



Official Statistics in the Digital Age: Challenges and Opportunities

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Eurostat

State of play

Explosion of information around us

Popularity of internet and other new technologies

Multitude of new data sources

Post-truth era and 'alternative' facts

Changes underway

Changing economies and societies

Fast changing data uses and user needs

Data revolution

Future of Europe

Budget constraints

How to adapt?

Power from statistics – gathering ideas at Round Tables

Globalisation

Madrid,
6 December 2016



Migration

Bratislava,
24 October 2016



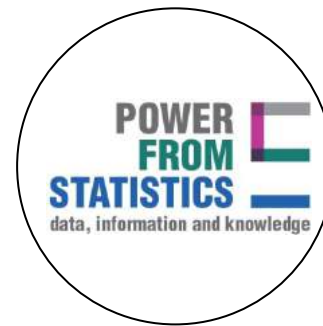
New Economic and Business Models

Rome,
2 February 2017



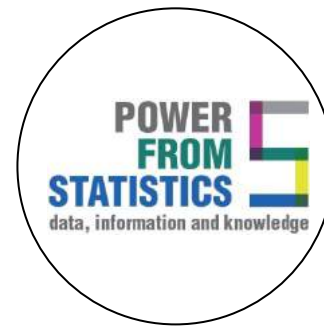
Sustainability

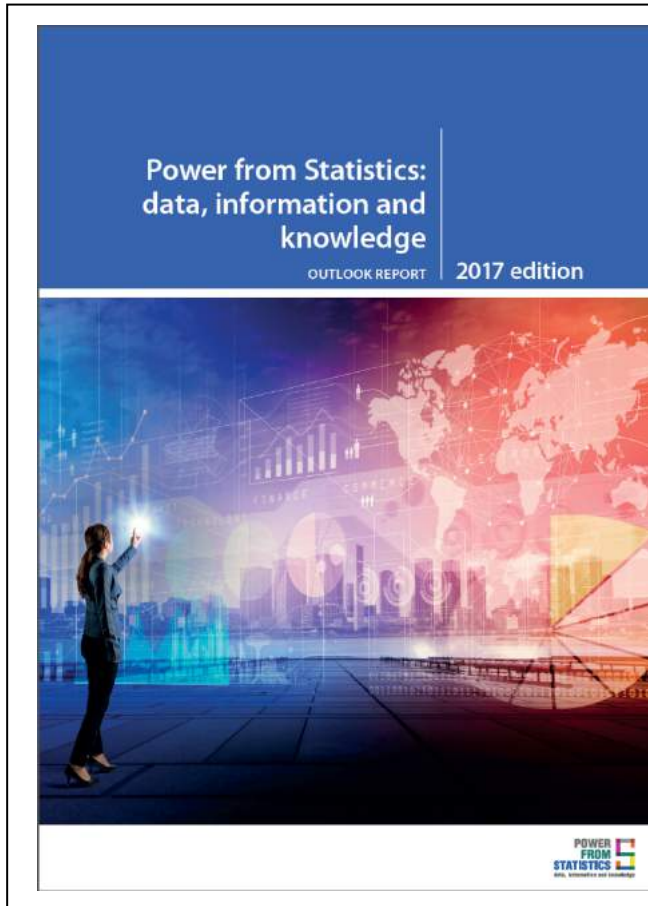
Paris,
28 March 2017



Statistics, Science and Society

Frankfurt,
24 April 2017





POWER FROM STATISTICS

data, information and knowledge

Keeping up with the trends in migration

Delivering sustainable evidence for sustainable development

Statistics in the digital era

Dealing with ethical dilemmas

Depicting globalisation

Capturing emerging phenomena



Brussels
18-19 October 2017



ESS priorities beyond 2020



**EUROPEAN
STATISTICAL
SYSTEM**



Strategic priority 1: satisfied users

Ensure that European statistics reach all relevant users and respond to their needs

- continuing to provide existing statistical products and services
- further developing statistics to measure emerging phenomena
- quality-related improvements driven by user needs
- better communication of European statistics
- more agility and interaction in responding to user needs
- stronger user capabilities
- promotion of the value of European statistics

Statistical offices need to deliver services along with their statistical products



What kind of services do users need?

User-focused
and of high
quality

Digitalised and
in line with
government IT
policies

Agile and
responsive to
evolving user
needs

**Standing
out among
other data
providers**

Further developing statistics to measure emerging phenomena

**POWER
FROM
STATISTICS** 
data, information and knowledge

Capturing emerging phenomena

New economic and business models are emerging, with shared platforms increasingly used in sectors such as local transport and short-term accommodation. Regardless of whether these developments are desirable or not, these new economic activities tend not to be captured by official statistics. As a result, they may not be part of the traditional measurement of GDP and production.

Panel

Kamil Kiljański



Chief Economist at the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (European Commission)

Ana Peleteiro Ramallo



Senior data scientist (Zalando)

Jon Steinberg



EMEA Public Policy and Government Relations Manager (Google)

Quality-related improvements driven by user needs: Reacting to user feedback on services provided by constant innovation



Better communication of European statistics

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STATISTICS**
data, information and knowledge



Statistics in the digital era

In the era of social media and political campaigning, which use numbers as their headlines, the existence of a trustworthy source and a possibility to fact-check the information has become a necessity. For this reason, post-truth societies can be seen as an opportunity for official statistics to confirm their role as a trusted party providing objective figures.

Panel

Natalia Hernández Rojo



Fact checker for El Objetivo de Ana Pastor (La Sexta)

Roger A. Pielke Jr.



Director of the Sports Governance Center (University of Colorado)

James E. Ridgway



Emeritus Professor (Durham University)

Aurel Schubert



Director-General for Statistics (European Central Bank)

Xaquín González Veira



Visual editor (xocas)

Better communication of European statistics

Data multiplier –
Eurostat news
section



Replicated by international news outlets

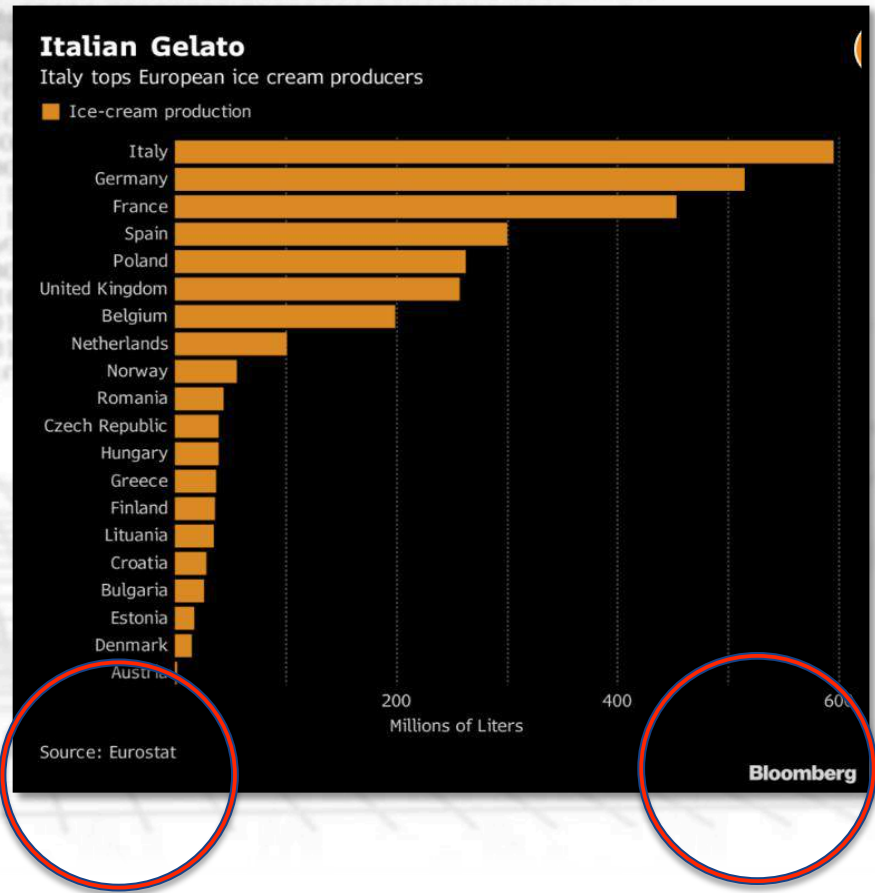



Italy Can Officially Say Everyone Loves Its Gelato

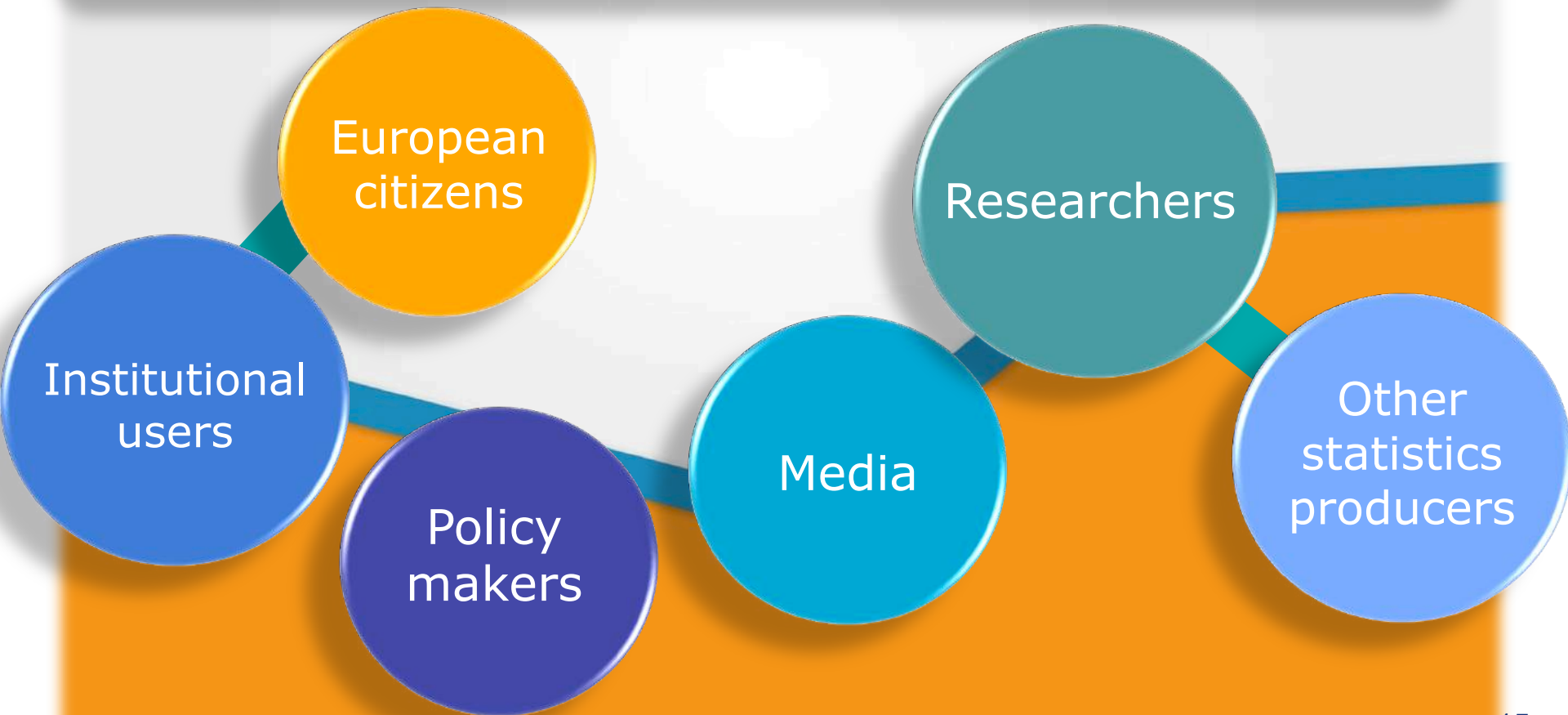
By Chiara Albanese and Giovanni Salzano
11 August 2017 06:00

- Country produced 6.8 billion scoops of ice cream last year
- Italy leads in consumption of treat that dates to 16th century

Eurostat



More agility and interaction in responding to user needs: Segmentation of user groups with different needs



More agility and interaction: Encourage user engagement and feedback

- **Potential and existing users
- via Twitter, Facebook,
Website surveys**
- **Advanced users – via
dedicated online platform
(from Sept. 2017)**



More agility and interaction: **experimental** statistics

- Pilot dissemination of statistics with a different level of maturity
- Target: advanced users and scientific community
- Launched on 8 June - 3 products responding to specific needs
- Seeking feedback on the use of the statistics and on the methodology



Food Price Monitoring
Labour Market Transitions
World heritage sites



Give your feedback



Strategic priority 2: suitable capabilities

The production of European statistics is based on making best use of available resources and reaping the benefits offered by modern technologies

- professional staff
- adequate resources
- making the best of the data revolution
- data protection leadership
- development of new methods for producing statistics
- commitment to quality

Professional staff

MODERN DATA SCIENTIST

Data Scientist, the sexiest job of the 21st century, requires a mixture of multidisciplinary skills ranging from an intersection of mathematics, statistics, computer science, communication and business. Finding a data scientist is hard. Finding people who understand who a data scientist is, is equally hard. So here is a little cheat sheet on who the modern data scientist really is.

MATH & STATISTICS

- ☆ Machine learning
- ☆ Statistical modeling
- ☆ Experiment design
- ☆ Bayesian inference
- ☆ Supervised learning: decision trees, random forests, logistic regression
- ☆ Unsupervised learning: clustering, dimensionality reduction
- ☆ Optimization: gradient descent and variants

DOMAIN KNOWLEDGE & SOFT SKILLS

- ☆ Passionate about the business
- ☆ Curious about data
- ☆ Influence without authority
- ☆ Hacker mindset
- ☆ Problem solver
- ☆ Strategic, proactive, creative, innovative and collaborative



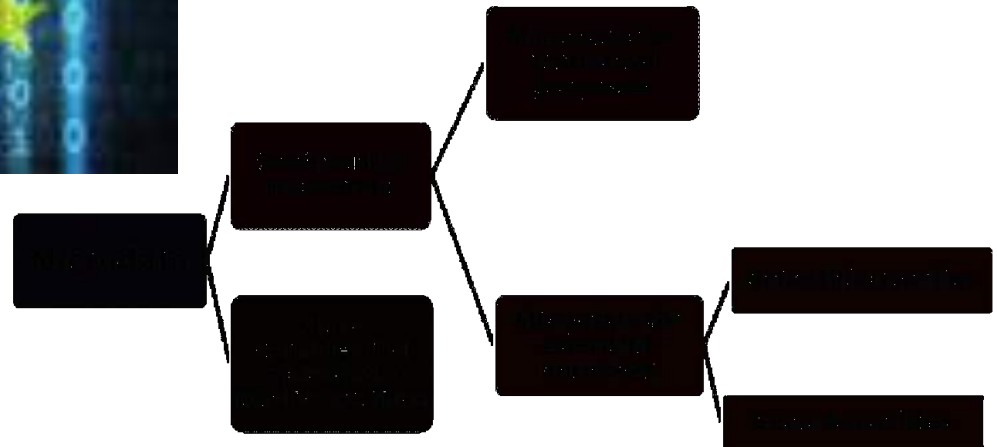
PROGRAMMING & DATABASE

- ☆ Computer science fundamentals
- ☆ Scripting language e.g. Python
- ☆ Statistical computing packages, e.g. R
- ☆ Databases: SQL and NoSQL
- ☆ Relational algebra
- ☆ Parallel databases and parallel query processing
- ☆ MapReduce concepts
- ☆ Hadoop and Hive/Pig
- ☆ Custom reducers
- ☆ Experience with xaaS like AWS

COMMUNICATION & VISUALIZATION

- ☆ Able to engage with senior management
- ☆ Story telling skills
- ☆ Translate data-driven insights into decisions and actions
- ☆ Visual art design
- ☆ R packages like ggplot or lattice
- ☆ Knowledge of any of visualization tools e.g. Flare, D3.js, Tableau

Data protection leadership



New methods for producing statistics



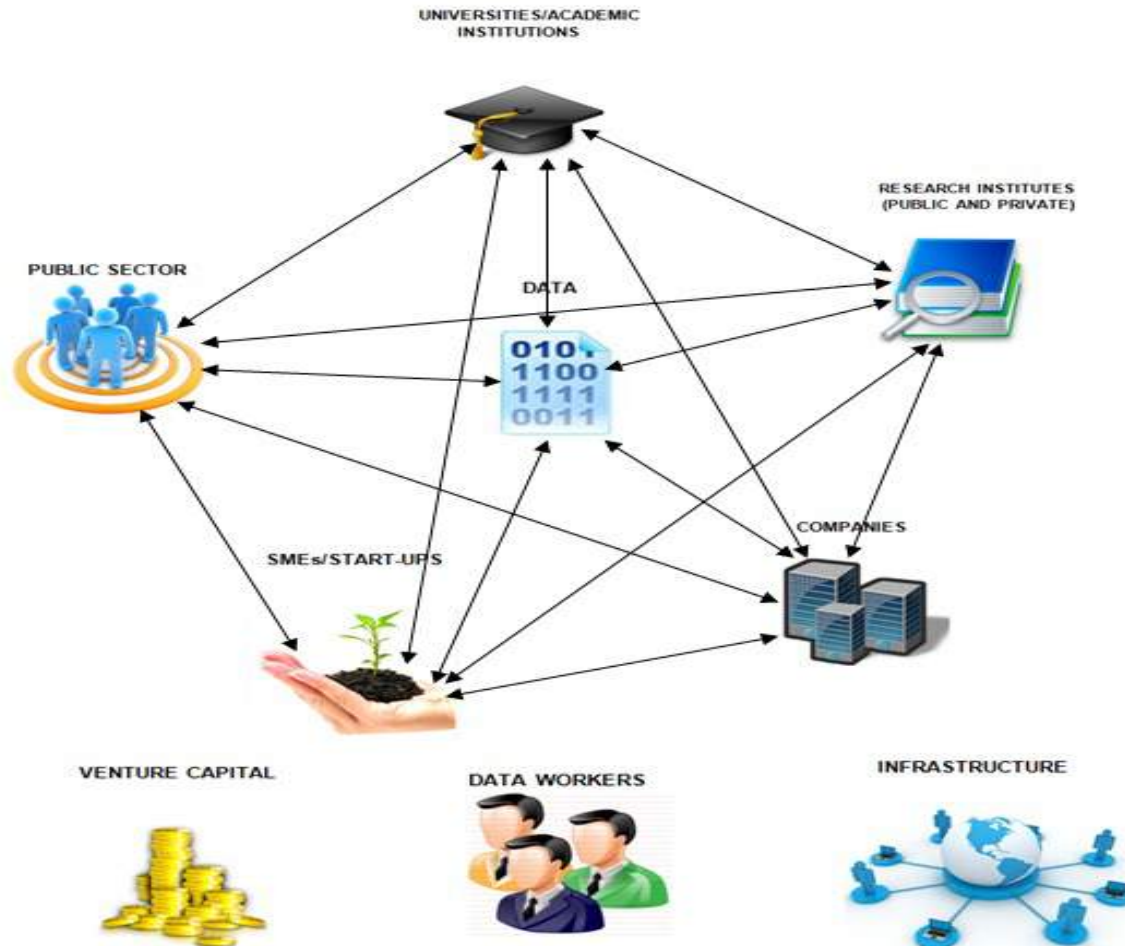


Strategic priority 3: effective partnerships

Close collaboration between ESS partners and successful strategic cooperation with all relevant external parties to enable constant enhancement of European statistics

- working together in the European Statistical System community
- relations with external stakeholders
 - **establish close relations with relevant private sector organisations building on partnership**
 - **enhancing cooperation with research and academia**

relations with external stakeholders: towards an efficient ecosystem





European
Commission

Any questions?

