Smart Austin Strategic Roadmap

Briefing to City Council, May 16

What's Inside

1. Review Council Resolution

2. Common Definition of Smart Cities

3. Maturing our capability

4. Needs and Gaps

5. Recommendations

Goals   Progress

A common, Austin-centered definition of Smart Cities

A statement of vision about Austin's Smart Cities future

Challenges on which we should focus and prioritize

Potential opportunities to address those challenges

Key goals & outcomes operationally for the City and for residents' equitable quality of life

An inventory of practices to consider

Core needs, gaps, and capabilities to deliver

Potential resources and means for partnering and financing initiatives

A prioritized list of projects to pursue

3

How would integrated technology & real time data help?

Homelessness Outreach Street Team

4 agencies across 2 jurisdictions working together to reduce:

- duplication, repetition of effort
- application do-overs
- gaps in providing service

Each agency has a technology system.

But when together they must work on paper.

AustinCityUP Retweeted

General Assembly ATX @GA_ATX · Apr 18

Smarter, safer, more efficient & more inclusive cities. Great conversation today @austincityup's #smartcity workshop

AustinCityUP @AustinCityUP · Apr 18

Chief Innovation Officer @kerry_atx: #Austin creating #smartcity roadmap @austintexasgov #sccreadiness smartaustin.bloomfire.com
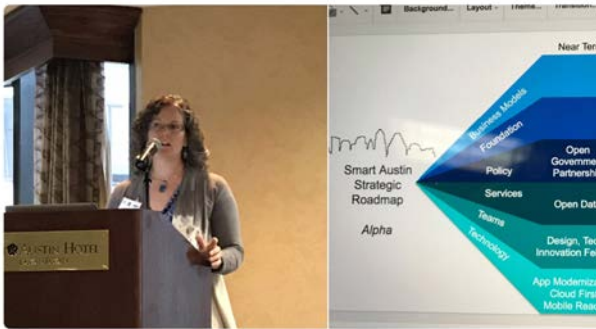
AustinCityUP @AustinCityUP · Apr 18

#smartcities #sccreadiness workshop in #austin today to learn & plan smart transportation health housing data & more

Ann Kitchen

AustinCityUP @AustinCityUP · Mar 15

How Can #Austin Achieve #SmartCity Status? @jayboisseau & @kerry_atx

How Can Austin Achieve Smart City Status?
Beyond the music, movies and tech debuting at South by Southwest, this year's festival is also hosting city leaders from around the country. They're

kut.org

↩ 1   ↻ 3   ♡ 2   I

AustinCityUP @AustinCityUP · Mar 15

Examining Austin's "smart city" bona fides - Austin Monitor

Examining Austin's "smart city" bona fides - Austin ...
Austin's reputation as one of the nation's smartest cities went under the microscope Sunday, with policy and academic experts examining the technology, education...

austinmonitor.com

↩   ↻ 1   ♡   I

AustinCityUP @AustinCityUP · Apr 18

CIO @austintexasgov Stephen Elkins "Make sure we are #inclusive in #smartcity roadmap so all residents of #Austin have input" #sccreadiness

AustinCityUP @AustinCityUP · Apr 18

Mayor Adler closes up #sccreadiness workshop "Need a certain tech base and people that #Austin has to be #smartcity" @austintexasgov

Austin's Smart City Strategic Intent

We are a city that becomes **increasingly efficient** in **solving real problems for real people** by:

(i) engaging stakeholders and users

(ii) leading collaboratively,

(iii) working across disciplines, departments, and city systems, and

(iv) using data and integrated technologies

to transform services and improve quality of life with and for *all* **Austinites,** businesses, and visitors.
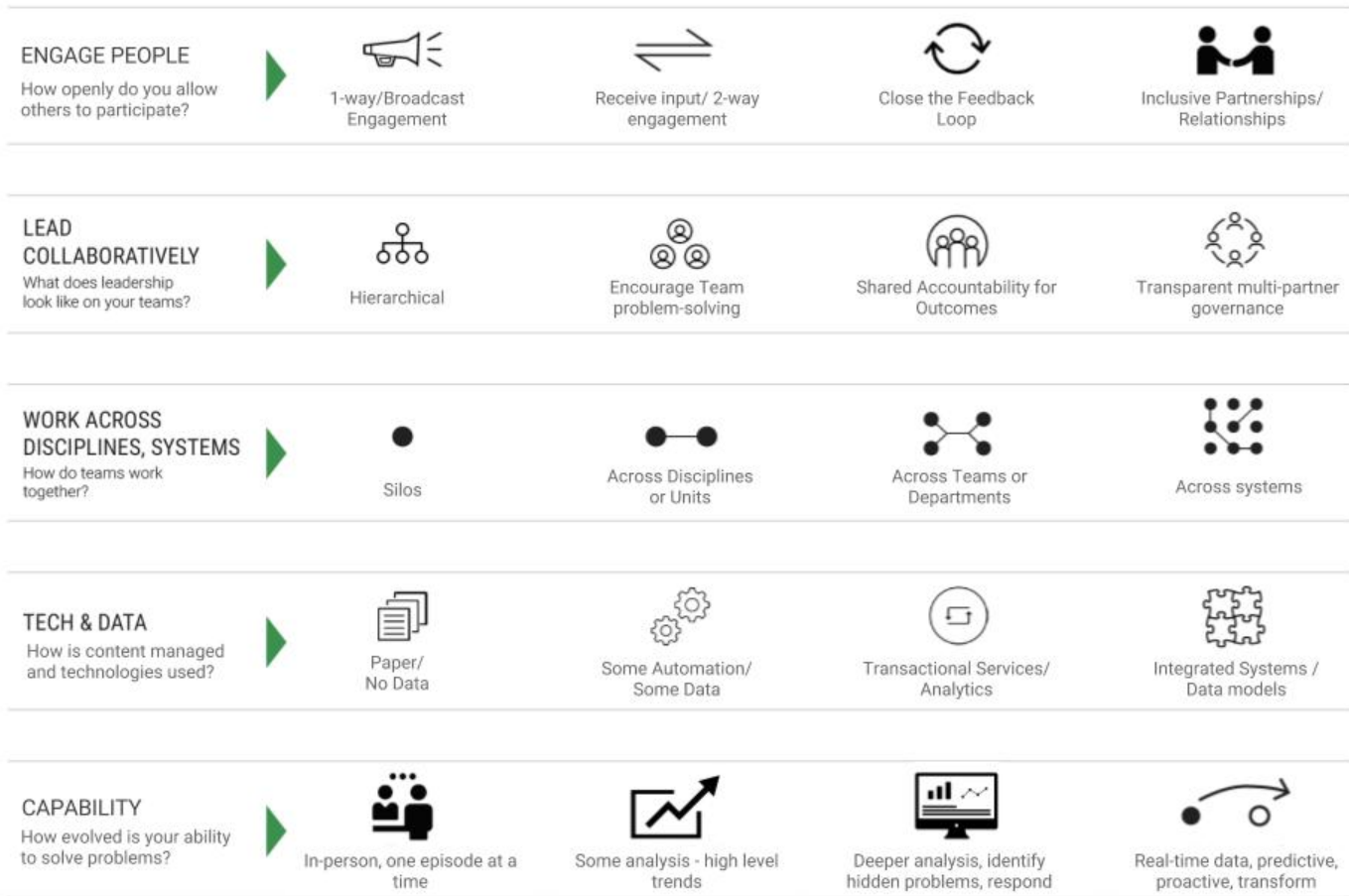
BOSTON SMART CITY PLAYBOOK

The age of the "Smart City" is upon us!

It's just that, we don't really know what that means. Or, at least, not yet.

So far, many "Smart City" pilot projects that we've undertaken here in Boston have ended with a glossy presentation, and a collective shrug. Nobody's really known what to do next, or how the technology and data might lead to new or improved services.
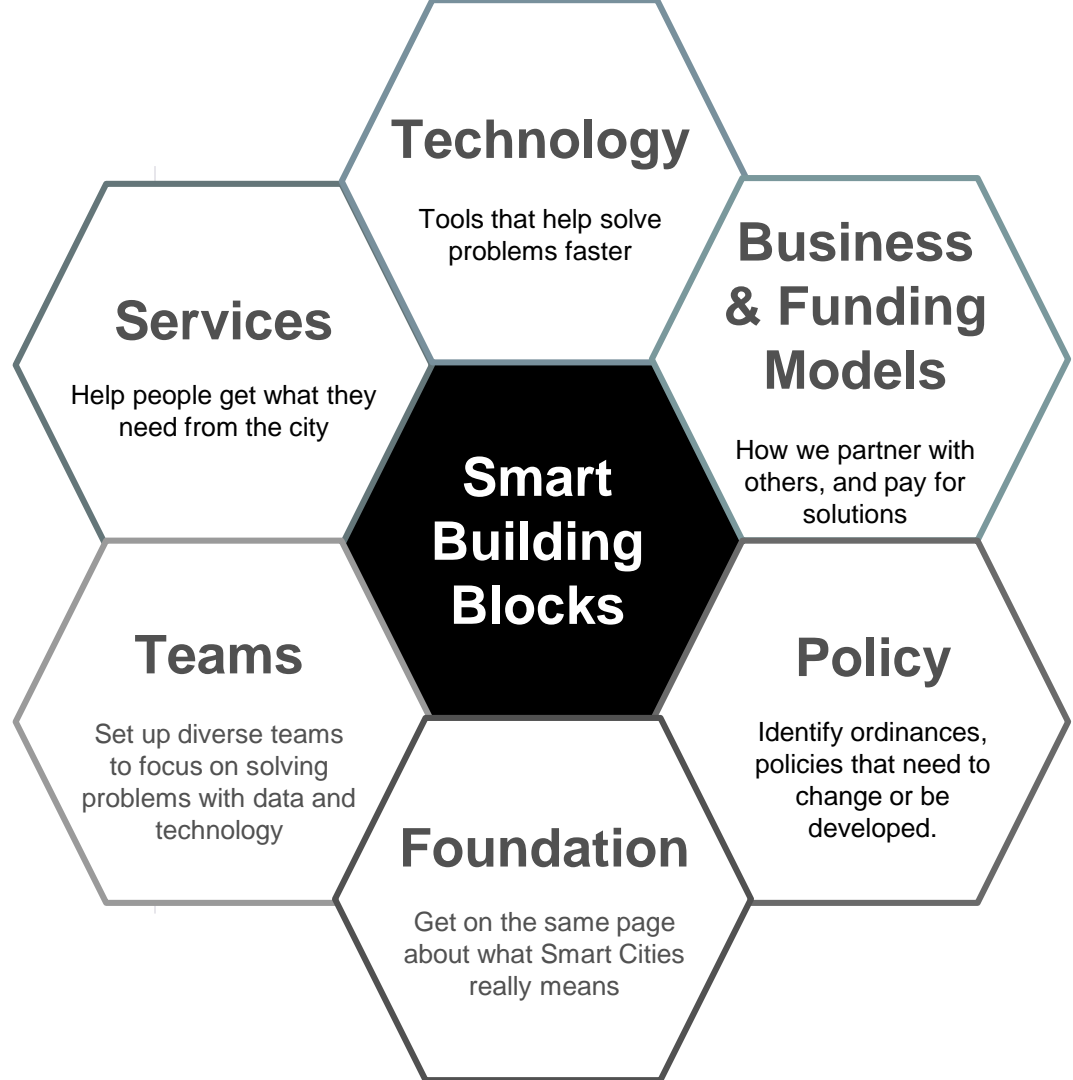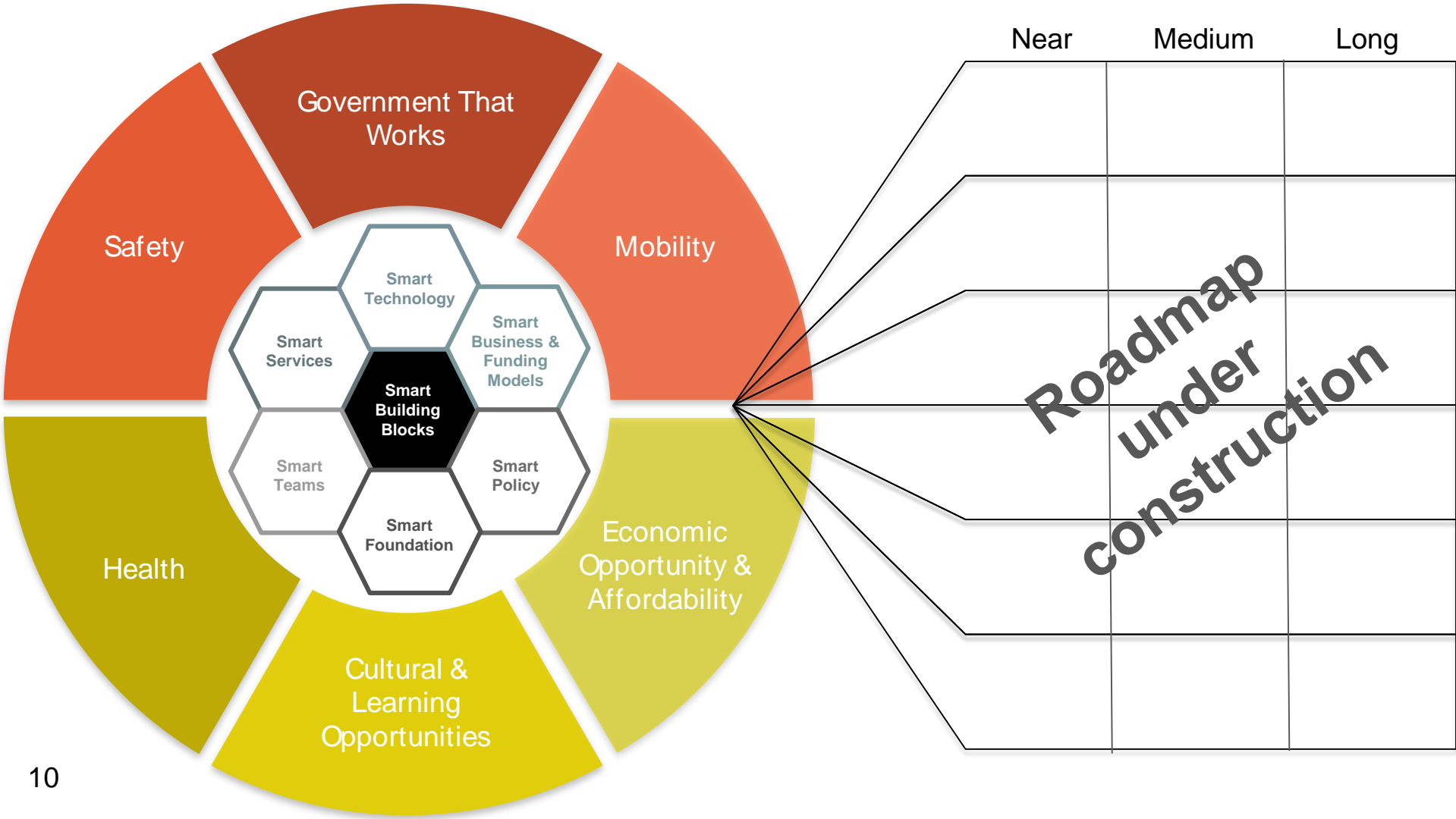
Smart Cities Maturity Model

	1	2	3	4
ENGAGE PEOPLE How openly do you allow others to participate?	1-way/Broadcast Engagement	Receive input/ 2-way engagement	Close the Feedback Loop	Inclusive Partnerships/ Relationships
LEAD COLLABORATIVELY What does leadership look like on your teams?	Hierarchical	Encourage Team problem-solving	Shared Accountability for Outcomes	Transparent multi-partner governance
WORK ACROSS DISCIPLINES, SYSTEMS How do teams work together?	Silos	Across Disciplines or Units	Across Teams or Departments	Across systems
TECH & DATA How is content managed and technologies used?	Paper/ No Data	Some Automation/ Some Data	Transactional Services/ Analytics	Integrated Systems / Data models
CAPABILITY How evolved is your ability to solve problems?	In-person, one episode at a time	Some analysis - high level trends	Deeper analysis, identify hidden problems, respond	Real-time data, predictive, proactive, transform

8

Core needs, gaps, capabilities to deliver

Technology

Tools that help solve problems faster

Business & Funding Models

How we partner with others, and pay for solutions

Services

Help people get what they need from the city

Smart Building Blocks

Policy

Identify ordinances, policies that need to change or be developed.

Teams

Set up diverse teams to focus on solving problems with data and technology

Foundation

Get on the same page about what Smart Cities really means

10

The hype cycle

Open Data in San Francisco:
Institutionalizing an Initiative

Phase 1:
The Executive Edict

This period is usually characterized by the creation of an Open Data Policy. Some groups are excited, some are skeptical. Most don't know how to start.

Phase 2:
The Publishing Scramble

During the publishing scramble a few or even many datasets are released with great fanfare. Some are high value and make a splash. Metadata needs and data quality may not be addressed.

Phase 3:
The Period of Stagnation

After the publishing scramble, low hanging fruit is hard to find. Tough issues, like timely data publishing arise. Some may recognize that those initial datasets have problems.

Phase 4:
The Resource Reckoning

New challenges emerge and the initiative lacks a clear path forward. Some recognize that no one "owns" the program and the need to dedicate resources emerges.

Phase 5:
The Integration of the Initiative

Open data is a part of doing business. Resources are allocated and data governance, roles and responsibilities, and standards are created and in practice.

11

Open Data Census - Austin ranking

Benefits of learning from those who went before

Scramble

2016
Austin ranked #2
(San Francisco #9)

2014
Austin ranked #10
(San Francisco #2)

Edict

Integration

2015
Austin ranked #58
(San Francisco #37)

Resource Reckoning

2013
Austin's Open
Data Directive

Stagnation

12
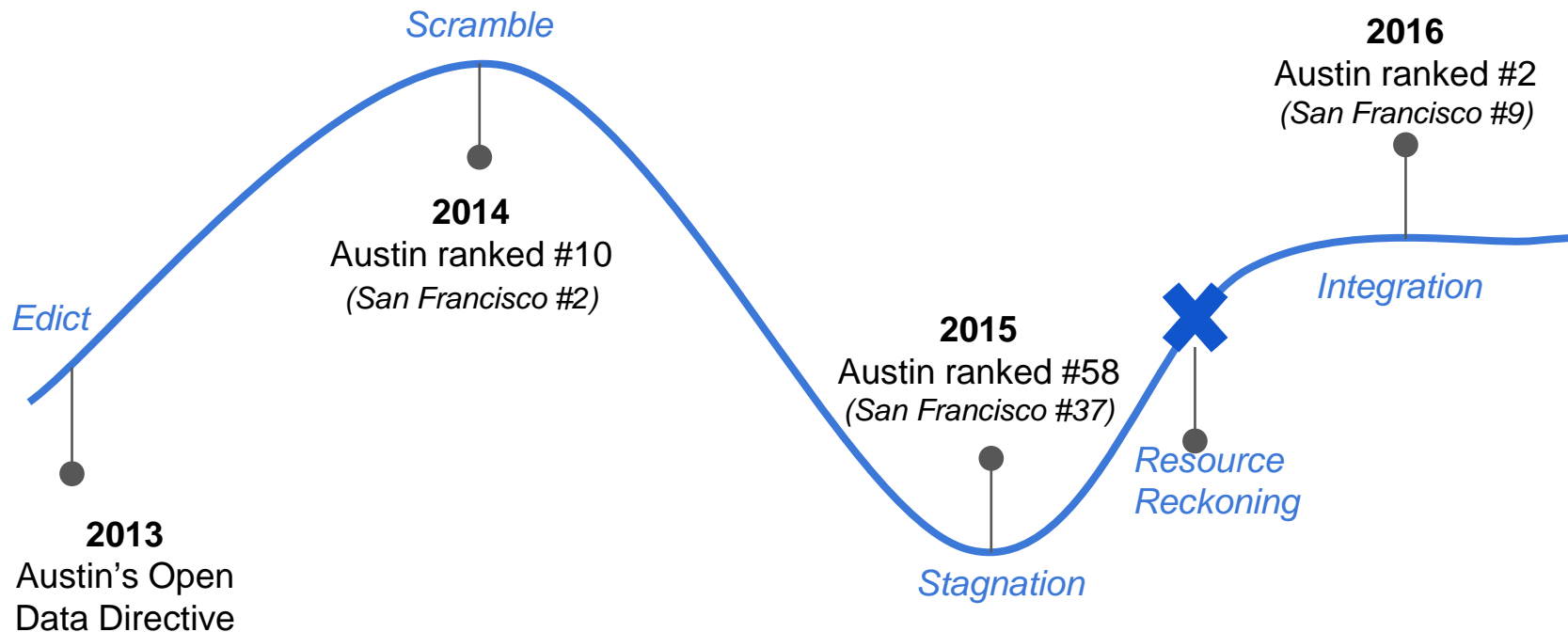
Why isn't our data open?

City of Austin Traffic Signal Division
Signal Trouble Ticket

Location 71 @ CENTER of THE HILL	
Intersect # 436	APD Case #
Date 2-1-17	Weather SUNNY
Source 213	
Work Location: SG	Work Type: PM

Time Received	
Time Arrived @ Loc.	9:00
Time Departed Loc.	12:00
Time Back @ Shop	
Time Back @ Home	

Task Order # 2423257000

CSR # NO.

Trouble Reported / Work Assigned: PM TxDOT		
Storm:	Y	N
Replace Controller:	Y	N
Controller Ver.:	1.4X	1.7X
Controller Brand:		
Loops:	Y	N
Problem Found: EB AMBER OUT, WB 5 SEC MESALEON Ø3 & Ø4 BAD LEAD-IN CABLE EB Ø2 SET BACK LOOP PULL BOX - PB COVER DAMAGED WB SEGNAL CABLE HANGEN DOWN	Video:	Y	N
	CMU Fault:		
	UPS Status: N/A	Y	N
	Pre-empt Working: N/A	Y	N
	QTY	**Materials Used**	

14

transportation.austintexas.io
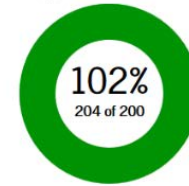
Smart Project Canvas

What lanes did John need cleared?

How did he up our game?

Project Title: **Signal Timing Program**

Council Priority: ▬ ▬   ▬

Outcome Qualities: ☐ Equity   ☐ Sustainability   ■ Resilience

Principles that apply: ☐ Privacy   ■ Security   ☐ Accessibility

Smart Foundation	Smart Policy	Smart Teams
Smart Services	Smart Technology	Smart Business, Funding Model

	1	2	3	4
Engagement				
Leadership				
Collaboration				
Digital				
Data				
Capability				

What we've learned about change

✓ Start small

✓ Follow a standard

✓ Focus on usability
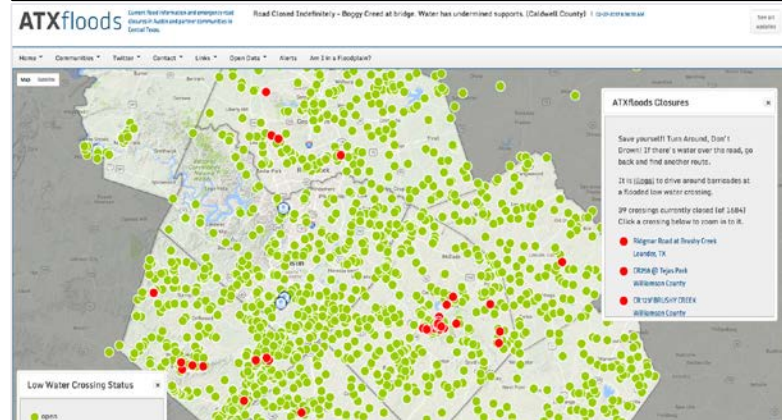
✓ Be open by default

A smart tool moving from 2 to 3

ATX Floods

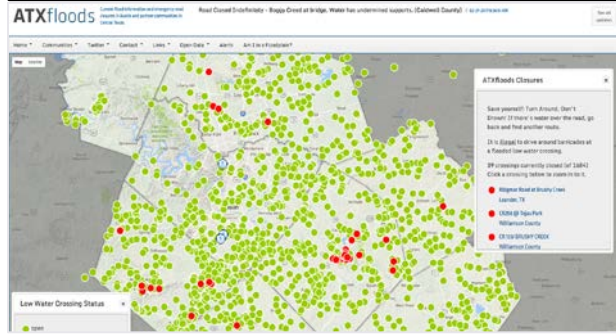| 2012	2017

2012: Created w/ Code for America fellow, handful of data points

2017: 2500+ data points, growing pains!
-> Texas Water Development Board Grant
-> Design, Technology, Innovation Fellows Team looking into integration with Google Maps, WAZE, first responder tools

What lanes needed clearing?

How are we upping our game?

20

Project Title: ATX Floods

Council Priority:

Outcome Qualities: ☐ Equity ☐ Sustainability ☒ Resilience

Principles that apply: ☐ Privacy ☐ Security ☒ Accessibility

Smart Foundation	Smart Policy	Smart Teams
Smart Services	Smart Technology	Smart Business, Funding Model

	1	2	3	4
Engagement				
Leadership				
Collaboration				
Digital				
Data				
Capability				

A smart journey - aiming for 4

Clunky tools make proactive case management difficult for Austin Code

- Lack of Intuitive & Automated Enforcement Tools

- Increasing Code Enforcement Demands

- Keeping Pace with New Enforcement Demands

- Lack of Real-Time Data for Field Inspectors

- Limited Code Education & Community Collaboration Tools
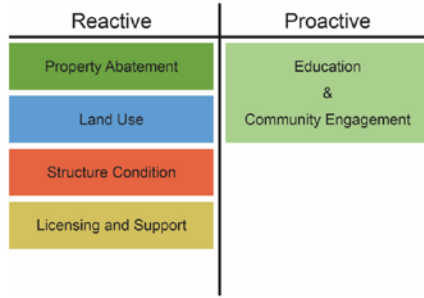
What lanes need clearing?

Where are they aiming?

Project Title: **Austin Code**

Council Priority:

Outcome Qualities: ■ Equity ☐ Sustainability ■ Resilience

Principles that apply: ■ Privacy ■ Security ■ Accessibility

Smart Foundation	Smart Policy	Smart Teams
Smart Services	Smart Technology	Smart Business, Funding Model

	1	2	3	4
Engagement				
Leadership			▬	
Collaboration				
Digital				▬
Data				▬
Capability				▬

A smart team - trying to align 1 - 4

Homelessness Outreach Street Team

Multi-agency team proactively meeting the needs of people living on the streets in downtown Austin.

2 Austin Police officers, 1-2 EMS community health paramedics, 3 Integral Care behavioral health specialists, 1 Downtown Austin Community Court case manager

Goal: Streamlined, accelerated collaborations between public safety agencies and service providers enable the *right intervention* with the *right resource* at the *right time* to:

protect vulnerable individuals at risk of
    deteriorating
- interrupt hostile/aggressive behaviors
- prevent crisis and crime

in a way that supports access to services and housing.

What lanes need clearing?

How will we up our game?

Project Title: **Homelessness Outreach Street Team**

Council Priority: ▬ ▬　　　▬

Outcome Qualities: ■ Equity　■ Sustainability　■ Resilience

Principles that apply: ■ Privacy　■ Security　■ Accessibility

Smart Foundation	Smart Policy	Smart Teams
Smart Services	Smart Technology	Smart Business, Funding Model

A healthy and smart future - level 4

Seeds of transformation

- Dell Medical School
- Design Institute for Health
- Community Health Paramedics
- Homelessness Outreach Street Team
- Pay for Success Task Force
- Sobriety Center

Focus on the vulnerable

Integrated teams, "whole person" focus

Data Integration

New practices, operations, technologies

Optimum use of resources

Better outcomes

	1	2	3	4
Engagement				
Leadership				
Collaboration				
Digital				
Data				
Capability				
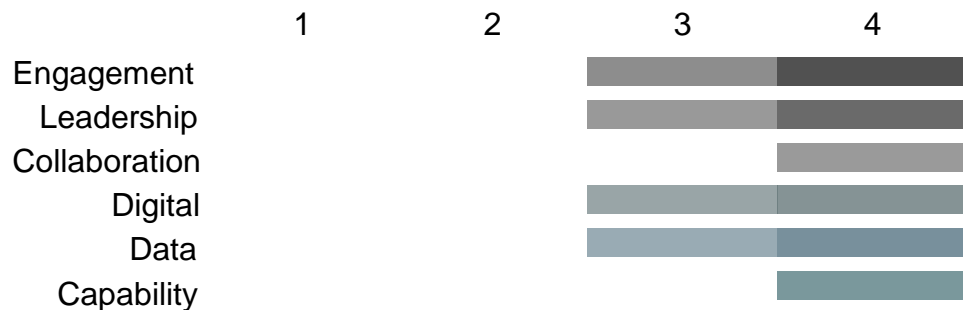
Smart City Plays

1. Stop sending sales people

2. Solve real problems for real people

3. Don't worship efficiency

4. Better decisions, not (just) better data

5. Platforms make us go ¯_(ツ)_/¯

6. Towards a "public" privacy policy

In detail

29
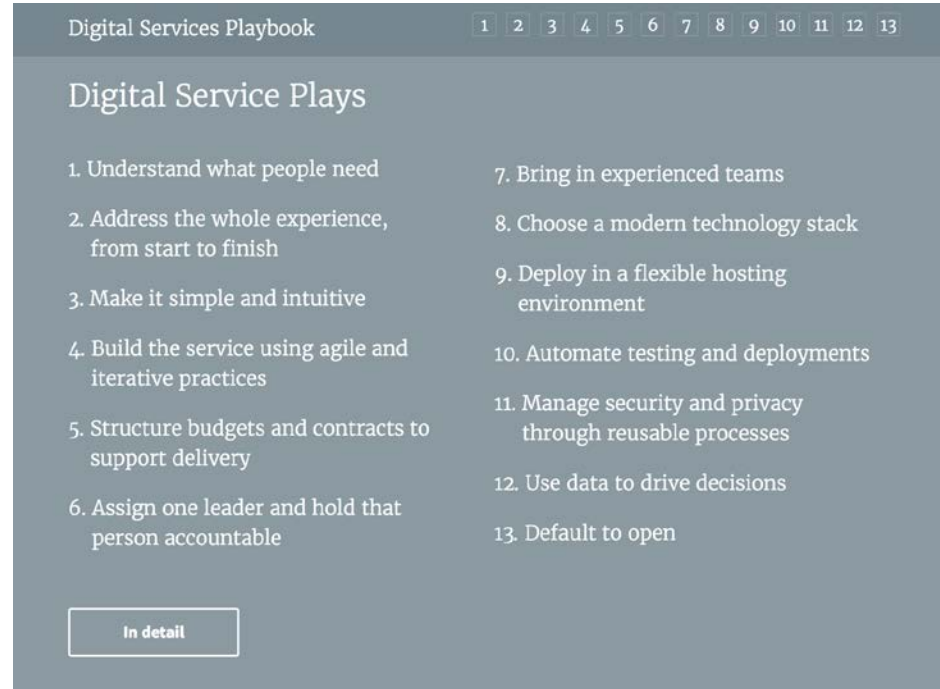
Next steps to make change

This is how you change things

1. Align to Council priorities

2. Budget for discovery to understand user needs

3. Budget for technology

4. Build or buy technology

Digital Services Playbook   1 2 3 4 5 6 7 8 9 10 11 12 13

Digital Service Plays

1. Understand what people need

2. Address the whole experience, from start to finish

3. Make it simple and intuitive

4. Build the service using agile and iterative practices

5. Structure budgets and contracts to support delivery

6. Assign one leader and hold that person accountable

7. Bring in experienced teams

8. Choose a modern technology stack

9. Deploy in a flexible hosting environment

10. Automate testing and deployments

11. Manage security and privacy through reusable processes

12. Use data to drive decisions

13. Default to open

In detail

Preliminary Inventory of
needs and projects (in progress)

Recommendations

1. Accept Smart City definition and maturity model

2. Invest in Smart Foundation Projects
   - Web Redesign
   - Paperless Initiative
   - Security Operation Center and Network Operation Center

3. Continue to assess department needs and projects

4. Provide update to Council early Fall

Questions?