



## 4ª MESA: ¿QUÉ DILEMAS PLANTEA EL BIG DATA?



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Data-Driven Decisions



## Telco Big Data and Healthcare

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# Getting the right balance isn't easy

Benefits always come with risk



*Big data—capturing its value*

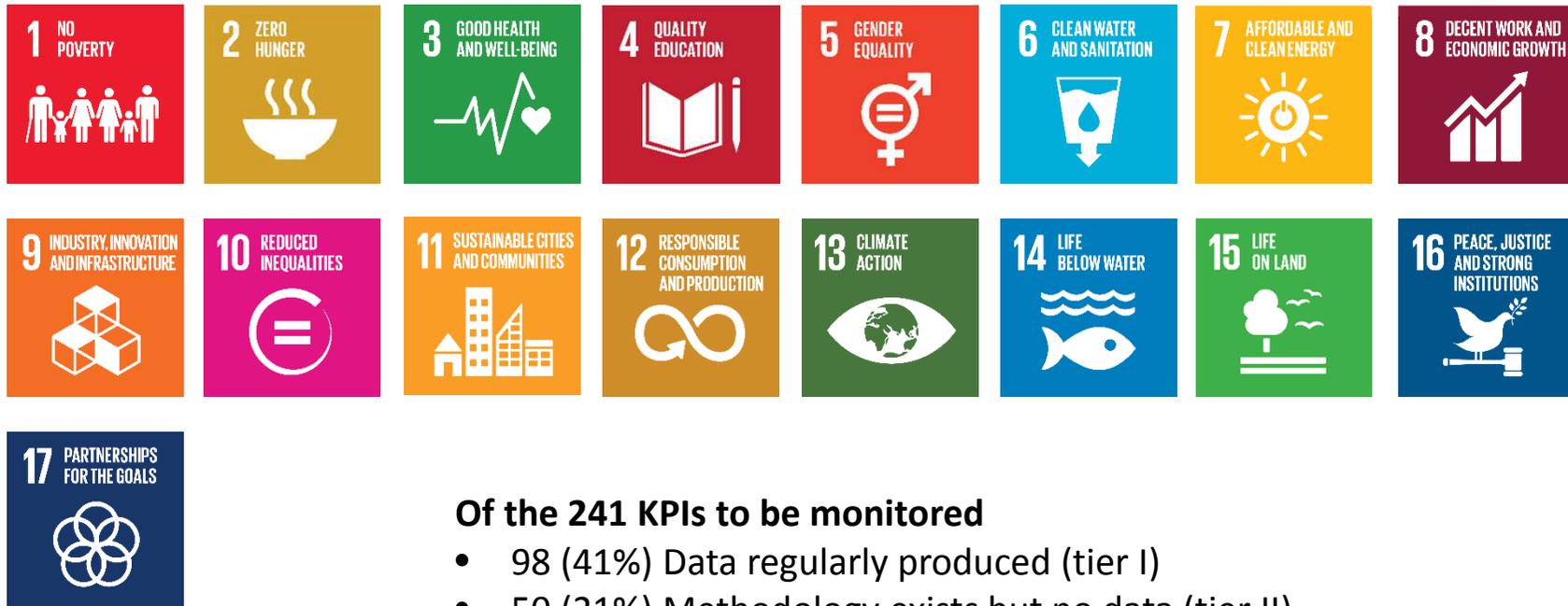
**\$300 billion**

potential annual value to US health care—more than double the total annual health care spending in Spain



# The UN has set 17 development goals for 2030...

17 SDGs, 161 Targets, 241 KPIs



## Of the 241 KPIs to be monitored

- 98 (41%) Data regularly produced (tier I)
- 50 (21%) Methodology exists but no data (tier II)
- 78 (32%) No international methodology exists (tier III)
- 15 (6%) Currently unrated indicators

# ...and Big Data is a huge opportunity to measure progress and shape policy

## Data Type

## Use Case



**Payment Data**



- Estimation of consumer price index and poverty rates.
- Economic impact of natural disasters.



**Search Queries**



- Identify influenza breakouts.
- Monitor dengue fever spread geographically.



**Satellite Imaging**



- Light emissions picked up by satellites to estimate GDP growth.
- Time series of satellite images to identify flood risk areas.



**Mobile Phone Data**

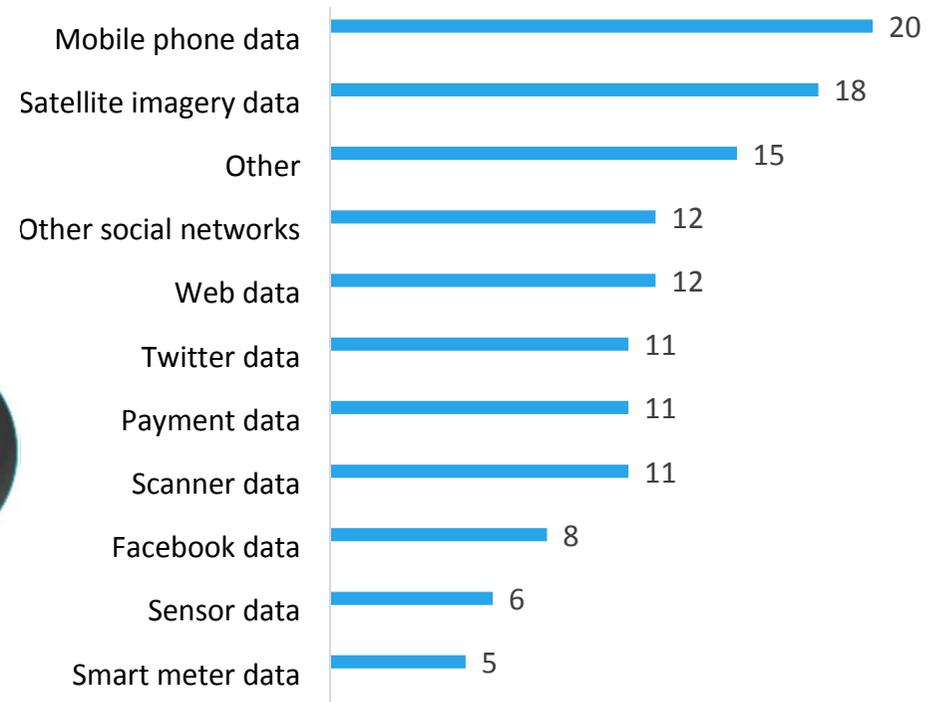


- Estimating literacy rates of countries.
- Cell phone records to predict socio-economic levels.

# Private Big Data can help achieving the SDGs



Which data is used in projects?



# Health is the 3<sup>rd</sup> goal of the 17 SDGs of the UN

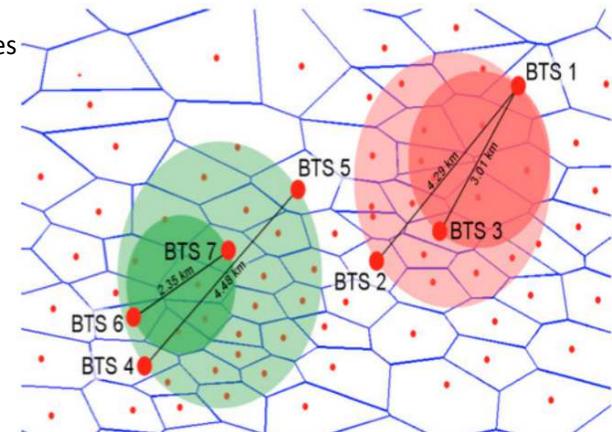
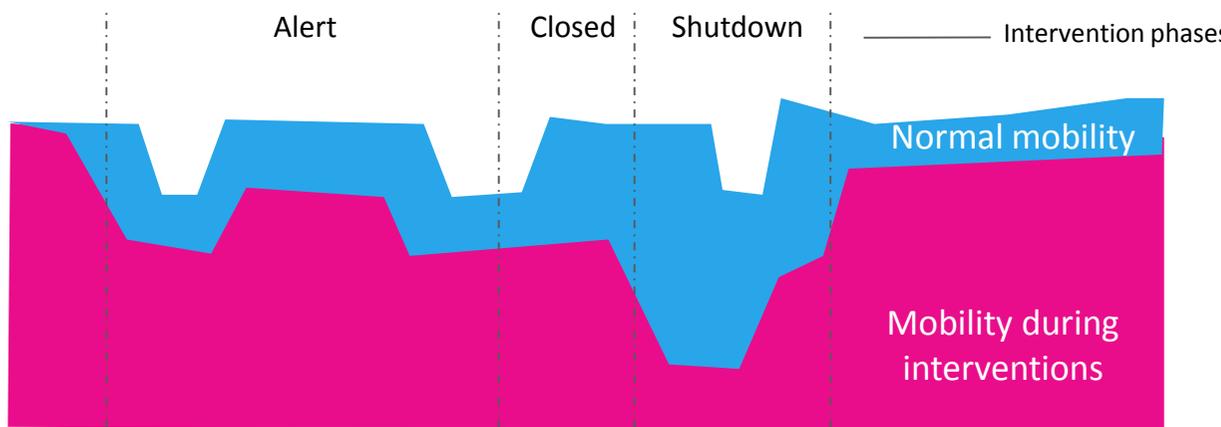


Ensure healthy lives and promote well-being for all at all ages

| Target | Description  |
|--------|--|
| 3,1    | By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births  |
| 3,2    | By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births |
| 3,3    | By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases                 |
| 3,4    | By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being                            |
| 3,5    | Strengthen the prevention and treatment of substance abuse, including narcotic drug  |
| 3,6    | By 2020, halve the number of global deaths and injuries from road traffic accidents  |
| 3,7    | By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of                   |
| 3,8    | Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable       |
| 3,9    | By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination  |

# Spreading of Swine Flu, Mexico

Telco data



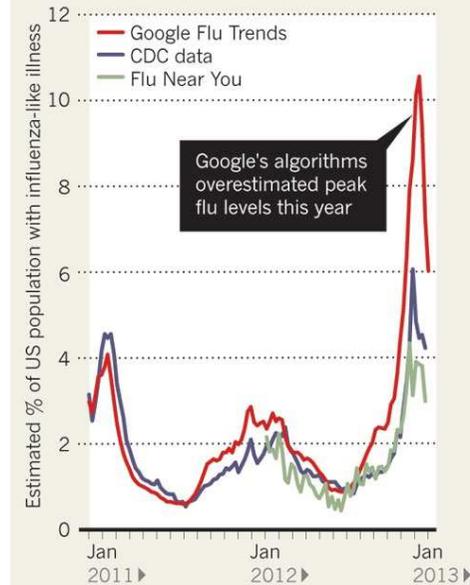
Shutting down key infrastructure **reduces mobility between 10 – 30%** and consequently disease **propagation by 10%**

# Google Flu Tracker

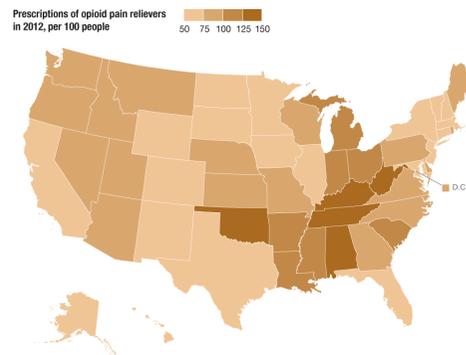
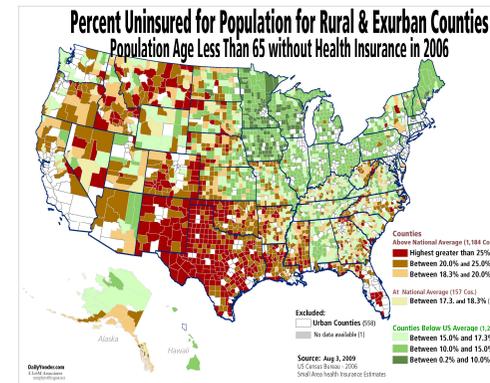


## FEVER PEAKS

A comparison of three different methods of measuring the proportion of the US population with an influenza-like illness.



# Prediction of disease spreading: the power is in combining different sources of data



Hospital Patient Check-In



# Key players from a Telco perspective

La investigación y la protección de la salud en la era del Big Data: ¿Oportunidad o Mito?

## Humanitarian Agencies



## Operators





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