GENERATING **HIGH TECH** IMPACT

High tech major harnesses the Internet of Things to improve urban public services delivery

Client
A global leader in high tech products and solutions

Industry
High tech

Business need addressed
- Enable a consolidated view of data across multiple citizen outreach channels
- Accelerate decision making through dashboards that generate insight from large volumes of data and drive real-time responses, especially in emergency situations

Genpact solution
- Analytics center of excellence based on specialized big data platform, Intelligent Process Insights Engine (IPIE), including resources to translate input data into English from local languages
- Robust master data management and latest digital technologies to capture, parse, and cluster data from diverse sources and then render metrics and insights with dynamic dashboards
- Advanced reporting capabilities to generate real-time insight, drive responses, and ensure accountability of civic action

Business impact
- Single view of data from multiple sources and channels enabled a consolidated view of citizen requests and focused action from public works
- Real-time reporting capabilities enhanced public services' efficiency and response times
- Better-directed public works cut waste and ensure improved quality of living

The Internet of Things (IoT) is forecast to deliver significant value across key public sector use cases over the next decade globally, including smart water, smart buildings, smart energy, smart parking, and more. However, significant investments made in sensor networks, infrastructure, and digital technologies will not generate adequate returns if the data generated cannot be harnessed for actionable insights at scale. Genpact's practical Lean Digital^{SM} approach helped this world leader in technology and IoT implement an analytics program for the integrated operations center of one of the largest cities in the world. The Data-to-Insight-to-Action analytics process is helping the city analyze and respond to public feedback and ideas to improve city-wide operational processes, public work prioritization, resourcing, and budget allocation in preparation for hosting prestigious international events.

Business challenge

The city was poised to host prestigious international events that required state-of-the-art infrastructure, logistics, and administration to ensure a world-class experience for the thousands of participants, support staff, dignitaries, media professionals, and millions of tourists from across the globe. The organizing committee enlisted numerous organizations to help find solutions to the arduous challenge of meticulously organizing such high-profile events to global standards while ensuring sustainable social and urban transformation through the use of advanced technology and analytics. One initiative was to ensure local governments engage with citizens proactively and harness their input and feedback in decision making.

A global leader in technology solutions was contracted to set up an integrated operating environment to analyze data from citizen and government departments, provide visibility to metrics and key events in real-time to increase the speed of decision making, and enhance responsiveness. However, crowdsourcing of ideas and feedback from a large and diverse population was fraught with many challenges. Large volumes of structured and unstructured data in multiple languages needed be sourced, translated, scrubbed, and organized for analysis from multiple sources, such as complaint registration portal, SOAPBOX application, citizens' portal, online government forums, and social media sites. Creating a consolidated view of these ideas provided by citizens to highlight the top problem areas facing the city, and recommending prioritized public works beneficial to the larger population required unprecedented technology and analytics expertise.

Large volumes of structured and unstructured data in multiple languages needed be sourced, translated, scrubbed, and organized for analysis from multiple sources

Genpact solution

Genpact partnered with the company to deploy advanced digital technologies and analytics harnessed, at scale through advanced organizational models such as an analytics center of excellence. A team of data scientists and process experts determined the links between data, its sources, operational processes, and outcomes: efficient utilization of city's resources, eliminate waste of public funds, and improve the quality of citizens' lives overall.

A lab environment was set up with a specialized big data platform, the Intelligent Process Insights Engine (IPIE), to capture only the relevant data from appropriate sources. A multi-lingual team translated the input data into English from Portuguese and other languages. Robust master data management and the latest digital technologies, such as multi-node Hadoop cluster, multi-node elastic search cluster, Carrot2, virtual desktops, and Kibana to capture, parse, and cluster data from diverse sources and then render metrics and insights with dynamic dashboards, helped quickly scale the platform to handle the growing volume and variety of data.

Robust master data management and the latest digital technologies helped analyze data from diverse sources and enable insights while quickly scaling the platform to handle the growing volume and variety of data

Additional potential use cases emerged through subsequent iterations, including downstream analytics of public data that could be extended to include categories such as weather, transport, and health to identify potential risks, for example, health hazards (in the case of epidemics), predict floods and other natural disasters, and drive pre-emptive responses.

Business impact

Real-time decision making enabled public work prioritization, resourcing, and budget allocation, driving enhanced efficiency of operations in public works and decreased costs

Faster information retrieval and easy reporting drastically reduced response times in emergencies

About Genpact

Genpact (NYSE: G) stands for "**generating business impact**." We architect the **Lean Digital**^{SM} enterprise through a unique approach based on our patented Smart Enterprise Processes (SEP^{SM}) framework that reimagines our clients' middle and back offices to generate growth, cost efficiency, and business agility. Our hundreds of long-term clients include more than one-fourth of the Fortune Global 500. We have grown to over 70,000 people in 25 countries, with key management and a corporate office in New York City. We believe we are able to generate impact quickly and power Intelligent Operations^{SM} for our clients because of our business domain expertise and experience running complex operations, driving our unbiased focus on what works and making technology-enabled transformation sustainable. Behind our passion for technology, process, and operational excellence is the heritage of a former General Electric division that has served GE businesses since 1998.

For additional information, contact, hightech.solutions@genpact.com and visit www.genpact.com/home/industries/high-tech

Follow Genpact on Twitter, Facebook, LinkedIn, and YouTube.