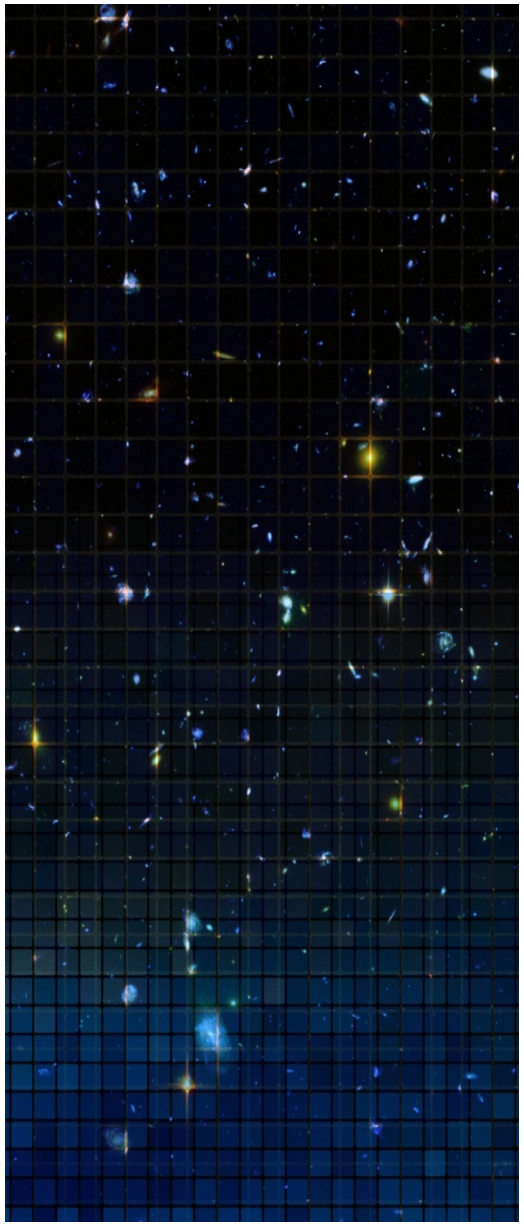

IDC Digital Universe Study: Big Data, Bigger Digital Shadows and Biggest Growth in the Far East

Sponsored by EMC

Embargo until December 11, 2012 at 8:00am

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Embargo lifts on Tuesday, June 26 at 8:00 AM ET

Methodology, Firsts and History of IDC Digital Universe Study

- Study's sixth anniversary
  - 2012 Study Focus
    - Drivers behind exponential growth in digital data
    - Analysis of Big Data and cloud implications
    - Assessment of how much of the world's data is adequately protected
    - Geographic breakdown of where the world's data is created and consumed
- Annual Study quantifies the amount of information created and copied each year
- Based on IDC studies tracking more than 60 devices and applications
- Looking back…
  - 2011 Study Focus
    - Data is doubling every two years
  - 2010 Study Focus
    - A 10-year forecast (to 2020) estimating information in and business impact of the shift to the cloud
  - 2009 Study Focus
    - Digital information growth outpaces projections despite down global economy
  - 2008 Study Focus
    - The Digital Shadow Phenomenon
    - Digital Universe bigger than estimated due to explosion of digital cameras and TVs, surveillance cameras and social networks
  - 2007 Study Focus
    - Brand new, first time forecast of 988 billion gigabytes of digital information in 2010

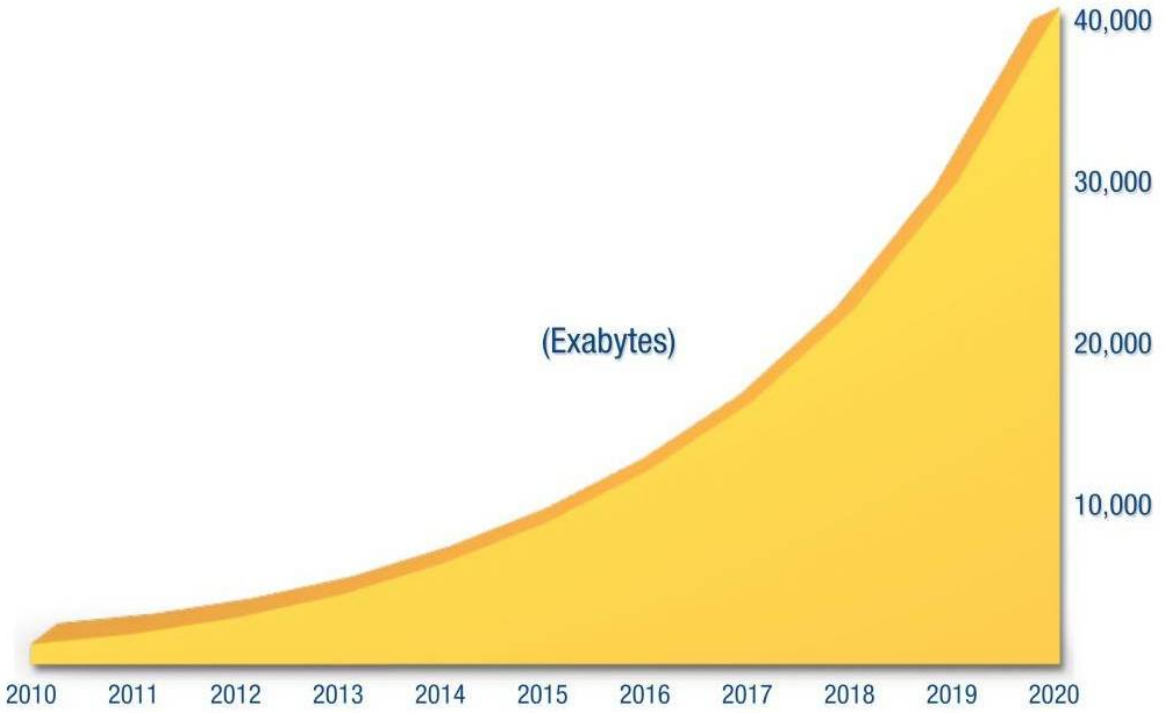
New Findings

- New IDC Digital Universe study, "Big Data, Bigger Digital Shadows, and Biggest Growth in the Far East" finds that only a tiny fraction of the world's Big Data potential is being realized, though the amount of useful data is expanding
- IDC projects that the digital universe will reach 40 ZB by 2020, an amount that exceeds previous forecasts by 14%; IDC predicts Digital Universe will increase 50-fold from beginning of 2010 to end of 2020.
- The amount of data that requires protection is growing faster than the digital universe itself, yet levels of protection are not keeping pace
- Cloud computing will increase in importance as the number of servers will grow 10x by 2020 and information managed by enterprise data centers 14x, yet the number of IT professionals will grow by a factor of less than 1.5
- This year's study marks the first time IDC was able to capture where the information in the digital universe either originated or was first captured or consumed, revealing some dramatic shifts currently underway.
- The investment in spending on IT hardware, software, services, telecommunications and staff that could be considered the "infrastructure" of the digital universe will grow by 40% between 2012 and 2020—investements in storage, security, big data and cloud computing will grow considerably faster

A Rapidly Expanding Universe…

- 40ZB = 1.7MB of new information created for every human on the planet – ***every second of every day***
- 2.8ZB will have been created and replicated this year alone
- A key driver is machine-generated data, which will grow from 11% of the digital universe in 2005 to over 40% in 2020

50-fold Growth From the Beginning of 2010 to the End of 2020



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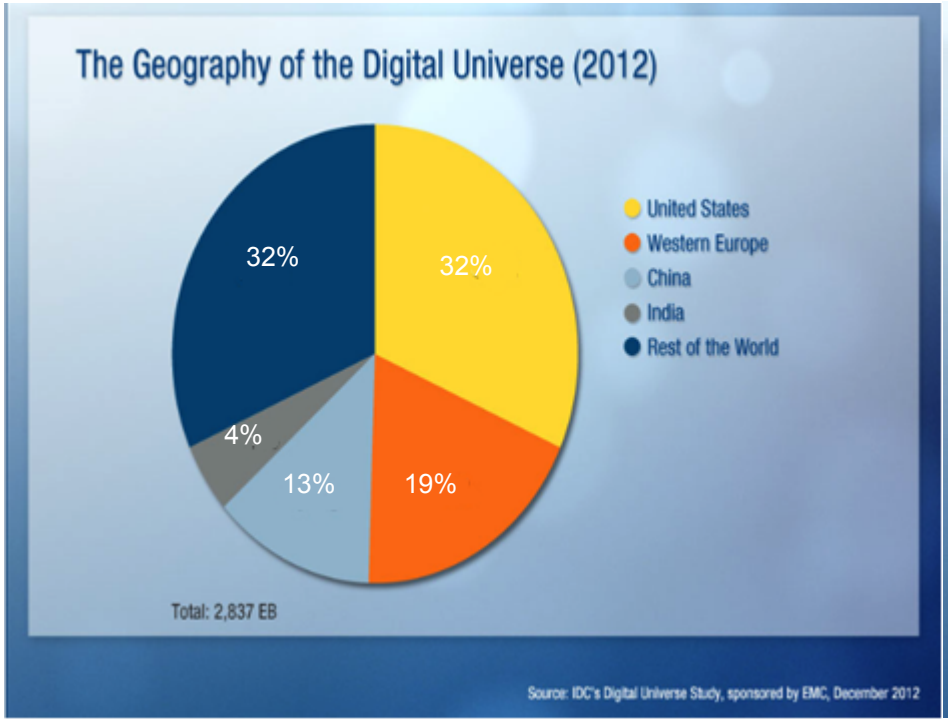
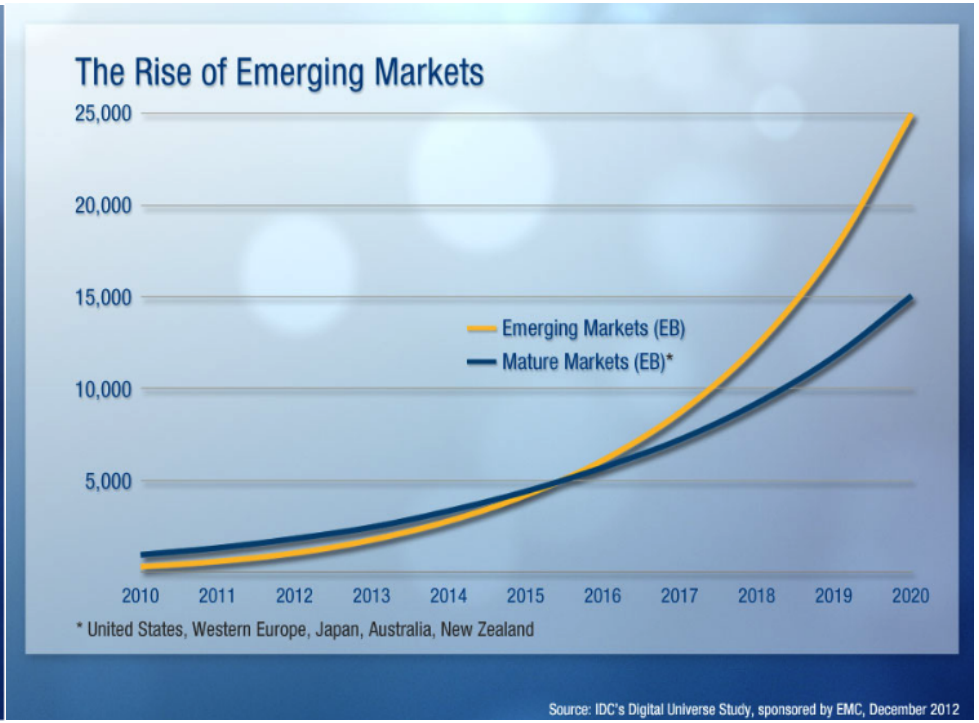
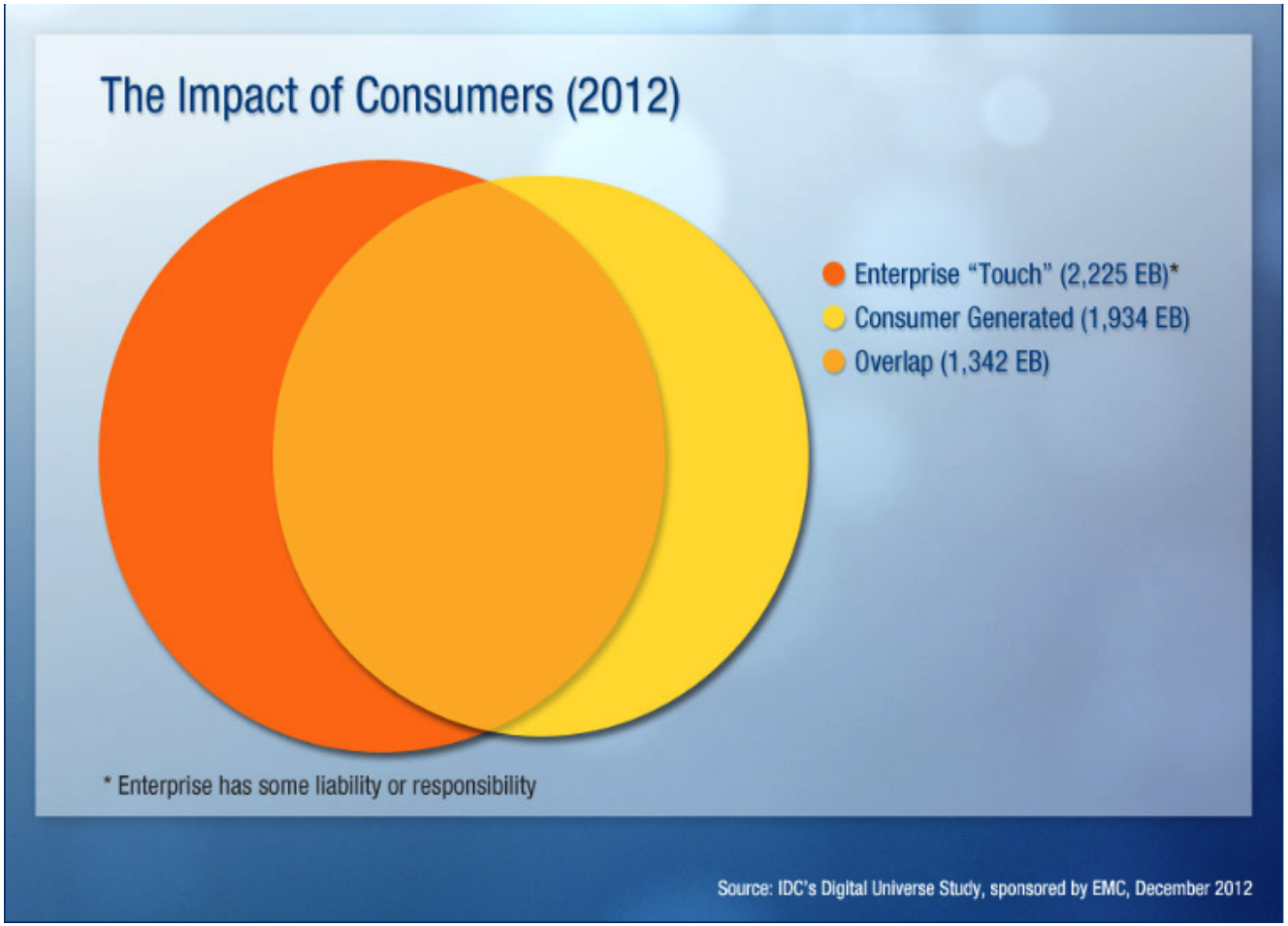
Geography plays a role…

- While emerging markets accounted for 23% of the digital universe as recently as 2010, their share is already up to 36% in 2012.
- By 2020, IDC predicts that a whopping 62% of the digital universe will be attributable to emerging markets.





Enterprises will “touch” most of it



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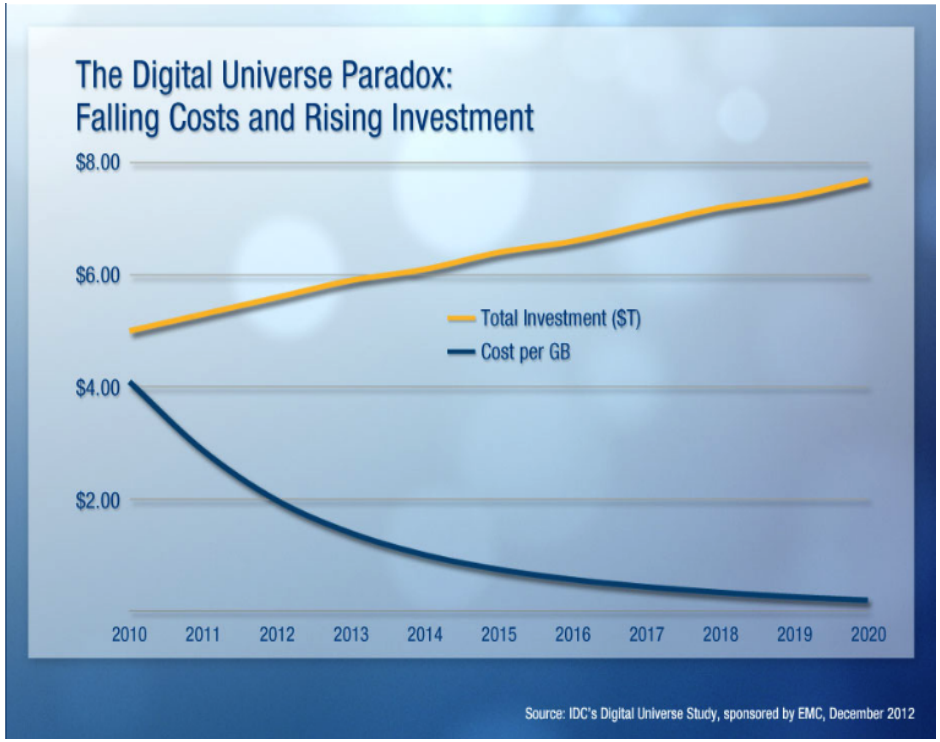
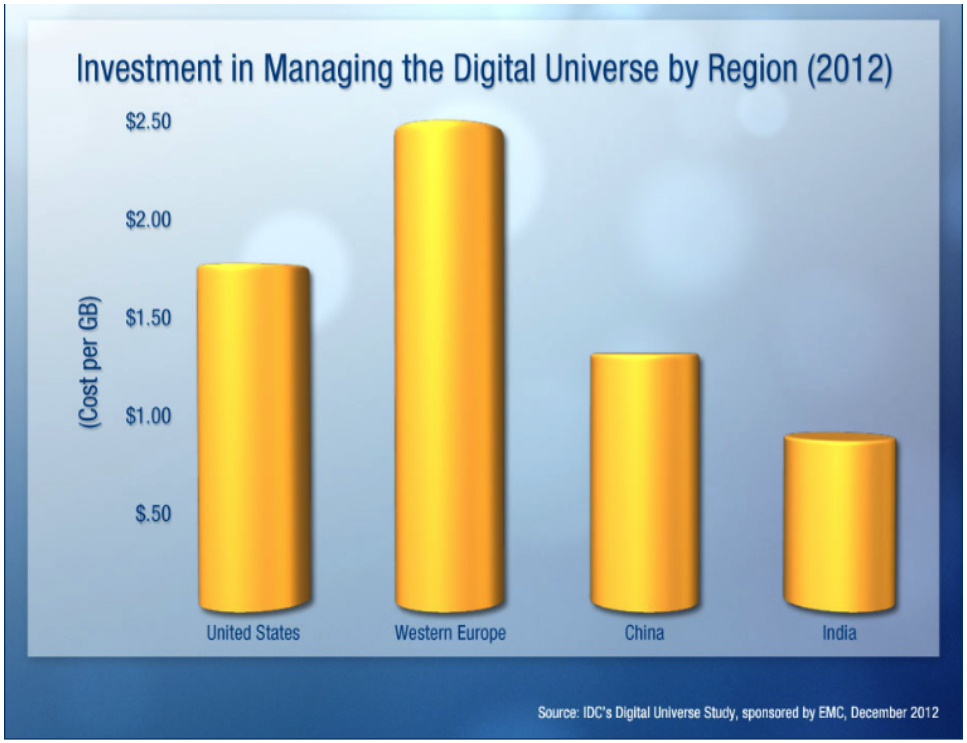
Costs will fall, investment will rise

- Investment in spending in IT hardware, software, services, telco and staff that could be considered “infrastructure” of the digital universe will grow by 40% between 2012 and 2020.



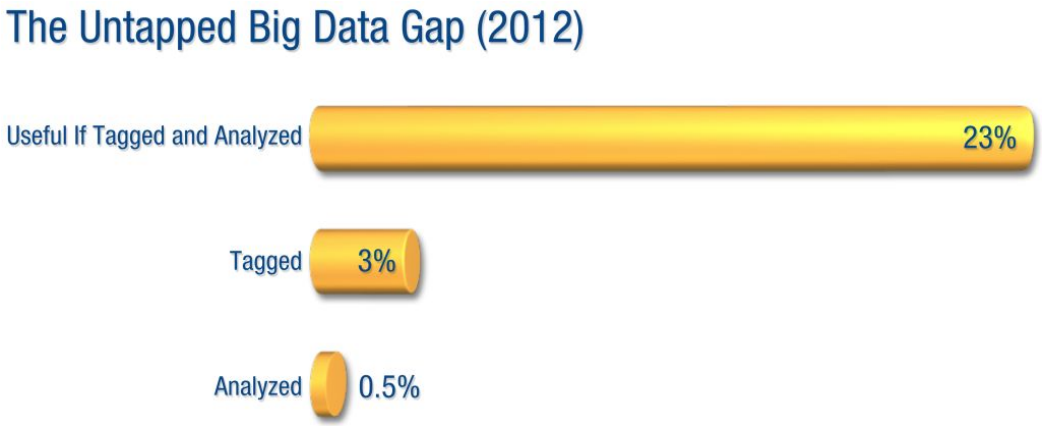


Introducing… the Big Data Gap

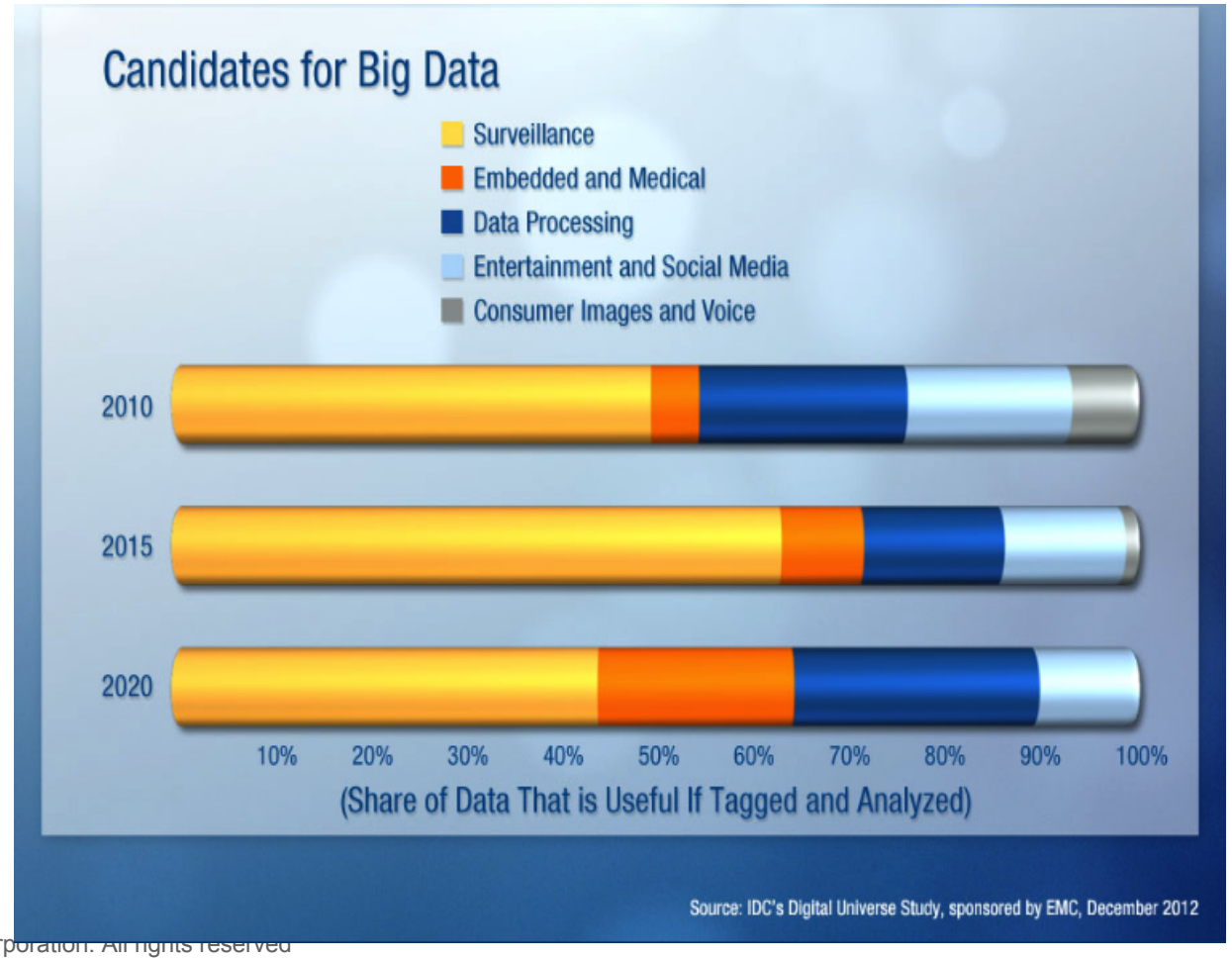
- In 2012, **23%** (643 EB) of the digital universe in 2012 is comprised of "useful" data.

However…

- ONLY **0.5%** of the world's data is **actually being analyzed**… underscoring the importance of technology and talent to extract the hidden value from all this data
- The Big Data Gap is IDC's measure of unexploited value



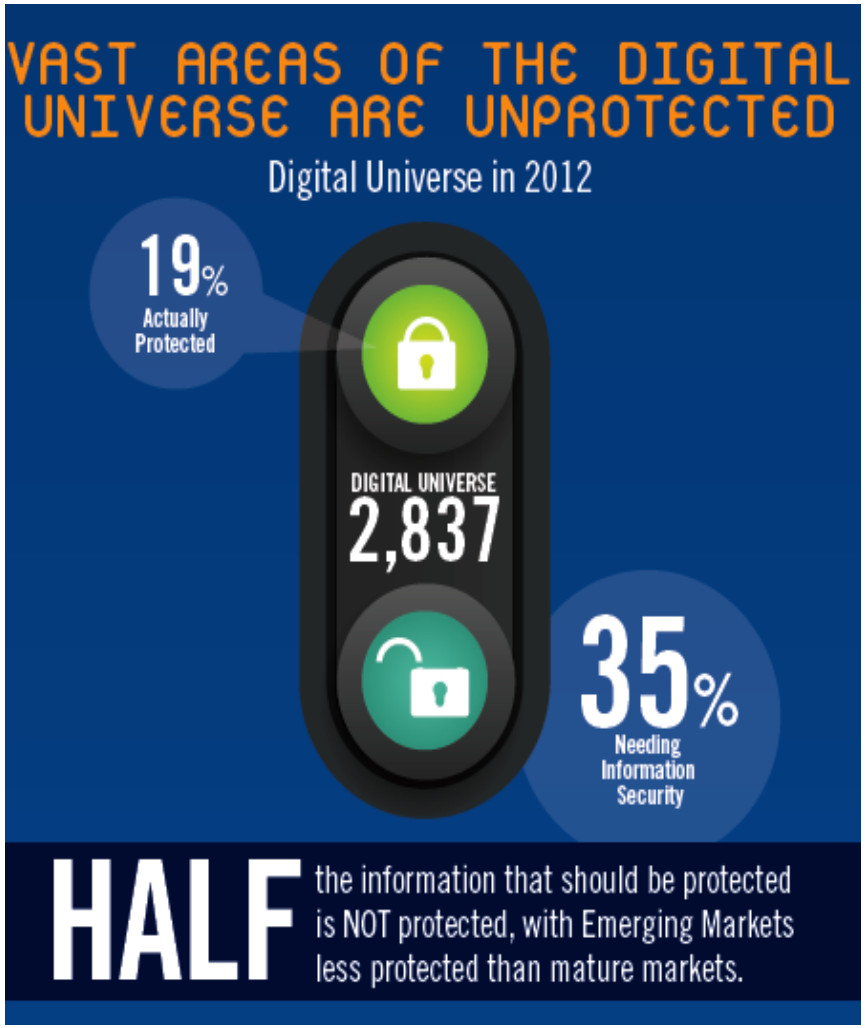
Surveillance data is teeming with Big Data potential



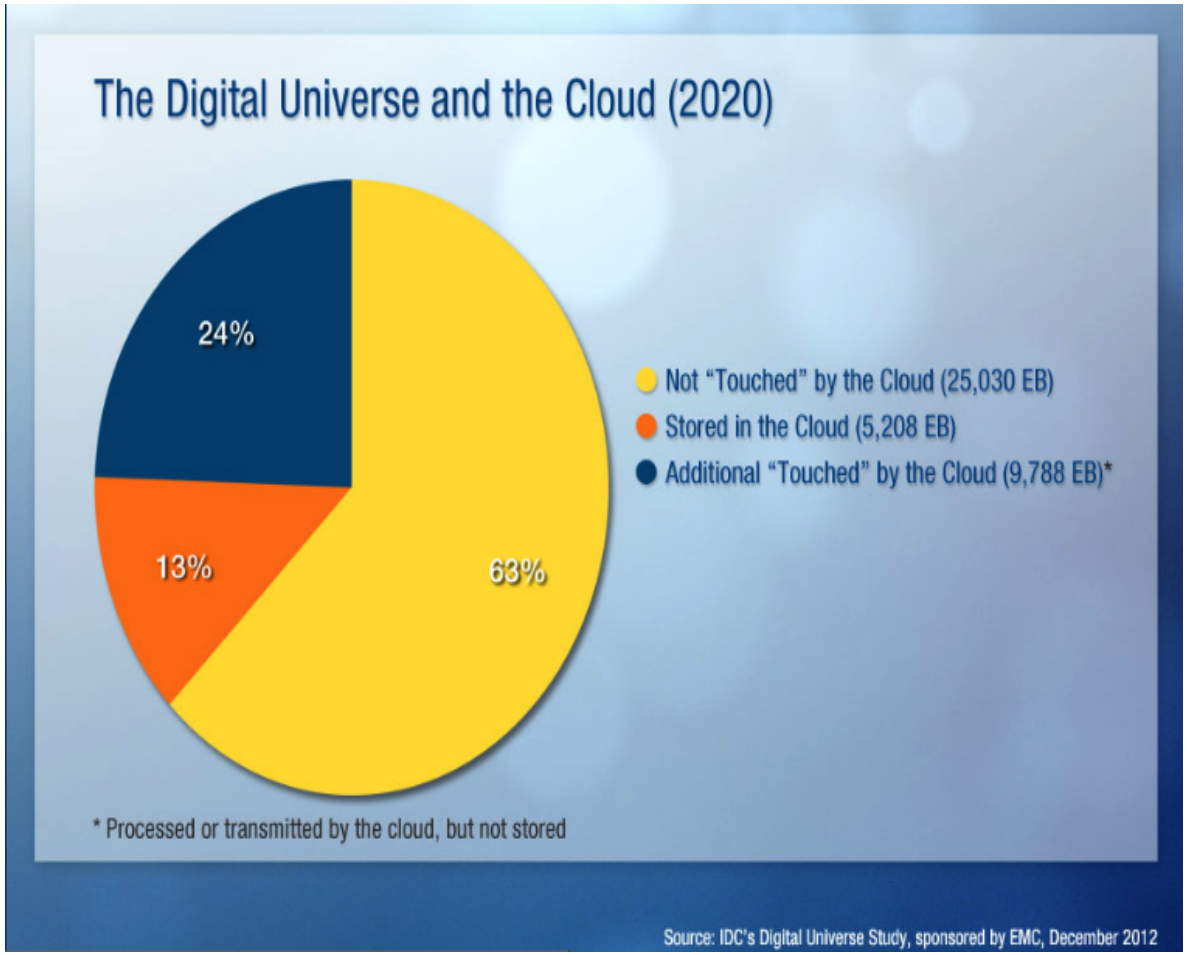
But it's a universe largely unprotected

- Less than a third of the digital universe required data protection in 2010, but that proportion is expected to exceed 40% by 2020.
- In 2012, only 19% of the DU is protected

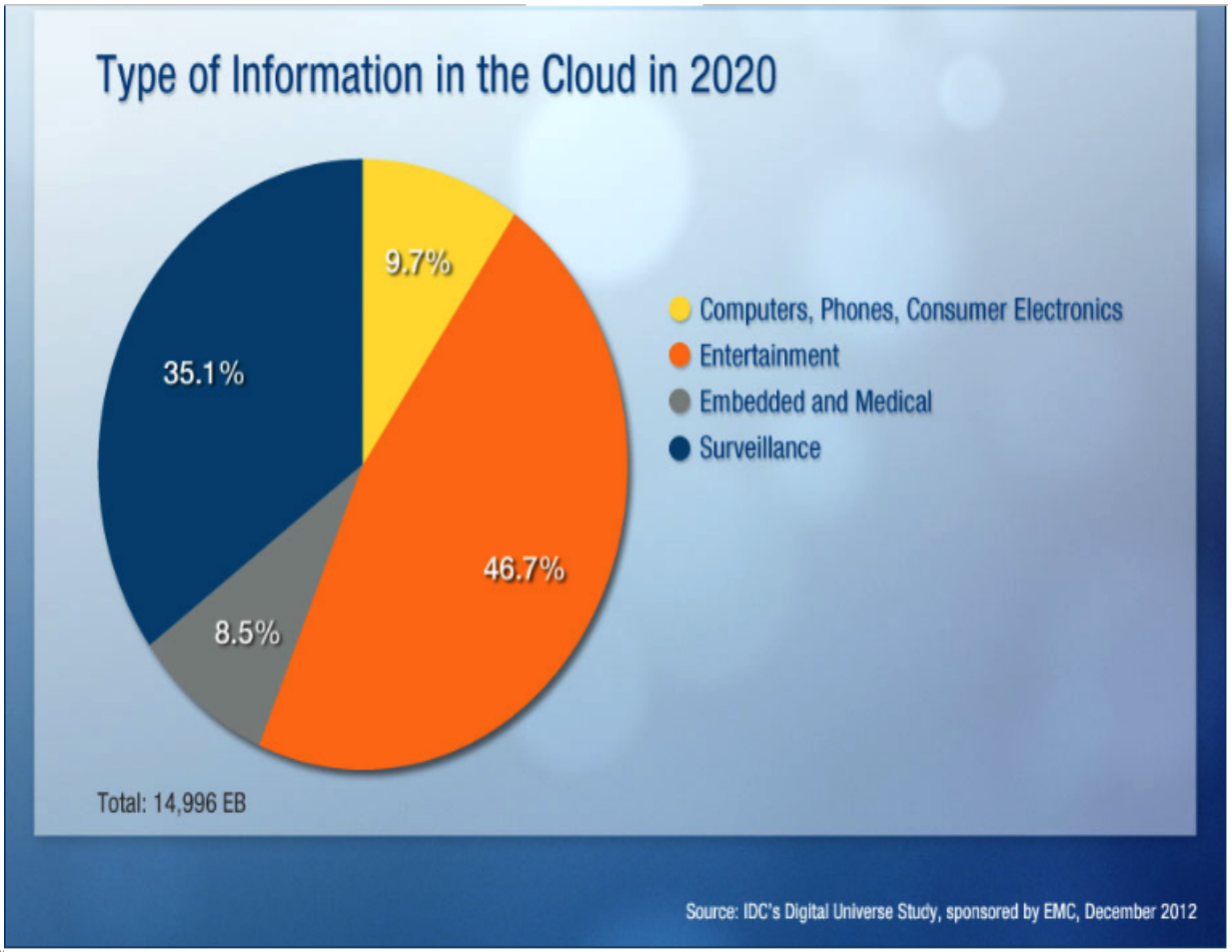
- Compounding challenges:
  - advanced threats,
  - security skills gap
  - lack of adherence to security best practices
- Opportunity:
  - Harnessing the useful data to IMPROVE protection



Not as much data will be stored in the cloud as you might think…



Entertainment, **not** enterprise data, will occupy the bulk of the cloud…



Other Study Findings

- The amount of information stored in the digital universe about individual users exceeds the amount of data that they themselves create.

- Western Europe is currently investing the most to manage the digital universe, spending $2.49 USD per gigabyte. The U.S. comes in second, investing $1.77 per gigabyte, followed by China at $1.31 per gigabyte and India at $0.87 per gigabyte.

- Forward-thinking enterprises will increasingly migrate to converged infrastructures, where servers, storage and networks are integrated together as a unit. By 2020 private and public clouds will be commonplace, with not one, but many clouds that are interconnected yet difficult to protect or manage

- With the balance of creation/consumption of data shifting to emerging markets, it may pose challenges to emerging markets in terms of managing, securing and analyzing their respective portions of the digital universe. It also underscores the importance of vigilance and sophistication for companies as the stewards of information, regardless of its origin.