How To Get City-Wide Participation For Your Smart City Plan

With the City of Ruston

Smart Cities Connect Conference

E Source
POWERING WHAT'S NEXT

EXCELLENCE MADE HERE
CITY OF RUSTON

October 28, 2020

Agenda

- Introductions
- Smart Cities Background
- City-Wide Participation
- Smart City Assessment Tool
- City of Ruston Results
- Questions and Answers

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Introductions

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The City of Ruston

- Established in 1883
- Population of 23,000
- Home to Louisiana Tech University with Grambling State University 5 miles west of Ruston
  - Population grows to 40,000 during the college school year
- Grant awards include:
  - $17.2 Million BUILD Grant: Smart Cities Innovation Testbed
  - $3.5 Million EDA Disaster Resiliency Grant: Smart Cities Innovation Testbed expansion
- Active pilot with Ubiquia for Smart Lighting

Ruston.org

Who is the E Source Technology Planning and Implementation Division?

A professional services advisory firm located in Baton Rouge, LA, with associates around the US and Canada

- Previously known as UtiliWorks, joined with E Source in 2020
- Founded in 2005 to address the advanced/smart metering market
- Have worked with approximately 100 cities and utilities
- Expanded our focus to support deployment of utility operational technologies and smart city initiatives
- Experienced team with wide range of subject matter expertise
- Recognized nationally as an industry expert
- History of success with all our projects
  - Vendor-Neutral
  - Strong client testimonials
  - Tailor solutions for your unique environment

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> Smart Cities use connected technology and data to (1) improve the efficiency of city service delivery (2) enhance quality of life for all (3) increase equity and prosperity for residents and businesses.
>
> *CHELSEA COLLIER - SMARTCITIES CONNECT*

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What are common applications?

- Smart Streetlights
  - Monitor traffic, air quality, temperature, wind, and noise for use by various departments
- Smart Trashcans
  - Monitor public dumpster/bin usage to optimize collection and avoid overflow
- Smart Parking Sensors
  - Monitor occupancy of lots and enable better metering
- Smart Pest Control
  - Monitor traps for real-time notification and optimization of collection

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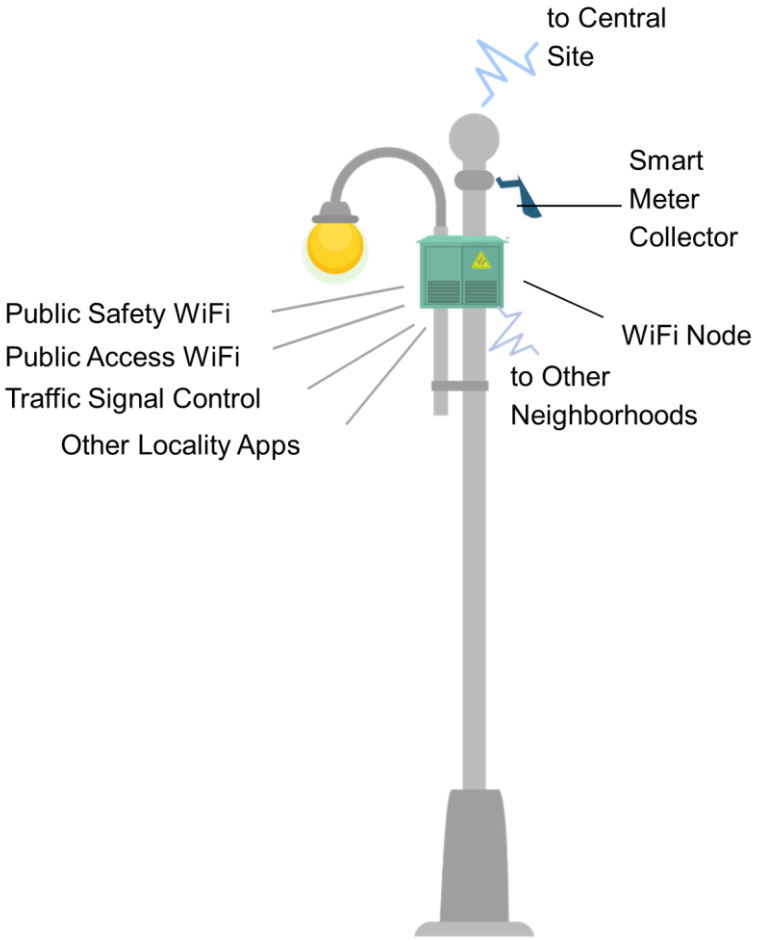
Why Smart Cities?

- Leverage networks to improve overall city management
- Produce new revenue streams with potential little capital investment
- Improve the quality of life of current residence and attract new residents
- Promote green initiatives and sustainability
- Increase operational efficiency across an entire city
- Provide a whole new level of citizen safety
- Set the framework for a dynamic and future proof smart city



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Deployment approach best practices

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Why is city-wide participation important?

- Creates awareness
- Fosters engagement
- Boosts employee morale
- Identifies risks
- Make stronger conclusions
  - Develop a common understanding
- Build smarter, more effective programs
  - Streamlined and cross-discipline
  - Cost-Savings
- Gain insights into the community perspective

By being inclusive, we can identify new ideas and ways to solve problems. That's what diversity is all about!

Smart City engagement best practices

Gaining city-wide feedback

- Engage with staff first
  - Create city-wide ambassadors for the program before advertising to the public
  - Focus on education and transparency for the program
- Release to public with clear messaging based on perception and feedback from staff
- Utilize surveys and focus groups
  - Make both staff and constituents feel like their voices are heard
  - Employee and citizen empowerment

Survey tool considerations

- Time to complete → Make it short and sweet
- Receiving honest, accurate answers → Set it up to be anonymous
- Getting a representative sample → Use tactics to encourage participation
- Participants feeling encouraged and valued → Share gratitude
- Analyzing the results → Look to proven, web-based platforms
- COVID-19 impacts → Why not use this as an opportunity to focus on positive planning efforts?
- Cost-effective ✓
- Repeatable ✓
- All-around awesome ✓

The City of Ruston goals

- Get city-wide participation
- Find the best-fit technology
- Cost-effective solution

Our goal is to give our staff and citizens tools to make the most educated and efficient decisions

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Gaining buy in from Ruston staff

- The City was very pleased with the participation it received across all groups
- The invite came directly from the Mayor's office
  - Department leaders encouraged their staff
- Results were monitored and reminders send out

Respondent Type	Completed Assessment Surveys
City Leadership	15
Electric Utility Management	3
Electric Utility Staff	12
First Responder Management	9
First Responder Staff	31
Information Technology Management	0
Information Technology Staff	2
Parks & Recreation Management	3
Parks & Recreation Staff	2
Planning, Zoning, and Development Management	3
Planning, Zoning, and Development Staff	4
Public Works, Sanitation, and Transportation Management	1
Public Works, Sanitation, and Transportation Staff	5
Water Utility Management	2
Water Utility Staff	5
Total	97

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Ruston's Smart City Tool process

- The product was set up by E Source
- E Source provided email templates and marketing assistance
- Mayor Ronny Walker emailed city employees and encouraged participation
- The survey start date was March 18, 2020, and it was open until April 30, 2020
- E Source monitored the progress and provided status updates
- Results were provided in a written report and presented to the City of Ruston
- Access to the results were given to the city for a period of three months

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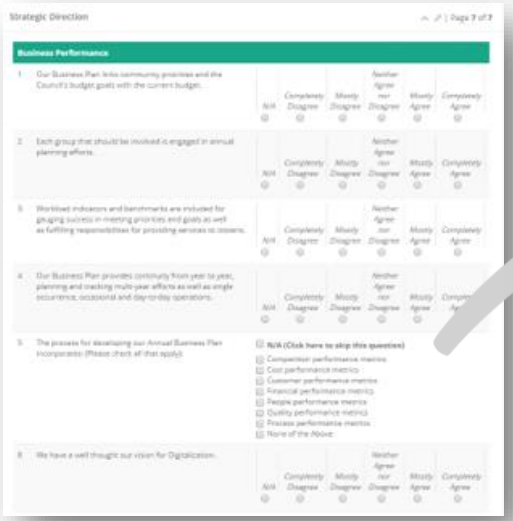
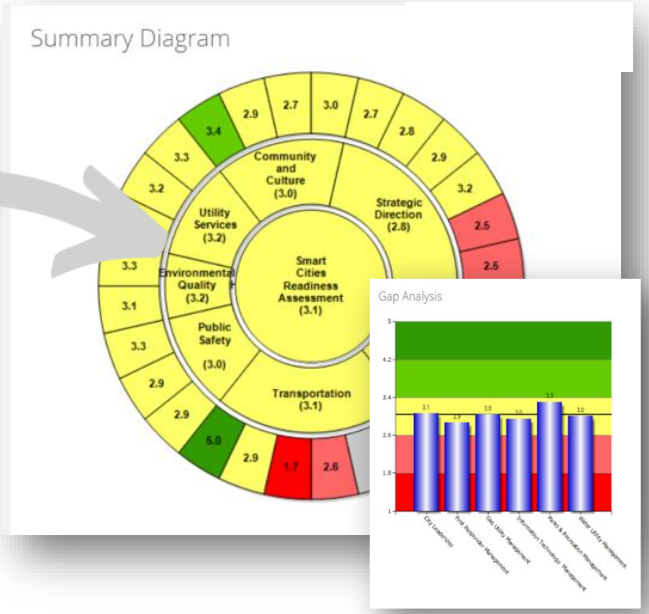
Smart City Tool Overview

Survey



Results



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A powerful platform

From NeuraTool

- NERC Power Plant Assessments
  Power Plant Security
- Financial Compliance Assessments
  Vendor Management & Oversight
- New Product Development Assessments
  Software, Hardware, and Service Development
- Call Center Operations Assessments
  COPC and other Best Practice Standards
- Clinical Engineering Analysis and Benchmarking
  Medical Instrumentation Standards (AAMI)
- Utility Company Operations Assessments
  Comprehensive Insight to Water/Electric Utilities
- Initiatives and Standards Assessments
  Quality, Six Sigma, Safety, Security, Culture, Supply Chain
- Voice of the Customer/ Employee Assessments
  Business Intelligence that is Strategic and Actionable

Steelcase, Shell, Boston Scientific, Ashland, Winnipeg, Freightliner, Publix, Cogentrix, AAMI, Emerson, Fujitsu, savant (Now You Can), logicaCMG, Chrysler, UC Davis Health, Canlan Ice Sports

Honest feedback from City staff

Surveys were taken by management and department staff across the city of Ruston. The surveys were recorded anonymously to encourage honest responses.

- City leadership
- Water utility
- Electric utility
- Public works, sanitation, and transportation
- First responders
- Parks and recreation
- Planning, zoning, and development
- Information technology

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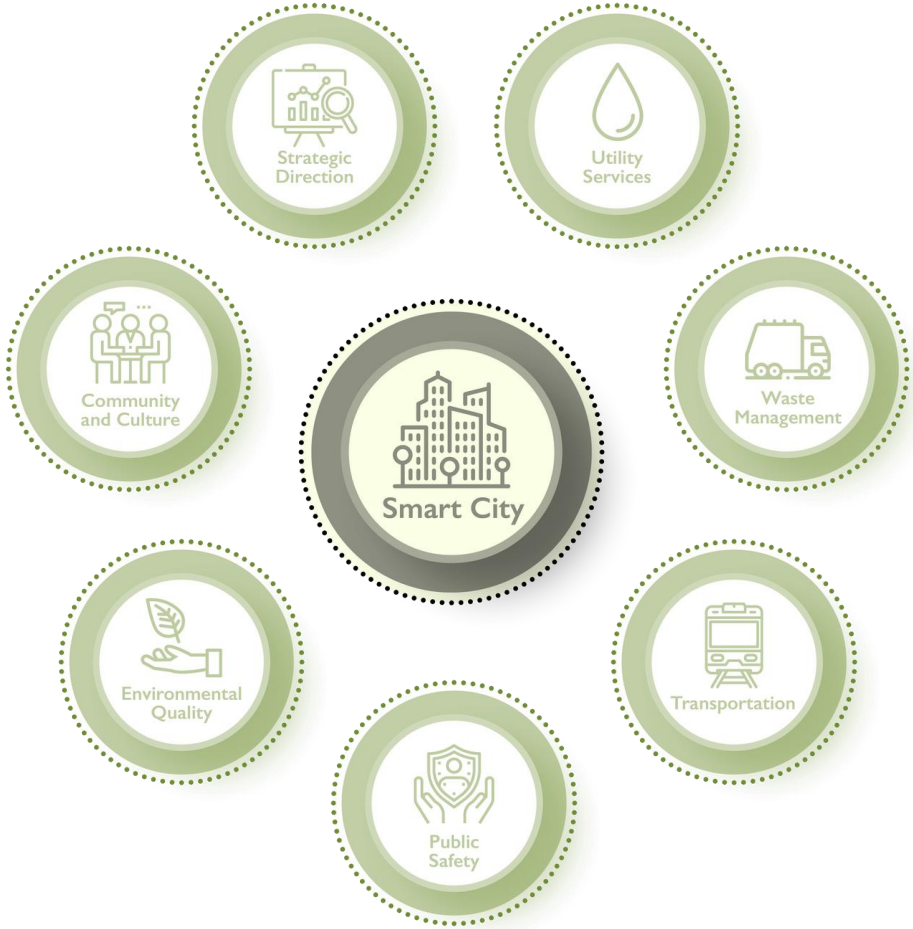
Strategic Direction
Utility Services
Community and Culture
Smart City
Waste Management
Environmental Quality
Transportation
Public Safety

Smart City Tool Demo

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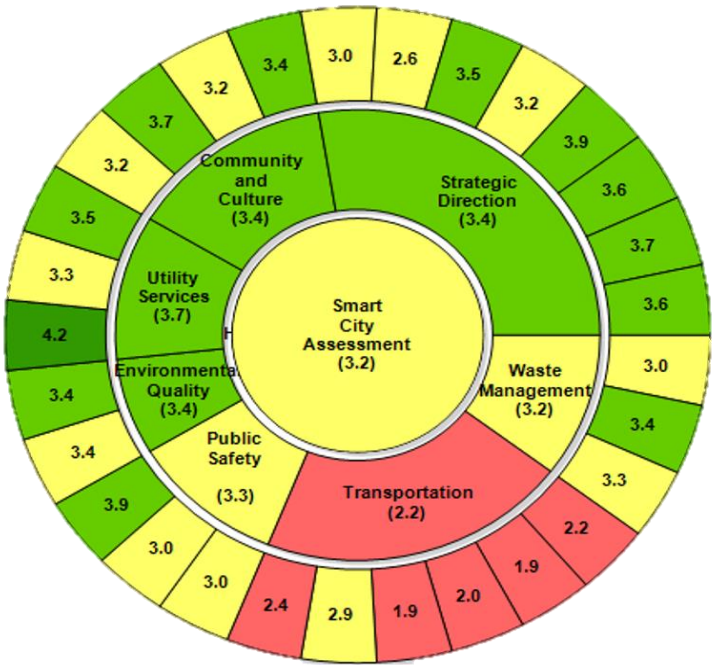
Summary statistics



Functional Area	Best Practice Category	Rank	Score
Utility Services	Metering and Communications	1	4.20
Public Safety	Disaster Readiness	2	3.87
Strategic Direction	IT Process	3	3.86
Strategic Direction	Leadership	4	3.70
Community and Culture	Community	5	3.68
Strategic Direction	Change Management	6	3.58
Strategic Direction	Asset Management	7	3.56
Strategic Direction	Data Governance	8	3.48
Utility Services	Utility Customer Tools	9	3.47
Waste Management	Automatic Vehicle Location	10	3.43
Environmental Quality	Ecosystem	11	3.42
Community and Culture	Goal Alignment	11	3.42
Environmental Quality	Pollution	13	3.36
Utility Services	Service Operations	14	3.33
Waste Management	Waste Management Planning	15	3.26
Community and Culture	Tourism	16	3.21
Community and Culture	Sustainability	17	3.19
Strategic Direction	Business Performance	18	3.17
Public Safety	Fire Department	19	3.05
Waste Management	Waste Facilities	20	3.01
Public Safety	Police Department	20	3.01
Strategic Direction	Smart City Perception	22	2.96
Transportation	Transportation Infrastructure	23	2.89
Strategic Direction	Smart City Planning	24	2.60
Transportation	Transportation Asset Management	25	2.43
Transportation	Transportation Status	26	2.18
Transportation	Accessibility	27	1.99
Transportation	Private Transit	28	1.92
Transportation	Traffic	29	1.89

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Transportation

- Projects and Opportunities:
  - Master planning for infrastructure based on growth and congestion
  - Use a data-driven approach
  - Bus service to connect the university and city-center
  - Centralized traffic signal prioritization
- Positive Observations:
  - Infrastructure adequately meets the current needs of citizens

Overall Score: 2.2

- Transportation Infrastructure: 2.89
- Asset Management: 2.43
- Accessibility: 1.99
- Private Transit: 1.92
- Traffic: 1.89

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Public safety

- Projects and Opportunities:
  - Gunshot monitoring and automated notification to law enforcement
  - Camera surveillance in specific areas of the city
  - Digitize recordkeeping (police and fire)
  - Preparation for hazardous materials incidents caused by train derailments or truck crashes on roads/highways
- Positive Observations:
  - Disaster responsiveness (both short-term and long-term) is highly rated
  - Police Department's policies on video camera usage
  - EMS digital patient care records

Overall Score: 3.3

- Disaster Readiness: 3.87
- Fire Department: 3.05
- Police Department: 3.01

Environmental quality

- Projects and Opportunities:
  - Air quality and water quality monitoring
  - Natural disaster planning (e.g., tornadoes and flooding)
- Positive Observations:
  - Employees felt water management and pollution management practices are favorable
  - Resources being used by the City are sustainable for the long-term

Overall Score: 3.4

- Ecosystem: 3.42
- Pollution: 3.36

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Community & culture

- Projects and Opportunities:
  - Encourage family- and community-oriented activities in parks and other public locations
  - Training plans and policies in place to retain staff during/after modernization efforts
- Positive Observations:
  - “My overall impression is that things in the city are getting better”
  - “My values are reflected by those in city leadership.”

Overall Score: 3.4

- Community: 3.68
- Goal Alignment: 3.42
- Tourism: 3.21
- Sustainability: 3.19

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Waste management

- Projects and Opportunities:
  - Optimize pick-up routing based on sensors to detect the utilization of public receptacles
  - Responses on litter and community-organized clean-up projects are highly stratified, which may represent unequal problems with litter and public trash in different areas of the community
- Positive Observations:
  - New waste management trucks
  - Environmental and safety standards
  - Recycling facilities are easy to find

Overall Score: 3.2

- Automatic Vehicle Location: 3.43
- Waste Management Planning: 3.26
- Waste Facilities: 3.01

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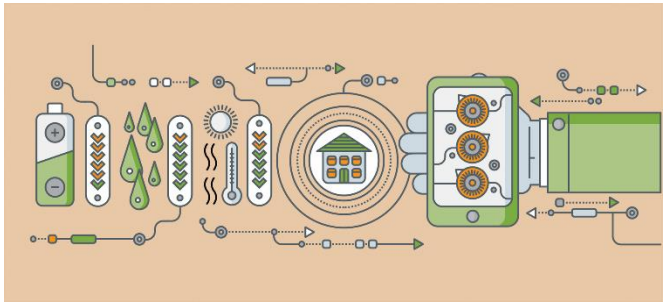
Utility services

- Projects and Opportunities:
  - Conduct a study to model the penetration and growth of solar panels and electric vehicles for future infrastructure planning
- Positive Observations:
  - Advanced metering program
  - Communication infrastructure is available and reliable (fiber and cellular)

Overall Score: 3.7

- Metering &Communications: 4.20
- Utility Customer Tools: 3.47
- Utility Services: 3.33



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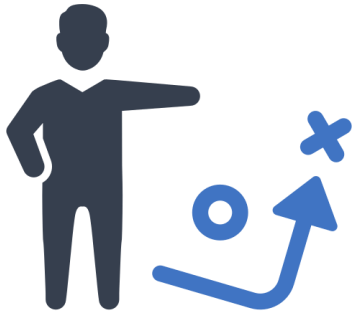
Strategic direction

- Projects and Opportunities:
  - Analyze communications infrastructure capacity for IoT devices and sensors
  - Develop security requirements and policies for smart city applications
  - Communication around technology vision
- Positive Observations:
  - Receptivity to new technologies
  - Confidence in leadership



Overall Score: 3.4

- IT Process: 3.86
- Leadership: 3.70
- Change Management: 3.58
- Asset Management: 3.48
- Data Governance: 3.48
- Business Performance: 3.17
- Smart City Perception: 2.96
- Smart City Planning: 2.60

Key risks and gaps

- Lower ranking scores from Public Works, Transportation, and Sanitary staff
- Near-universal concerns over:
  - Tornadoes and flooding
  - Potential for hazardous material and public health emergencies due to train derailments or vehicular accidents
- Perception of City leadership is largely positive, but:
  - Some express growth in the City may be non-systematic and may create divisions or a lack of equity in economic development and service quality
  - Diversity and minority participation/inclusion are concerns that are prevalent across a number of functional areas
- Points of pride and enjoyment:
  - Air quality
  - Environmental cleanliness
  - Friendly sense of community

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Key planning next steps:

1. Enhance the Smart City and digitalization vision
2. Develop a communications and engagement strategy
3. Develop a business case
4. Identify funding resources
5. Define requirements and acceptance criteria

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Conclusions

- Ruston utilized the E Source Smart City Assessment tool in their planning efforts to:
  - Receive feedback from employees across all departments
  - Get a holistic understanding of the city's performance
  - Review key risks and gaps
  - Identify areas to prioritize for their smart city plan
- Develop a communications and engagement strategy as part of your smart city planning efforts
  - Determine channels
  - Define target audience – internal and external
- City-wide participation should be continuous throughout the smart city program

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Questions? Contact us!

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