Amsterdam’s Intelligent Approach to the Smart City Initiative

Following initial experiments to see what the city’s data would reveal, Amsterdam is now using that information to spur innovations and improve services for citizens, businesses and tourists alike.

Smart City projects need to benefit the people who live, work and visit the city in which they are implemented. In EY’s view, these projects are an important way to use technology to build a better working world. Amsterdam’s approach to its Smart City initiative does this while also demonstrating how champions of analytics, no matter what their industry or organization, can pursue their goals. That said, the City of Amsterdam is not just any organization. Its collection of strong, vocal and independent stakeholders includes elected officials from varied urban and suburban districts, as well as government department managers and a diverse group of businesses. This mix makes managing any major change a challenge—it also elevates the value of the lessons learned this case study presents.

Amsterdam’s Smart City initiative has graduated from an early period of experimentation, in which the city opened up its data to see what the public would offer. Now, in its second stage, the initiative is characterized by more deliberate and directed efforts to spur innovations. The city is improving services for its citizens (better lighting and recycling programs), businesses (precise readings into merchants’ energy use) and tourists (information on public transit and museum lines).

Smart City initiatives will benefit from the strengths Amsterdam demonstrates, including:

• Strong leadership. The case study poignantly describes two initiative leaders. The first: Ger Baron, the city’s chief technology officer, called “Mr. Outside” for his strong advocacy work and political skills in engaging city leaders and other stakeholders. The second: Berent Daan, Baron’s ally and Amsterdam’s director of research, information and statistics. Daan is “Mr. Inside,” the one who implemented agile development processes with his teams and works with city departments to share data.

Although the efforts of Baron and Daan effectively complement each other, the backing of the political establishment is also critical. Amsterdam’s political leaders continued to pursue the Smart...
City project in spite of changes occurring after an election, modest early results and pressure on elected officials to show concrete benefits. That leadership commitment is essential to any data analytics program. It takes time and perseverance to innovate.

- **Emphasis on proof-of-concept projects.** Amsterdam has produced more than 80 pilot projects across the city. Some are as simple as sending text messages to welfare recipients to say their checks are on the way, a move that reduces call volume to the city’s help lines. Others are more complex, including an experiment to have residents separate biomass from recycling streams to feed the city’s waste-to-energy power plant.

Sometimes, even when “big data” is available, small data will do. The best analytics projects incorporate the needs of end users into their design. The number of pilot projects illustrates Amsterdam’s bottom-up approach to innovation through its Smart City initiative. Although it is a challenge to manage so many projects, the benefits are clear: they spread the potential benefits to many constituents. The sheer number also provides a hedge against the certainty that many projects are likely to yield high enough returns to pursue them long term. Plus, these projects get different parties across the city working together, opening up new avenues for collaboration.

Even as this approach forces managers to communicate about more pilot projects, it sets the stage for transforming city services through innovative uses of data and analytics. An organization with a top-down management approach to its analytics projects might want to limit its roster of pilot projects. In Amsterdam’s operating environment, however, this strategy represents a best practice.

- **Effective alliances.** When it comes to data-driven efforts, Amsterdam’s Smart City initiative shows that it pays to work with partners. This is true both inside the city government and externally. Inside, leaders like Baron and Daan work to educate department heads on the benefits of getting involved and sharing data—moves that require established players to rethink their existing practices—as well as working hard to earn the trust of colleagues, policymakers and citizens.

The private sector also plays an essential role, encouraged by the open data policies at the national level. For example, Amsterdam tapped into grocery store data about vegetable sales to evaluate a city campaign to encourage children to eat more healthfully. Insurance companies, meanwhile, helped gather data to research areas within the city that needed more mental health services. These are among the ways Amsterdam can improve the lives of its citizens using data from multiple sources. Such efforts also demonstrate how these programs rely on collaborative partnerships. The Smart City is not an island. Amsterdam cannot do this alone.

- **Tailoring products to customer needs.** Amsterdam’s Smart City managers have learned that even though they can do very sophisticated presentations of data, the consumers of that data will influence the best style of communication. For example, the “Climate Street” shop owners wanted to receive annual reports with simple recommendations on how to reduce energy use—not more frequent and complex analyses.

Learning to listen to customers and cater to their needs is an essential lesson for analytics practitioners in every industry. Sometimes, even when “big data” is available, small data will do. The best analytics projects incorporate the needs of end users into their design. In Amsterdam, that meant including activities to elicit the needs of citizens and other stakeholders in its Smart City initiative.

- **Building a talent pool.** One of the key challenges in a Smart City initiative—and in any major analytics strategy—is attracting and retaining talented people to do the work. Amsterdam is a leader in this concept. Having the city’s CTO help form the Amsterdam Institute for Advanced Metropolitan Solutions is emblematic of its efforts. A university program dedicated to smart cities, this institute benefits Amsterdam while also making the city a hub for people interested in using data to make a positive difference in the world. That, in turn, should have positive benefits for the region’s private sector.

Overall, the strategy behind the Amsterdam Smart City initiative demonstrates how a city can embrace public and private sector best practices to pursue analytics programs that benefit its citizens.