment of performance, accomplishments and progress made since 2014 when the initial DSP Refresh was carried out. The DSP Refresh assessment examined the following:

- 5-Year DSP Initiatives Planned Vs. Actual: Years 3, 4, and 5
- Projects completed by City Goals
- Projects by Dollar Size
- Long-term strategic accomplishments

2. Enterprise Cashiering Functional & Requirements Definition (2020)

ThirdWave was retained to carry out a series of Rapid Workflow® process modeling workshops to articulate functional and technical requirements for an Enterprise Resources Planning RFP to standardize the numerous and disparate cashiering systems used at the City. Business process assessed included the following:

- | | |
|---------------------------------------|--|
| 1. Finance Taxes & Payment Permit | 8. Animal Care Animal Licenses & Adoptions |
| 2. CDD Building Permits Cashiering | 9. Convention Cultural Services Events |
| 3. City Clerk Commission Cashiering | 10. Fire Department Weekly Deposit |
| 4. Sacramento Marina | 11. Department of Utilities Utility Bill Payment |
| 5. Police Records Cashiering | 12. Public Works Parking Cashiering |
| 6. Finance Ticketing | |
| 7. Youth, Park & Community Enrichment | |
| Activision Child Care Registration | |

3. Digital Strategic Plan Two Year Refresh (2016)

ThirdWave was retained to carry out a DSP Refresh, which is a post implementation performance assessment to gauge the City’s progress in the first two years of implementation. We were pleased to report to City executives and elected officials that the DMP implementation is one of the most successful ThirdWave has seen in the



US in the last 10 years. The City's IT organization and its operation have been reinvented, exceptional service delivery redefined, and dramatic cost savings realized.

4. 5 Mini-Digital Roadmaps (MDR) (2017-2018)

ThirdWave carried out a series of detailed digital roadmaps using our patented methodology. These MDRs developed detailed business, functional and technical specifications for new Smart City/Internet of Things solutions. The following City departments were included in this project:

1. Community Development Department
2. Public Works
3. Utilities
4. Police Department
5. Fire Department

Section 6 Attachments



6.1 Sample Documentation

The following pages provide sample artifacts taken from various IT Strategic Planning projects for cities. The final deliverable is comprised of two volumes:

Volume I, IT Strategic Plan, reflects the detailed findings of all project tasks along with actionable recommendations. Each ITSP provides a description of each initiative, the challenge, solutions, and justification for investing in the initiative.

Volume II, ITSP Roadmap, provides a prioritized list of ITSP initiatives, a detailed timeline and a detailed 5-year budget estimate reflecting one-time hardware costs, one-time software costs, ongoing software maintenance costs, professional services costs, and City staff costs (if required).



We have included representative samples from our ITSP projects, but not an entire plan.

Staff Survey: The sample data below was gathered via an online Survey Monkey survey that allowed all City staff the opportunity to provide input on their perception of the City's Information Technologies, their needs, and the IT organization's ability to support the City's needs.

Figure 6.1.1: Staff Rating of Overall Condition of Information Systems

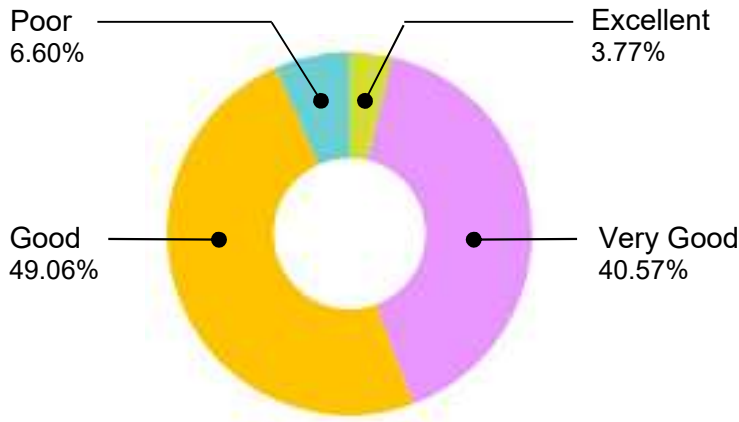
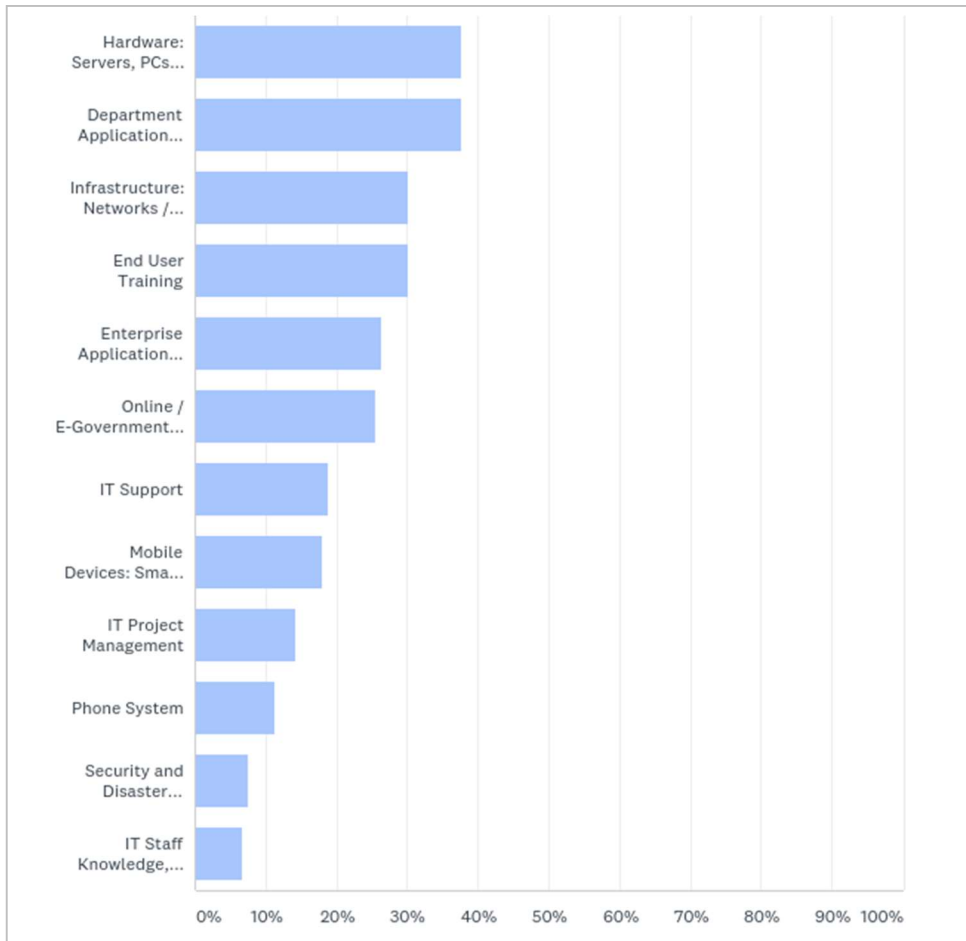
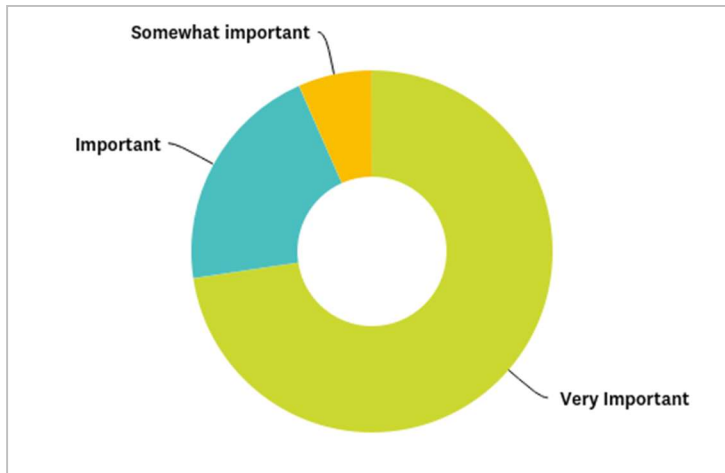


Figure 6.1.2: Staff Rating of Most Needed IT Improvements



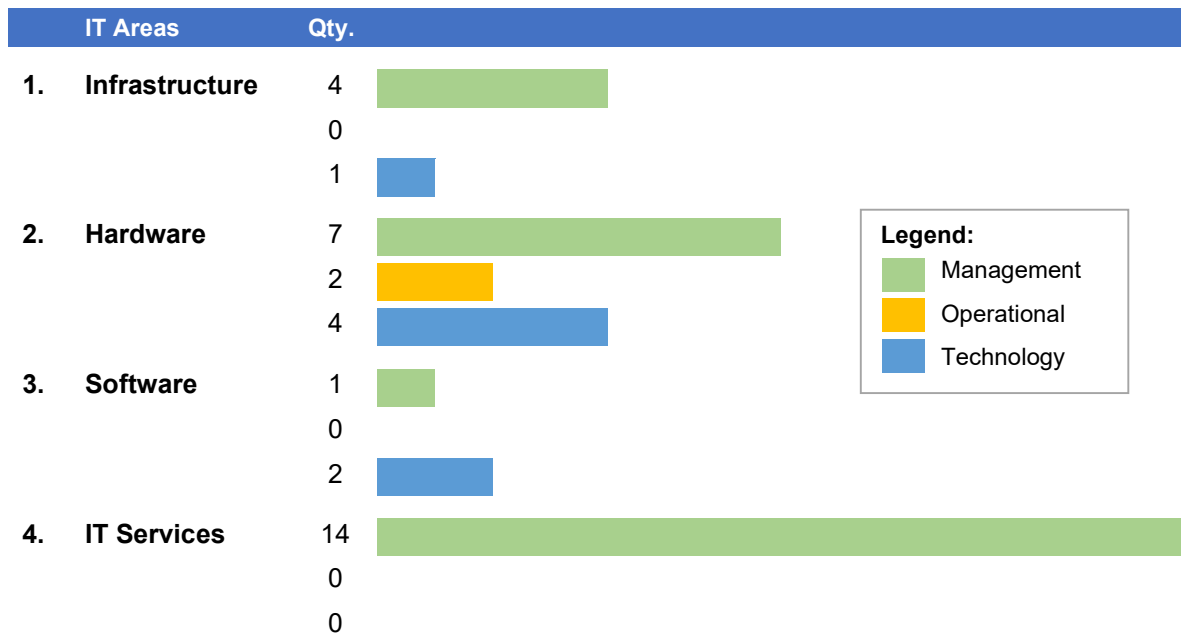
Access to online services has become ubiquitous in everyday life, and constituents have come to expect the same from government. City staff were asked how they perceive the importance of providing online services to resident, business and visitors, not just information. The graphic below illustrates their responses.

Figure 6.1.3: Staff Rating of Important for Website to Provide Online Services



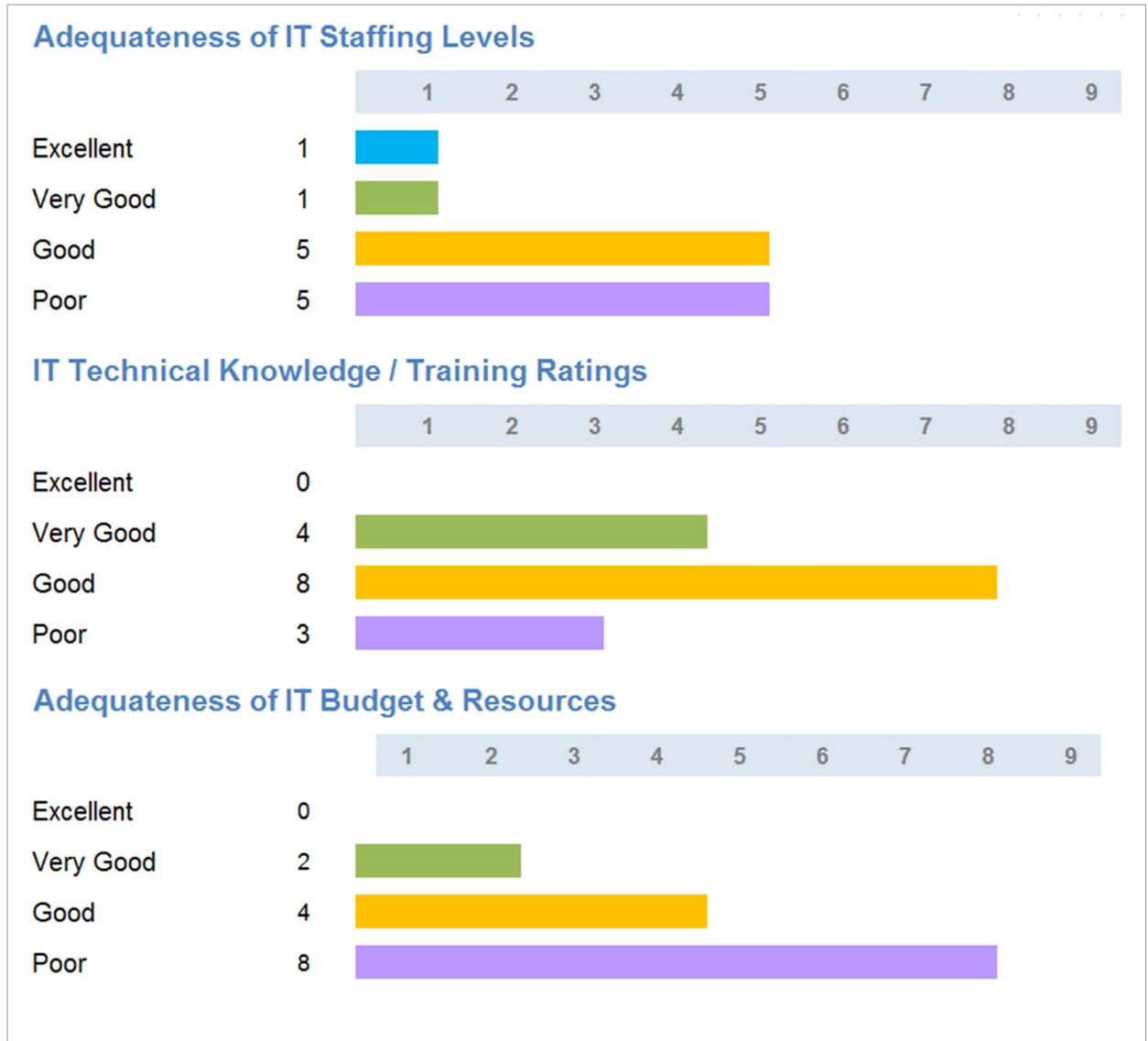
The figure below provides a high-level overview of the four technology support areas addressed in the IT Focus Groups. (The longest Gantt chart bar indicates the greatest challenge.)

Figure 6.1.4: IT Staff Focus Group Problem Statement Dashboard



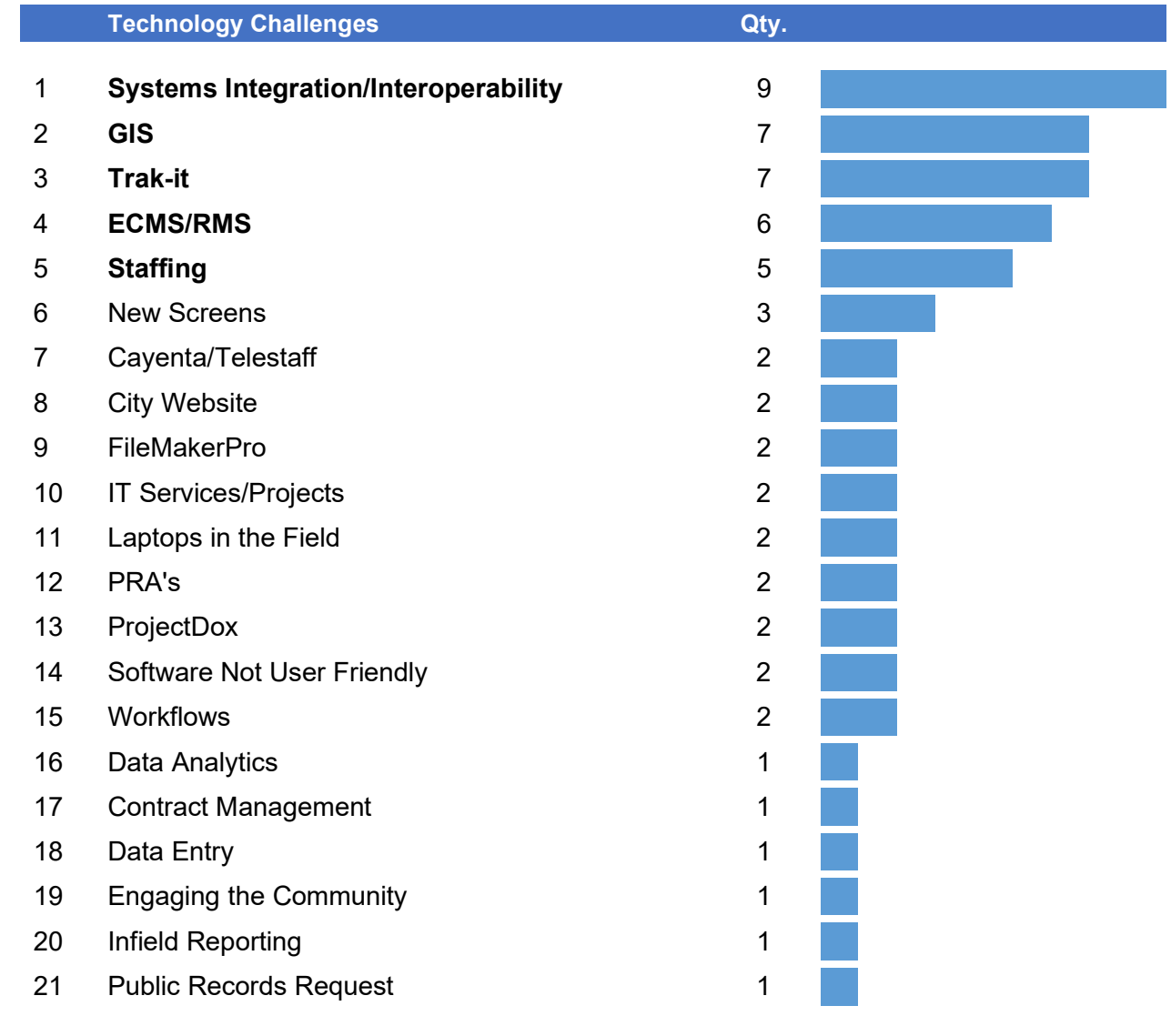
The figure below indicates that the most significant challenges identified by IT staff are in the area of IT Service Delivery, related to management issues.

Figure 6.1.5: Management Interview Data: IT Staffing, Training & Budget Ratings



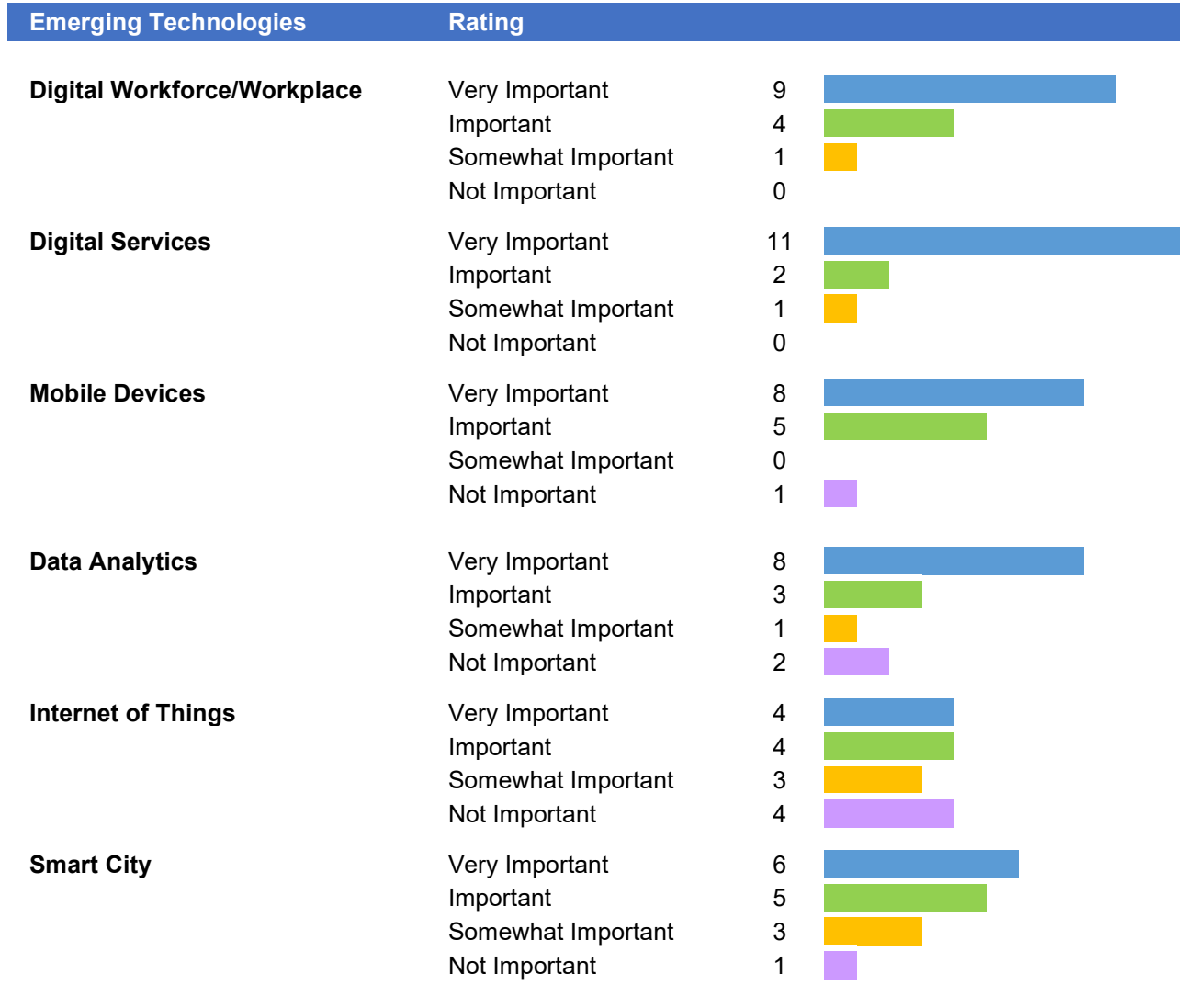
The management interview response below represents a summary of what the leadership team feels are the most significant technology challenges in the next 3 - 5 years.

Figure 6.1.6: Management Team Technology Challenges



The following provides a summary of responses provided by the City’s management team with regard to how important emerging technologies are to their organizations.

Figure 6.1.7: Rating of Emerging Technologies



The management interview responses below represent how the leadership gauges the staffing levels, knowledge and resource allocation of the IT department in meeting their departmental needs – currently and in the next 3 to 5 years.

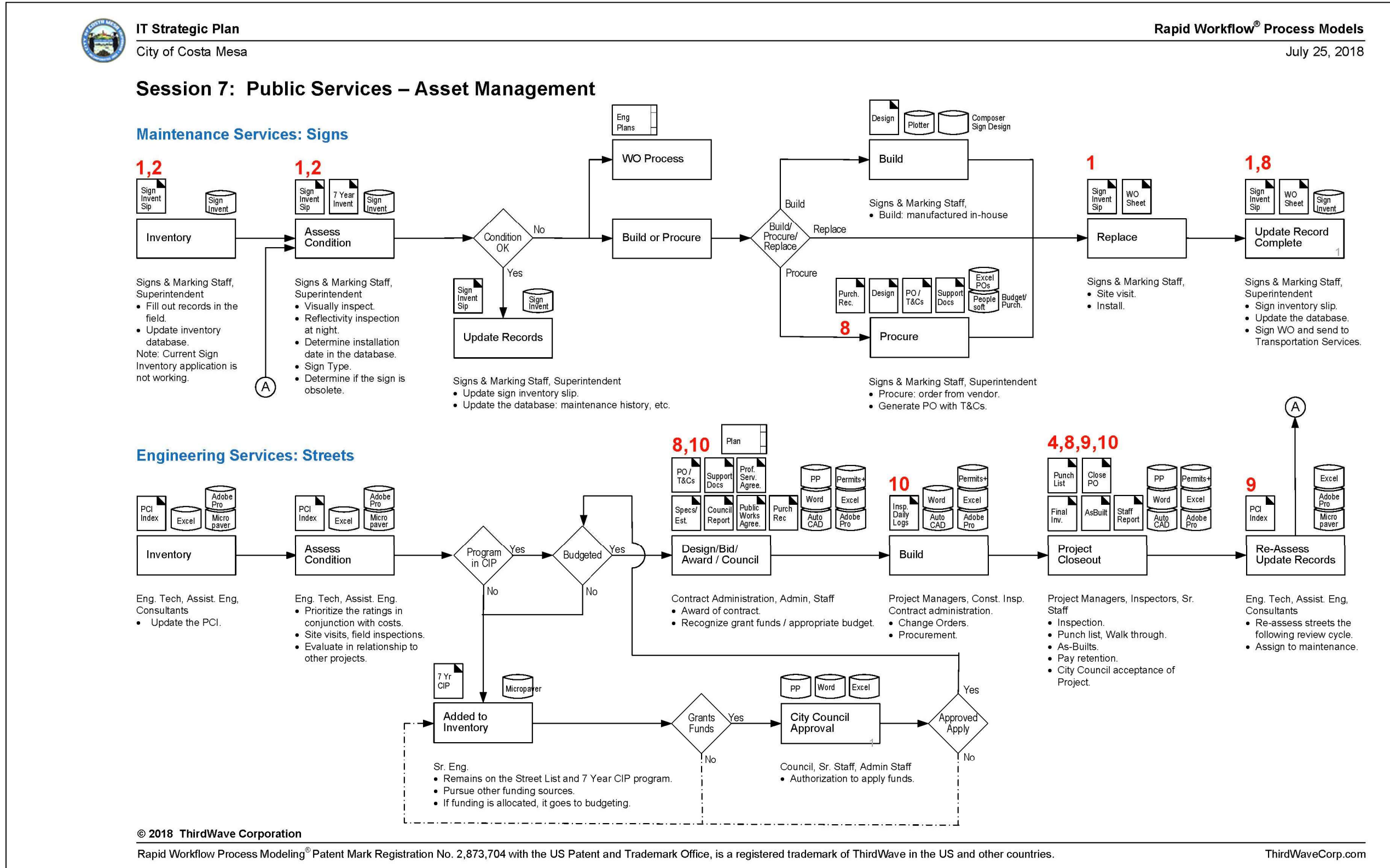
Figure 6.1.8: IT Staffing, Knowledge and Resources Allocation



Figure 7.1.9 Sample Rapid Workflow® As-Is Business Process Map, on the following pages provides a sample As-Is business process model. This artifact illustrates the existing business process, process bottlenecks (Red Numbers), and narrative (Problem Statements, Impact Statements, Solutions and Benefits).

This sample demonstrates the comprehensiveness of the Rapid Workflow® methodology in articulating detailed specifications for proposed Information Technology solutions. ThirdWave’s approach is the **only method in the IT industry robust enough to produce technical specifications detailed enough to be used in expediting the development of Request for Proposal documents**, a value-added feature of our IT Strategic Plan Roadmaps.

Figure 6.1.9: Sample Rapid Workflow® As-Is Business Process Map





Session 7: Public Services – Asset Management

Problem	Impacts	Solutions
<ol style="list-style-type: none"> 1. Antiquated inventory application, does not work. Insufficient storage. (15,000+ signs) 2. Loss of institutional knowledge. 3. No SOPs for Streets. 4. Records management, lack of digital records 5. Inability to communicate with departments together, lack of a collaborative platform. 6. Redundant systems, electronic and hardcopy. 7. Lack of electronic storage, servers. 8. Signatures routing is cumbersome and inadequate. 9. No reliable as-builts. 10. Project files are not standardized. 11. Excel spreadsheets contain vital infrastructure are vulnerable and corruptible. 12. Lack GIS and GPS to manage assets, contemporary technology. 	<ol style="list-style-type: none"> 1. - Staff time. - Public perception. - Liability issues. - Inability to do asset manage. 2. - Staff time. - Staff stress. - Cost to hire consultants. 3. - Inconsistent operations. - Staff confusion. - Creates redundant work. - Staff frustration. 4. - Challenges responding to PRAs, meeting federal audit requirements. - Financial impacts. - Difficult to research. 5. - Less collaboration. - Staff time. - Create redundant work. 6. - Updating and managing multiple systems. 7. - Potential loss of information. - Unable to manage assets. - Difficult to locate information. - Unreliable data. 8. - Staff time. - Delays in service and projects. 9. - Staff time. - Costs because of change orders. - Challenging for maintenance and asset management. 10. - Inconsistent file management. - Staff time. - Difficult to research. 11. - Vulnerability. - Potential loss of information. 12. - Challenging to locate assets. - Management maintenance of assets. - Inaccurate information. - Staff time. - Increased cost. - Inability to catch fraud, i.e., illegal red curbs. - Staff have to go to the field to verify. 	<p>New Fixed Asset Management System</p> <p>Features & Functions</p> <ul style="list-style-type: none"> • Asset Inventory. • Ability to track the following asset types: <ul style="list-style-type: none"> ▪ Owned buildings: <ul style="list-style-type: none"> ○ PW facilities ○ Parks building facilities ▪ Parks ▪ City Signs ▪ City Storm Drain System ▪ City retaining walls, roadways ▪ Streets ▪ Roadway Marking ▪ Bike Lanes ▪ Amenities ▪ Street light ▪ Light poles ▪ Curb ramps ▪ Sidewalks (track trip & falls, claims) ▪ Curbs and gutters ▪ City Electrical ▪ City Irrigation ▪ City Trees ▪ Monument signs ▪ Parking Permits • Link condition assessment to asset management. • Ability to add request to the asset management process. • Mobile application. • Ability to see the service request history of an asset. • Web-enabled. • Support mobile devices, responsive design. • Intuitive GUI (graphical use interfaces.) • Provide public access to appropriate information on City assets. • User friendly system. • Ability to store video, pics, and data. • O&M/Capital: Capture maintenance and inspection costs. • Job Costing: provide ability to capture labor charges, material, equipment, contracts, etc., for asset costs. • Spatial Data/GIS: document the location of assets, interfaced with the GIS. • Dashboard: <ul style="list-style-type: none"> ▪ Good graphics (Pie/Gant Charts) of spent and available funds ▪ Management level data presentations ▪ Work management for employees <ul style="list-style-type: none"> • Workflow Automation: <ul style="list-style-type: none"> ▪ Reviews ▪ Approvals ▪ Status only ▪ E- notifications ▪ Escalations • Search: multitude of search functionality: <ul style="list-style-type: none"> ▪ Asset Type ▪ Asset location ▪ Related assets ▪ Work Order Number: dates: received, installed, inspected; by combination of fields, structured queries • Ability to add Attachments: <ul style="list-style-type: none"> ▪ Pictures/Images (various image file formats) ▪ Specifications ▪ Test reports • Forecasting: Use acclimation of risk index to facilitate yearly budget process. • Standard templates: Equipment type. • Data analytics: <ul style="list-style-type: none"> ▪ Efficiencies ▪ Areas for improvement ▪ Performance measurement ▪ Performance metrics (equipment installed over time) • User friendly query. <p>System Requirements</p> <ul style="list-style-type: none"> • Strong security. • Adopt a consistent standardized process for assigning funding, and provide training. • Purchase appropriate GIS software and run on properly configured PCs. <p>Reports</p> <ul style="list-style-type: none"> • Inventory of asset • Project List • Asset by Project • Asset by age • Maintenance schedules • Service Request history of an asset • Dollar-based Report for Capital Improvement

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Session 7: Public Services – Asset Management

Solutions

- Maintenance / Replacement:
 - Schedules
 - Time Keeping
 - Triggers
 - Inspection records
 - Predictive Maintenance Models
 - Test reports
 - Feedback to Work Order when required or during appropriate planned periods
- Depreciation Schedule:
 - Useful life
 - Annual expense
 - Net Book Value
 - Depreciation Expense Forecast
- E-Forms
- Job Closing: Automated method of capture all costs and turn it into an asset
- Asset number linked to future ERP.
- Asset Status
- Provide ability to produce Risk Index.
- Conditions (e.g., moratorium)

Interfaces

- Work with the City's Laserfiche content management system, including a standard taxonomy
- GIS
- Outlook (Calendar)
- Underground Service Alert (receive Tickets via email into this process)
- Future Land Management System

Benefits

1. - Could do better project management, what projects can be delivered.
 - Better public perception.
 - Could accurately estimate the City's maintenance costs.
 - Enhance efficiencies.
 - Reduced staff stress.
 - Better public perception of the City.
 - Overall cost savings.
 - Improved maintenance of assets.
 - Better data for future planning.
 - Improved reporting capabilities
 - Improved transparency
 - Better manage expectations.
 - Improved resource allocation.
 - Improved future planning.
 - Could effectively articulate to management the resources requirements.
2. - Improved retention of knowledge.
 - Improved efficiency.
 - Better data for future planning.
 - Reduced staff stress.
3. - Same as #2.
4. - Improved records management and compliance with records retention schedule.
 - Better Public Records Request responses.
5. - Everyone would have access to the consistent data.
 - Less follow up required.
 - Staff time savings.
 - Reduced redundancy.
 - Improved efficiency.
 - Reduce the number of staff need to locate data.
6. - Same as #1 and #2.
7. - Locate information faster and easier.
 - Complete and organized documents and records.
8. - Same #1.
9. - Better closeout.
 - Reduced staff stress.
 - Improved efficiencies and maintenance.
 - Retain institutional knowledge.
 - Mitigate staff time verifying information.
10. - Consistent project files.
 - Quickly provide required documents in audits.
 - Same as #1.
 - Expedite fund reimbursement with grants.
11. - Improved security of data.
 - Improved data sharing and collaboration.
12. - Accurate information, location, asset identification, condition and quantities.
 - Simplify staff time in the field.
 - GPS would reduce staff time tracking assets.



Figure 6.1.10: Sample City of Costa Mesa ITSP Table of Contents

**City of Costa Mesa Information Technology Strategic Plan & Roadmap
Table of Contents**

IT Strategic Plan & Roadmap: Volume 1 Findings & Recommendations

Preface P1

Section 1 Executive Summary **1**

 1.1 Information Technology Strategic Plan Vision 1

 1.2 Project Goals & Objectives 2

 1.3 Project Approach & Methodology 2

 1.4 Information Technology Strategic Plan (ITSP) Findings 3

 1.4.1 Summary of Key Findings 3

 1.4.2 Summary Key Recommendations 4

 1.4.3 IT Strategic Plan Roadmap Benefits 6

 Figure 1.4.3.1: ITSP Potential Benefits 7

Section 2 Project Overview **8**

 2.1 Project Background, Goal & Objectives 8

 2.2 IT Strategic Plan Roadmap Project Approach 9

 Figure 2.2.1: Comprehensive Project Methodology 10

 Figure 2.2.2: Comprehensive Project Framework 11

Section 3 IT Strategic Plan Roadmap Findings **12**

 3.1 Management Requirements Findings 12

 Figure 3.1.1: Management Team Business Challenges 13

 Figure 3.1.2: Management Team Technology Challenges 14

 Figure 3.1.3: Emerging Technologies 15

 Figure 3.1.4: IT Staffing, Knowledge and Resources Allocation 16

 3.1.2 Summary of Management Interviews 16

 3.2 IT Staff Focus Group Findings 17

 1: Infrastructure 17

 2: Hardware 17

 3: Application/Database Software 17

 4: IT Service Delivery Model 18

 3.2.1 Summary of IT Focus Groups 19

 Figure 3.2.1.1: IT Focus Group Problem Statement Dashboard 19

 Figure 3.2.1.2: Overall Summary of IS Department Challenges 19

 3.3 City Staff Online Survey 20

 Figure 3.3.1: Rating of Overall Condition of Information Systems 21

 Figure 3.3.2: Staff Rating of Services Provided by the IT Organization 22



3.4	Online Constituent Survey	23
	Figure 3.4.1: Age of Community Participants	23
	Figure 3.4.2: Social Media Usage	23
	Figure 3.4.3: Customer Experience Rating	24
	Figure 3.4.4: Importance of Online Services.....	24
3.5	Leading Technology Initiatives.....	25
	Figure 3.5.1: Enterprise Initiative Matrix.....	25
	Figure 3.5.2: Management Policies & Process Improvements	26
	Figure 3.5.3: Infrastructure & Hardware Requirements	27
	Figure 3.5.4: Departmental Software Requirements	28
	Figure 3.5.5: Enterprise Software Requirements	29
	Figure 3.5.6: E-Government Requirements	30
3.6	ITSP Initiatives	31
	Figure 3.6.1: ITSP Technology Initiatives (Not Prioritized)	31
Section 4	ITSP Roadmap Recommendations	33
4.1	Introduction to the ITSP Roadmap Recommendations	33
4.2	Information Technology Strategic Roadmap Initiatives	34
4.2.1	Technology Recommendations	34
	I Infrastructure.....	34
	I 1 Wi-Fi Master Plan	34
	I 2 Telephone System	36
	HW Hardware: Servers, Desktops, Mobile Devices, Peripherals	36
	HW 1 Police In-Car Video	36
	HW 2 Public Services: Parks & Community Services 2-Way Radios	37
	HW 3 Police Mobile Data Computers.....	38
	HW 4 Video Cameras.....	38
	D SW Departmental Software	39
	D SW 1 Parks, Parks & Recreation Application	39
	D SW 2 Public Services, Adopt Asset Works for Vehicle Services ..	41
	D SW 3 Code Enforcement, Code Enforce. Compliant Application .	43
	D SW 4 Police, Learning Management Application	45
	D SW 5 Special Events Application	45
	D SW 6 Parks & Community Services, Park Facilities Mapping	46
	D SW 7 Development Services, Land Management System]	46
	E SW Enterprise Software	47
	E SW 1 ERP Finance	47
	E SW 1.1 ERP: General Accounting Module	47
	E SW 1.2 ERP: Accounts Receivables Module.....	48
	E SW 1.3 ERP: Accounts Payable Module	50
	E SW 1.4 ERP: Budget Module.....	52
	E SW 1.5 ERP: CIP Module	55
	E SW 1.6 ERP: Cashiering Module	58
	E SW 1.7 Year End Closing & Financial Reporting.....	60
	E SW 2 ERP: Purchasing Module	61



E SW 3	ERP: Store Inventory Module.....	64
E SW 4	HR	65
E SW 4.1	ERP: HR Payroll Module	65
E SW 4.2	ERP: HR Hiring Module.....	68
E SW 4.3	ERP: HR Benefits Module	70
E SW 4.4	ERP: HR ID Card Printing Application	72
E SW 5	ERP: Fixed Asset Management	72
E SW 6	ERP: Fleet Management Module	76
E SW 7	ECMS	78
E SW 7.1	ECMS Deployment Strategy & Taxonomy	78
E SW 7.2	ECMS Backfile Conversion	79
E SW 7.3	ECMS Workflow Automation	80
E SW 7.4	ECMS Records Management / E-Discovery	81
E SW 8	Public Records Requests	83
E SW 9	Agenda Management Application	85
ESW 10	Public Service Request Application	87
ESW 11	Construction & Demolition Application	89
ESW 12	Enterprise GIS	92
E G 13	Smart City/Internet of Things.....	94
E G 13.1	E-Government Applications.....	95
Figure 13.1.1:	Web Technologies for Enhancing Customer Service	95
Figure 13.1.2:	Importance of Online Services	95
Figure 13.1.3:	Importance of Providing Online Services	96
E TECH	Enterprise Architecture.....	97
E TECH 1	Cloud Solutions/Cloud Services Broker Policies.....	97
4.2.2	Operational Recommendations	98
O	IT Operational Improvements	98
O 1	PC/Mac Support.....	98
O 2	Fiber Backbone.....	98
O 3	Disaster Recovery Plan	99
O 4	Business Continuity Plan	100
O 5	Physical Security Assessment.....	100
O 6	Cyber Security Assessment.....	101
O 7	Project Management.....	101
O 8	Ongoing End User Training	102



4.2.3 Management Recommendations 103

 M Management 103

 M 1 IT Organization and Operational Model 103

 Figure M 1.1: Existing City IT Organization Chart 104

 Figure M 1.2: Adequateness of IT Staffing 105

 Figure M.1.3: Proposed IT Organization..... 107

 M 1.1 IT Organization Benchmarking 109

 Figure M.1.4: IT Staffing Benchmark 109

 Figure M.1.5: IT Staffing Benchmarked Cities 110

 M 2 IT Governance 111

 Figure M 2.1: Existing IT Governance Process 112

 Figure M 2.2: Proposed IT Governance 113

 M 3 Change Management 114

 Figure M 3.1: Proposed IT Change Management Model 115

Section 5 Appendix 117

 5.1 Land Management System, Procurement in Progress 117

 5.1.1 Developmental Services, Building Division, Plan Check 117

 5.1.2 Development Services – Inspections 119

 5.1.3 Public Services – Entitlement Process 122

 5.1.4 Fire & Rescue Building Permit 127

 5.2 Glossary of Terms 129



Figure 6.1.11: ITSP Roadmap 5 Year Estimated Investment

Year	No.	Type	ITSP Roadmap Initiative Costs	Year 1	Year 2	Year 3	Year 4	Year 5	
Phase 1									
	1	M 1	IS Organization Realignment	50,000	0				
	2	M 2	IT Governance	50,000	0				
	3	O 2	PMO Office	50,000	0				
	4	I 6	Improve Network Performance	800,000	0	0	0	0	
	5	DSW 1,6	Customer Billing System, Refunds, Conservation Portal	3,660,000	288,000	288,000	288,000	288,000	
	6	ESW 4	Enterprise Content master Plan & Taxonomy	100,000	0	0	0	0	
	7	EGOV 1,3	Website Improvements & Mobile Responsiveness Design	300,000	0	0	0	0	
	8	I 1	Backbone Infrastructure Assessment	70,000	0	0	0	0	
	9	I 2	Install SCADA Microwave Ring	1,550,000	50,000	50,000	50,000	50,000	
	10	HW 2	Annual PC Lifecycle Replacement (180-200) HW 1	350,000	0	0	0	0	
	11	HW 2	Annual Server Replacement (6) HW 6	125,100	0	0	0	0	
	12	DSW 7	Fleet Reservation System	160,000	18,400	18,400	18,400	18,400	
Phase 2									
	1	ESW	Financial System Enhancement		100,000	0	0	0	
	2.1	DSW 12	Capital Planning Project Management Application		200,000	23,000	23,000	23,000	
	2.2	ESW 6	Procure-to-Pay**		0	0	0	0	
	2.3	DSW 5	Contract Management Application		140,000	18,400	18,400	18,400	
	2.4	DSW 11	Project Cost Accounting Application		270,000	34,500	34,500	34,500	
	2.5	DSW 10	Project Approval Request Application		120,000	9,200	9,200	9,200	
	3	EGOV 2	Online Service Apps (1 of 3 Apps)		80,000	0	0	0	
	4	ESW 1	ECMS/eB Web Migration: Phase 1		460,000	48,000	48,000	48,000	
	5	O 1	Develop End User Training Program		250,000	0	0	0	
	6	DSW 8	Replace EMIS		370,000	57,500	57,500	57,500	
	7	I 4	Add Redundant AC in SCADA Demarcation Room		30,000	0	0	0	
	8	HW 2	Annual PC Lifecycle Replacement (180-200)		350,000	0	0	0	
	9	HW 2	Annual Server Replacement (6) HW 6		125,100	0	0	0	
Phase 3									
	1	EGOV 2	Employee Engagement Services (Intranet)			120,000	23,000	23,000	
	2	ESW 1	Enterprise Content Management System: Phase 2			200,000	0	0	
	3	EGOV 2	Online Service Apps (2 of 3 Apps)			80,000	0	0	
	4	HW 5	Mobile Device Management System			150,000	11,500	11,500	
	5	DSW 3	Software Consolidation			20,000	0	0	
	6	HW 2	Application/OS Lifecycle Management			80,000	9,200	9,200	
	7	I 1	Lifecycle Management Plan (Servers)			70,000	0	0	
	8	HW 2	Annual PC Lifecycle Replacement (180-200)			350,000	0	0	
	9	HW 2	Annual Server Replacement (6) HW 6			125,100	0	0	
Phase 4									
	1	ESW 1	Enterprise Content Management System: Phase 3				540,000	19,200	
	2	ESW 5	Back-file Conversion				300,000	0	
	3	I 5	Replace Microwave Repeater Stations (replace old Radios)				1,100,000	0	
	4	EGOV 2	Online Service Apps (3 of 3 Apps)				80,000	0	
	5	HW 2	Annual PC Lifecycle Replacement (180-200) HW 1				350,000	0	
	6	HW 2	Annual Server Replacement (6) HW 6				125,100	0	
	7	HW 2	Infrastructure Replacement Cost				200,000	9	
Phase 5									
	1	HW 2	Annual PC Lifecycle Replacement (180-200) HW 1					350,000	
	2	HW 2	Annual Server Replacement (6) HW 6					125,100	
	3	HW 2	Infrastructure Replacement					400,000	
				7,265,100	2,851,500	1,742,100	3,285,800	1,485,009	
				726,510	285,150	174,210	328,580	148,501	
				7,991,610	3,136,650	1,916,310	3,614,380	1,633,510	
								5 Year Total	18,292,460
								Aver/Year	3,658,492

Figure 6.1.12: Sample 5 Year ITSP Roadmap

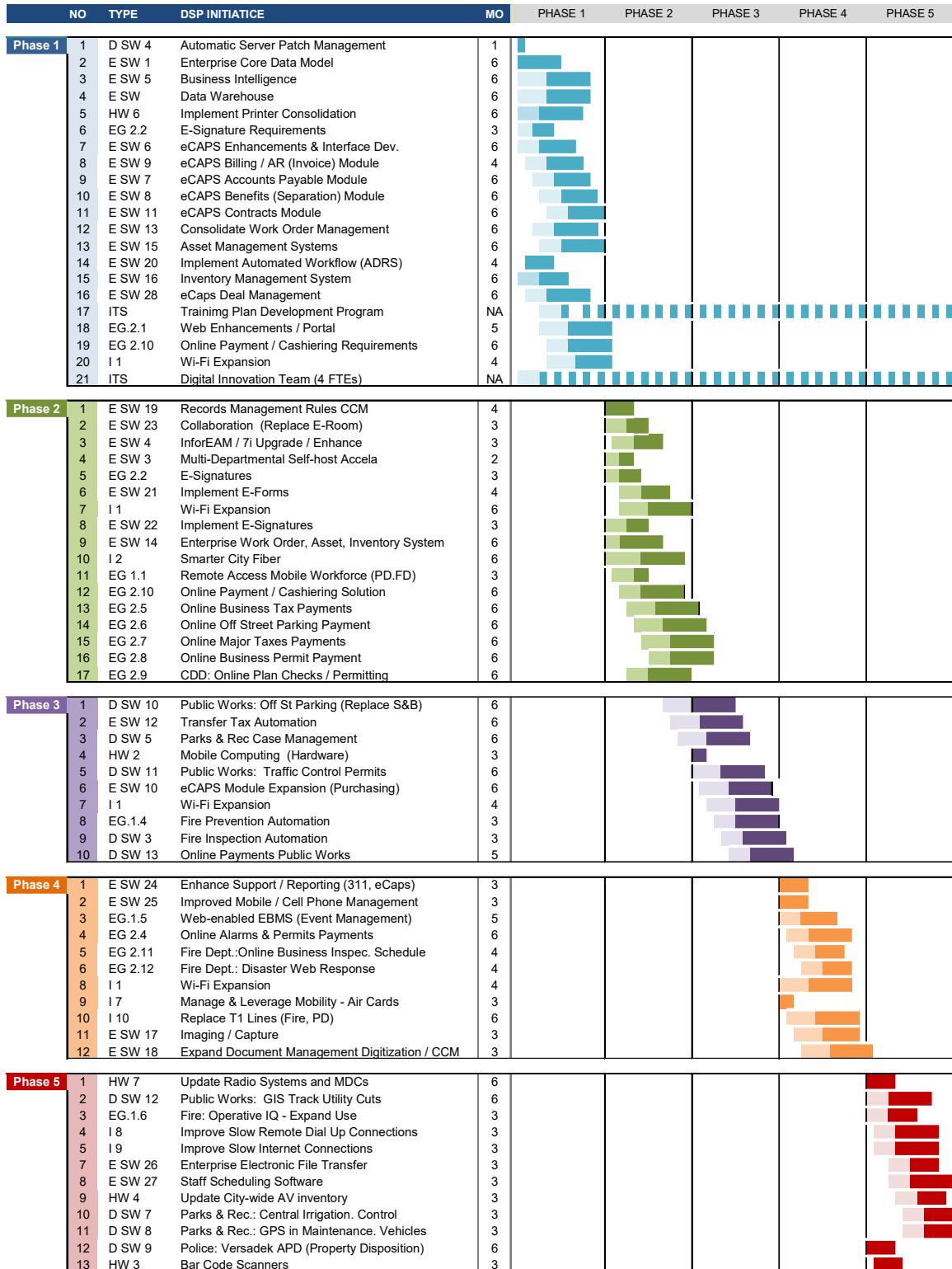


Figure 6.1.13: Sample Summary of Projected ITSP 5-Year Investments for Elected Officials

