



*"If I can't see it,
I can't understand it."
– Albert Einstein*

 GLOBAL CITY
TEAMS CHALLENGE

NIST National Institute of
Standards and Technology
U.S. Department of Commerce

Vision Architecture, Inc.

*Smart City Vision, Strategic Planning,
& Digital Transformation Methodology*

*Global Tech Jam – Portland, OR
June 20, 2018*

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Stated goals for NIST “*Smart City Vision, Strategic Planning, and Digital Transformation Methodology*” Action Cluster

- The Smart City Methodology helps people imagine and learn about future state scenarios for their lives, businesses, and cities. The process produces clearly defined product solutions and projects they want to create, design, and implement.
- The methodology can be used to introduce people who have little to no knowledge about Smart Cities and facilitate learning experiences that create and build well-versed leaders who can drive, manage, and support Smart City initiatives. Digital Transformation aspects will include key performance indicators and checkpoints to ensure teams remain on course until goals and future vision are realized.
- We are submitting this methodology for consideration and use with the Education SuperCluster and Action Teams to help define what each group would like to create for the SuperCluster and how they want to interface with the existing SuperClusters to integrate and amplify existing knowledge within the GCTC.



Vision Architecture's Projects

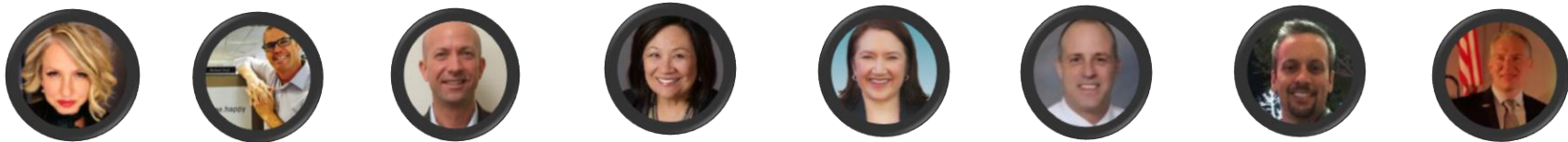
Smart City Integrated Vision with a Triple Bottom Line and Sustainable Solutions to Help Cities Grow

Over the past 20+ years Stephanie has defined vision and technology solutions for Fortune 1-500 corporations, Smart Cities, and Social Impact initiatives.

No other vendor provides cities with a full suite of guided and facilitated vision, Business Architecture, Cybersecurity governance, product capability roadmap and solution designs, project implementation plans, and KPI metrics to ensure private-, public-, and constituent service ecosystems are integrated into new business models - like the client projects here:



- **Smart State Public Safety & Emergency Response Systems** for Governor State of Oklahoma
- **Smart State Transportation** for Washington State Department of Transportation
- **Situational Intelligence for Tornado Emergency Response** for the State of Oklahoma
- **Smart Schools Emergency Response System for Active Shooters** for the State Oklahoma
- **Smart State Highway Patrol Trooper & Strike Team Response System** for the State of Oklahoma
- **Situational Intelligence for CA Earthquake Emergency Response** for Pacific Gas & Electric
- **The Future of Legal Publishing** for Thomson Reuters FindLaw
- **The Future of Telematics for Car Insurance** CA AAA
- **The Future of Global Game Development** for Electronic Arts
- **The Future of Customer Engagement** for Pacific Gas & Electric Company
- **The Future of Los Angeles** for the LA Department of Transportation
- **The Future of the Olympic Games Event Management in Los Angeles** for LA Department of Transportation
- **The Future of Customer Experience** for Hitachi
- **The Future of Work** for Johnson Controls Global Supply Chain
- **The Future of Global Emergency & Disaster Response for Employees** for Johnson Controls
- **The Future of Biopharma e-Commerce** for Bio-Rad
- **The Future of Online Customer and Doctor Engagement** for Roche & Genentech
- **The Future of Video Evidence Collection** for Panasonic
- **Future State Intelligence Internal Operations** for Boeing
- **The Future of Smart City Transportation** for the Oakland Department of Transportation
- **Rockefeller 100 Resilient Cities Resilient Oakland** Engaging Youth in Shaping the Future of Oakland
- **The Future and Next Generation** of the U.S. Navy
- **The Future of Global Channel Partnerships** ExxonMobil
- **The Future of Global Drug Safety** Operations for Amgen
- **The Future of Construction Education** for Turner



20+ years Private & Public Sector Software & Consulting

Vision Architecture Clients & Endorsements





Vision Architecture

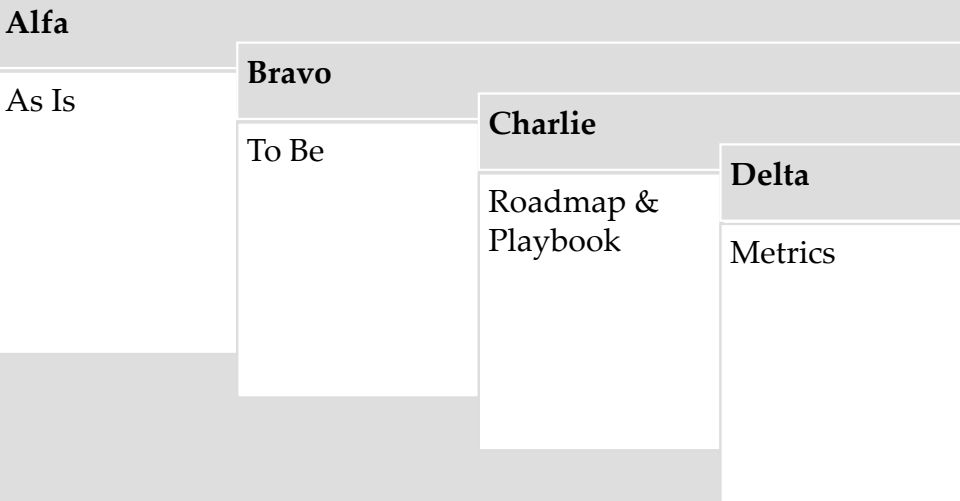
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Methodology Overview with Conversational Focus on Cybersecurity

Smart City Strategic Planning Timeline

Phase 1

● *Vision & Strategic Alignment*



 *1 month phases*

Phase 2

● *Program Architecture*

- User Experience Architecture
- Business Architecture
- Data Architecture
- Application Architecture
- Infrastructure Architecture

Phase 3

● *Business Requirements & Project Plans*

- Business Requirements
- Project Plans
- Data Privacy Governance/ Cybersecurity
- Solution Designs
- Team Assignments
- Applications & Infrastructure

Phase 4

◆ *Program Implementation*

- Digital Transformation & Smart City Program Development
- Smart City Project Pipeline Portfolio Mgmt
- Smart City Development & Workforce Dev for New Smart City Jobs

Phase 5

◆ *Adoption, Communications & Outreach*

- Promote and deliver Smart City programs and services
- Share storylines about the future of Smart City to drive adoption
- Engage constituents to co-design future services

<http://www.visionarchitectureinc.com/booking>

Phase 1 - Vision & Strategic Alignment

GPS Alfa Workshops

create an inventory of the Current State of who, what, where, when, why, and how scenarios for what you're experiencing day to day. The goal is to create a mind map spectrum of insight that describes what is highly regarded, negative, positive, of net zero influence, in need of cancellation, taking a lot of time, being measured, not being measured, wild cards, and performance metrics being requested today.

GPS Bravo Workshops

create an inventory of the Future State of who, what, where, when, why, and how scenarios of what you want to experience in the future. The goal is to create a mind map spectrum that describes highly regarded traits that will be most prominent in the future, the types of positive impact and influence that will be accessible, the performance over time that has brought stability and power to an individual and/or organization, and the metrics of success that brought this specific future to fruition.

GPS Charlie Workshops

create a line-by-line inventory of who, what, where, when, why, and how scenarios of for getting from the Alfa state to the Bravo state. This is where the conversations about data privacy, data capture, surveillance, and Cybersecurity come in because we understand how things are done today through the Alfa workshop and we know what is expected in the future through the Bravo workshop. The goal is to create a three-phase roadmap that describes specific steps and tasks that will be taken to detach from Alfa state processes and technologies that will not be beneficial or supported in the Bravo state.

GPS Delta Workshops

use the output from GPS Alfa, Bravo, and Charlie to create a play-by-play navigation plan that describes exactly which who, what, where, when, why, and how scenarios will be used to reach the Bravo destination. The goal is to create explicit data metric targets and a scheduled timeline to hit the numbers and stay on course, on time, and on budget. This tight control of the environment and execution strategy allows the group to work independently and with assurance their moves and accomplishments are furthering the progress of the team without having to stop and check in very frequently to see if everyone is in alignment.

Nutshell:

- Always do these four things with experts & end users first:
 - A. Where are you today?
 - B. Where do you want to go?
 - C. How will you get there?
 - D. How will you measure performance?

Phase 1 – Vision & Alignment Workshops

A

Alfa Workshop
As Is Current State

Where are you and your clients now?

B

Bravo Workshop
To Be Future State

Where are you and your clients now?

C

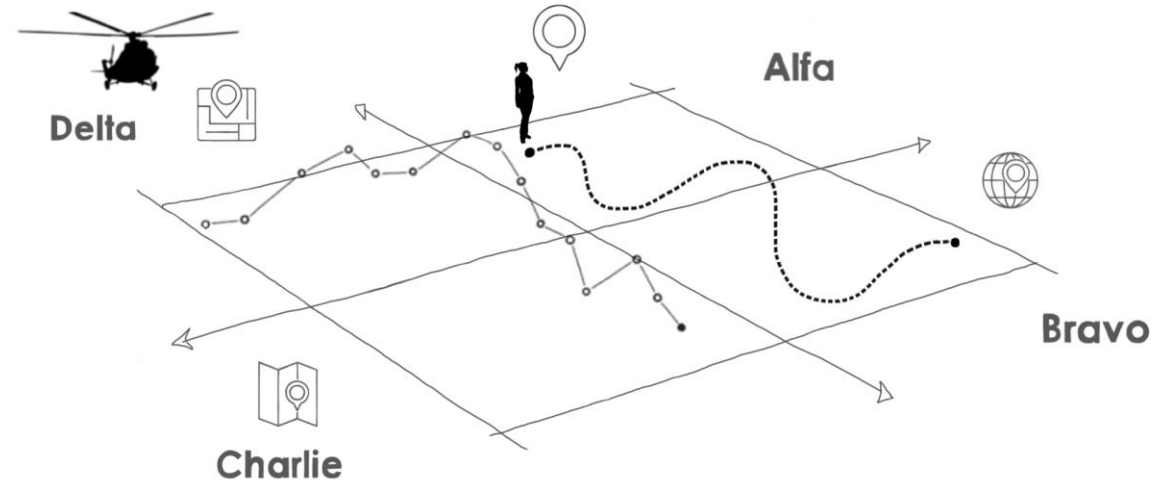
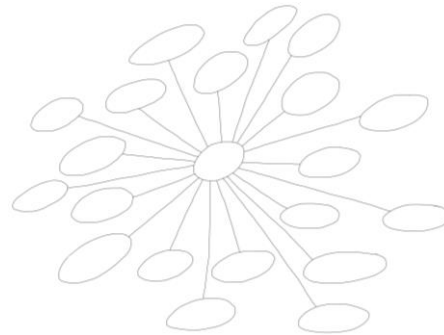
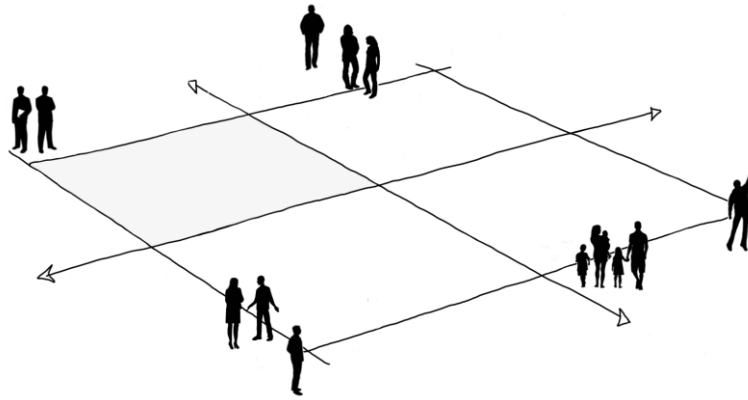
Charlie Workshop
Roadmap

How will you get from where you are now to your future state?

D

Delta Workshop
Metrics

How do you know where you are and how far you have to go to reach your goals?



Phase 2 - Program Architecture

User Experience

Architecture Workshops build upon findings from the GPS Bravo, or Future State, workshops and the GPS Alfa, or Current State, workshops that discovered critical elements about the who, what, where, when, why, and how scenarios for which your Smart City solutions and programs need to drive value for all stakeholders. The goal of the UX Architecture workshop is to identify personae to use in developing Business Requirements and Journey Maps that describe the issues your team is working to resolve for stakeholders as they experience challenges today and the value of the solution once it's in place. Storytelling is critical here to create a narrative people can easily understand and follow as you add layers of requirements and move into Business Architecture Planning which is the next step in Phase 2.

Business Architecture

Planning Workshops utilize data gathered in the Vision Architecture GPS workshops and prior planning activities from various stakeholder groups where work has already begun. The goal is to identify the core pillars of functionality and capabilities people imagine could be part of a Smart City Program in order to assemble all ideas in one framework to create a baseline for which new ideas can flourish and ideas that are ready to go can launch amid new project inquiries without risk of failure due to lack of planning and/or understanding the overall business agenda and performance metrics associated with successful Smart City projects.

Data Architecture

Workshops create a framework for conversations to be started, grown, and matured over time to create high-value Smart City intelligence solutions for diverse stakeholders. Cybersecurity, data privacy, surveillance, and information governance standards for the capture, management, storage, use, retention and delivery of all Smart City data types will be discussed to align attendees with a common operating vocabulary. A Data Governance Board framework will be shared with roles and responsibilities for interoperability, between private-, public-, non-profit and constituent-led projects.

The Application & Infrastructure

Architectures Workshop creates an inventory and/or adds depth to existing inventories when looking at existing application functionality to identify what can be augmented within current capabilities and what should be built out to enable future Smart City capabilities. This inventory will go across city departments, private sector industries, non-profit organizations, and constituent-led initiatives. The goal is to perform and assessment around the use the Internet of Things as a platform of connectivity and to understand legacy infrastructure so that new elastic services can be modeled around systems that must remain in place to maintain critical government services.

Nutshell:

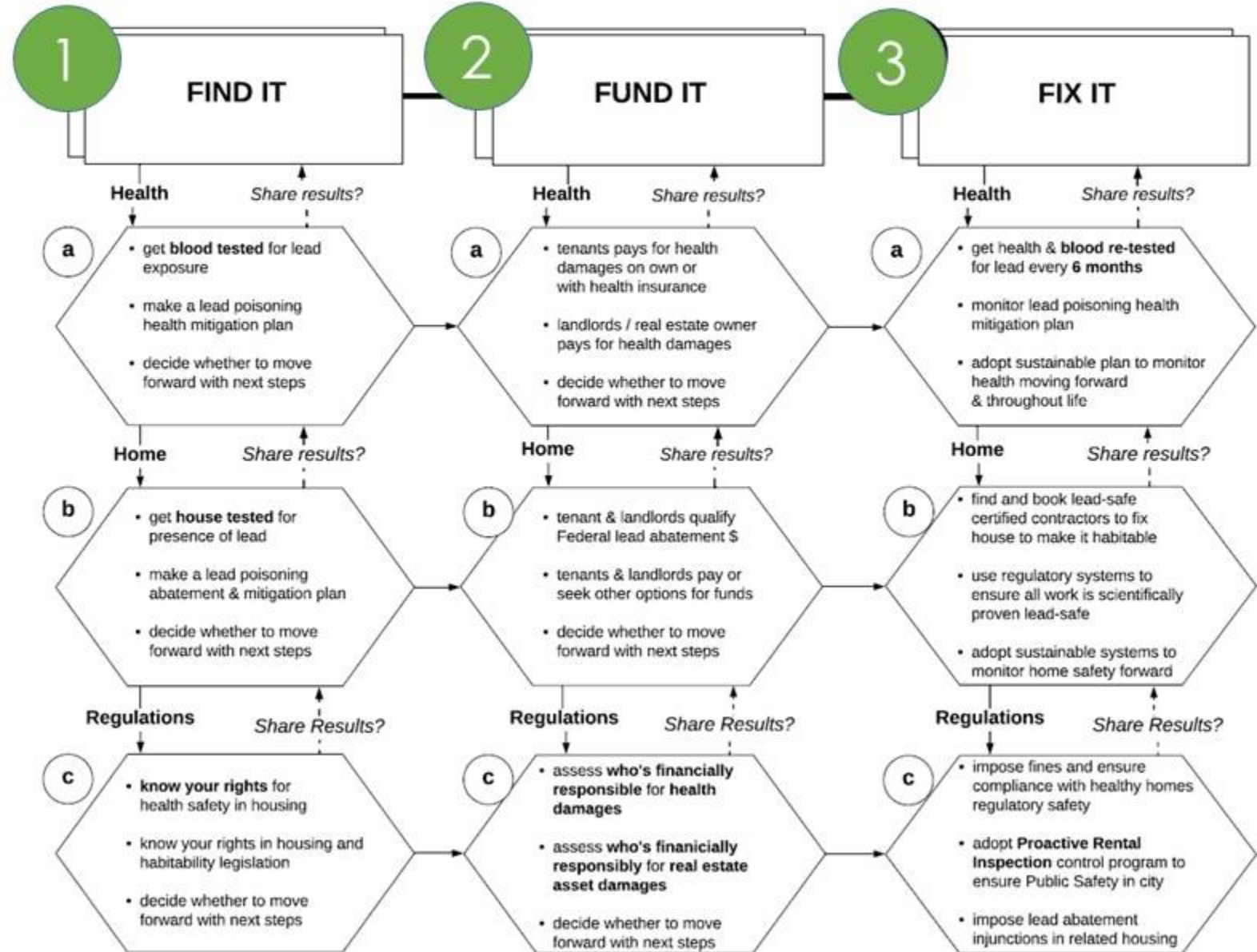
- Always do these five things with experts & end users first:
 1. Vision for User Experience Architecture
 2. Business Architecture
 3. Data Architecture
 4. Application Architecture
 5. Infrastructure Architecture

Smart City Example of Inclusion for Digital Transformation:
Health, Housing & Environmental Data & Apps

Health, Housing & Environmental Data & Apps



USER PROCESS FLOW FIND IT. FUND IT. FIX IT.



Phase 3 - Business Requirements & Project Plans

The Smart Cities What's Possible in a Nutshell Overview Workshop provides a fast-paced summary of four basic types of Smart Cities scenarios. 1) A High-value potential Smart City that waits for leadership; 2) A Hybrid Smart City focuses on making the old city new again and co-creates constituents solutions; 3) A New Smart City from Scratch includes buying new land, investing in all new infrastructure and tech; 4) A New Private, Corporate, Smart City from Scratch run by a CEO, built for exclusive profit, and designed to operate without any social services or public support systems.

Smart City Business Requirements Gathering Workshops are fast-paced and build upon the User Experience Architecture workshops where user personae were created for storytelling and Journey map activities illustrate Future State Smart City business capabilities. These sessions map out new business processes, data to be presented within processes, and application functionality that will drive the user experience for diverse Smart City stakeholders. This is only the beginning of developing detailed business and project requirements for Smart City solutions with a goal to map to existing Software Development Lifecycle (SDLC) and Project Management Office protocols where necessary.

Cybersecurity and Data Governance Workshops are used to create a Smart City data security taxonomy to carve out sectors of data types in the intersections of private-, public-, non-profit, and constituent-led data ecosystems and then apply the appropriate level of protection and governance to ensure high quality user experiences and data privacy compliance protecting all stakeholders. This work begins developing detailed business and project requirements for Smart City Cybersecurity and Data Privacy policies and solutions. The goal is to map to existing Software Development Lifecycle (SDLC) and Project Management Office protocols and integrate with existing security policy programs.

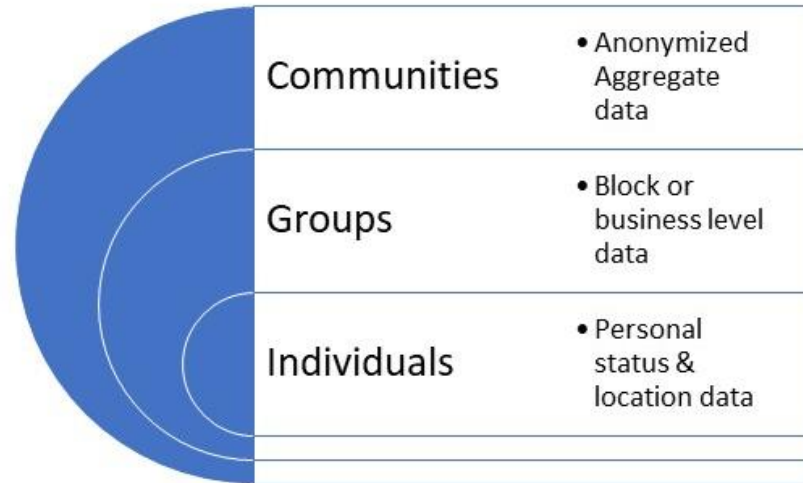
Resilience, Cloud Services & Elastic Infrastructure Workshop allows Enterprise Architects and Solution Architects to come together and ask detailed questions about pros and cons related to building services using Cloud infrastructure and resilience strategies for disaster recovering in the case of Smart City system failures. Use cases presented for attendees will include stories of Smart Grid and Utility customers, Global Manufacturing Supply Chains, and Emergency Management Response teams using Smart City technologies to navigate natural disasters and spinning up new instances of service to respond to immediate need.

Nutshell:

- Never start a Smart City project without Business Requirements
- Always talk about data you want first, then talk about **Cybersecurity** and policy you'll use to protect it

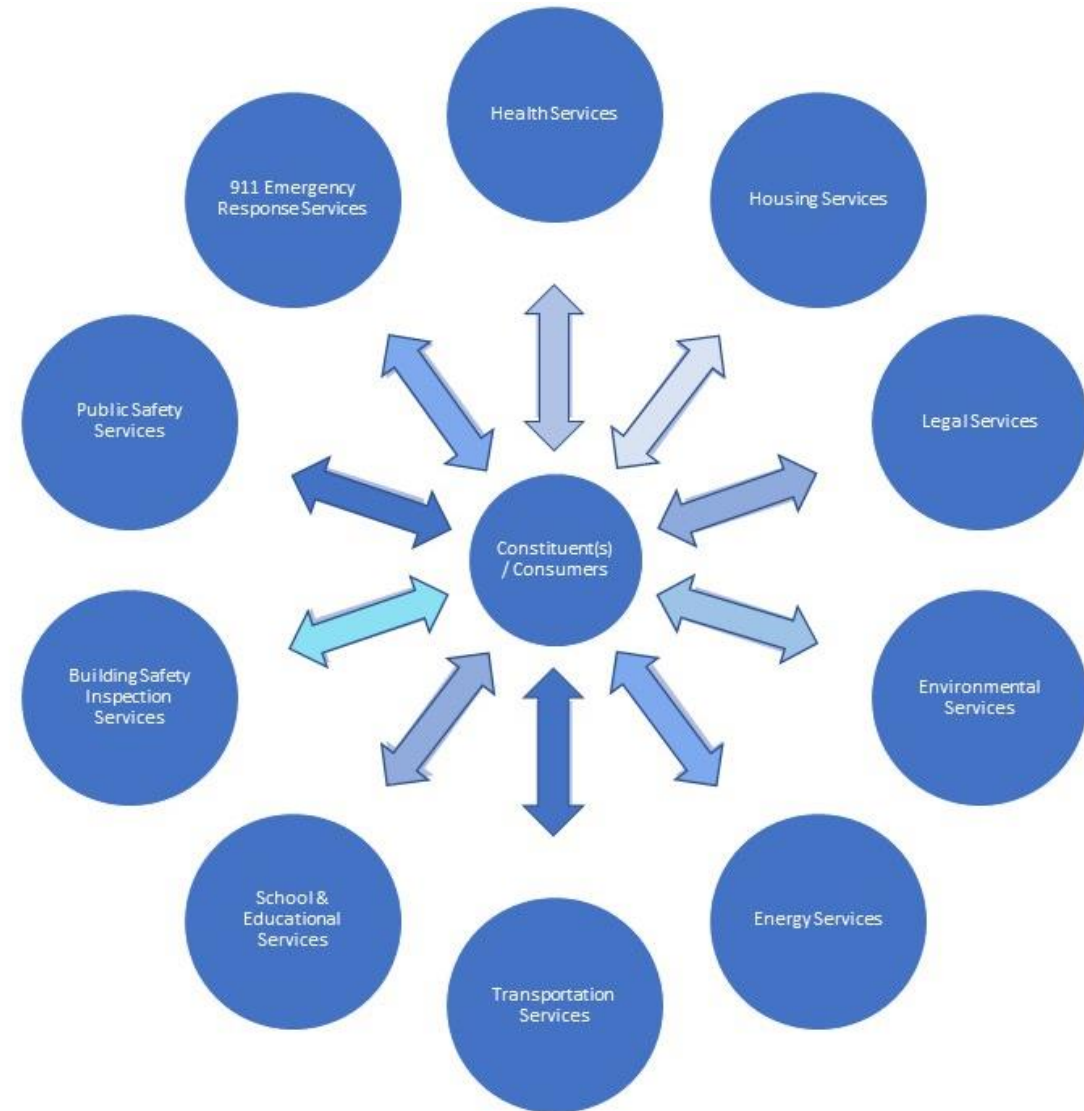


Cybersecurity-focused, data literacy initiatives, can help people understand data, privacy, the value of owning & controlling their own data and what sharing critical data with the public can do



Some initial issues to discuss and consider:

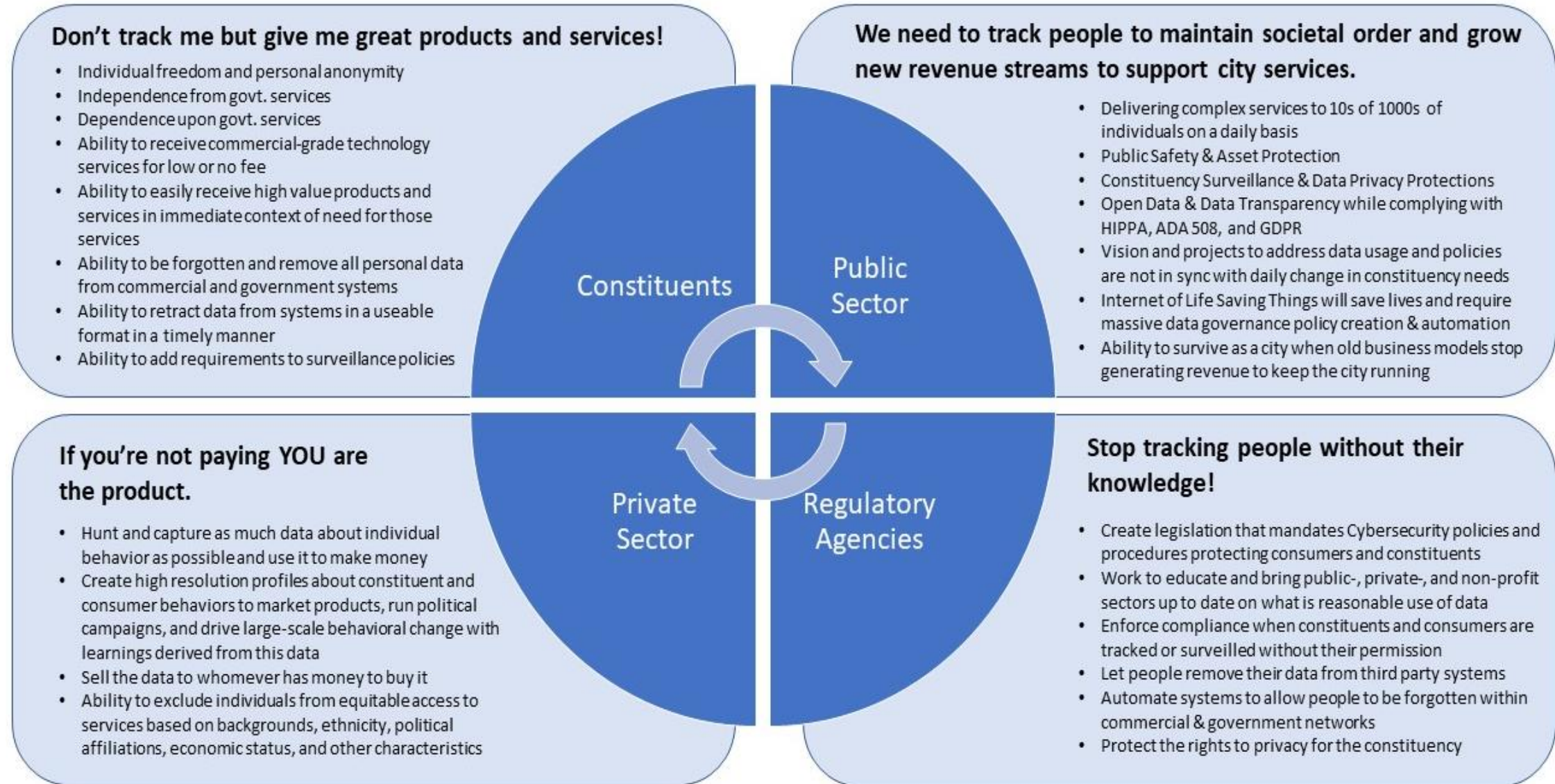
- How useful is anonymized data for delivering real-time services to individuals and groups?
- Who should have access to specific data types and how long should they retain they retain it?
- Which types of technology services and human processes can be used to manage Cybersecurity threats for each data sharing agreement?
- How much data can one entity control and should any one entity control all data access and delivery?
- Pros and cons of data integrations and transparency initiatives in context of Cybersecurity threats.



Smart City Vision, Strategic Planning, & Digital Transformation Methodology



Cybersecurity landscape and data privacy perspective with intersections and collision points



Phase 4 - Program Implementation

Digital Transformation Planning Workshops discuss the change associated with the application of digital technology in all aspects of human society, and specifically for your Smart City Projects, and that all depends upon digital literacy. A Smart City's success depends upon ideas about technology value from one person or group's perspective being described and understood by very different people and groups who may not speak the same language, be from the same generation, or from similar cultures. If people do not understand Smart Cities they disconnect, block shared initiatives, and block investment in improving centralized services. This is what cannot happen in your Smart City initiative.

We're not talking about technology products in this workshop and do talk about cultural and societal connections that can be developed to create a baseline of digital competence within private-, public-, non-profit, and constituent-led groups. This allows stakeholders to feel empowered to share vision, value, mission, and plans to succeed and Digital Transformation can occur for your Smart City programs.

Smart City Program Design Workshops provide an overview of Smart City initiatives worldwide to paint a clear picture of the options and approaches available for consideration and planning. Topics of Smart Cities, Resilient Cities, Private Cities, Corporate Cities, and Sustainable Green Cities will be covered to show the pros and cons of taking the approach of creating Hybrid Smart City programs that focus on the Triple Bottom Line of People-Planet-Profit vs. the Corporate City programs that are run by CEOs and have no government or social service offerings. This workshop is intended to be educational and open for questions and answers from attendees to ask about real-world scenarios and real-life implementation examples so they can learn a lot in a short period of time to have conversations with Smart City program leaders, vendors, and stakeholders.

Smart City Project Pipeline Planning Workshops assume clients have completed all GPS Workshops and are beginning Business Requirement sessions for Smart City projects. This workshop helps facilitate decision making and mapping of Smart City Projects to intersections of private-, public-, non-profit, and constituent-led initiatives. This mapping will be connected to existing Project Management approval processes and internal Software Development Lifecycle (SDLC) protocols to integrate Smart City projects into existing programs. If the goal is to create a new Smart City Project Management Office the workshop will be used to define operating procedures, roles and responsibilities, and processes to approve and kick off Smart City projects.

Smart City Program Steering Committee Workshops are designed to create a collective group of concerned stakeholders that may include representatives from private-, public-, non-profit, and constituent environments who will agree to monitor the success of Smart City projects and initiatives. This group needs to play a variety of roles to ensure critical components are supported to ensure program success. These components can include financial support, project sponsorship, political capital, project implementation services, expertise, data reporting, Cybersecurity governance, and a range of other services that will be determined during this fast-paced workshop.

Nutshell:

- Digital Transformation is multi-faceted and persists in every phase
- Map your ideas and brand new variable concepts to existing delivery channels and SDLCs where process helps but does not impede

Phase 5 - Adoption, Communication & Outreach

Storytelling & Journey Mapping for Smart City Workshops help marketing teams, executives, Digital Transformation leaders, community leaders, and educators tell stories of the future from a personal perspective using personae designed to represent real people with real personalities and backgrounds so they are relatable for people to watch and listen to your story. Smart Cities can be confusing so simple visual story lines that map out day-to-day experiences of a Current situation that needs to be fixed next to a Future scenario where everything is fine is a powerful, fast, way to get your vision translated into someone else's mind and gain buy-in for Smart City projects.

Education, Training, and Planning Workshops use output from Business Architecture, Business Requirements, Marketing, and Constituent Engagement workshops to consider which types of Education will help facilitate Digital Transformation and digital literacy to support your Smart City Program initiatives.

Once Smart City projects move from requirements into development Education and Training programs will be needed to ensure users are aware of the value of the new solutions and that they know how and when to use them for their intended purpose. Outreach is critical to make sure your end users actively adopt your Smart City projects.

Many Smart City programs create new jobs and in the case Smart Buildings, Energy, and Green Investment initiatives underlying technology will require new training and Workforce Development programs which need to be ready in advance of project launch.

Adoption and Communications Planning Workshops provide attendees with examples of successful Adoption and Communication strategies used for Smart City initiatives and for Digital Transformation overall so Marketing teams can begin planning and designing messaging and promotions for launch activities.

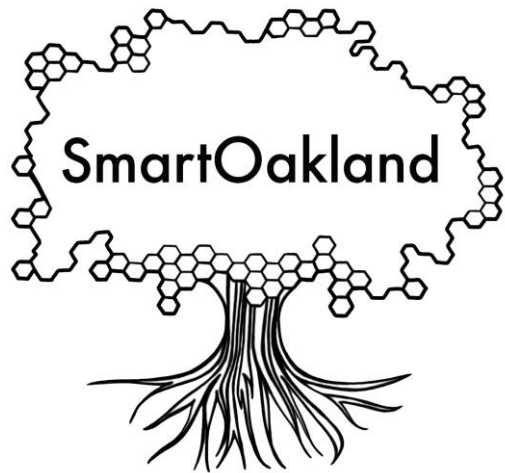
Output from the GPS Alfa, Bravo, Charlie, and Delta workshops will play a critical role in creating content for these messaging campaigns to help seed Digital Transformation that will drive people to the Smart City solutions and help monitor the usage and value of the program and whether or not performance is matching the Smart City Steering Committee's goals.

Constituent Engagement Program Workshops share examples of initiatives used in at least four cities to ensure attendees gain access to a wide variation of examples for consideration in their own Smart City projects. The goal here is not to focus on initiatives that are generally rolled out in cities like Smart Parking or transportation surveillance initiatives but to discuss ways these programs impact the people living in urban environments.

The goal here is education for Smart City Programs leaders to consider options for engaging their own constituencies using different types of Digital Transformations activities to engage and build new connections and new value between private-, public-, non-profits, and constituent groups to ensure sustainability and results for your Smart City Program initiatives.

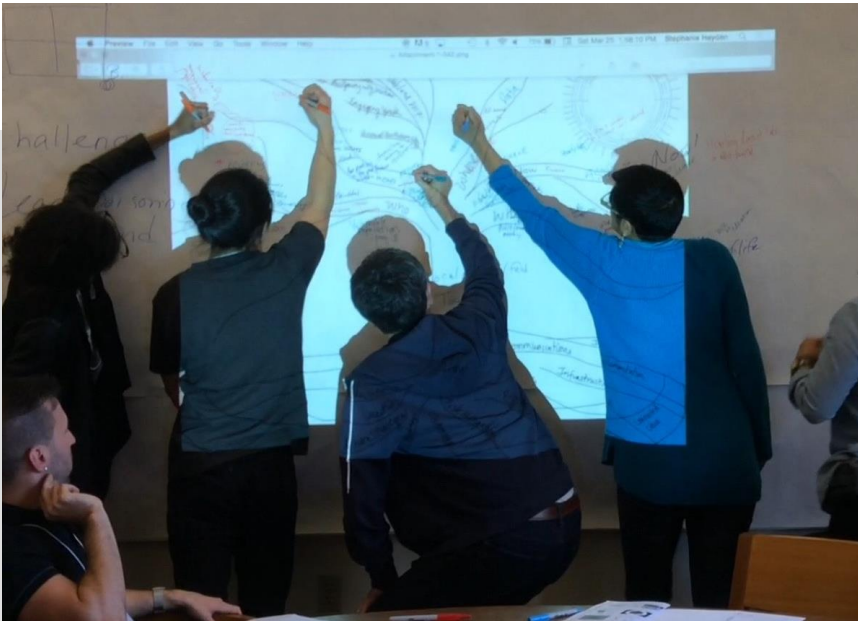
Nutshell:

- Digital Transformation is challenging and mandatory for Smart City project adoption
- There is a checklist you can use to make sure you don't miss things so your project generates value and performs as planned




Use Case & User Stories

What happens when you co-create, plan, and move forward together with new people and organizations?




Constituent- led Smart City Solution Designs



[WHO WE ARE](#) [WHAT WE DO](#) [HOW WE DO IT](#) [OUR IMPACT](#) [WORK WITH US](#)

Empowering the local government to solve 21st century challenges.

SEE HOW WE WORK →






- PROJECTS
- TEAMS
- STORIES
- NEIGHBORHOODS
- FUNDING SUPPORT
- ACTION CLUSTERS
- NEWS & MEDIA
- LEARN
- EVENTS
- CITIES FIGHTING THE LEAD WAR
- SITE MAP





CART (0)

WE ARE A CONSTITUENT-LED, SMART CITY, NON-PROFIT

Who We Are < >




GLOBAL CITY TEAMS CHALLENGE



SmartOakland Recognized by U.S. Dept. of Commerce National Institute of Standards & Technology for Smart City Public Data & IoT Utility


Read More →



We care about Getting the Lead Out of Oakland and Sharing How We Do It

Read More →

Breaking News < >




Stephen Curry
Throughout the country, schools are finding lead

Steph Curry of Golden State Warriors Does a PSA for Getting Lead Out of Drinking Water in Oakland Schools

Read More →

Stories You Need to Hear... < >



Persistent Poison: Living with lead poisoning

KALW: Persistent Poisoning Part I: Living with Lead Poisoning

Read More →

Lead poisoning is really bad for you.

MI helps you avoid poisoning because it does this to humans |

It takes less than this amount of lead paint to cause brain damage



This doctor learned about lead poisoning in Medical school but she doesn't think she and her baby match the profile of lead poisoning cases

her baby isn't poisoned yet but he will be by tonight crawling in settled lead dust on the floor

mom breathed in lead dust when handymen sanded and painted the lead poisoned house next door and it blew in an open window

toddler was born deaf after receiving lead poisoning from mom when he was a fetus, and continued exposure cause speech impediments

this 5-year old girl isn't poisoned yet but she will be next week after her family moves into a house that was built before 1978 and contains lead paint

dad was lead poisoned before he was 2 and his heart will stop before he's 40 from high blood pressure

teenager played handball against a lead paint-covered wall when he was 5, fell behind in school and dropped out when he couldn't concentrate, by next year he'll get into trouble with law enforcement

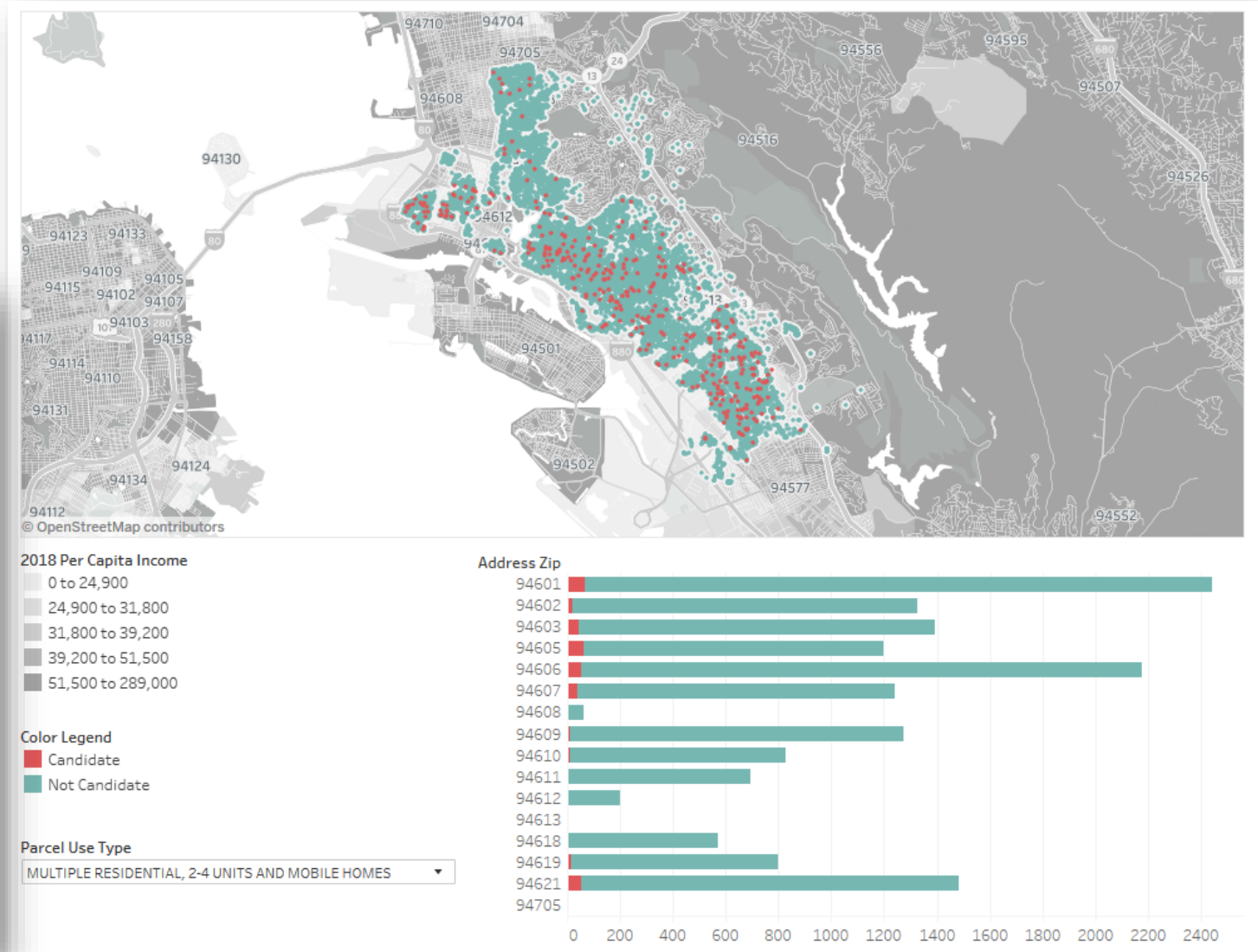
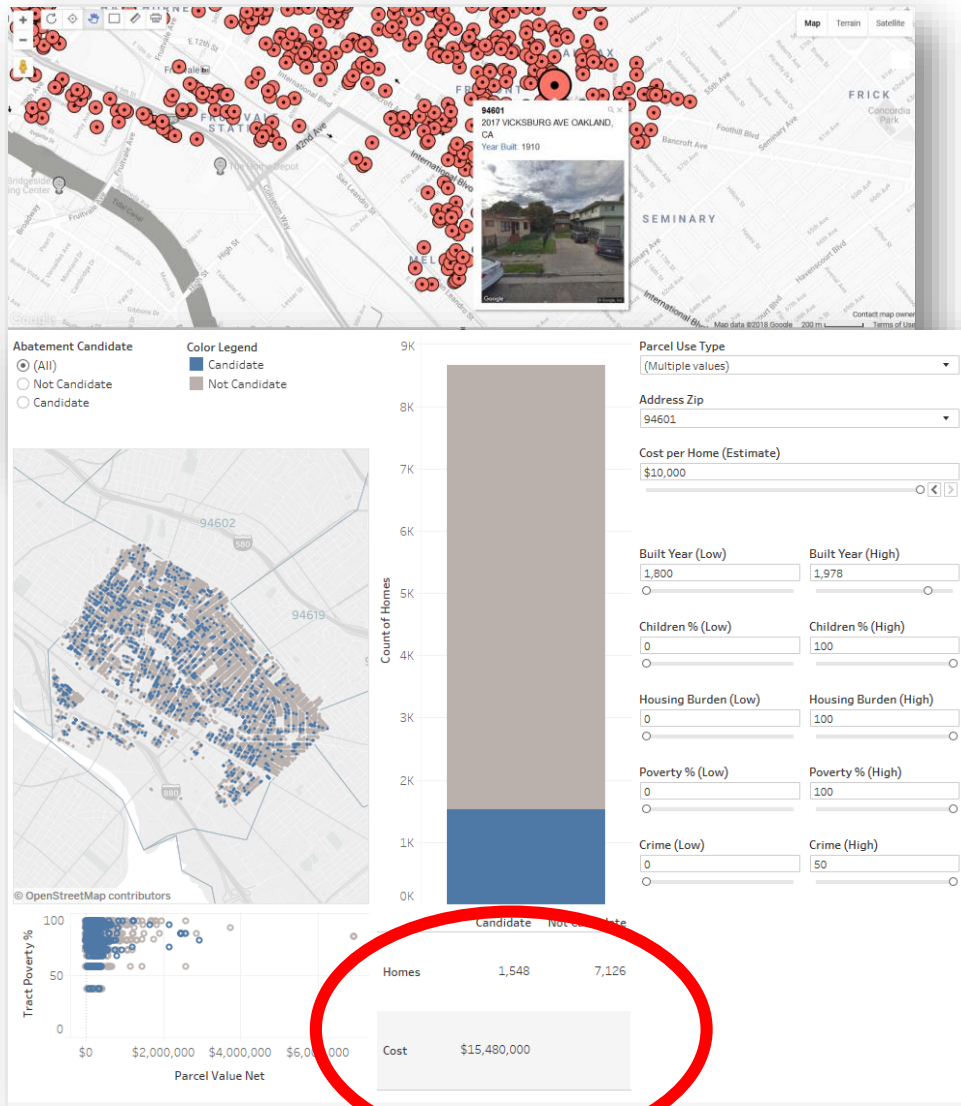
grandma was lead poisoned when she was 6 and as her bones break down from osteoporosis at 70 lead is released into her blood and is the cause of her Alzheimer's Disease



This 4-year old develops ADHD, he's on the autism spectrum, and fights a lot



We are now able to **predictive** where At Risk children 6 and under are located, down to the apartment #, by Zip Codes, income levels, and likelihood of becoming lead poisoned this year...including costs & financial returns on performing lead abatement of entire Zip Codes – see more about what this data is on the following slides



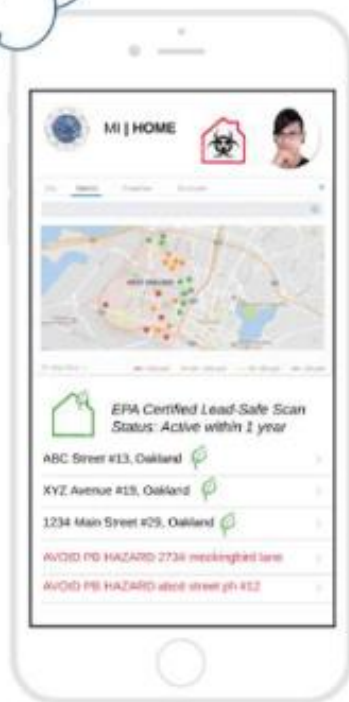
Consumers find lead-safe housing...

Julio uses MI to decide which home to rent. | Lead poison is invisible but MI's XRay vision sees it for you



Julio loves Oakland but heard there was lead poisoning in some of the houses.

He uses MI HOME to check apartments for lead-safe scans and chooses a home from the safe list.



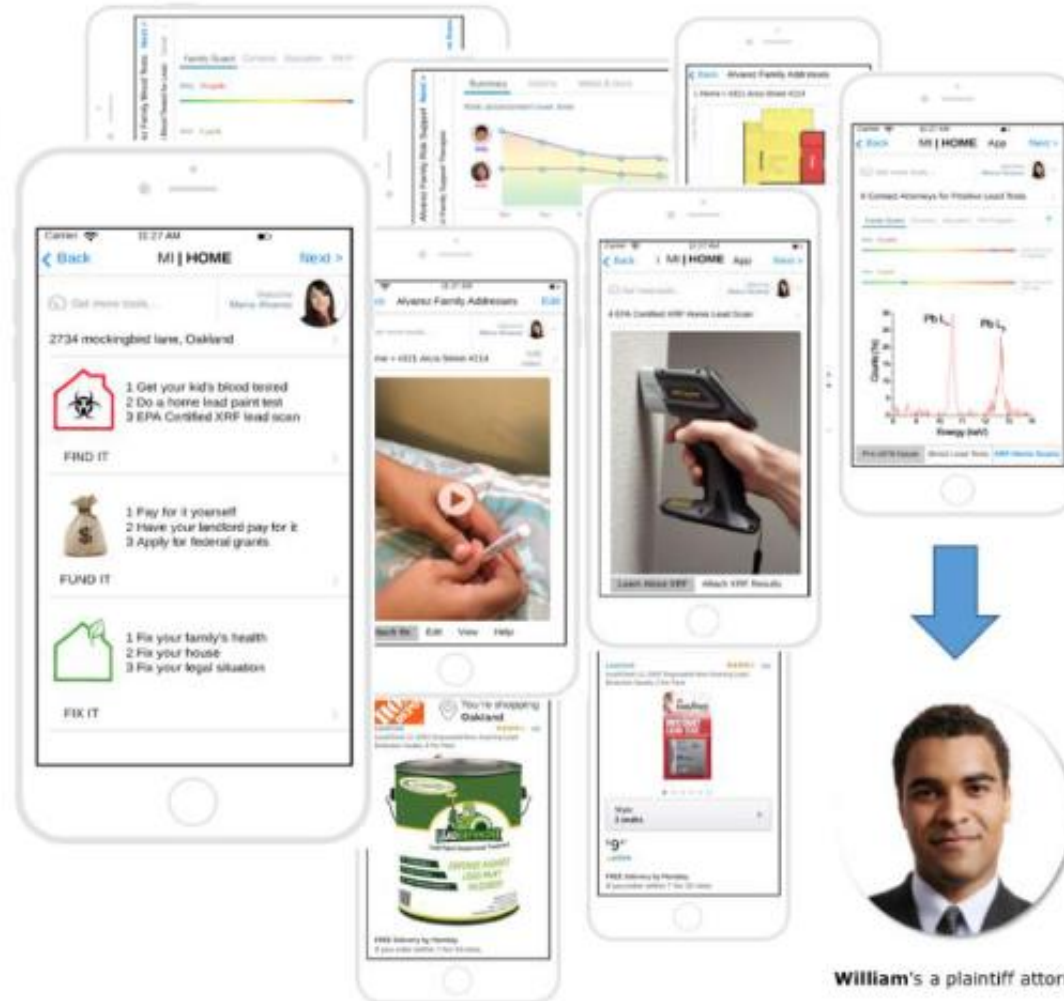
Find lead where you already live...

Maria uses MI to gather evidence and find a lawyer for her family. | Someone needs to pay for damages

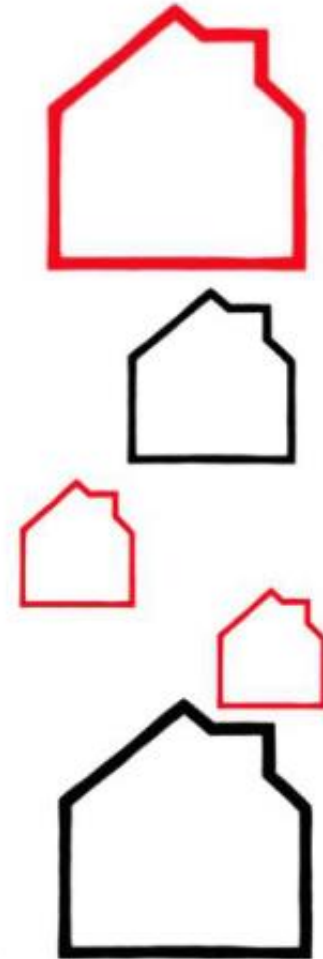


Maria learned about lead poisoning the hard way. Her son, Billy, was hospitalized from lead poison he absorbed while breathing the air and dust in the apartment they just moved into.

She's using MI HOME to find lead sources, fund her health and housing costs, and fix the lead problem in her apartment with help from her new lead poisoning plaintiff and Tenants Rights attorneys.



William's a plaintiff attorney



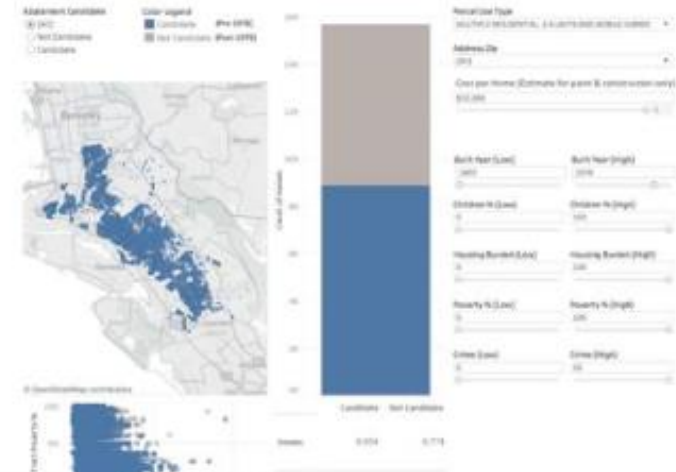
Find risks and money to fund lead abatement

William uses MI to find Maria and others like her to win more cases faster. | MI runs on Blockchain



William is a lead plaintiff attorney who understands thousands of people and cities are at risk for lead poisoning, so he's expanding his law practice by advertising to At Risk Zip Codes and parents of children 6 and under.

He's developing class action law suits to hold large corporations accountable for manufacturing and selling lead paint and medical providers who have not been warning parents or testing their kids for lead poisoning per federal and state regulations.



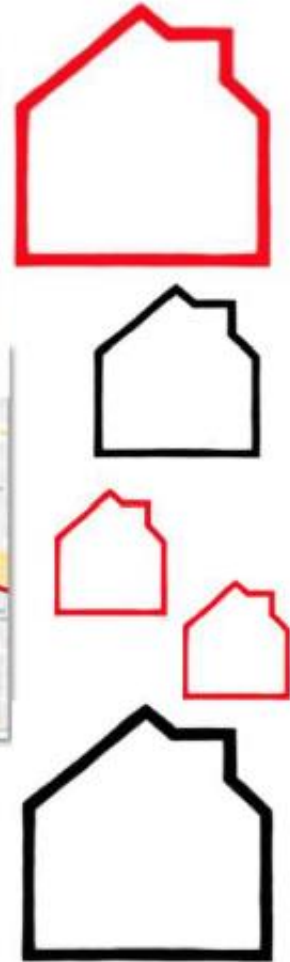
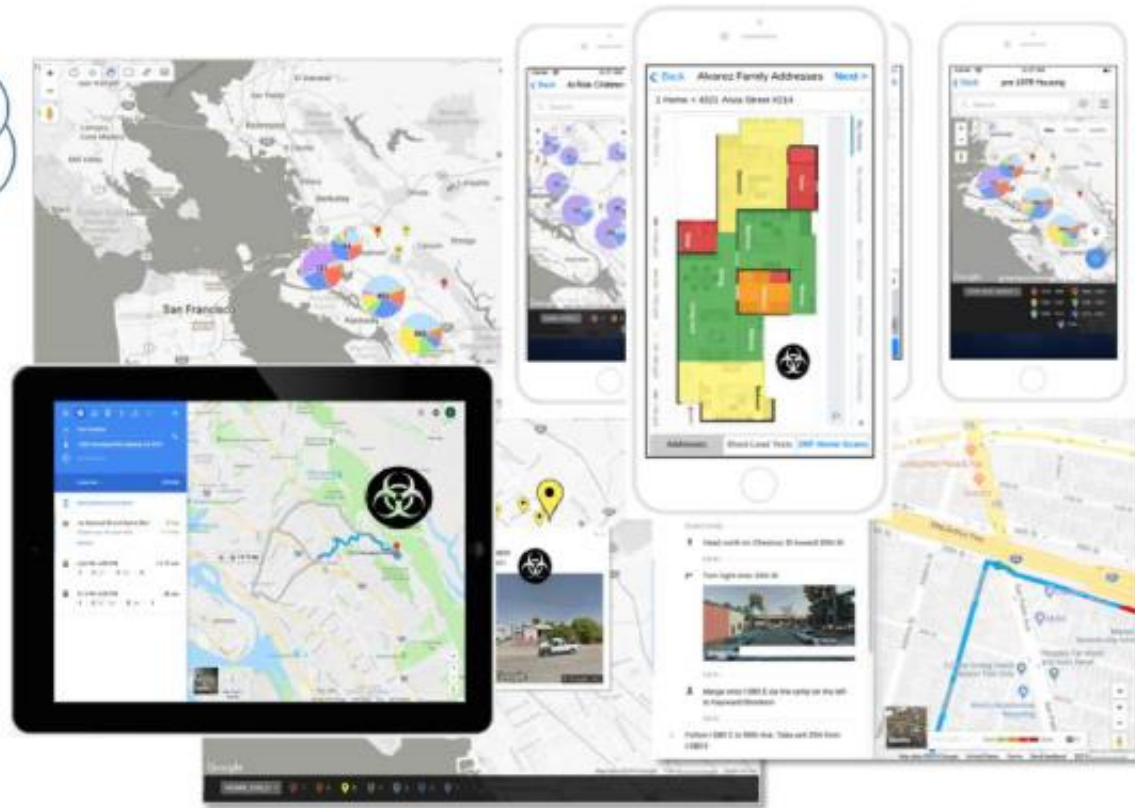
Find at-risk kids before poison finds them and connect to 911 for emergency response...

Joe uses MI to rescue people who've realized they're in poison rooms. | And to keep himself safe too



Joe is a fire fighter and First Responder who takes action on 911 calls and risks his life saving others.

He uses MI 911 to locate at risk children in lead poisoned homes and to know if the burning building he's running into will poison his team. He can take extra precautions as they arrive on scene to assist with the emergency call.

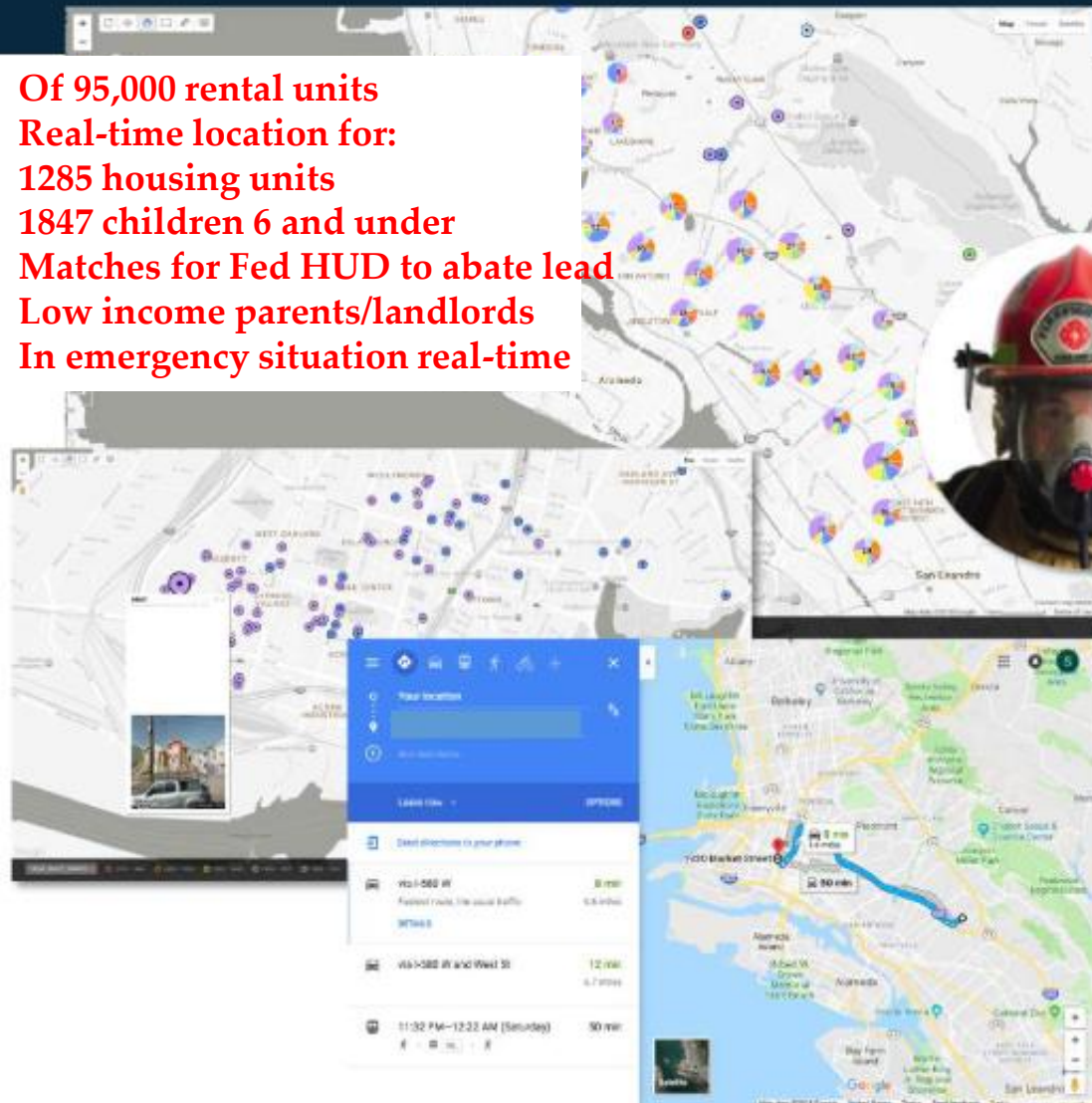


Conference: May 14, 2018
Santa Clara Convention Center
Santa Clara, CA

CO-LOCATED WITH
Internet
of Things
World

We offered to help ACHHD meet their HUD funding targets, of 70 units with 70 kids, but we didn't. We found all of them. What do you do when you suddenly have clear, real-time, insight into mass poisoning events? You have to develop new relationships...quickly.

- Of 95,000 rental units
- Real-time location for:
- 1285 housing units
- 1847 children 6 and under
- Matches for Fed HUD to abate lead
- Low income parents/landlords
- In emergency situation real-time



How to build new emergency response protocols that include neighborhood community leaders

- Connect at-risk children and families with Federal HUD funds and non-profits to abate the lead from low income units.
- Work with City of Oakland's 56 Neighborhood Councils to do block-by-block testing of every home and child in the district to promote more testing and large-scale buy in at National Night Out on August 7, 2018 – starting with this one!

Create new life saving capabilities for First Responders and empower people to watch out for themselves too

- Emergency Responders, possibly using FirstNet, can know about life saving lead data, at-risk people, and also protect themselves from exposure to lead hazards while they're doing their critical work.
- Our goal is to enable a national safety and resilience platform that streams real-time data, via IoT, to empower more people to be informed and watch out for themselves while performing better connections to critical services in emergencies.

Thank you!

Please contact us with questions & comments.

Stephanie Hayden

CEO & Founder

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www.visionarchitectureinc.com/booking

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