The potential of Big Data for statistics on international migration

Regional workshop on strengthening the collection and use of international migration data in the context of the 2030 Agenda for Sustainable Development

Bangkok, 5–8 February 2019

International Organization for Migration (IOM)
The UN Migration Agency

IOM's Global Migration Data Analysis Centre
GMDAC

European Commission

IOM‘s Global Migration Data Analysis Centre

- Officially launched on 7 September 2015
- Part of IOM’s response to growing calls for action to improve data on international migration globally
- Part of IOM’s HQ
  Based in Berlin at the invitation of the Government of Germany
- Team of 20

International Organization for Migration (IOM)
The UN Migration Agency

IOM’s Global Migration Data Analysis Centre GMDAC

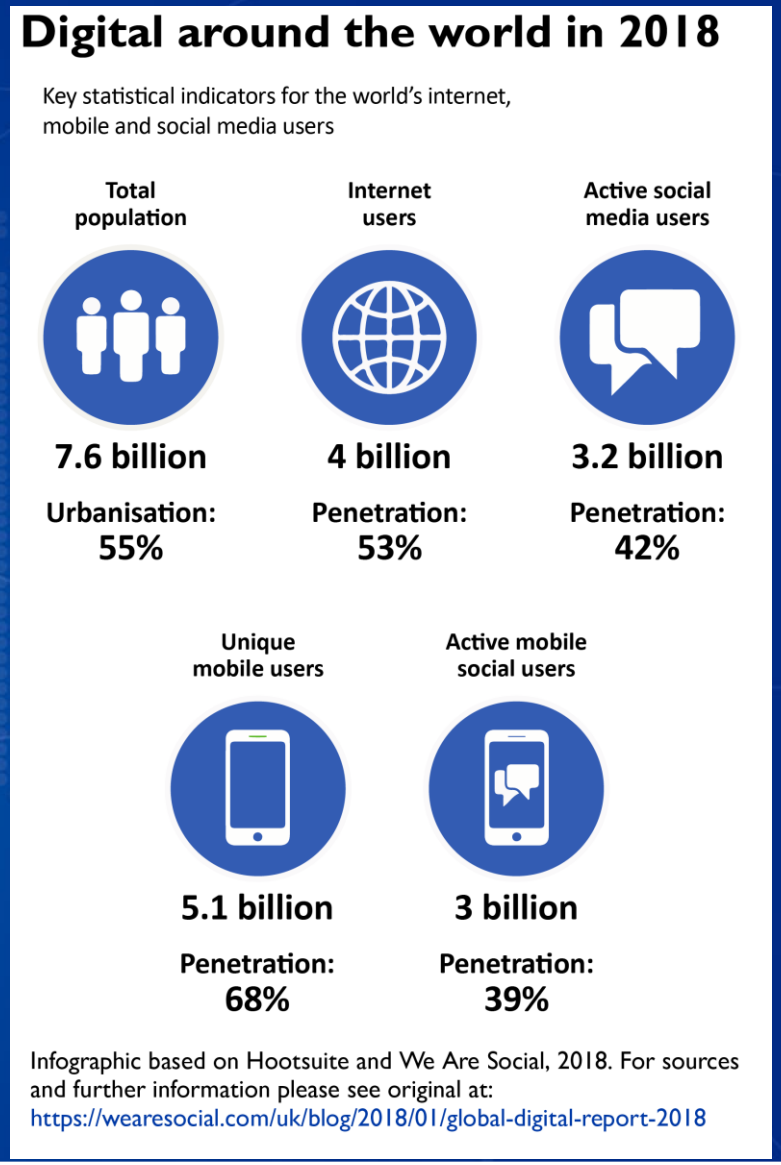
European Commission

Data Innovation for Migration: Why?

The Global Data Revolution

The (persistent) paucity of migration data globally

Renewed calls (needs) for evidence on migration (SDGs and GCM)



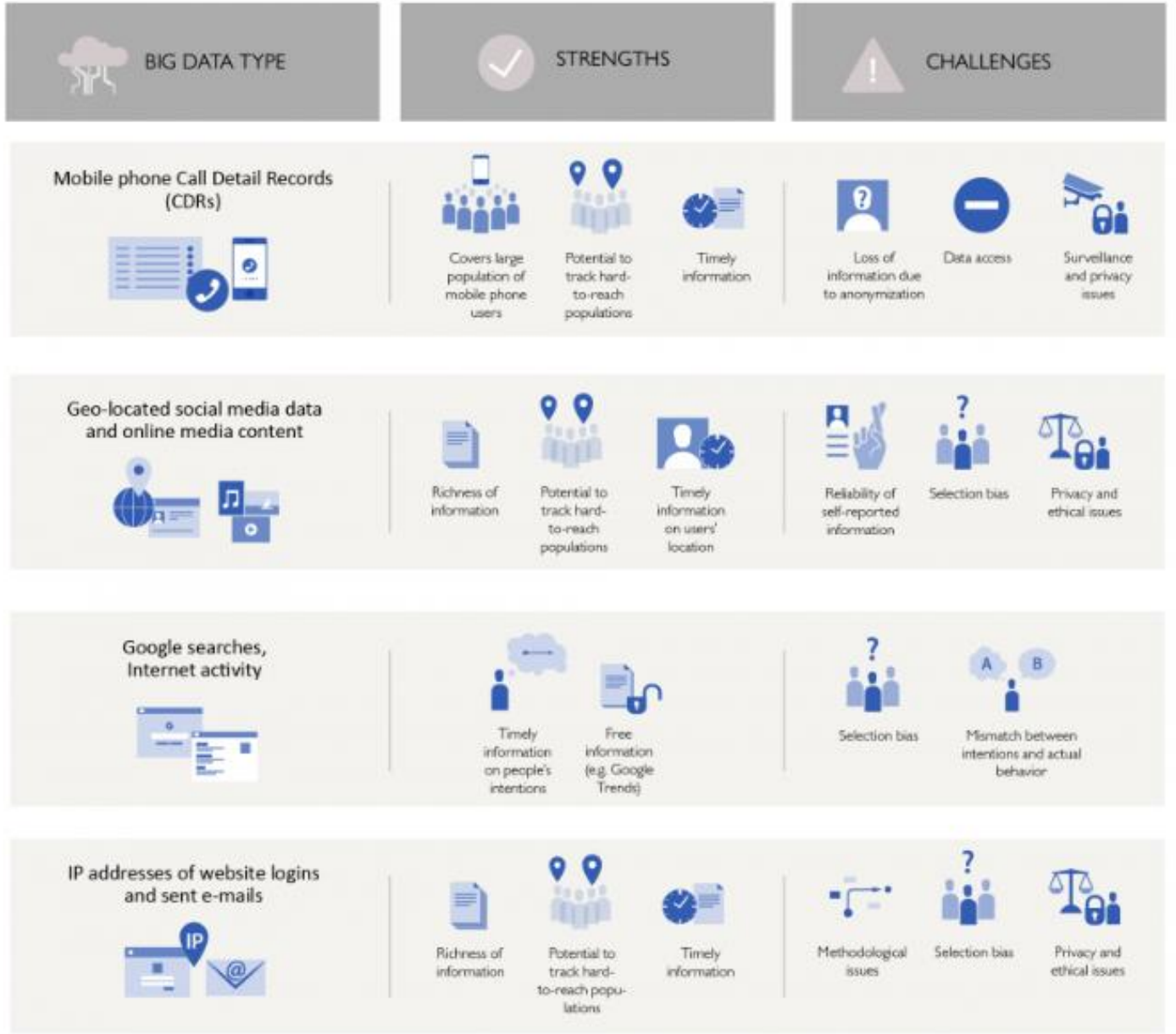
International Organization for Migration (IOM)
The UN Migration Agency

IOM's Global Migration Data Analysis Centre GMDAC

European Commission

The potential

- High spatial resolution
- High frequency of update
- Timeliness (virtually real-time)
- Wide coverage (hard-to-reach populations)
- Larger sample size compared to surveys
- Richness of information
- Relatively low cost (depending on…)



International Organization for Migration (IOM)
The UN Migration Agency

IOM's Global Migration Data Analysis Centre GMDAC

European Commission

Big data for migration: from case-studies to policy support

Most promising application:

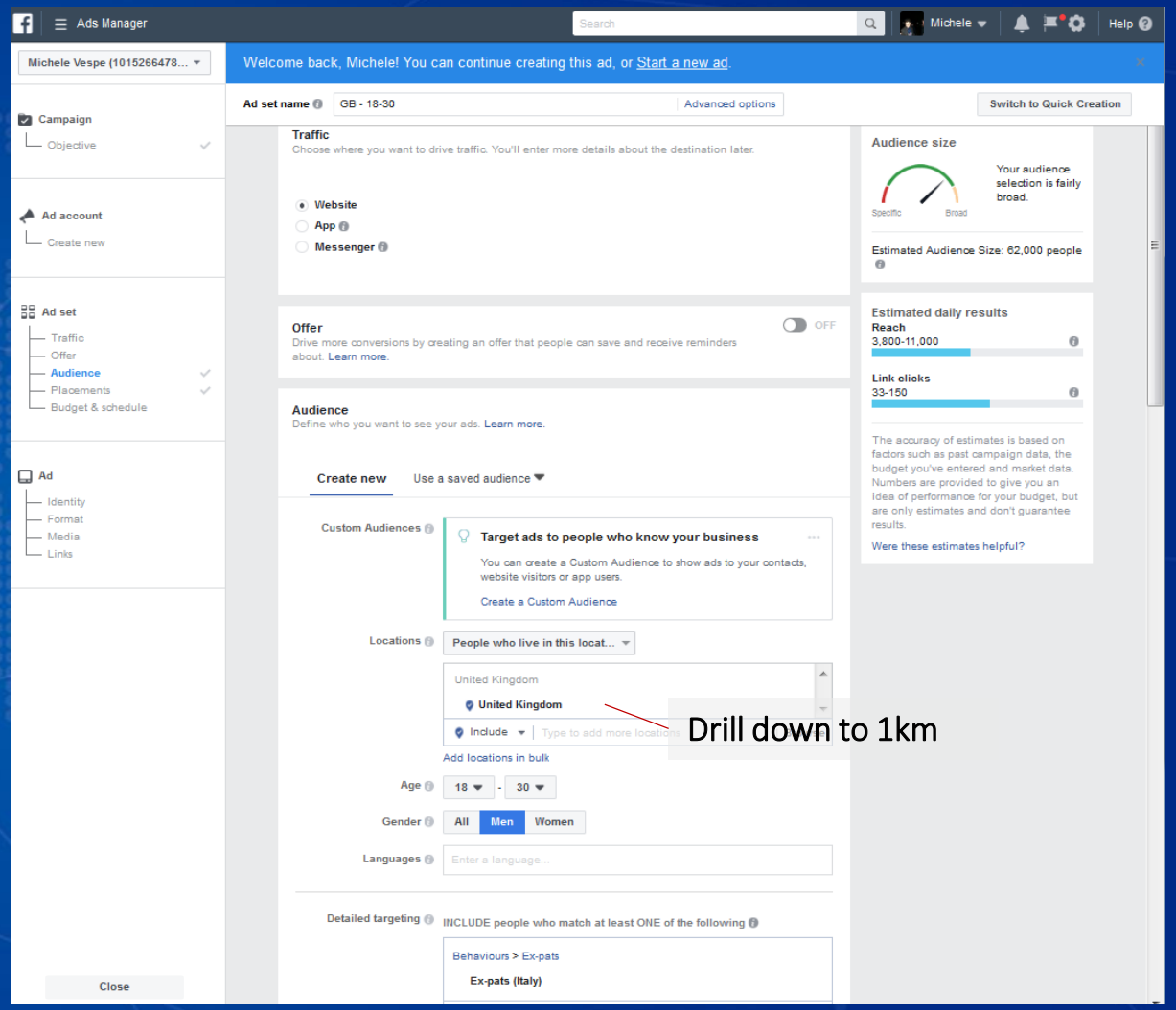
Social media advertising platforms

Opportunities

- Real time census
- “inexpensive”
- Attributes like country of origin, education, age, sex (self-reported) and interests (likes)

Challenges

- Information reliability (often self-reported by user)
- Definitions (proprietary)
- Aggregations/rounding (proprietary)
- Penetration rate / selection bias (country, sex, age, education, sector, urban/rural…)
- Fake or double accounts
- Assimilation: expats destination or origin penetration rate?



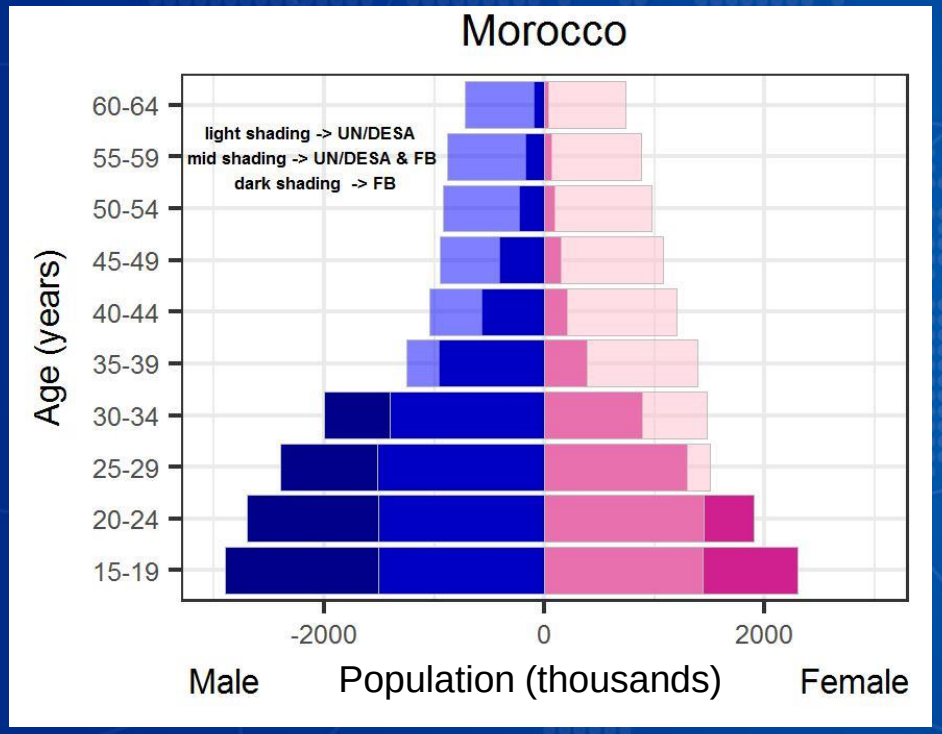
International Organization for Migration (IOM)
The UN Migration Agency

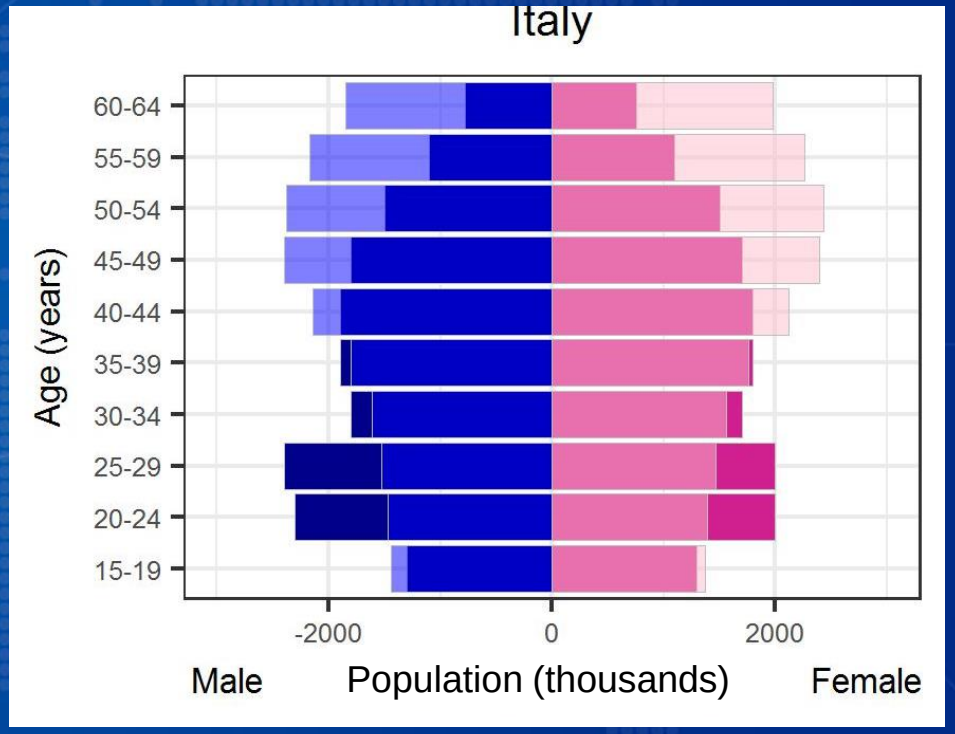
IOM's Global Migration Data Analysis Centre GMDAC

European Commission

Understanding the bias

Correction bias: a question of penetration rate (popularity and internet access) but also gender gap



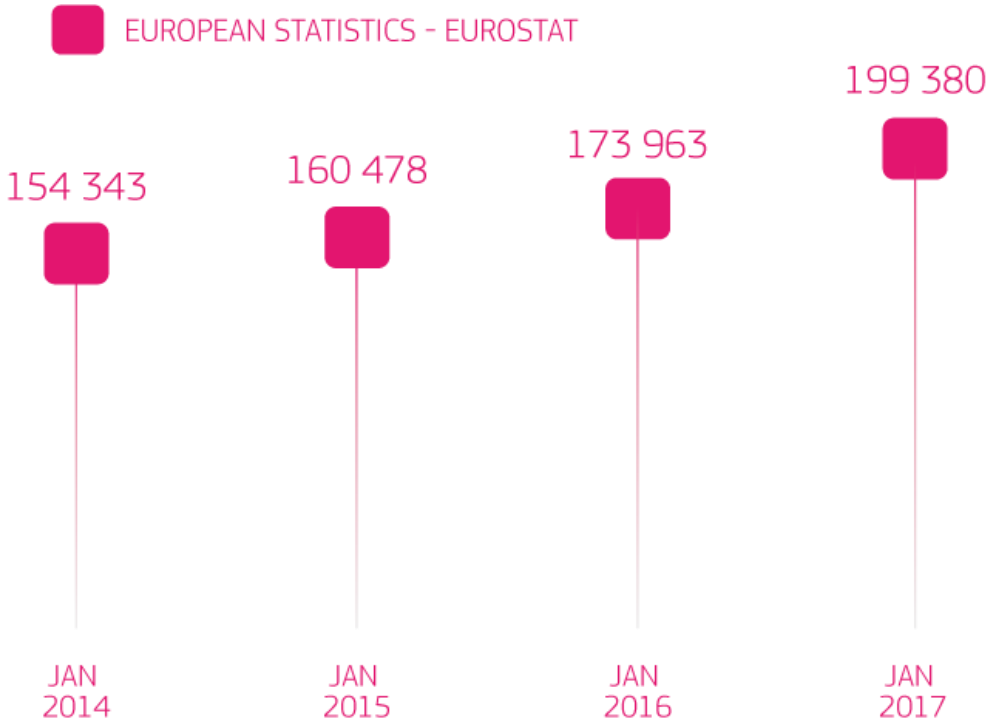


International Organization for Migration (IOM)
The UN Migration Agency

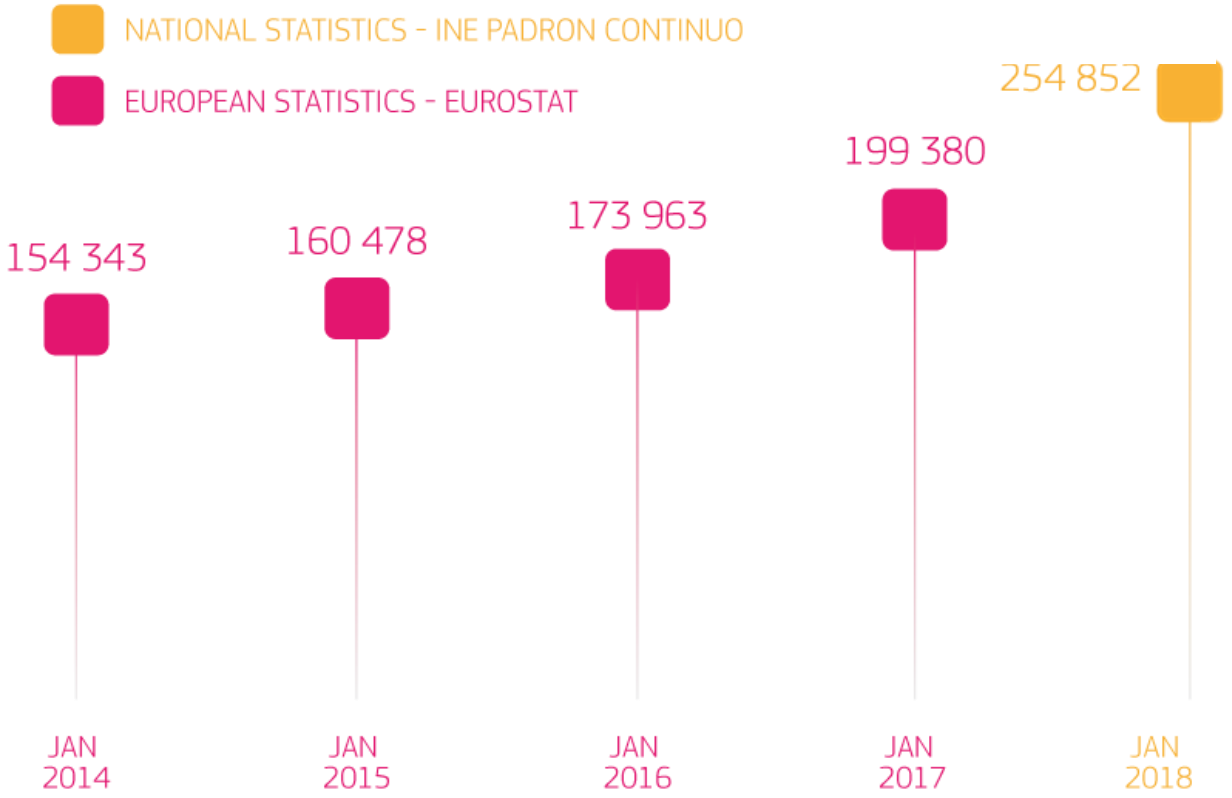
IOM's Global Migration Data Analysis Centre GMDAC

European Commission

Migration data innovation potential I – Facebook

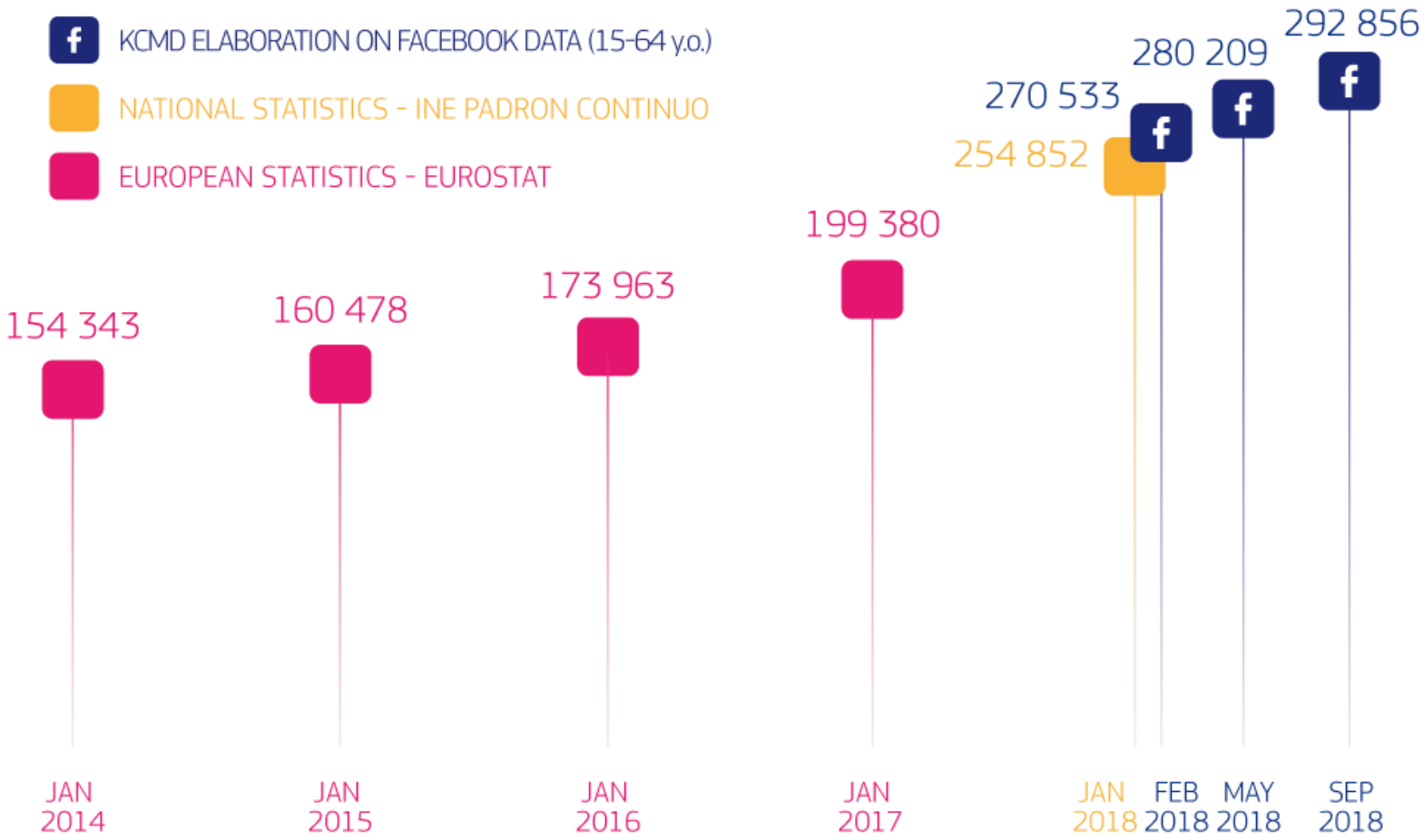


Migration data innovation potential I – Facebook



Latest EU official statistics: 1-Jan-17,
Spanish Statistical Office: 1-Jan-18

Migration data innovation potential I – Facebook



Latest EU official statistics: 1-Jan-17, Spanish Statistical Office: 1-Jan-18

Facebook Advertising Platform data: high refresh rate – real time census

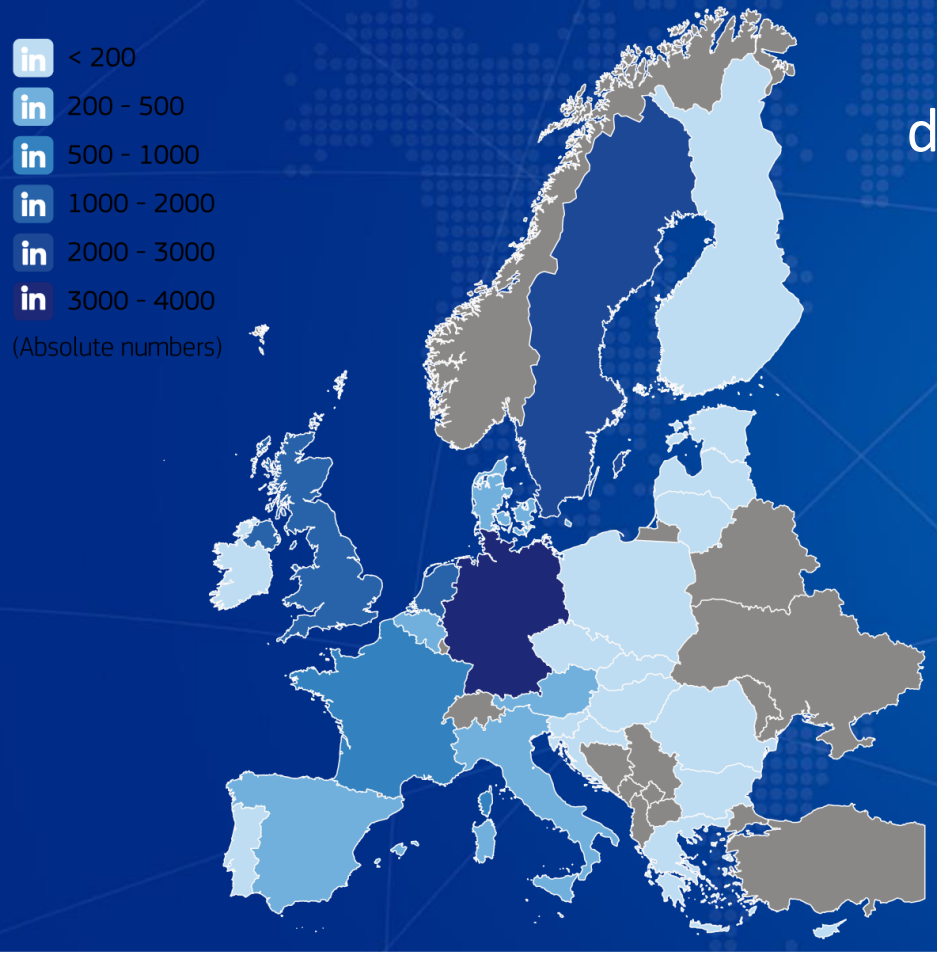
"Migration Data using Social Media"
Spyratos, S., M. Vespe, F. Natale, I. Weber, E. Zagheni and M. Rango, doi:10.2760/964282, 2018

International Organization for Migration (IOM)
The UN Migration Agency

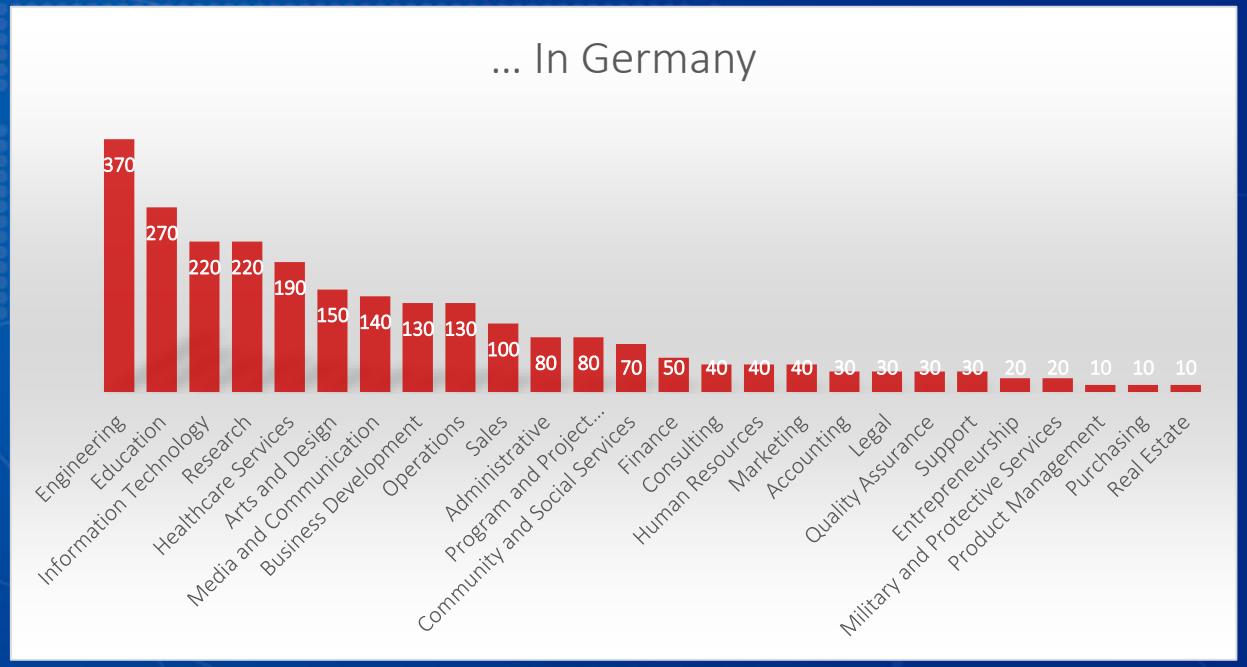
IOM's Global Migration Data Analysis Centre GMDAC

European Commission

Migration data innovation potential II: Characteristics



Syrian users of LinkedIn in Europe:
distribution (left) and sector of occupation (below)

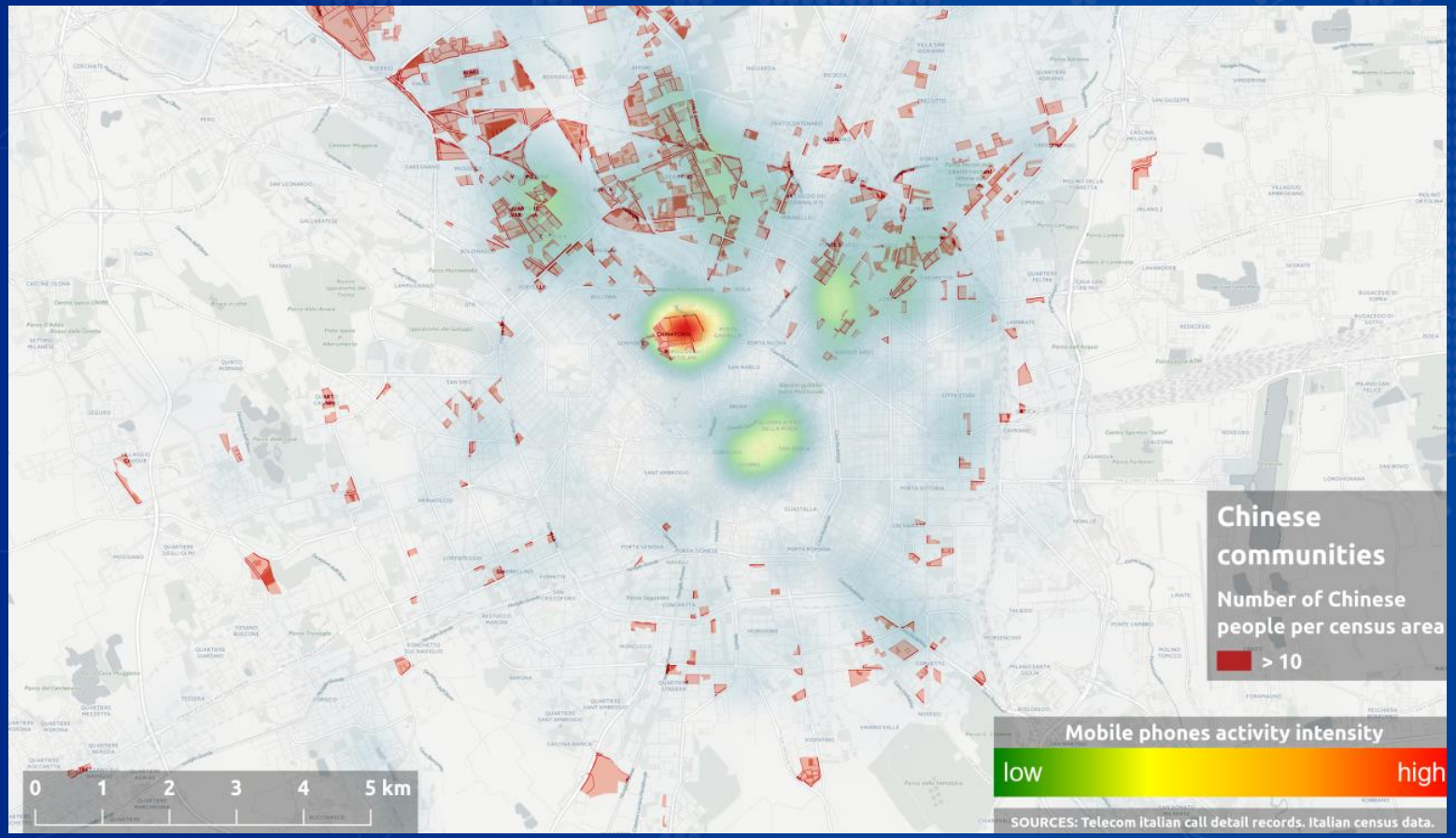


International Organization for Migration (IOM)
The UN Migration Agency

IOM's Global Migration Data Analysis Centre GMDAC

European Commission

Migration data innovation potential III: Granularity (space)



Density of mobile phone traffic with China and areas of highest concentration of Chinese immigrants (2011 Census)

Sources:
- Italian Census Data &
- Call Detail Records, Telecom Italia

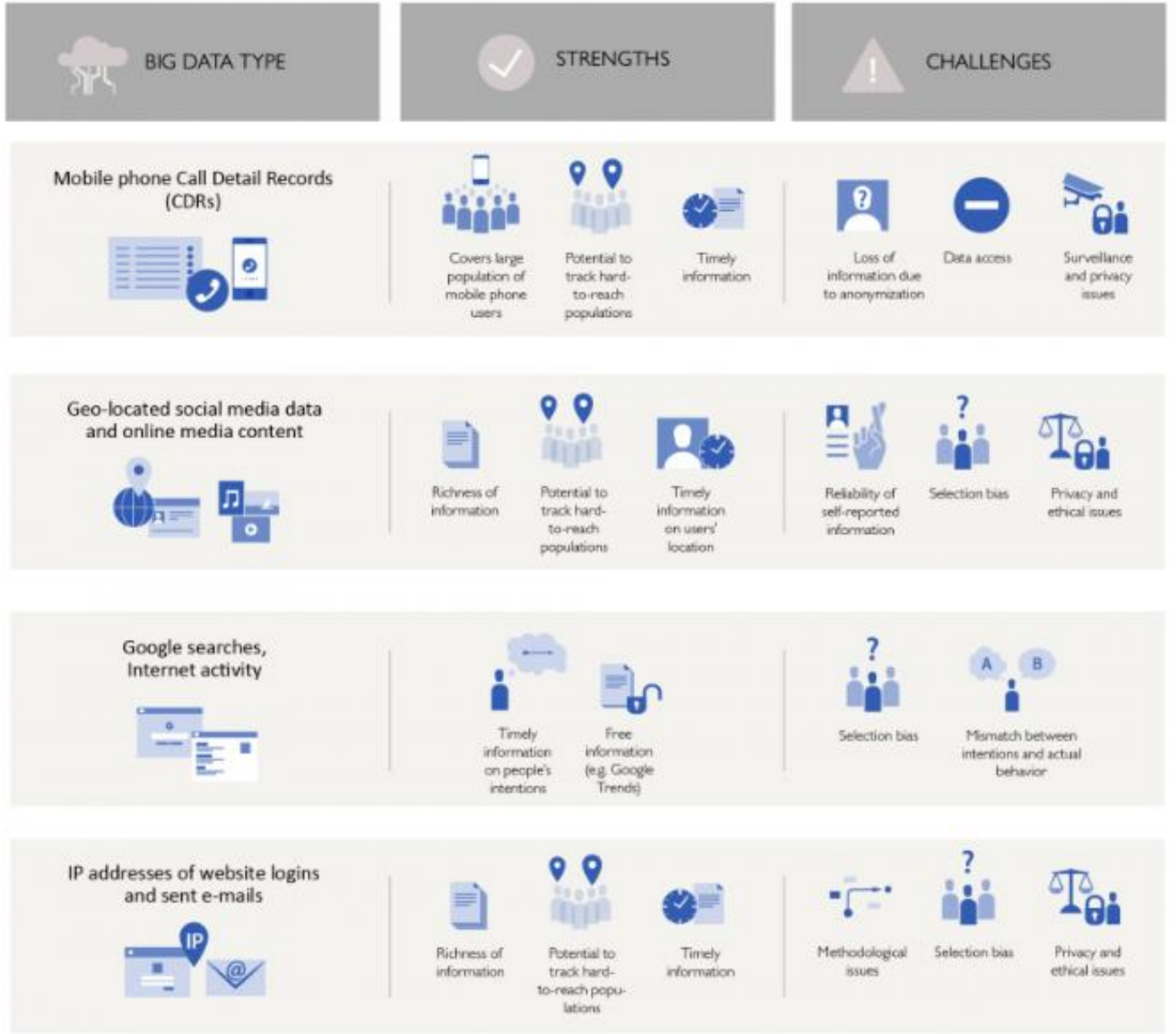
International Organization for Migration (IOM)
The UN Migration Agency

IOM's Global Migration Data Analysis Centre GMDAC

European Commission

Challenges

- Data access/Continuity
- Confidentiality
- Security/Ethical issues
- Methodology (selection bias)
- Reliability
- Definitions
- Fragmentation



International Organization for Migration (IOM)
The UN Migration Agency

IOM's Global Migration Data Analysis Centre GMDAC

European Commission

Harnessing data innovation for migration: The Big Data for Migration Alliance (BD4M)

- Launched on 25 June 2018 in Brussels
- Convened by the EC KCMD and IOM's GMDAC
- Aim: Foster data innovation for migration analysis & policymaking through *partnerships*

Launch of the Big Data for Migration Alliance, Joint Research Centre, Brussels, 25 June 2018
© European Commission 2018

International Organization for Migration (IOM)
The UN Migration Agency

IOM's Global Migration Data Analysis Centre GMDAC

European Commission

Big Data for Migration Alliance (BD4M)

Main areas of work:

a) Awareness-raising and knowledge-sharing

- Repository of big data & migration projects
- Organization of regular workshops (Global South)
- Creation of a network of '**data stewards**'

b) Capacity-building

- Preparation of guidance and training materials
- 'Study visits' and exchange of experiences across countries

c) Policy-oriented analysis

- Exploring EU/global frameworks to sponsor applied research (e.g. issuing data challenges)
- Working paper series

Launch of the Big Data for Migration Alliance, Joint Research Centre, Brussels, 25 June 2018. © European Commission 2018

International Organization for Migration (IOM)
The UN Migration Agency

IOM's Global Migration Data Analysis Centre GMDAC

European Commission

Data innovation and the Global Compact for Migration

- Historic opportunity to make real progress on migration data
- Better data on migration will be essential to designing forward-looking policies and balancing the public debate on migration
- Full awareness of data opportunities and limitations essential to inform policies
- New data sources and innovative methodologies: a potential we cannot ignore

Global Compact FOR Migration

UN Photo/Mark Garten | Miroslav Lajčák, President of the 72nd Session of the United Nations General Assembly (l), stands with ambassadors Juan José Gómez Camacho of Mexico (c) and Jürg Lauber of Switzerland (r), co-facilitators of negotiations on the global compact for safe, orderly and regular migration, at UN Headquarters in New York, 13 July 2018.

Contact

Marzia Rango

IOM's Global Migration Data Analysis Centre (GMDAC)

mrango@iom.int
gmdac.iom.int
migrationdataportal.iom.int

Michele Vespe

European Commission's Knowledge Centre on Migration and Demography (KCMD)

michele.vespe@ec.europa.eu
http://ec.europa.eu/jrc/en/migration-and-demography

International Organization for Migration (IOM)
The UN Migration Agency

IOM's Global Migration Data Analysis Centre GMDAC

European Commission