Project 8: Anticipating the needs of 8 billion people and beyond

Sumair Sayani, Vice President, The Demand Institute and Nielsen
> Sumair.Sayani@DemandInstitute.org
> (416) 568 0806
> 845 3rd Avenue
> New York, 10022, New York, USA

Sarah Cummings, Project Manager The Demand Institute and Nielsen
> Sarah.cummings@demandinstitute.org
> (860) 614 8677
> 85 Broad Street
> New York 10004, New York, USA

Introduction

In September 2015, 193 world leaders attending the UN Sustainable Development Summit unanimously adopted the 2030 Agenda for Sustainable Development and the 17 Sustainable Development Goals. The Sustainable Development Goals build on the progress achieved by the Millennium Development Goals (MDGs).

According to the United Nations, MDGs led to achievements including:

- A drop in the number of people living in extreme poverty by more than half, to 836 million in 2015.
- Gender parity in primary schools in the majority of countries.
- A reduction in the rate of children dying before their fifth birthday by more than half since 1990.
- A fall of 45 percent worldwide in maternal mortality.
- Over 6.2 million malaria deaths averted and 37 million lives saved by tuberculosis prevention and treatment.
- Access to improved drinking water sources for 2.6 billion people between 1990 and 2015.

That said, it also recognized that a lot of challenges still remain:

- Around 800 million people still live in extreme poverty and suffer from hunger, with fragile and conflict-torn states experiencing the highest poverty rates
- Between 2008 and 2012, 144 million people were displaced from their homes by natural disasters, a number predicted to rise as the planet warms, bringing more extreme weather and rising seas
- Water scarcity affects 40 percent of the global population and is projected to increase
- Some 946 million people still practice open defecation
- Gender inequality persists in spite of more representation for women in parliaments and more girls going to school.

The need for a global data platform

Preparing for our civilization's future is more challenging than ever given accelerating demands on the Earth's resources. Consider that between now and 2030 we expect the world's population will increase from seven billion people to over eight billion. In addition, life expectancies will continue to rise; over 500 million people will move into cities, and over 1.5 billion people will join the middle class.

In order to prepare for a changing world, we need to closely look at the challenges faced by the global community towards achievement of MDGs. Identifying the most pertinent challenges could also help us develop new solutions or identify ways to strengthen existing eco-systems.

Among the opportunities for improving humanity's efforts to meet existing and emerging challenges, a key enabler is captured in the "UN's 2015 MDG Report: section Measure what we treasure" [1]. And that is Data.

The report stated that the monitoring of the MDGs showed the global community that data are an indispensable element of the development agenda. Only by counting the uncounted could the UN and others reach those that have not been reached. Several challenges were identified concerning the availability, accessibility and use of data.

United Nations Secretary-General's Independent Expert Advisory Group on a Data Revolution for Sustainable Development in their report "A world that counts: mobilizing the data revolution for sustainable development" [2], established the need for there to be a global collaboration around data for sustainable development. They called for increased as well as multi-pronged partnership between the public and private sectors. It gave a call out to innovators from around the world to take this challenge of solving massive global challenges. The group also encouraged governments, public sector organizations and NGOs to be more open to accepting and working with the private sector and see them as partners in finding sustainable solutions.

That is when Project 8 was born.

Project 8 was timed with the new global sustainable development agenda.

Project 8 is a global, digital information community where people come together to share, compare, analyze, and discuss data and perspectives on the evolving demand for basic human needs. How much energy will be needed in India? How much new housing will be needed in Brazil? How much food will China need to feed its population? With the world's population totaling nearly 7.6 billion in mid-2017 [3], it is expected to reach 8.6 billion by 2030 and 9.8 billion by 2050 [1].

In order for decision makers to properly plan for the world's future, it is important to first understand human need.

---

[1] United Nations, "The Millennium Development Goals Report."

[2] Independent Expert Advisory Group on a Data Revolution and for Sustainable Development, "A World That Counts, Mobilising the Data Revolution for Sustainable Develepment."

[3] Blazhevska, "World Population Projected to Reach 9.8 Billion in 2050, and 11.2 Billion in 2100 – Says UN."

Project 8 was designed with the following question in mind: what will it take to sustain a global population of 8 billion people?

While today's data on basic human need is highly fragmented, highly variable, and challenging to access and navigate, Project 8 brings these data together in one online community by hosting datasets from a variety of private and public sector organizations. Project 8 is unique in the fact that it allows experts from all over the world to both contribute to and access this essential knowledge and to discuss and drive collaboration around it. With Project 8, we can achieve a sustainable future for our growing world population by putting high-quality metrics in the hands of decision-makers, whether they be leaders in government agencies, NGOs, foundations, non-profit agencies, academia, or business.

By providing a cloud-based distribution and visualization platform for new and existing data sources and by fostering cross-sector collaboration around human needs data, Project 8 directly supports those working to achieve the Sustainable Development Goals.

Currently, Project 8 houses more than 300 million rows of data – and is growing daily. It began with input from six organizations to compile data across 30 datasets. The platform now supports users from more than 100 public and private sector organizations across 16 countries.

Project 8 was created by the United Nations Foundation and The Demand Institute (jointly operated by The Conference Board and Nielsen). We have received support from and collaborated with leading global organizations such as Salesforce, Accenture, Dell Boomi, and the U.S. State Department Office of Global Food Security.

Development of a global data commons - Agility and Scale
Once we set out to build a global data commons, we wanted to move fast and build something that we can scale.

We went through a series of stages to be able to release the prototype in the fall of 2015, timed with the launch of SDGs.
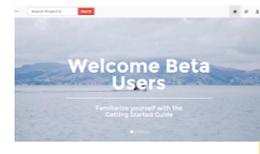

| Discovery 2013-2014 | Human Centered Design 2H 2014 | Agile Development 1 H 2015 | Prototype Release Fall 2015 |

The most important aspect of the speed with which we were able to develop and launch the platform was collaboration and partnership.

All the organizations who had originally joined forces to solve the massive global issues, also came together with resources and personnel at every stage of the development process. Select senior leaders visualized the most important elements of the platform at

the discovery stage; hundreds of employees volunteered their time to identify the most important challenges and mapping out best path to solve them in the human centered design phase; technical expertise of developers and program managers synthesized what was needed into a seamless user experience by way of a physical and workable platform with tutorials and other guidelines to enable users to get the most out of their engagement.

This was and continues to be a true epitome of the Non-Zero-Sum thinking. The founders and collaborators have realized that if we are to solve the global challenges then we need to work together.

Project 8 has created an example to show that public and private sectors can actually work together sustainably without compromising each other's interests.

Most important features of the platform

Data
The most important and indeed foundational aspect of the platform is its ability to host large volume of data on the cloud in a secured environment.

Users are able to load data easily, and also access data that is already available on the platform.

While most of the data currently on the platform is publicly available, we are seeing increasing progress on securing private data.

We are also in early stages of conversations to develop a homomorphic encryption protocol to protect personally identifiable information. The goal is to mask that information and yet make it available for analyses purposes.

Furthermore, we are also working towards building data standards with the help of domain experts to ensure that we streamline data from around the world and from multiple sources and make it viable for analyses.

Collaboration
We believe that it's not only important to bring data together, but also the people together. A lot of great work is happening in silos. We want to change that.

By creating a 'community' space within the platform, we remain the only data collaborative even today that has a feature like that. Users from around the world can share their profile, their work and experience. They can follow each together, tag each other, post their updates, form special groups with those who may work in the same area or have other common interests.

This way once we inculcate a culture of open sharing of data and perspectives, discussions around the big questions and collaborate on next work that needs to be done or area that needs to be focused, we can create better and faster outcomes, instead of having to re-invent the wheel over and over again.
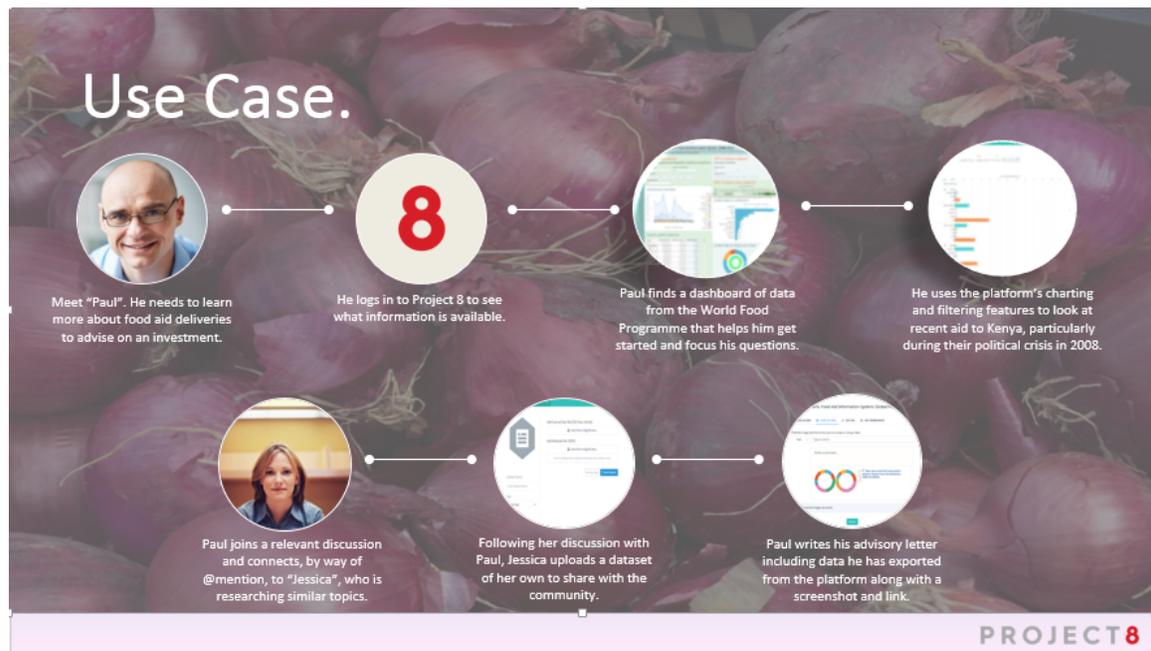
Analysis
A critical aspect of our work is to create possibility for merging different data sets to create new analytical outcomes.

We have created a private space within the platform as well for those users who are still not ready to share their private data or have personally identifiable information to leverage the data on the platform. This way users don't have to drag the data out of the platform to run their analyses.

We request and expect all our users to share their analyses with the rest of the community and promote it within the platform so that others can also benefit from the new knowledge.

The Project 8 team is available to support dissemination of new and important work through its various communication channels.

How does it work?

Power of Collaboration
Project 8's first Sustainable Development Goal of focus is SDG2: Zero Hunger. We are monitoring user activity and outcomes to evaluate whether users are generating useful knowledge for one another and their organizations. One such user is Sai Krishna Dandamudi. Dandamudi is CEO of VARI, an online marketplace with real-time agricultural price data in India. He is an early contributor of real-time data to the Project 8 platform and he believes that VARI's real time agricultural price data will allow experts and researchers to create better solutions. Sai plans to use data from Project 8 to assist VARI in developing better analytics as VARI's mission is to provide price transparency and price transmission in assisting farmers to transition from production/commodity based agriculture into pricing power based agriculture.

In partnership with Nielsen Data Scientists in May 2017, Project 8 hosted a virtual hackathon in order to issue a challenge posed by the World Food Program. The participating data scientists were challenged to create a predictive model that would predict the next month's Food Consumption Score (FCS) with an accuracy of 80%.

<u>Future Work & Conclusion</u>
Achieving SDG2: Zero hunger not only signifies putting an end to hunger but also achieving food security, improving nutrition, as well as promoting sustainable agriculture. As Project 8 expands to focus on additional Sustainable Development Goals such as SDG4: Quality Education and SDG8: Decent Work and Economic Growth, the platform aims to be a key tool for decision makers to analyze data and collaborate as they work to achieve the 2030 Agenda for Sustainable Development. As the number of datasets on the platform increases, we aim to increase the number of users as well to include users from every country as well as create governance boards for each of the Sustainable Development Goals. We also plan to continue partnering with other organizations in this space to continue learning from them and collaborating for shared outcomes.

Project 8 remains open to collaborate and share what we have learned. We strongly believe in shared values and our core guiding principle remains to have a "Non-Zero-Sum" mindset.