Data Innovation Symposium

Director's remarks as prepared for delivery

October 13, 2023

"A collective approach to innovation for improving equity and governance in Puerto Rico"

- Thank you, and hello, everyone! ¡Buenos dÍas! It's an honor to join you at the Data Innovation Symposium.

- Para mí es un honor estar aquí con todos ustedes. Muchísimas gracias por invitarme. Quienes me conocen saben, que siempre he luchado para que las voces de aquellos que son más afectados por las decisiones que tomamos, estén en la mesa cuando estamos discutiendo las soluciones.

- You know, something that I'm trying to do at the U.S. Census Bureau as director is bring my whole self to the table as the leader of the largest federal statistical agency. That includes my statistical expertise, my life experiences, my values, and also my Latino culture.

- I really like that we can use our culture, our values, and our life experiences as Latinos to create new levels of excellence in whatever we do. Doing that creates unique contributions in ways that would otherwise never be possible.

- Your unique insights and ideas—motivated by nuestra cultura—produces success.

- I've found that, over a 40-year career, it allows me to offer unique perspectives that can add value to research, to scientific investigations, and especially to interpretations of results.

- It's in this spirit that I offer a little cuentito for you to think about.

- I was trained as a mathematical statistician. You know, mathematical proofs 24/7 with lots of formal logic, pages of math symbols and Greek letters, subscripts and superscripts; the whole nine yards.

- I accidentally fell into survey sampling and ended up becoming a sampling statistician, then a survey director, manager and down the road I immersed myself in policy research because I'm passionate about helping people.

- My 4-decade experience in policy research has been—let's say—quite enlightening.

- Let me share a little of what I learned, because it ties in to our discussion today.

- For instance, I discovered you don't really need a probability sample to survey and understand the plight of runaway teens who were victims of human trafficking. The tragic uniformity of their horrendous experience allowed a convenience sample to suffice for the purpose of gaining the knowledge, the insight that was needed to develop interventions. . . to help them.

- And I've often spoken of the sufficiency of a sample of n=1 to make impactful policy recommendations.

- In that instance, I worked on a study on the impact of ICE raids on families and local communities. The insight required just one interview of one family whose breastfeeding mom was transferred out of state without her child. The simple policy recommendation called for authorities to ask detainees if they had children at home so that family separations were averted.

- Now, I've often been the sole person of color, a Latino, in a room full of decision-makers.

- I once found that I needed to argue against funding a sound scientific research project that would only promote a two-tier health care system for those with and those without health insurance. The project had been pitched as a way to provide the uninsured with cheap, less effective care for a chronic condition, while those with health insurance would continue to receive conventional treatments.

- I argued against a beautifully designed project that would teach the homeless how to reduce or eliminate smoking cigarettes because of the cancer risk it posed 20 years hence. Yet it totally ignored the grave, immediate threats that the homeless faced in their daily struggle with survival.

- I've witnessed countless health care research projects try with futility to get underserved, non-English speakers to their improve access and use of clinics. Yet no one saw—literally before their very eyes—that the real solution was for the health care industry itself to acculturate to a more diverse population, which it is now doing inevitably after about 30 years.

- You see, I had brought my whole self to the table for my work as a statistician. I brought my life experience, my culture and values as a Latino, and my technical training as a statistician and mathematician.

- That combination allowed me think differently and unconventionally about problems facing society. It empowered within me a different lens, a different perspective.

- And in a real sense, it advanced a community-based participator research perspective, one that uses a community's lens to not only define the problem, but to develop the solution as well.

- And that's exactly what I see in the people and the solutions being developed through the data innovation. These projects embrace community engagement by asking participants to view problems and develop solutions from their own communities' perspectives. And the magic elixir that crystalizes the solution is data!

Census Bureau Data and Tools for Puerto Rico

- At the Census Bureau, we're committed to producing data that reflects an accurate portrait of America—and of Puerto Rico. Our data are valuable assets that can be used by policymakers and the public to advance equity.

- Our data can assist federal agencies and others in equitably distributing resources and identifying underserved communities.

  - We provide a wealth of data by age, disability, race, ethnicity, sex, income, veteran status, and other key demographic variables to help measure equity.

  - These data are often by geography, which provides meaning and context to the statistical data, and can identify rural and underserved communities.

  - We also provide economic data that can help businesses in underserved communities identify opportunities for growth. The measures inform policymakers working to advance equity and enable them to propose effective, data-driven solutions.

- In that vein, I'd like to talk about some of the data and tools that the Census Bureau has that can enable solutions here in Puerto Rico.

- On census.gov, we had a dedicated Puerto Rico landing page that is the source for comprehensive Census Bureau statistics on Puerto Rico. It includes datasets and resources covering a wide array of topics for Puerto Rico such as population, demographics, income and employment, housing, businesses, and the economy. Each data product is carefully curated, providing valuable insights into the life, demographics, and socioeconomic realities of Puerto Rico.

- Whether you're a government official looking for demographic data to plan public services, a business seeking market trends for investment decisions, or a resident curious about your neighborhood's statistics, our Census Bureau data serve as a reliable source.

Community Resilience Estimates for Puerto Rico

- In June, the Census Bureau released the first Community Resilience Estimates (CRE) for Puerto Rico—a measure of the commonwealth's ability to withstand natural disasters and other challenges.

- CRE provide an easily understood metric for a community's capacity to withstand and recover from a disaster, and comes with an easy-to-use interactive mapping tool. Using Puerto Rico Community Survey (PRCS) restricted microdata and small area estimation methods, the experimental estimates measure social vulnerability to disasters at the state/commonwealth, municipio, and census tract geographic levels.

- Social vulnerability is measured-based on ten PRCS indicators, including:
  - Poverty status.
  - Disability status.
  - Number of caregivers in the households.
  - Unit-level crowding.
  - Vehicle access.
  - Broadband internet.
  - Employment.
  - Education.
  - Age.
  - Health insurance.

- These data show that Puerto Rico's population had high levels of social vulnerability, indicating that it would have trouble bouncing back in the event of a natural disaster.

- All municipios in Puerto Rico showed high levels of social vulnerability compared to the United States, but some had particularly high rates relative to the entire commonwealth.

- Nearly half—46.1 percent—of Puerto Rico's population was estimated to have three or more risk factors ranging from poverty to age, more than double the estimated share (21.6 percent) of the stateside U.S. population in 2019.

- In addition, all municipios in Puerto Rico and 87.0 percent of census tracts had higher rates of individuals with three or more risk factors compared to the U.S. estimate.

- These are all problems that data allows us to see—and to address.

Opportunity Project/COIL

- And this isn't the first time the Census Bureau has been involved in bringing data and technology to bear on issues that are important here in Puerto Rico.

- Each year, we bring together cross-sector collaborators to solve some of the nation's biggest challenges with data and technology through our Opportunity Project product development sprints.

- The Opportunity Project is an innovation program led by the Census Open Innovation Labs (COIL) at the Census Bureau. COIL's mission is to source knowledge and solutions to solve key challenges for the Census Bureau and the public at large through human-centered design, data, creative media, and technology.

- The Opportunity Project supports projects that require a special kind of creativity and critical thinking by entrepreneurs. What I really like is that it brings together aspirational thinkers, dreamers, and technical expertise. And then it enables them with federal data and technology.

- To date, thousands of people, hundreds of organizations, and 30 federal agencies have participated in Opportunity Project sprints—resulting in nearly 175 new open data tools including apps, websites, mapping tools, data visualizations, games, and more.

- In 2022, Opportunity Project technology development sprints focused on issues specific to Puerto Rico. They focused on problem statements such as:
  ◦ Transforming Local Addressing Systems in Puerto Rico.
  ◦ Developing Community-Informed National-Level Indicators of Well-Being.
  ◦ Helping Communities Access Infrastructure Grant Funding.
  ◦ Supporting Island Communities' Transition to Renewable Energy.
  ◦ Enhancing Children's Resilience to Adversity in Puerto Rico.
  ◦ Building Community and Individual Climate Resilience.
- These efforts bore fruit, with over 200 new open data tools covering environmental, health, and social problems as well as our economy.
- These projects embrace community engagement by asking participants to view problems and develop solutions from their own communities' perspectives. And the magic elixir that crystalizes the solution is data!

Census xD

- And finally, I want to talk about our Census xD group, whose mission is to advance the delivery of data-driven government services through new and transformative technologies.
- xD works in multidisciplinary teams of engineers, project managers, and data scientists to support the research and application of artificial intelligence solutions to the delivery of government services. Each team works with federal stakeholders across government and often with the support of outside partners, such as academic research groups, to apply the latest innovations in artificial intelligence to each project.
- Currently, it's focusing on four areas, including bias mitigation in federal data; the future of data collection and sharing; reducing costs and increasing efficiencies; and enterprise-wide developer experience.

Conclusion

- We've never been in a better position to use federal data to engage in inclusive innovation. Inclusive innovation is not easy, but the challenges can be tackled by leveraging federal data and community perspectives. And the solutions are only limited by your creativity and determination.
- Bringing our 'whole selves' to the table in our work—our culture, our values, our professional, and technical training—allows us think differently and unconventionally about problems facing society. It empowers within us a different lens, a different perspective.
- I challenge you to bring your life experience, your culture, your values, and training to the table. Take a look at your community and find problems using your own unique, powerful lens. Invite others to give their own perspectives, too.
- And if you need help developing a solution, we at the Census Bureau are at your service.
- Please enjoy the rest of your day, learn from it and see about making solutions to your community. Thank you so much for joining us for this symposium—and for all your work on behalf of Puerto Rico.