



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Kip Harkness

SUBJECT: INNOVATION ROADMAP &
COUNCIL COMMITTEE
WORKPLAN

DATE: January 23, 2017

Approved

Date

1/23/17

RECOMENDATION

- (a) Approve the membership of the *Smart Cities and Service Improvements Council Committee*;
- (b) Approve the scheduling of the first Smart City and Service Improvements Council Committee on March 2, 2017 at 1:30 p.m. Council committee meetings to occur on monthly basis, so request approval for cadence for subsequent Council Committee meetings at 1:30 p.m. on April 6, May 4, and June 1, 2017;
- (c) Accept the Administration's recommended priority projects Roadmap; and
- (d) Accept the Administration's recommended City Council Workplan.

BACKGROUND & ANALYSIS

On March 29, 2016, City Council unanimously approved a plan to transform San José into the most innovative city in America by 2020.

The *Smart City Vision* creates a framework for innovation that aligns the City organization around:

- core values that support the City's innovation imperative;
- prioritized, high impact, and community-oriented work, and;
- a focused execution strategy that builds capacity by leveraging new tools, approaches and skillsets.

The Smart City Vision articulates broad outcomes spanning five domains—to make San Jose as safe, inclusive, user-friendly, and sustainable as possible, and demonstrate the possibilities of technology and innovation along the way.

To drive implementation of this vision, the City created the Office of Civic Innovation & Digital Strategy (Innovation Team) within the Office of the City Manager in August 2016.

In its first 100 days the Innovation Team worked with the Civic Innovation Cabinet of department directors to establish the first ever *Innovation Roadmap*, which is comprised of 21 priority projects that focus the City's innovation work, including:

- high impact implementation at scale (7),
- strategy/demonstration/pilot projects (13), and
- capacity building.

A summary of the projects in the *Innovation Roadmap* is provided as Attachment A.

The *Innovation Roadmap* process and priority projects will be presented to Council at the Civic Innovation & Digital Strategy Special Meeting on January 27, 2017.

This first iteration of the *Innovation Roadmap* is focused on a limited set of projects that are important, core, and achievable.

- **Important** – Is the problem causing a lot of our residents or businesses pain or annoyance?
- **Core** – Is the problem something our City can and should solve?
- **Achievable** – Is the problem solvable at scale using technology or process improvement?

As important as 'what' projects we chose are the principles that guide 'how' we do our work;

- **Champion the Customer** – Relentlessly focus on the customer experience by integrating human-centric principles into service delivery and technology platform design;
- **Learn through Data** – Measure performance with real-time data to continuously improve our services; and
- **Iterate to Improve** – Prototype new initiatives, and rapidly iterate, reflect, and learn from failure or success before scaling.

We believe that innovation is *Powered by our People* and our approach seeks to amplify the expertise of the City's own workforce by cultivating the best ideas and actions of our people. We are committed to *harnessing the power of Silicon Valley* by partnering with residents, private sector, universities, foundations, and other organizations to accelerate impact.

All our service improvements and innovations must be both secure and accessible. *Secure* to protect individual privacy and provide secure IT platforms. *Accessible and empowering* favoring accessible technology solutions, helping to level the playing field for underserved populations, and providing tools to take action.

Roadmap Process – From the interesting many to the vital few

City leadership collaboratively developed the *Innovation Roadmap* in four phases; Backlog, Analysis, Prioritization, and Commitment.

Backlog

The Roadmap process began with the gathering and review of approximately 100 citywide innovation and digital strategy-related projects and policy areas that were either underway, in-

planning, or under consideration. All of the projects in the backlog were reviewed by senior staff in the Civic Innovation Cabinet and represent the best available snapshot of current or planned innovation efforts citywide.

Analysis

To select the most impactful projects and appropriately manage risk and level of effort, the backlog of projects was analyzed along four dimensions:

- *Impact* – i.e., how many people are affected, and how big is the positive impact to each person;
- *Risk* - i.e., along a continuum from something we do many times a day with ease to something that has never been done in the world and we have no idea how to do;
- *Effort* - i.e., how much time, money, resources, and problem-solving effort is required for successful completion, from trivial to a massive undertaking (high \$\$ and staff); and,
- *Core* - i.e., along a continuum, ranging from the City having no appropriate role in providing this service to the City MUST provide this service, and it cannot be provided by anyone else.

Prioritization

The analysis above is necessary to yield relative estimates across the four dimensions of Impact, Risk, Effort, and Core, but on its own is not sufficient to result in a clear prioritization. In order to take the next step and develop a sense of prioritization, projects are further broken down into four categories based on level of risk and effort described below. As a general rule, when prioritizing among projects in a given category, preference is given to those projects with a higher Impact and whose focus is more Core. Stated another way, the Innovation Roadmap should have a consistent bias towards selecting high impact projects that are core to what our City does.

1. Lower Risk/Lower Effort

Low risk, low effort projects typically represent tested approaches that are relatively straight forward. While these are rarely pure innovation in the global sense if the approach is new to the organization it can be quite valuable to be fast follower. In this way we can adopt the approach of others and build on their success.

2. Higher Risk/Lower Effort

Many high risk, low effort projects are likely to fail, but relatively little effort is expended in the failures. In order to manage risk, it is important that the potential impact be significant, so that when these projects succeed it balances out other failures. This space is characterized by purer innovation with both significant risk, as well as significant reward. The limit on how many of these projects to select in this category is set largely by the organizations appetite for experimentation and risk tolerance for small-scale failure.

3. Lower Risk/Higher Effort

These low risk, high effort projects are almost a sure success but require enormous commitment of time and resources to achieve. Because of the exceptional level of effort, only a few projects with extremely high impact and strong core fit should be considered for inclusion in the roadmap

from this category. The limiter in this category is likely to be a combination of resources and project management capacity.

4. Higher Risk/Higher Effort

The high-risk, high-effort projects in this last category are the most difficult for any organization to take on, and especially fraught with peril in an organization such as the City, which is both resource constrained and risk-averse. The strongest reasons for selecting any projects in this area are mandatory compliance or deeply core services. One strategy for mitigating risk of projects in this area is to do smaller proof of concept projects (i.e. take a piece of the project and prove the concept) in order to clarify and manage risk before proceeding with full scale implementation.

The Civic Innovation Cabinet analyzed and prioritized the items in the backlog over the course of several months to select out a balanced list of priority projects that became the draft *Innovation Roadmap*.

Commit to Roadmap

The next iteration consisted of validation and refinement of the draft *Innovation Roadmap* and commitment from both lead departments and the entire Civic Innovation Cabinet.

The committed *Innovation Roadmap* presented as Attachment A for in turn informed the creation of the Workplan for the new Council Committee focusing on Smart Cities & Service Improvements included as Attachment B. Both of these items are presented for Council consideration and action.

COORDINATION

Department of Transportation, Public Work, Finance, Planning, Building and Code Enforcement, Airport, Human Resources, Information Technology, Parks, Recreation and Neighborhood Services, and Police, City Attorney's Office.

CEQA

Not a Project, File No. PP10-069, City Organizational & Administrative Activities.

/s/

KIP HARKNESS

Deputy City Manager, Civic Innovation &
Digital Strategy

For questions, please contact Steven DiNoto, Director of Civic Innovation & Digital Strategy, at (408) 535-3567.

Attachments: Attachment A- Innovation Roadmap
Attachment B- Innovation Workplan

**OFFICE OF CIVIC INNOVATION
AND DIGITAL STRATEGY**

INNOVATION ROADMAP

ATTACHMENT A

PRIORITY INNOVATION ROADMAP PROJECTS

1. Talent Recruitment Initiative

Problem Being Solved	The City’s current approach to recruitment neither brings enough of the most talented people into the recruitment tunnel nor moves fast enough to ensure that the best people accept and are on boarded. The City currently has over 870 vacancies across all departments. The City uses a customer-centered, design thinking approach to tackle this problem and improve the process.	
Expected Impact	The process improvements increase the number of people on boarded, reduce the time to recruit and fill positions, and increase the percentage of high potential people entering City service.	
Lead Department or Office	Human Resources	
Category	Strategy/Demonstration/Pilot	

2. Development Services Process Improvements and Permitting System Upgrade

Problem Being Solved	Development Services partners have identified several potential improvements to entitlement, plan review, and inspection processes. Simultaneously, the City’s permitting software, used by over 800 City staff to process 40,000 permits annually, is undergoing a comprehensive upgrade.	
Expected Impact	The process improvements and new permitting system increase staff efficiency and customer satisfaction.	
Lead Department or Office	Planning, Building, and Code Enforcement	
Category	High Impact Implementation at Scale	

PRIORITY INNOVATION ROADMAP PROJECTS (CONT)

3. Customer Relationship Management (CRM)

Problem Being Solved	This enterprise project implements a CRM solution to resolve service needs and lay a foundation for future uses including: (1) Singular City mobile app; (2) Consolidated analytics, reporting for service requests, and trends on an automated basis; (3) Cross-department service request handling; (4) Illegal dumping reporting; and (5) Interfaces for graffiti abatement, abandoned vehicles and pothole reports.	
Expected Impact	The new CRM system provides more efficient, responsive, and user friendly services to the public.	
Lead Department or Office	Information Technology	
Category	High Impact Implementation at Scale	

4. City Website Content Management Digital Front Door

Problem Being Solved	This project implements a digital platform that is reflective of the City’s Smart City Vision by improving transparency, empowering residents to actively engage in the governance of the City, and making the City more responsive to the complex and growing demands of the community. By implementing a new web content management system, the City’s web site becomes a service delivery platform that improves the user experience.	
Expected Impact	The new web content management system and web site provide a delightful customer experience and better engages the community.	
Lead Department or Office	City Manager’s Office	
Category	High Impact Implementation at Scale	

PRIORITY INNOVATION ROADMAP PROJECTS (CONT)

5. Digital Inclusion Strategy

Problem Being Solved	Approximately 100,000 residents in the City are not connected to the internet at home. This project answers the question "What is the best use of existing and new city and non-city resources to increase digital inclusion for underserved San Jose community segments?"	
Expected Impact	Implementation of this strategy promotes equity and improves educational outcomes, promotes job acquisition and advancement, improves mental and physical health options, and allows businesses to be more efficient and effective.	
Lead Department or Office	City Manager's Office	
Category	Strategy/Demonstration/Pilot	

6. Broadband Strategy

Problem Being Solved	To support the City's Smart City Vision and goals, a robust citywide public and private sector digital infrastructure is required. This project assesses the City's digital infrastructure (assets that can provide internet service and promote availability of affordable broadband internet access). This assessment identifies where current market forces and technologies meet the expectations of access, affordability, adoption, and service quality and where there are gaps and opportunities for strategic interventions to close these gaps.	
Expected Impact	Implementation of this strategy drives improvements in broadband speeds, pricing, coverage, and quality and builds the digital infrastructure to increase digital inclusion, safety, user-friendliness and other Smart City goals.	
Lead Department or Office	City Manager's Office	
Category	Strategy/Demonstration/Pilot	

HIGH IMPACT IMPLEMENTATION AT SCALE

7. Transportation Events Tracking and Management

Problem Being Solved	The new system proactively informs DOT's traffic engineers of traffic delays and unusual backups, and enables them to make necessary adjustments to the City's traffic signal system and inform other agencies and the public of problematic conditions.	
Expected Impact	The new system helps manage traffic flow, ease congestion, reduce traffic delays, and improve safety.	
Lead Department or Office	Transportation	
Category	High Impact Implementation at Scale	

8. Business Process Automation

Problem Being Solved	A Business Process Automation solution transforms paper-based processes to electronic workflows and adds capabilities to record e-signatures, automate workflows, search for results, and pull content into other systems for additional uses. Additionally, this project creates the opportunity to re-engineer processes.	
Expected Impact	This solution improves the efficiency and effectiveness of city personnel by simplifying processing, allowing rapid and consistent access to work products, providing staff the ability to see and resolve workflow delays, and other process improvements. Candidate pilot processes include grants management, contract lifecycle management, and accelerated development/submittal of procurement requests.	
Lead Department or Office	Information Technology	
Category	High Impact Implementation at Scale	

HIGH IMPACT IMPLEMENTATION AT SCALE (CONT)

9. Vehicle Fleet Telematics

Problem Being Solved	Cellular enabled GPS devices are installed on City vehicles to record and communicate vehicle functions and driver operations.	
Expected Impact	The new device and system reduce fuel consumption, reduce emissions, and promote the safe operation of City vehicles.	
Lead Department or Office	Public Works	
Category	High Impact Implementation at Scale	

10. Business Tax System

Problem Being Solved	The City is implementing a new Business Tax Billing System to replace the City's current end-of-life Oracle Forms System. The new system manages the annual billing for approximately 85,000 Business Tax accounts and consolidates the management of the City's tax operations. Additionally, a new web-based process replaces the current paper based process for completing Business Tax applications and making payments.	
Expected Impact	The new process and system (1) improve billing, payment processing, collections, and accounting; (2) allow more advanced reporting and querying capabilities; and (3) provide long-term flexibility administering business taxes.	
Lead Department or Office	Finance	
Category	High Impact Implementation at Scale	

STRATEGY/DEMONSTRATION/PILOTS

11. Radar Sensor Module

Problem Being Solved	Radar devices and data processing units are deployed across demonstration sites at signalized intersections for advanced traffic, pedestrian and bicycle counting, and analytics.	
Expected Impact	The devices help the City improve traffic flow and reduce street congestion.	
Lead Department or Office	Transportation	
Category	Strategy/Demonstration/Pilot	

12. Master Address Database

Problem Being Solved	A Master Address Database that is accurate, complete, reliable, centrally-managed, and geographically-enabled is developed for emergency dispatch, noticing, permitting, billing, and GIS analysis.	
Expected Impact	The Master Address Database reduces resources spent on redundant and inefficient departmental addressing processes. It is also essential to Police and Fire response and related reporting requirements.	
Lead Department or Office	Public Works	
Category	Strategy/Demonstration/Pilot	

STRATEGY/DEMONSTRATION/PILOTS (CONT)

13. Eastside Union High School District (ESUHSD) Wi-Fi Community Pilot

Problem Being Solved	A ESUHSD funded community Wi-Fi pilot is implemented in three attendance areas to provide home access to the internet for students.	
Expected Impact	The Wi-Fi access increases digital inclusion for students and other residents in underserved neighborhoods.	
Lead Department or Office	Public Works	
Category	Strategy/Demonstration/Pilot	

14. Silver Spring Networks Internet of Things (IoT) Demonstration

Problem Being Solved	The City and Silver Spring Networks partner to bring the Starfish wireless network service to San José. This foundational technology provides the connected network and processing infrastructure that supports the Smart City initiatives for the community.	
Expected Impact	The IoT capability improves safety and sustainability by enabling new solutions for public safety, intelligent transportation systems, and utilities telemetry.	
Lead Department or Office	City Manager's Office	
Category	Strategy/Demonstration/Pilot	

STRATEGY/DEMONSTRATION/PILOTS (CONT)

15. Safe City Strategy

Problem Being Solved	This strategy identifies the Safe City process and technology improvement opportunities. The strategy builds capacity within Police, Fire and OES for applied use of technology. Potential strategies include optimized staffing and deployment, predictive analytics, and infrastructure technology SWOT (Strengths, Weaknesses, Opportunities and Threats).	
Expected Impact	The implementation of the strategy increases safety.	
Lead Department or Office	Police	
Category	Strategy/Demonstration/Pilot	

16. LED Streetlights

Problem Being Solved	The City seeks innovative ways to convert 40,000 streetlights at no cost to the City. In addition, further benefits such as enhancing the City's digital infrastructure are considered.	
Expected Impact	The LED street lights improve safety and sustainability.	
Lead Department or Office	Transportation	
Category	Strategy/Demonstration/Pilot	

STRATEGY/DEMONSTRATION/PILOTS (CONT)

17. Facebook Terragraph Wi-Fi

Problem Being Solved	Facebook and the City partner to implement very high-speed Wi-Fi access in the downtown corridor and select underserved areas of the City. The aim is to serve as a demonstration project for the technology with the impact of expanding fast connectivity for the urban core.	
Expected Impact	The very high speed Wi-Fi access increases digital inclusion and improves the customer experience.	
Lead Department or Office	City Manager's Office	
Category	Strategy/Demonstration/Pilot	

18. Citywide Data Communities Architecture and Open Data

Problem Being Solved	This initiative provides an open data blueprint and proof-of-concept results to help advance the City's ability to reach across the organization's data and systems, connect with coming Internet of Things solutions, and use those elements to meet San Jose Smart City goals. This includes supporting advanced transparency, data-sharing, automation, and decision-making by the City.	
Expected Impact	Structures for shared data, accessibility through integrations, and data ownership are key principles behind the City's Open Data Communities Architecture (ODCA). These efforts are foundational in the sense the City runs many systems in silos, has challenges sharing data and generating insights, and often has outdated and/or incomplete data. The City will use the ODCA to add value by (1) setting the tools and methods to make data accessible for advanced uses and (2) allowing the City to improve the quality of the tremendous data generated by City operations.	
Lead Department or Office	Information Technology	
Category	Strategy/Demonstration/Pilot	

STRATEGY/DEMONSTRATION/PILOTS (CONT)

19. Transportation Innovation Zone and Autonomous Vehicles Strategy

Problem Being Solved	This multi-block area for testing autonomous vehicles stimulates the relocation of autonomous vehicle manufacturing and designers to City.	
Expected Impact	Establishment of this zone and implementation of this strategy increase economic development and make the City safer.	
Lead Department or Office	Transportation	
Category	Strategy/Demonstration/Pilot	

20. Demonstration Policy Revision

Problem Being Solved	The demonstration policy is updated to reflect the Smart City Vision.	
Expected Impact	The new policy makes it easier to partner with the City on innovation projects that drive economic development and improve City service delivery.	
Lead Department or Office	City Manager's Office	
Category	Strategy/Demonstration/Pilot	

CAPACITY BUILDING

21. Civic Innovation Bootcamp

Problem Being Solved	The Civic Innovation Bootcamp is a six-month training program with an integrated curriculum of human centered design, data informed decision making, and agile iterative execution.	
Expected Impact	The training program builds capacity to tackle the City's toughest problems by engaging local talent and training government in human-centered, data-driven innovation.	
Lead Department or Office	City Manager's Office	
Category	Capacity Building	



Memorandum

TO: RULES AND OPEN GOVERNMENT
COMMITTEE

FROM: Mayor Sam Liccardo
Chair

**SUBJECT: SMART CITIES & SERVICE
IMPROVEMENTS COMMITTEE
WORKPLAN**

DATE: January 27, 2017

Approved

Date

Approved

Date

RECOMMENDATION

Approval of the *Smart Cities & Service Improvements Committee* workplan for the period March through June 2017 and setting its meeting schedule on the first Thursday of each month (commencing March 2, 2017) at 1:30 p.m. in Rooms W118-119.

WORKPLAN CONTENTS

<p>SMART CITIES & SERVICE IMPROVEMENTS COMMITTEE WORKPLAN March - June 2017</p>
--

COMMITTEE MEMBERS:

CHARLES "CHAPPIE" JONES, CHAIR
SAM LICCARDO
JOHNNY KHAMIS
DEV DAVIS
LAN DIEP

STAFF:

KIP HARKNESS, CITY MANAGER'S OFFICE
STEVEN DINOTO, CITY MANAGER'S OFFICE
SHIREEN SANTOSHAM, MAYOR'S OFFICE
ELIZABETH KLOTZ, CITY ATTORNEY'S OFFICE

MISSION STATEMENT: To achieve the strategic goals of San José's *Smart City Vision* by advancing innovation projects at scale, demonstration/pilot projects, and strategy & policy initiatives that deliver community benefit, optimize resources, improve service delivery, and build capacity for future success.

MARCH 2, 2017

1. **Talent Recruitment Initiative** (Innovation & Digital Strategy)

Purpose: To provide a verbal update of ongoing and planned strategies to improve the number, quality, and cycle time associated with recruiting, hiring, and retaining/developing City employees; update on progress against first-phase goals. Discussion and feedback to staff.

2. **Information Technology Department Strategic Plan** (ITD, Innovation & Digital Strategy)

Purpose: To provide the first quarterly update of the assessment of the City's information technology portfolio, capabilities, and needs. Share plan to address the strategic utilization of resources that will enable the City to execute and sustain the Smart City Vision over a three-year period, including coordination of the enterprise technology stack and execution across department lines, as well as adoption of outcome measures for management and budget reporting. Discussion and feedback to staff.

3. **Cybersecurity** (ITD):

Purpose: To provide first quarterly update regarding ITD's capacity to minimize the City's risks from cybercrime and cyber-disasters. Plan to mature the City's security program, including accountability for compliance requirements, as well as demonstration of evolving security capabilities as part of coordinated security "game day" exercises. Updates regarding status of key security-related audit findings. Discussion and feedback to staff.

4. **Innovation Roadmap** (Innovation & Digital Strategy)

Purpose: To provide first monthly committee report that lists all innovation projects (and key performance indicators) spanning three categories (i.e., ongoing implementation at scale, strategy/demonstration/pilot, and capacity building) that comprise the Innovation Roadmap. Discussion and feedback to staff.

APRIL 6, 2017

1. **Information Systems Audits Updates** (ITD, City Auditor)

Purpose: Provide updates on the status of outstanding process and controls-related findings stemming from five ITD audits, including: technology deployments; call-handling; general controls; mobile devices; and, financial statements (by external Auditor). Discussion and feedback to staff.

2. **Data Analytics and Open Data Initiative** (Innovation & Digital Strategy, ITD)

Purpose: Provide an update on the status of recent data-driven efforts to improve select department's analytic capacity, increase transparency, and bolster efficient service delivery. Discussion and feedback to staff. Including an exploration of the Master Address Database project creating a single source of truth for permitting, billing, and dispatch.

3. **Innovation Roadmap** (Innovation & Digital Strategy)

Purpose: To provide monthly committee report that lists all innovation projects (and key performance indicators) spanning three categories (i.e., ongoing implementation at scale,

strategy/demonstration/pilot, and capacity building) that comprise the Innovation Roadmap. Discussion and feedback to staff.

MAY 4, 2017

1. Customer Relationship Management (ITD, Innovation & Digital Strategy)

Purpose: Provide an update of the ongoing CRM project that will deliver a high-quality customer experience for those residents and businesses who seek to leverage web/mobile-enabled functionality to interface with and/or conduct City services online. Updates on status of project work regarding CRM integration with key technical systems, the City Contact Center, data aggregation and analysis, customer-facing neighborhood dashboard, and planned support for new online services. Discussion and feedback to staff.

2. Information Technology Department - Policies Refresh (ITD)

Purpose: Provide first bi-annual update on initiative to re-structure ITD policies to maximize understanding and adherence, as well as to modernize aged controls and processes that align with contemporary operating environment. Discussion and feedback to staff.

3. Demonstration Projects Update (Innovation & Digital Strategy)

Purpose: Provide update on Innovation demonstration projects to date, as well as present possible guiding principles for future refresh of *Framework for Establishing Demonstration Partnerships* policy. Discussion and feedback to staff.

4. Development Services Process Improvements (PBCE, Innovation & Digital Strategy)

Purpose: To provide a verbal update on process improvements being implemented by Development Services staff in collaboration with the Innovation Team, using an approach that is customer-centered, data-driven and iterative. Discussion and feedback to staff.

5. Innovation Roadmap (Innovation & Digital Strategy)

Purpose: To provide monthly committee report that lists all innovation projects (and key performance indicators) spanning three categories (i.e., ongoing implementation at scale, strategy/demonstration/pilot, and capacity building) that comprise the Innovation Roadmap. Discussion and feedback to staff.

JUNE 1, 2017

1. Report on Key State Legislation (Intergovernmental Relations, Innovation & Digital Strategy)

Purpose: To provide the Committee with a report on key State legislation relevant to the Smart Cities & Service Improvements Council Committee. Discussion and feedback to staff.

2. Digital Inclusion Update (Innovation & Digital Strategy, Library, PRNS)

Purpose: To provide a verbal update on status of ongoing work related to three items: digital infrastructure assessment; broadband strategy development; and, digital inclusion strategy and policy development. Discussion and feedback to staff.

3. Autonomous Vehicles Strategy Update (Department of Transportation)

Purpose: To provide an update on work underway and planned with key partners to support the development of Automated Vehicle (AV) regulations, policies, and pilot projects that align with the City's goals for a balanced, efficient and safe transportation system. Discussion and feedback to staff.

4. Innovation Roadmap (Innovation & Digital Strategy)

Purpose: To provide monthly committee report that lists all innovation projects (and key performance indicators) spanning three categories (i.e., ongoing implementation at scale, strategy/demonstration/pilot, and capacity building) that comprise the Innovation Roadmap. Discussion and feedback to staff.