



Be a Data Storyteller



Presenters



Kevin Knutson, Envisio



Kelly Corsette, Scottsdale, AZ

CITY DATA CHALLENGES



A flood of complex data

- Massive volumes of data
- Multiple, disjointed sources
- Data owners often don't understand processes
- Lack of meaningful analysis
- Metadata is often missing
- Uses of data are unclear



Open data portals

- No context for the information
- Analysis is thin or nonexistent
- Tends to be workload, output, volume-based
- Inconsistent data management, reliability, validity

Please don't leave data interpretation
in the hands of the public!



BUILDING PUBLIC TRUST



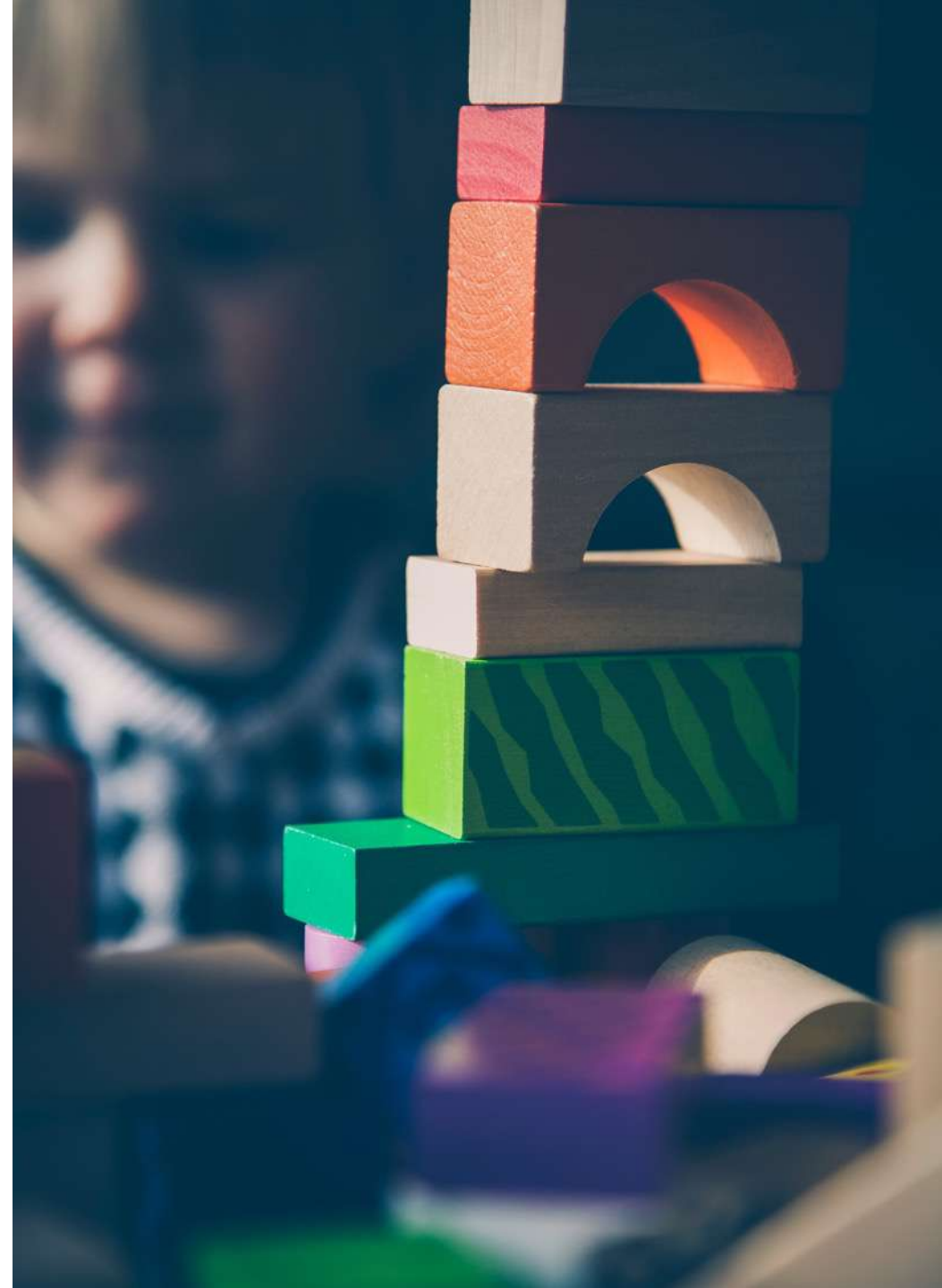
What is public trust?

- Trustworthiness
- Credibility
- Reliability
- Responsiveness
- Openness and transparency
- Integrity and fairness
- Inclusiveness
- Political Efficacy



Building blocks for public trust

- ✓ A strong vision and direction
- ✓ A public strategic plan
- ✓ An effective board
- ✓ Appropriate service levels
- ✓ Strong operational and financial performance
- ✓ Good customer service
- ✓ Open and transparent communications



THREE DATA FOCUS AREAS



1

BRING STRATEGY TO LIFE



Bringing strategy to life

- Defining success for abstract goals with concrete measures
- Explaining alignment of actions with goals
- Showing progress on actions
- Sharing results and outcomes
- Explaining issues and disruptions



Bigbelly Comes To Ferndale

November 15, 2018

Bringing strategy to life

Sustainability strategy in Ferndale

“The City of Ferndale recently welcomed seven new Bigbelly smart waste and recycling systems to the downtown area. The Bigbelly stations, which allow for both trash collection and recycling, come equipped with GPS location and real-time capacity check. This software will help determine which units are close to needing service—eliminating overflowing bins and blowing garbage.”



2

BRING PERFORMANCE TO LIFE



Bringing performance to life

- Service delivery outcomes (effectiveness)
- Efficiency of processes
- Output of programs
- Survey results
- Comparative results
- Value for tax dollars





Bringing performance to life

Better student outcomes at Russellville City Schools

Russellville City Schools
July 29 at 1:08 PM · 🌐

We appreciate this article recently published by the Montgomery Advertiser that highlights the challenges school systems with high numbers of English Language Learners face.

While the article focuses on schools in their main readership areas, they also reached out to our own RCS Superintendent Heath Grimes for his thoughts since RCS currently has the highest ELL percentage in the state (20% of the student population).

Mr. Grimes is also leading the way in the area of EL...

[Continue Reading](#)



MONTGOMERYADVERTISER.COM

As state's Hispanic population increases, schools scramble to educate English Learners

👍❤️ 20

6 Shares

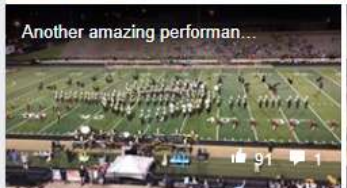
Videos

Congratulations to the Russellville High School Class o...



121 2

Another amazing performan...



91 1

Students in Russellville City



160 11

[See All](#)

Measures/KPIs

Report Created On: Aug 06, 2019

Value of grants

Total \$ of grants received. Target is 0.10% increase per year.
Task 4.3.2 Pursue Additional Grants

Owner: Tim Guinn Last Update: Mar 20, 2019 15:13:37



Social Media Connectivity

of hits on system's social media sites. Target is 25% increase over 5 years.
Task 5.4.1 Develop & share with schools Idea Database for school-lead technology use professional develo...

Owner: Tiffany Warhurst Last Update: Mar 22, 2019 15:28:41



3

BRING COMMUNITY TO LIFE



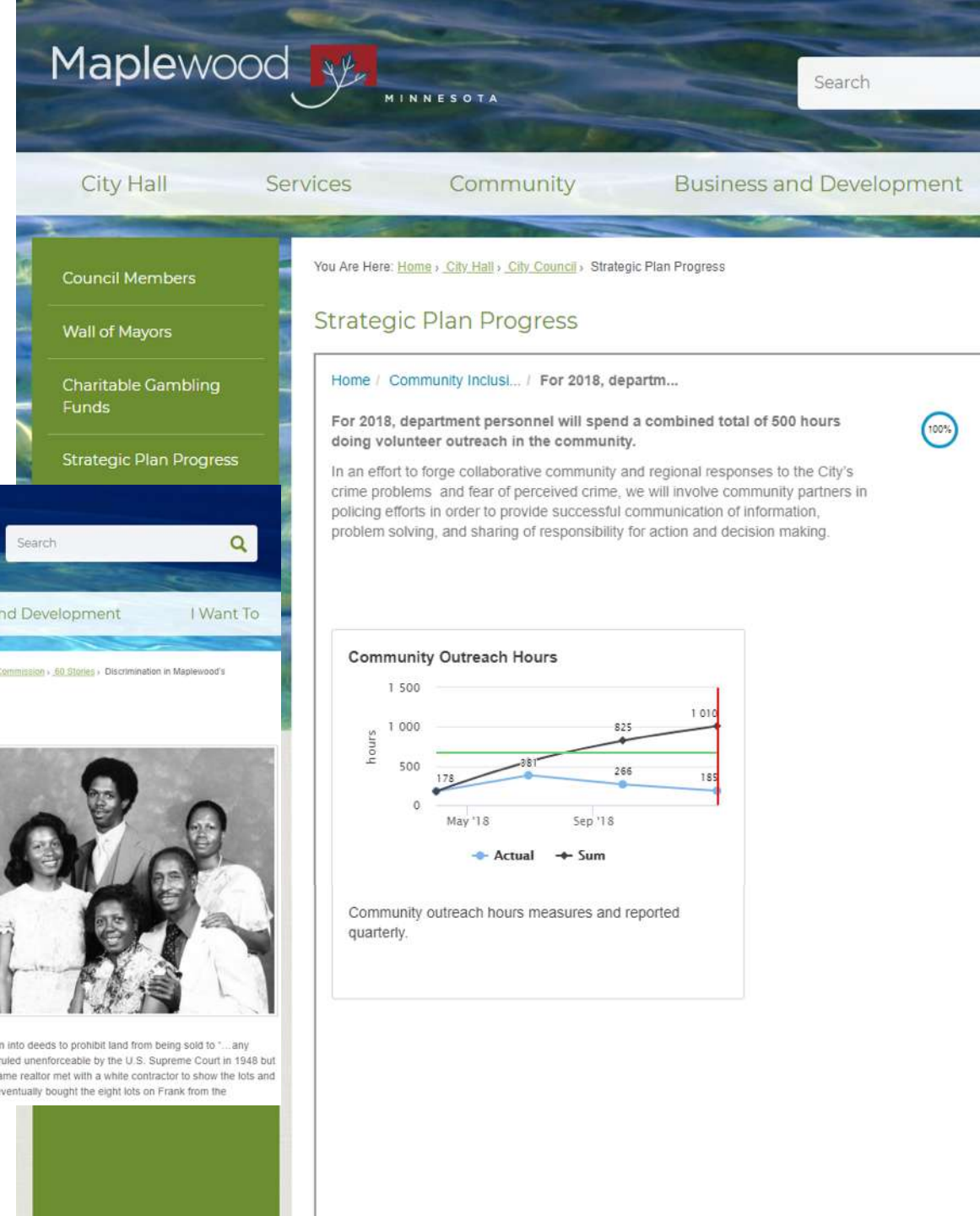
Bringing community to life

- How the community is growing and adapting (demographics)
- How city services enrich neighborhoods (success stories)
- Impact of development
- Impact of arts and culture
- Impact of economic development



Bring community to life

Community inclusiveness success in Maplewood



STORYTELLING WITH DATA



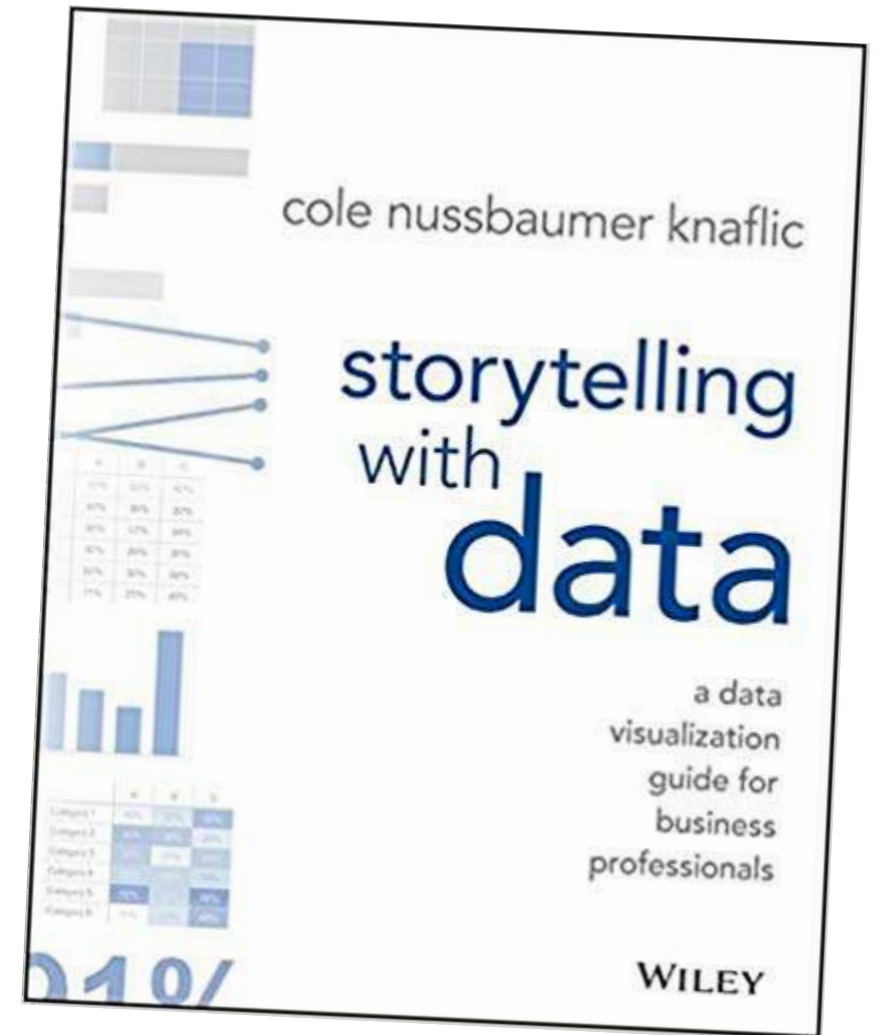
Data doesn't stand on its own

1. Link data to personal stories—of those who are impacted or those who provide service
2. Provide context and analysis
3. Align key messages with vision and strategy
4. Include metadata
5. Use effective visualizations
6. Compare and contrast



“There’s a story in your data. But your tools don’t know what that story is. That’s where it takes you to bring that story visually and contextually to life.”

- Cole Nussbaumer Knaflic

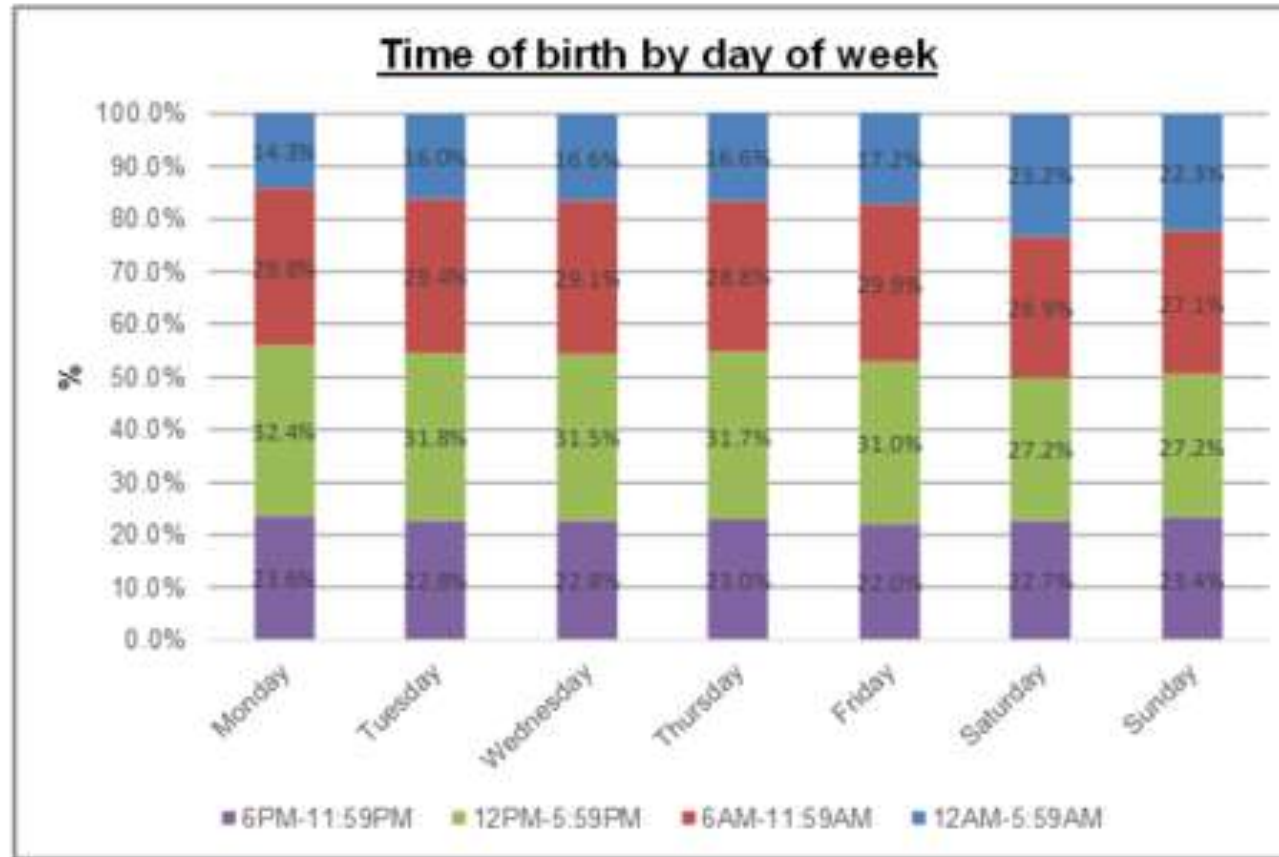


Effective visualizations

- Choose an appropriate visual display
- Eliminate clutter
- Focus attention where you want it, using color and contrast
- Start at the end—explain conclusions and findings, rather than providing background



Before



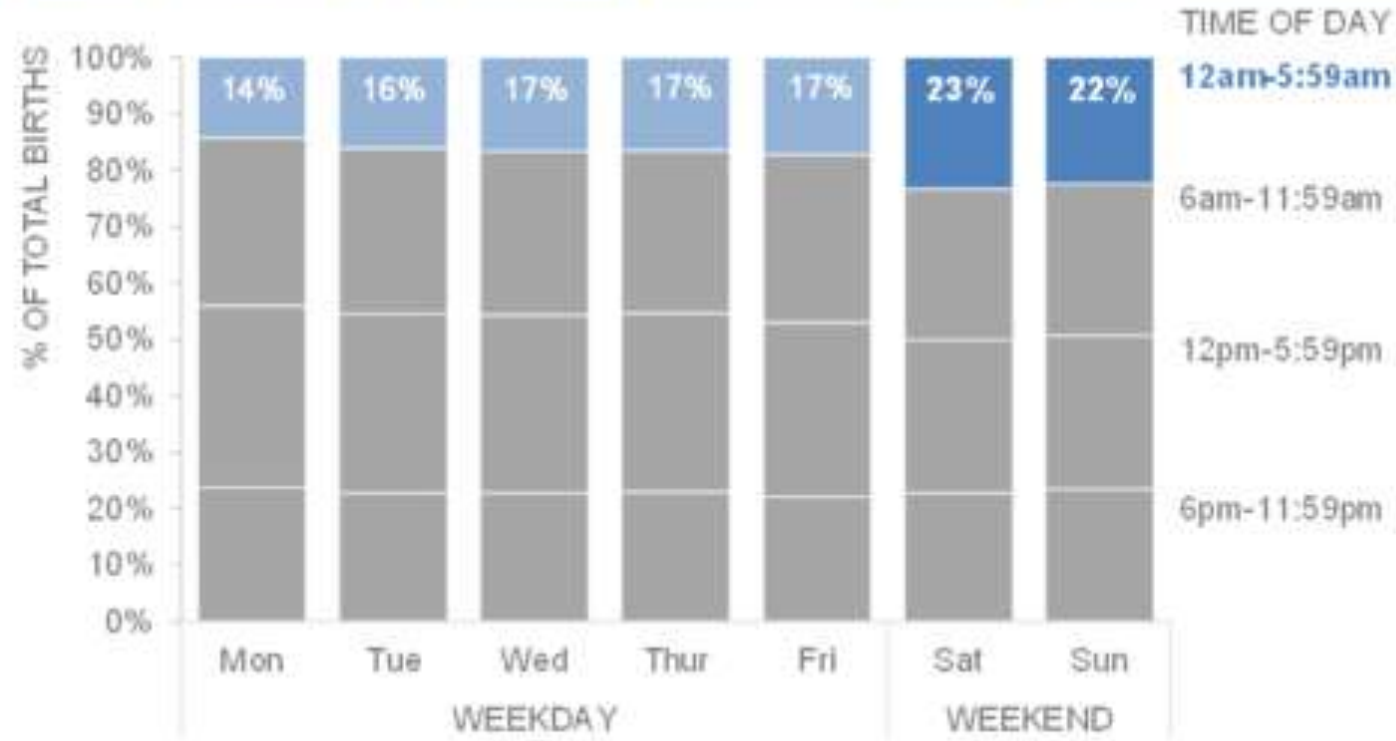
Data source: CDC (National Vital Statistics Reports, Vol. 67, No. 1, January 31, 2018)



After

When babies are born

Weekend deliveries are more likely to be in early morning, compared to weekdays



Data source: CDC (National Vital Statistics Reports, Vol. 57, No. 1, January 31, 2018)



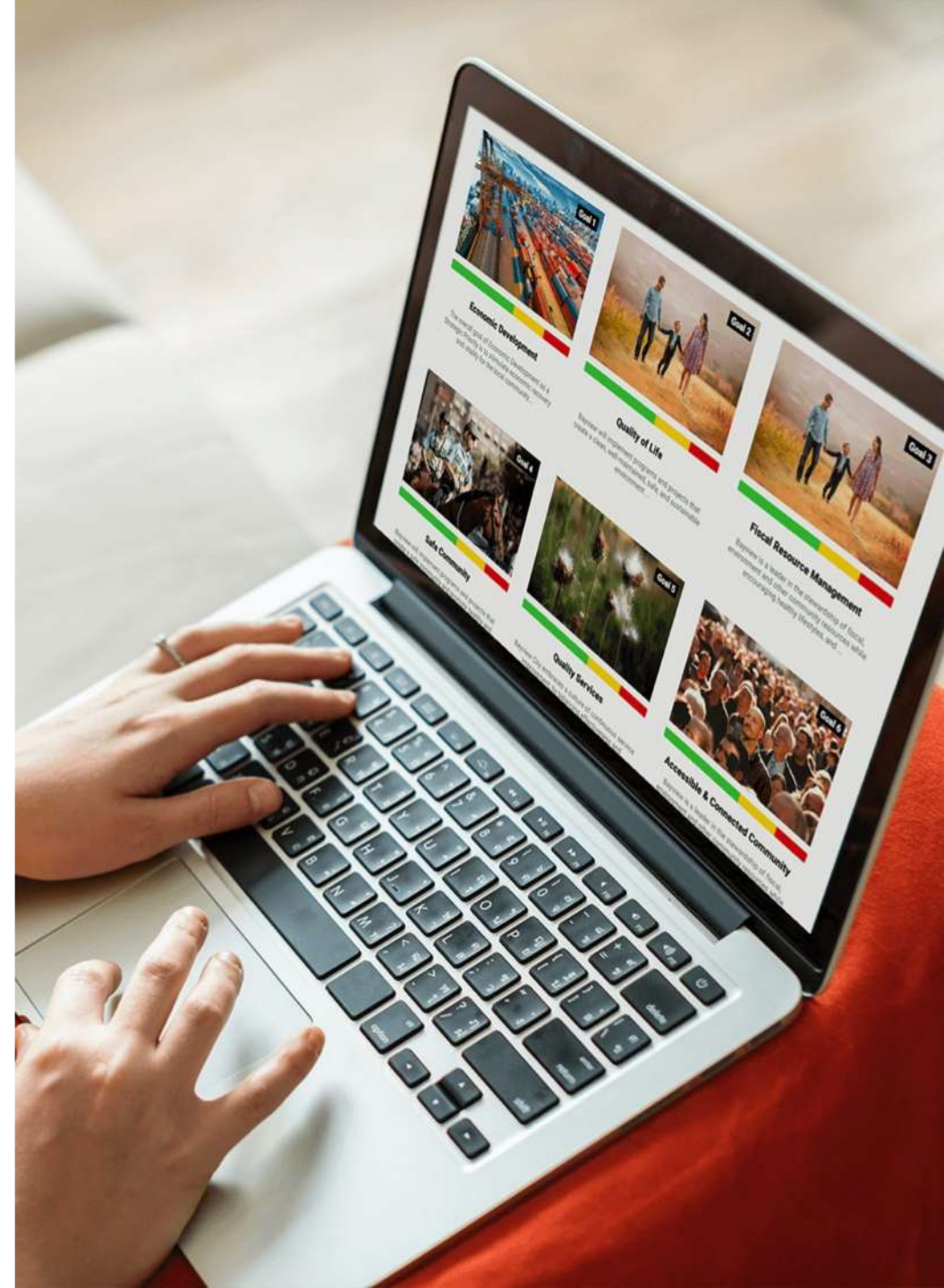
Public dashboards

Provide context for data

Help elected officials communicate progress

Share great work by staff

Nurture a shared vision



Communications Leadership

You need *good* data...make sure you get it

- Identify existing data you can use
- Ask departments to “prove it”
- Participate in discussions on data management
- Push for outcomes, not workload
- Question validity and reliability
- Use data to manage your own function



TELLING YOUR CITY'S DATA STORIES

TRANSPARENCY = TRUST



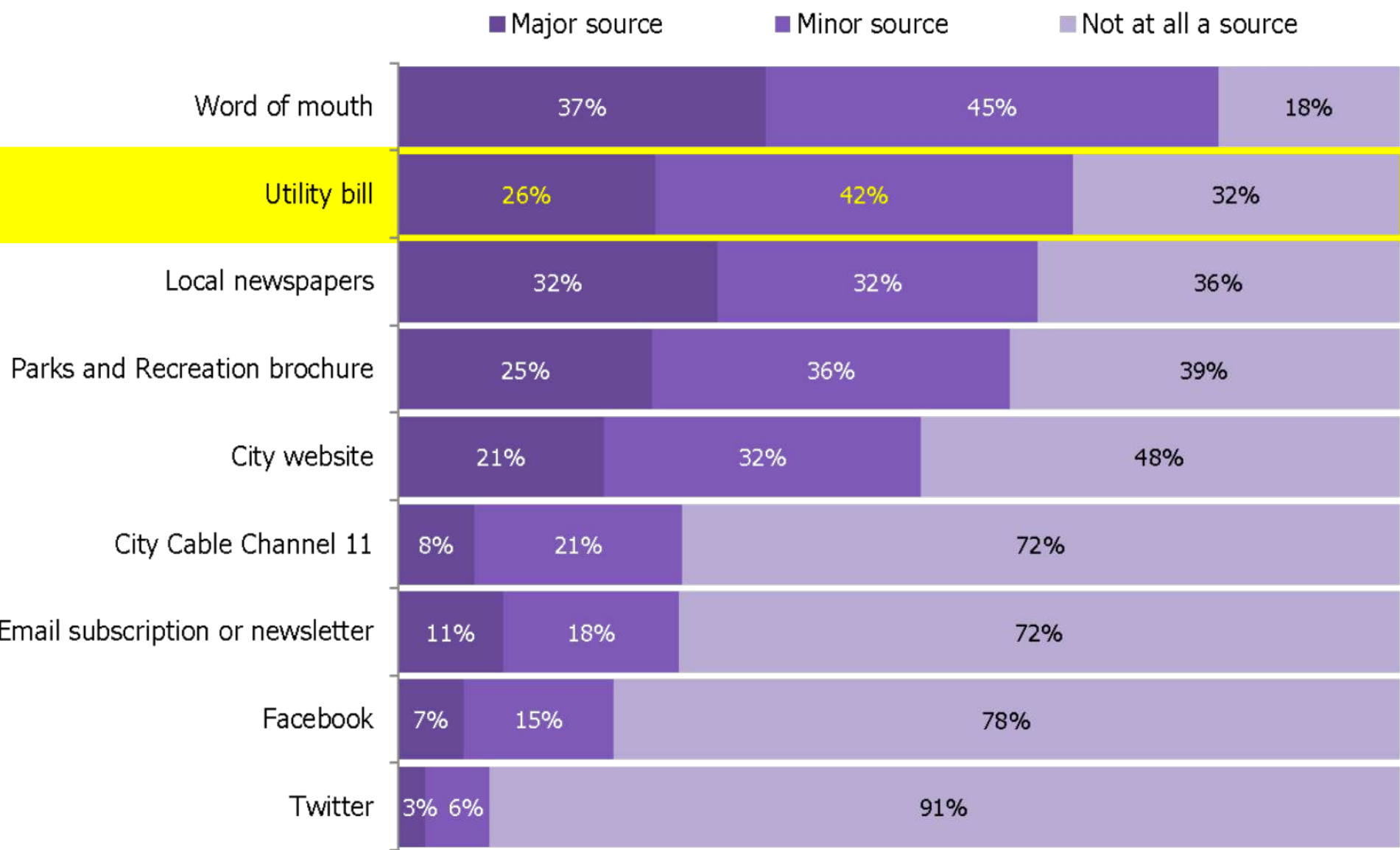
clutter



clarity

Use data to support the case for communications

Q: Which is a source of information for you about the city of Scottsdale and its activities?



*National
Citizen
Survey
Scottsdale
2014*

Surfacing the Submerged State: Operational Transparency Increases Trust in and Engagement with Government

Ryan W. Buell
Ethan Porter
Michael I. Norton

Working Paper 14-034



“Residents who experienced
‘operational transparency’
in government services
– **seeing the work that
government is doing** –
expressed more positive
attitudes toward government
and greater support for
maintaining or expanding the
scale of government programs.”



Who?



“effective information visualization (is) premised on:

simplicity

(complex notions simplified to save time for reader);

transparency

(visual honesty and responsibility in sourcing);

creativity

(design that is memorable and understandable);

sociability

(easily shared and improved)”

Richard Sambrook

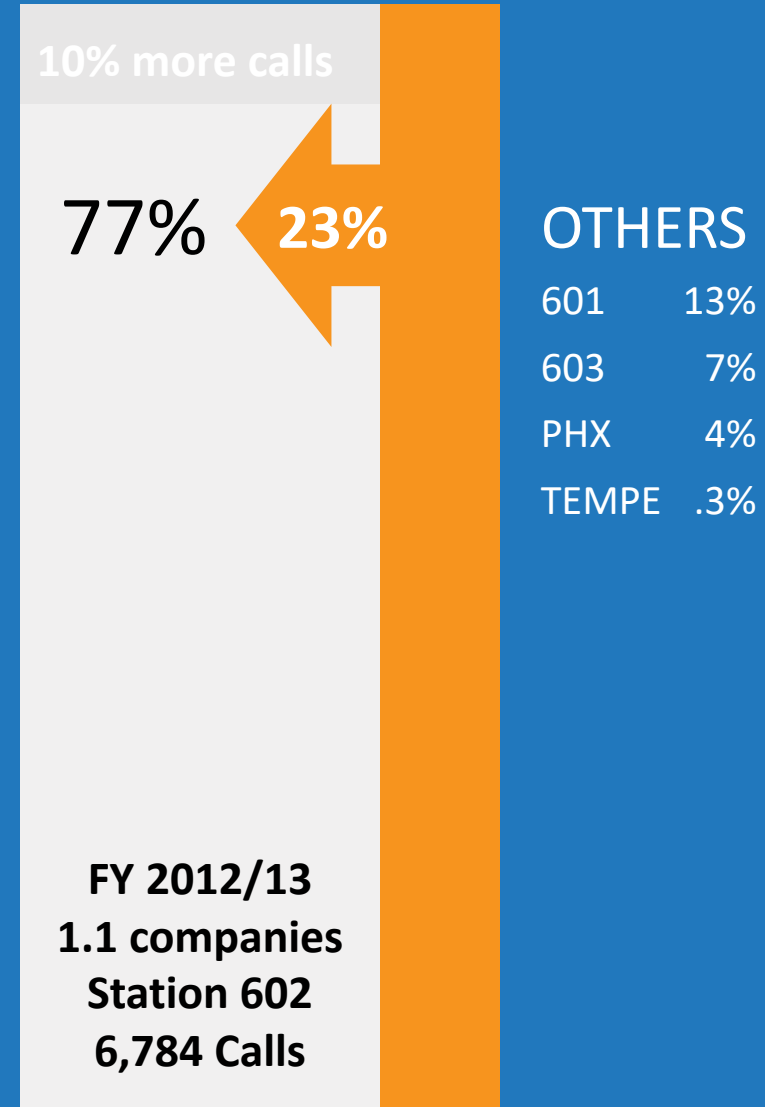
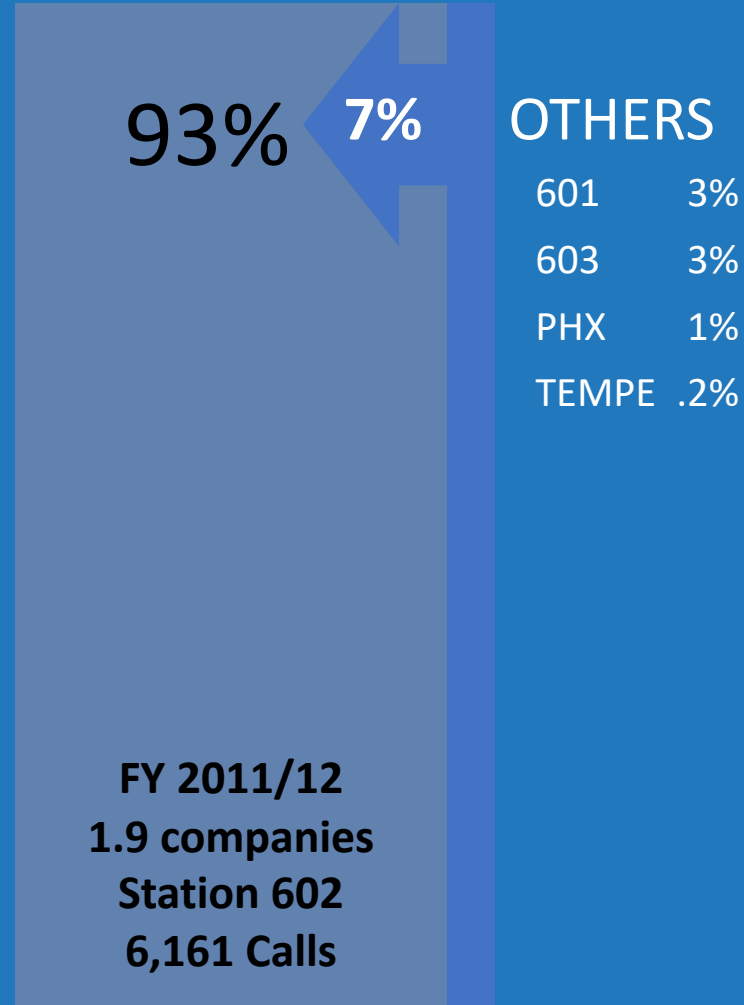
 @Sambrook

Request:

**Add a fire company to our
downtown station due to
increasing call volume.**



First Response Unit - Station 602 Area





This is what \$120 looks like.

If you don't submit your Health Risk Assessment by Aug. 15, you'll miss out on \$120.

That's the incentive each employee receives for completing it. If you have a spouse or partner on the city's health plan, you earn another \$120 if they do it, too.







It's still possible to beat a photo-enforcement ticket in Arizona. / Ray Stern

12 Tips for Beating an Arizona Photo-Enforcement Ticket: Updated for 2019

RAY STERN | FEBRUARY 5, 2019 | 7:00AM



(UPDATE: The original article ran in 2016, but was updated in February 2019.)



Legal loopholes make it possible to escape punishment for a speed- or red-light-camera ticket in Arizona. Hundreds of people, at least, do it successfully every year after being flashed by the cameras. As of February, 19 cities in metro Phoenix had photo enforcement equipment, but only six are actually using it to ticket people: Chandler El Mirage Mesa Paradise Valley Phoenix and



Ray Stern

Tip 4: Beware of Scottsdale

The city of Scottsdale fights back. If you blow off a violation notice in Scottsdale, the city will file an alternative-service motion showing that a server attempted to deliver the ticket three times – in the morning, the afternoon, and the evening, all on separate days. Once a judge grants the motion, the process server will tote the citation to your residence and tape it to the front door.

At that point, you've been legally served. Other cities only rarely resort to this practice.

Still, it's not a total deal-breaker. While the city may use such motions in as many as one-third of the cases that require process servers, your case could fall through the dragnet, resulting either in no alternative-service motion, or no process server at all. If the server comes, though, expect to pay more for that ticket.

Scottsdale photo-enforcement study shows big drop in crashes



Photo enforcement in the Phoenix metro area

[Fullscreen](#)

In Arizona, 11 cities and towns have red-light cameras, and 13 communities have speeding cameras, according to data from the Insurance Institute for Highway Safety.

Parker Leavitt, The Republic | azcentral.com

Published 11:47 a.m. MT Jan. 25, 2017 | Updated 1:10 p.m. MT Jan. 25, 2017



(Photo: Mark Henle/The Republic)



CONNECT



TWEET



LINKEDIN



COMMENT



EMAIL



MORE

A new study commissioned by Scottsdale officials links photo enforcement to a significant reduction in collisions at the city's camera locations, providing evidence that some see as validation for an oft-controversial program.

80-312-7517

safer

s of data exist to determine if it it does.

nsic traffic engineering, analyzed nts in Scottsdale with photo

rcement. This data and its analysis r. "It makes our city streets safer."

er photo enforcement was g:

rcement, overall crashes were o red-light running were reduced

all crashes were reduced by 37

rashes were reduced by 63

, likely due to a positive spillover

ed at southbound Scottsdale the

City of Scottsdale

NEWS RELEASE

Feb. 26, 2019

Contact: [Holly Walter](#), public information officer, 480-312-2655

Scottsdale shifts photo enforcement locations based on speed and crash data

Speeding and red-light cameras work in tandem to improve safety – a fact well-supported in Scottsdale and why the city will deactivate two locations and add four new intersection safety cameras next month.

Photo enforcement systems on Thomas Road eastbound at Hayden Road and McDowell Road eastbound at Scottsdale Road will be deactivated. Four new systems will be activated March 1:

- Scottsdale Road southbound at Pinnacle Peak Road
- Shea Boulevard westbound at 92nd Street
- Frank Lloyd Wright westbound at Greenway-Hayden Loop
- Indian School Road westbound at Hayden Road

Choosing which locations no longer needed photo enforcement, and selecting new locations was a data-based decision made after city traffic engineers analyzed an aggregate of collision, red light/speeding violations, collision severity and traffic volume data.

“The technology helps us enforce traffic laws and allows us to maximize the deployment of our patrol officers throughout the city,” said Alex Ristuccia, Scottsdale Police Program Manager of Photo Enforcement.

Scottsdale has used photo enforcement systems since 1996. A 2017 study by Lee Engineering, an independent firm specializing in research and forensic traffic engineering,

NOTICE
TRAFFIC LAWS
PHOTO ENFORCED

DATA 4
DONUTS





Where we've been and where we're going

Fifty years ago, Scottsdale celebrated the opening of City Hall. Completing a project of that scale required cooperation between a renowned architect, residents and city staff. Thousands celebrated its grand opening, an opportunity that will be recreated this fall with 'Scottsdale Celebrate '68.'

Like constructing a building, operating a city is a collaborative effort. Voters elect a mayor and six council members to govern. Nearly 2,700 employees and more than 5,100 volunteers serve our nearly 250,000 residents.

As residents, your tax dollars support city services. Read this annual report to learn how. Please contact the City Manager's Office if you have comments or suggestions on how we can improve this report: 480-312-2800 | citymanager@ScottsdaleAZ.gov



Value Scottsdale's Unique Lifestyle and Character



Highlighted Accomplishments

- ▶ The city launched a rebranding effort to focus attention on Old Town Scottsdale and its unique character.

Looking Forward

- ▶ Scottsdale Arts, with additional financial support from the city, will continue to grow Canal Convergence, a destination event that brings increasing amounts of people and attention to Scottsdale.



WestWorld hosted 280 days of special events

More than 9,000 people dug into the 42nd Mighty Mud Mania



Get Involved

Looking for a way to contribute your skills? Volunteer as an Old Town Ambassador.

Learn more at ScottsdaleAZ.gov, search "about"



ern Scottsdale.
policy issues and
nteers serve

y year, grouped by strategic goal:



ENHANCE NEIGHBORHOODS

- **Back to school program** provided 992 children with clothing and backpacks filled with supplies
- More than 4,000 participate in Library's fourth Ultimate Play Date for families
- Police and Fire departments hosted successful 5-day interactive teen academy



SUPPORT ECONOMIC VITALITY

- Attracted, retained or expanded **14 businesses** with **1,019 jobs** with average wages of \$62,744

How our residents rate Scottsdale

Percent "excellent" or "good"



For complete results go to ScottsdaleAZ.gov and search "survey."

Scottsdale

Fiscal Year 2015/2016



and six council members to govern Scottsdale. The City Council appoints six officers to advise them on policy operations. 2,679 city employees and 6,957 volunteers serve the 231,200 citizens of Scottsdale.

Accomplished?

Accomplishments from the past year, grouped by strategic goal:

VALUE SCOTTSDALE'S UNIQUE LIFESTYLE AND CHARACTER

Attendance at **Canal Convergence** event increased by almost 50% from prior year, attracting 56,000 visitors to Scottsdale Waterfront celebrated Scottsdale's 65th birthday and the 40th anniversary of both Scottsdale Center for the Performing Arts and Scottsdale Public Art.

ENHANCE SUSTAINABILITY

Increased diversion of recyclable materials from residential single-family homes to 28% (highest rate of any large Valley city) increased the percentage of **compressed natural gas vehicles** to 64%, through replacing diesel equipment reinforced the city's solid standing with credit rating agencies and maintained Scottsdale's excellent bond ratings

RESERVE MEANINGFUL OPEN SPACE

Opened 7.5 miles of **new rails** in the northern preserve region, including the Renegade, Esperado, North Diablo, South Diablo, and a portion of the High Desert Trail



ADVANCE TRANSPORTATION

- Reduced travel time by an average of 15% by **improving signal timing and coordination** on McDonald Drive and Chaparral Road corridors
- Paved three dirt roadways, Via Dona, Hayden and Pinnacle Vista, to improve air quality, lessen maintenance costs and provide better access for all users
- Reconstructed wheelchair accessible (ADA) ramps at 293 intersections



ENHANCE NEIGHBORHOODS

- Library circulation increased by 6% citywide (Appaloosa Library pictured above)
- A new after school and summer Police **P.L.A.Y. Program** was created where Scottsdale youth interact with Police Officers through arts and crafts and recreational activities
- Self-service MVD kiosk installed at Scottsdale City Court to offer the public real-time registration renewal, registration tagprints, license reinstatements, driving history reports, voter registration, and address changes

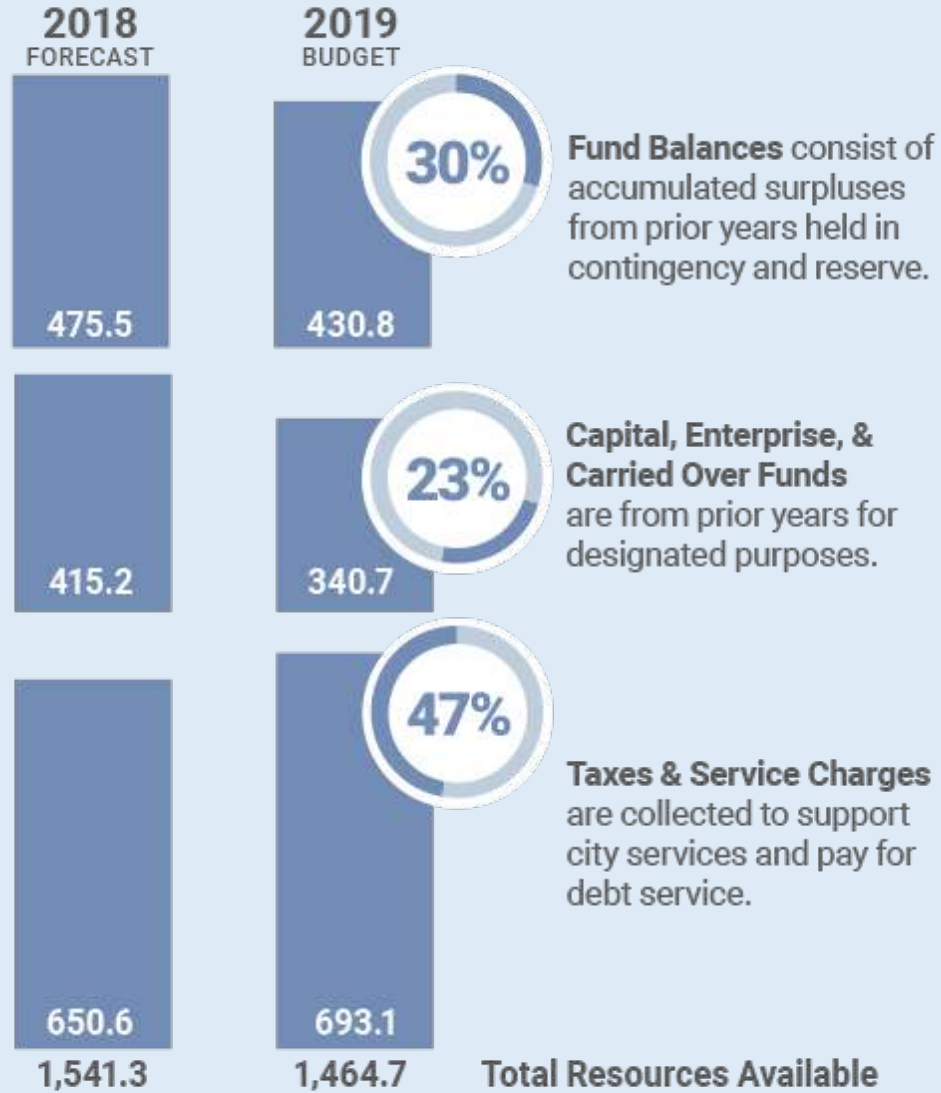


SUPPORT ECONOMIC VITALITY

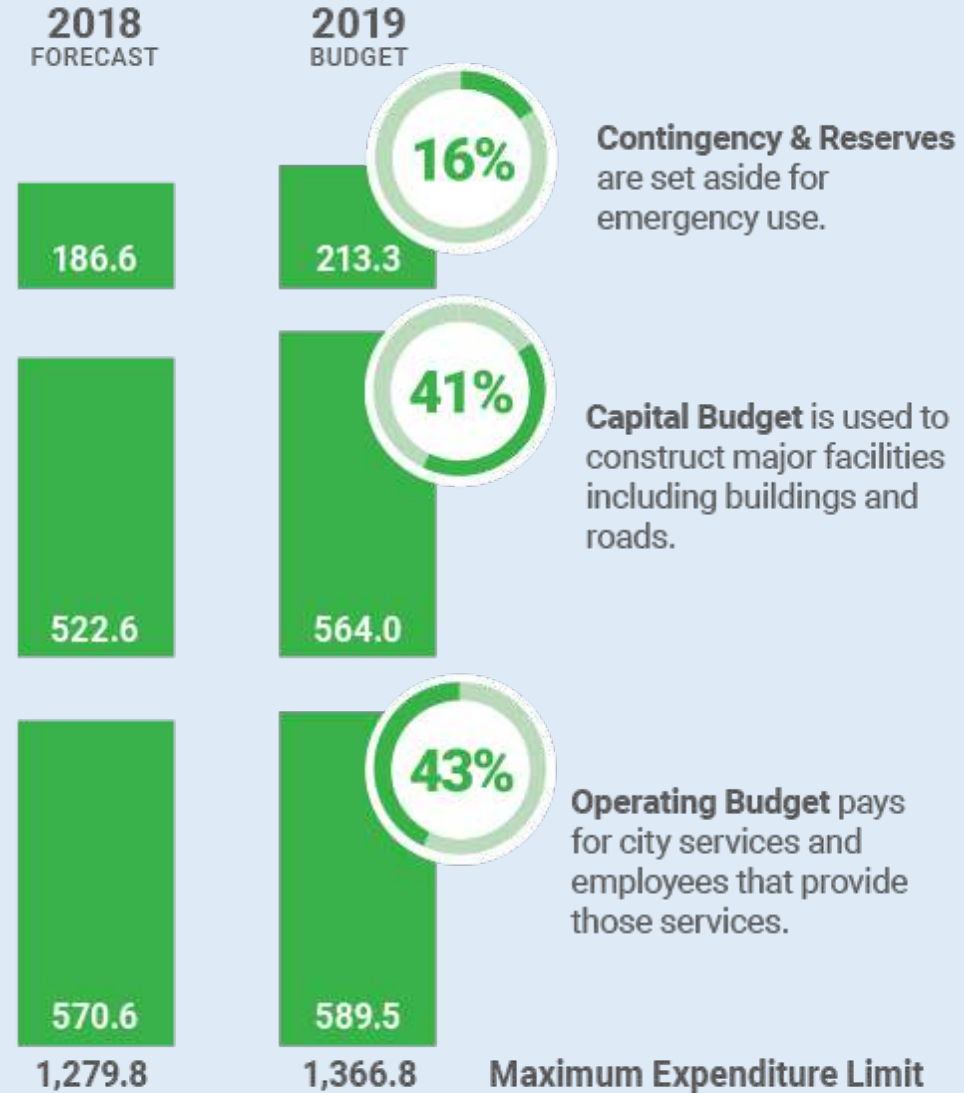
- Attracted or **expanded 9 businesses** with 1,183 jobs and an average wage of \$67,085
- Opened new operations center at Scottsdale Airport

ated bud get. Go to ScottsdaleAZ.gov and search "finance". graphics, leadership, or a community profile, visit ScottsdaleAZ.gov and search "about".

Resources (in millions of dollars)



Expenses (in millions of dollars)



Some numbers may not add correctly due to rounding.



Enhance Neighborhoods



4:46 minutes for average fire response time



4:57 minutes for average police response time



1,282 number of families with children under five served at Paiute Neighborhood Center



447 volunteers with Vista del Camino and Paiute Neighborhood Center



1.1 million visitors to five library branches

Highlighted Accomplishments

- ▶ An all-inclusive playground was installed at Chaparral Park, serving both able-bodied children and those with disabilities.
- ▶ The city developed Scottsdale EZ, a single, mobile-optimized system to report issues that need to be fixed.
- ▶ Thanks to bond financing approved by voters in 2015, Fire Station 605 on Shea Boulevard was renovated to modern standards, and Fire Station 613 in Desert Foothills was built, replacing a "temporary" modular building that was used for more than 20 years.

Looking Forward

- ▶ The treatment systems at all four city aquatic centers will be modernized by the end of 2018. The advanced systems will improve water quality and swimming conditions while eliminating the need to store and handle large amounts of chemicals, making things safer for the public and staff.

70.9
MILLIONS
GALLONS OF WATER
DELIVERED
DAILY

6 WATER
FACILITIES

54 SOLID WASTE
TRUCKS

1,468
MILES OF
SANITARY SEWERS

2,102 MILES OF WATER MAINS

4 POLICE
STATIONS **343** POLICE
VEHICLES

15 FIRE
STATIONS

39 FIRE RESPONSE
VEHICLES

296 TRAFFIC
SIGNALS

2,990 LANE MILES OF ROADS

11,213
FIRE HYDRANTS

42 PARKS

ACRES OF PRESERVE LAND

11 TRAILHEADS AND 215 MILES
OF NON-MOTORIZED TRAILS
IN THE PRESERVE

975 TOTAL ACRES

37 PLAYGROUNDS

70 ATHLETIC FIELDS

30 VOLLEYBALL COURTS

**53 TENNIS COURTS
2 TENNIS CENTERS**



1 RAILROAD PARK

39 BASKETBALL COURTS

3 OFF-LEASH AREAS

4 AQUATIC FACILITIES

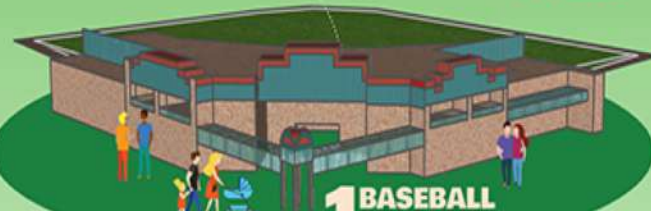
7 SPRAY FEATURES

2 SKATE PARKS

12 PICKLEBALL COURTS



3 EQUESTRIAN CENTERS



1 BASEBALL STADIUM



**50 HOTELS
8,875 ROOMS**



1 AIRPORT



21,600+ BUSINESSES



**38 PUBLIC SCHOOLS
25,847 ENROLLMENT**



4 FREE TROLLEY ROUTES

150+ ART GALLERIES & ART DEALERS

6 MUSEUMS



900+ RESTAURANTS

11 BUS ROUTES

105 MILES OF PAVED PATHWAYS, 147 UNPAVED



2 SENIOR CENTERS



6 COMMUNITY CENTERS

5 PUBLIC LIBRARIES

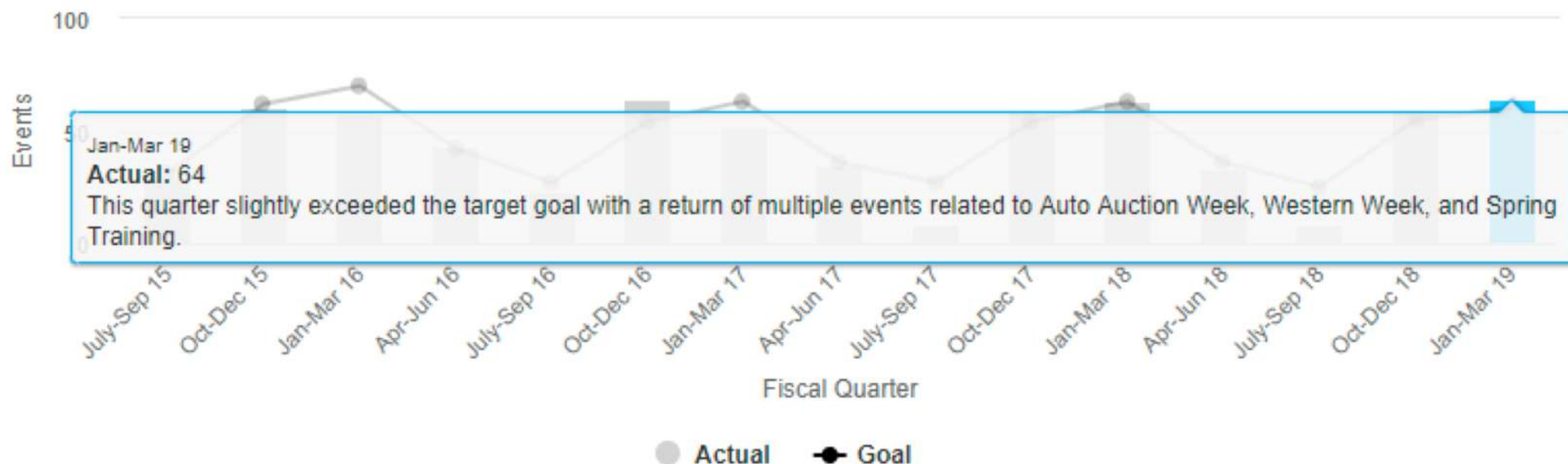
**280 DAYS
OF SPECIAL
EVENTS AT**



51 GOLF COURSES



Number of Downtown Scottsdale Events and Activities Processed by Staff and Special Events Committee



Measuring events and activities in the Downtown assists in tracking distinct activities that help strengthen and diversify Downtown. Special events are an economic boost to businesses and contribute to a quality of life for our community.

64 events

Favorable
6.67% above
target



Transportation Department, [Paul Basha](#), Transportation Director, 480-312-7651.

Anticipate and plan for future transportation needs

80%



Description

Progress

Status

Carry out the adopted transportation master plan to guide efforts over the next 10 years

73%



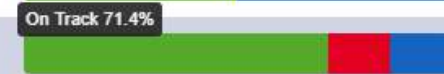
Improve street, transit, and trail connections while minimizing neighborhood impacts

93%



Design, build, operate, and maintain barrier-free streets for all users

72%



Increase communication related to transportation options, funding and needs

100%



Begin planning and acquisition for Cactus Trolley, Airpark Trolley and Scottsdale Limited Bus service

85%



Legal Policies

<http://www.scottsdaleaz.gov/policies>



Questions

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