Austin Civic Solutions Reverse Pitch
2019 Summaries

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September Reverse Pitch Slide Deck

October 2019 Reverse Pitch Slide Deck

Austin Strategic Direction 2023

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City of Austin CTM

Contact: Ted Lehr, Data Architect | ted.lehr@austintexas.gov

Project Summary:

Accessing the vulnerabilities of COA's open data to privacy attacks and providing defenses and tools to mitigate those vulnerabilities. Help exploring (and implementing) additional privacy protections on Austin's open data portal. For example: Differential Privacy (DP) (with Machine Learning) & K-Factor Anonymity (KFA)

Issue Summary:

Much research has shown that anonymizing a data set is not sufficient to reliably protect privacy under machine driven attacks. There are measures of privacy attack vulnerability and tools of varying quality for reducing vulnerability. COA anonymizes its open data but understand that the privacy of our residents is still vulnerable to unknown degrees.

Pitch:

Work with an outside team to:

1. To choose which COA open data sets to study for privacy vulnerability.
    a. Option: We would like to discuss the value of bringing other, similar data sets, from other cities into the analysis.
2. The outside team returns a measure of the vulnerability of the data sets using measures described in the links above or other suitable measures.
3. The outside team uses privacy defenses like differential privacy, K-factor anonymization (on, for example, GIS data), to demonstrate a measurable/demonstrable reduction in the vulnerability of data sets.
    a. Option: Additionally, we would like a measure of how much the usefulness of the data has been impacted.

Housing Authority for the City of Austin

Contact: Catherine Crago, Head of Strategic Initiatives & Resource

Development, HACA | catherinec@hacanet.org

Project Summary:

Create a safe, secure, reliable communication technology for residents using HACA services. A way to authenticate (system) users who do not have a consistent authentication method, i.e. changing or no phone number, changing or no email or simply asynchronous access, i.e. no internet, ran out of bandwidth, ran out of minutes.

Issue Summary:

1. Issue #1: VLI Communication Cost, Quality Untenable in Cloud Era
    a. Resident communication is largely intermittent, asynchronous.
    b. Untenable cost related to flyering, paper processes
    c. Residents are largely on the wrong side of the digital divide (Access to the internet, device, digital literacy)
    d. Personal technology stack is uneven, varied (Past is unevenly distributed & device features & capabilities vary)
    e. Digitally included residents often have intermittent access (Limited number of minutes, limited bandwidth, 30% change 3-5X per year; “Had to let it go," Digital tools are a shared resource
    f. Temporal inequity - 8 hour vs 24 hour periodicity (Response time lag, Workplace environment; shift work)
    g. Lack of / varied de facto communication standards - frequency, duration, cadence
2. Issue #2: Increase Insight, Performance with ML/AI
    a. For physical assets, staff and residents, use ample data in multiple disaggregated data sets to determine:
        i. How to allocate limited resources
        ii. Where to invest more to limit adverse activities
        iii. Which inputs (housing + staff + resident + services + neighborhood) tend to drive outputs and outcomes
        iv. Move from reactive to proactive; manual to automated
        v. Timely detection of fraud and insight into better detection methods
    b. High compliance environment - data data everywhere
    c. Moving to paperless, automated, urgency and willingness
    d. High performer status and deep networks of learning; to maintain status in the face of decreased resources need to learn more timely, more cost-effectively than the market currently allows

Pitch:

Features

- “Real ID” email-address-independent system
- Trusted system, i.e. limited biometric, facial recognition access
- Safe and secure, HIPAA, FIRPA compliant
- Sender-prioritized communication
    - Received
    - Understood
    - Acted on

Ideas, from high to low hw/sw integration

- Facility-dependent HACA device
- Key fob with “polling” capability
- WhatsApp / Facebook (e.g. govt in East Africa, India)
- Portable encryption key

Austin Transportation Department

Contact: Jason JonMichael, Jason.Jonmichael@austintexas.gov

Project Summary:

Create smart solutions for residents to access services: health clinics, grocery stores, & downtown available parking

Issue Summary:

Issue #1: Needs in the Built Environment: Parking, signage, traffic lights
Issue #2: Needs for Service Delivery: Health Access, Food Access, Freight Hotels| m

Pitch:

Needs for the built environment: ATD wants to learn how to reliably, securely, and cost-effectively instrument and analyze the built environment. For example, help understanding where parking is, what's available now and at what cost, and even project when parking will be available and where. ATD and DAA want to make sure that drivers can easily find and use available parking, rather than hunting and thus creating more traffic/congestions.

Need for services: ATD wants to help people obtain the products and services they need--quality food/groceries, quality healthcare, etc.--at the lowest cost and/or greatest convenience. People living in food deserts or far from healthcare services need tools to reduce mobility limitations. For example, an app with a digital wallet that spans multiple modes of transportation (and thus enables not only trip planning (and trip protection) but also single payments (including affordability discounts) while retaining visibility of the vendors' offerings (e.g.

Uber/Lyft brand, app functions) would help with such mobility.

Need for understanding crash causes: the vast majority of accidents are caused by humans, not machine failures or environmental conditions. Therefore, ATD wants better data to observe human behaviors that lead to decisions that cause accidents. Understanding how pedestrians, cars, cyclists, scooter riders, and others behave on various roads and intersections can help determine how signage, signals, policies, etc. can be revised to improve safety and reduce accidents.

Neighborhood Housing & Community Development

Contact: Rebecca Giello & Josh Rudow | Rebecca.Giello@austintexas.gov & Josh.Rudow@austintexas.gov

Project Summary:

Create a web or application based platform for Austinites to easily donate to persons experiencing homelessness and fill gaps in homelessness funding (full list of features on slide deck)

Issue Summary:

Point in Time Count identified 2,255 people experiencing homelessness in 2019. 3,116 Households are Currently experiencing homelessness and are in need of housing and other support services

Response:

- Historic $62.7M budget in support of ending homelessness in Austin
- 2018 Housing Bond for $250 Million
- Pay for Success Initiative
- Affordability Unlocked Ordinance
- New Homelessness Strategy Officer

Pitch:

Strategic Donations

- Create a web-based platform for Austinites to easily donate to fill gaps in homelessness funding
- Interface shows where the money goes, what it supports, and how it specifically helps.

- Ties with social media to encourage others to give.
    - It's the giver's storytelling platform.
- Donations are geographically specific and will help people experiencing homelessness in their area

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Austin Fire Department

Contact: Chris Vetromile, Fire Adapted Communities Program Coordinator, AFD | Chris.Vetromile@austintexas.gov

Project Summary:

AFD Wildfire needs a platform to house, maintain and visualize living documents and associated data

Issue Summary:

- There is no state that is completely free from wildfire risk
    - Historic wildfire data indicates
        - The13 Western states are the most commonly affected
        - And to have an expectation of property losses due to wildfire
- ***Austin ranks as the 5th highest metro area for wildfire risk in reconstruction cost value in billions: $16.32***
- That is nearly the value of the next two highest ranking Texas cities on the list put together, San Antonio #11 and Houston #15.

Pitch:

AFD Wildfire needs a platform to house, maintain and visualize living documents and associated data

What resources is AFD using?

- Office 365 with limited Share potential
- State of Austin's Wildfire Readiness portal https://arcg.is/1zGiGr
- Austin Firewise Alliance

What are the gaps to achieving these outcomes?

- Collaboration with outside stakeholders on the living document
- Platform to house the completed living document and data

What smart cities approaches might help?

- Using existing products

- Technosylva Wildfire Risk Atlas
- ESRI Hub

Central Health

Contact: Sandy Coe Simmons, Director IT/IS, Enterprise Operations, Central Health | sandycoe.simmons@centralhealth.net

Project Summary:

The outcome of this project involves expanding and connecting data across multiple sectors - housing, health, criminal justice and other social determinant of health data (SDOH). This will allow improved interconnectivity between disparate data systems and additional analytic capacity to address care for individuals from a more holistic perspective.

Issue Summary:

Some of the main focus and goals of Central Health include:

- Creating healthy communities through health care system alignment.
- Utilizing local tax dollars to leverage other sources.
- Increasing health equity through innovative collaborations. ●

What problem are you trying to solve for Austin residents and why is it important?

- Slowing the revolving door: Using data to improve outcomes for a vulnerable population.
- People who are chronically ill and/or chronically homeless often use taxpayer funded services in a manner that are poorly integrated and inefficiently coordinated.

Pitch:

The outcome of this project involves:

- Expanding and connecting data across multiple sectors - housing, health, criminal justice and other social determinant of health data (SDOH).
- Improved interconnectivity between disparate data systems and additional analytic capacity to address care for individuals from a more holistic perspective.

Success for this project will be demonstrated by

- Having a greater capacity to connect and analyze data from across

sectors.

- The ability to identify individuals who cycle through and across taxpayer funded services so providers can generate individualized care plans.
- The ability to provide more realistic utilization and costs of services.
- Central Health and partners are already working towards this for their own outcomes. Our community is rich in talent to bring the integration of all data together.

A smart city approach would involve:

- Commitment and support to acquiring data at the highest level.
- Legal and political support (data sharing agreements).
- Integration support (SDOH data vs. health vs. justice data set consistency).
- Enhanced capabilities of existing HIE technology.

Downtown Austin Alliance

Contact: Jenell Moffett, MBA, Director of Research & Analysis, Downtown Austin Alliance | jmoffett@downtownaustin.com

Project Summary:

Improving ability of persons experiencing homelessness to know how to access resources and services. Need: Accessible and simple user interface to input and locate resources accurately and efficiently.

Issue Summary:

The Homeless System Process Triage found that:

- Austin is operating at a level that is below 50% of the current demand or capacity needed.
- 90% of those engaged are impaired by behavioral issues and do not know where to access the services they need or do not desire to know.
- 50% of those who do engage with an outreach worker decline services and refuse shelter, 35% of those offered permanent housing refuse it.

- Approximately 3,000 households need immediate housing/shelter and services, but the system is generating fewer than 300 units per year.

Problem: Clients do not know how and where to access resources and services that will meet their needs.

Pitch:

Initiative – Improving ability of persons experiencing homelessness to know how to access resources and services.

- Need #1: A centralized information system that will warehouse and provide real-time quantities of what's available and where.
- Need #2: Accessible and simple user interface to input and locate resources accurately and efficiently.

Travis County

Contact: Brigid Shea, Travis County Commissioner | brigid.shea@traviscountytx.gov

Project Summary:

Develop a technology that would allow the county to find residents homebound for emergency evacuations (older residents, handicapped,children, pets). Develop a way to contact and rescue homebound during an evacuation when law enforcement sets up barricades.

Issue Summary:

Problem #1: Older residents, handicapped, children, pets, etc; many people are at home and unable to evacuate themselves in case of a wildfire, flood or other disasters.

Problem #2: In an emergency, especially a wildfire, law enforcement will NOT let anyone into an area they are evacuating; how do rescue those stuck at home: children, elderly, handicapped, pets, etc?

Pitch:

Currently, there is no accurate, up-to-date database of homebound populations that may need to be evacuated in case of an emergency; due to medical emergencies, finances, etc, older residents are frequently displaced; how can we track this information so first responders know where to go?

Austin Chamber of Commerce

Contact: Drew Scheberle, SVP, Education & Talent | dscheberle@austinchamber.com
Project Summary:

Opportunity Austin 4.0 is designed to tackle our biggest challenges: to diversify our economy and improve talent, affordability, connectivity and opportunity for all. To grow Human Capital, Opportunity Austin 4.0 has an aspirational goal: 100% readiness and placement directly from high school graduation – into college, credentialing, the military or high-performance workplace.

Issue Summary:

- 97% of Non-Direct College Enrollees Earn Less Than A Living Wage
- 37% of high school students do not directly enroll in college.
- Of those directly not enrolled in college, only about half are employed.
- Earnings for employed non college enrolled high school graduates are quite low, even for the 'high achievers'.

Pitch:

Support for Opportunity Austin 4.0. Help developing a digital platform to increase college enrollment & retention Including: a dashboard with enrollment indicators (college intent, FAFSA, intake checklist, etc), market assessments surveys, college and career readiness & placement, digital messaging for FAFSA, and more. (full list of features on slide deck)

Austin Smart Mobility - City:One Challenge

Contact: Hannah Barron, Smart Mobility Community Engagement Manager | Hannah.Barron@austintexas.gov
Project Summary:

How might we make it easier for East Austin community members to live a healthier life through improved mobility and transportation?

Opportunity 1: Supporting health during the unexpected

Opportunity 2: Providing trusted health services
Opportunity 3: Delivering health to those who want it
Opportunity 4: Connecting neighborhoods to hubs

Issue Summary:

The City:One Austin Challenge engages residents and decision makers to envision, design and deploy new mobility solutions, through a five phase process that takes about eight months to complete:

Pitch:

Applications for the chalenge will close on November 5th. Visit cityoneaustin.com to submit your application.

When designing solutions and proposals for submission in the Challenge, Austin Transportation Department, City:One and our project collaborators ask that you consider the following principles:

Solutions should…

- Foster community support and buy-in
- Promote racial equity
- Balance data transparency and privacy
- Be inclusive of diverse communities
- Incentivize the adoptability of agile solutions
- Be environmentally sustainable and have a path towards carbon neutrality
- Account for those who might not have digital access

All applications in the Propose phase will be evaluated against the following criteria:

1. Desirable: The application demonstrates how it can meet the needs of both the city and its intended user
2. Feasible: The solution can be piloted with up to $100K and within 6 months, and it is operational within the current transportation system
3. Viable: The solution has a clear customer and a pathway to a sustainable service model

Preference may be given to proposals that demonstrate the following qualities:

Solutions for All – Is there a mechanism to help further mobility solutions that maximize the full integration of people with disabilities and conditions of aging into the community?

Equity – is there a mechanism to help ensure equity in the pilot (for example, by creating services accessible to people of different abilities, or addressing socioeconomic barriers to movement within a city)?

Community Buy-in – Is there a mechanism to help confirm the community buy-in of the pilot (for example, by having a local implementation partner, or by developing a mechanism to bring the community into the pilot design, development, and deployment)?

Economic Value – Is there a mechanism to help create economic value in the community in which the solution is piloted (for example, by creating jobs, giving an equity stake, or some other mechanism)?

Austin Energy

Contact: Karl Popham, Manager, Electric Vehicles & Emerging Technologies | karl.popham@austinenergy.com

Project Summary:

Austin Energy is more than just a power company. We are 1,700 of your friends and neighbors with a mission to safely deliver clean, affordable, reliable energy and excellent customer service — 24 hours a day, 365 days a year. Austin Energy is continuing their ongoing transition to clean, renewable energy sources and would like to inform Austin residents of available clean energy options and benefits available to those that switch to cleaner energy options.

Issue Summary:

Austin residents have expressed interest in wanting access to their energy use data through their IoT devices such as Alexa and other personal digital assistant apps.

Pitch:

Develop a tool that would allow people to understand their energy consumption based on the Austin Energy's energy sources portfolio mix, make recommendations to save based on what they can track (e.g. home power usage levels and patterns, home type since private homes can add solar, etc.) and on what the user is willing to provide (if they list car type

and MPG, they could measure miles/day based on GPS and provide carbon footprint, and reduction amount by transitioning to an electric vehicle, or a scooter for short rides, etc.)

Cap Metro

Contact: Charlie Jackson, Director Transit Technology Systems | Charlie.Jackson@capmetro.org

Project Summary:

Cap Metro's Civic Purpose is to transform the daily lives of Central Texans by providing a robust, sustainable, transportation network that connects people and communities to jobs and opportunities.

Issue Summary:

Cap Metro wants to:

- Increase transit ridership
- Reduce vehicle traffic
- Prepare for Austin's Growth

Pitch:

1. Can we take advantage of 5G and IoT devices to enhance communications between vehicles and the external environment?
2. How can IT support mixed-use fleets of electric transit vehicles across the city
3. How can we use AI and smartphone APIs to make the Cap Metro app useful for non-riders? An app that could entice them to consider Cap Metro services for certain transportation during the day, with alerts about how much money/carbon they could have saved on a specific route. It could also prompt them to see whether an upcoming trip (based on calendar appointments and locations) or recurring trip (based on daily transportation patterns) could be replaced by a bus route at savings.