Uncover Barriers and Opportunities for Developing Smart Cities
In a recent survey of key municipal executives in North America on the readiness of cities to undertake smart city initiatives:

- The officials surveyed indicated smart city initiatives are underway in their cities, but so far, most cities are in the planning stages.

- By far, the biggest inhibitor in smart city initiatives is funding, as cities are challenged to find the appropriate funds for both short- and long-term projects.

- The respondents also indicated there were internal organizational challenges, such as the lack of cross-departmental coordination and alignment. In addition, many cities do not have a champion to lead the effort.
Which department do you represent in the smart city initiatives for your Organization?

- 37.7% Other
- 25.4% Mayor’s Office or City Admin
- 14.8% Information Technology
- 3% Planning and Development
- 5% Community Development

© 2013 Cisco and/or its affiliates. All rights reserved.
What are the top 3 needs and opportunities driving Smart City development in your city?

ONE

Improving City Infrastructure: Energy, Water and Transportation Systems

TWO

Enhancing the Cities' Global Attractiveness to Business and for Economic Development

THREE

Creating a More Attractive City and Improving the Quality of Life
Which area(s) of Smart City transformation have you begun?

Many efforts have been initiated,
**Top Efforts Are:**

<table>
<thead>
<tr>
<th>Area</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved IT and Communications</td>
<td>49.9%</td>
</tr>
<tr>
<td>Long-term Vision/Roadmap</td>
<td>49.0%</td>
</tr>
<tr>
<td>Energy Efficiency and or Sustainability</td>
<td>47.0%</td>
</tr>
<tr>
<td>Citizen Engagement and Empowerment</td>
<td>46.4%</td>
</tr>
<tr>
<td>Open Data and Government transparency</td>
<td>42.1%</td>
</tr>
<tr>
<td>Transportation, Parking and Traffic Management</td>
<td>40.3%</td>
</tr>
<tr>
<td>Public Safety and Security</td>
<td>38.0%</td>
</tr>
</tbody>
</table>
What steps have you taken already?

Planning:
- Creating Plans to Communicate City’s Vision: 61.2%
- Reviewing Departmental Needs and Priorities: 37.6%
- Studying The Concept: 51.2%

Operation:
- Issue RFPs to Procure Technology, Services: 20.5%
- Set up Initial Pilots: 18.7%
- Implement Full Deployments of Initial Projects: 13.9%
What are the three top external barriers that hinder progress of the Smart City Initiative?

- Inability to Align Funding for a Project up Front: 26.2%
- Community Not Engaged or at the Same Readiness: 22.1%
- Lack of Clarity of the Benefits: 17.1%
What are the top three internal barriers that hinder progress of the Smart City Initiative?

- Lack of a Committed Champion/Visionary Leader
- Lack of Funding (35.4%)
- Departmental Silos and Lack of Coordination (17.9%)
- Lack of Alignment on Priorities (35.4%)
What 1 item would help accelerate your Smart City implementation?

- Access to Innovative Funding Alternatives
- Clearer Sense of Technology Solutions Across Departments
- Policies to Encourage Innovation and Cross-Departmental Collaboration
- Case Studies and Best Practices from Other Cities

© 2013 Cisco and/or its affiliates. All rights reserved.
Do you have cross-departmental teams to address Smart City initiatives? Which departments participate?

*2/3 don’t have a cross-departmental team for Smart City developments

**Yes**

- Planning Departments
  - Transportation
  - Parks and Recreation
  - Emergency Management
  - Information Technology
  - Health and Human Services
  - Housing and Community Development
  - Economic Development
  - Administration and Regulatory Affairs

**No**

- Public Works
- Energy
- Finance
- Legal
- Public Safety
- Parks and Recreation
- Transportation
- Emergency Management
- Information Technology
- Health and Human Services
- Housing and Community Development
- Economic Development
- Administration and Regulatory Affairs
What top 3 methods do you use most effectively to engage citizens?

1. Through Public Hearings and Town Hall Meetings
2. Through Social Media
3. Through Planning Meetings with Stakeholders
What policies and standards need to be in place to protect citizen and corporate data?

Percent of Security, Data Sharing Policies in Place

- Data Privacy: 40% (City Wide Policies)
- Cybersecurity: 33% (No Policy)
- Data Architecture and Data Management: 27% (Department-based Policies)

Top Security Concerns

1. Data Privacy
2. Cybersecurity
3. Data Architecture and Data Management
4. Data Collection
What is your biggest funding challenge?

"The need to fund ongoing, day-to-day operations consumes 99.9% of our available funding. Without new funding sources and new, dedicated staff, we can't seriously consider long-term sustainability initiatives."

- Ease of Securing Funding to Cover the Total Costs of the Project: 35%
- Correctly Estimating the Cost and ROI for the Projects: 24.8%
- Securing Funding Options That Match the Duration Needs of the Project (Short/Long Term): 18.6%
What types of funding are you using/planning for your smart project?

- Government Based Finance Options
- Other/Grants
- Private
- Public
Did you prepare a business plan for upcoming or current Smart City Investment?

Respondents Answered “No.”

76.3% were not able to forecast results with ROI and metrics.
What are your biggest challenges regarding deployment of new technology?

**Top Technology Challenges**

- **19.5%** Interoperability Between Systems
- **24.3%** Systems Integration

**Percentage of Smart City Applications Were Designed for Mobile Communications**

- 0-25%: 11.4%
- 26-50%: 21%
- 51-75%: 10.9%
- 76-100%: 56.7%

**What are your biggest challenges regarding deployment of new technology?**

- 5.3% Addressing Security and Privacy Concerns
- 6.1% Managing and Storing the Data
- 7.8% Finding off the shelf Applications to Avoid Expensive Custom Programming
- 11.6% Finding “Platforms” that can be installed once and Employed by Many different Departments
- 13.4% Training Personnel to Operate and Maintain Technology

© 2013 Cisco and/or its affiliates. All rights reserved.
Technology Purchase Priorities

1. Communications Network
2. Intelligent Infrastructure
3. Storage/Compute
4. Data and Analytics
5. CyberSecurity
6. Applications (Public) and Physical Security
7. Sensors
Accelerating the Smart City Journey (‘10 How-to Tips’)

1. Find a Visionary Leader
2. Move beyond Planning
3. Begin Pilots that Prove Value
4. Understand the Costs and Benefits
5. Explore Available Funding Options
6. Improve Internal Support
7. Explore Technology Options
8. Start Mobilizing Technology
9. Learn from Peers
10. Find the Right Partners