

Smart City Initiatives  
for the Flagstaff region

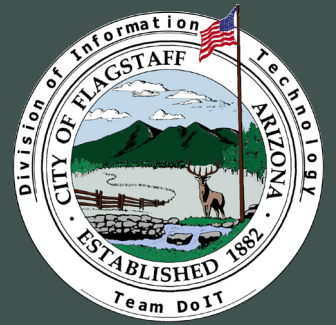
# Information Technology

*"The Best Way to Predict the Future is to Create IT."*



Smart City Initiatives for the Flagstaff region

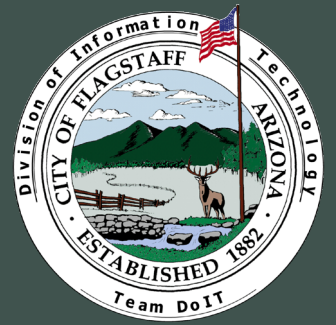
# Information Technology



## Agenda

- Fiber Update
- Smart City

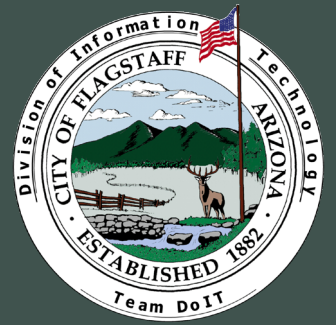
Smart City Initiatives for the Flagstaff region  
**Information Technology**



# Fiber Update

# Smart City Initiatives for the Flagstaff region

## Information Technology



## Current Funding

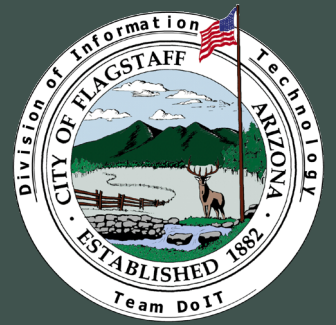
- IT Funding - \$2,770,000
- Traffic Engineering - \$600,000
- Visitor's Center - \$80,000
- Water Services – Various amounts

**Total Exceeds \$3,000,000**

*Note: Grant Capacity of over \$16,000,000*

# Smart City Initiatives for the Flagstaff region

## Information Technology



## Defining our Goals

Meeting the City's internal needs

- Facilities

- Smart City Initiatives

Meeting our community partner needs

- Coconino County

- Northern Arizona University

- Flagstaff Unified School District

Meeting the community's needs

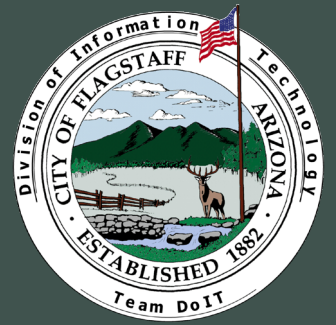
- Bring additional options for homes and businesses

- Reduce cost of fiber buildouts for ISPs

- Not compete directly with ISPs

# Smart City Initiatives for the Flagstaff region

## Information Technology



## Defining our Tools

Direct Funding

Grants

Capital Project Coordination

City Right-of-Way

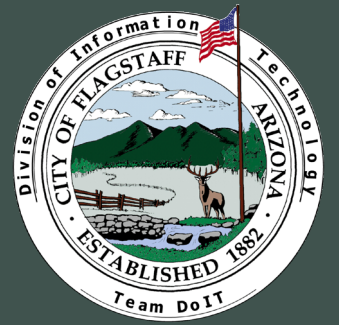
Existing City Infrastructure

Conduit

Abandoned Pipes

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### Lessons Learned: Grants

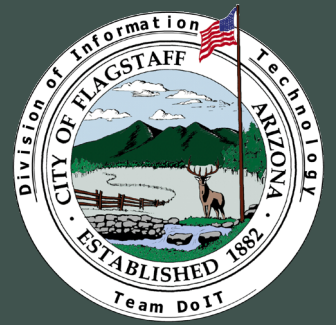
Arizona Commerce Authority \$10 million grant required partnership with an active ISP

Federal Broadband Grants require specific service to the home or business

There are some grants we qualify for directly, but they are smaller and have caveats.

# Smart City Initiatives for the Flagstaff region

## Information Technology



## Defining our Strategy

### Option 1 – Continue building as-is

#### ***Pros:***

We have complete control.

We get long-term revenues.

#### ***Cons:***

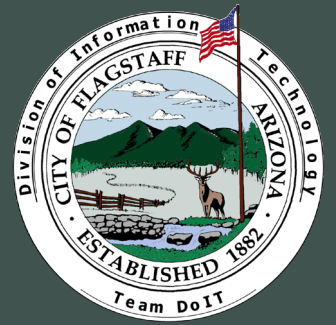
Costs are high.

Timeframe is long (without additional funding).

Most grants are off the table.

# Smart City Initiatives for the Flagstaff region

## Information Technology



## Defining our Strategy

### Option 2 – Partner with an ISP through a public procurement process

#### *Pros:*

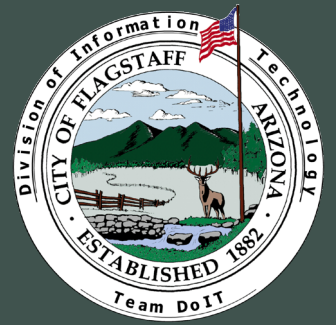
- ISP pays most of the upfront capital cost.
- Could have new service in under 2 years for both community and City needs.
- Grants are possible (depending on the partner).

#### *Cons:*

- We are beholden to the fiber provider.
- We give up all future revenues.
- Grant funds go to the ISP rather than the City

# Smart City Initiatives for the Flagstaff region

## Information Technology



## Council Discussion

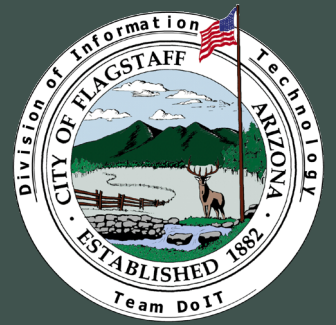
Answer the following questions:

Any preference on strategy?

Option 1 – Continue building as-is

Option 2 – Partner with an ISP through a public procurement process

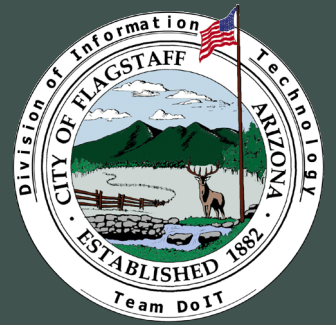
Smart City Initiatives for the Flagstaff region  
**Information Technology**



**Smart City  
Discussion**

# Smart City Initiatives for the Flagstaff region

## Information Technology



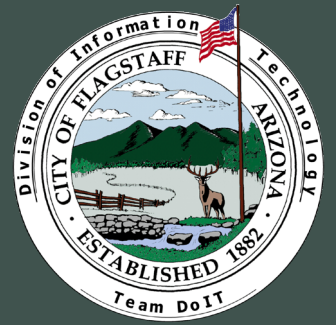
## What is a Smart City?

Whatever you want it to be?

- Technology + Infrastructure
- Data Transparency
- Citizen Interaction
- Staff Efficiency

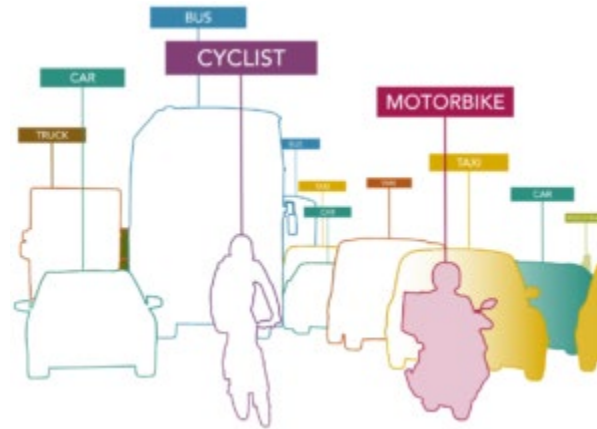
# Smart City Initiatives for the Flagstaff region

## Information Technology



## What is a Smart City?

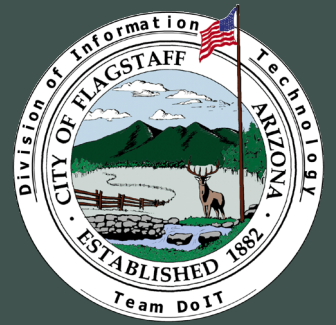
Technology + Infrastructure



[Demo - Vivacity Labs](#)

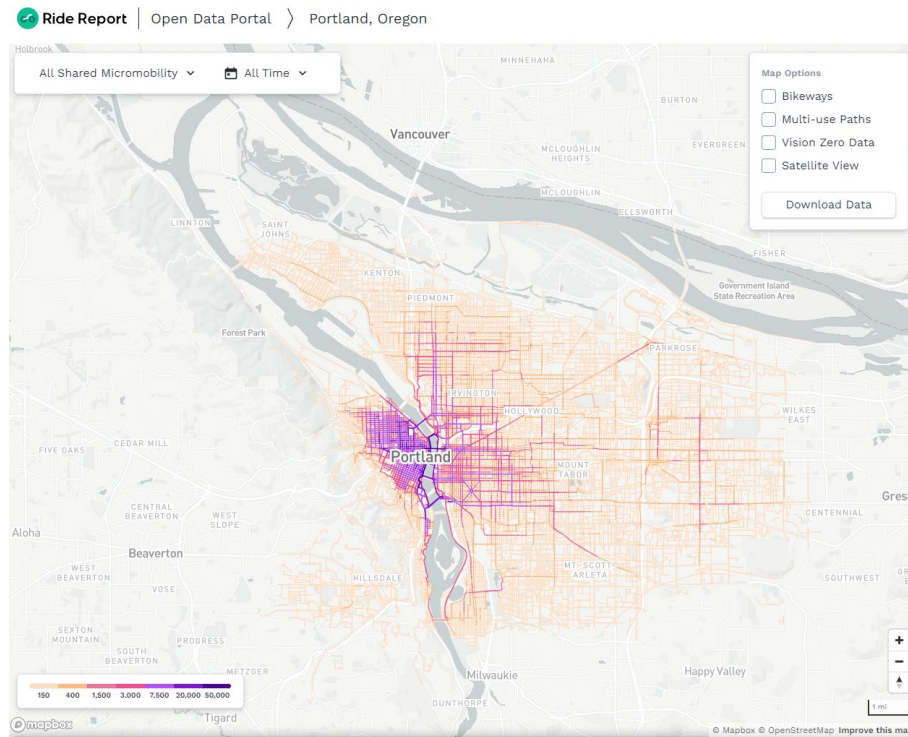
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## What is a Smart City?

Technology + Infrastructure

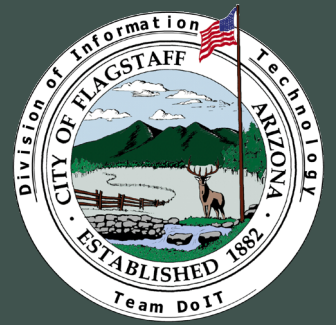


Median Trip Distance	Median Trip Duration	Trips per Day (avg)	Total Trips	Total Distance
1.03 miles	9.6 minutes	2,719 trips	1,935,700 trips	3,085,871 miles

[Ride Report Open Data Portal | City of Portland](#)

# Smart City Initiatives for the Flagstaff region

## Information Technology



## What is a Smart City?

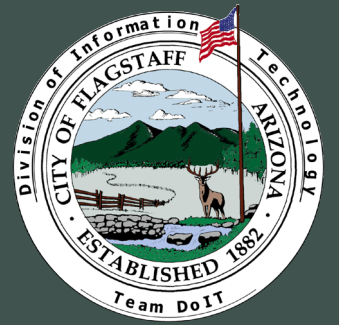
### Technology + Infrastructure

Other ideas and examples

- COVID testing sensors the sewers
- Air Quality Sensors
- Smart Facilities (smart lighting, HVAC, etc.)
- Smart parking sensors
- Electric Vehicle Infrastructure
- Smart Traffic Signals
- Smart Flood/Fire Warnings

# Smart City Initiatives for the Flagstaff region

## Information Technology



## What is a Smart City?

### Technology + Infrastructure

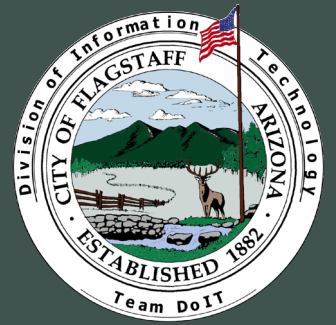
Benefits = More data at a faster pace

What it takes to succeed?

- Capital Costs (High)
  - Network Connectivity (Fiber, Wireless, etc)
  - Sensors (Cameras, IOT Devices, other sensors)
- Ongoing Costs (Medium/Low)
  - Staffing (Database Engineers, Solutions Architects, GIS Analysts)
  - Software

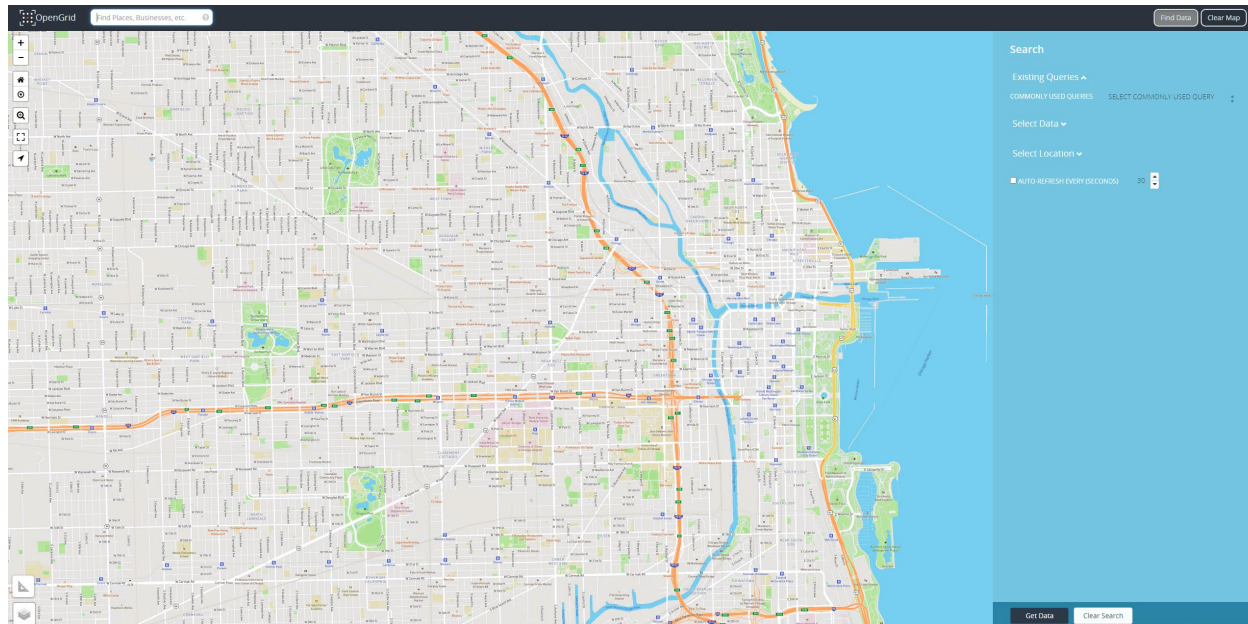
# Smart City Initiatives for the Flagstaff region

## Information Technology



## What is a Smart City?

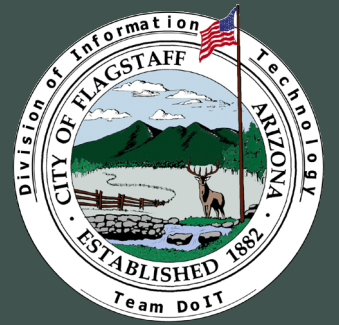
Data Transparency



[OpenGrid | City of Chicago](#)

# Smart City Initiatives for the Flagstaff region

## Information Technology



## What is a Smart City?

### Data Transparency

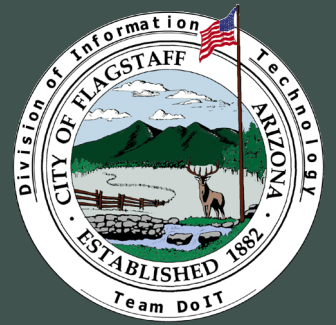
Benefits = More informed data-based decisions

What it takes to succeed?

- Ongoing Costs (Medium)
  - Staffing (Database Engineers, GIS Analysts, Division Data Entry)
  - Software

# Smart City Initiatives for the Flagstaff region

## Information Technology



## What is a Smart City?

Citizen Interaction

### Flagstaff Connect

Advertisement

My Usage

Environment

Permits

Report Issue

Events

Add App

**Upcoming Event: Art in the Park**

Come see the work of local artisans this Friday thru Sunday in Wheeler Park. There will be a bounce house for the kids and food trucks onsite.

Learn more

< **Flagstaff Connect**

#### Air Quality

Air Quality Index is a measurement of pollutants in the air. Lower is better.

#### Landfill Usage

**13,285** cu ft

TOTAL LANDFILL

**235** cu ft

ADDED LAST MONTH

#### Dark Sky

Compared to other cities under 1 million population. Lower is better.

#### Vehicle Charging Stations

< **Flagstaff Connect**

#### Bill Due: Sept 28

Here's a friendly reminder that your Water/Trash bill is due September 28!

Pay now!

Setup Autopay

#### Trash Usage

#### Award: Trash Saver

Congratulations! You have used 30% less trash than similar homes in Flagstaff last month. Thanks for helping us reduce waste. Keep up the good work!

#### Water Usage

You used 15% more water than similar homes last month.

< **Flagstaff Connect**

#### Submit a Permit

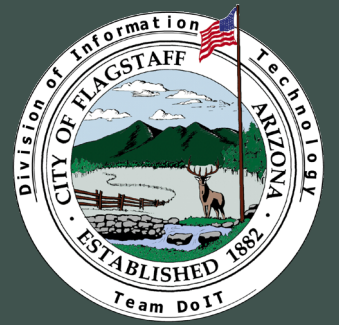
Submit a New Permit

#### Permit Status - #13839

- ✔ Submitted Permit #13839
- ✔ Submitted Environmental Analysis
- ✔ Submitted Building Plan
- ✔ Engineering Approved by John Smith
- Under Fire Review by Jane Doe
- Pending Inspection
- Pending Permit Complete

# Smart City Initiatives for the Flagstaff region

## Information Technology



## What is a Smart City?

### Citizen Interaction

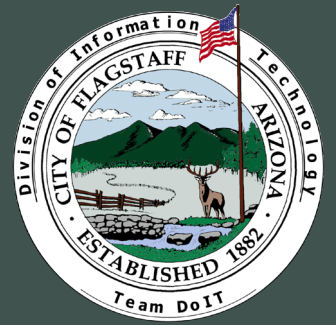
Benefits = More engaged community

What it takes to succeed?

- Ongoing Costs (High)
  - Staffing (Database Engineers, Solutions Architects, Developers, Division Data Entry)
  - Software

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## Information Technology



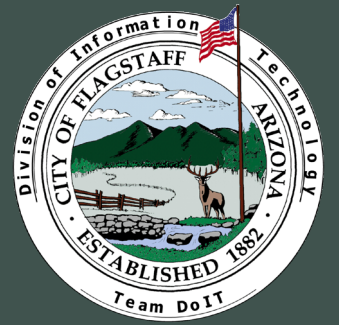
## What is a Smart City?

Staff Efficiency



# Smart City Initiatives for the Flagstaff region

## Information Technology



## What is a Smart City?

### Staff Efficiency

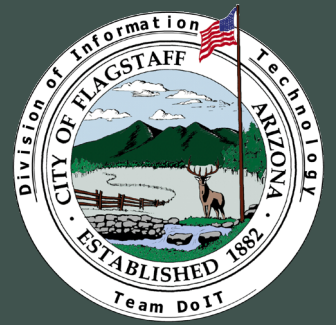
Benefits = Lower costs and increase speeds to deliver services

What it takes to succeed?

- Ongoing Costs (Medium)
  - Staffing (Database Engineers, Solutions Architects)
  - Software

# Smart City Initiatives for the Flagstaff region

## Information Technology



## What is a Smart City?

What are we already doing?

## GIS Open Data Portal | City of Flagstaff

Home Addressing Information Open Data Downloads Sign In

### City of Flagstaff GIS Open Data Portal

**Flagstaff Development Projects Dashboard**  
Find details on current private development projects throughout the City.  
Explore

**Southside Community Specific Plan Update**  
Flagstaff Southside Neighborhood Plan Update Information  
Explore

**FLAGSTAFF REGIONAL PLAN 2030**  
PLACE MATTERS  
Flagstaff Regional Plan 2030 StoryMap  
Flagstaff Regional Plan 2030 StoryMap. Points to Future Growth Illustration, Concentration of Natur...  
Explore

**Neighborhoods and Subdivisions Web App**  
Search for neighborhoods and subdivisions within the Metro Plan boundaries.  
Explore

**Planning Information Web App**  
View the regulated use zoning, lighting zones, special districts, and zoning overlays within Flagstaff.  
Explore

**FWPP Route Closure and Forest Treatments**

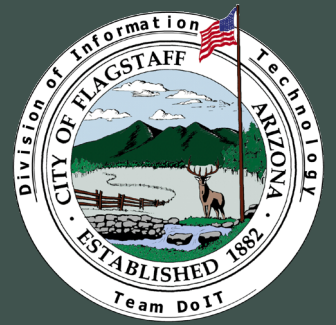
**Contours Web App**

**Natural Environment Web App**

**Floodplains Web App**

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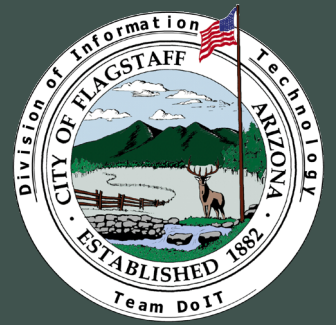
## What is a Smart City?

What are we already doing?

Demo Video

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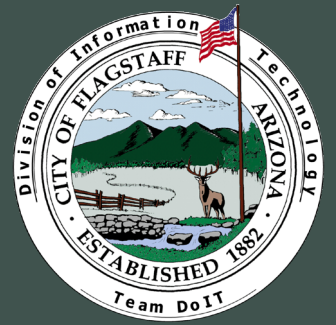
## What is a Smart City?

Why are we talking about this?

- To align our [IT Strategic Plan](#) (Long-Term Planning)
  - Moonshot Ideas
  - Future Staffing Requests
  - Future Budget Requests

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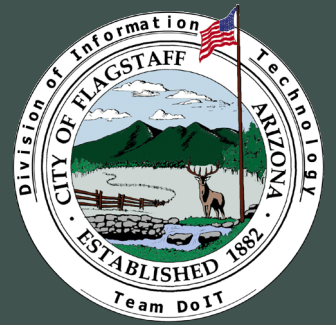


## What is a Smart City?

What do you want it to be?

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## Information Technology



## What is a Smart City?

### What resonates with Council?

#### Invest in targeted area?

Technology + Infrastructure  
Data Transparency  
Citizen Engagement  
Staff Efficiency

Something else?

*Answer: Incorporate into  
IT Strategic Plan*

#### Keep the current course?

*Answer: Staff recommendations per the budget process*

#### Invest more all around?

Want it all?

Want to invest more but not sure where most impact is?

*Answer: Standalone Smart City Strategic Plan*

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*"The Best Way to Predict the Future is to Create IT."*

