Arab Regional Assessment Study of the Enabling Environment for Big Data

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Lesvos in Greece – Venus C

The University of the Aegean in Greece developed the VENUS-C Fire app—featuring Bing Maps, Microsoft Silverlight, and Windows Azure—to determine the daily wildfire risk and fire propagation in the vulnerable island of Lesvos during its dry season.

Fire App Fights Wildfires with Data

Geography of Natural Disasters Laboratory at the University of the Aegean in Greece to calculate and visualize the risk of wildfire ignition and to simulate fire propagation.

Give me a little data and I'll tell you a little. Give me a lot of data and I'll save the world.

Darrell Smith, Director of Facilities and Energy at Microsoft

“The information about the package is just as important as the package itself.”

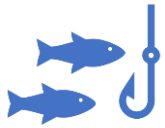
Fred Smith, Fedex CEO

Agenda

- What is Big Data
- Importance of Big Data
- Relevance of this study
- Proposed structure of the study
- Different deadlines and time frame

What is Big Data?

Velocity



Variety

Volume

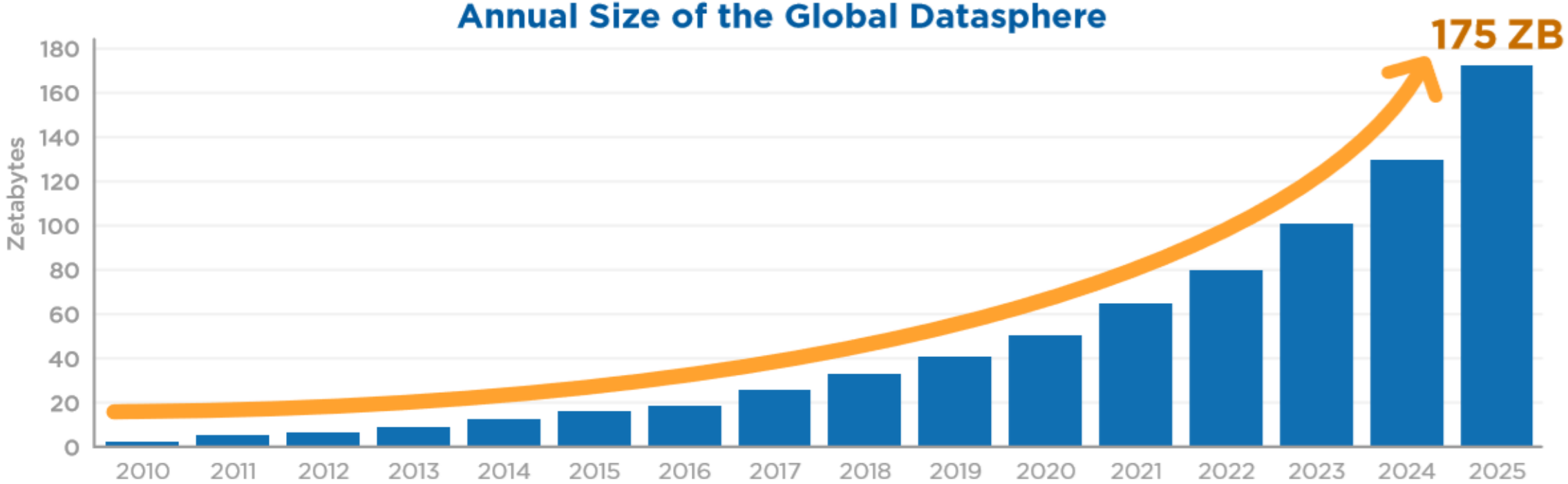
Veracity

Value

"A paradigm for enabling the collection, storage, management, analysis and visualization, potentially under real-time constraints, of extensive datasets with heterogeneous characteristics."

[Recommendation ITU-T Y.3600]

Annual Size of the Global Datasphere



Source: Data Age 2025, sponsored by Seagate with data from IDC Global DataSphere, Nov 2018

Big Data: Velocity

5 GB for an autonomous car!

Big Data : Variety

Structured Data

Data bases

Transactional

Unstructured Data

Social

Video

Text

Tweet

Voice

Images

Mapping

Various Sources

Sensors

Devices

Applications

Web

Public Data

GPS

Various Disciplines and Domains

Health

Weather

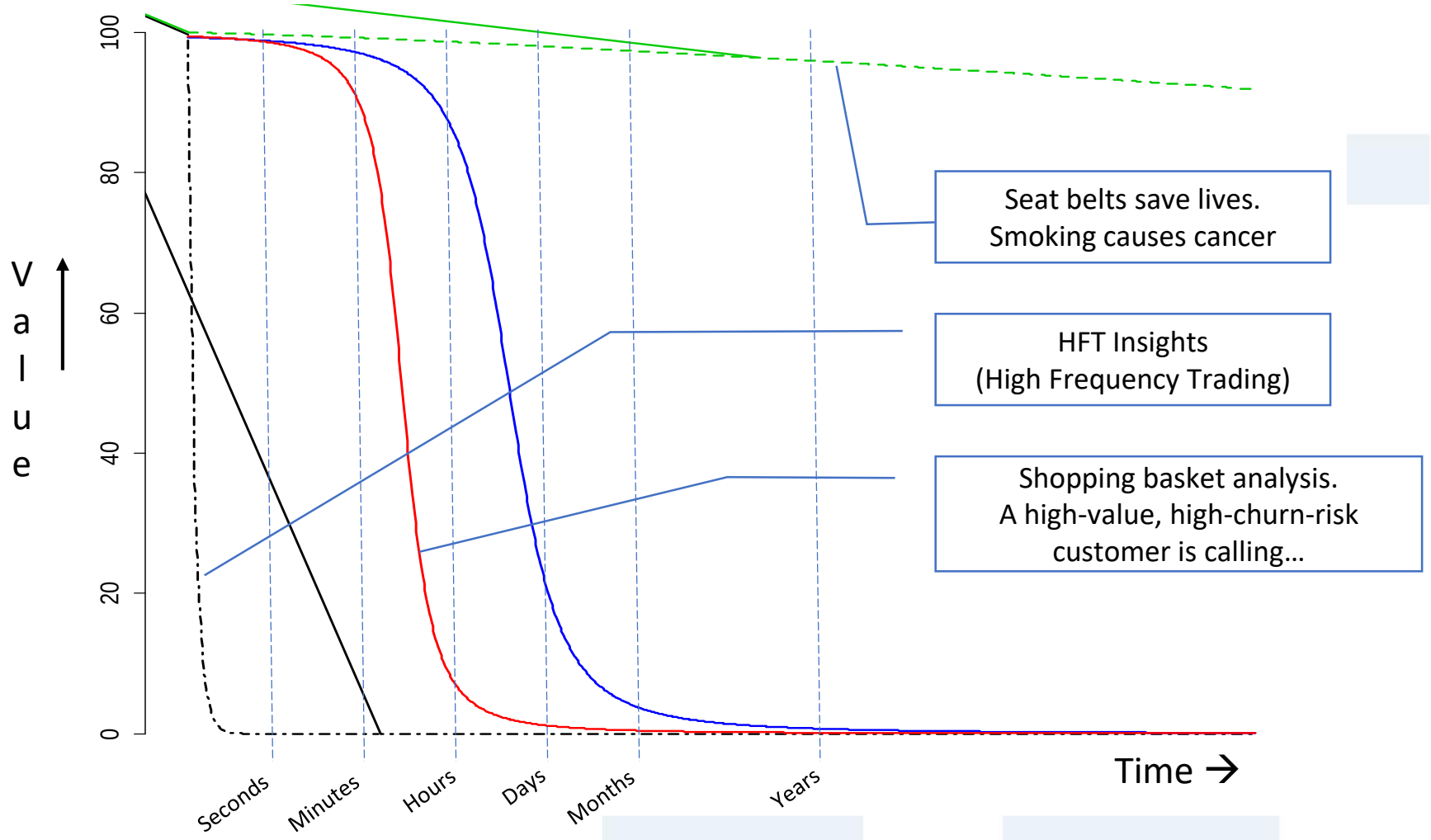
Finance

Social

Environment

…

Big Data: VALUE



Data is the new Oil! Really?

95% of data in Oil&Gaz is lost before it gets to business leaders!

How many leaders treat their data as Oil? How many measure its value? How many show their Data value in their financial reports, do they report the value to their board? …

Data is NOT the new Oil!

Abundance

Reusable

Replicable

Zero Weight

Instantly transferable

Exponential benefits

Why Now ?

- It is here
- Many sources
- Open Data

Data availability

- Acquisition
- Storage
- Compute

Shrinking Costs

- Easy
- Accessible
- Democratized

Technology

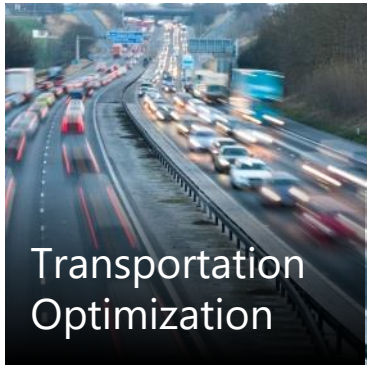
- Time to value relationship of Insight
- From Weeks to minutes

Time

- What's the social sentiment of my citizens?
- How do I optimize my services based on patterns of weather, traffic, etc.?
- How do I better predict future outcomes?

New Questions

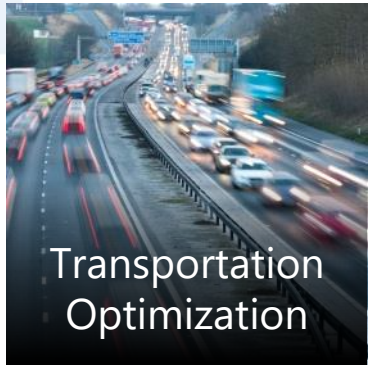
What can Big Data do for Government?



New Opportunities for Cities

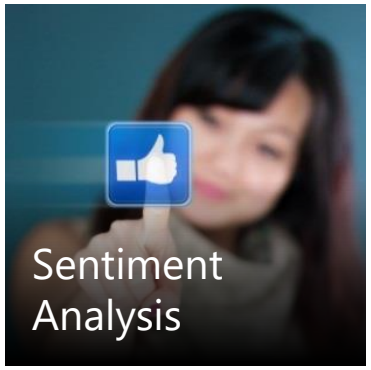
VENUS-C Fire Greece

Issy Grid



London Transport

New Opportunities for Businesses …



Targeted advertising

Predictive Consumption & Maintenance

Blackout & shortage Prevention

Crisis Management

Faster & Better Decisions

Dubai Electricity and Water Authority
UNITED ARAB EMIRATES

Zweckverband Bodensee-Wasserversorgung
GERMANY

Swiss Transjurane
SWITZERLAND

Why a ITU Study for the Arab Region ?

Learn the current environment

Frame the discussion

Promote (awareness on opportunities and challenges)

Help – focus the needed support

Methodology

Expert Advise

Survey, online questionnaire

Desk Research

Structure of the Report

- Big Data definitions and evolution
- Why Now
- Opportunities
- Challenges and Risks
- Enabling Environment
- Arab Countries Environment Landscape
- Recommendations

Opportunities

« The data revolution was recognized as an enabler of the 2030 Agenda. It can not only help to monitor progress towards the SDGs, but it also engages multiple stakeholders to advance ***evidence-based policies and programmes*** *aimed to reach the most vulnerable and leave no one behind. »*

Big Data for SDGs

Senegal is using Big Data for improved diagnosis of poverty. The experience used call data records (CDR) data to build a high-resolution poverty map. The researchers concluded "*we believe that this Big Data and our models can generate disaggregated poverty maps for Senegal based on gender, the urban/rural gap, or ethnic/social divisions. Such poverty maps will assist in policy planning for inclusive and sustained growth of all sections of society. Our methodology is generic and can be used to study other socio-economic indicators of the society*". https://www.brookings.edu/blog/africa-in-focus/2015/06/02/big-data-for-improved-diagnosis-of-poverty-a-case-study-of-senegal/

There are several ways to address the Hunger problem across the world. Increasing the farming yield and productivity is obviously one of the ways. There is a believe amongst world leaders, experts and scientists that important step towards solving that issue is to allow farmers, scientists, and entrepreneurs unrestricted access to agricultural big data. The reason being that Big Data can increase crop yields by helping farmers make better decisions about when to plant, manage and harvest their crops by harvesting several key well defined data sets. Data sets can come from the traditional weather. But today, drones provide imagery, censors in the soil provide data, censor in herd provide data, biotech data comes from labs, …

The UN Women developed a full report on Gender Equality and Big Data: Making Gender Visible. "The report provides background context on how big data can be used to facilitate and assess progress towards SDG "Achieve gender equality and empower all women and girls". It examines successes and challenges in the use of big data to improve the lives of women and girls, and identifies concrete data innovation projects that have considered the gender dimension from across the development sector."

Charity:Water is a well know NGO that focuses on Water issues and is developing water projects in many part of the world. They are now using Big Data in an interesting way. By putting sensors straight into the taps and the well, these sensors are sending massive data to a central location in the Cloud, that is then used by Charity:Water data scientists to get a real-time feed on water consumption and a real map of water utilization and pumping, which is then used for better management, optimization, planning.

Enabling Environment

Infrastructure

Skills and Competencies

Innovation Ecosystem

Trust Ecosystem

Timeline

Survey ends: December 30th

2nd Draft Report: January 20th

Final Report: February 15th

Actions

RESPOND TO THE SURVEY

SHARE THE SURVEY

https://www.itu.int/en/ITU-D/Regional-Presence/ArabStates/Pages/RIAP/RI2018/QBD.aspx