

## Response to IT Master Plan RFP Questions

1. Can the City share a target budget range or not-to-exceed ceiling for the Master Plan engagement to help align the scope and cost proposal accordingly?

The City has intentionally chosen not to include a strict not-to-exceed amount in the RFP. This approach is intended to encourage proposers to develop creative, scalable, and cost-effective solutions tailored to the City's specific needs and priorities. However, we recognize the value of aligning expectations and ensuring scope-appropriate proposals.

While we are not disclosing a fixed budget ceiling at this time, the City has allocated sufficient resources for a comprehensive IT Master Plan that includes stakeholder engagement, assessment of current systems and infrastructure, strategic planning, and an actionable implementation roadmap. Proposals will be evaluated based on overall value, quality of approach, and alignment with the City's goals, not solely on cost.

We encourage proposers to submit competitive pricing that reflects the scope of work outlined in the RFP, and to clearly delineate any optional or scalable components that could be adjusted based on budget availability or evolving priorities.

2. Can the City provide a current network topology or systems architecture diagram that outlines connectivity between its five sites, server environment, and GIS infrastructure?

The City will provide this information to the winning bidder.

3. What are the primary challenges or pain points the City is currently facing with its IT infrastructure, application stack, or GIS systems that the City hopes the Master Plan will address?

The City hopes to identify projects in the IT Master Plan that will compliment its soon to be completed City-wide Strategic Plan.

4. Will the City provide access to recent internal IT audits, cybersecurity assessments, or asset inventories to support the Current State Analysis and Risk Assessment tasks?

The requested information may be provided to the winner bidder.

5. Is the City open to considering hybrid cloud or hosted infrastructure models for certain systems, and if so, are there any compliance, budgetary, or policy constraints that should be considered in our recommendations?

The City is open to any recommendations that make sense for our environment. The City must comply with CJIS regulations.

6. To what extent does the City want the IT Master Plan to assess and include SCADA-related infrastructure or operational technologies managed by the Water Authority?

SCADA is not part of this project.

7. Can the City clarify the scope of “Smart City” planning envisioned in the RFP? For example, should recommendations include IoT infrastructure, data platforms, public Wi-Fi, smart mobility, or sustainability systems?

The City of Indio’s vision for “Smart City” planning as part of the IT Master Plan is broad and forward-looking. We seek strategic guidance on how emerging technologies can be leveraged to improve service delivery, operational efficiency, community engagement, and overall quality of life for residents, businesses, and visitors. While we are not prescribing specific solutions at this stage, the City is open to recommendations.

8. What is the expected level of stakeholder engagement for interviews and workshops? How many departments and users should be planned for during the assessment phase?

There are 10 departments within the City of Indio: City Manager’s Office, City Clerk’s Office, Economic Development, Information Technology, Public Works, Community Development, Finance, Indio Water Authority, Human Resources, and Police Department.

9. Will the awarded consultant have access to internal staff for shadowing or process observation, or is all information expected to be collected via interviews and document review only?

The winning bidder will have access to internal IT Staff, we could probably arrange for shadowing of other departments if requested.

10. You mention cyber security in the RFP. Can you elaborate what you would like the vendor to do. For instance, load software to monitor the network, produce findings and recommendations?

Review the City's current security posture, software and services, and make recommendations if any gaps are found. This is not a request for a vulnerability assessment or penetration test. The City did recently undergo a vulnerability assessment and pen test and may provide some of those results if requested.

11. What is the anticipated date for contract award and project start, and what is the City's preferred timeline for completing the IT Master Plan within the fiscal year?

The current plan is to award the contract for the IT Master Plan at the July 16, 2025, meeting of the Indio City Council. After the award the project start date can be discussed and a timeline established. The project will need to be completed within the fiscal year, which for Indio is July 1, 2025 through June 30, 2026.

12. Is there a current or previous consultant who developed the 2020 IT Master Plan? If yes, could the City share the name of the firm and the approximate contract value of that engagement?

The 2020 IT Master Plan was developed by ThirdWave Corporation with a value of \$90,733.00.

13. Could the City provide a detailed overview or summary of the current technology landscape, including versions of key platforms such as Tyler Technologies (EERP/EPL), ESRI ArcGIS, Microsoft 365 G5, and CentralSquare Utility Billing?

Please see the City of Indio's Enterprise Catalog located at <https://www.indio.org/home/showpublisheddocument/154/638530188376700000>

14. Will the City require the IT Master Plan to assess and provide recommendations for cross-departmental system integration—including GIS, enterprise applications, public safety systems, and water utility platforms?

Yes, the City anticipates that the IT Master Plan will include an assessment of cross-departmental system integration opportunities. This may encompass systems such as Geographic Information Systems (GIS), enterprise applications (e.g., ERP, permitting, HR systems), public safety technologies, and water utility platforms. The objective is to identify current integration gaps, evaluate interoperability, and provide strategic recommendations to improve data sharing, workflow efficiency, and service delivery across departments.

15. How many departments, agencies (e.g., Police, Water Authority), or stakeholder groups are expected to participate in the assessment and roadmap development process?

[Please see the answer to question #8.](#)

16. Will the City support a hybrid engagement model, with a mix of remote and on-site work, especially for stakeholder interviews, workshops, and presentations?

[Yes.](#)

17. Is there an anticipated or approved budget range for this engagement that vendors should use to structure pricing and scope accordingly?

[Please see the answer to question #1.](#)

18. What pricing format does the City prefer for Exhibit C – hourly rates, fixed fees, or deliverable-based?

[The City is open to any of the above pricing formats assuming the costs do not exceed the original estimate without an agreed upon change order.](#)

19. Can the City outline any current pain points or priority areas to address in the IT/GIS environment?

[Please see the answer to question #3.](#)

20. Which departments or stakeholder groups will be involved in interviews and how many are expected?

[Please see the answer to question #8.](#)

21. Will the 2020 IT Master Plan be shared to help inform our proposal and planning approach?

[Please see the attached IT Master Plan from 2020](#)

22. Does the City have an existing Smart City vision to align with, or should we propose one from scratch?

Please see the answer to question #7.

23. Has a budget been established for this project?

Please see the answer to question #1.

24. Project Scope Section – a. states, “Conduct interviews with City Department Heads, staff, stakeholders, City customers, and other designated key leaders to develop high-level recommendations for an IT Master Plan.”

- a. Please provide some explanation regarding “City Customers” if this should include a survey, and if so, will the city logistically handle and provide information for the consultant to review, or is this envisioned as a Q&A workshop for interested City Customers to attend?

City Customers would include a few select outside customers that use some of the City’s IT Services, for example, the use of licensing and permitting self-service portal.

- b. What other key leaders are envisioned and what method to obtain their input?

In addition to City Department Heads, staff, stakeholders, and City customers, other envisioned key leaders may include members of the City Council, and community or business leaders with a strong interest in technology and service delivery.

Input from these key leaders may be obtained through a combination of structured interviews, focus groups, and/or targeted surveys, depending on their availability and role. The goal is to ensure broad and representative input to inform strategic recommendations for the IT Master Plan.

25. Does the City have a specific project timeline expectation?

The City anticipates that the IT Master Plan can be completed within **3 to 6 months**, depending on the final scope of work and level of stakeholder engagement required.

A more precise timeline will be developed collaboratively during project kickoff, but the City expects the work to progress through typical phases including assessment, stakeholder input, strategic planning, and plan finalization.

26. Can a copy of the City's last Information Technology Master Plan be provided, or a link to the documentation?

Please see the answer to question #21

27. Could the City please confirm whether this is a new initiative or an existing engagement?

This is a new initiative.

28. If there are existing incumbents, would the City be able to share their technical and cost proposals for reference?

This is a new project and there is not a current incumbent.

29. Could the City provide an estimated budget or a Not-to-Exceed (NTE) amount for this contract?

Please see the answer to question #1.

30. Could the City please provide the anticipated project timeline, including key milestones and the overall expected duration of the engagement?

Please see the answer to question #25

31. Could the City please clarify whether it intends to award this RFP to a single vendor or multiple vendors? If multiple awards are anticipated, could The City specify the expected number of vendors to be selected?

This will be a single vendor award.

32. Can you provide more details on the expected depth and format of the current state analysis? For example, how many departments or systems should be covered in detail?

This should be a comprehensive review of all 10 departments and their associated systems.

33. Are there existing IT policies, documentation, or previous assessments (besides the 2020 Master Plan) that the consultant should review as part of the update?

Yes, the City's Strategic Plan and any IT specific policies will be provided upon request to the winning bidder.

34. Regarding the IT Risk Assessment, are there specific industry standards or frameworks (e.g., NIST CSF 2.0, ISO) that the City prefers the assessment to follow?

CJIS and CIS Controls

35. For the application portfolio review, should the focus be on all applications or only enterprise-level and mission-critical systems? How many applications and IT systems/services is the city considering for this project?

Please see the City of Indio's Enterprise Catalog located at <https://www.indio.org/home/showpublisheddocument/154/638530188376700000>. The Enterprise Catalog does not include the full portfolio due to security concerns; full list of applications can be provided to the winning bidder.

36. What is the current state of IT infrastructure documentation, and does the City expect detailed technical network diagrams or high-level infrastructure summaries?

The City current IT infrastructure documentation is mixed with some areas well documented and others needing documentation. The City does not expect detailed technical network diagrams.

37. In the personnel skills assessment, will the consultant have access to IT staff for interviews or surveys? Should training and education recommendations include formal programs or informal upskilling?

Yes, the consultant will have access to IT staff for interviews and surveys. Training and education recommendations should be specific enough to guide future staff training.

38. What level of detail and format is expected for the strategic roadmap and executive summary deliverables?

The strategic roadmap should include the projects as determined in the IT Master Plan, the estimated year the projects should be done, and the estimated costs of the project. The executive summary should be just that a high-level summary suitable for executive staff and the council to review and have a good idea of the current state of IT, future IT projects, and how they align with the City's Strategic Plan.

39. What is the team size?

The IT Department has 10 staff members consisting of the following:

- 1 – IT Director
- 2 – Systems Engineers
- 1 – Enterprise Application Engineer
- 2 – IT Analysts
- 3 – IT Support Technicians
- 1 – GIS Coordinator

40. What is the estimated budget or cost range for completing the project as outlined in the scope of work?

Please see the answer to question #1.

41. Pricing template? Fixed price or Time and material?

Please see the answer to question #18

42. Will your team perform the work primarily onsite or remotely?

IT Staff work primarily onsite.

43. What is the anticipated duration of the project from initiation to final deliverables?

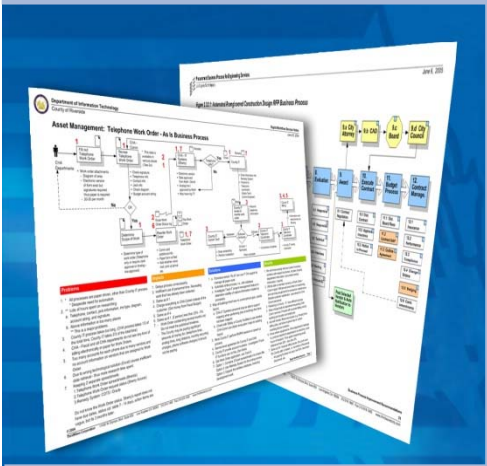
Please see the answer to question #25

44. What are the environment specifics regarding locations, devices, assets, and teams?

The City has three major datacenters and one minor datacenter, around 480 devices/assets, and 10 staff members across three locations.

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## IT Master Plan & Roadmap Volume 1: Findings & Recommendations March 30, 2020

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## Preface



## Preface

The City of Indio (City) Information Technology Master Plan & Roadmap (ITMP Roadmap) is the result of a comprehensive and thorough assessment of the City's existing technologies, operational requirements and service delivery needs. This document reflects a strategy that is technologically strategic, operationally responsive, and fiscally responsible. It addresses the unique requirements of mission critical business needs of the City and its constituents, visitors and business community.



Known as the “City of Festivals,” the City holds a number of yearly festivals including its world-famous arts, food, and music festivals such as the Coachella Valley Music & Arts Festival and Stagecoach Country Music Festival.

The ITMP Roadmap is the product of a collaborative effort with City management and staff who made valuable contributions throughout the project. A focus was placed on addressing management, operational and technology challenges that could be mitigated with strategic investments in emerging technologies. ThirdWave observed numerous strengths at the City including the following:

- The City is making significant investments in departmental and enterprise Information Technologies. As this project is completed, the City is engaged in the selection of a Land Management System, an Enterprise Resources Planning system, and are beginning the process of procuring a CAD/RMS for the public safety departments. All of these systems fall under the category of ‘enterprise systems,’ meaning that they address a number of city-wide needs.



- The City has a number of new members on its leadership team, e.g., Indio Water Authority, Director, Community Development, and Director of Communications & Marketing, which has infused the City with a fresh set of progressive perspectives.
- City staff have a strong level of professionalism, with a conscientious commitment to delivering exemplary services to the residents, businesses and visitors to the City of Indio.
- The City's decision to execute this IT Master Plan to chart the City's technology direction for the next 10 years is a healthy indicator of the City's desire to intelligently map the City's future use of emerging technologies.
- As of this writing, the City is embarking on the development of a Fiber Master Plan. This will be the foundation for municipal communications, broadband services and Internet access to the city, citizens, businesses, education, and healthcare -- fostering access and dynamic economic development for the next 50 years. The City will be positioned to continue its key role in the Coachella Valley.

The ITMP Roadmap focuses on improving the status quo and articulating a path for the City's continuing evolution as an exceptional city; it is comprised of two complementary volumes:

**Volume 1: *ITMP Roadmap Finding & Recommendations (ITMP)***, identifying a comprehensive set of possible management, business process improvement, and Information Technology initiatives (this document); and,

**Volume 2: *ITMP 5 Year Implementation Roadmap (Roadmap)***, providing the final proposed and prioritized initiatives, budget estimate, and 5-year timeline for implementing the Roadmap (a second document).

The challenge of adopting, funding and implementing an ITMP Roadmap is a formidable one. However, given its 5-year timeline, there is plenty of latitude to execute the technology initiatives identified in the ITMP. The ITMP Roadmap is a living document that can be (and should be) reviewed and adjusted on a yearly basis. It provides an opportunity for new, more efficient ways of providing services. The purpose of the ITMP Roadmap is to ensure investments in strategic business technologies are sound and deliver the highest possible value to the City and its constituents. This document provides a wealth of data that can be leveraged over the next five years to facilitate excellence in municipal services, civic participation, and community wellbeing.

A special thanks to the City Manager, Department Heads and professional staff at the City of Indio for their engagement and valuable input.

Roy R. Hernández  
Founder, President & CEO  
**ThirdWave Corporation**



## Section 1 Executive Summary



### 1.1 Information Technology Master Plan Vision

This document provides an Information Technology Master Plan and Roadmap (ITMP) custom tailored to the City of Indio.

Informed by the unique organizational and operational needs of the City, the ITMP offers a technologically sound vision focusing on Strategic Business Technologies responsive to the challenges and opportunities that exist at the City.



The vision of the ITMP Roadmap is to:

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

The adoption and implementation of the ITMP will leverage the effective investment in Information Technologies, while at the same time support the City's mission critical services.



## 1.2 Project Goal & Objectives

The goal of the project was to create an exceedingly responsive five (5) year ITMP Roadmap employing a highly participatory process engaging City staff, management, the IT department and constituents. The objectives are to:

- Connect technology resources, innovation, and initiatives to the City's core values and mission critical services;
- Serve as an effective framework for how IT services are delivered throughout the City; and
- Define a clear set of goals, guiding principles, and strategic priorities for accomplishing the City's ITMP, principles and implementation roadmap.



The ITMP Roadmap represents the results of a comprehensive City-wide assessment of the City's IT needs. **It provides a high-level technical specification for more than forty Information Technology initiatives, including a compelling business case for each.** Consequently, this is a sizable document.

This document is structured to provide sufficient detail for each actionable recommendation, to the extent that the content could be used to develop numerous Request for Proposal/solicitation documents over the next five years. In other words, this is a technical reference volume, not a document meant to be read in one sitting.

The ITMP Findings and Recommendations document contains articulated objectives that will guide how the City delivers innovative and effective services internally and to the public.

## 1.3 Project Approach & Methodology

The ITMP project employed a comprehensive and structured best practice methodology. It applied ThirdWave's patented data driven method, which collected and synthesized various types of information, including:

- Data on existing and planned Information Systems
- Focus Groups with IT staff and management
- Interviews with the City's leadership team
- Online Staff Survey, to allow all City staff the opportunity to provide input
- Sixteen (16) half-day Rapid Workflow<sup>®</sup> business process improvement workshops addressing mission critical business functions



## 1.4 Information Technology Master Plan (ITMP) Findings

The City of Indio operates under a City Council-City Manager form of government with five elected members of the City Council served by a City Manager, staff and City Attorney. The Council members represent districts within the City, which has a population just under 90,000 residents. The City has approximately 300 full-time and part-time employees. Indio is a full-service city providing residents with diverse public services including police and fire, water, public parks and community services, economic development, housing and neighborhood services, building and safety, planning and public works.

### 1.4.1 Summary of Key Findings

The ITMP project identified approximately forty-six (46) strategic initiatives spanning management, operational and technology areas of opportunity. The following provides a summary of the top challenges facing the City. (All initiatives are described in detail in Section 4, ITMP Roadmap Recommendations in the document. Technical terms are defined in a glossary in Section 5 of this document.)

#### 1. **Infrastructure Single Points of Failure**

There are a number of infrastructure systems that present single points of failure and a lack of redundancy. These include:

- City Facilities: PD, City Hall, Corp Yard, Teen Center, Sr. Center
- Coachella Valley History Museum: MOU
- Indio Performing Art Center: Internet, Firewall, and Wi-Fi

The City lacks a data center backup site, with limited data replication, but all in the local area. Exposures include the following:

- Possible loss of data
- Complete loss of productivity
- Impacts to customer service
- Impacts to public safety

#### 2. **Outdated Systems Hardware**

There are a number of systems that require upgrade or replacement, for instance:

- SAN (Promise and HP): some of these systems are no longer supported, making it difficult to get replacement parts or are at risk of data loss.
- There is no redundancy for the Exchange Server, located in City Hall, where there is no backup generator.

#### 3. **Lack of Enterprise Asset/Work Order Management**

Asset Management was consistently identified as a requirement throughout the project. In the online staff survey, it was noted as the most needed software. IT staff identified it as a requirement in the IT Focus Groups. In the Rapid Workflow<sup>®</sup> workshops, Indio Water Authority noted challenges using two systems (CityWorks and HTE) and the workshop with Public Works revealed they lack and require a work order system.



4. **Underutilized GIS**

GIS was consistently identified as a requirement throughout the project. It was noted as a challenge in the Management interviews. IT staff identified the City only has one GIS staff. The Online Staff survey rated GIS as a key application and how the implementation of the new Land Management system will have a strong need for accurate GIS data. The GIS Rapid Workflow® workshop revealed a number of GIS challenges including out of date GIS data, lack of standards, and more broadly, no GIS Master Plan.

5. **Public Safety Technologies**

The Rapid Workflow® workshops and Indio management interviews revealed a variety of needs for the Indio Police Department. Examples include systems to interface with State law enforcement systems and various operational applications.

6. **Economic Development Applications**

The need for technologies that will support the City’s continued growth were identified by staff and management. Some of these focus on business growth while others are a response to the numerous festivals held in Indio, creating opportunities to energize the local business community.

7. **Underleveraged Enterprise Content Management System**

The City has Laserfiche, an Enterprise Content Management System (ECMS), but it is underutilized. The need for electronic content and records management was the most mentioned technology identified by city in the project. It was raised in the Rapid Workflow® workshops, IT Focus Groups, and Management Interviews.

8. **Lack of Cyber Security**

The need for a Cyber Security assessment was identified in the Management Interview with the Indio Water Authority (IWA). Given its key role as one of the fastest growing municipal utilities in the Coachella Valley, protecting the integrity of its (and the City’s) Information Systems from cyber-attacks, is crucial.

9. **ITMP Sustainability by IT Organization**

The ITMP project reveals IT staff are talented, highly capable, and work exceedingly well as a team. However, there are a number of areas for improvement, including:

- Business process improvement, requirements definition, and project management skills
- A lack of GIS staff, which results in not fully utilizing the GIS system.
- Siloed IT organizational structure, with limited staff, which results in staff not having time for training and professional development
- Lack of a key positions to support new enterprise systems, e.g., ERP Finance/HR, Land Development and Asset Management systems – in addition to Fiber in the future.
- The IT Director is responsible for a number of technical tasks that should be carried out by IT staff



### 1.4.2 Summary of Key Recommendations

The ITMP Roadmap project identifies hundreds of potential initiatives. Of those, forty-four were deemed to be the most beneficial to the City and Indio community. The following are the most significant, and specific, actionable recommendations. The items below provide a summary of the top nine organizational and technical recommendations for the ITMP Roadmap.

1. **Upgrade City Infrastructure Resiliency**  
Retain a professional organization to develop Disaster Recovery/Business Continuity Plans. Include policies, processes and procedures to recover and ensure business continuity in regards to technological infrastructure in the event of a disaster, whether manmade or natural. Disaster recovery planning is a subset of a larger process (the Business Continuity Planning) and should include planning for resumption of applications, data, hardware, communications (such as networking) and other IT infrastructure. Other ITMP infrastructure initiatives include:
  - Build out redundant firewalls.
  - Replicate to a cloud service and become CJIS certified
  - Implement backup generator at City Hall
2. **Upgrade or Replace Outdated Hardware**
  - Upgrade or replace existing servers
  - Replace outdated SANs
  - Build out a second Exchange Server, or go to Office 365
3. **Adopt Enterprise Asset/Work Order Management**  
Adopt one system as an enterprise Asset/Work Order Management system at the City, for IWA and Public Worlds, e.g., the systems currently used by IWA – CityWorks.
4. **Fully Leverage GIS**  
Develop a GIS Master Plan for the City. Resource sufficient staff resources to develop GIS standards, inclusive of Public Safety, and maintain all critical layers, standards and tools for economic development to identify and market available properties for sale.
5. **Enhance Public Safety Systems**  
Implement the most appropriate option to enhance the City’s CLETS system. Implement a number of public safety applications, e.g., upgrade the IPD Interview system, Purchasing and Short-Term Rental software.
6. **Economic Development Applications**  
Implement ITMP initiatives to foster economic developments; examples include:
  - Automate the processing of business licenses, building plans, and permitting to improve and expedite these business service experiences (The City is in the process implementing a new Land Management System that will address this.)
  - Develop an Economic Development Website, which could be the first phase of a broader City website redesign.



- Implement a Short Term Rental Applications in IPD to help manage the influx of people to the City's festivals.
- 7. **Enterprise Content Management System (ECMS) Strategy**  
Develop an enterprise taxonomy (naming convention) without delay to allow electronic documents/content to be stored and accessed in a consistent, easy and expeditious manner. Develop an Enterprise Content Management Strategy to determine what ECMS applications are required by each department, including a backfile conversion plan to scan and store existing hardcopy documents that should be stored in the ECMS.
- 8. **Cyber Security Assessment**  
Retain a third party to carry out a cyber security for the City's systems, including the following minimum areas:
  - Privacy and Data Security
  - Network Security
  - Email
  - Website Security
  - Facility Security
  - Operational Security
  - Incident Response
- 9. **Resource and Realign the IT Organization**
  - Revise the IT Classifications to make them more consistent
  - Resource the IT organization to sustain the ITMP for the next 5 to 10 years
  - Articulate clearly defined roles and responsibilities for all IT staff and IT Director

### 1.4.3 IT Strategic Plan Roadmap Benefits

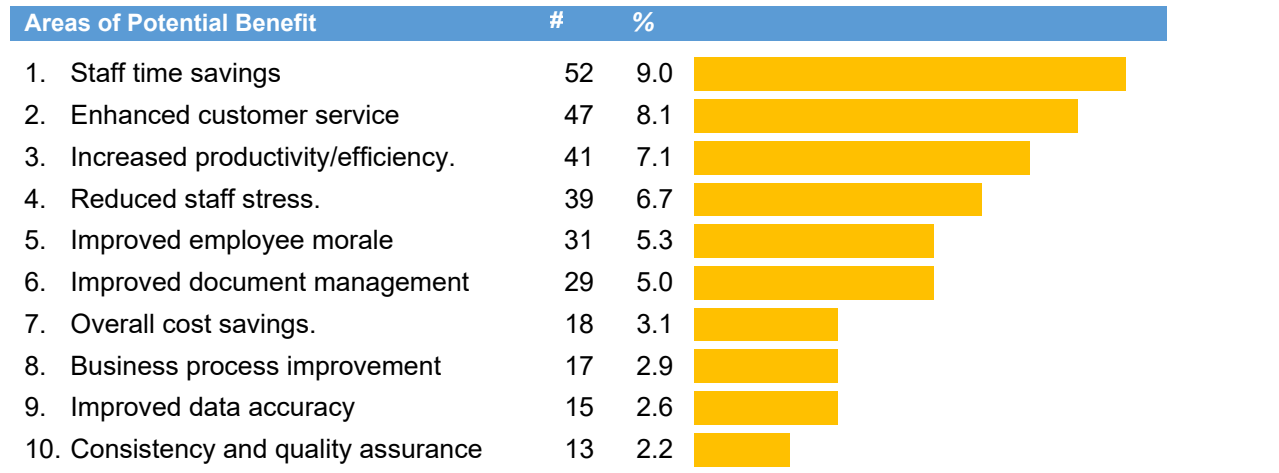
The ITMP project identified substantial potential benefits that could be realized by implementing the plan. Qualitative and quantitative benefits were identified in the Rapid Workflow® workshops. This information was leveraged to prioritize ITMP initiatives.

A total of five hundred-eighty-one (**581**) potential benefits were identified in sixteen (16) business process workshops, an average of **thirty-six (36)** benefit opportunities per mission critical business process.

Figure 1.4.3.1, ITMP Potential Benefits, on the following page lists the top ten potential benefits that will be derived by approving and funding the ITMP. (The number in the column shown as “#” indicates the number of times these benefits were identified in all of the Rapid Workflow® workshops.) This figure illustrates the magnitude of the potential benefit ITMP initiatives offer the City and its constituents.



**Figure 1.4.3.1: ITMP Potential Benefits**





## Section 2 Project Overview



### 2.1 Project Background, Goal & Objectives

The goal of the ITMP Roadmap is to identify internal and external municipal technology needs; the role of Information Technology within the IT organization; and responsive technology solutions that will allow the City provide exemplary services to the community of Indio. Moreover, the ITMP will help guide the City in responsive technology planning and sound investments.

The objective of the ITMP is to provide a 5-year ITMP Roadmap employing a highly participatory process directly engaging City departments and staff. The ITMP contains actionable recommendations that will guide and shape how Indio delivers innovative and effective technology services throughout the organization and to the community at large.

This report is accompanied by a second volume, **Volume II: ITMP Roadmap** focusing on prioritization, budgeting and deployment timeline. As such, the following pages address “what” should be done, and the ITMP Roadmap addresses “when” and at “what cost.”





The objectives of the ITMP are to:

- Define a clear set of goals, guiding principles, and strategic priorities for accomplishing the City's objectives defining best practices and actionable recommendations.
- Serve as the framework for how IT services will be delivered to the City with an enterprise focus (instead of in a siloed manner) to integrate existing and new systems to provide business process improvement.
- Provide actionable objectives, and be the guiding document that shapes how the City delivers innovative, unified, and effective technology services throughout the organization and to the community.

To this end, the implementation of future business systems and Information Technology projects must be properly prioritized, scheduled, and coordinated as part of an enterprise ITMP. Implementation of the ITMP Roadmap will help ensure the City's technological advancement by making logical and sound investments in physical resources (i.e., hardware, software, integrated systems, etc.) and human resources (staff and training).

## 2.2 IT Strategic Plan Roadmap Project Approach

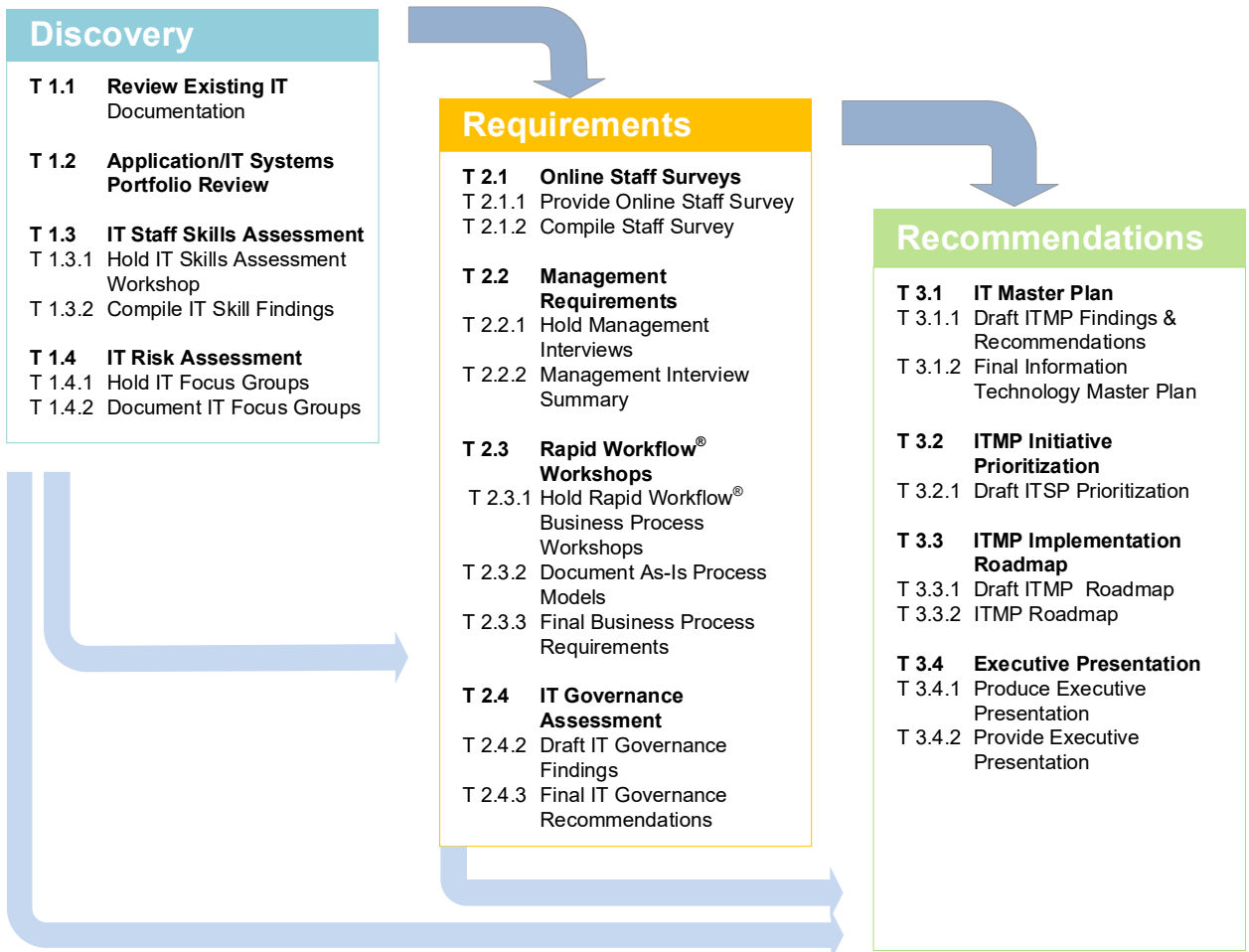
The ITMP project employed a comprehensive, logical and structured approach relying on the collection, assessment, and synthesis of various types of information gathered in the course of the project, including:

- Documentation of Current Technology
- Management Interview data
- City Staff Online Survey data
- IT Focus Groups data
- Rapid Workflow® Business Process Workshop data.

Figure 2.2.1 on the following page illustrates the approach used on the ITMP Roadmap project. The project was broken out into three phases: Discovery, Analysis/Requirements, and Recommendations/Strategy.



**Figure 2.2.1: Comprehensive Project Methodology**



The project employed ThirdWave’s patented Enterprise Architecture data driven methodology where data from one phase informs the subsequent project phases and forms the basis for the final recommendations and strategy.

**Phase 1:** The Discovery Phase established a baseline understanding of the City’s IT and business systems environment, including a survey of existing Information Technologies.

**Phase 2:** The Requirements Assessment Phase engaged a broad section of stakeholders, including:

- City Department Heads: in management interviews soliciting a management perspective on current and future operating challenges faced by departments.
- City staff: sixteen (16) business requirements workshops were held to address departmental and enterprise operating/service delivery needs. The workshops had



a total of 48 (forty-eight) staff participate. Many staff attended multiple workshops for a total participation level of 62 (sixty-two).

- IT staff: in four focus groups addressing infrastructure, hardware, software, and IT service delivery.

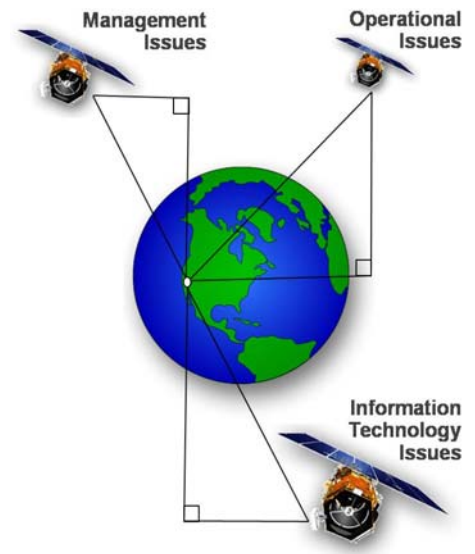
**Phase 3:** The Strategic Plan and Roadmap Phase: which synthesized all of the data collected in previous tasks to produce the findings, recommendations, prioritized technology initiatives, budget estimates and implementation plan.

The ITMP Roadmap identifies opportunities for improving business processes and customer service through policy, process and/or Information Technology initiatives.

**Figure 2.2.2: Comprehensive Project Framework**

ThirdWave’s IT Strategic Planning framework triangulates on all key facets of the organization to get a crisp definition of business, functional and technology requirements to produce responsive and actionable recommendations. The project employed a highly participatory process including:

- **Management Interviews:** To address business unit missions, business architecture, governance structure, management policies, strategic planning, fiscal and staff resource allocation to effectively sustain the ITMP Roadmap.
- **Operational/Business Process Workshops:** To address opportunities for streamlined business processes, methods and procedures, and tools required by staff to provide extraordinary service delivery to the public.
- **Technology Focus Groups:** To address strategic information technologies with the appropriate infrastructure, hardware, software, Enterprise Architecture, organizational structure, knowledge, skills and abilities; standards and best practices.



ThirdWave’s IT Strategic Planning Triangulation Framework ©1988

ThirdWave’s IT Strategic Planning Triangulation Framework recognizes that a viable IT strategy must address all needs of the organization, including the needs of constituents.

This document is not meant to be read in one sitting; it is a blue pint/roadmap for a five to ten-year journey. The ITMP provides technical descriptions of strategic business/IT initiatives supported by the rationale for each. This will facilitate the effective planning, procurement, implementation and management of Information Technologies at the City of Indio. Volume 1 ITMP Findings & Recommendations (this document) describes “what” the City should do, Volume 2, the ITMP Roadmap describes “when” and at what cost.



## Section 3 IT Master Plan Roadmap Findings



### 3.1 Management Requirements Findings

Management requirements were gathered via interviews; the objectives included the following:

1. Obtain a management perspective on unique business challenges facing each department;
2. Gather city-wide functional, operational and service delivery requirements; and,
3. Solicit management opinion on the existing IT organization and the level of their support services.



Department heads from the following departments participated:

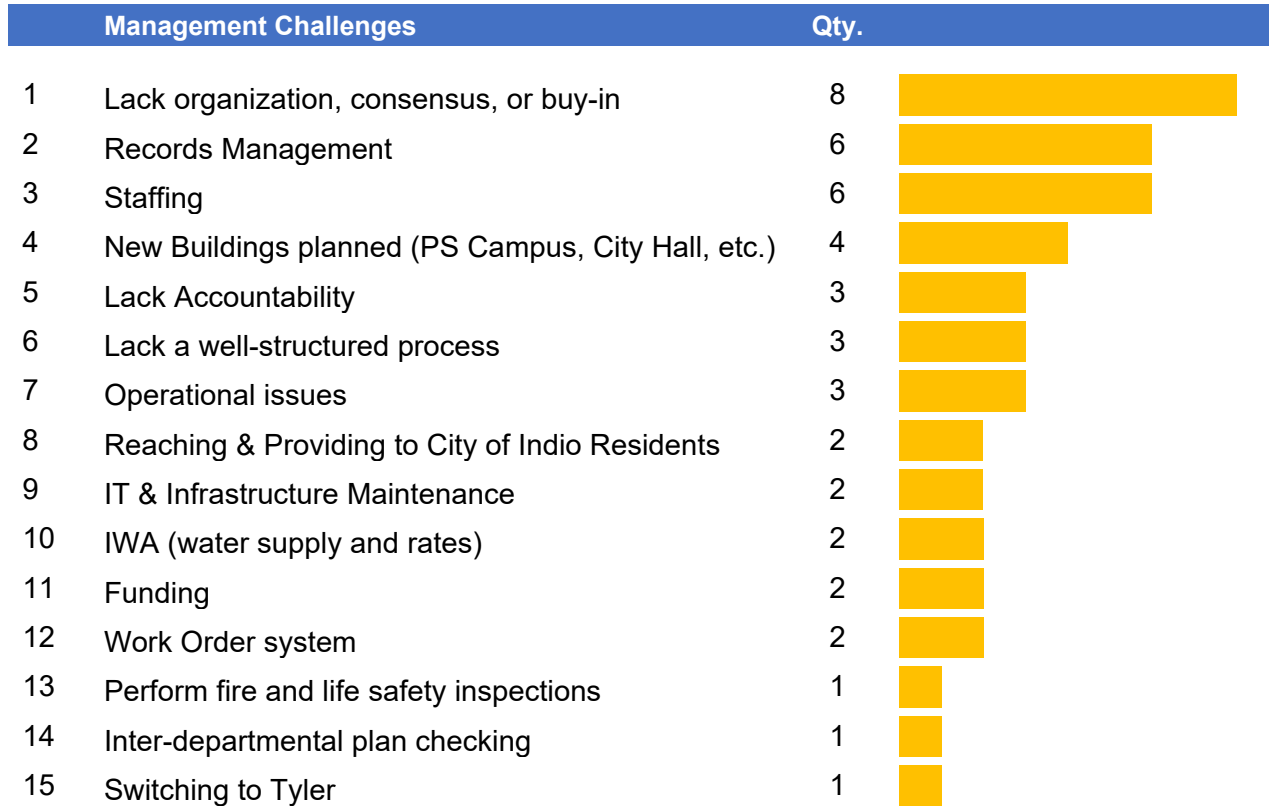
- |                               |                                |
|-------------------------------|--------------------------------|
| 1. Community Development      | 8. Indio Water Authority       |
| 2. Police                     | 9. Community Services          |
| 3. Public Works               | 10. Communications & Marketing |
| 4. City Clerk                 | 11. Fire Department            |
| 5. Finance                    | 12. City Manager's Office      |
| 6. Human Resources            | 13. Economic Development       |
| 7. Emergency Operation Center |                                |

The figures below summarize the data collected from the City's leadership team including the most significant management, business and technology challenges. Department challenges are shown on the left and corresponding number of times an existing challenge was mentioned is reflected under the quantity (Qty.) column, illustrated by the Gant chart.



The responses below are for the following question: “What are the most significant operational and/or service delivery (not technology) challenges facing your department at the present, and in the next 3 to 5 years?”

Figure 3.1.1: Management Team Business Challenges

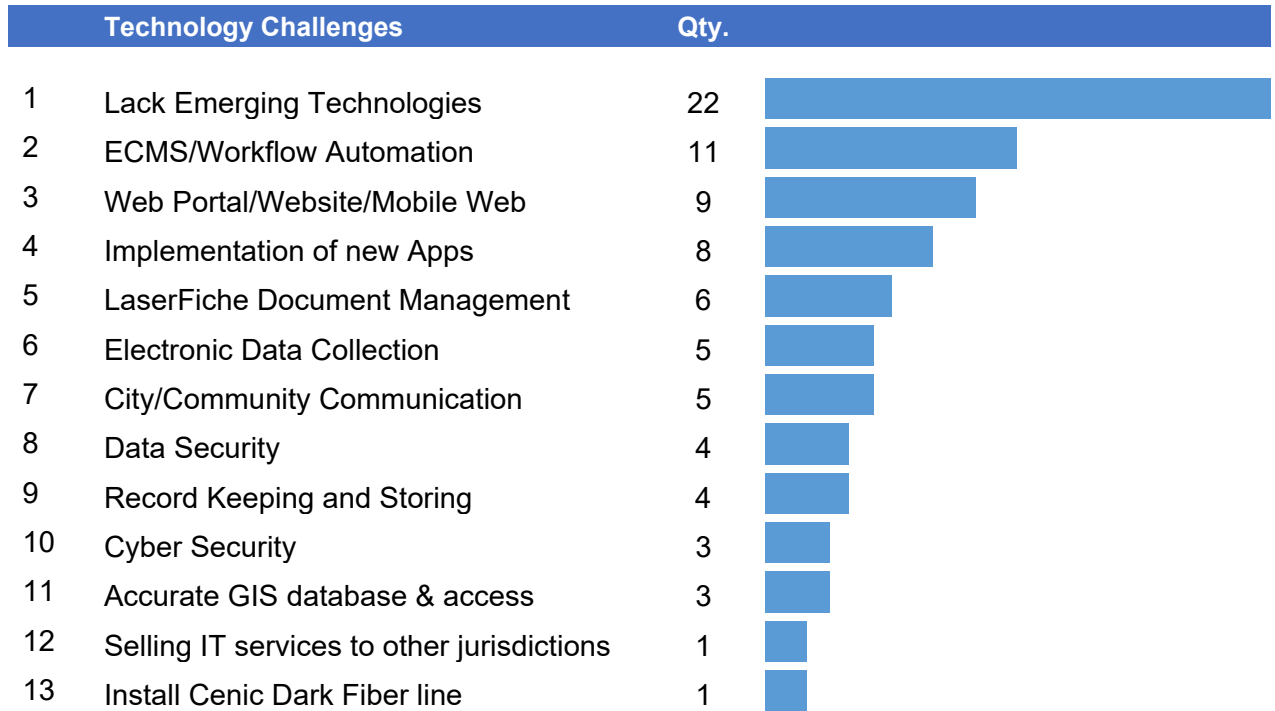


The most significant management/operational challenge facing City executives are noted in the first three items on the list, led by the Lack organization, consensus, or buy-in, Records Management and Staffing.

The figure on the following page provides a summary of technology challenges identified in the City’s management team interviews.



**Figure 3.1.2: Management Team Technology Challenges**

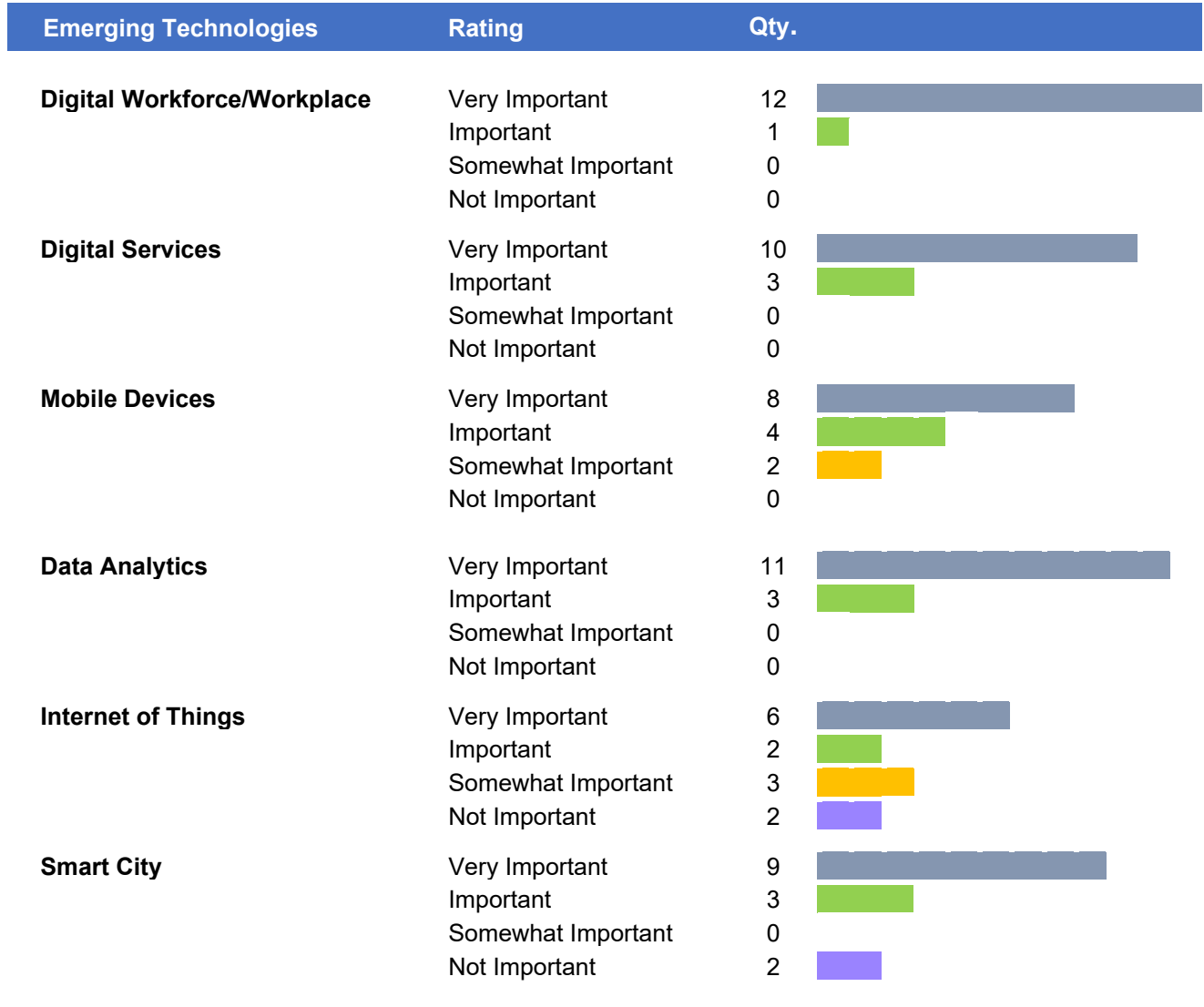


The most significant management technology challenges facing City executives entail the City's lack of Emerging Technologies, ECMS/Workflow Automation and Web Portal/Website/Mobile technologies.



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

**Figure 3.1.3: Emerging Technologies**



The three most important emerging technologies for the City’s leadership team are digital workflow/workplace, data analytics and Smart City. These three solutions require sufficient IT resources the City currently lacks.



The figure below provides a list of management responses for the following question: “What is your department’s level of satisfaction with the IT organization’s ability to support your department’s current or projected needs based on your perception of one or more of the following?”

Figure 3.1.4: IT Staffing, Knowledge and Resources Allocation



### 3.1.1 Summary of Management Interviews

The management interviews revealed the following:

- **Management/Operational Challenges:** A lack of organization, consensus, or buy-in is the most significant challenge, followed by records management and a shortage of staff.
- **Technology Challenges:** The top technology challenges relate to a lack of emerging technologies, followed by Enterprise Content Management/Workflow Automation and the City’s Web Portal/Website/Mobile Web.
- **Emerging Technologies:** The top two emerging technologies identified by the leadership team are Digital Workforce/Workplace and Data Analytics.
- **Staffing levels:** 76.5% of the management team rated IT staffing levels as Very Good/Good.
- **Technical knowledge/training:** IT staff rated very high in this area; 75% of the management team rated IT staff knowledge as Very Good/Excellent, and balance rate IT staff as Good. There were no Satisfactory or Poor ratings.



- **Budget and resource allocation for IT:** This item received the lowest management rating; with the highest rating being ‘Very Good’ and the balance of managers rating this ‘Good,’ ‘Satisfactory’ and ‘Poor.’

### 3.2 IT Staff Focus Group Findings

Four Focus Groups were held with IT staff regarding the City’s Information Technology portfolio and operation. The following illustrates the challenges and opportunities facing the City in four key technology areas as perceived by IT staff:

- Infrastructure
- Hardware
- Software
- Sustainability & Service Delivery

**Legend:**

- M** ■ Management Issues: related to finance, organizational structure, staffing, training, and/or policy.
- O** ■ Operational Issues: related to operations, service delivery, methods and/or procedures.
- T** ■ Technology Issues: related to any aspect of information technology.

1.	Infrastructure	M	O	T
1.1	<b>Network Infrastructure</b>			
	1. City has a few single points of failures and firewalls; all sites lack redundancy.....			■
	• City Facilities: PD, City Hall, Corp Yard, Teen Center, Sr. Center .....			■
	• Coachella Valley History Museum: MOU.....			■
	• Indi Performing Art Center: Internet, Firewall, and Wi-Fi.....			■
1.2	<b>Telecommunications</b>			
	1. The phone system is starting to age out .....	■		
1.3	<b>Data Centers</b>			
	1. The main City sites act as data centers .....	■		
	2. Water Authority has some data replication.....			■
	3. City Hall and PD do not have a backup data site.....			■
	4. All of the sites are local; there is nothing out of area .....			■
	5. PD has backup generators, but City Hall does not .....		■	
1.4	<b>Data Storage</b>			
	1. Some of the backup SANs are fairly old (Promise, HPs, and new InfoTrend).....	■		
1.5	<b>Network/Wells Site Infrastructure</b>			
	1. The City has approximately 35 sites, some are well sites.....	■		
	2. The radio system used is an older system .....	■		
	3. The radio system is starting to show signs of deterioration .....	■		
	4. Some of the radio sites go out occasionally .....	■		



2. Hardware		M	O	T
<b>2.1 Servers: Application, Database and Web Servers</b>				
1. There is no redundancy in the Exchange Server.....				■
2. The Exchange Server is at City Hall has no backup generator.....	■			
3. If the City loses external communications, there would be no way to get emails.....				■
<b>2.2 Personal Computer</b>				
1. There are still a lot of PCs with Windows 7 in City Hall.....				■
<b>2.3 Peripherals: Printers, Plotters, Scanners</b>				
1. There are too many personal printers.....	■			
2. In City Hall there are approximately 40 devices.....				■
3. Application/Database Software		M	O	T
<b>3.1 Department Applications</b>				
1. Public Works lack a Work Order/Asset Management System.....	■			
2. Engineering uses an Access database for historical data and other purposes.....				■
3. Fleet uses the precursor to CityWorks, e.g., CityTech.....	■			
4. City Tech sits on an old server and has its own 2005 SQL database.....				■
5. The hardware in PD interview system has not been update for 8 years.....	■			
6. The software has not been updated in 6.5 years.....	■			
<b>3.2 Enterprise Applications</b>				
1. City has had Laserfiche since 2012-2013.....	■			
2. There are a number of challenges with the system.....				■
• There are a number of documents that were imported and not Q&A'd (Engineering & Community Development).....				■
• Documents are not OCR'd.....				■
• Lack enterprise taxonomy.....				■
• People write on documents.....				■
• Lack of staff training.....	■			
<b>3.3 Hosted and Cloud-Based Applications</b>				
1. Website is not mobile friendly and not completely ADA compliant.....	■			
4. IT Service Delivery Model		M	O	T
<b>4.1 IT Organizational Structure</b>				
1. The IT organization currently lacks clearly defined roles for IT staff.....				■
<b>4.2 IT Staff Resources KSAs</b>				
1. Staff lack knowledge on SCADA and rely on consultants.....	■			
2. Business Analyst have a vast set of areas.....				■
3. Business Analyst acting more like a technician than a Business Analyst.....				■
<b>4.3 Technology Staff Levels</b>				
1. IT is short staffed right now; the department is down one tech position.....	■			
2. The City only has one GIS person, the GIS Coordinator.....	■			
3. Existing staff is doing data creation and map production.....				■



**4.4 Technology Training Needs**

- 1. Training has been offered to staff but they do not have time to do it .....
- 2. The IT Department is heavily tasked.....

**4.5 Project Management: Project Tracking, Reporting and Prioritization**

- 1. The City lacks an integrated project management tool for collaboration. ....

**4.6 Resource Planning: Cost/Budget Allocation, Business Process Workflow**

- 1. Do not have someone working as a Business Analyst. ....
- 2. Workflow automation is not being addressed.....

**4.7 System Administration**

- 1. The City has disparate systems: Nutanix and Simplivity.....
  - IT lacks cross training .....
  - Only some IT staff are authorized to work on the PD Systems .....
  - Not all staff have gotten CJIS training .....

**4.8 Storage, Backups, Lifecycle**

- 1. The City and PD do not have an off-site back site. ....
- 2. Water does back up to another plant, but it is not out of area.....

**4.9 Account Management, Virtualization, Operating Systems, Security**

- 1. PD/City/Water has a number of servers that need to be upgraded .....
- 2. Windows 7 is at end of life.....

**4.10 Policies & Procedures**

- 1. Do not have:
  - Physical Security Access policies at PD .....
  - BYOD policy.....
  - City Equipment Loaner Policy.....
  - Digital Signature policy .....
  - PII (Personally Identifiable Information) policy.....

**4.11 Business Continuity & Disaster Recovery**

- 1. Do not have a Business Continuity and Disaster Recovery Plans.....

**4.12 Help Desk**

- 1. City has two different systems, but are working on merging into ServiceDesk. ....
- 2. When IT staff respond, end users do not respond. Either they do not know how to respond or may lack training.....
- 3. Getting users to use the Ticket System.....

**3.2.1 Summary of IT Focus Groups**

The figure on the following page provides a high-level overview of the four technology support areas addressed in the IT Focus Groups. The most challenging is the IT organization and service delivery model. Figure 3.2.1.1, IT Focus Group Problem Statement Dashboard on the next page provides a summary of findings.



Figure 3.2.1.1: IT Focus Group Problem Statement Dashboard

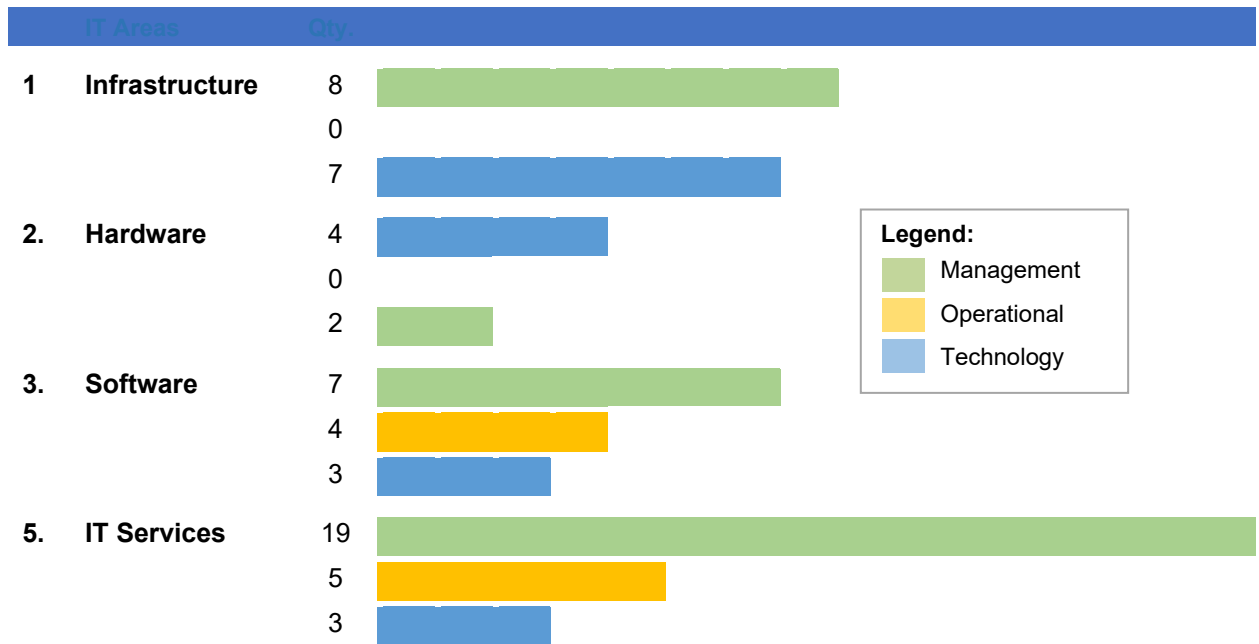
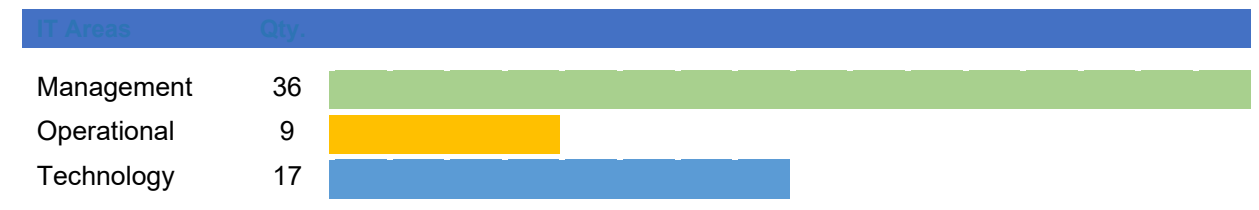


Figure 2.3.1.2 below provides an overall summary of the challenges identified by IT staff during the IT Focus Groups. While the compiled instances of management, operational, and technology problems are not weighted, this dashboard provides a general indicator of existing challenges identified by the City’s IT staff.

Figure 3.2.1.2: Overall Summary of IT Department Challenges



The figure above indicates that the most significant challenges faced by the IT organization relate to management issues. (The solutions from the IT Focus Groups are incorporated into section 2.5 Summary of Technology Requirements.)

This data is aligned with other findings in the discovery and requirements definition phases of the project, namely that the existing IT organization has significant staff resources challenges in how it provides services to City departments, and supports the City’s information systems. These issues are addressed in section 3.2.2, Operational Recommendations.



### 3.3 City Staff Online Survey

The data on the following pages was gathered via an online survey that allowed all City staff the opportunity to provide input on their perception of the City's Information Technologies and the IT organization's ability to support the City's needs.

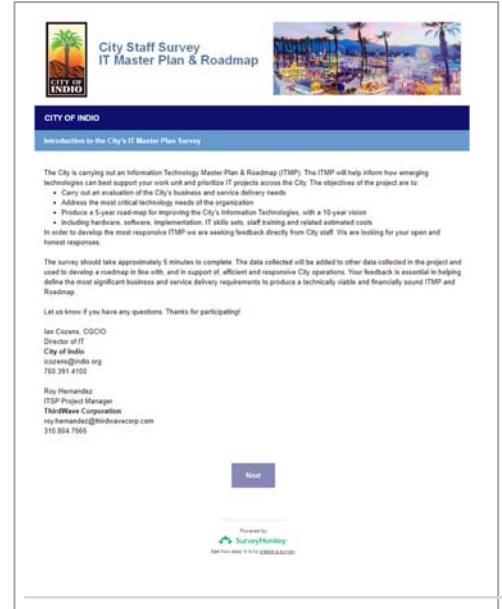
The online survey was posted from October 20 to November 1, 2019. **One-hundred and four (104)** City staff responded to the survey -- an outstanding response.

The online survey addresses the following:

- Overall condition of the City Information Systems
- The state of existing systems
- Information Technology needs
- Information Systems requiring improvement
- Services provided by Information Services
- Emerging Web Technologies

The list below provides key findings derived from the online staff survey.

- The overall condition of the City's Information Technologies is perceived to be Good/Very Good by City staff.
- Staff rated their understanding and skill on the use of technology in the workplace as Proficient (74.04%) and Highly Proficient (20.19%) for a combined total of 94.23%, a high skill set.
- The highest rated systems are Network File Savings and the lowest rated is the Phone System.
- In the category of Hardware, printers/copiers rated the highest and large format scanners/plotters rated the lowest.
- In the category of Enterprise Software, Laserfiche and Scanning were rated the highest. The most required software identified by staff are Work Order Management, E-Form and E-Signatures.
- In the category of Department Software, Agenda Processing software was rated the highest. The software noted as being the most needed was Asset Management.
- In the category of Engineering Software, GIS software was rated relatively high (although he ratings were low) as Excellent (1.92%) and Very Good (4.81%) for a total of 6.73%. The software noted as being the most needed was Engineering Plan/Permit Tracking.





- In the category of Web Software, both Web Content Management and E-Government rated Poor, 8.65% and 8.82%, respectively.
- When asked which technology requires the most improvement in the area of systems and services provided by IT staff, the two clear leaders are Infrastructure Networks (44.23%) and the Phone System (27.88%).
- The top-rated Web technologies identified by City staff for enhancing customer service were Mobile Friendly Website, with a combined score of 90.8% (Very Important 54.42% and Important of 32.67%) and Online Apps with a combined score of 91.09% (Very Important 51.49% and Important of 30.6%).
- When asked how important it is for the City's website to provide online services the overwhelming answer was Very Important (84.6%) and Important (10.58%), for a combined total of 95.2%.
- When asked what on-line interactive or online/transactional service delivery apps staff would most like to see out of 14 options, the two leaders are:
  - Online Payments: Parking, Invoices, Alarms, Permits, Business Licenses, Online Plan Checks/Permitting, 53.68%
  - Online Maps: Interactive map searches, 52.63%
- When asked to rate the services provided by IT the two top rated services include:
  - Ongoing Technical Support, or a combined score of 65.39%; Excellent 36.54% and Very Good 28.85%
  - Help Desk, for a combined 66.99%, Excellent 39.81% and Very Good 27.18%
  - The lowest rated service is Business Process Improvement, for a combined score of 25.74%, Excellent 8.91% and Very Good 16.83%.
- When asked to address challenges not specifically mentioned in the survey, the top 4 responses out of 23 included the following:
  - Faster PCs
  - Training
  - CAD/RMS
  - CLETS



**Figure 3.3.1: Challenges not Specifically Mentioned in the Online Survey**

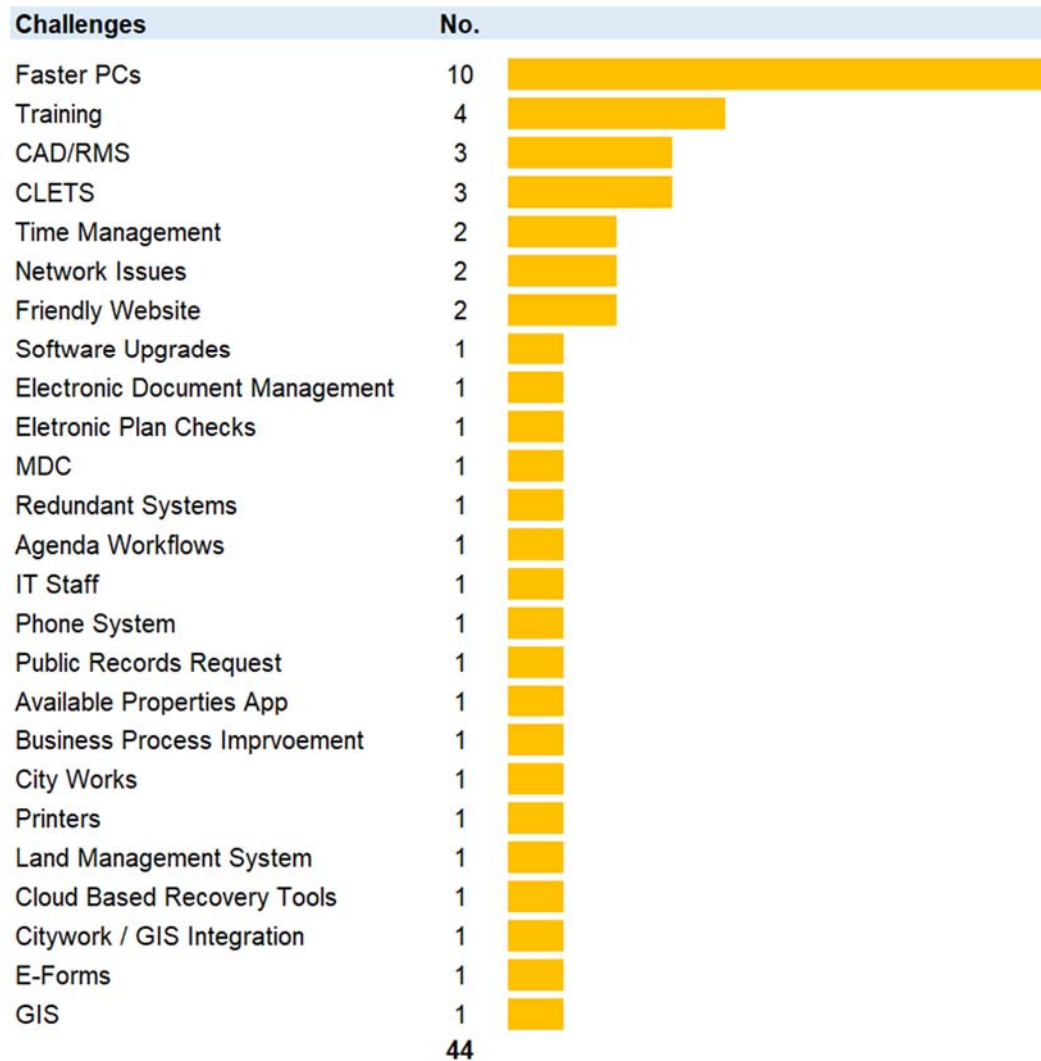
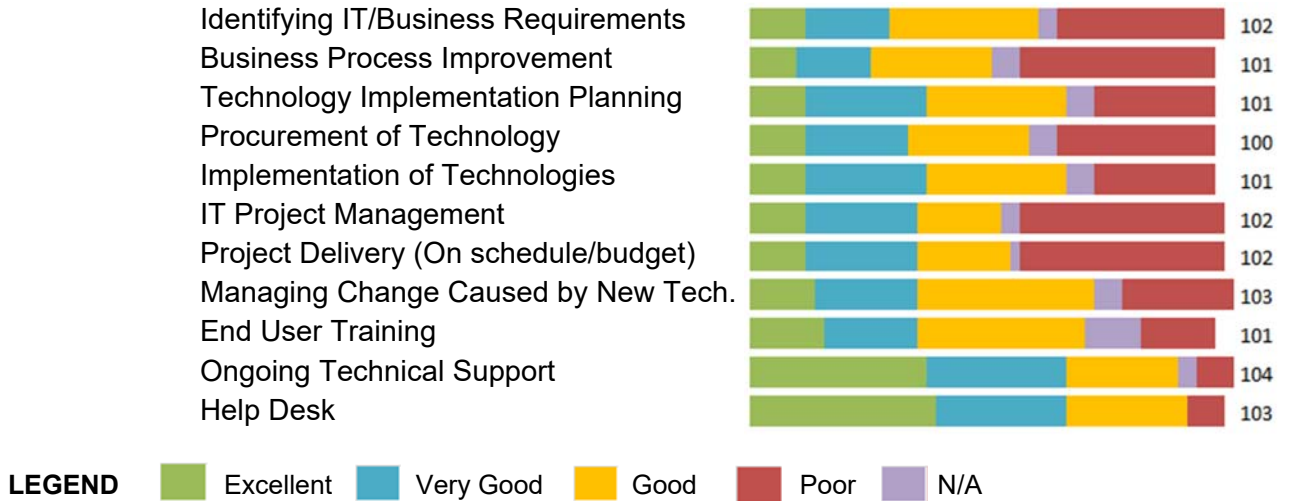


Figure 3.3.2, Staff Rating of Services Provided by the IT Organization, provides an overall view of how City staff perceive services provided by IT.



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



The figure above reveals that the strongest areas of IT services is Ongoing Technical Support and Help Desk. According to City staff, the areas requiring the most improvement include:

- Business Process Improvement
- Identifying IT/Business Requirements

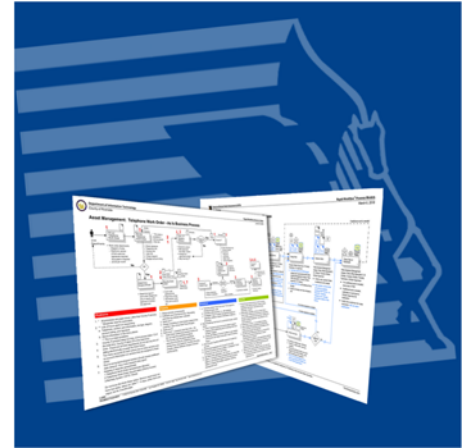
The IT service areas above are important because Business Process Improvement can make a difference and the cost of implementation is practically zero. Identifying IT/Business Requirements is key because it ensures the needs of staff are properly articulated, and can be included to properly inform vendors.



### 3.4 Rapid Workflow

A comprehensive assessment of City-wide operational and customer service requirements was carried out in the ITMP project. ThirdWave's patented Rapid Workflow® Business Process Improvement workshops were held with City staff and management.

The interactive workshops encompassed a detailed analysis of mission critical business functions listed below. Business, functional and technical challenges and opportunities that might be addressed with Information Technologies, Business Process Improvement of Policy Change were reviewed with business process owners.



Sixteen (16) Rapid Workflow® workshops were held from December 2, 2019 to January 29, 2020. Staff attendance and input was outstanding. Sixty-two (62) City staff and management representing all departments participated in the workshops, with some staff participating in up to 3 workshops. Consequently, total participation in the workshops consisted of ninety-four (94) business subject matter experts and IT staff addressed the departmental and enterprise business processes. The following workshops were held.

- |  |   |
|--|---|
| 1. Work Order Service Requests               | 10. Indio PD. Short Term Rental Permits     |
| 2. Public Works Work Orders                  | 11. Indio PD Alarms                         |
| 3. Human Resources Personal Action Forms     | 12. Indio PD Training Request               |
| 4. Commercial Building Permit Process        | 13. Community Services Event Management     |
| 5. Economic Development. Econ. Dev. Website  | 14. IWA Development Review                  |
| 6. Indio Police Department Ticket Writing    | 15. Enterprise Geographic Information Syst. |
| 7. City Clerk Public Records Request         | 16. Enterprise Content Management           |
| 8. Indio PD Supplies Ordering                |   |
| 9. Indio Water Authority Warehouse Inventory |   |

The data collected from staff was used to inform the ITMP initiatives shown in Section 3.5 of this document, as well as determine the prioritized initiatives in Volume II, ITMP Roadmap.

Figure 3.4.1, Sample Rapid Workflow® Business Process Map, on the next page provides a visual sample (it is not meant to be legible) of a process map produced by City staff.



Figure 3.4.1: Sample Rapid Workflow® Business Process Map

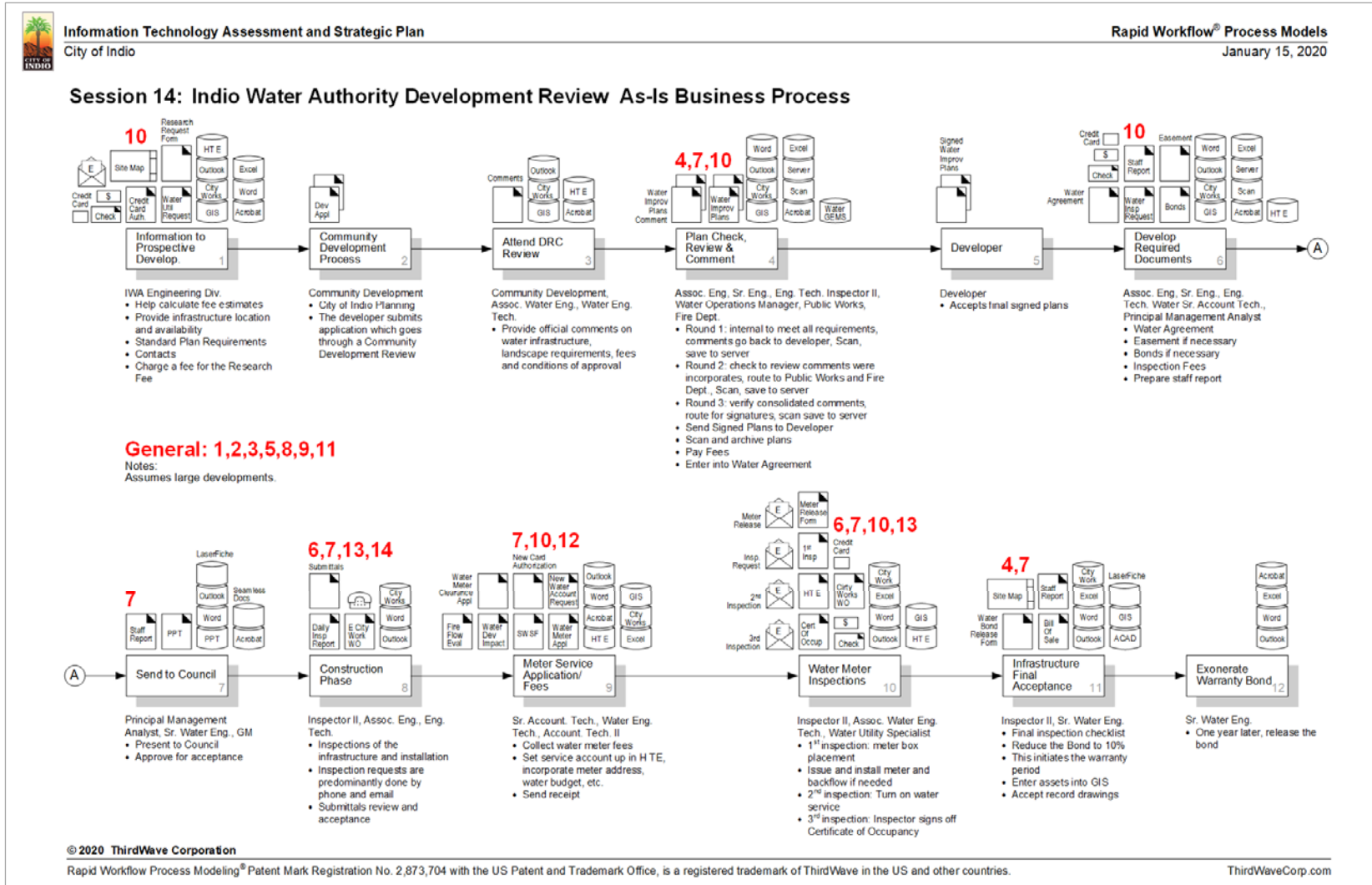





Figure 3.4.1: Sample Rapid Workflow® Business Process Map: Narrative

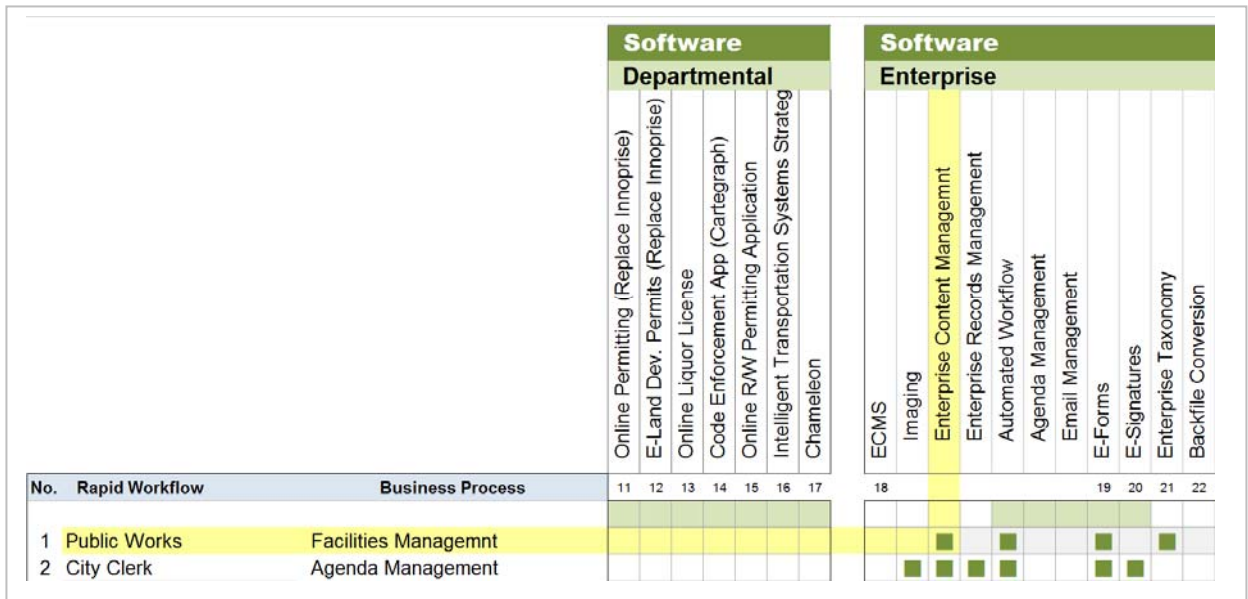
 <b>Information Technology Assessment and Strategic Plan</b> City of Indio		<b>Rapid Workflow® Process Models</b> January 15, 2020		
<b>Session 14: Indio Water Authority Development Review As-Is Business Process</b>				
<b>Problems</b>	<b>Impacts</b>	<b>Solutions</b>	<b>Benefits</b>	
<ol style="list-style-type: none"> <li>1. Landscape compliance in not implemented.</li> <li>2. Lack of workflow for this process.</li> <li>3. Email is relied on too much.</li> <li>4. Cannon large format scanner can only scan one page at a time and then have to combine images.</li> <li>5. Lack of cross training.</li> <li>6. There is a lot of redundancies, i.e. meter inspections.</li> <li>7. Hardcopy archiving (Engineering Onsite, some in the warehouse, if it has to do with meters, it is in a storage bin) which are also scanned.</li> <li>8. The retention schedule for Engineering has never been implemented.</li> <li>9. The IWA taxonomy is very broad.</li> <li>10. Have an awkward payment system.</li> <li>11. Do not have a standard updated operating procedure for plan check review.</li> <li>12. There is no connection between creating the Water Budget and Conservation Division.</li> <li>13. There are no formal online inspection request systems.</li> <li>14. Lack of GPS during construction and training on importing that data into GIS.</li> </ol>	<ol style="list-style-type: none"> <li>1. - Non-compliant landscape constructed.               <ul style="list-style-type: none"> <li>- Legal exposure.</li> </ul> </li> <li>2. - Inefficiencies.</li> <li>3. - Same as #2.</li> <li>4. - Lack the ability to leverage data.</li> <li>5. - Staff time.               <ul style="list-style-type: none"> <li>- Same as #2.</li> </ul> </li> <li>6. - Affects coverage.               <ul style="list-style-type: none"> <li>- Same as #4.</li> <li>- Risk of customers getting different answers.</li> </ul> </li> <li>7. - Same as #2.</li> <li>8. - Same as #2 and #4.</li> <li>9. - Affects records retention compliance.               <ul style="list-style-type: none"> <li>- Inability to retrieve historical information.</li> <li>- Staff time.</li> <li>- Legal exposure.</li> </ul> </li> <li>10. - Same as #7.</li> <li>11. - Increased costs to the City for storage.</li> <li>12. - Same as #7.</li> <li>13. - Same as #4.</li> <li>14. - Same as #2.</li> <li>15. - Staff time.</li> <li>16. - Inconsistent budget for same types of customer categories.</li> <li>17. - Unpleasant customer interface.               <ul style="list-style-type: none"> <li>- Reduce response time.</li> <li>- There is no way to measure if resources are adequate.</li> </ul> </li> <li>18. - Same as #2.</li> <li>19. - Inaccuracy in infrastructure data.</li> </ol>	<ol style="list-style-type: none"> <li>1. - Provide a landscape documentation package.               <ul style="list-style-type: none"> <li>- Make it a requirement through the plan check process.</li> <li>- Adopt a plan review fee for landscape.</li> </ul> </li> <li>2. <b>Implement a Water Develop Review Workflow Software.</b> <ul style="list-style-type: none"> <li><b>Feature &amp; Function</b> <ul style="list-style-type: none"> <li>• Enterprise software, accessible to all appropriate departments</li> <li>• Contemporary system and GUI</li> <li>• Web-enabled application</li> <li>• Submit online requests:                   <ul style="list-style-type: none"> <li>▪ Construction Inspections</li> <li>▪ Fees</li> <li>▪ Research</li> <li>▪ Plan Check</li> <li>▪ Bond Release</li> <li>▪ Meter Release</li> <li>▪ Meter Inspection</li> </ul> </li> </ul> </li> <li>• User friendly application</li> <li>• Smart forms, dynamic choices:                   <ul style="list-style-type: none"> <li>▪ Depending on event type and conditions and what is checked in the application, it would trigger all required additional permits</li> </ul> </li> <li>• Data validation</li> <li>• Auto population of fields</li> <li>• Help features with detailed explanations</li> <li>• Workflow Automation                   <ul style="list-style-type: none"> <li>▪ Checklist</li> <li>▪ Routing</li> <li>▪ Tracking</li> <li>▪ Status</li> <li>▪ Auto-notification</li> <li>▪ Reminders</li> <li>▪ Review</li> <li>▪ Approval</li> <li>▪ E-Signatures</li> </ul> </li> </ul> </li> </ol>	<ul style="list-style-type: none"> <li>• Inspection Scheduling</li> <li>• Ability to attach/store PDFs</li> <li>• Support mobile devices</li> <li>• Support Responsive Design</li> <li>• Project Number</li> </ul> <p><b>Reports</b></p> <ul style="list-style-type: none"> <li>• Scheduled inspection requests</li> <li>• Project status</li> <li>• Fees paid</li> <li>• Landscape square footage</li> <li>• Consumption reports</li> <li>• Closure reports</li> </ul> <p><b>Interfaces</b></p> <ul style="list-style-type: none"> <li>• Laserfiche</li> <li>• GIS</li> <li>• HTE</li> <li>• CityWorks</li> </ul> <ol style="list-style-type: none"> <li>3. - Same as #2.</li> <li>4. - Buy a new scanner.</li> <li>5. - Provide skills inventory.</li> <li>6. - Provide cross training.</li> <li>7. - Same as #2.</li> <li>8. - Enterprise Content Management Program (document inventory, taxonomy, update Records Retention Schedule, adopt in to Laserfiche)</li> <li>9. - Same as #7.</li> <li>10. - Same as #2.</li> <li>11. - Develop and adopt a SOP for plan check.</li> <li>12. - Develop a workflow which includes communication between IWA Eng. And Conservation.</li> <li>13. - Same as #7.</li> <li>14. - Implement construction GPS program.</li> </ol>	<ol style="list-style-type: none"> <li>1. - Compliance with the State.               <ul style="list-style-type: none"> <li>- Improved water conservation.</li> </ul> </li> <li>2. - Streamline process.               <ul style="list-style-type: none"> <li>- Improved efficiencies.</li> <li>- Enhance customer services.</li> </ul> </li> <li>3. - Same as #2.</li> <li>4. - Same as #2.</li> <li>5. - Same as #2.               <ul style="list-style-type: none"> <li>- Improved coverage.</li> <li>- Maintain quality of work.</li> <li>- Improved consistency.</li> </ul> </li> <li>6. - Same as #2.</li> <li>7. - Same as #2.               <ul style="list-style-type: none"> <li>- Historical data would be available for research.</li> <li>- Record retention compliance.</li> </ul> </li> <li>8. - Same as #7.</li> <li>9. - Same as #7.</li> <li>10. - Enhanced customer experience.</li> <li>11. - Same as #2.</li> <li>12. - Same as #1.</li> <li>13. - Same as #10.</li> <li>14. - Improved accuracy.               <ul style="list-style-type: none"> <li>- Improved quality.</li> </ul> </li> </ol>
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### 3.5 Leading Technology Initiatives

The ITMP Roadmap project identified numerous Information Technology initiatives related to infrastructure, hardware, software solutions and IT Operations. The figures on the following pages provide a matrix of all operational and technology initiatives identified in the project. It bears noting that the initiatives identified in the figures starting with Figure 2.4.2 are for reference purposes; the list will be reviewed and prioritized in the *ITMP Volume 2: ITMP Roadmap*.

**Figure 3.5.1: Enterprise Initiative Matrix**



**How to read the matrices:**

The enterprise initiative matrix provides a list of Rapid Workflow® process workshops, IT Focus Groups and Management Interview requirements on the left column. Each square symbol on that line indicates an IT initiative identified in that workshop, focus group or interview. The technology initiative is denoted above in the vertical text. In this illustration, the first initiative for the Public Works Facilities Management workshop is Enterprise Content Management; the second initiative is Enterprise Records Management, and so on.

Detailed descriptions for each ITMP initiative are provided in Section 4, Information Technology Master Plan Roadmap Recommendations, in this document.

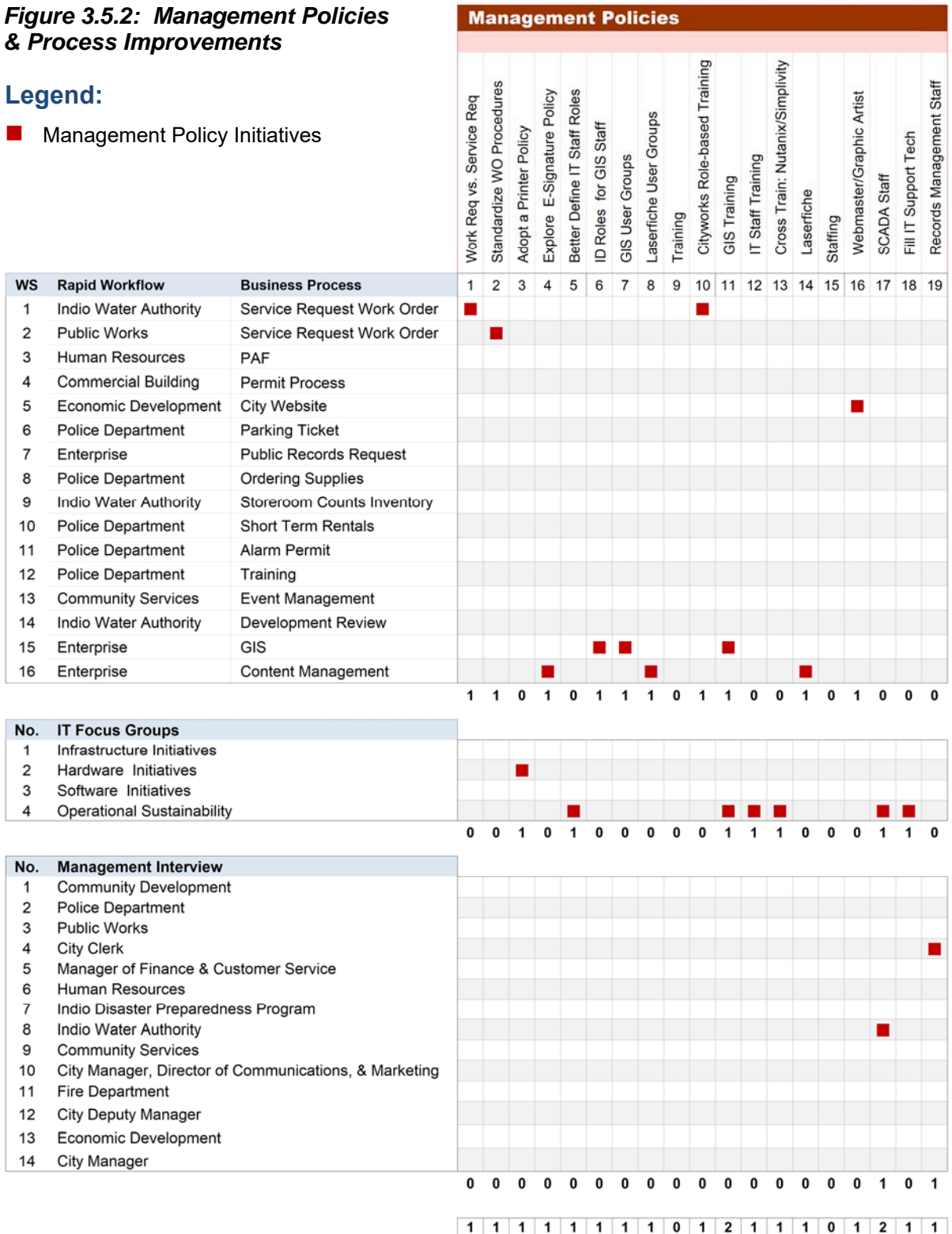
The figures on the following pages (Figures 3.4.2 through 3.4.6) illustrate where each of the initiatives was identified in the ITMP Roadmap project, e.g., management interviews, IT Focus Groups, or Rapid Workflow® workshops. This is important for traceability purpose; in future years of the ITMP Implementation Roadmap, City staff will be able to reference where recommendations came from.



**Figure 3.5.2: Management Policies & Process Improvements**

**Legend:**

■ Management Policy Initiatives

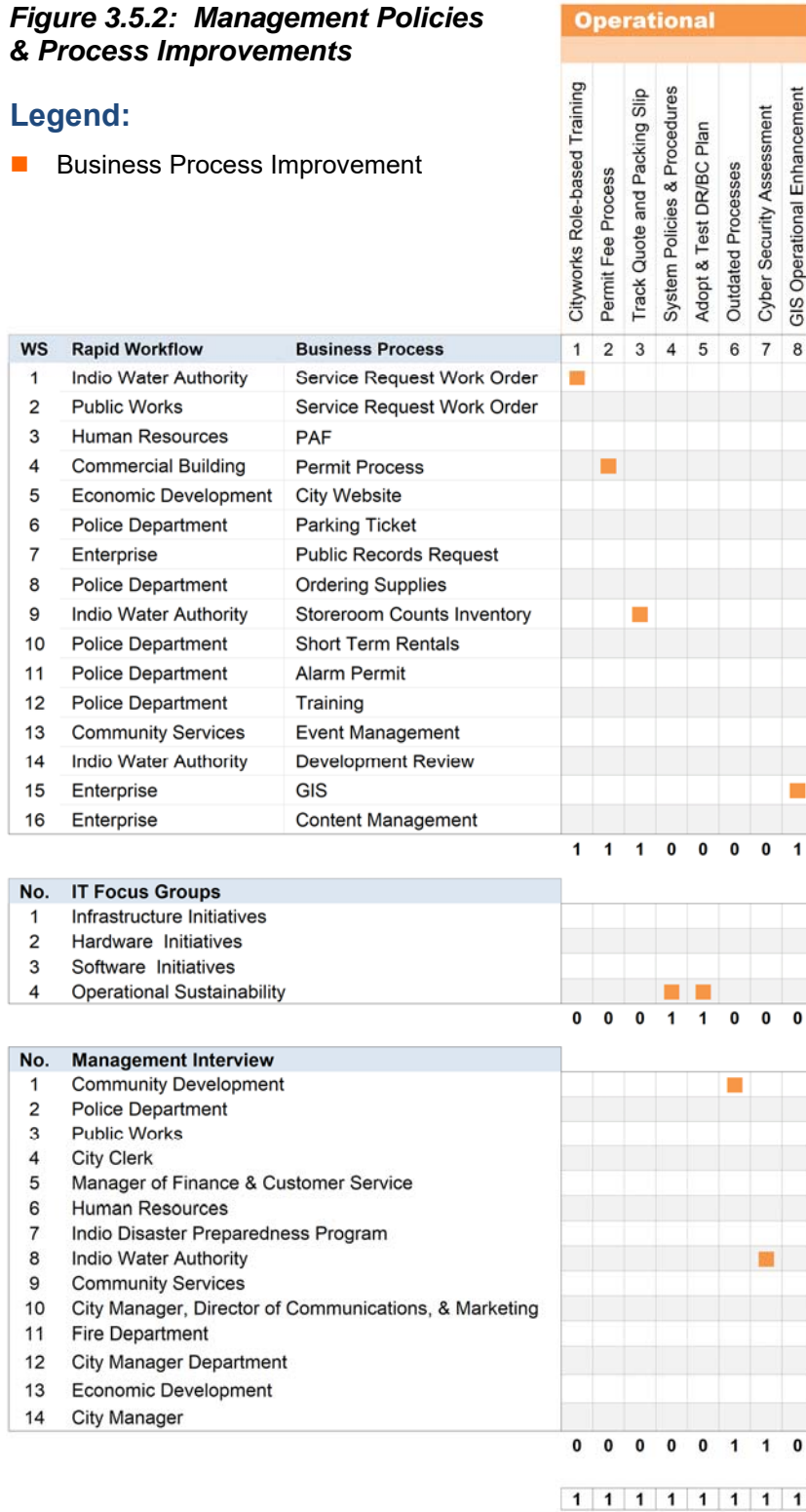




**Figure 3.5.2: Management Policies & Process Improvements**

**Legend:**

- Business Process Improvement

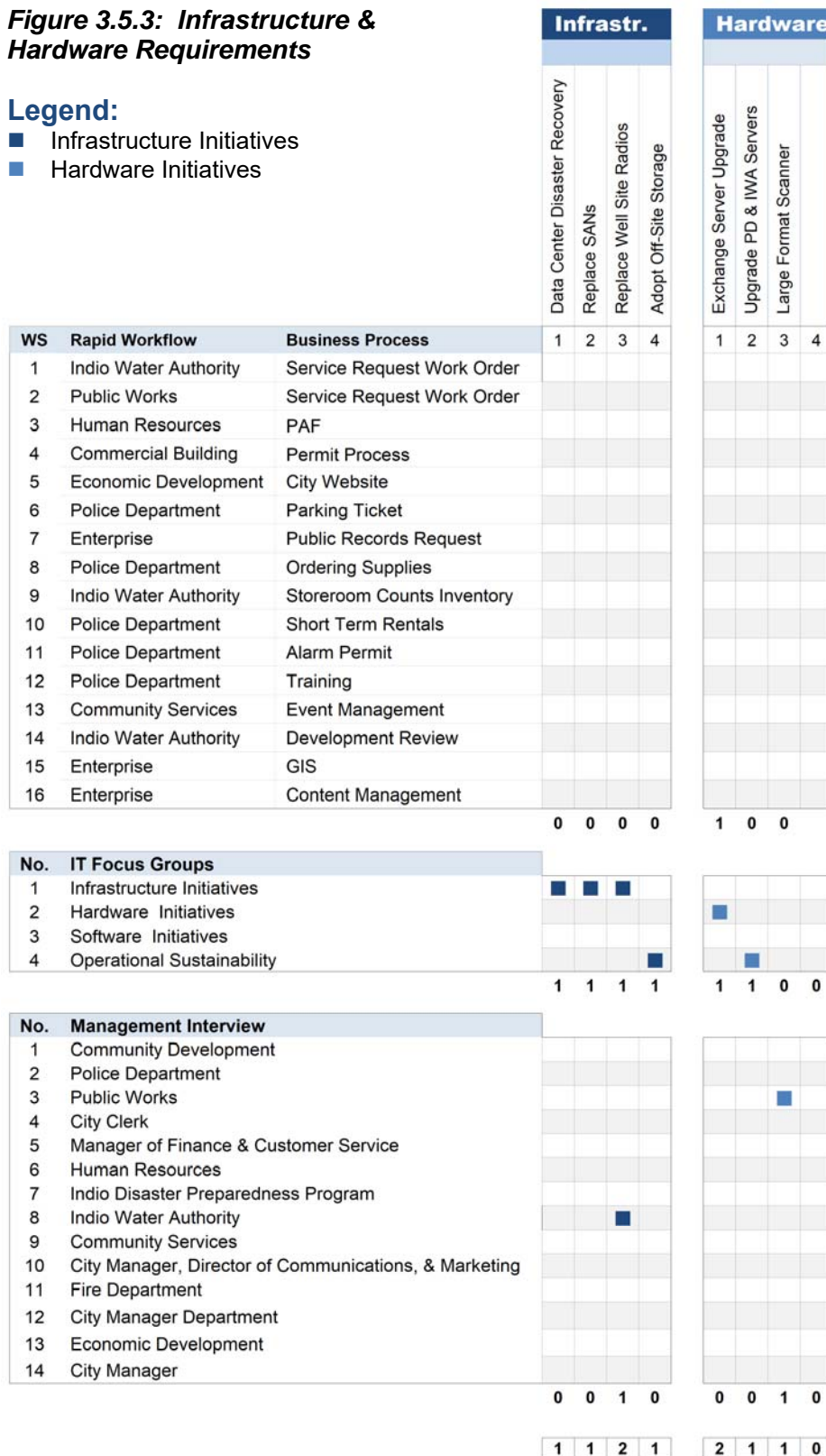




**Figure 3.5.3: Infrastructure & Hardware Requirements**

**Legend:**

- Infrastructure Initiatives
- Hardware Initiatives

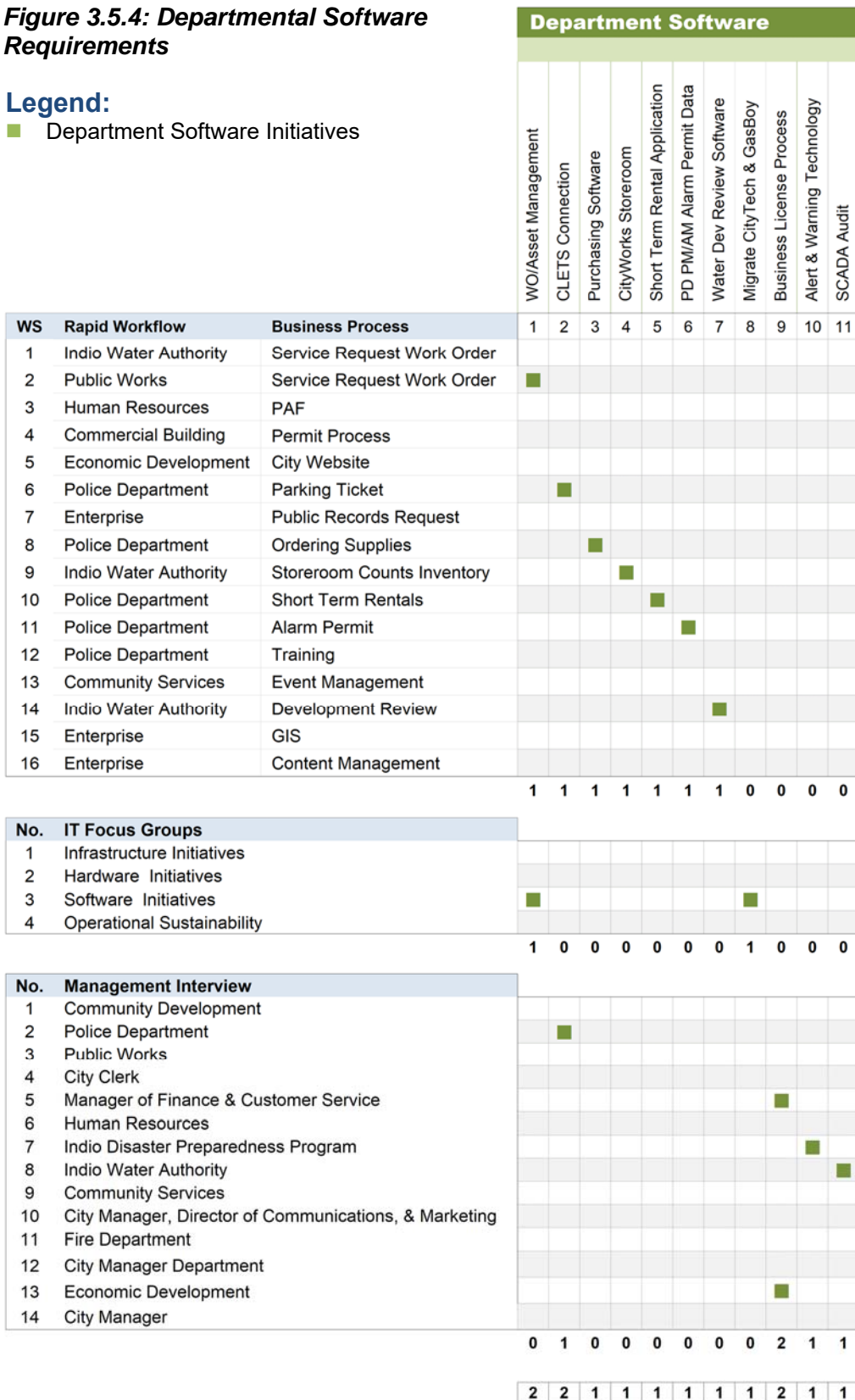




**Figure 3.5.4: Departmental Software Requirements**

**Legend:**

■ Department Software Initiatives

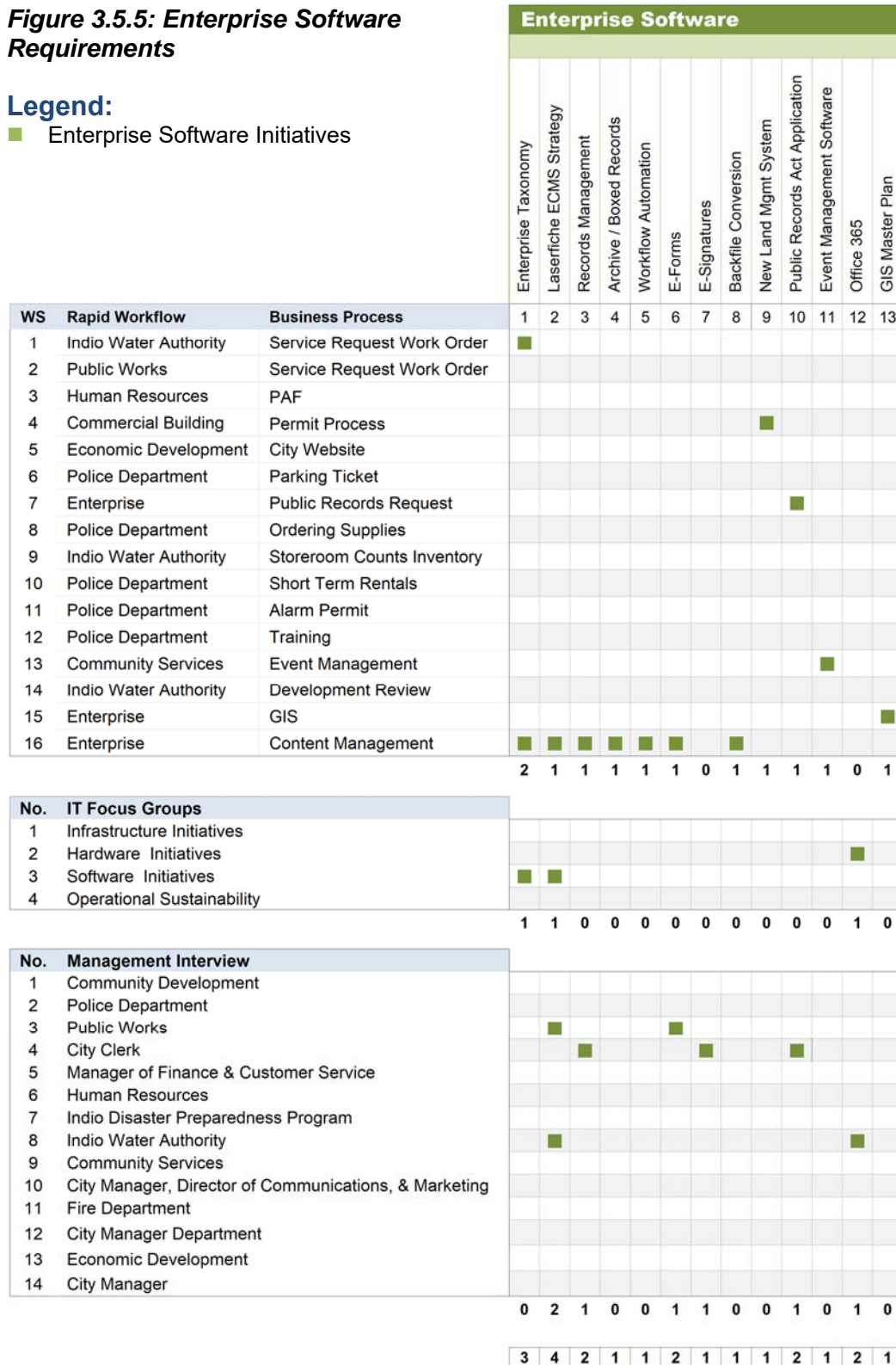




**Figure 3.5.5: Enterprise Software Requirements**

**Legend:**

- Enterprise Software Initiatives

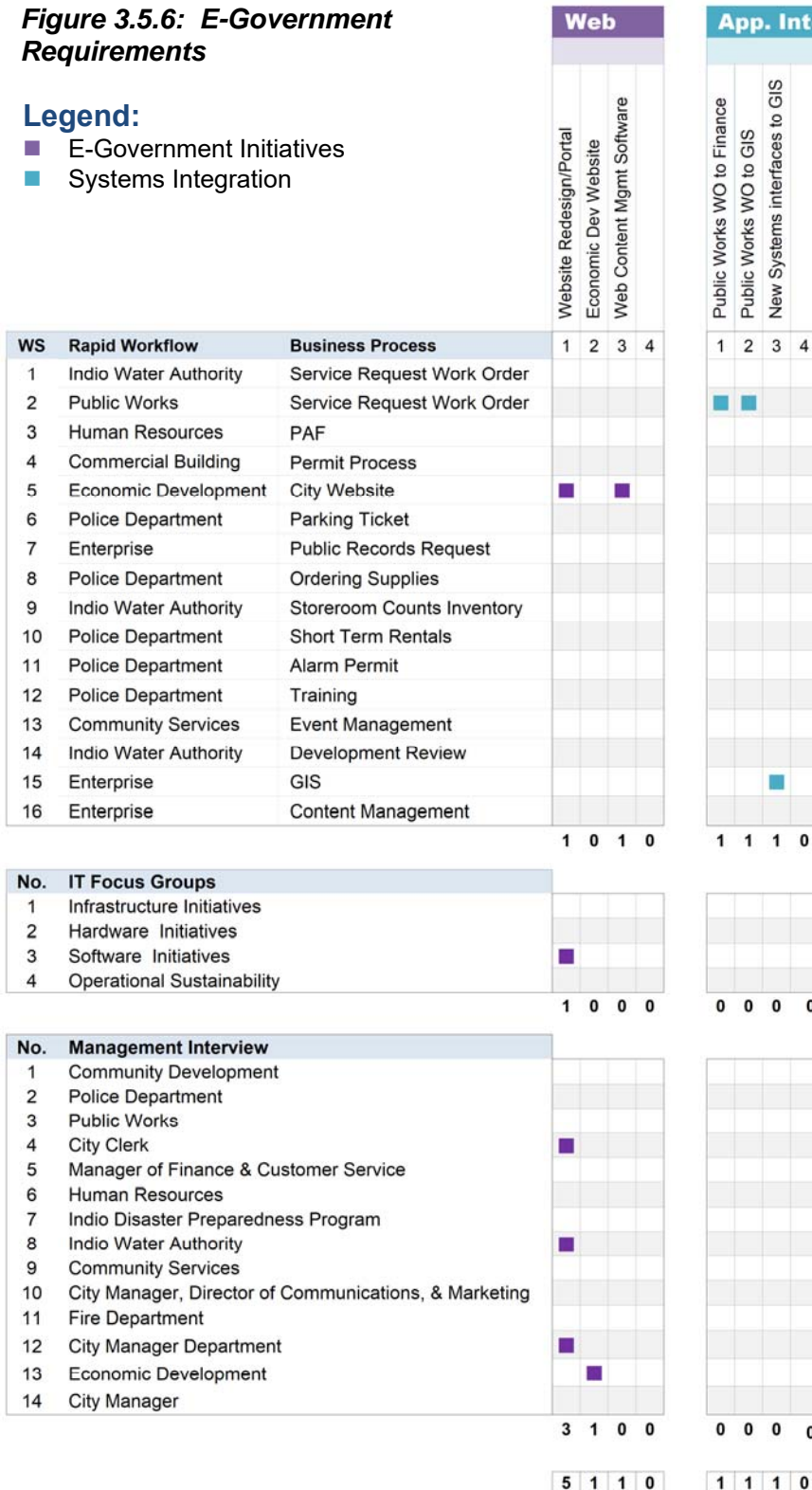




**Figure 3.5.6: E-Government Requirements**

**Legend:**

- E-Government Initiatives
- Systems Integration





### 3.6 ITMP Initiatives

The figure below provides a summarized list of technology initiatives identified in the ITMP project Enterprise Initiative Matrix<sup>®</sup> shown in the previous pages.

The initiatives below are grouped by type of technology, then sorted in descending order in terms of how many times they were identified in the course of the project (for general information purposes). However, the initiatives below are not prioritized; initiatives are prioritized in the companion document to this report, the *ITMP Volume 2: the ITMP Roadmap*.

**Figure 3.6.1: ITMP Technology Initiatives (Not Prioritized)**

INF		Infrastructure	
1.	I 1	Data Center Disaster Recovery [ITFG]	1
2.	I 2	Replace SANs [ITFG]	1
3.	I 3	Adopt Off-Site Storage [ITFG]	1
HW		Hardware: Servers, Workstations, Peripherals	
4.	HW 1	Exchange Server Upgrade [1/ITFG]	2
5.	HW 2	Upgrade PD & IWA Servers [ITFG]	1
6.	HW 3	Large Format Scanner [MI3]	1
D SW		Software: Departmental	
7.	DSW 1	Police	CLETS Connection [6/MI2]
8.	DSW 2	Indio Water Authority	WO/Asset Management [ITFG/MI8]
9.	DSW 3	Public Works	WO Software [2]
10.	DSW 4	Police	Purchasing Software [8]
11.	DSW 5	Indio Water Authority	CityWorks Storeroom [9]
12.	DSW 6	Police	Short Term Rental Application [10]
13.	DSW 7	Police	PD PM/AM Alarm Permit Data [11]
14.	DSW 8	Indio Water Authority	Water Dev Review Software [14]
15.	DSW 9	Information Technology	Migrate CityTech & GasBoy [ITFG]
16.	DSW 10	Police	Upgrade PD Interview System [ITFG]
17.	DSW 11	Indio Disaster Preparedness	Alert & Warning Technology [MI7]
18.	DSW 12	Indio Water Authority	SCADA Audit [MI8]

1. The numbers inside the parenthesis, [ ], indicate the number of the Rapid Workflow<sup>®</sup> workshop, 'M' denotes a management interview, and 'ITFG' indicates IT Focus Group.



Figure 3.6.1: ITMP Technology Initiatives (Not Prioritized) continued

<b>E SW</b>		<b>Software: Enterprise</b>	
19.	ESW 1	Enterprise Taxonomy [1/16/ITFG]	3
20.	ESW 2	ECMS Strategy [16/ITFG/MI8]	3
21.	ESW 3	GIS Database [MI3/MI8/MI13]	3
22.	ESW 4	Laserfiche [MI3/MI8]	2
23.	ESW 5	Records Management [16/MI4]	2
24.	ESW 6	E-Forms [7/MI3]	2
25.	ESW 7	E-Signatures [MI4/MI8]	2
26.	ESW 9	Go to Office 365 [ITFG/MI8]	2
27.	ESW 10	Archive/Boxed Records [16]	1
28.	ESW 11	Workflow Automation [16]	1
29.	ESW 12	Backfile Conversion [16]	1
30.	ESW 14	New Land Management System [4]	1
31.	ESW 15	PRA Application [7]	1
32.	ESW 16	Event Management Software [13]	1
33.	ESW 17	GIS Master Plan [15]	1
34.	ESW 18	IPD Address Sublayer [15]	1
35.	ESW 19	Public Records Request [MI4]	1

<b>E G</b>		<b>E-Government Apps</b>	
36.	E G 1	Website Redesign/Portal [5/ITFG/MI4/MI8/MI12]	5
37.	E G 2	Economic Dev Website [MI13]	1
38.	E G 3	Web Content Management Software [5]	1

<b>I</b>		<b>Interfaces</b>	
39.	I 1	Public Works WO to Finance [2]	1
40.	I 2	Public Works WO to GIS [2]	1
41.	I 3	New Systems interfaces to GIS [15]	1

<b>O</b>		<b>Operational</b>	
42.	O 1	Cityworks Role-based Training [1]	1
43.	O 2	Permit Fee Process [4]	1
44.	O 3	Track Quote and Packing Slip [9]	1
45.	O 5	System Policies & Procedures [ITFG]	1
46.	O 6	Adopt & Test DR/BC Plan [ITFG]	1
47.	O 8	Cyber Security Assessment [MI8]	1
48.	O 9	GIS Operational Enhancement [15]	1



<b>M</b>		<b>Management Policies</b>	
49.	M 1	GIS Training [15/ITFG] .....	2
50.	M 2	SCADA Staff [ITFG/MI8].....	2
51.	M 3	Work Req vs. Service Req [1] .....	1
52.	M 4	Standardize WO Procedures [2].....	1
53.	M 5	Competitive RFPs [9].....	1
54.	M 6	Adopt a Printer Policy [16].....	1
55.	M 7	Explore E-Signature Policy [16].....	1
56.	M 8	Better Define IT Staff Roles [ITFG] .....	1
57.	M 9	ID roles for GIS Staff [15] .....	1
58.	M 10	GIS User Groups [15].....	1
59.	M 11	Laserfiche User Groups [16] .....	1
60.	M 12	Cityworks Role-based Training [1] .....	1
61.	M 13	IT Staff Training [15].....	1
62.	M 14	Cross Train: Nutanix & Simplivity [ITFG].....	1
63.	M 15	Laserfiche [16].....	1
64.	M 16	Webmaster/Graphic Artist [5] .....	1
65.	M 17	Fill IT Support Tech [ITFG].....	1
66.	M 18	RMS Staff [MI4] .....	1



## Section 4 ITMP Roadmap Recommendations



### 4.1 Introduction to the IT Master Plan Roadmap Recommendations

The following pages provide the findings and recommendations for the ITMP Roadmap. This reflects the City's input, IT industry best practices, and ThirdWave's 32 years of experience in this arena.

This section of the ITMP includes a description of technology initiatives reflecting input provided in all phases of the project. It is important to note **that not all solutions identified** in Figure 3.6.1: ITMP Technology Initiatives will be included in *Volume II ITMP Roadmap*. The figure noted above captured solutions discussed in various discovery/requirements activities.



The fact that a solution was mentioned by City staff in a requirements definition task does not automatically constitute a recommended technology.

The following ITMP Roadmap initiatives do not include those that lacked a compelling business case or sufficient justification. Therefore, there is not a one-to-one relationship with items in the figures listed above and recommended solutions in the following pages.

The City can use this document, however, as a reference document to revisit all solutions identified in the course of the ITMP project.



## 4.2 Information Technology Master Plan Roadmap Initiatives

This section provides an overall view of IT solutions identified in various tasks of the ITMP Roadmap project, and including infrastructure, hardware and software initiatives.

### 4.2.1 Technology Recommendations

The following enterprise-wide technology recommendations are based on all phases of discovery and requirements definition tasks of the ITMP Roadmap project. (The number in parenthesis indicates the number of the Rapid Workflow® workshop, IT Focus Group or Management Interviews.) Recommendations synthesize staff input and industry best practices, as appropriate, for the City’s technological landscape and organizational culture.



The findings identified here relate to technology issues; but in some cases, operational and management issues are also referenced in these findings where they relate specifically to technology recommendations.

#### I Infrastructure

The ITMP Roadmap project assessed various infrastructure, networking, and communications technologies. Various IT operational opportunities were also assessed as part of the project. Our findings and recommendations on infrastructure issues are provided below.

#### I 1 Data Center Disaster Recovery [ITFG]

**Findings:**

The IT Focus Group revealed the main City site acts as a data center. Water Authority has some data replication. City Hall and PD do not have a backup data site. All the sites are local; there is nothing out of area. PD has backup generators, but City Hall does not. This results in:

- Possible loss of data
- Complete loss of productivity
- Impacts to customer service
- Impacts to public safety, including data collection for prosecutions (last day) hearings

**Recommendations:**

- Explore implementing Disaster Recovery (DR) as a service
- Replicate to a cloud service and become CJIS certified
- Implement backup generator at City Hall
- Data Center Disaster Recovery

**Benefits:**

- Improved customer service in a disaster
- Improved confidence in City infrastructure



**I 2 SAN Replacement [ITFG]**

**Findings:**

The IT Focus Group revealed some of the backup SANs are fairly old (Promise, HPs, and new InfoTrend), which results in:

- Difficulty to get parts
- Potential for data loss
- Promise is not under a support contract
- The capacity of the drives will not be recognized

**Recommendations:**

- Replace the outdated systems or retire them
- Replace SANs

**Benefits:**

- Increased safeguards
- Increased network speed for backups

**I 3 Off-Site Storage [ITFG]**

**Findings:**

The Operational Sustainability IT Focus Group revealed the City and PD do not have an off-site backup site. Indio Water Authority does back up to another plant, but it is not out of area. This results in potential data loss in the event of a natural or manmade disaster.

**Recommendations:**

- Adopt an off-site backup
- Adopt off-line storage

**Benefits:**

- Protected data and resilience

**HW Hardware: Servers, Desktops, Mobile Devices, Peripherals**

**HW 1 Exchange Server Upgrade [1/ITFG]**

**Findings:**

The Hardware IT Focus Group revealed there is no redundancy on the Exchange Server. The Exchange Server is at City Hall, where there is no backup generator. If the City loses external communications, there would be no way to get emails. This results in:

- A loss of communication
- Impacts to customer service
- The IT department could look bad
- Potentially affecting Officer safety

**Recommendations:**

- Build out a second Exchange Server, or
- Go to Office 365
- Locate a second Exchange Server in the cloud
- Exchange Server upgrade



**Benefits:**

- Improved redundancy
- Enhanced customer service
- Improved Officer safety

**HW 2 Upgrade PD & IWA Servers [ITFG]**

**Findings:**

The Operational Sustainability IT Focus Group revealed the PD/City/IWA have a number of servers that need to be upgraded. Windows 7 is at end of life, which results in being out of compliance with DOJ regulations.

**Recommendations:**

- Upgrade or replace existing machines
- Upgrade to Windows 10 or Server 2016

**Benefits:**

- Be in compliance
- Receive security and feature updates

**HW 3 Large Format Scanner [MI3]**

**Findings:**

The Public Works Management Interview revealed the need for a large format scanner.

**Recommendations:**

- Procure a large format scanner, with the ability to scan mylar sheets

**Benefits:**

- Provide ability for Public Works to scan engineering drawings for City projects.

**D SW Departmental Software**

Departmental software are applications meeting specific or unique internal department functionality. For instance, a Library would be the only department in a city requiring a Library Information Management System. In general, municipalities tend to have a decentralized approach to the procurement and deployment of departmental application software, which is often predicated by the municipal budget process. The lack of an enterprise approach typically results in disparate departmental information systems, and various home grown, stand-alone “shadow” systems that are usually unsupported, one-off applications.

The following departmental applications were identified in the course of the project; their selection and implementation should all go through an IT Governance best practice and a detailed business, technical and functional specifications development and benchmarking to evaluate and procure the most responsive and cost-effective solutions.



**DSW 1 CLETS Connection [6/MI2]**

**Finding:**

The Police Department Parking Ticket Rapid Workflow® workshop revealed the following:

1. This process comes to a stop if the CLETS connection goes down, which is tied to Cathedral City. The connection goes down daily, from a few minutes to multiple hours, which results in:
  - Not being able to verify a vehicle's information
  - In some cases, would not be able to issue a citation
  - Safety issues not knowing the status of issues, e.g., if there is a BOLO on a car, because of a violent crime, the Officer would not know it
2. The City has new Citation Writers, but the batteries die by 11:00am if start at 8:00am (3-hour life), which results in citations not being able to be issued.

**Recommendations:**

- Interface with RSO (Riverside Sherriff's Office) instead of Cathedral City
- Have the City get a direct CLETS connection at Indio PD
- Take the fund currently paid to Cathedral City and pay RSO instead (Do a cost/benefit comparison between the two, as well as a City CLETS connection)
- Have the City be self-sufficient with its own CLETS connections
- RSO would be more reliable/carry extra batteries
- Explore an in-vehicle charging system

**Benefits:**

- RSO: Improved reliability with the CLETS connection
- It might reduce the number of connections for the City, which could have cost savings
- Improve officer safety
- Issue citations on all vehicles
- Would know status of the car i.e., whether it is stolen, or part of a violent crime
- The City is going to occupy a new Data Center, which will house all IT infrastructure, so the timing is good for a line to the City
- Better enforcement activities

**DSW 2 Indio Water District Work Order/Asset Management [1]**

**Findings:**

The Indio Water Authority Work Order/Asset Management Rapid Workflow® workshop revealed the following:

1. Work Orders are printed in hardcopy, which results in:
  - Wasted staff time for managing paperwork
  - Risk of losing documentation
  - Adds an additional step for documents to line up
  - More room for errors
  - Wasted staff time
2. There is an issue with using two different systems for one process: HTE and CityWorks. This results in:
  - Staff not having access to both systems



- Staff do not have access to data until it is entered into the system
- Wasted staff time managing paperwork
- Higher software maintenance costs
- Systems do not talk to each other
- Potential for data errors across the two systems
- More labor costs
- Risk of losing documentation
- Adds an additional step for documents to line up
- More room for errors

### Findings:

The IWA Management Interview revealed a need for a Work Order/Asset Management system to carry out condition assessments.

### Recommendations:

- Adopt a single system to manage requests to close out all electronics – paperless (currently doing a test to integrate Navline/HTE to CityWorks, which will mitigate printing)
- Business process redesign
- Provide CityWorks role-based training to everyone in the process/IWA:
  - Create the work order
  - Enter data/record the work
  - Manage the System
  - Data Analytics: searches, queries, and reports
  - Get best-practice training on CityWorks
- Eliminate scanning if CityWorks is used for the entire process
- Have a policy level discussion on what is a Work Request and what is a Service Request

### Benefits:

- Improved efficiency
- Save paper
- Environmentally considerate
- Cost saving regarding printers, paper, etc.
- One common data source
- Lower labor cost
- Happier customers and staff
- Improved data on assets
- Ability to implement an asset management program
- Added tool that could use the data to apply for grants
- Staff time savings
- Reduced storage costs
- Staff would be freed up for high value work
- Better problem solving
- Better workflow, Business Process Improvement
- Improved communication amongst IWA and customers
- More accurate information
- Improved customer service
- Increased productivity



- Understanding the condition of assessment and doing the right work, at the right time, at the right cost

**DSW 3 Public Works Work Order Software [2]**

**Findings:**

The Public Works Department Work Order Service Request Rapid Workflow® workshop revealed the following:

1. Public Works does not have a Work Order system, which results in:
  - Slower response time for Work Requests
  - A lack of ability to track the quantity of Work Requests
  - Inability to verify status of Work Requests
  - Not knowing if Work Requests were resolved
2. The City does not have a user-friendly reporting system for City staff and the Public, where request is routed to the right person, which result in:
  - Frustrated residents
  - Residents being transferred to different City staff
  - Lack of communication overall
  - Impacts to the perception of the City
3. There is no way to track and quantify the number of various Work Order requests received, which results in:
  - Slower response time for Work Requests
  - A lack of ability to track the quantity of Work Requests
  - Inability to verify status of Work Requests
  - Not knowing if Work Requests were resolved
  - Not being able to run a report on the number of Work Requests related to a specific task or field
4. There is no point person to receive requests, which results in:
  - A lack of accountability to follow through
  - Impacts current job load
5. Not everyone is properly trained, which results in:
  - Frustrated residents
  - Residents being transferred to different City staff
  - Lack of communication overall
  - Impacts perception of the City
  - Giving residents the wrong response or the wrong information
  - Not getting the right information from customers
6. There is no way to know if the Work Order process is understaffed, which results in:
  - The organization not being properly staffed to respond to Work Requests
  - More work falls on the supervisor's plate
7. Texts and emails are a cumbersome method to track Work Orders, which results in:
  - No proper way to quantify the number of Work Requests
  - May lose information



8. The lack of ability to search for Work Order history would force City staff to currently go through emails, which result in wasted staff time and the inability to prioritize.
9. The City lacks policy for identifying the process, which results in:
  - Not knowing the right steps to take
  - Lack of standardization of processing Work Requests
10. There is no status on the Work Orders, which result in:
  - Lack of follow ups
  - Inability to manage workloads
  - Lack the ability to gauge outstanding Work Requests
11. Lack the ability to send a Work Order from the public, the City and contractors via mobile device can result in inefficiencies and risk of not capturing all safety related issues.
12. Supervisors lack an efficient tool to issue Work Order requests from the field, which results in inefficiencies and risk of not capturing all safety related issues.

**Findings:**

The Software IT Focus Group revealed Public Works lacks a Work Order/Asset Management System. Indio Water Authority currently uses CityWorks. This results in:

- Customer service issues
- No work order tracking
- Emails can get lost
- Currently taking two to three weeks to get done for residents
- Facilities Maintenance is done through the use of emails

**Benefits:**

- Improved customer service
- Increased productivity
- Quantitative/qualitative analysis
- Understanding the condition of assessment and doing the right work, at the right time, at the right cost.

**Recommendations:**

**1. Implement a Work Order System**

***Features and Functions:***

- Ability to assign Work Orders by the type of work request:
  - Parks
  - Traffic Signals:
    - Signs
    - Streetlights
  - Streets:
    - Potholes
    - Sidewalks
    - Shopping Carts
    - Storm Drain
    - Street Sweeping
    - Facilities Maintenance
- Capture repeat location and requestor history
- Prioritize Work Orders and the work
- Prioritize Work Request



- Recognize duplicate requests and consolidate as appropriate
- Search for Work Requests
- Ability to see related work
- Send Work Requests from a mobile device
- Track the status of Work Requests
- Track the quantity of Work Requests
- Accessible from the City website
- Accessible to City staff, public and vendors
- Automatic notifications to the requestor that:
  - Work has been completed
  - Refer them to other entities who is the responsible party for the request
- Automatically close out the case
- Automatically distribute notifications to the appropriate department/division or external agency based on comprehensive taxonomy for the type of work
- Automatically distribute notifications to the appropriate supervisor
- Distribute Work Requests automatically to the appropriate field crews based on the work activities
- E-Forms:
  - Smart forms that adjust to the specific activity in the field and have the capabilities to capture detailed information
  - Data validation
- Generate E-Work Order when needed
- Label attachment, including a taxonomy
- List of tools required for a request
- Provide a contemporary GUI, including pull downs, pick list and radio buttons
- Provide a desktop and mobile app (iPhone or iPad compatible)
- Provide ability to edit and close out a Work Order in the field
- Provide ability to pull up maps and separate Work Requests on them
- Provide ability to show staff their tasks for the day
- Provide auto notification
- Provide real time status of the Work Request
- Provide scheduling capabilities
- Provide supervisors the ability to issue Work Requests from the field
- Provide the history of the Work Requests and all their related Work Requests
- Provide user friendly reporting and analytics
- Refer customers to other entities who are the responsible party for the request
- Reporting
- Resource allocations
- Route request to the right person
- Support spatial data, interactively:
  - Ability to indicate the location of a request on a map
- Identify existing cases or Work Orders on a map
- Support a variety of Jurisdictions: Riverside County, Tribal Lands, Bordering adjacent cities, Caltrans
- Support Mobile Devices, with Responsive Design
- Support storing electronic photographs
- Time, Materials and Equipment Tracking
- User friendly, contemporary GUI
- Web-enabled application



- Work Order data will be available to all groups that need it
- Workflow Automation:
  - Electronic routing
  - Auto Referencing Customer to proper entity
  - Escalations
  - Auto-notifications
  - Status checking
  - Follow-ups
  - Reminders
  - E-signatures

**Reports:**

- Open and closed Work Requests
- Number of Work Requests carried out
- Work Requests by type:
  - Parks/Landscapes
  - Traffic Signals
  - Streets
  - Facilities
- Work Requests by type, person, month, project code
- Work Request Status
- Time, Materials and Equipment Tracking
- Invoices

**Interfaces:**

- Finance: for fees and hourly rates
- GIS

**Benefits:**

- Happy employees
- Improved time
- Improved efficiency
- Enhanced customer service
- Better community engagement
- Improved perception of City
- Better allocation of resources and justification of needs
- Help with fee study
- Improvement in accountability
- Better understanding of the process
- Business process improvement
- Timely response to Work Orders
- Improve communications without having to engage in time consuming communication
- Streamline the process
- Convenience
- Better scheduling



**DSW 4 Purchasing Software [8]**

**Findings:**

The Police Department Ordering Supplies Rapid Workflow® workshop revealed the following:

1. Paper Requisitions and Purchase Orders result in:
  - A lot of redundancy of time
  - Lost requisitions
  - The slow payment of vendors
  - Not being able to track purchases
  - Not being able to track where a requisition is
  - Creating more work to find out where an item is
2. Not having purchasing software results in:
  - A lot of redundancy of time
  - Lost requisitions
  - The slow payment of vendors
  - Not being able to track purchases
  - Not being able to track where a requisition is
  - Creating a lot of work to find out where an item is
  - Enormous cost in staff
  - The Chief currently signs every invoice, no matter how small the invoice is
3. Staff purchase items without Requisitions or Purchase Orders because the existing process takes so long. They use credit cards or call the vendor directly, which results in:
  - Staff time: must find out who placed the order, money for the order, must get a Purchase Request done through Seamless Docs, and doing the Purchase Requisition after items have been ordered and shipped
4. The Police Chief must sign every invoice no matter how small it is, which results in:
  - Not good stewardship of public dollars, currently sign 56 – 60 items per week
  - There is a lack a formal emergency purchasing process, which results in a lack of control in purchasing items and staff figure out how to work around the system/policy
5. There is an overreliance on credit cards, which results in reduced accountability.

**Recommendations:**

**1. Purchasing Software**

***Features & Functions:***

- Web-enabled
- Provide workflow automation:
  - Tracking
  - Automatic notification
  - Review
  - Approvals
  - Escalation
  - Signatures
  - Status
- Ability for vendors to submit certain documents, e.g., business licensees, W9, etc.
- Provide Vendor registration
- Ability to scan and obtain quotes



- Ability to attach documents
- IT purchases will require IT Department Authorization
- Contemporary GUI (Graphical User Interface)
- Must support Responsive Design

**Reports:**

- Reports by Budget number
- Reports by Budget category
- Reports by project code
- Reports by requestor
- Reports by Budget Unit
- Output reports to Excel, easily
- Reports by dollar amount
- Reports by Vendor
- Insurance document received, reminders
- Business License
- Reminders of contract to expire

**Interfaces:**

- Tyler: Ability to check account balance's

**Benefits:**

- Improved efficiencies
- Efficient use of staff resources
- Staff time savings
- Cost savings: paper, toner, etc.
- Enhanced accountability and checks and balances
- Better incident response
- Improved accountability and transparency

**DSW 5 CityWorks Storeroom [9]**

**Findings:**

The Indio Water Storeroom Counts Inventory Rapid Workflow® workshop revealed the following:

1. There are inaccurate storeroom counts. No one is counting the inventory, which results in increased carrying cost for inventory.
2. There is no parts cost accounting, which results in inventory loss and inventory shrinkage.
3. The City is currently using an honor system, which results in inventory loss and inventory shrinkage.
4. The City lacks a strong competitive vendor selection, which results in a risk of lawsuits and risk of being overcharged.
5. The City is currently having a formal chain of ownership for parts, which results in inventory loss and inventory shrinkage.
6. The City is not using a three-way match for invoice approvals, which results in:
  - Risk of overpayment
  - Risk of paying for parts not received
  - Increased need for cost recovery



7. There is no clear process defined for special purchases, which results in increased risk of inventory inaccuracy.
8. Not having an Inventory Clerk results in not having a single point of accountability.

**Recommendations:**

- Adopt clear procedures for parts and materials handling
- Adopt the use of CityWorks Storeroom for inventory management
- Clearly define roles and responsibilities
- Need to clarify competitive advertisement requirements for these types of contracts
- Post RFPs on City website and plan room
- Must track the quote/packing slip all the way through the invoicing process. Use CityWorks to receive those goods and track it as part of the validation process, with coordination between Finance and Operations
- Evaluate whether we need clearly defined roles and responsibilities or a new position

**Benefits:**

- Better business controls
- Cost savings potential
- Improved conformity with contracting requirements/best practices
- Better accountability
- Improved internal controls
- Uniform inventory control across processes

**D SW 6 Short Term Rental Application [10]**

**Findings:**

The Police Department Short Term Rentals Rapid Workflow® workshop revealed the following:

1. The City lack incentives to achieve compliance, which results in less Transient Occupancy Taxes for the City and the City not being in line with other Valley Cities for short term rentals
2. The process is siloed, which results in:
  - Lack of communication across the board, PD and Finance
  - No real electronic database to facilitate the coordination
  - A lot of emailing
3. Staff are obtaining property owner information when they are in the process of obtaining a business license, e.g., incomplete hardcopy application, additional mailing addresses, and phone numbers results in not being able to properly get hold of applicants, which impacts customer service.
4. When cases get appealed to Administrative Hearing Office, and the property owner brings a back-dated business license (showing they complied but were not). This results in issuing a citation when they go to a hearing. They show the application date instead of the actual approved date and citations are dismissed.
5. The process is paper intensive, which results in staff having a hard time accessing the information and cost of paper.
6. Only the Code Enforcement Manager has access to Laserfiche, which results in code enforcement staff not having access to data.



7. Customers cannot apply for a Business License online, which results in lack of customer convenience and time consumed sending the mail or tending to persons who come in person to the City.
8. Customers do not have the status of their business license application, which results in customers having to call and leave messages and impacts to the customer experience.
9. There is a disconnect of Applicants leaving a message for building inspections and having the inspections done, which results in a delayed process and impacts in customer experience.

**Recommendations:**

**1. Implement a Short-Term Rental (STR) Application**

***Features & Function***

- Enterprise system: provide access to appropriate Code Enforcement, Building, Planning, and Finance staff
- Complaints: provide ability to:
  - Receive and process complaints (any type, not just STR)
  - Identify the type of complaint and where to route to
- Web-enabled/web-services
- Provide online Business Application
- Support responsive design
- You cannot submit unless every field is filled in, data validation
- Approval date should be the effective date, not when the initial application was filled out
- Workflow Automation features:
  - Routing
  - Review
  - Approval
  - Status
  - E-Forms
    - Complaint
    - Time Extension Form
    - Appeal Form
  - E-Signatures
- Provide ability to take a picture of documents, e.g. driver's license, and upload to the application
- Provide ability to schedule building inspections online
- Provide ability to schedule building re-inspections online
- Schedule Code Enforcement inspections (internally)
- Track whether applicants are paying Transient Occupancy Tax

***Reporting***

- Case Types
- Number of licensed short-term rentals
- Repeat violators, by address and owner
- Case outcomes



**Interfaces**

- Provide access to Laserfiche for appropriate Code Enforcement staff
  - GIS
2. Policy change to make the Admirative fine higher than it is, e.g. greater than \$1,000. A new ordinance is needed in order to do this.

**Benefits:**

- Increased tax revenues to the City
- Better communication and coordination
- Improved efficiency, business process improvement
- Everyone has access to real time information
- Better customer service
- Improve the City’s reputation to the Hearing Officer
- Utilize technology the public has come to expect

**D SW 7 PD PM/AM Alarm Permit Data [11]**

**Findings:**

The Police Department Alarm Permit Rapid Workflow® workshop revealed the following:

1. The City is responding to repeat false alarms, which results in:
  - Staffing and man hours being wasted, which all adds up (Average 2 – 3/shift)
  - Costs: vehicle cost, gas, wear and tear
  - Other calls in the City
  - Customer service being impacted
2. The public is unaware of alarm requirements, which results in the public expecting the PD to respond, which could also generate an unnecessary frivolous complaint, and people not knowing they need an alarm permit.
3. Public expectations are that the PD should respond to every alarm, which results in:
  - Staffing and man hours being wasted, which all adds up (Average 2 – 3/shift)
  - Costs: vehicle cost, gas, wear and tear
  - Affects other calls in the City
  - Customer service being impacted
4. PD does not have access to the false alarm report, which results in, by ordinance, the PD could stop going to some customer locations, but those customers are not being put on a ‘No Response’ list, which requires providing a hearing.
5. Information silos and PD is left out of the information loop, which results in having several obligations, which would not happen if residents were meeting those obligation. Staff may not have to go to those alarms. There is a process to reinstate those customers.
6. Repeat false alarms are not being tracked, which results in, by ordinance, the PD could stop going to some customer locations, but those customers are not being put on a ‘No Response’ list, which requires providing a hearing

**Recommendations:**

- Educate the public with public service messaging on alarm requirements
- Adopt the use of door hanger false alarm notifications with instructions



- Tighten up the false alarm ordinance to reduce the number of false alarm calls
- Keep the current process with PM/AM
- Download PM/AM Alarm Permit data needed by the PD, batched daily
- Data requirements include:
  - All information collected in the Alarm Permit
  - Hazardous conditions (not currently being collected)
  - Customer delinquent in paying fines
  - Customers with more than 4 alarms in 30 days (would like to change ordinance to fewer incidents) This data should be pushed into the new CAD/RMS

**Benefits:**

- Reduce the number of responses
- Capture productive Officer and Dispatch staff time
- Better response time to other calls that are not false alarms
- Enhanced Officer safety, due to less airtime
- Minimize the cost of equipment, vehicles, gas, wear and tear
- Improved customer relations
- Increased revenue to the City
- Capturing hazardous material information will enhance the response, including Officer safety
- Could start placing repeat offenders in the 'No response' list
- Enhance the use of resources
- Could perform data analytics based on this data, e.g., on the alarm company

**D SW 8 Water Development Review Software [14]**

**Findings:**

The Indio Water Authority Development Review Rapid Workflow<sup>®</sup> workshop revealed the following:

1. Landscape compliance is not implemented, which results in non-compliant landscape being constructed and legal exposure.
2. There is a lack of workflow for this process, which results in inefficiencies.
3. Email is relied on too much, which results in inefficiencies and the lack of ability to leverage data.
4. Canon large format scanner can only scan one page at a time and staff must combine images afterwards, which results in staff time and inefficiencies.
5. There is a lack of cross training, which results in:
  - Affects in coverage
  - Staff time
  - Inefficiencies
  - Risk of customers getting different answers
6. There is a lot of redundancies, i.e. meter inspections, which results in inefficiencies and staff time.



7. Hardcopy archiving (Engineering Onsite, some in the warehouse, if it has to do with meters, it is in a storage bin) are scanned, which results in:
  - Affects in records retention compliance
  - Inability to retrieve historical information
  - Staff time
  - Legal exposure
8. The retention schedule for Engineering has never been implemented, which results in:
  - Affects in records retention compliance
  - Inability to retrieve historical information
  - Staff time
  - Legal exposure
  - Increased costs to the City for storage
9. The IWA taxonomy is very broad, which results in:
  - Affects in records retention compliance
  - Inability to retrieve historical information
  - Staff time
  - Legal exposure
10. The City has an awkward payment system, which results in staff time and inefficiencies.
11. Not having a standard updated operating procedure for plan check review results in staff time and inefficiencies.
12. There is no connection between creating the Water Budget and Conservation Division, which results in:
  - Constructed, non-compliant landscape
  - Legal exposure
  - Inconsistent budget for same types of customer categories
13. There are no formal online inspection request systems, which results in:
  - Unpleasant customer interface
  - Reduced response time
  - No way to measure if resources are adequate
14. There is a lack of GPS during construction and training on importing that data into GIS results in inefficiencies and inaccuracy in infrastructure data.

**Recommendations:**

**1. Implement a Water Develop Review Workflow Software**

***Features & Function:***

- Enterprise software, accessible to all appropriate departments
- Contemporary system and GUI
- Web-enabled application
- Submit online requests:
  - Construction Inspections
  - Fees
  - Research
  - Plan Check
  - Bond Release
  - Meter Release



- Meter Inspection
- User friendly application
- Smart forms, dynamic choices:
  - Depending on event type and conditions and what is checked in the application, it would trigger all required additional permits
- Data validation
- Auto population of fields
- Help features with detailed explanations
- Workflow Automation:
  - Checklist
  - Routing
  - Tracking
  - Status
  - Auto-notification
  - Reminders
  - Review
  - Approval
  - E-Signatures
- Inspection Scheduling
- Ability to attach/store PDFs
- Support mobile devices
- Support Responsive Design
- Project Number

**Reports:**

- Scheduled inspection requests
- Project status
- Fees paid
- Landscape square footage
- Consumption reports
- Closure reports

**Interfaces:**

- Laserfiche
- GIS
- HTE
- CityWorks
- Buy a new scanner
- Provide skills inventory
- Provide cross training
- Enterprise Content Management Program (document inventory, taxonomy, update Records Retention Schedule, adopt in to Laserfiche)
- Develop and adopt a SOP for plan check
- Develop a workflow which includes communication between IWA Engineering and Conservation
- Implement construction GPS program



**Benefits**

- Compliance with the State
  - Improved water conservation
  - Streamline process
  - Improved efficiencies
  - Enhance customer services
  - Improved coverage
  - Maintain quality of work
  - Improved consistency
  - Historical data would be available for research
  - Record retention compliance
  - Enhanced customer experience
  - Improved accuracy
2. Provide a landscape documentation package.
    - Make it a requirement through the plan check process.
    - Adopt a plan review fee for landscape.
  3. Procure a new scanner.
  4. Implement a formal Enterprise Content Management Program: carry out a document inventory, enterprise taxonomy (naming convention), and updated Records Retention Schedule, and incorporate into Laserfiche
  5. Implement Construction GPS Program.

**D SW 9 Migrate CityTech & GasBoy [ITFG]**

**Findings:**

The Software IT Focus Group revealed Fleet uses the precursor to CityWorks, e.g., CityTech. City Tech is sitting on an old server, it has its own 2005 SQL database. It is so old that it would take several updates to bring it up to date. The City has GasBoy, but it is an old version. There is limited documentation. Staff are not sure how things are connected. This results in:

- Potential for data loss and loss of functionality
- Divergent data
- Every piece of information on all City vehicles is in the CityTech system

**Recommendations:**

- Upgrade or migrate CityTech and GasBoy
- Provide role-based end user training

**Benefits:**

- Better functionality of the programs
- The Dongle in GasBoy would go away with the most recent version



**D SW 10 Upgrade PD Interview System [ITFG]**

**Findings:**

The Software IT Focus Group revealed the PD interview system requires upgrading. The hardware is 8 years old since its last update. The software has not been updated in 6.5 years. The current software is completely different. Its existing version only works with IE, requires custom Codes (Video Decoder) and has problems operating on Windows 10. This results in:

- Software: have trouble with officers accessing the (5) cameras
- Potential for the system to go down because of the age of the hardware
- Security issues having to maintain IE

**Recommendations:**

- Upgrade the PD interview system
- Software/hardware: upgraded to the latest software version
- Appliance/support: \$5,000 with a setup cost of: \$2,250

**Benefits:**

- Easier for the officers to use
- May get more usage from the system
- Safeguards the video system

**D SW 11 Alert & Warning Technology [MI7]**

**Findings:**

The Disaster Preparedness Management Interview revealed the City needs Alert & Warning technology for the maintenance and updating of equipment and technology, e.g., technology that will allow residents to opt in.

**Recommendation:**

- Implement an Alert & Warning System

**Benefits:**

- Improved customer service
- Enhanced disaster preparedness

**D SW 12 SCADA Audit [MI8]**

**Findings:**

The IWA Management Interview revealed that there are concerns with data security and the need to make the SCADA systems more secure.

**Recommendations:**

- Carry out a SCADA Audit
- Hire an IWA SCADA Specialist

**Benefits:**

- Improved data security
- Enhanced SCADA operations



**E SW Enterprise Software**

Enterprise Software denotes applications used by all departments, by all key departments, or many departments across the City. An enterprise technology vision, which the ITMP Roadmap proposes, typically adheres to the following:

- Enterprise software benefits several business units across the organization, taking advantage of economies of scale.
- Enterprise software pools financial resources from one or more business units or departments to procure systems that otherwise might not be affordable by one business unit.
- Voids the purchase of technically disparate systems that provide the same functionality.
- Procures systems that meet an Enterprise Architecture and established technology standards to minimize operational costs and maximize investments in technology.
- Decreases the overall workload on IT staff by not having to provide technical support on numerous redundant applications or applications that do not meet the City's standard Enterprise Architecture or standards.
- Typical enterprise applications include ERP Systems (e.g., financial, human resource, work order, procurement, asset management applications, etc.) Enterprise Content Management Systems, and Geographic Information systems.

**E SW 1 Enterprise Taxonomy [1/16/ITFG]**

An enterprise taxonomy is a high-level hierarchical classification of electronic content facilitating the access, records management and disposition of electronic documents/records, digital photographs, digital video, and/or digital recordings throughout their lifecycle. Taxonomy is to content management as a Chart of Accounts is to a finance system; it classifies documents and other digital content into logical groups/subgroups in an Enterprise Content Management System (i.e., Laserfiche) in a manner that is responsive to how information is used by various City departments. A standard taxonomy facilitates fast and easy access to content by both staff and the public, when made available via web access.

**Findings:**

The Enterprise Content Management Rapid Workflow® workshop revealed the following:

1. The City has a lot of scanned documents in a scanned folder. There is currently no way to store in a specific folder location. There is a lack of staff to do this (Commun Dev.). This results in Public Records Requests being too difficult to complete. [Taxonomy]
2. The City does not have an Enterprise Taxonomy, which results in not being able to do backfile conversions and difficulty finding content.
3. Searching for documents is challenging, which results in staff time.
4. The naming conventions in the servers are not consistent, which results in difficulty finding documents and it makes records management challenging.

**Recommendations:**

- Develop and adopt an enterprise taxonomy
- Laserfiche and taxonomy training
- Document all the workflows that Laserfiche employees, e.g., workflow/process maps
- Carry out an assessment of the meta data and scanning documents themselves
- Develop an Enterprise Content Management Strategy and Implementation Plan



**Benefits:**

- Better records management
- More server spaces
- Better utilization of the system
- City could make content available to the public and reduce public records requests
- Faster and easier to find content
- Staff time savings
- Staff could find their own content; it would be simple
- Better searchability
- More efficiencies for staff
- If correct, could open it up for public records searches, which could lead to improved service to the public
- Reduce the pressure on staff for Public Records Requests
- Free up network storage

**E SW 2 Laserfiche Enterprise Content Management [16/ITFG/MI8]**

**Findings:**

The Enterprise Content Management Rapid Workflow<sup>®</sup> workshop revealed the following:

1. The use of Laserfiche is limited, which results in makes finding content difficult and Public Records Requests are too difficult to complete.
2. There is no strategy/roadmap for content management, which results in:
  - Information being spread out
  - A lack of utilization of Laserfiche
  - A hesitation to purge documents
3. Staff do not have access to other department information on the server, which results in
  - Wasted staff time for both departments
  - Delays in responding to the public
  - Duplicate contents
4. There are multiple copies of the same document on the network, which results in increasing server size.
5. Sometimes, files get misplaced, which results in staff time.
6. Staff work on the wrong version of a document, which results in wasted staff time.
7. Staff alter the same document, which results in duplicate versions of documents.
8. There is not enough training on Laserfiche, which results in limiting the utilization of the systems.
9. There is currently creation of too many subfolders under subfolders, which results in confusion and duplicate documents.
10. Staff do not know where to find documents since they are stored in several places, e.g., off-site, trailers, Laserfiche, server. This results in confusion and duplicate documents.
11. There is a lot of old data on the shared drives that no one cleans out, which results in:
  - Redundant data
  - Impacts to server space
  - Legal exposure related to Public Records Request or legal requests



## Recommendations:

- Develop an ECMS Strategic plan:
  - Enterprise Content Management requirements
  - Enterprise Taxonomy
  - E-forms Requirements
  - Workflow automation requirements
  - E-signatures: technical and legal requirements
  - Hardcopy Archive/Box Management
  - Application Software requirements for each department
  - Backfile Conversion requirements
  - Citywide rollout timeline
- Laserfiche and records management training
- Adopt a Laserfiche User Group
- Implement all applicable modules, prioritized by need
- Adopt policies for content storage
- Move towards the use of Laserfiche for everything, one system of record

## Benefits:

- Staff would be able to find documents
- Enhanced collaboration
- Staff time savings
- City could make content available to the public, reduce public records requests, and staff would have time for other work and be able to concentrate
- More responsive to records request
- Improved job satisfaction and productivity
- Save server space
- Cost effectiveness
- Files would not get lost
- Improved records management
- Up to date information
- Staff time savings
- Drafts would be deleted
- Promotes consistency
- Would eliminate the wrong version of documents
- Better utilization of the Laserfiche system
- Better return on investment
- Simplified searches
- Staff would not be limited to the MS character limits

## Findings:

The IT Focus Group revealed the following:

City has had Laserfiche since 2012-2013. There are a number of challenges with the system:

- There are a number of documents that were imported and not Q&A'd (Engineering & Community Development)
- Documents are not OCR'd
- Lack enterprise taxonomy
- People write on documents
- Lack of staff training



Currently use Laserfiche for:

- Finance: AP, POs, payroll, Employee paystubs, printed checks and 1099s
- Engineering: plans and specs
- City Clerk: agendas, minutes, resolutions, ordinances and agreements
- Community Services
- Water: new contract, meters and service orders. Water uses Workflow for approvals

This results in a lack of proper searchability and limits the ability to interface to other systems.

**Recommendations:**

- Create a citywide taxonomy
- Document all the workflows that Laserfiche employees, e.g., workflow/process maps
- Carry out an assessment of the meta data and scanning documents themselves
- Enterprise Content Strategy

**Benefits:**

- Better searchability
- More efficiencies for staff
- If correct, could open it up for public records searches, which could lead to improved service to the public
- Reduce the pressure on staff for Public Records Requests
- Free up network storage

**ESW 2.1 Records Management [16]**

**Findings:**

The Enterprise Content Management Rapid Workflow® workshop revealed the following:

1. The City has approximately 3,000 boxes in storage. The naming convention of each box is poor. There is no naming convention, i.e., department, name and year. The City has started destroying documents. This results in difficulty finding documents and it makes records management challenging.
2. There is no formal document/records management training, which results in:
  - Information is spread out.
  - A lack of utilization of Laserfiche
  - A hesitation to purge documents
3. Hardcopy documents are kept everywhere and are not being disposed of per the records retention schedule, which results in:
  - The creation of legal exposure
  - Eating up office space
  - A lack of space
  - Staff having to research and find the box/document
  - Cost of storage bins
4. There is a lack of Records Management staff in the Clerk's Office/Departments, which results in a slow response for dispositioning. Additionally, the City only destroys documents once/twice per year, which in some cases should be done monthly.



**Recommendations:**

- Develop a backfile conversion plan
- Implement a Records Management Modules features as part of the ECMS deployment providing the following minimum functionality:
  - Create, edit and manage a corporate “file plan”/records retention schedule, which contains information used to classify records
  - Create and manage the record folders (and folder volumes) that are available to help organize the file plan
  - Configure the system to easily declare objects as records in native authoring tools and specify which object classes and properties to manage
  - Create and manage records retention rules
  - Create and manage physical boxes, folders and records
  - Search for categories, folders and records
  - Place holds against record categories or search results
  - Identify appropriate metadata for all formats and sources
  - Retrieve information for personal use or to comply with Freedom of Information Act/E-Discovery requests
  - Manage record version control
  - Manage the integrity and reliability of records once they have been declared as such
  - Identify records that are due for disposal when their prescribed retention periods elapse, managing the disposal process
  - Views file plans and retention and disposition policies
  - Participate in automated workflows, seamlessly integrated with the ECMS via a desktop client or Web browser
  - Provide intelligent bar-coding of physical objects
  - Typical Reports: Including, but limited to, the following:
    - Ready for Destruction report
    - Future Disposition Schedules report
    - File Plan and Retention Codes report
    - User Profiles and Activities report
    - Records Status report
  - Create and manage records’ security profiles, object stores, services and to enable auditing
  - Adhere to industry best practices (e.g., the ISO 15489, the International Records Management Standard, U.S. Department of Defense’s 5015.2, and Model Requirements for the Management of Electronic Records (MOREQ))
  - Allow for the creation of records that refer to electronic files, paper documents, boxes of paper documents and microfilm
  - Provide the ability for a document(s) to be dragged and dropped into a record (folder of documents) and have this new document automatically inherit the records management policy
  - Provide the ability to place a hold (or multiple holds) on a record, as in the case of an audit or legal discovery
  - Provide a variety of retention options, including the ability to keep both index values and files permanently, keep only index values, or purge both index values and files with or without a history log
  - Provide Laserfiche and records management training
  - Adopt a Laserfiche User Group (adopt a user group for the website)
  - Establish a Records Management Users Group



**Benefits:**

- Staff would have time for other work and be able to concentrate
- More staff time
- More responsive to records request
- Improved job satisfaction and productivity
- Better utilization of the system
- Better return on investment
- Improved job satisfaction
- Better records management
- Improved compliance with the records retention schedule
- Mitigate legal exposures
- Better department coordination and collaboration

**E SW 2.2 Workflow Automation [16]**

**Findings:**

The Enterprise Content Management Rapid Workflow® workshop revealed there is no distinct workflow where documents should be stored, i.e., contracts are kept by department. This results in confusion, duplicate documents, staff time and lost documents.

**Recommendations:**

- Address workflow automation in the ECMS strategy
- Adopt workflow automation

**Benefits:**

- Business process improvement
- Staff time savings

**E SW 2.3 E-Forms [MI3]**

**Findings:**

The Enterprise Content Management Rapid Workflow® workshop revealed a lot of forms which are still in hardcopy, but the Council has adopted an e-form policy. This results in:

- Multiple copies of the same document
- Different document versions
- The cost of paper
- Documents can get lost
- May be using the wrong version of a form

The Management interview with the City Engineer revealed the need for online forms for customers, e.g., encroachment permit, online payment of fess.

**Recommendations:**

- Address forms that are good candidate for E-forms in the ECMS strategy

**Benefits:**

- Business process improvement
- Staff time savings



**E SW 2.4 E-Signatures [MI4/MI8]**

**Findings:**

The Management interview with the City Clerk revealed the desire to use e-signatures.

**ESW 3 Backfile Conversion [16]**

**Findings:** The Enterprise Content Management Rapid Workflow® workshop revealed there is a large backlog of paper documents to be scanned: 500 boxes (approximately 750,000 pages) with 10-15% of them being scanned (IWA). This results in a lack of space and staff having to research and find the box/document.

**Recommendations:**

- Carry out a city-wide physical documentary inventory
- Develop an enterprise taxonomy
- Develop a backfile conversion strategy to coincide with ITMP initiatives
- Use the standard taxonomy to carry out backfile conversion: scanning large quantities of hardcopy documents using a predetermined meta data scheme (taxonomy) to index and store scanned content. Backfile conversion should include stringent quality assurance practices to produce and transmit electronic documents in bulk for porting into the ECMS
- Provide staff Laserfiche and records management training
- Move towards the use of Laserfiche for everything

**Benefits:**

- Provide documents/records required by City staff for mission critical operational and service delivery needs
- Expedite content becoming available in Laserfiche
- Accelerate end user acceptance and use of the Laserfiche system as new departments come online
- Leverage the use of Laserfiche and maximize the return on the investment
- Better records management
- Compliance with legal requirements
- Files would not get lost
- Improved back-up
- Improved compliance with the records retention schedule
- Improved records management
- Staff time savings
- Staff would be able to find documents
- Staff would not have to physically go the trailers
- The City would not need the trailers

**E SW 4 Office 365 [ITFG/MI8]**

**Findings:** The IT Focus Group revealed there is no redundancy in the Exchange Server. The Exchange Server is at City Hall, where there is no backup generator. If the City loses external communications, there would be no way to get emails. This results in:

- Loss of communication
- Impacts to customer service
- The IT department could look bad
- Can affect Officer safety



**Recommendations:**

- Build out a second Exchange Server, or
- Go to Office 365
- Locate a second Exchange Server in the cloud
- Exchange Server upgrade

**Benefits:**

- Improved redundancy
- Enhanced customer service
- Improved Officer safety

**E SW 5 New Land Management System [WF4]**

**Findings:** The Commercial Building Permit Process Rapid Workflow® workshop revealed the following:

1. Not all reviewing parties understand what each other do, resulting in:
  - Poor perception to the public on the City's credibility
  - Lack of ordinance compliance
  - Time delays
2. The City does not have a Digital Land Management System yet. If customers come in without their plans, staff have to go to a container to pull out boxes or plans, resulting in staff time (a couple times per month), reduced customer service and it can take a day or more.
3. The City has insufficient customer service physical space, which results in making it difficult to retrieve documents, permits and history. Staff have to go to another area to do the work, which reduces productivity.
4. Everything is done with hardcopy documents, resulting in:
  - Lost comments
  - Customers can get irritated at City staff losing their documents.
  - Wasted staff and customer time
  - Cost to the customer
  - Constant searching for files
5. Do not have software with address verification for different buildings, resulting in utter confusion for departments because no one knows where a building is.
6. Plans get lost when they are routed to other departments. They may not have received them, resulting in Techs having to call applicants to resubmit. This results in impacts to customer service and wasted customer time.
7. The City does not have scanning capabilities to keep copies of plans if they are lost, which results in seldom getting scanned approved files.
8. When plan sets are resubmitted, they do not bring in redlines, which results in stopping the plan check because it cannot continue and having to start over which is a waste of time.
9. The City does not have an easily accessible tracking system, which results in not knowing where things are, spending time to find out where things are and staff time to manually fill out a different Excel tracking spreadsheet.
10. When Impact Fees are calculated for new projects, there could be development agreements with different impact fees, which results in:



- A level of chaos: staff do not know what they do not know
- The Developer may know more than the contractor, because the City does not have a system to create a fee process
- A lot of information is in people’s heads, with documents located somewhere
- Inefficiencies

11. At permit issuance, sometimes a digital copy of the final approved plan is not collected, which results in:

- Staff having to look for the physical file when there is a public records request
- Staff would have to ask for an extension and dedicate time to attempt to find the document if there is a need for a revision or amendment

**Recommendations:**

- Implement a new Land Management System (LMS)
  - All plan checks will be submitted electronically
  - Digital submittals and workflow routings
  - LMS will be a universal system everyone can access
  - Assign a gatekeeper of outstanding issues and status of comments
  - GIS capabilities and the ability to issue permits with the correct address
  - At permit issuance, the final approval plan will be in digital format.
- **Operational & Process Change**
  - Process change, more communication and education amongst reviewing parties
  - Improved communications between departments
  - Cradle to grave Project Manager
  - Provide ability to formalize the process of calculating the permit fee by track/parcel in the Permitting System
  - Redesign the customer service physical space area
  - More efficient workspaces

**E SW 6 Public Records Act (PRA) Application [RW 7, MI4]**

**Findings:**

The management Interview with the City Clerk revealed City records are not stored in a user-friendly way. The Clerk typically gets about 5 requests per week; they are for: building permits, APN numbers, property Environmental Studies, Community Development, Finance, Fire and Public Works. PD does their own. This results in:

- The City is starting to place them on the website, but there is no portal or workflow to assign them.
- Staff use email and Excel spreadsheet to keep track requests.
- Staff currently go to the basement and look in boxes.

**Findings:**

The Enterprise Public Records Request Rapid Workflow® workshop revealed the following:

1. There are documents that could be scanned and put online, but are not, e.g., project files, business license. This results in:
  - Perception of poor customer service
  - Staff time
  - Not having the time to search and scan the documents



2. The public is not educated to go on the website to access documents, which results in receiving many requests per year (400).
3. In Planning, there's been a lot of turnover. Things are available digitally, but there are hundreds of files that are not final documents, which results in a lack of space and staff time.
4. There is a lack of staff, which results in:
  - Staff requesting for continuation of time for most PRAs
  - A frustrated public
  - Preventing staff from doing the rest of their jobs
5. Multiple logging systems results in a waste of time and redundant, repetitive work.
  - There is a lack of staff training on PRAs, which results in confusion and delays in processing and responding, e.g., is this releasable? What department goes this go to?
6. There are too many people involved, which results in:
  - The process being elongating
  - Further confusion
  - Creating more files on computers
  - A lack of accountability
7. There are no tracking capabilities, which results in:
  - A lack of accountability
  - A lack of status of request
  - Creating more work
  - Creating more emails
8. The folder structure in the shared drive is not uniform. Keeping up with technology is part of this, which results in staff time and staff not being directed to do PRAs because the folders are not clearly labeled. It is hard for staff to search for things.
9. There is a lack of inventory in the offsite storage. Staff do not know what is in them, which results in staff time and the cost of storage.
10. There is a lack of communication between departments where items should be stored, labeled, and whether to keep on their personal drives, which results in impacting responsiveness to the public.
11. There is a lack of physical storage space, which results in:
  - A crowded work environment
  - Cost of space
  - Having to purchase trailers to store files
  - Hazards
  - Not having a proper records retention center
12. The City lacks a good redaction system, which results in:
  - Staff time
  - Could end up providing information the City should not provide
  - Inconsistencies across departments, e.g., some use Adobe while others use markers



**Recommendations:**

**1. Public Records Act (PRA) Management System**

***Features & Functions***

- Implement a portal to track all Public Record Requests
- Web-enabled
- Ability to search documents
- Ability to search for keywords
- Provide metadata
- Enterprise log solution: one system used by all departments
- Workflow automation
- Electronic submittal of PRAs
- Keep a log of all request
- Employ a standard numbering system
- Automatic notifications to the requestor and staff
- Ability to manually enter PRA number for hardcopy requests
- Required fields/data validation
- Drop down/pick list by departments
- Drop down distribution
- Automatic distribution
- Workload Management
- Track who is working on what
- Assign pending PRAs
- Update status of record searches
- Store PRA requests
- History of requests
- Template for Responses, by clicking on options, e.g., permits, violation to codes, etc. with an excerpt of the response
- Identify Department, Division and Staff person responding to a PRA
- Rigorous redaction features

***Reports***

- Number of requests per week, month, quarter, year
- Request by date range
- Persons requesting PRA
- Subject of PRA
- Number of PRAs department process per year
- Status and pending reports
- PRAs submitted, denied/approved
- Number of requests that were responded within the required timeline

***Interfaces***

- Laserfiche with a citywide taxonomy
- Tyler

2. Work on the City's online tools, prominently placed on the home page
3. Backfile conversion of records and documents the likely to be requested by the public
4. Support administrative staff to work with all departments



5. Provide training on the legal aspects of PRAs
6. Do a document inventory, develop and adopt an enterprise taxonomy

**Benefits:**

- Transparency
- Improved customer service
- More efficient
- Staff time savings
- Improved public perception
- Reduced public frustration
- Easier to onboard and train new staff
- Easier to locate documents
- Get more work done
- Allow to work on projects
- Improved customer service
- Staff efficiency
- Accountability
- Centralization
- Save money on legal fees
- Smoother process for the PRAs
- Trackable
- Searchable
- Do not use a lot of space on hard drive saving multiple versions
- Fewer staff would need to be involved and more could do high value work
- Faster and easier to find documents
- Cost savings for the trailers, paper, etc.
- Remove uncertainty
- Reduced space requirements
- Improved accuracy

**E SW 7 Event Management Software [RW 13]**

**Findings:**

The Event Management Rapid Workflow® workshops revealed the following:

1. Departments are missing applications emailed to them from Community Services or Planning departments, which results in approval or denials are delayed and extends the process.
2. Waiting for comments or responses, in a timely manner – or at all. Not adhering to the deadline timeframe for replies results in poor customer service and loss of revenue.
3. The application may not be clear enough for those filling them out, which results in delayed responses by the applicant and difficulty for the applicant.
4. All the applications are hardcopy, which results in:
  - No disaster recovery
  - Not being environmentally friendly
  - Storage issues
  - Cost of paper
  - Misplacement of documents



- Information cannot be shared
- 5. Setting meeting dates for the Special Event Team results in delayed responses and not having everyone at the meeting.
- 6. Incomplete applications result in delays and more staff time.
- 7. The City lacks a shared Special Events Calendar, which results in making coordination between departments difficult and departments not knowing what is going on in the City.
- 8. There is no Special Event guideline or Ordinance, which results in inconsistencies on how applicants are treated and there may be miscommunication.
- 9. Each department keeps event related documents separately in filing cabinets and City servers, which results in:
  - Eating up space on the server
  - There is no central storage
  - Lack of communication
  - Redundancies
  - Cost of storage, e.g., cabinets
- 10. There are no Special Event FAQs, which results in customer confusion and dissatisfaction and loss of staff time answering questions.
- 11. Emails may not be responded to, e.g., staff could be on vacation or out of the office. There is no reminder system, which results in delayed response or no response at all.
- 12. There is no tracking or checklists for events, which results in impacts in planning.
- 13. Documenting and tracking third party costs to the City results in:
  - Additional staff time
  - Lost cost recovery
  - Lost revenue

**Recommendations:**

**1. Adopt Event Management Software**

***Feature & Function:***

- Enterprise software, accessible to all appropriate departments
- Contemporary system and GUI (Graphical User Interface)
- Web-enabled application
- Submit online applications/related documents electronically:
  - Park
  - Film
  - Event
  - TUP
- User friendly application
- Smart forms with dynamic choices: Depending on event type, conditions and what is checked in the application, the form would trigger all required additional permits
- Data validation
- Auto population of fields
- Help features with detailed explanations
- Provide ability to select Community Services or Planning



- Workflow Automation:
  - Checklist
  - Routing
  - Tracking
  - Status
  - Auto-notification
  - Reminders
  - Review
  - Approval
  - E-Signatures
- Internal Schedule
- Internal Events Calendar
- Event Conflict Checking
- Event Booking Conflict Calendaring
- Ability to attach/store PDFs
- Ability to track costs: internal and 3rd party
- Support mobile devices
- Support Responsive Design
- E-commerce functionality: accept credit card payments
- Event Number

**Reports:**

- After action reports
- Customer satisfaction
- Revenues per month, quarterly, and annually
- Events by type
- Events by location
- Events by some period at a certain location

**Interfaces:**

- Laserfiche
- GIS
- HTE

**Hardware:**

- Dual monitors
- Large monitors

**Special Event Guidelines:**

- Process
- Timelines
- Legal document that could be enforced

**FAQs:**

- Process
- Timelines
- Costs
- Requirements
- Refer to Fee Schedule



**Benefits:**

- Streamline the process
- Satisfied staff
- Hold more events
- Increased revenue
- Job creation
- Improved mobile access
- Fosters a digital workplace and workforce
- Eco friendly and improved sustainability
- More efficient staff time
- Improved coordination and collaboration
- Consistency
- Better customer service
- Applicant would be better informed
- Better communication with applicants
- Eases anxiety of applicants
- Better event management and accountability
- Provide better information to the applicant in response to questions
- Improved auditing
- Satisfied Director of Finance

**E SW 8 GIS Master Plan [RW 15]**

**Findings:** The Management Interview with Indio Water Authority revealed the need to have asset data easily accessible digitally in a GIS.

**Findings:** The Management Interview with Economic Development revealed the need for GIS tools to identify and market available properties for sale.

**Findings:** The GIS Enterprise Rapid Workflow® workshop revealed the following:

1. The County does not notify the City when an APN has been created, resulting in outdated data, which impacts the accuracy of maps.
2. The City does not have enough staff to create and maintain all necessary layers, resulting in outdated data, impacts the accuracy of maps, and not being able to respond during a GIS emergency if the GIS Coordinator is out of the office.
3. Data collection and maintenance is expensive, resulting in potentially not getting the data because of the cost, or it may take longer to get the data.
4. The City does not know what departments need in dashboard data, resulting in not fully utilizing the technology and departments are not being as efficient as they could be.
5. The City has too few department staff trained on GIS, resulting in:
  - Some reluctance to use GIS
  - Not fully leveraging the investment of GIS software
  - Updates take longer to get added to the database
  - Field staff get frustrated
6. Only some GIS production processes are documented, resulting in impacts to the process for updating map data and makes the City more dependent on consultants.



7. Integration between GIS and ERP, LMS, or CAD/RMS is limited, resulting in not sharing spatial data as much as the City could and underutilizing the GIS.
8. Do not know when data was last updated; or what is the most current data, resulting in confusion.
9. The City does not understand the full potential of GIS, resulting in the underutilization of GIS and departments are not as efficient as they could be in their use of GIS.
10. The City does not have GIS standards, resulting in:
  - Being prone to errors
  - Impacts data accuracy
  - Lack of consistency
11. Not receiving a sign-off on web maps after they have been developed is an issue, resulting in wasted staff time.
12. There is a lack a GIS Strategy or Roadmap, resulting in a shotgun approach and a lack of focus in the most effective leveraging of GIS.
13. GIS is not up to Public Safety standards, e.g., addresses and roads, results in Officer and Public Safety.

**Recommendations:**

- **Technology**
  - Develop and adopt a GIS Strategic Plan
  - Integrate and expand GIS software in Economic Development website
  - Create maps that are more user friendly for marketing purposes
  - As new systems come online, ensure that they are integrated
  - Adopt version tracking of layers in GIS
  - Make this part of the GIS User Group to ensure it moves forward
  - Use a tool bar for updating center line address ranges
  - Authorize PD with a sublayer where they could make changes on the fly, and it would be incorporated into the default GIS
- **Management**
  - Articulate clear roles and responsibilities for all staff supporting GIS
  - Have departments provide staff to undergo training
  - Have staff use the training materials from the ESRI User Conferences
  - Education of elected officials
  - Adopt a GIS User group that defines and approves GIS standards
  - Authorize the user group to sign-off on the maps
  - The City is in the process of hiring a GIS Technician
- **Operational Solutions**
  - Adopt more formal requirements meetings with department staff
  - Allocate time to document GIS processes
  - Adopt general map building, uniformity, graphic standards, fonts, approved logos, symbology, and make sure the data has the same projections
  - Continue leveraging on-going efforts, including GPS equipment



## Benefits:

- **Technology**
  - The City would have a clear direction of where it is going with GIS technology
  - Integrating systems will provide two-way communication, and improve leveraging information, e.g., field crews will have access to more data
  - More accurate data, and knowing where data is stored
  - Better quality map data and products
  - Staff will be using the latest data set
  - Better analysis of public safety data
  - Improved efficiencies by using dashboards
  - Focus on what is actually needed
  - Better and quicker decision making
  - Better utilization of GIS for the whole city
  - Fewer IT requests
  - Fewer public records request if the data can be provided to the public
  - Less demand for staff resources via fewer calls, citizens will be able to search the data themselves
  - Enhanced customer service
  - Improved consistency
  - Fewer public records request if the data can be provided to the public
  - Enhanced public safety
  - More accurate officer safety
  - Faster response time
  - Improved resilience
  - Improved end user confidence
- **Management**
  - Free up GIS Coordinator to perform higher level work
  - There would be a backup GIS technician
  - Updates will be done a lot quicker
  - Field staff will have access to data sooner
- **Operational**
  - Improved self-sufficiency for department staff
  - Help educate city staff on the use of GIS

## E GOV Website, Smart City, Internet of Things

E-Government technologies include web-enabled, Smart City and Internet of Things technologies. These provide the most significant opportunity for operational cost containment, enhancing service delivery levels and meeting growing customer expectations for online services.

Leading E-Government cities are those that evolve towards online service delivery with interactive, transactional and online services integrated with the City's financial systems. This framework maximizes the use of the Internet, enhances customer service, while at the same time reducing operating and staffing costs.



**E G 1 Website Redesign [5/ITFG/MI4/MI8/MI12]**

**Findings:** The Economic Development Management Interview revealed a need for a new Economic Development website that is user friendly and easy to navigate. [The existing website was redesigned 4 years ago.]

**Findings:** The Rapid Workflow® Economic Development-City Website Workshop revealed the following:

1. The City does not have a webmaster, which results in inconsistencies of web pages and lack of coordination and consistency of content.
2. The City does not have a design/graphic artist, which results in:
  - Everyone becoming a graphic designer, preventing them from doing their everyday assignments
  - Lack of consistency
  - No style guides
  - Duplication of efforts
3. The City does not have a policy that requires the content to go through the department of Communication and Marketing, which results in:
  - Inconsistency of web pages
  - Lack of coordination and consistency of content
  - Everyone becomes a graphic designer and they get pulled off from their everyday assignments
  - Lack of consistency
  - No style guides
  - Duplication of efforts
  - Editorial issues and content that is written poorly
4. The role of the Director of Communication has not been articulated related to the website and content, which results in confusion and the position becomes a catch all for everything that does not fit in a neat box.
5. Content can be written very poorly, which can result in miscommunication and a negative view of the City.
6. The City lacks depth and breadth of writers in departments, which results in:
  - A lack of content contribution or delegation of content distribution to other departments
  - Poor quality content
7. There is a lack of an existing assessment of staff talents, writing and graphic designs, which results in missed opportunities and affects staff morale.
8. There is lack of bilingual content, which results in missing the opportunity to connect with 70% of the City's population.
9. Indio is a large city operating like a small city from a staff and resource perspective, which results in:
  - Website management becomes lowest priority
  - Internal frustration
  - Staff morale
  - Resistance to adapt and change and learn new skills
  - Lack of communication between departments, and not knowing what's going on



- Not utilizing the web to communicate effectively with the public
  - Not publicizing the positives
10. There are website issues, including poor navigation, which results in:
- Frustrated users and staff
  - Cannot find information
  - Public ends up calling staff
  - Wasted staff time
11. There are broken links, which results in:
- Frustrated users and staff
  - Cannot find information
  - Public ends up calling staff
  - Wasted staff time
12. The website is not intuitive, which results in:
- Miscommunication
  - Negative view of the City
  - Frustrated users and staff
  - Cannot find information
  - Public ends up calling staff
  - Wasted staff time
  - Poor customer experience
13. There is a lack of technical knowledge to populate/post content on the website, which is not being done in the onboarding process, which results in:
- Wasted staff time
  - Creates a bottleneck
  - Slow response/delays
14. It is difficult to find content, which results in:
- Frustrated users and staff
  - Cannot find information
  - Public ends up calling staff
  - Wasted staff time
15. There is a limitation of Website features, which results in:
- Not having the ability to put up or publicize the great things the City is doing
  - Wasted staff time by duplicating work
16. The website cannot add a small visual calendar/widget on any department web pages, which results in:
- Not having the ability to put up or publicize the great things the City is doing
  - Wasted staff time by duplicating work
17. There are functionality issues with Calendaring, which results in:
- Confusing the customers
  - Do not have the ability to put up or publicize the great things the City is doing
  - Wasted staff time by duplicating work
18. There is an inconsistency of content location, e.g., meetings and calendaring, which results in confusing customers.



**Recommendations:**

- Redesign a new website with good, friendly, and intuitive navigation, and explore a new CMS
- Explore launching the Economic Development component of the website first, followed by other website components
- Define the role and responsibility of the Director of Communication
- Take the lead in establishing content standards and establish the messaging for the website
- Identify a content specialist in each department to review, edit and post content
  - Heavy content and graphic design would go to the Director of Communication for final review
  - Graphics would go to a consultant
- Ensure website supports bilingual content
- Resourcing scenarios:
  - Worst case scenario: Address existing resource, training and technical issues with existing technologies
  - Middle case scenario: Existing staff and new website
  - Best case scenario: Existing staff, new website and Webmaster

**Branding & Visual Design Solutions:**

- Provide clear guidelines and design standards
- The Main Page should be the barest of pages, acting like the “compass” that takes you to the information
- Pick latest technologies that are used in the industry
- Have program branding dovetail with the City branding
- Provide city staff the ability to change the text size
- Distinguish between information and web services
- Ability to be translated to other languages, Spanish
- Synchronize the City calendar with customer calendars, i.e., Google
- Let staff know what software tools are and are not supported
- Provide better support and training for producers
- Clarity of contact people, or staff who can respond to technical questions
- Have a person or department that manages the site
- Each department have an assigned person to answer questions

**Training Solutions:**

- Adopt a content and style guide
- Develop a full guide on how to use the platform
- Provide regular and formal training sessions
- Assign dedicated staff to work on the website
- Configure tools structured in a way to control what people do on the website to enforce the adopted website standards
- Provide the ability to follow the City’s establish guidelines. i.e., follow the standard City color scheme
- Provide training on ADA compliance

**Content Management Solutions:**

- Implement a new, contemporary Web Content Management System (CMS) platform
- Features and functions:
  - Hierarchy, improved navigation, user friendly format for staff and the public



- Mobile friendly, Responsive Design
- Ability to do scheduling meetings and communicate
- Accept online payments
- Run Java script
- Collect contact information and comments
- Subscribe to City calendars
- Provide robust permission management
- Autosave and versioning
- Connect all different services
- Image editing and customization
- Batch uploads
- Allow for more formatting and variety
- Notification prior to auto log-off
- See tracked changes on edits
- Provide ability to create a ghost pages
- Search feature
- Allow for establishing a naming convention
- Provide ability to create a personalized user dashboard: for example, user-specific customizable dashboards where users could “favorite” their pages and with one click get into the “Navbuilder” or “HTML editor”, or whatever the equivalent will be with the new CMS
- Provide standard practices
- Provide ability to post up newsletter
- Ability to submit forms

**ADA Compliance Solutions:**

- Accommodate ADA compliance
- Build in ADA compliance into the new website design
- Provide all text for images
- PDFs should be OCRd
- Provide training on the ADA standards
- Reevaluate the City style guide for ADA compliance

**Website Functionality: E-Government Apps & Social Media Solutions:**

- Need to provide vendors a list of third-party sites to explore integration: Tyler Munis, Land Management (Future), GIS
- Provide standard API with third party websites
- Adopt Responsive Design
- Access to social media across the City
- Ensure that the website works on all leading browsers and OS
- Supports leading mobile devices
- Support Smart Cities/IoT solutions, tools and training
- Ability to create and share URLs on the website

**Benefits:**

- Reduced stress and frustration
- Eased workload
- Streamline the visual design
- Increase the quantity and quality of marketing materials
- Streamline web content management



- Improved clarity
- Better perception of the City
- Better communication to the community
- Enhanced messaging
- More community engagement
- More efficient web content management
- Less stress
- Improved content
- Reduced workflow
- Reduced duplication of effort and content
- Improved customer service & experience

## INT Interfaces

A number of interfaces were identified in the course of the project. Some of these are related to the implementation of new technologies. They are listed here for future references.

### INT 1 Public Works Work Order System to Finance [RW 2]

### INT 2 Public Works WO to GIS [2]

### INT 3 New Systems interfaces to GIS [15]

## E TECH Enterprise Architecture

### E TECH 1 Cloud Solutions/Cloud Services Broker Policies

#### Findings:

Cloud computing came into existence in the late 1990s and became a widely used solution in the 2000's, it is now mature technology. Cloud computing cities benefit from shared infrastructure, software, and application technologies, without the need for deep knowledge about or expertise with each one of them. The cloud aims to cut costs, and helps the users focus on their core business instead of being impeded by IT operation obstacles. Some of the initiatives in the course of the ITMP Roadmap project lend themselves to hosted solutions.

#### Recommendations:

- Explore cloud computing as an option with every system deployment, meeting the evolving needs of the City using one or more cloud computing solutions:
  - Software as a service (SaaS): cloud providers install and operate application software in the cloud and users access the software from cloud clients. Hosting companies manage the cloud infrastructure/platform where the application runs, eliminating the need to install and run the application on the City's servers, which simplifies maintenance and support
  - Platform as a service (PaaS), provides a computing platform, typically including operating system, programming language execution environment, database, and web servers. Application developers develop and run software solutions on a cloud platform without the cost and complexity of buying and managing the underlying hardware and software layers.



- Infrastructure as a service (IaaS), providing computers, physical or virtual machines, and other resources
- Prepare a standard City specification for implementing a flexible cloud environment.
- Play close attention to the “pay-as-you-go” cost structure offered by cloud vendors.
- Carry out a pilot project to test the performance and total cost of cloud solutions.
- Monitor cloud performance.

**Benefits:**

- Provides tools and technologies to build data/compute intensive parallel applications with more affordable costs compared to traditional parallel computing techniques.
- Improved scalability and elasticity via dynamic (“on-demand”) provisioning of resources on a fine-grained, self-service basis in near real-time.
- Possible cost reductions, by converting capital expenditures to operational expenditures.
- Device and location independence, providing access to systems / applications using a web browser regardless of location or device, e.g., PC, laptop, smart phone, or tablets.
- Easier maintenance of cloud computing applications.
- Multi-tenancy enabling shared resources/costs across a large pool of users allowing:
  - Centralization of infrastructure in locations with lower costs, e.g., real estate
  - Peak-load capacity increases
  - Utilization improvements based on system utilization levels
  - Monitored performance, with consistent architectures constructed using web services as the system interface
- Reduced risk and liability, with the use of multiple redundant sites, offering business continuity and disaster recovery.
- Potential for improved security, due to centralization of data and increased security-focused resources.



### 4.2.2 Operational Recommendations

The area of operational sustainability relates to the IT organization’s ability to provide the complete spectrum of services required to effectively and successfully meet the technology needs of the City and public. Issues related to sustainability include the use of professional best practices commonly found in IT organizations committed to providing exceptional customer service.



The following findings and recommendations are based on input gathered throughout the ITMP Roadmap project related to sustainability.

#### O IT Operational Improvements

##### O 1 Cityworks Role-based Training [1]

**Findings:** The Rapid Workflow® Work Order Service Request workshop revealed the following:

1. Work Orders are printed in hardcopy, which results in:
  - Wasted staff time for managing paperwork
  - Risk of losing documentation
  - Adds an additional step for documents to line up
  - More room for errors
  - Wasted staff time
2. There is duplication of data entry that results in wasted staff time and slower response time.
3. Slow processing time results in slower customer response time and slower work order completion.
4. A lack of CityWorks training results in lower quality data.
5. There is an issue with using two different systems for one process: HTE and CityWorks. This results in:
  - Staff not having access to both systems
  - Staff do not have access to data until it is entered into the system
  - Wasted staff time
  - Higher software maintenance costs
  - Systems do not talk to each other
  - Potential for data errors across the two systems
  - More labor costs
6. Renaming of scanned files results in wasted staff time.
7. Retrieving files from Laserfiche results in wasted staff time (General note: It takes 15 minutes to find files because there is a lack of consistency.)
8. This is not a uniform process for all customer requests, which results in that not all Work Order make it into CityWorks, IWA is unable to forecast staff and resource requirements.
9. The Multifunction device does not allow to name the scanned file at the source, which result in wasted staff time and repeated data entry.



10. Multiple scans of the same document results in:
  - Electronic Storage space is being taken up
  - Wasted staff time
  - Potential for not using the most current version
  - Same document stored in multiple places
11. There is a lack of clarity on the definition of a Service Request and Work Orders.

**Recommendations:**

- Adopt a single system to manage requests to close out all electronics – paperless (currently doing a test to integrate Navline/HTE to CityWorks, which will mitigate printing)
- Business process redesign
- Provide CityWorks role-based training to everyone in the process/IWA:
  - Create the work order
  - Enter data/record the work
  - Manage the System
  - Data Analytics: searches, queries, and reports
  - Get best-practice training on CityWorks
- Eliminate scanning if CityWorks is used for the entire process
- Develop and adopt enterprise taxonomies
- Have a policy level discussion on what is a Work Request and what is a Service Request

**Benefits:**

- Improved efficiency
- Save paper
- Environmentally considerate
- Cost saving regarding printers, paper, etc.
- One common data source
- Lower labor cost
- Happier customers and staff
- Improved data on assets
- Ability to implement an asset management program
- Added tool that could use the data to apply for grants
- Staff time savings
- Reduced storage costs
- Staff would be freed up for high value work
- Better problem solving
- Better customer service
- Better workflow
- Business Process Improvement
- Improved communication amongst IWA and customers
- More accurate information



**O 2 Permit Fee Process [4]**

**Findings:** The Rapid Workflow® Commercial Building Permit Process workshop revealed the following:

1. Not all reviewing parties understand what each other do, which results in:
  - Poor perception to the public on the City’s credibility
  - Lack of ordinance compliance
  - Time delays
  - A lack of communication, which can cause delays
2. Not being a digital system yet can cause customers to come in without their plan, staff must go to a container to pull out boxes or plans, which results in:
  - Staff time (a couple times per month)
  - Reduced customer services
  - The process taking a day or more
3. Having insufficient customer service physical space results in:
  - Difficulty to retrieve documents, permits and history
  - Going to another area to do the work
  - Reduced productivity
4. Everything is done with physical documents, which results in:
  - Comments being misplaced
  - Customers feeling irritated at City staff losing their document
  - Wasted staff and customer time
  - Cost to the customer
  - Constant search for files
5. Not having software with address verification for different buildings and addresses results in utter confusion for departments, because no one knows where it is at.
6. The City is losing plans when they are routed to other departments, which results in the departments potentially not receiving them.
  - The Techs must call applicants to resubmit
  - Impacts customer service to the applicant
  - Waste of customer time
7. Not having scanning capabilities to keep copies of plans if they are lost results in getting the scanned approved files.
8. When plan sets are resubmitted, they do not bring in redlines, which results in:
  - The plan checks not continuing
  - The whole process starting over
  - Waste of staff time to review and starting over
9. Not having an easily accessible tracking system. Not knowing where things are results in:
  - Spending time to find out where things are at.
  - Staff time to manually fill out different Excel tracking spreadsheet
10. When you calculate impact fees for new projects, there could be development agreements with different impact fees, which results in:



- A level of chaos that does not know what they do not know. The developer may know more than the contractor, because the City does not have a system to create a fee process.
  - A lot of information is in people's heads, with documents located somewhere.
  - Inefficiencies.
11. At permit issuance, sometimes a copy of the final approved plan in digital format is not collected, which results in:
- The staff looking for the physical file when there is a public records request.
  - In a need for a revision or amendment, staff would have to ask for an extension, and dedicate time to attempt to find the document.

**Recommendations:**

- Process change, more communication and education.
- New LMS: All plan checks will be submitted electronically.
- The new land management system will be a universal system everyone can access.
- Redesign the area.
- More efficient workspaces.
- Improved communications between departments.
- Assign a gatekeeper of outstanding issues.
- Status of comments.
- Cradle to grave Project Manager.
- New LMS: GIS capabilities and the ability to issue permits with the correct address.
- New LMS: Digital submittals and workflow routings.
- Provide ability to formalize the process of calculating the permit fee by track/parcel in the Permitting System
- The last approval will already have this information.

**Benefits:**

- Increased efficiency
- Increased productivity
- Improved customer service
- Staff time savings
- Staff could work from anywhere
- Customer could contact the city from anywhere
- Environmentally friendly city
- Cost saving: paper, storage, copies, file cabinets
- Reduced paper cuts
- Smaller workspace
- Improved city staff morale
- Be more proactive than reactive
- Implement state laws
- Eliminates mistakes, i.e., issuing a permit with the wrong address for tax purposes
- There is a snowball effect where this can become a bigger problem
- Save money
- Better service to contractors
- Reduced work for staff
- Better organized
- Staff will be more aware of redline issues



- Will charge the correct amount, instead of issuing refunds later or charging additional fees later

### O 3 Track Quote and Packing Slip [9]

**Findings:** The Rapid Workflow® Indio Water Storeroom Counts Inventory workshop revealed the following:

- There are inaccurate storeroom counts. No one is counting the inventory, which results in increased carrying cost for inventory.
- There is no parts cost accounting, which results in inventory loss and inventory shrinkage.
- The City is currently using an honor system, which results in inventory loss and inventory shrinkage.
- There is no strong competitive vendor selection results in a risk of lawsuits and risk of being overcharged.
- The City is currently having a formal chain of ownership for parts results in inventory loss and inventory shrinkage.
- The City is not using a three-way match for invoice approvals, which results in:
  - Risk of over payment
  - Risk of paying for parts not received
  - Increased need for cost recovery
- There is no clear process defined for special purchases, which results in increased risk of inventory inaccuracy.
- Not having an Inventory Clerk results in no single point of accountability.

**Recommendations:**

- Adopt clear procedures for parts and materials handling
- Adopt the use of CityWorks Storeroom for inventory management
- Clearly define roles and responsibilities
- Need to clarify competitive advertisement requirements for these types of contracts
- Post RFPs on City website and plan room
- Must track the quote/packing slip all the way through the invoicing process. Use CityWorks to receive those goods and track it as part of the validation process, with coordination between Finance and Operations
- Evaluate whether we need clearly defined roles and responsibilities or a new position

**Benefits:**

- Better business controls
- Cost savings potential
- Improved conformity with contracting requirements/best practices
- Better accountability
- Improved internal controls
- Uniform inventory control across processes



**O 4 System Policies & Procedures [ITFG]**

**Findings:** The IT Focus Group revealed the following:

1. The City of Indio does not have:
  - Physical Security Access policies at PD
  - BYOD policy
  - City Equipment Loaner Policy
  - Digital Signature policy
  - PII (Personally Identifiable Information) policy

This results in:

- Lack of consistency
- Security risks
- Data intrusion
- Lack of accountability

**Recommendations:**

- Create policies as required
- System Policies and Procedures

**Benefits:**

- Improved efficiencies
- Improved accountability
- Mitigate risks
- Enhanced compliance
- Better audits

**O 5 Adopt & Test Disaster Recovery & Business Continuity Plan [ITFG]**

**Findings:**

The IT Focus Group revealed the City does not have a Business Continuity and Disaster Recovery Plans, which results in impacts getting operational in a timely manner in the event of a disaster.

**Recommendations:**

**1. Develop, adopt, and test a Disaster Recovery Plan**

- Develop a DR plan: Include policies, processes and procedures to recover and ensure business continuity in regards to technological infrastructure in the event of a disaster whether manmade or natural.
- Retain a professional organization to develop a Disaster Recovery Plan if City IT staff lack the expertise to develop the DR Plan. Disaster recovery planning is a subset of a larger process (the Business Continuity Planning) and should include planning for resumption of applications, data, hardware, communications (such as networking) and other IT infrastructure.



- The disaster recovery plan should address three key control measures:
  - Preventive measures: controls aimed at preventing an event from occurring.
  - Detective measures: controls aimed at detecting or discovering unwanted events.
  - Corrective measures: controls aimed at correcting / restoring systems after a disaster.
- Integrate with EOC.
- Coordinate with Public Works.
- Adopt a formal Service Level Agreement (SLA) so IT can get Public Works engaged with a sense of urgency in an SLA.
- Explore utilizing the Cloud as a backup disaster recovery site.
- Verify and validate DR Plan to ensure its effectiveness and efficiency for recovery of City operations on a yearly basis.

**2. Business Continuity Plan**

- Retain a professional organization to develop a Business Continuity Plan.
- A business continuity plan (BCP) includes planning for non-IT related aspects such as key personnel, facilities, crisis communication and reputation protection, and should refer to the disaster recovery plan (DRP) for IT related infrastructure recovery / continuity.
- Verify and validate BCP to ensure its effectiveness and efficiency for recovery of City operations on a yearly basis.

**Benefits:**

- Be prepared for possible outages, man-made or natural disasters
- Enhanced resilience

**O 6 Cyber Security Assessment [MI]**

**Findings:**

The Indio Water Authority and City Manager interview revealed a concern with Cyber Security.

**Recommendations:**

- Develop Cyber Security/Resilience Master Plan.
- Redo class specifications for all IT staff to include scope for today’s technology needs and cyber security needs to be a key element in this
- Provide continued security training for City employees (now a requirement for PCI compliance)
- Include security as a key requirement in all IT classifications.
- Add cyber security to an existing IT staff person’s responsibility, but given the very limited staffing levels of IT, adding a staff resource to handle this may be more responsive.

**Benefits:**

- The City would be better at managing risks.
- Security damage would not be as significant as it might.
- Would be proactive in managing security risks.
- Better compliance PCI/HIPAA and DOJ requirements.



### 4.2.3 Management Recommendations

This section of the report includes management recommendations designed to support the successful implementation and support of the City's ITMP Roadmap over the next 10 years.

Management recommendations are based on information gained from a thorough review and assessment of the City's mission, business processes and requirements. A baseline understanding of the City's IT management issues were realized by holding interviews with all department heads at the City. Business process requirements were identified in the Rapid Workflow<sup>®</sup> sessions held with staff and management, which also identified management and policy recommendations.



## M Management

### M 1 IT Organization

#### Findings:

#### IT Staff Knowledge, Skills and Abilities (KSA)

The IT Skills Assessment reveals City IT staff are talented, highly capable, and work exceedingly well as a team. However, the following were also identified:

- IT staff skills are low in a number of areas: business process improvement, requirements definition, and project management
- SCADA knowledge is low, resulting in a dependency on consultants who may not be available.
- A lack of GIS staff, which results in not fully utilizing the GIS system.
- IT staff do not have time to take training, which impacts project delivery

#### Organizational Structure:

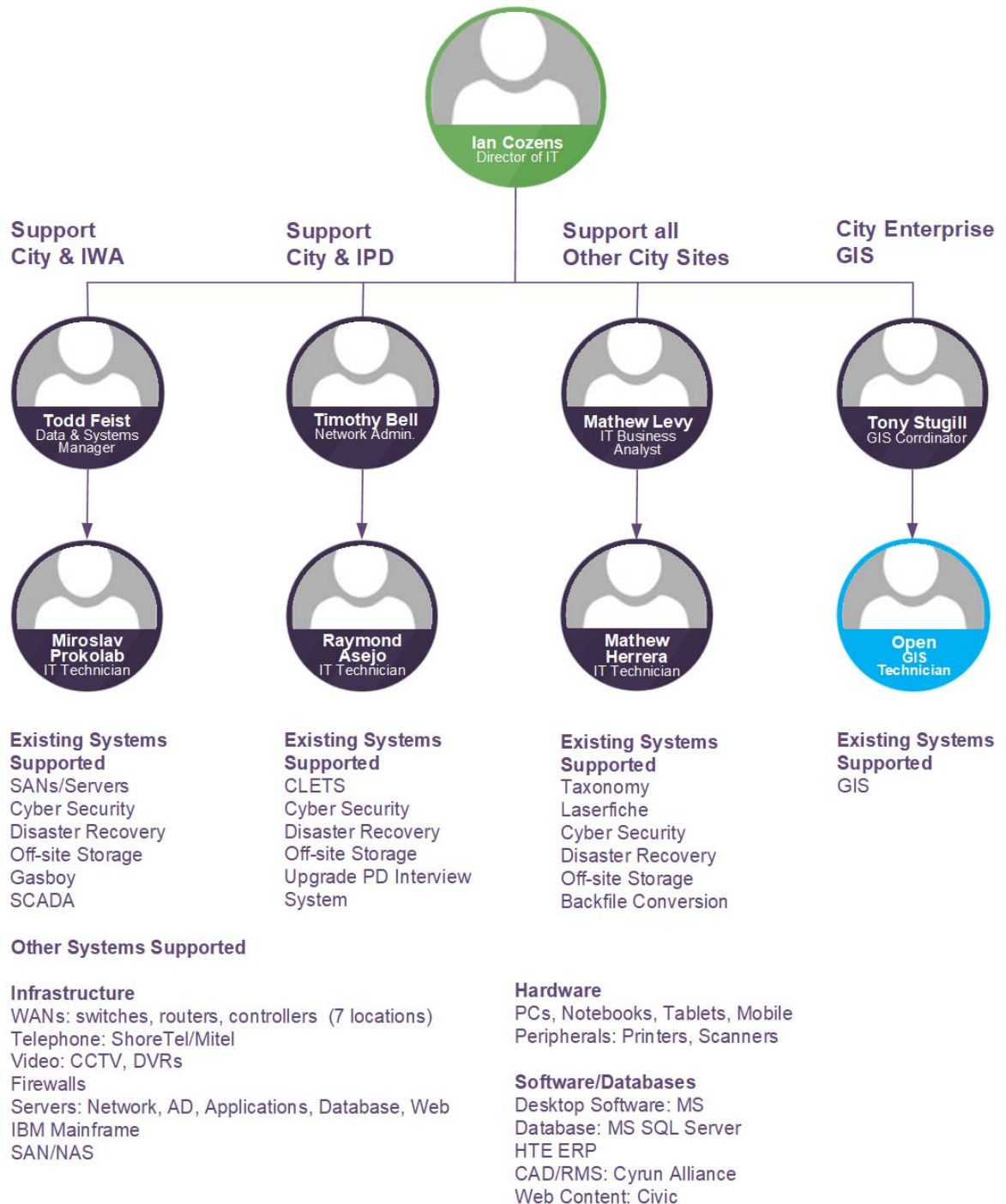
The City IT organization has eight FTEs, including one open GIS Technician position – plus the Director of IT. Existing IT staff are divided into three primary support teams across the major city locations: Indio Water Authority (IWA), Indio Police Department (IPD) and the rest of City facilities. One staff supports GIS. IT staff support their respective clients as well as supporting broader City-wide IT needs. This operating model takes advantage of a small group of IT professionals, fully leveraging their skills sets. However, organizational challenges include the following:

- The IT organizational structure, given assigned responsibilities by location, can make staff feel the organization is somewhat siloed
- Lack of a key positions: Business Analyst, Database Administrator, and Project Manager
- Given the current lack of staff, the IT Director is responsible for a number of technical tasks that should be carried out by IT staff
- Given the current organization, the IT Director has limited time to dedicate to acting as an IT Director

Figure 1.1, Existing IT Organization Staff and Responsibilities, on the next page provides an overview of the existing IT organization, staffing, and related responsibilities.



**Figure M 1.1: Existing IT Organization, Staff and Responsibilities**





## Recommendations:

- Revise the IT Classifications for the top three staff supporting IWA, IPD and Other City Locations to Sr. Systems Engineer and Systems Engineer. (Optionally, the second title could be Systems Engineer/Analyst, indicating that person will perform business analyst activities.)
- Resource the IT origination with new positions to support the three new Enterprise Systems with the following:
  - Sr. Enterprise Business Analyst for the ERP Finance and Human Resources in year 1
  - Applications Specialist: Land Management & Asset Management in year 2
  - Database Administrator/Programmer in year 3, which will be key to leveraging Smart City solutions and data analytics, leveraging the data from various new and existing City software and their related data
- Clearly articulate the knowledge, skills and abilities for each IT staff, including the respective roles and responsibilities of all IT staff, particularly those who will support new enterprise applications.

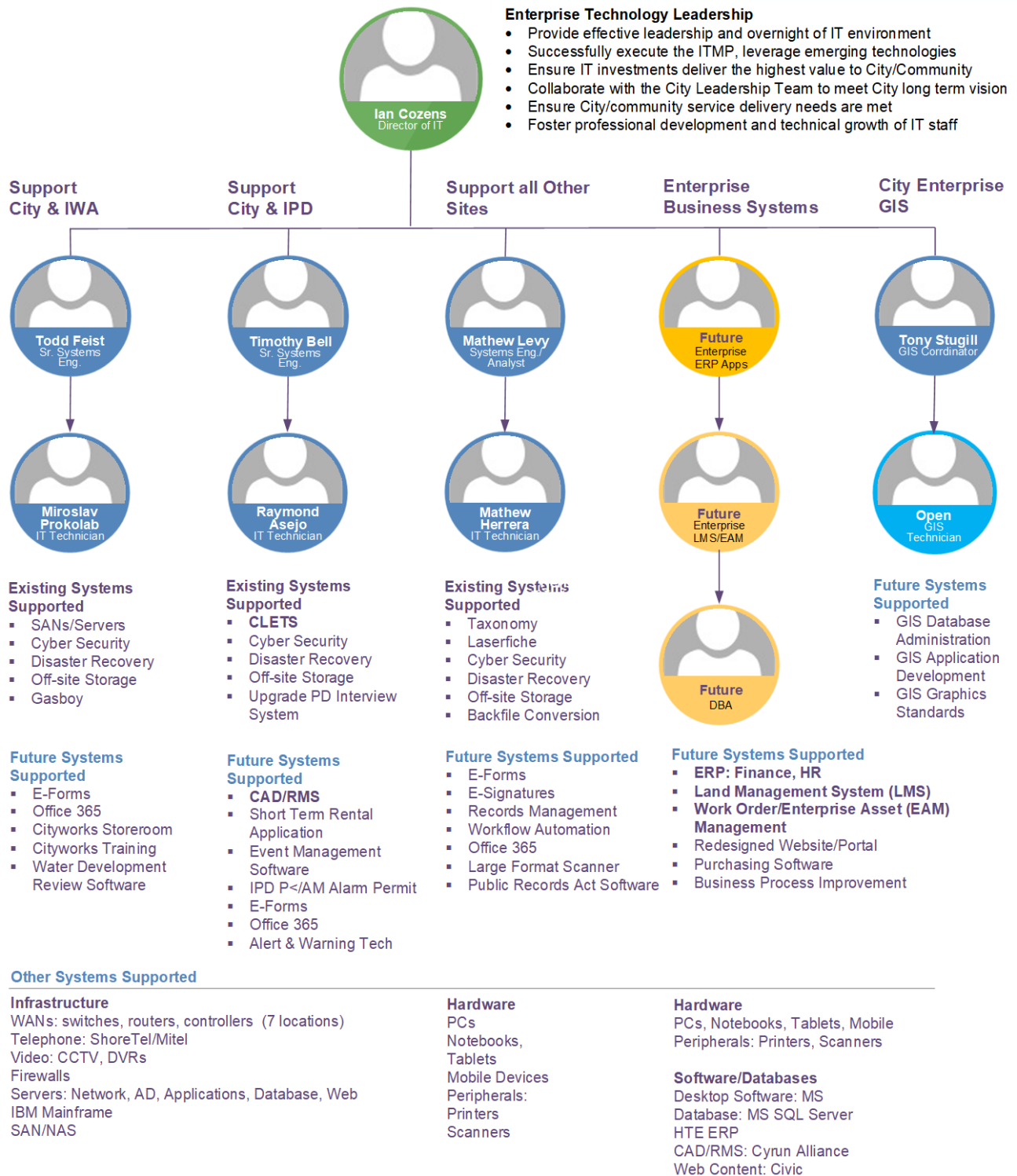
## Benefits:

- Minimized risk of failed enterprise system implementations
- City IT organization will be configured for the long-term sustainability of ITMP mission critical enterprise systems, including future Smart City applications utilizing broadband fiber
- Better management of overall staff allocation of resources
- Clearly defined responsibilities with focused tasks for each IT team
- Formal use of best practices will enhance requirements definition, project management and end user acceptance
- Streamlined workflow with specific staff responsibilities
- Increased staff professional development and accountability
- Enhanced customer support to City departments, business community, residents and visitors
- Foster IT Governance and the adherence to an Enterprise Architecture

Figure M 1.2, Proposed IT Organization, Staff and Responsibilities, on the next page provides an overview of the proposed IT organization, staffing, and related responsibilities.



**Figure M 1.2: Proposed IT Organization, Staff and Responsibilities**





**M 2 IT Governance**

Information Technology (IT) Governance is a best practice used by progressive organizations that seek to implement business controls that entail the proper planning, approving, budgeting and purchasing of Information Systems and professional services.

Adopting IT Governance best practice often requires cultural change in how Information Technology and the IT Department are perceived in the organization. It necessitates adjusting the relative importance assigned to successfully implementing and supporting strategic information systems.



IT Governance best practices include well-defined roles of all stakeholders (staff, IT staff, and the leadership team) to accomplish the following:

- Identify IT requirements that are responsive to the unique needs of each department.
- Specify IT solutions and required resources for the successful implementation of technology.
- Vet proposed projects prior to procuring Information Technologies.
- Ensure a common IT Enterprise Architecture.
- Prioritize IT initiatives and related expenditures.
- Optimize investments in IT by eliminating the procurement of duplicate technologies and taking advantage of economies of scale.

There is a whole body of knowledge on the ramifications of not having IT Governance. Some typical consequences are listed below:

- The IT organization lacks prior knowledge of technology procurements and finds out that they are required to support them after the fact.
- Lack of technology standards and inefficient use of limited IT funds.
- The IT staff is adversely impacted by having to support non-standard technologies, and in some cases (because of a lack of knowledge or expertise in non-standard systems) simply cannot support those non-standard technologies.
- Adversely affects customer service, because of a lack of knowledge on non-standard systems, the customer perception of the IT organization is poor.
- IT operational inefficiencies are impacted as IT staff are required to research and support systems that do not adhere to system standards.

**Findings:**

1. The City does not have a formal IT Governance process e.g. the PD has a check box on their procurement form but do not have a formal adopted process. This results in departments purchasing Information Systems that were not exactly the right systems, e.g., IWA and Code Enforcement.
2. Occasionally, a department is determined on adopting something another city had, and fell in love with it. And that's what they want. City leadership then have to get them to work together and reconsider their direction. Since the City went to a centralized IT approach, departments have gotten more used to working with the IT Director.
3. Without proper governance get a lot of completing priorities every project is a number 1 priority. This results in IT staff having to determine what to work on, for instance, how much



time to work on systems, balancing time and available staff resources. If priorities were set, IT staff would know what to work on.

4. Procurement process are not as clear as they could be. This results in the City Manager ending up not approving projects. If the City had an IT Governance process, it would address this challenge.

### **Recommendations:**

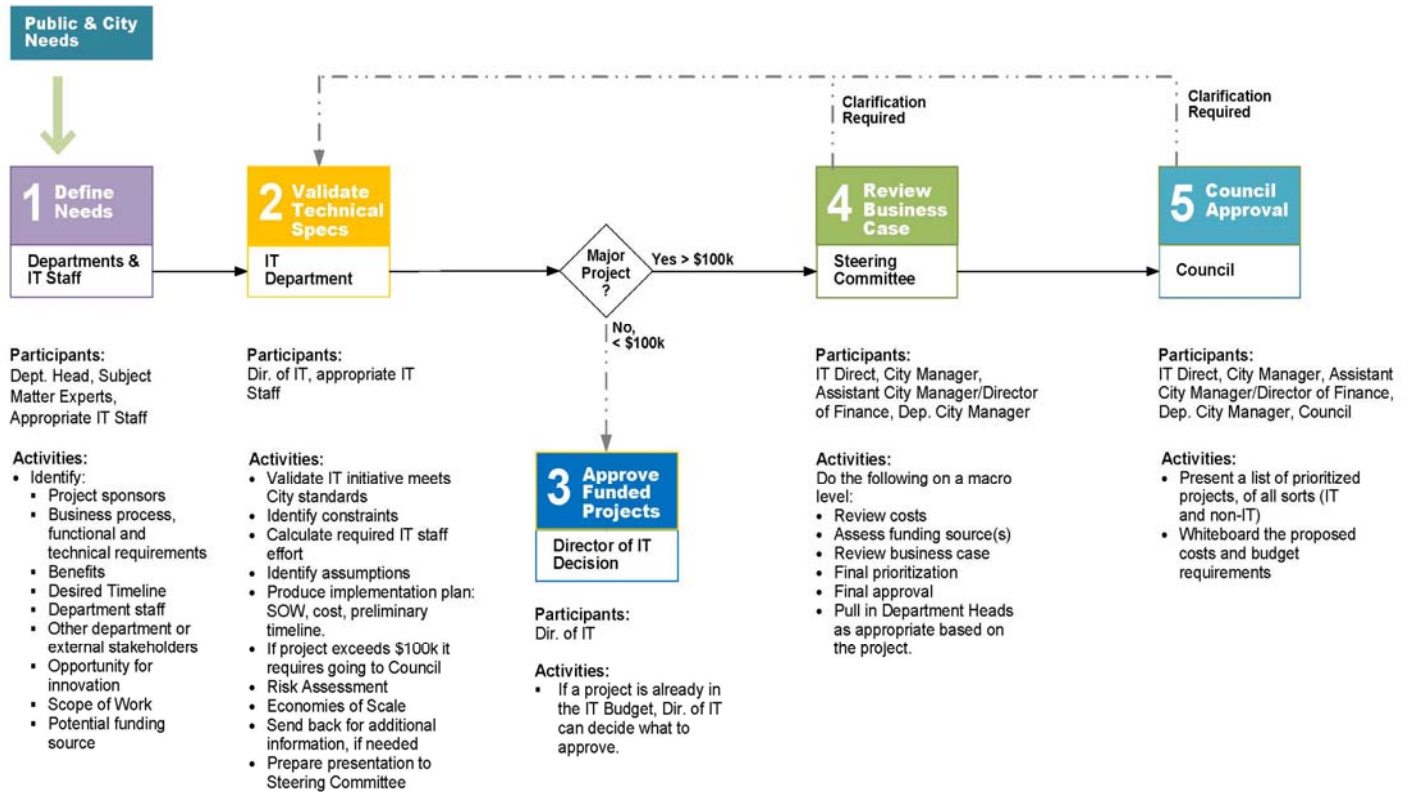
1. Adopt a formal IT Governance Framework providing business controls on the identification, selection, procurement and implementation of Information Technologies.
2. The framework will include a new process with appropriate policies and practices in support of IT Governance, aligned with existing City purchasing policies and practices. The proposed steps in the IT Governance process will include the following participants and activities
3. Adopt the IT Governance best practice produced with City management shown on the following page.

### **Benefits:**

- Allow the City to procure standard and strategic Information Technologies.
- Minimizing the risk of buying the wrong technologies.
- Take advantage of economies of scale when purchasing Information Technologies.
- Improves the IT Department's ability to effectively support the City's systems, end user operational needs and service delivery to the public.
- Aligns technology with the City's Business Strategy



Figure M 2.1: IT Governance Process



### M 3 Change Management

Change Management is the process, tools and techniques used to manage the people-side of changed business processes and new technologies to achieve the required outcomes. Change Management ensures effective change with staff and the wider organization.

#### Findings:

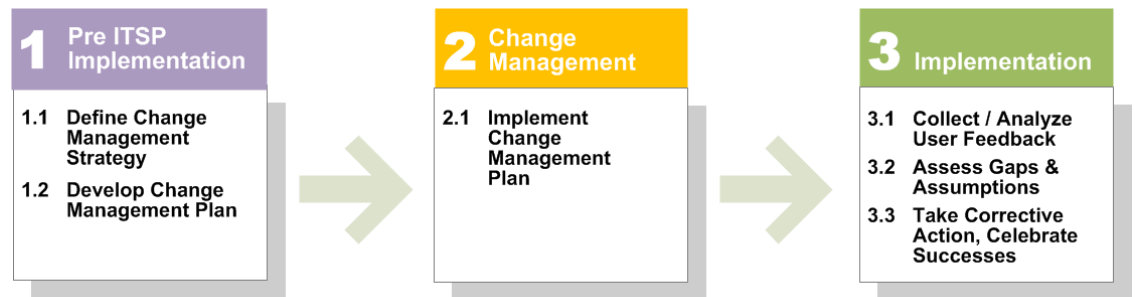
- The ITMP project identified a number of technology initiatives, e.g., a Work Order system, which if implemented correctly, will transform how the City operates and services are provided. This type of technology and organizational change will require effective change management to ensure the highest likelihood of success;

#### Recommendations:

- Adopt and implement Change Management Best Practices as ITMP initiatives are implemented. There are a number of Change Management models which can be considered. The one on the following page, Figure M 3.1: Proposed IT Change Management Model, is a common one which incorporates the key components of an effective Change Management program.



Figure M 3.1: Proposed IT Change Management Model



**Outputs**

- Identify sponsor structure, stakeholders roles and responsibilities
- Change Management Plan
  - Communication Plan
  - Sponsor Roadmap
  - Training Plan
  - Resistance Management Plan

**Outputs**

- Carry out ongoing Change Management activities

**Outputs**

- Compliance audit
- Correction action plans
- After action review

- Implement a formal Change Management Process, with the following activities:
  - **Sponsor Roadmap:** Identify the sponsor structure, stakeholder roles and responsibilities.
  - **Communication Plan:** Establish and execute a communication plan to support ITMP initiatives; possible components could include (but not be limited to) the following:
    - Publish an ITMP Newsletter posted on the City's Intranet, highlighting current and planned IT initiatives, highlighting how suggestions made by staff in the ITMP Project are being carried out. Celebrate End User and IT successes.
    - Publish an ITMP Newsletter posted on the City's Website, notify the public of planned and ongoing initiatives that will improve customer service. Celebrate E-Government success stories.
    - Establish End User Groups of newly deployed technologies.
    - Encourage and recognize the participation of "Super Users" (staff who become highly proficient in the use of new technologies).
    - Establish City, Community, Business, Regional Government forums to discuss ongoing and planned ITMP initiatives.
  - **Training Plan:** Implement the training recommendations in the ITMP, formalizing an ongoing IT training program for City staff. Develop a curriculum of classes, prerequisites, and course descriptions.
  - **Resistance Management Plan:** Provide feedback mechanisms for staff and management, such as:
    - Suggestion Box or User Tips on the City's Intranet.
    - End User Groups (Quality Circles) for different technologies and / or disciplines.
    - Implement the recommendation to adopt Business Process Improvement techniques where end users can work with an IT Business Analyst to identify new



requirements and / or shortcomings and feed-back loops on newly deployed technologies.

- Carryout a Post Implementation Evaluation of the ITMP on a yearly basis.
- Utilize performance measurement techniques to gauge the progress of the ITMP implementation.
- Make necessary adjustments to planned initiatives based on changing business and / or service delivery requirements.
- Make necessary changes to planned initiatives based on changes or innovations in technology that significantly affect the return on investment.

***Benefits:***

Change management will allow the City to achieve the following:

- Implement a formal process for facilitating the most efficient implementation of the ITMP initiatives, via clear executive sponsorship and leadership.
- Foster enterprise communication and coordination.
- Provide a mechanism to identify and address staff objections and resistance early, allowing the City to take steps to mitigate concerns and reduce risk before they become significant issues.
- Provide the highest likelihood of success.



## Section 5 Appendix



### 5.1 Glossary of Terms

	Term	Definition
1.	<b>Access Control</b>	The term “access control” denotes a technique used to define or restrict the rights of individuals or application programs to obtain data from, or place data onto, a storage device.
2.	<b>Administrator</b>	A role responsible for the day to day operation of the corporate records management policy. The tasks attributed to Administrators may be divided between several roles, with titles such as Records Manager, Records Officer, Archivist, etc.
3.	<b>As-Is Business Process Map</b>	Graphical business process model used to depict the existing condition of a business process. Used for the analysis of current business process steps and activities. Typically produced with input from business subject matter experts and business process owners.
4.	<b>Automated Workflow</b>	The tasks, procedural steps, organizations or people, required input and output information, and tools needed for each step in a business process. A workflow approach to analyzing and managing a business process can be combined with an object-oriented programming approach, which tends to focus on documents, data, and databases. This is commonly referred to as ‘Automated Workflow.’
5.	<b>Backbone</b>	Another term for bus, the main wire that connects nodes. The term is often used to describe the main network connections composing the Internet



	Term	Definition
6.	<b>Bulk Load</b>	An automatic data import of scanned documents utilizing the indexing schema attributes for subsequent search and retrieval of electronic documents / records stored in an ECMS.
7.	<b>Business Intelligence (BI)</b>	Often described as "the set of techniques and tools for the transformation of raw data into meaningful and useful information for business analysis purposes. BI technologies are capable of handling large amounts of unstructured data to help identify, develop and create new strategic business opportunities. BI allows for the easy interpretation of large volumes of data. Identifying new opportunities and implementing an effective strategy based on insights, providing businesses with a competitive market advantage. BI technologies provide historical, current and predictive views of business operations. Common functions of business intelligence technologies are reporting, online analytical processing, analytics, data mining, process mining, complex event processing, business performance management, benchmarking, text mining, predictive analytics and prescriptive analytics.
8.	<b>Business Process Improvement (BPI)</b>	Business process improvement (BPI) is a systematic approach to help an organization optimize its underlying processes to achieve more efficient results. The methodology was first documented in H. James Harrington's 1991 book Business Process Improvement.
9.	<b>CCTV</b>	Closed-circuit television (CCTV), also known as video surveillance, is the use of video cameras to transmit a signal to a specific place, on a limited set of monitors.
10.	<b>Change Management</b>	An approach to transitioning individuals, teams, and organizations to a desired future state. It focuses on how people and teams are affected by an organizational transition. It deals with many different disciplines, from behavioral and social sciences to information technology and business solutions. In a project management context, change management may refer to the change control process wherein changes to the scope of a project are formally introduced and approved.
11.	<b>Customer Relationship Management Software</b>	Customer Relationship Management, CRM, entails all aspects of interaction a company has with its customer, whether it be sales or service related.
12.	<b>Departmental Software</b>	Software providing functionality specific to a department in an organization, features and functions not required by any other department. In government, an example might be a Library Information System or Police Department 911 system, both systems which no other department requires. Departmental application software solves department specific problems and may integrate with enterprise systems.
13.	<b>DOD 5015.2</b>	Design Criteria Standard for Electronic Records Management Applications, DOD 5015.2-STD: A DOD and NARA approved set of requirements for Electronic Records Management applications.



	Term	Definition
14.	<b>E-Commerce</b>	E-commerce is business that is conducted over the Internet using any of the applications that rely on the Internet, including interactive and transactional functions, e.g., online payments, registration and application submittals.
15.	<b>E-Government</b>	A generic term that refers to any government functions or processes that are carried out in digital form over the Internet. Local, state and federal governments essentially set up central Web sites from which the public (both private citizens and businesses) can find public information, download government forms and contact government representatives.
16.	<b>Electronic Document Management System (EDMS)</b>	Functionality to support the computerized management of electronic and paper-based documents. Associated components include a system to convert paper documents to electronic form, a mechanism to capture documents from authoring tools, a database to organize the storage of documents, and a search mechanism to locate the documents.
17.	<b>Enterprise Architecture (EA)</b>	A discipline for proactively and holistically leading enterprise responses to disruptive forces by identifying and analyzing the execution of change toward desired business vision and outcomes. EA delivers value by presenting business and IT leaders with signature-ready recommendations for adjusting policies and projects to achieve target business outcomes that capitalize on relevant business disruptions.
18.	<b>Enterprise-wide</b>	Deployment or use of a single software application throughout all departments, divisions, or components of the organization.
10.	<b>Enterprise Content Management System (ECMS)</b>	An automated system with the functionality to capture, manipulate, retrieve, and publish the entire inventory of digital assets (e.g., web pages, office documents, databases, scanned images, e-mail) created by an organization.
20.	<b>Electronic Record</b>	The information recorded in a form that requires a computer or other machine to process it and that satisfies the legal definition of a record according to section 3301 of Title 44 of United States Code (USC).
21.	<b>Electronic Records Management System (ERMS)</b>	A collection of hardware, software, staff, policies, and procedures that work in concert to enable an agency to effectively manage records electronically. A software product that identifies, classifies, and disposes of records according to specified records disposition policies.
22.	<b>Enterprise Resource Planning System (ERP)</b>	Business management software that allows an organization to use a system of integrated applications to manage the business: e.g., Finance, Human Resources, Asset Management, Customer Relationship Management, Project Management, Business intelligence, to name a few.



	Term	Definition
23.	<b>Enterprise Software</b>	Enterprise applications (e.g. CRM, ERP, BI) assist an organization in solving enterprise/city-wide problems. They integrate with other enterprise systems.
24.	<b>E-Services</b>	The concept of e-service (short for electronic service) represents one prominent application of utilizing the use of information and communication technologies (ICTs) in different areas.  'E-Service constitutes the online services available on the Internet, whereby a valid transaction of buying and selling (procurement) is possible, as opposed to the traditional websites, whereby only descriptive information is available, and no online transaction is made possible.'
25.	<b>Ethernet</b>	A local-area network (LAN) architecture that uses a bus or star topology and supports data transfer rates of 10 Mbps.
26.	<b>Fiber Optics</b>	A high-bandwidth transmission technology that uses light to carry digital information. One fiber telephone cable carries hundreds of thousands of voice circuits. These cables, or light guides, replace conventional coaxial cables and wire pairs. Fiber transmission facilities occupy far less physical volume for an equivalent transmission capacity, which is a major advantage in crowded ducts. Optical fiber is also immune to electrical interference.
27.	<b>File Plan</b>	A document containing the identifying number, title, description, and disposition authority of files held or used in an office.
28.	<b>E-Forms</b>	Program development tools that build applications by designing electronic forms for data entry, update or processing. Electronic forms are generally designed with visual programming tools that allow fields, buttons and logos to be drawn directly on screen.
29.	<b>E-Signatures</b>	An electronic sound, symbol, or process attached to or associated with a contract or other record and used as the legal equivalent of a written signature.
30.	<b>Geographic Information System (GIS)</b>	GIS is a collection of computer hardware, software and geographic data for capturing, managing, analyzing and displaying every form of geographically referenced information, often called spatial data.
31.	<b>Image Capture (scanning)</b>	A process whereby documents are scanned into a system and stored electronically. Imaging is the digital capture, storage, manipulation and delivery of copies of digitized originals, which may be texts, manuscripts, pictures or other information types.
32.	<b>Infrastructure</b>	An enterprise's entire collection of hardware, software, networks, data centers and facilities used to develop, test, operate, monitor and/or support information technology services.
33.	<b>Interoperability</b>	The ability of software and hardware on different machines from different vendors to share data.



	Term	Definition
34.	<b>Internet Service Provider (ISP)</b>	Refers to a company that provides Internet services, including personal and business access to the Internet.
35.	<b>IT Governance</b>	The processes that ensures the effective and efficient use of IT in enabling an organization to achieve its goals. IT demand governance (what IT should work on) is the process by which organizations ensure the effective evaluation, selection, prioritization, and funding of competing IT investments; oversee their implementation; and extract measurable business benefits. ITG is a business investment decision-making and oversight process, and it is a business management responsibility. IT supply-side governance (how IT should do what it does) is concerned with ensuring that the IT organization operates in an effective, efficient and compliant fashion, and it is primarily a CIO responsibility.
36.	<b>ITS</b>	Short for Federal Intelligent Transportation Systems, it is a broad range of wireless and wired communications-based information and electronics technologies that are integrated into transportation system and in vehicles themselves. ITS is made up of 16 types of technology-based systems.
37.	<b>Life Cycle</b>	The records life cycle is the life span of a record from its creation or receipt to its final disposition. It is usually described in three stages: creation, maintenance and use, and final disposition.
38.	<b>Metadata</b>	In the context of records management, meta-data is the structured or semi-structured information which enables the creation, management and use of records through time and within and across domains in which they are created.
39.	<b>Open Data</b>	The idea that some data should be freely available to everyone to use and republish as they wish, without restrictions from copyright, patents or other mechanisms of control. The goals of the open data movement are similar to those of other "Open" movements such as open source, open hardware, open content, and open access. The term "open data" is recent, gaining popularity with the rise of the Internet and World Wide Web and, especially, with the launch of open-data government initiatives such as Data.gov and Data.gov.uk.
40.	<b>Optical Character Recognition (OCR)</b>	The recognition of printed or written text characters by a computer. This involves analysis of the scanned-in image and then translation of the character image into character codes, such as American Standard Code for Information Interchange (ASCII). OCR is applied to image (raster) files to create text-searchable files.
41.	<b>PBX System</b>	A private branch exchange (PBX) phone system that's delivered as a hosted service, typically by one of the major telephone companies.
42.	<b>Portable Document Format (PDF)</b>	This format is proprietary to Adobe Inc., and is widely used as a de-facto data exchange method.



	Term	Definition
43.	<b>ThirdWave Rapid Workflow Process Modeling®</b>	US Patent 8615423 B1: A method of rapid workflow process modeling, which is established according to a triangulation principle. The method integrates issues of management, operation and technology including information technology that are three fundamentals of a triangulation principle to characterize challenges and opportunities for process improvement of any organization including military units, governmental agencies and public and private business sectors. Specifically, the method is comprised of seven steps such as the As-Is process mapping, problem statements, impact statements, solution statements, benefit statements, To-Be process mapping and cost benefit analysis for generating a quantitative projection of the business cost reduction. Application of the method is able to comprehensively and effectively address challenges and opportunities for all aspects of the organizational process improvement.
44.	<b>Record</b>	The information, regardless of medium, that details business transactions. Records include all books, papers, maps, photographs, machine-readable materials, and other documentary materials, regardless of physical form or characteristics. Records are made or received by an Agency under Federal law or in connection with the transaction of public business. Records are preserved or appropriate for preservation by that Agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government, or because of the value of data in the record.
45.	<b>Records Manager</b>	Individuals who are responsible for records management administration.
46.	<b>Retention Period</b>	The length of time that a record must be kept before it can be destroyed. Records not authorized for destruction are designated for permanent retention. Retention periods for temporary records may be expressed in two ways: <ul style="list-style-type: none"> <li>• A fixed period from the time records in the series or system is created. Normally, a fixed period that follows their regular cutoff dates. For example, the phrase “destroy after 2 years” provides continuing authority to destroy records in a given series 2 years after their creation (normally 2 years after their regular cutoff date).</li> <li>• A fixed period after a predictable event. Normally, a fixed period following the systematic cutoff applied after completion of an event. The wording in this case depends on the kind of action involved.</li> </ul>
47.	<b>Retention Schedule</b>	A plan for the management of records listing types of records and how long they should be retained by the organization for business purposes; the purpose is to provide continuing authority to dispose of, transfer, or archive records.



	Term	Definition
48.	<b>SAN</b>	A Storage Area Network (SAN) is a network that provides access to consolidated, block level data storage. SANs are primarily used to enhance storage devices, such as disk arrays, tape libraries, and optical jukeboxes, accessible to servers so that the devices appear to the operating system as locally attached devices.
49.	<b>Service-Oriented Architecture (SOA)</b>	An architectural pattern in computer software design in which application components provide services to other components via a communications protocol, typically over a network. The principles of service-orientation are independent of any vendor, product or technology, Services can be combined to provide the functionality of a large software application. <sup>[3]</sup> SOA makes it easier for software components on computers connected over a network to cooperate. Every computer can run any number of services, and each service is built in a way that ensures that the service can exchange information with any other service in the network without human interaction and without the need to make changes to the underlying program itself.
50.	<b>Taxonomy</b>	The study of the general principles of scientific classification: systematics; classification; especially: orderly classification of plants and animals according to their presumed natural relationships. Taxonomy is a high-level, hierarchical classification for documents and records that facilitates the management (storage, access, retrieval, revision, archiving, and disposition) of recorded information throughout its life cycle. A taxonomy is a living document that changes as the work within the company changes. It is never final because organizations constantly change their content types, processes and organizational structures.
51.	<b>ThirdWave Strategic Planning Triangulation® Methodology</b>	ThirdWave's Strategic Planning Triangulation methodology is a powerful technique that facilitates validation of data through cross verification from two or more sources. This is accomplished by the collection and synthesis of data from three: Management perspective (Organizational, policy and finance), Operational perspective (business process and practices), and Information Technology perspective (enterprise-wide systems). In particular, it refers to the application and combination of several research methods in the study of the same phenomenon to produce comprehensive and thorough strategies based on a compelling business case.
52.	<b>To-Be Business Process Map</b>	Graphical business process model used to depict the future state (To-Be) condition of a business process. Used for the design of a reengineered business process steps and activities. Typically produced with input from business subject matter experts / business process owners.



	<b>Term</b>	<b>Definition</b>
53.	<b>Waterfall Methodology</b>	The waterfall model is a sequential design process, used in software development processes, in which progress is seen as flowing steadily downwards (like a waterfall) through the phases of conception, initiation, analysis, design, construction, testing, production/implementation and maintenance.
54.	<b>Web Browser</b>	Web browser is a software application used to locate, retrieve and display content on the World Wide Web, including Web pages, images and video.
55.	<b>Wi-Fi</b>	Wireless-Fidelity certification mark issued by the Wi-Fi Alliance to certify that a product conforms to the 802.11b, g and a standard for WLANs.
56.	<b>XO ISP Bandwidth</b>	Bandwidth Shaping. The process of manipulating, managing or controlling (shaping) portions of a network connection to the outside world and determining an allowed bandwidth consumption based on types of activities. The term is commonly used in conjunction with Internet Service Providers (ISP), where it refers to a tool that is used to limit or direct bandwidth consumption by users.

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## Information Technology Master Plan & Roadmap

**Volume 2: ITMP Roadmap**  
March 27, 2020

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## Section 1 Introduction



### 1.1 Introduction to the ITMP Implementation Roadmap

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



Volume 1 of the ITMP Roadmap, Information Technology Master Plan Findings and Recommendations document articulates “what” should be undertaken. This document is a management tool that defines “when” ITMP Roadmap initiatives might be carried out and what investment.

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

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

- The criteria used to prioritize ITMP Roadmap Initiatives;
- Implementation Roadmap over a 6-year timeline; and,
- Resources required to sustain the ITMP implementation.



## 1.2 ITMP Vision, Mission and Values

The following outlines the City of Indio's ITMP Implementation Roadmap vision, mission and values:

### *Vision*

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



### *Mission*

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

### *Implementation Values*

Information Technology actions are guided by three values integral to everything the City's IT organization does:

**Excellence:** Lead with a clear vision, communicate, form partnerships, and take full ownership and responsibility in fulfilling our mission. Our Information technology work is relevant, timely, and delivered with superior customer service that reflects our commitment to collaboration and the highest standards of quality.

**Transparency:** Uphold a standard of municipal transparency, accountability, and reliability. We conscientiously run our IT operations to promote a City workforce that is worthy of the public trust.

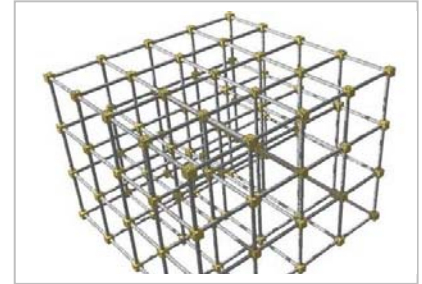
**Innovation:** Constantly seek new ways to accomplish our work through efficiencies and collaboration to generate extraordinary transformative results. We are dedicated to delivering creative, innovative and forward-looking technology solutions.



### 1.3 ITMP Roadmap Framework

The ITMP Roadmap will foster a transformative framework for how the City leverages its Information Technologies.

The City of Indio will embrace Information Technology as a strategic enabler, embedding it as a critical and fundamental component in all the City does. The City will continue to ensure the use and application of Information Technologies stays aligned with and supportive of an efficient and responsive delivery of services to all of the City's constituents – residents, businesses, and visitors.



By aligning Information Technology in support of the City's business and service delivery processes, Indio will become a more agile organization that is better able to support the City's unique community. Moreover, the Roadmap will allow the City to leverage emerging and evolving technologies. Through investment in IT, the City will develop and implement innovative and cost-effective approaches for improving the quality and delivery of needed services to its constituents.

### 1.4 ITMP Implementation Roadmap Objectives

The objectives of the ITMP Implementation Roadmap are to:

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



## 1.5 ITMP Implementation Roadmap Guiding Principles

ThirdWave recommends that the City of Indio adopt a new set of guiding principles related to the implementation of Information Technologies. Many of the following have not historically been in place due to the City’s business model and limited IT staff.



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

- 1. Leadership** Embrace technology as a strategic enabler and utilize IT to improve the way City staff perform their jobs and deliver services to residents and businesses.
- 2. Communications** Foster effective communications between the City and constituents to keep all parties involved and informed on the progress of IT initiatives. Indio will keep the public informed on the use of technology in the City via its website, Open Data/Citizen Engagement and other means.
- 3. IT Governance** Adopt a formal management process to ensure that IT initiatives are properly vetted for consistency with the ITMP Implementation Roadmap, IT industry trends, are fiscally sound, and are effective in improving operating efficiencies and customer service prior to proceeding with IT initiatives.
- 4. Enterprise Approach** Encourage an enterprise approach when procuring, implementing and managing the City’s Information Technologies. The City will utilize state-of-the-practice technology ensuring investments are effectively leveraged across departments, businesses and constituents while employing economies of scale wherever possible. Information Technologies will foster cost containment and/or the highest return on investments possible.
- 5. Accountability** Create an environment that encourages accountability through service level agreements, performance measures and individual responsibility, including the City contracted service providers.
- 6. Proven Technology** Implement contemporary, but proven, technologies that maximize future options by emphasizing open standards. Applications should use Commercial Off-the-Shelf software wherever possible, and should be web based, wireless ready, employing a Service Oriented Architecture, and GIS compatible, where appropriate and applicable.



- 
- 7. Efficiencies** Decisions regarding funding for future technology initiatives should be based on a Business Process Improvement assessment using a formal and standard Continuous Improvement methodology. The resulting data will be used to produce a comprehensive business case that takes both tangible and intangible costs and benefits of the project into account.
- 
- 8. Strategic Investments** IT assets, systems, skills and support operations will be viewed as strategic investments that are critical in attaining internal City-wide business and external service delivery objectives.
- 
- 9. Partnerships** The City will maintain partnerships with outside Information technology firms, consultants and regional government organizations to undertake collaborative efforts in the provision of information and services, and obtain expert advice and knowledge of IT trends.
- 
- 10. Accessibility** Implement Information Technology that provides all internal and external customers easy and timely access to online information and services. The City will strive to make data available for the benefit of the public subject only to the need to protect the privacy of individuals.



## Section 2 ITMP Initiatives



### 2.1 Technology Initiatives

Volume I, ITMP Findings and Recommendations, identified management, business process and technology solutions for enhancing the organization and service delivery environment at City of Indio over the next five years.

The initial list of potential ITMP Roadmap initiatives was consolidated, reduced and prioritized in this document, bringing the final number to forty-six (46) technology initiatives. The final list relates to five Information Technology categories: infrastructure, hardware, departmental software, enterprise software, and E-Government solutions.



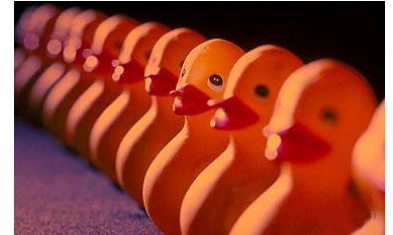
Other solutions in the ITMP Findings & Recommendation document, not contained in this document, include operational and/or policy recommendations related to the use, operation and management of the City's IT portfolio.

IT solutions identified in the requirements definition phase of the project were vetted to produce the final list used in the prioritization process. Information Technology initiatives are described in some detail in Volume 1: ITMP Findings & Recommendations document, February 28, 2020, which will act as a reference document over the five year duration of the Roadmap.



## 2.2 Prioritization Criteria & Process

The ITMP Roadmap initiatives were processed through a prioritization model that included a range of performance parameters aligned with common municipal business objectives and tangible internal/public benefits. The criteria was used by the City and the ThirdWave Project Team to identify a preliminary sorting of initiatives. A final prioritization was carried out taking into account technology prerequisites, related applications, optimum sequencing of IT initiatives and investment balancing.



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

**Figure 2.2.1: ITMP Roadmap Initiative Prioritization Criteria**

### Business Case Benefit Rating

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

### Prioritization Application of Criteria

- 1. Internal or External ITMP Requirements**
  - The number of times an initiative was identified in the requirements definition phase of the project, including the Rapid Workflow® workshops, Management Interviews, Online Staff Survey, and/or IT Focus Groups;
  - Provides the architecture and infrastructure required to implement other key projects;
  - Facilitates collaboration; and/or.
  - Provides an enterprise solution, highly leverageable, benefiting the City as a whole.
- 2. Improved Staff Productivity**
  - Staff time savings;
  - Fosters internal operating efficiencies;
  - Improves organizational practices, aligning them with enterprise/departmental goals; and/or,
  - Enhances the ability to share data.
- 3. Improved Customer Services**
  - Significantly improves customer service;
  - Provides online 24x7 convenience; and/or,
  - Provides Web-enabled services for faster/easier service to the public.



4. Cost Savings

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

5. Revenue Generation

- Provides the potential of increased revenues in a variety of instances where the City collects fees for services.

Figure 2.2.2 below provides a list of the final technology initiatives identified in the prioritization process, grouped into yearly phases for management consideration and budgeting. Some of the initiatives listed below were broken out into phased deployments; therefore, the number of initiatives shown below and the actual number of initiatives in the implementation may differ.

Figure 2.2.2: Prioritized ITMP Roadmap Technology Initiatives

Legend:

- M Management Initiatives
- OPS IT Operations
- INF Infrastructure Systems
- HW Hardware
- DSW Departmental Software
- ESW Enterprise Software
- EGOV E-Government Applications

Year 1	Type	Initiative
1.	INF 4	Replace SANs
2.	D SW 2	CLETS Connection
3.	E SW 1	Enterprise Taxonomy
4.	E SW 2	Laserfiche ECMS Strategy
5.	OP 8	Cyber Security Assessment
6.	E SW 11	New LMS - Process Mapping
7.	D SW 8	WO/Asset Management
8.	E SW 15	GIS Master Plan
9.	OP 9	GIS Training

Year 2	Type	Initiative
1.	INF 3	Data Center Disaster Recovery
2.	INF 6	Adopt Off-Site Storage
3.	E GOV 1	Website Redesign/Portal/CMS
4.	D SW 5	Short Term Rental Application
5.	E SW 13	Event Management Software



Year 3	Type	Initiative
1.	D SW 6	PD PM/AM Alarm Permit Data
2.	D SW 3	Purchasing Software
3.	D SW 9	Migrate CityTech & GasBoy
4.	E SW 6	E-Forms
5.	OP 6	Disaster Recovery/Business Continuity Plan
6.	E SW 14	Office 365

Year 4	Type	Initiative
1.	E SW 5	Workflow Automation
2.	HW 4	Large Format Scanner
3.	E SW 12	Public Records Act Application
4.	D SW 4	CityWorks Storeroom
5.	M 10	Cityworks Role-based Training

Year 5	Type	Initiative
1.	D SW 12	Alert & Warning Technology
2.	D SW 7	Water Development Review Software
3.	OP 2	Permit Fee Process
4.	OP 3	Track Quote and Packing Slip
5.	OP 5	System Policies & Procedures

Year 6	Type	Initiative
1.	E SW 3	Records Management
2.	D SW 10	Upgrade PD Interview System
3.	E SW 8	Backfile Conversion
4.	M 4	Explore E-Signature Policy
5.	HW 1	Exchange Server Upgrade

A description of each strategic initiative listed above is provided in the *Volume 1: ITMP Findings & Recommendations* document.



## Section 3 Budget Estimate



### 3.1 Budget Overview

The budget estimate reflects a comprehensive analysis, drawing on specific data collected in the course of the ITMP Roadmap project. It provides a management planning budgeting tool.

While every effort has been made to project the approximate cost of the proposed ITMP initiatives (i.e., gross order of magnitude estimates), the City should be aware that technology hardware and software vendor prices vary widely, both in pricing models, product suites, bundling and maintenance options.



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

The following pages provide high level budget estimates, or investment requirements, for a phased 6-year implementation of the City of Indio's ITMP Roadmap.

It should be noted that the budget estimate represents gross level of effort estimates using the most currently available data; **it does not represent a price quote**. Furthermore, the budget estimates do not include detailed and/or total training costs, data conversion costs, systems integration and other system related costs. These costs can only be developed after a detailed specification and scope of work has been articulated.





Figure 3.2.1: ITMP Roadmap 6-Year Estimated Investment

Investment by Year			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
<b>YEAR 1</b>									
1	INF 4	Replace SANs	25,000	6,250	6,250	6,250	6,250	6,250	
2	D SW 2	CLETS Connection	0	0	0	0	0	0	
3	E SW 1	Enterprise Taxonomy	25,000	0	0	0	0	0	
4	E SW 2	Laserfiche ECMS Strategy	25,000	0	0	0	0	0	
5	OP 8	Cyber Security Assessment	75,000	0	0	0	0	0	
6	E SW 11	New LMS - Process Mapping	5,000	0	0	0	0	0	
7	D SW 8	WO/Asset Management - Cityworks (1)	100,000	56,000	56,000	56,000	56,000	56,000	
8	E SW 15	GIS Master Plan	100,000	0	0	0	0	0	
9	M 11	GIS Training	5,000				0	0	
			<b>360,000</b>	<b>62,250</b>	<b>62,250</b>	<b>62,250</b>	<b>62,250</b>	<b>62,250</b>	
<b>YEAR 2</b>									
1	INF 3	Data Center Disaster Recovery		0	0	0	0	0	
2	INF 6	Adopt Off-Site Storage		0	0	0	0	0	
3	EGOV 1	Website Redesign/Portal/Content Management		100,000	6,250	6,250	6,250	6,250	
4	D SW 5	Short Term Rental Application		125,000	18,750	18,750	18,750	18,750	
5	E SW 13	Event Management Software		125,000	18,750	18,750	18,750	18,750	
			<b>0</b>	<b>350,000</b>	<b>43,750</b>	<b>43,750</b>	<b>43,750</b>	<b>43,750</b>	
<b>YEAR 3</b>									
1	D SW 6	PD PM/AM Alarm Permit Data			70,000	12,500	12,500	12,500	
2	D SW 3	Purchasing Software			150,000	20,000	20,000	20,000	
3	D SW 9	Migrate CityTech & GasBoy			40,000	0	0	0	
4	E SW 6	E-Forms			25,000	7,500	7,500	7,500	
5	OP 6	Disaster Recovery/Business Continuity Plan			50,000	0	0	0	
6	E SW 14	Office 365 (2)				67,000	67,000	67,000	
			<b>0</b>	<b>0</b>	<b>335,000</b>	<b>107,000</b>	<b>107,000</b>	<b>107,000</b>	
<b>YEAR 4</b>									
1	E SW 5	Workflow Automation				45,000	5,000	5,000	
2	HW 4	Large Format Scanner				28,000	0	0	
3	E SW 12	Public Records Act Application				100,000	12,500	12,500	
4	D SW 4	CityWorks Storeroom				0	0	0	
5	M 10	Cityworks Role-based Training				10,000	0	0	
			<b>0</b>	<b>0</b>	<b>0</b>	<b>183,000</b>	<b>17,500</b>	<b>17,500</b>	
<b>YEAR 5</b>									
1	D SW 12	Alert & Warning Technology					100,000	0	
2	D SW 7	Water Development Review Software					100,000	0	
3	OP 2	Permit Fee Process					0	0	
4	OP 3	Track Quote and Packing Slip					0	0	
5	OP 5	System Policies & Procedures					0	0	
			<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>200,000</b>	<b>0</b>	
<b>YEAR 6</b>									
1	E SW 3	Records Management						50,000	
2	D SW 10	Upgrade PD Interview System						100,000	
3	E SW 8	Backfile Conversion						90,000	
4	M 4	Explore E-Signature Policy						0	
5	HW 1	Exchange Server Upgrade						23,500	
			<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>263,500</b>	
			<b>360,000</b>	<b>412,250</b>	<b>441,000</b>	<b>396,000</b>	<b>430,500</b>	<b>494,000</b>	
								<b>6 Year Total</b>	<b>2,533,750</b>



**Note:**

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

The footnotes below provide a synopsis of assumptions for each of the ITMP initiatives listed over the 6-year timeline. The foregoing assumes all projects deployments will be preceded by the development of formal functional and technical requirements, development of a comprehensive Request for Proposal document where appropriate and will utilize competitive solicitations processes to contain costs.

**Year 1**

- 1 INF 4 **Replace SANs:** This cost reflects an initiative that will entail the City's IT staff performing this work, therefore there is no associated cost.
- 2 D SW 2 **CLETS Connection:** This cost reflects either interfacing with RSO (Riverside Sherriff's Office) instead of Cathedral City or getting a direct CLETS connection at Indio PD.
- 3 E SW 1 **Enterprise Taxonomy:** This cost reflects an initiative that will entail professional services.
- 4 E SW 2 **Laserfiche ECMS Strategy:** This cost reflects an initiative that will entail professional services.
- 5 OP 8 **Cyber Security Assessment:** This cost reflects an initiative that will entail professional services provided by a consultant.
- 6 E SW 11 **New LMS – Process Mapping:** This cost reflects an initiative that will entail professional services provided by a consultant.
- 7 D SW 8 **WO/Asset Management:** This cost reflects an initiative that will entail software and professional services provided by a Systems Integrator, in addition to ongoing software maintenance costs. This initiative will require the participation of City subject matter experts.
- 8 E SW 15 **GIS Master Plan:** This cost reflects an initiative that will entail professional services provided by a consultant.
- 9 M 11 **GIS Training:** This cost reflects an initiative that will entail professional training services provided by a consultant.

**Year 2**

- 1 INF 3 **Data Center Disaster Recovery:** This cost reflects an initiative that will entail the City's IT staff performing this work, therefore there is no associated cost.
- 2 INF 6 **Adopt Off-Site Storage:** This cost reflects an initiative that will entail software and professional services provided by a Systems Integrator, in addition to ongoing software maintenance costs. This initiative will require the participation of City subject matter experts.
- 3 E GOV 1 **Website Redesign/Portal/CMS:** This cost reflects an initiative that will entail professional web development services provided by a consultant.
- 4 D SW 5 **Short Term Rental Application:** This cost reflects an initiative that will entail software and professional services provided by a Systems Integrator, in addition to ongoing



software maintenance costs. This initiative will require the participation of City subject matter experts.

- 5 E SW 13 **Event Management Software:** This cost reflects an initiative that will entail software and professional services provided by a Systems Integrator, in addition to ongoing software maintenance costs. This initiative will require the participation of City subject matter experts.

**Year 3**

- 1 D SW 6 **PD PM/AM Alarm Permit Data:** This cost reflects an initiative that will entail software and professional services provided by a Systems Integrator, in addition to ongoing software maintenance costs. This initiative will require the participation of City subject matter experts.
- 2 D SW 3 **Purchasing Software:** This cost reflects an initiative that will entail software and professional services provided by a Systems Integrator, in addition to ongoing software maintenance costs. This initiative will require the participation of City subject matter experts.
- 3 D SW 9 **Migrate CityTech & GasBoy:** This cost reflects an initiative that will entail software and professional services provided by a Systems Integrator, in addition to ongoing software maintenance costs. This initiative will require the participation of City subject matter experts.
- 4 E SW 6 **E-Forms:** This cost reflects an initiative that will entail software and professional services provided by a Systems Integrator, in addition to ongoing software maintenance costs.
- 5 OP 6 **Disaster Recovery/Business Continuity Plan:** This cost reflects an initiative that will entail professional services.
- 6 E SW 14 **Office 365:** This cost reflects an initiative that will entail the City's IT staff performing this work, therefore there is no associated cost.

**Year 4**

- 1 E SW 5 **Workflow Automation:** This cost reflects an initiative that will entail software and professional services provided by a Systems Integrator, in addition to ongoing software maintenance costs. This initiative will require the participation of City subject matter experts.
- 2 HW 4 **Large Format Scanner:** These costs reflect the purchase of equipment.
- 3 E SW 12 **Public Records Act Application:** This cost reflects an initiative that will entail software and professional services provided by a Systems Integrator, in addition to ongoing software maintenance costs. This initiative will require the participation of City subject matter experts.
- 4 D SW 4 **CityWorks Storeroom:** This cost reflects an initiative that will entail additional software licenses for an existing system and the deployment by City IT staff. This initiative will require the participation of City subject matter experts, therefore there is no associated cost.
- 5 M 10 **Cityworks Role-based Training:** This cost reflects an initiative that will entail professional training services provided by a consultant.



**Year 5**

- 1 D SW 12 **Alert & Warning Technology:** This cost reflects an initiative that will entail software and professional services provided by a Systems Integrator, in addition to ongoing software maintenance costs. This initiative will require the participation of City subject matter experts.
- 2 D SW 7 **Water Development Review Software:** This cost reflects an initiative that will entail software and professional services provided by a Systems Integrator, in addition to ongoing software maintenance costs. This initiative will require the participation of City subject matter experts.
- 3 OP 2 **Permit Fee Process:** This process improvement recommendation does not have a cost associated to it, as it will be carried out by IT and staff.
- 4 OP 3 **Track Quote and Packing Slip:** This process improvement recommendation does not have a cost associated to it, as it will be carried out by IT and staff.
- 5 OP 5 **System Policies & Procedures:** This initiative includes the development of a number of policies currently missing in IT. It does not have a cost associated to it, as it will be carried out by IT and staff.

**Year 6**

- 1 E SW 3 **Records Management:** This cost reflects an initiative that will entail software and professional services provided by a Systems Integrator, in addition to ongoing software maintenance costs. This initiative will require the participation of City subject matter experts.
- 2 D SW 10 **Upgrade PD Interview System:** This cost reflects an initiative that will entail software and professional services provided by a Systems Integrator, in addition to ongoing software maintenance costs. This initiative will require the participation of City subject matter experts.
- 3 E SW 8 **Backfile Conversion:** This cost reflects an initiative that will entail professional services.
- 4 M 4 **Explore E-Signature Policy:** This cost reflects an initiative that will entail the City's IT staff performing this work, therefore there is no associated cost.
- 5 HW 1 **Exchange Server Upgrade:** This cost reflects an initiative that will entail the City's IT staff performing this work, therefore there is no associated cost.



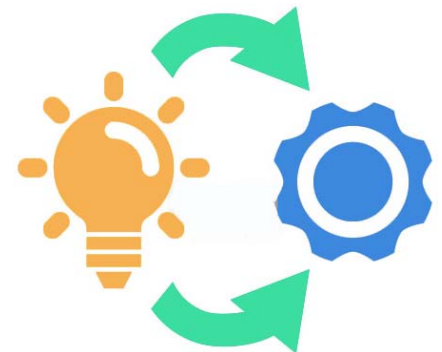
## Section 4 6-Year ITMP Roadmap



### 4.1 ITMP Roadmap Implementation Principles

The ITMP Roadmap illustrates the prioritized sequencing and projected timelines for strategic initiatives over a 6-year period. The Roadmap represents the logical and well-planned construction phase of the IT Strategic Plan.

The following pages provide yearly project schedules reflecting the final prioritized IT Initiatives identified in the ITMP Roadmap Project *as of this writing*. However, it bears noting that this Roadmap is a living document. **As a planning and implementation document, this document is subject to continuous review and adjustment as the City's organization needs, financial position, technologies emerge, and the City's Information Technology portfolio changes.**



#### 4.1.1 Technology Implementation Principles

The ITMP Implementation Roadmap adheres to a framework comprised of a number of general operating principles, as outlined below:

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

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



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

For instance, the implementation of a city-wide Work Order/Asset Management System will meet the needs for several departments; deployment of an enterprise taxonomy (naming convention) for Laserfiche will allow all city department to leverage that investment across numerous, if not all, departments.

**3. *Provide staff with sufficient tools of the trade.***

The ITMP Roadmap focuses on providing staff with the fundamental tools needed to provide City services to the Indio community, i.e., contemporary departmental and enterprise application software, mobile devices, and web-enabled service delivery solutions.

**4. *Recognize deployment prerequisites.***

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

**5. *Utilize parallel deployment approaches to fast track initiatives.***

Some ITMP Roadmap initiatives will occur in parallel using appropriate IT resources and/or service providing firms to execute IT projects and initiatives. In the case of Indio, who is implementing several large systems at once (ERP, Land Management, CAD/RMS and Asset Management systems), this will require rigorous coordination and communication, within the IT organization and between IT and city departments.

**6. *Use IT best practices for the execution and management of ITMP Roadmap initiatives.***

All development and implementation projects will use formal industry standard PMBOK® (the Project Management Institute's *Project Management Body of Knowledge*) Project Management methodology and a uniform Enterprise Architecture, Structured Development Life Cycle (SDLC) methods will be employed by vendors and City IT in the implementation of ITMP initiatives.

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

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



## 4.2 6-Year Implementation Timeline

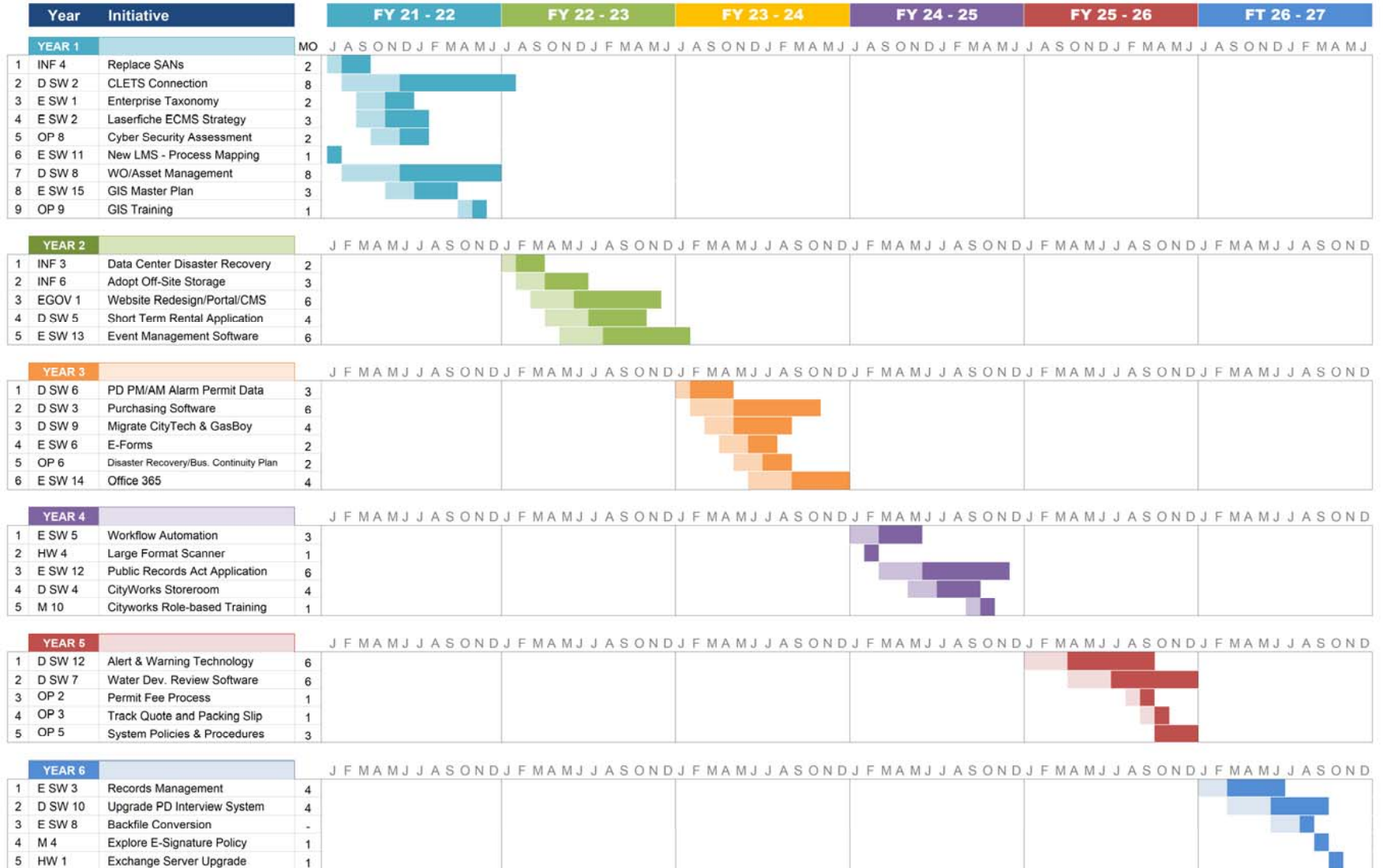
The figure on the following page (4.2.1) provides an overview of the proposed 6-year ITMP Roadmap. In general, the 6-year plan follows the prioritization identified in Section 2 of this document. The following should be noted:

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





Figure 4.2.1: Overall 6-Year Implementation Roadmap





**Note:**

The numbers shown in the “MO” column indicate the number of months for the implementation of an ITMP initiative, shown with the dark colored bar. It does not include the front-end work to develop requirements or carry out a solicitation.

**Implementation Assumptions:**

The footnotes below provide a synopsis on the implementation approach for each of the ITMP initiatives listed over the 6-year timeline. The number in the parenthesis indicates the estimated duration of each initiative in months. The foregoing project timelines assume all project deployments will use formal PMBOK™ Project Management and Change Management Best practices.

**Year 1**

- 1 INF 4 **Replace SANs (2):** This initiative assumes a 2-month timeline to procure the necessary systems and 1 deploy. This initiative will be carried out by City IT staff.
- 2 D SW 2 **CLETS Connection (8):** This initiative assumes a 4-month timeline to: develop detailed technical and functional requirements, RFP and go through a formal procurement process if required, or work with the Riverside Sheriff's Office, followed by the deployment estimated to take 8 months.
- 3 E SW 1 **Enterprise Taxonomy (2):** This initiative assumes a 2-month timeline to execute a solicitation to retain a consultant to develop a records retention policy for the City, estimated to take 2 months.
- 4 E SW 2 **Laserfiche ECMS Strategy (3):** This initiative assumes a 3-month timeline to retain a consultant to provide professional services, deployment estimated to take 3 months.
- 5 OPS 8 **Cyber Security Assessment (2):** This initiative assumes a 2-month timeline to retain a consultant to provide professional services, an initiative estimated to take 2 months.
- 6 E SW 11 **New LMS – Process Mapping (1):** This initiative assumes a 1-month timeline to retain a consultant to carry out a business process improvement initiative.
- 7 D SW 8 **WO/Asset Management (8):** This initiative assumes a 4-month timeline to: develop detailed technical and functional requirements, RFP and go through a formal procurement process followed by the deployment estimated to take 8 months.
- 8 E SW 15 **GIS Master Plan (3):** This initiative assumes a 2-month timeline to: develop detailed technical and functional requirements, RFP and go through a formal procurement process followed by the deployment estimated to take 3 months.
- 9 M 11 **GIS Training (1):** This initiative assumes a 1-month timeline to go through a formal procurement process followed by consultant training estimated to take up to 30 days.

**Year 2**

- 1 INF 3 **Data Center Disaster Recovery (2):** This initiative assumes a 1-month timeline assessment to develop detailed technical and functional requirements and go through the procurement process followed by the deployment estimated to take 2 months.
- 2 INF 6 **Adopt Off-Site Storage (3):** This initiative assumes a 2-month timeline to develop detailed technical and functional requirements, go through the procurement process followed by the off-site storage deployment estimated to take 3 months.



- 3 EGOV 1 **Website Redesign/Portal/Content Management (6):** This initiative assumes a 2-month timeline to: develop detailed technical and functional requirements, RFP and go through a formal procurement process followed by the deployment estimated to take 6 months.
- 4 D SW 5 **Short Term Rental Application (4):** This initiative assumes a 3-month timeline to: develop detailed technical and functional requirements, RFP and go through a formal procurement process followed by the deployment estimated to take 6 months.
- 5 E SW 13 **Event Management Software (6):** This initiative assumes a 3-month timeline to: develop detailed technical and functional requirements, RFP and go through a formal procurement process followed by the deployment estimated to take 6 months.

**Year 3**

- 1 D SW 6 **PD PM/AM Alarm Permit Data (3):** This initiative assumes a 1-month timeline to: develop detailed technical and functional requirements and retain a consultant to execute the work, estimated to take one month.
- 2 D SW 3 **Purchasing Software (6):** This initiative assumes a 3-month timeline to: develop detailed technical and functional requirements, RFP and go through a formal procurement process followed by the deployment estimated to take 6 months.
- 3 D SW 9 **Migrate CityTech & GasBoy (4):** This initiative assumes a 2-month timeline to: develop detailed technical and functional requirements, RFP and go through a formal procurement process followed by the deployment estimated to take 4 months.
- 4 E SW 6 **E-Forms (2):** This initiative assumes a 2-month timeline to develop detailed technical and functional requirements, RFP and go through a formal procurement process followed by the deployment estimated to take 2 months.
- 5 OPS 6 **Disaster Recovery/Business Contunity Plan (2):** This initiative assumes a 2-month timeline to retain a consultant to provide professional services, an initiative estimated to take 2 months.
- 6 E SW 14 **Office 365 (4):** This initiative assumes a 2-month timeline to develop detailed technical and functional requirements and go through the procurement process followed by the deployment estimated to take 4 months.

**Year 4**

- 1 E SW 5 **Workflow Automation (3):** This initiative assumes a 2-month timeline assessment to develop detailed technical and functional requirements and go retain a consultant to implement the software, estimated to take 3 months to develop representative workflows. (The development of workflows will be an ongoing task carried out by IT staff or consultants.)
- 2 HW 4 **Large Format Scanner (1):** This initiative assumes a 1-month to develop the technical specification and procure the scanner.
- 3 E SW 12 **Public Records Act Application (6):** This initiative assumes a 3-month timeline to: develop detailed technical and functional requirements, RFP and go through a formal procurement process followed by the deployment estimated to take 6 months.
- 4 D SW 4 **CityWorks Storeroom (4):** This initiative assumes a 2-month timeline to retain professional services and 1 month for a consultant to configure CityWorks Storeroom.



- 5 M 10 **Cityworks Role-based Training (1):** This initiative assumes a 1-month to retain professional services to provide training to City staff.

**Year 5**

- 1 D SW 12 **Alert & Warning Technology (6):** This initiative assumes a 3-month timeline to: develop detailed technical and functional requirements, RFP and go through a formal procurement process followed by the deployment estimated to take 6 months.
- 2 D SW 7 **Water Development Review Software (6):** This initiative assumes a 3-month timeline to: develop detailed technical and functional requirements, RFP and go through the procurement process followed by the deployment estimated to take 6 months.
- 3 OP 2 **Permit Fee Process (1):** This initiative assumes a 1-month to retain professional services and 1-month to carry out business process improvement services.
- 4 OP 3 **Track Quote and Packing Slip (1):** This initiative assumes a 1-month to retain professional services and 1-month to carry out business process improvement services.
- 5 OP 5 **System Policies & Procedures (3):** This initiative assumes a 3-months for City IT staff to produce various system policies and procedures.

**Year 6**

- 1 E SW 3 **Records Management (4):** This initiative assumes a 2-month timeline assessment to retain a consultant to implement the Laserfiche records management module, estimated to take 2 months.
- 2 D SW 10 **Upgrade PD Interview System (4):** This initiative assumes a 3-month timeline to develop detailed technical and functional requirements, go through the procurement process followed by the off-site storage deployment estimated to take 4 months.
- 3 E SW 8 **Backfile Conversion (Ongoing):** This initiative assumes a 2-month timeline to retain a consultant to provide professional services, deployment estimated to take 6 months – or this could be an ongoing initiative.
- 4 M 4 **Explore E-Signature Policy (1):** This initiative assumes a 1-month timeline to explore the legal requirements of E-signatures and purchase the software, followed by the deployment estimated to take 2 months.
- 5 HW 1 **Exchange Server Upgrade (1):** This initiative assumes a 2-month timeline to procure the necessary servers and 1 month to build the redundant firewalls. This initiative will be carried out by City IT staff.



## Section 5 City & Constituent Benefits



### 5.1 Sorted ITMP Roadmap Benefits

A number of quantitative and qualitative benefits were identified in the ITMP Roadmap project indicating considerable opportunity for enhancing internal operations and service delivery to the public.

Qualitative business process improvement and service delivery benefits were split equally across external (customer focused) and internal benefits. And while the benefits were not quantified (i.e., there is no measure of the magnitude of benefits in terms of dollars) the list below provides a general indicator of the opportunity.



The figure following the top ten benefits provides a compiled list of potential ITMP Roadmap benefits identified by City staff and management if the initiatives identified in the project were implemented. This list indicates that the most substantial benefits of implementing an enterprise driven ITMP Roadmap are the outcomes all municipalities strive for.

The top 10 potential benefits identified include:

#### 1. Improved efficiencies and productivity

Execution of the ITMP Roadmap will further the efficient use of staff time, in terms of executing common work tasks, looking for information, not re-keying data into redundant systems, and/or looking for (and gathering) information from numerous disparate systems. The implementation of an online building and land development permitting system with



online payments will streamline business processes and make. The implementation of a contemporary Enterprise Content Management System will make information accessible internally to City staff and the external customer – on a self-service model. Execution of the ITMP Roadmap will improve staff productivity by fostering a workplace where more can be done with fewer or existing resources

## **2. Enhanced customer service**

Execution of the ITMP Roadmap will improve the levels of customer service, internally amongst City staff and externally to constituents. In both cases, systematizing data / information and transactions replaces the need to physically go to the City and/or manage City operations and services with hardcopy documents. Web-enabled applications will allow the public 24x7x365 convenience. Even though City staff appreciates providing face-to-face services, the use of online applications and E-Forms will allow the public self-services options which are increasingly the norm with progressive E-Government agencies.

## **3. Staff time savings**

According to City staff, management and ThirdWave's findings, funding the ITMP Roadmap will allow for better use of staff time and time-savings. The implementation of the ITMP Roadmap will allow existing City staff to better meet the growing service demands of the City's constituents.

## **4. Streamline Business Process**

The adoption and funding of the ITMP Roadmap will provide significant opportunity to streamline the execution of City Department work activities in many areas. This will result in improved internal operations and enhanced service delivery and customer experience for City of Indio community members.

## **5. Cost Savings**

Implementing the ITMP Roadmap will reduce the City's operating costs in several areas by reducing: the amount of hardcopy documents, duplicate staff work, wasted staff time, the cost of driving back and forth to City facilities by field staff, etc. City constituents will also see cost savings by accessing City information and services on-line, without having to drive to City Hall receive services or gather information.

## **6. Improved Document Management**

Implementing the content management recommendation will improve the overall document and records management practices across the City. It will make it faster and easier to find content related to providing city services, freeing up staff time currently spent on locating documents. The ITMP will better leverage the existing Laserfiche document management system, improving compliance with the City's records retention schedule and mitigate legal exposures.



**7. Happier Staff**

Implementing the ITMP will reduce and mitigate a number of workplace/ business process situations where City staff is experiencing considerable frustration. The use of automation will streamline many business processes which currently rely on manual methods. This will enhance service delivery and decrease stress. This would include initiatives such as the new phone system for IWA, event management software for a City that depends on several music and cultural events, and the city-wide roll out of Laserfiche, employing workflow automation.

**8. Improved staff productivity**

Implementation of the ITMP will further the efficient use of City resources (staff and financial), in terms of executing common work tasks, looking for information, not re-keying data into redundant systems, and/or looking for (and gathering) information from numerous disparate systems. Execution of the ITMP will improve staff productivity by fostering a digital workplace/digital workforce where more can be done with existing resources.

**9. Improved perception of City**

Implementation of the ITMP will cement the position of Indio as a leader in the Coachella Valley, leveraging value across a wide range of municipal and community services, including fostering economic development and community wellbeing. A number of proposed technology solutions will support the City’s nickname as “The City of Festivals,” e.g. new software such as Event Management, Short Term Rentals, and Economic Development website, to name a few.

**10. Improved department collaboration**

Many, if not most, of the mission critical business processes assessed in the ITMP Roadmap project included cross functional services delivery activities. A common theme that emerged was the need to implement strategic software providing workflow automation providing streamline business process improvement, cross-department communication and collaboration.

The top 10 benefits identified above, and the remaining quantitative and qualitative benefits provide a compelling business case for approving and funding the City of Indio’s ITMP Roadmap.

The Gant chart on the following page provides a graphical representation of the most mentioned forty-five (45) potential benefits out of a total of 81 (eighty-one) identified in the ITMP project.

Seven-hundred and eighteen (718) specific potential benefits were identified in thirty-one (31) business process workshops, an average of twenty-three (23) benefits per mission critical business process.)

While these benefits are not quantified, they do illustrate the level of magnitude of the benefit of investing in the City’s future as innovative user of Information technologies.



**Figure 5.1.1: Summary of Potential Benefits Across All City Departments**

Benefits		
1	Improved efficiencies	52
2	Enhanced customer service	47
3	Staff time savings	41
4	Streamline processes	39
5	Cost savings	31
6	Improved document management	29
7	Happy staff, improved job satisfaction	18
8	Improved staff productivity	17
9	Improved perception of City	15
10	Better communication/coordination	13
11	Reduced staff stress and frustration	12
12	Increased accountability	10
13	Eased workload	10
14	More accurate information	9
15	Improved staff morale	9
16	One common, improved data on assets	9
17	More server space	7
18	Improved financial tracking	6
19	Staff freed up for high value work	6
20	All staff have access to real time data	6

The benefits listed above represent a compiled tabulation of 385 (three-hundred and eighty-five) benefits of a total of 581 (five hundred and eighty-one) benefits identified in the Rapid Workflow® process maps of mission critical business processes at the City.



## Section 6 Closing Recommendations



### 6.1 Adoption & Funding

Based on the voluminous amount of data collected from City staff and management, the findings and recommendations of the ITMP Roadmap project, and the opportunities for making substantial progress in the use of emerging Information Technologies, ThirdWave recommends that the City of Indio Information Technology Master Plan and Roadmap be approved and adopted by the City.

Moreover, we recommend that year one be funded.

Doing so will result in business process improvement, increased operational efficiencies, and enhanced service delivery to constituents while containing operational costs.

Adoption of the ITMP represents a timely quantum leap into the future in the evolution of an extraordinary City and community. The Roadmap will strategically position the City of Indio for the next 6 to 10 years.



**NEXT STEPS**