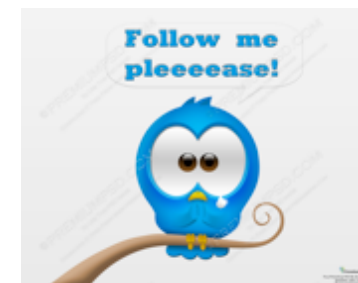


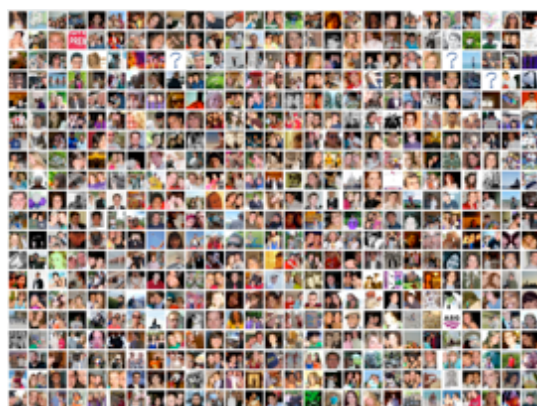


Web 2.0



WHERE ARE THE DATA?

Stéphane Grumbach
INRIA



Huge data centers



Energy consumption
in the order of magnitude
of a country



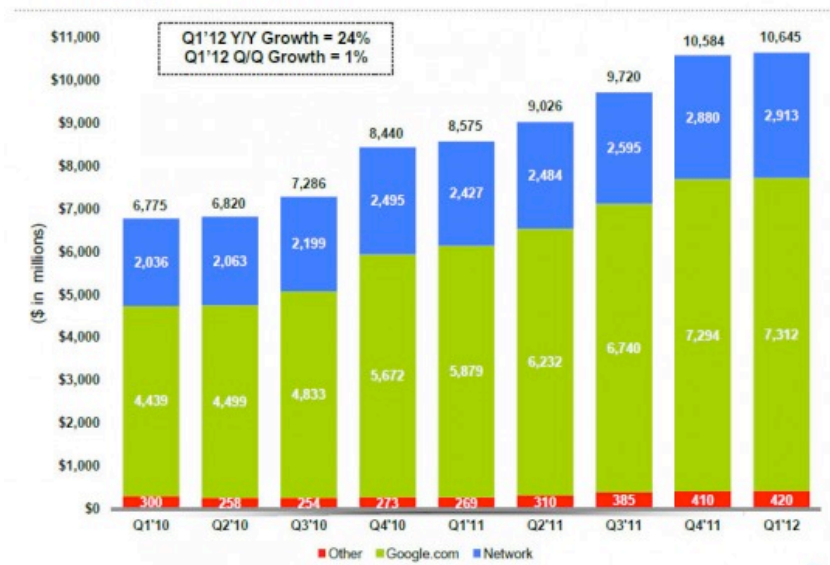
http://www.nytimes.com/2012/09/23/technology/data-centers-waste-vast-amounts-of-energy-belying-industry-image.html?_r=1&pagewanted=all
<http://www.electronics-cooling.com/2010/12/energy-consumption-of-information-technology-data-centers/>

Data: fuel of the new economy

“Google is a Vacuum cleaner for revenue”

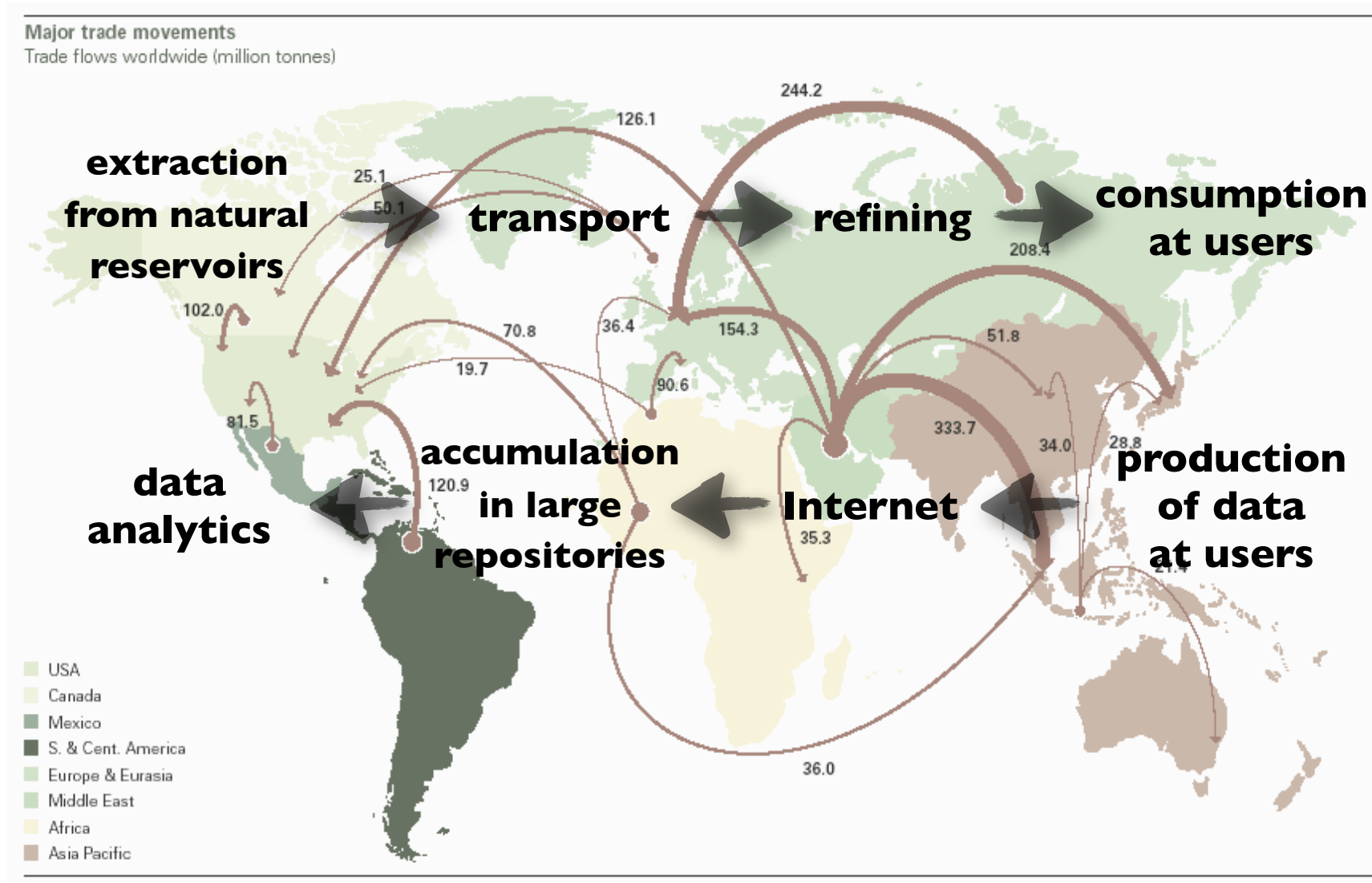
Barry Diller

Quarterly Revenues



McKinsey: health data in the USA
worth \$1000 per year per inhabitant

Data: raw material of the 21st century much like crude oil





Data harvesting



The free paradigm of the 2.0

Free services traded for private user data

Free exploitation of the accumulated data



Percentage of national web corporations among top 25 by country

- **USA: 100%**
- **China: 92%** (only Google makes it in the top 25)
- **France: 36%** (but mostly marginal sites, not data intensive)



iCloud



The Top 50 websites worldwide

- USA: 72 %
- China: 16 % (Baidu: 5; QQ: 8; Taobao: 13; Sina: 17; I 63: 28; Soso: 29; Sina weibo: 31; Sohu: 43)
- Russia: 6 % (Yandex: 21; kontakte: 30; Mail: 33;)
- Israel: 2 % (Babylon: 22)
- UK: 2 % (BBC: 46)
- Netherland: 2 % (AVG: 47)

New territories
are emerging



Eventually
data
will surpass
crude oil
in importance

Europe
is at
the periphery
of
the information society

The global imbalance

“Since asymmetries of information give rise to market power, and perfect competition is required if markets are to be efficient, it is perhaps not surprising that markets with information asymmetries and other information imperfections are far from efficient.”

JOSEPH E. STIGLITZ