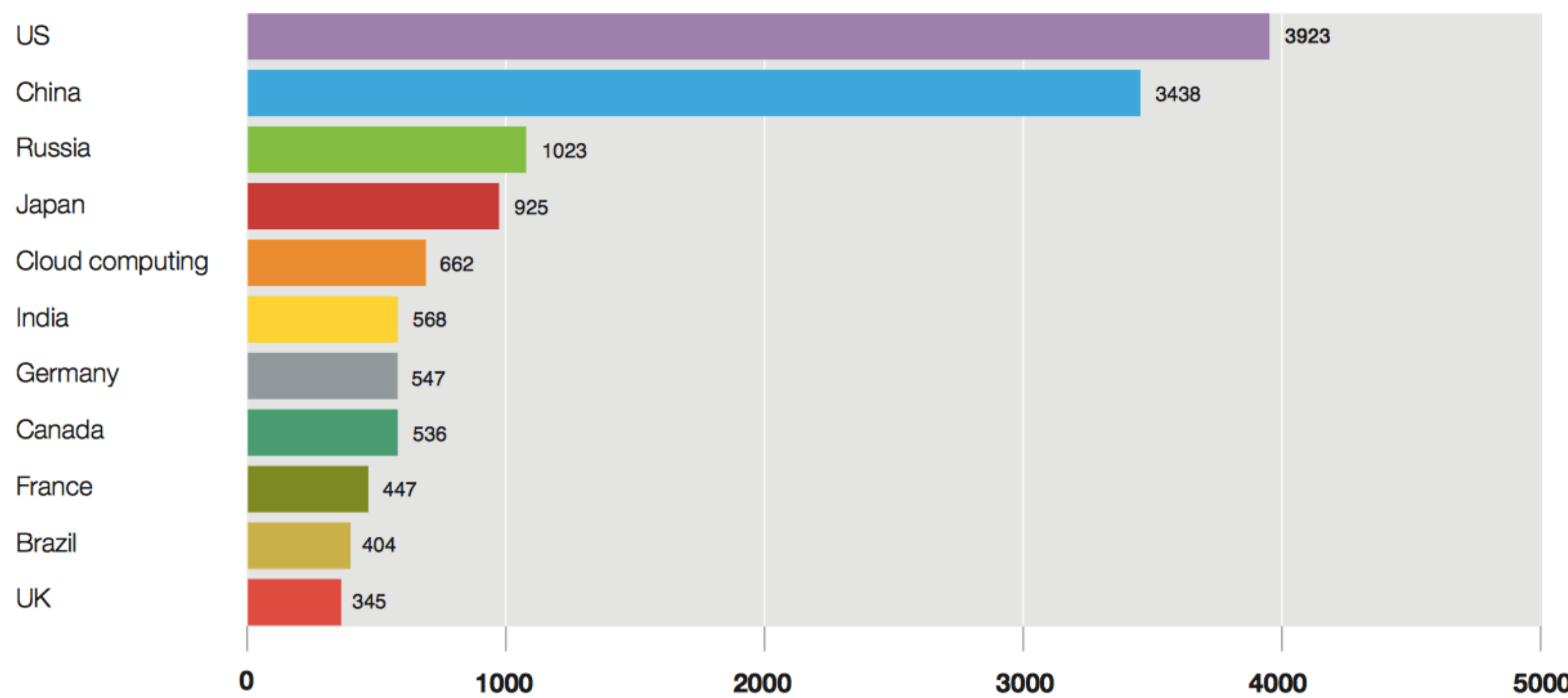


Sustainable Data Management

Goal: To raise awareness in practitioners on the environmental impacts of Big Data.

2007 electricity consumption. Billion kWh



Why: Nowadays, user data is everywhere. Thanks to Cloud Computing, users are able to store and retrieve their photos, videos and documents from any device at any time. However, this comes with a price: the environmental impact of the Cloud is continuously growing and new solutions are needed for a more sustainable use of IT resources.

The Green Practitioner

We are building an online calculator that provides an end user with a series of customized 'green' practices and solutions to choose from.

Practice selection

We defined a series of green practices specific to different types of Big Data practitioners. A user will see which practices are of interest.

The Green Practitioner

Try Out Going Green

You can reduce the environmental impacts of your ICT operations. Find out how much by running simulations based on research from two universities in Amsterdam.

I'm a , and I'm interested in doing experimentation with .

Utilize processing power more efficiently instead of using a traditional model of dedicated servers, and make savings on hardware and energy consumption.

Or, if you know what you are looking for...

User input

The users enter information about their systems and the tool will provide them with the energy consumed, the CO2 emissions and the cost savings in the green scenario.

The Green Practitioner

Green Utilization

1 Technical Specifications 2 Monetary Costs 3 Energy and CO2 emission 4 Run simulation

Consumption of an active machine: W

Consumption of a standby machine: W

CO2 emission constant: g CO2 / kWh

The power consumption of a machine on idle

References

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- Gu, Q., Lago, P., & Potenza, S. (2013, September). *Delegating data management to the cloud: A case study in a telecommunication company*. In *Maintenance and Evolution of Service-Oriented and Cloud-Based Systems (MESOCA)*, 2013 IEEE 7th International Symposium on the (pp. 56-63)