Building Inclusive Data Ecosystems – Data as an Asset

APRIL 2022
We are a global group working to build a more inclusive and sustainable world where all people, everywhere, can reach their fullest potential.

24 Locations
90+ Countries we’ve worked in
60+ Nationalities of staff
80+ Languages spoken
3000+ Engagements globally
The Dalberg Group combines a large set of capabilities

At DDI, we build data ecosystems across geographies and sectors to tackle human, organizational, and technological challenges along three pillars.
DDI has 7+ years of experience partnering with telcos across geographies under the **Data-as-a-Service model** to bridge the demand and supply gap for rich mobile data insights

**Unique, targeted partnerships for data access**

DDI’s unique Data-as-a-service models allow unparalleled access to telecom data, a result of a substantial vetting and approval process. The data is anonymized by the operator; thus, DDI never communicates any insights at the level of the subscriber; insights are always at the aggregate level.

**Diverse collaborators and champions for telecom data analytics**

DDI works closely with private, public, and development champions of data to identify opportunities to leverage telecom data for impact, and continually develops relationships with key decision and policy makers who can apply the data insights to their policies and programs.

**Strong technical and strategic analytics skillset**

Working with telecom data requires data analytics skillsets to apply the right software and algorithms to derive insights. DDI has a team of experienced data scientists, data engineers, and data consultants building high-functioning data products and implementation strategies.

~20 data specialists

Deep experience in 10+ sectors

Across 15+ markets
What are the conditions for such partnerships to happen? – Focus on an ecosystem approach

**DATA AS AN ASSET:** Start with the data use cases, not the data

Identifying use cases that make sense for the end user and solve a real problem is more important than starting with the data itself

**DATA LITERACY:**

Foster a Data Community

Understand and align incentives of the different stakeholders in the community. Understand data literacy and empower everyone to fully grasp the potential of the data

**TRUST: Data Governance is Key**

The governance through the whole data value chain, from identifying a use case to delivering a scalable and sustainable product is critical. We need clear roles and responsibilities
THE PRIVATE & PUBLIC SECTORS MUST SEE DATA AS AN ASSET
“New rules are allowing customers to effectively switch between different cloud data-processing services providers and put in place safeguards against unlawful data transfer.”

INVEST IN DATA LITERACY FOR THE PUBLIC & PRIVATE SECTORS & INDIVIDUALS
TRANSPARENCY AND TRUST WILL BE KEY
Thank you!

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ANNEX: DATA AGAINST COVID 19 TOOLKIT
We leveraged MNO data to limit the spread of COV19 in Belgium

**THE CHALLENGE:**

Little is known about mobility patterns of people and reliable systematic insights regarding people's travel are not available for health surveillance and intervention planning.

Adapt the strategy and the tools to each phase of the pandemic.

**THE SOLUTION:**

A toolkit that brings data insights for each phase; covering 4 sets of use case.

**The Technical Tools:**

**List of use cases**

- **Mobility reduction**: KPIs on the evolution of human mobility to assess whether measures are bearing fruit + direct resources to problem areas

- **Propagation maps**: predict where the disease will spread based on near-real time population mobility using epidemiology model

- **High Risk Situations 5HRS)/Event anomaly**: detect areas that have an unusual concentration of people (e.g. unauthorized gathering > 30people) or an unusual spike in calls to emergency numbers

- **Region at risk**: develop a risk mapping of the country based on epidemiological models, socio-demographics, mobility patterns. Develop scenarios for exiting the confinement
Three key modules were critical for the implementation of the Data Against COVID19 toolkit:

1. **GOVERNANCE MODULE**
   - Ministry of Health’s Mandate
   - Consortium, taskforce, ethics committee set up

2. **REGULATORY MODULE**
   - Signed NDA between Dalberg and the three national telecom operators
   - Telecom and Health data access
   - DPIA Version 1

3. **TECHNICAL MODULE**
   - Use Cases Definition
   - Phase 1 Dashboards

**Activities**

- Signed NDA between Dalberg and the three national telecom operators
- Telecom and Health data access
- DPIA Version 1

**Results:**

- Fig.1: Consortium
- Fig.2: Ethics Committee & DPIA
- Fig.3: Mobility Index Dashboard: Mobility before and after lockdown per day and per zipcode – Illustrative example: Results under NDA
- Fig.4: Incidence Index Dashboard - Disease over time - Illustrative example: Results under NDA
How do we interact with telecom operators in Belgium?

Abbreviations:
- **ETL** = Extraction, Transformation, Load (describes a data transformation)
- **DB** = Database
- **DDI** = Dalberg Data Insights (company lead by Frédéric Pivetta)
- **MNO** = Mobile Network Operator
The model analyses **different mobility variables** to understand the different dynamics over time.
Ethical principles we follow

• We have set-up an Ethics Committee in Belgium, a group of researchers independent to the crisis response team, who are responsible for guiding the crisis response teams on the ethical principles related to data use
• We do not work without proper authorizations (from government & data protection authority)
• We do not process non-anonymized data
• We do not mix individual location data and individual epidemiological data
• We do not publish non-aggregated outputs
• We do not give data access to members outside of the task force