Data Analytics: The Next Big Thing in Information

Rome, Italy
November, 2012

June Crowe and J.R. Candlish, Information International Associates, Inc., Oak Ridge, TN.

Abstract

Data Analytics: The Next Big Thing in Information

Information is now available in an overabundance, so much so, that distinguishing the noise from the signal has become very problematic. In the past, the collection and storage of information was the primary issue. Currently, we have massive amounts of data both structured and unstructured, that need to be analyzed in an iterative, as well as in a time sensitive manner. In the meantime, data analytical tools have emerged to solve this problem.

Grey literature repositories, libraries, and information centers are well positioned to take advantage of these new tools. The current trend is to make grey literature more easily discoverable, accessible, and with the new data analytical tools, more easily analyzed.

We created and administered a survey to the Grey Literature Community to get a snapshot of the Community's use, planned use, and knowledge of Big Data as it affects grey literature. The results are reported in these slides.

IIa
Information
International
Associates
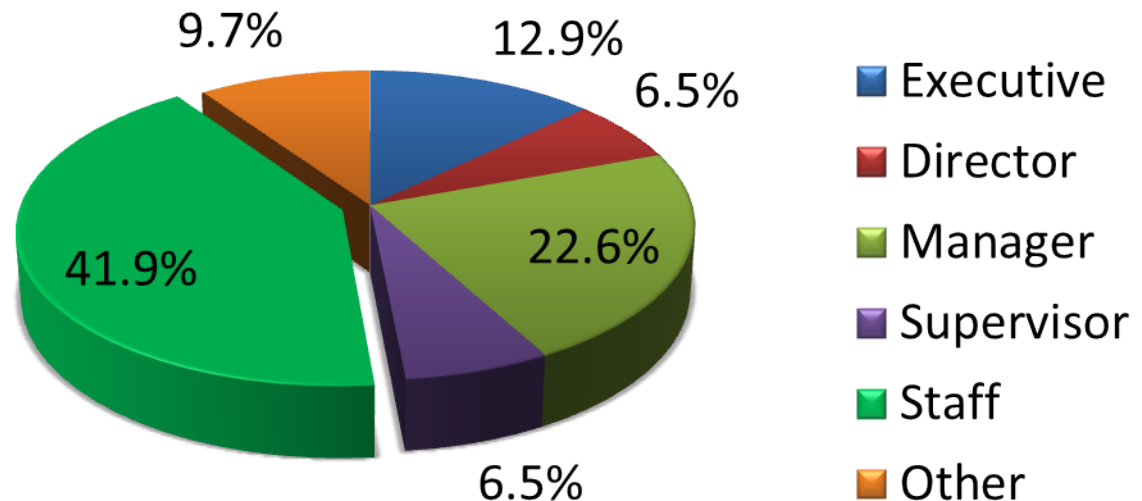
Survey Participants from Around the World
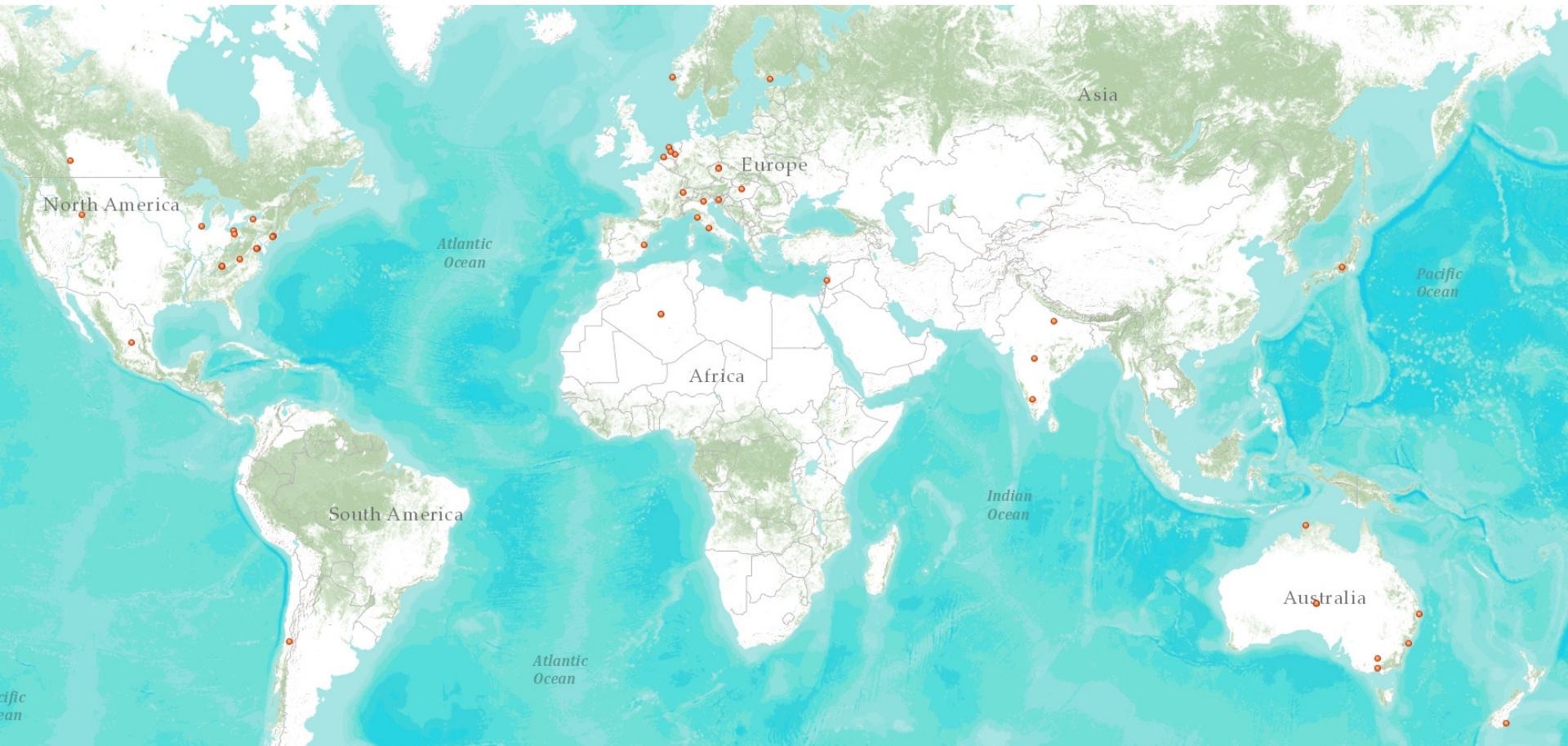
Total No.: 48

Represented Industries

Academia	50%
Government agency	25%
Private industry	25%

- Within these industries, nearly 42% are <u>staff level</u>

Pie chart:
- Executive: 12.9%
- Director: 6.5%
- Manager: 22.6%
- Supervisor: 6.5%
- Staff: 41.9%
- Other: 9.7%

IIa
Information
International
Associates

Potential Impact of Big Data

In the next 2-3 years, do you see Big Data products/services (analytical platforms, databases, services, appliances) impacting grey digital collections?

10.4%	Low Impact
27.1%	Some Impact
10.4%	Neutral
18.8%	Moderate Impact
33.3%	High Impact

IIa
Information
International
Associates
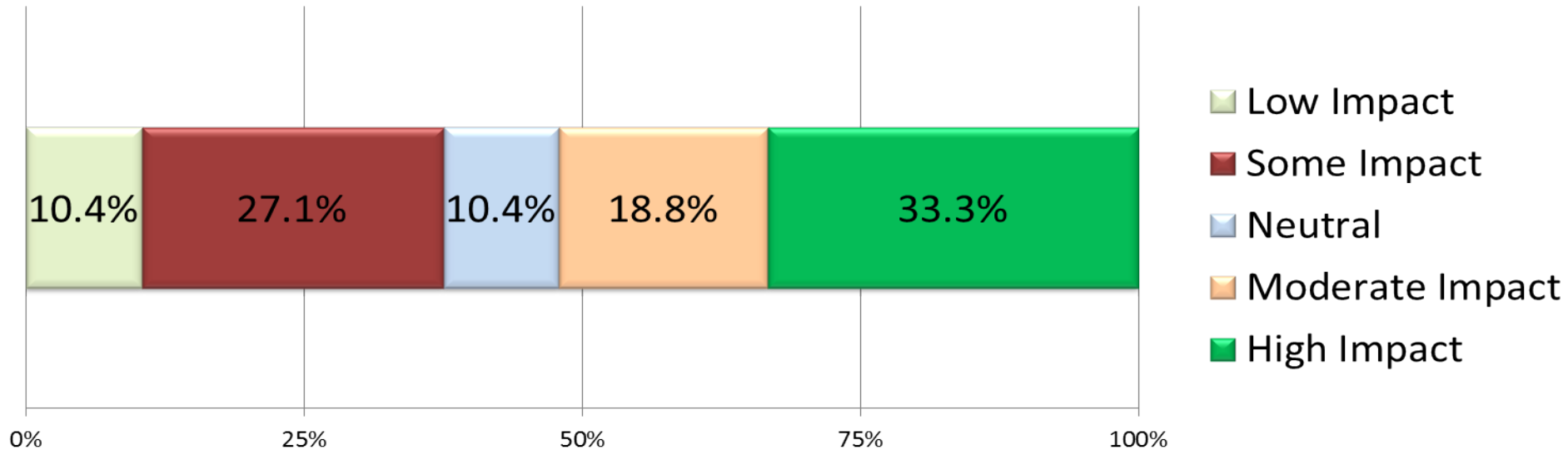
Current Landscape

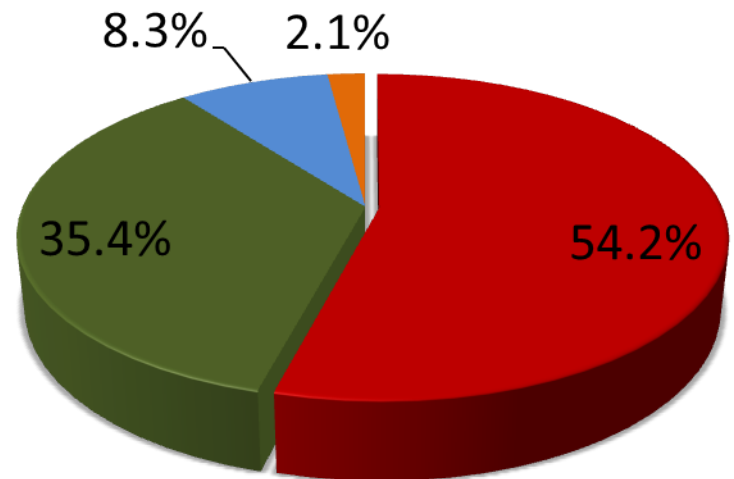Does your organization currently use Big Data products and services?

- No, 73%
- Yes, 27%

Why such a low percentage?

- No one is <u>driving</u> the adoption of products/services_

Here are the drivers:

- 🟥 No One
- 🟩 Research & Development
- 🟦 Operations
- 🟧 IT

8.3%   2.1%

35.4%   54.2%

IIa
Information
International
Associates

Current Landscape

Indicate your level of expertise in Big Data: **Novice, 74.4%**

Within the breadth of product/services currently available, the three
most recognized were:

1.   SAP
2.   SAS
3.   Google BigQuery

Interesting Finding: 81.4% of survey takers have not seen any
Big Data products/services demonstrated.

However: current/planned analytic Big Data projects favored
Web analytics (30.4%), Predictive analytics (25.6%), and Real-
time analytics (15.4%) respectively.

Importance of Big Data

According to a survey The Pew Research Center undertook about Big Data, most respondents think that the rise of Big Data is a huge positive for society. Do you think that Big Data will be a huge positive for your organization?

Definitely (value of 5)	30.8%
Moderate (4)	25.6%

>56% of responses!
Only 10% neutral

Regarding Mobile Devices: A strong percentage (36.1%) of survey takers feel it is only "*Somewhat Important*" to access Big Data Results via mobile devices.

Barriers to Adopting Big Data Products/Services

Please rank the following potential barriers within your organization that may impede the adoption of Big Data products/services. Please rank each on a scale of 1-5 with 1 being the least and 5 the greatest.

	1	2	3	4	5
Lack of Personnel	11.1%	11.1%	19.4%	25.0%	**33.3%**
Lack of Resources	8.6%	11.4%	14.3%	20.0%	**45.7%**

Goals to Utilize Big Data Products/Services

If it were possible to select any of the Big Data products/services, which of the following common data goals would be most relevant in your situation? Please rank each on a scale of 1-5 with 1 being the least and 5 the greatest.

	1	2	3	4	5
Data visualization	2.8%	8.3%	19.4%	30.6%	**38.9%**
Data discovery	5.6%	8.3%	8.3%	30.6%	**47.2%**
Data mining analytics	2.8%	2.8%	27.8%	22.2%	**44.4%**

IIa
Information
International
Associates

Potential Concerns and Local Economy

As Big Data capabilities evolve, do you think that biased reporting will be a cause of concern across multiple facets of applicability (economic, political, social, scientific, health, etc.)?

Least Concern	Somewhat Concerned	**Moderate Concern**	Moderately High Concern	High Concern
2.9%	2.9%	**52.9%**	26.5%	14.7%

In your opinion, will Big Data initiatives benefit your local economy?

Least	Somewhat	**Moderate**	Moderately High	Most
5.7%	25.7%	**42.9%**	20.0%	5.7%

Metrics on Survey Participants

Total Number of Survey Takers: **48**

Number of Completed Surveys: **32 (66.7%)**

Trend in Responses

- Of the 24 questions, the <u>first third</u> of the questionnaire had the most participation.

- The <u>second third</u> had an average of 36-39 participants

- The <u>last third</u> had a range of responses from 19-36.