Italian Enterprises Adopt Big Data Solutions

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Scenario

Data is exploding and so are the capabilities to collect and process information from it. But currently, enterprises are only using about 5% of the available data. Now it’s time to see what the other 95% can tell us. New big data techniques and technologies now enable enterprises to collect, process, and analyze this data for concrete business value. **Enterprises can leverage this data** to better track product sales and customer movements, monitor complex machinery, analyze healthcare information, or capture market intelligence from social media. Telecom operators tap into social media data to market friends-and-family plans. Public utilities - both water and electricity - perform sophisticated analytics to identify anomalies in energy and water transmission. Hospitals analyze vast amounts of data in order to understand the causes of hospital-acquired infection. In Europe, 18% of enterprise decision-makers report adoption of big data solutions, with another 18% planning adoption and 28% interested with yet no plans for it.

In November 2012, Reply and Forrester Consulting evaluated the trends in the interest in the adoption of **Big Data solutions in Italy**. Forrester set out to explore not only the adoption of big data but also the maturity of enterprises in their big data strategy and operations. The study spanned vertical industries with concentrations in financial services, telecommunications, energy, utilities and waste management, retail, and professional services.
The Vast Majority Of Italian Enterprises Has Adopted Or Plans To Adopt Big Data Technologies And Solutions

“Based on Forrester’s definition of big data, what best describes your firm’s current usage/plans to adopt big data technologies and solutions?” (Select one)

- Implemented, not expanding: 3%
- Expanding/upgrading implementation: 19%
- Planning to implement in more than 1 year: 28%
- Planning to implement in the next 12 months: 40%
- Interested but no plans: 10%
- Not interested: 0%
- Don’t know: 0%

Base: 100 Italian enterprise professionals responsible for big data initiatives

Source: A commissioned study conducted by Forrester Consulting on behalf of Reply, November 2012
Global Enterprises Embrace Big Data - And Italy Is No Exception

Italian Enterprises Expect BI And Big Data Budgets To Grow More Than The Overall IT Budget

“In 2013, how do you expect your firm’s IT budget will change as compared to 2012?”
(Select one for each row)

- Increase by more than 10%
- Increase by 1-10%
- Stay about the same

<table>
<thead>
<tr>
<th>Total IT budget</th>
<th>Total budget for all business intelligence related purchases, initiatives and projects</th>
<th>Big data related purchases, initiatives and projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>10%</td>
<td>19%</td>
</tr>
<tr>
<td>19%</td>
<td>32%</td>
<td>37%</td>
</tr>
<tr>
<td>45%</td>
<td>46%</td>
<td>28%</td>
</tr>
</tbody>
</table>

Base: 100 Italian enterprise professionals responsible for big data initiatives (percentages will not add up to 100% as options for “Decrease by 1-10%,” “Decrease by more than 10%,” and “Don’t know” have been removed)

Source: A commissioned study conducted by Forrester Consulting on behalf of Reply, November 2012
Global Enterprises Embrace Big Data - And Italy Is No Exception

Italian Enterprises Use Or Plan To Use A Good Range Of Data Sources

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transactional data from enterprise applications</td>
<td>66%</td>
</tr>
<tr>
<td>Unstructured content from external sources</td>
<td>57%</td>
</tr>
<tr>
<td>Sensor/machine/device data</td>
<td>53%</td>
</tr>
<tr>
<td>Social media data (Facebook, Twitter, etc.)</td>
<td>50%</td>
</tr>
<tr>
<td>Unstructured content from internal sources</td>
<td>44%</td>
</tr>
<tr>
<td>Locational/geospatial data</td>
<td>34%</td>
</tr>
<tr>
<td>Clickstream</td>
<td>29%</td>
</tr>
<tr>
<td>Scientific data</td>
<td>25%</td>
</tr>
<tr>
<td>Audio/video data</td>
<td>23%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1%</td>
</tr>
</tbody>
</table>

Source: A commissioned study conducted by Forrester Consulting on behalf of Reply, November 2012
Global Enterprises Embrace Big Data - And Italy Is No Exception

Italian Enterprises Have A Somewhat Limited Vision Of The Potential For Big Data Use Across Departments

“What groups or departments are currently [using/planning to use] big data?”
(Select all that apply)

- IT analytics: 50%
- Sales: 46%
- Operations: 44%
- Procurement: 34%
- Marketing: 34%
- Logistics and distribution: 27%
- Finance: 27%
- Research and development: 24%
- Manufacturing: 23%
- Customer service: 23%
- Supply chain management: 21%
- Human resource management: 15%
- GRC (governance, risk, compliance): 14%
- Product development: 13%
- Other: 0%

Base: 100 Italian enterprise professionals responsible for big data initiatives

Source: A commissioned study conducted by Forrester Consulting on behalf of Reply, November 2012
Levels Of Big Data Maturity Among Italian Enterprises

Italian Companies Focus First On Data Quality, Followed By Business Objectives; Globally Business Comes First

“What are the most important goals/drivers your organization considers when orchestrating your overall business intelligence/analytics application strategy?”

- Improve data quality and consistency: 34%
- Make better informed business decisions: 14%
- Achieve better business transparency: 14%
- Improve business planning: 10%
- Improve customer interaction and satisfaction: 10%
- Improve and optimize process performance: 9%
- Overall gain competitive advantage: 4%
- Monitor process performance: 2%
- Monitor and improve business performance across departmental silos: 2%
- Ensure compliance and reduce risks: 2%
- Expand the scope of data we leverage to include more data and more extreme scale (velocity, variety, sources): 2%

Base: 100 Italian enterprise professionals responsible for big data initiatives (responses will not add up to 100%, as second, third, fourth, and fifth priorities have been removed)

Source: A commissioned study conducted by Forrester Consulting on behalf of Reply, November 2012
Levels Of Big Data Maturity Among Italian Enterprises

While Almost One-Half Of Respondents Report Having A Business Case, Few Measure Tangible And Proven Benefits

Source: A commissioned study conducted by Forrester Consulting on behalf of Reply, November 2012

Base: 90 Italian enterprise professionals responsible for big data initiatives

"Do you have a business case for your big data initiative in place?"

- Don’t know: 0%
- We have no explicit business case for big data: 4%
- Currently we have no business case, but we are currently working on one: 19%
- We have a business case for big data but with intangible benefits only: 19%
- We have a business case for big data with measurable KPIs and a projected but not yet proven ROI: 11%
- We have a business case for big data with measurable KPIs and already proven ROI: 47%

Maturity
Few Firms Have A Governance Strategy Specific To Big Data Initiatives

Levels Of Big Data Maturity Among Italian Enterprises

“What is your current (and future planned) information governance approach (i.e., data quality, security, standardization, and life cycle) for big data?”

- We have a specific information governance strategy and processes for our big data initiatives: 12%
- We are in the process to develop our specific information governance strategy and processes for our big data initiatives: 24%
- We are following our standard information governance strategy and processes for our big data initiatives: 55%
- We have no information governance strategy and processes: 5%
- Don’t know: 4%

Base: 100 Italian enterprise professionals responsible for big data initiatives
Levels Of Big Data Maturity Among Italian Enterprises

Concerns Focus More On Better Managing Volumes And Velocity Than On Better Leveraging The Data Itself

“What are the main business and technical requirements or inadequacies of earlier-generation business intelligence technologies, applications, and architecture that are causing you to consider or implement new big data techniques and technologies?” (Select all that apply)

- Data volumes have grown beyond what we can cost-effectively manage: 41%
- The number of data formats that we must be able to deal with exceeds our ability to cost-effectively integrate: 32%
- Data changes become available much faster than we can process to support business decisions: 29%
- Analysis requirements change too fast to keep up with: 23%
- Earlier-generation technology is too expensive: 22%
- We don’t know what our entire data universe contains; we need new ways to explore data and discover patterns and insights before we even understand what we are looking for: 20%
- We can achieve (or are achieving) significant cost reductions by changing our data management and analytic architecture: 19%
- The velocity of data (e.g., streaming) is too high for earlier technologies: 15%
- We want to access data that was not accessible for us with existing technologies: 12%
- I don’t know: 0%

Base: 100 Italian enterprise professionals responsible for big data initiatives

Source: A commissioned study conducted by Forrester Consulting on behalf of Reply, November 2012.
**Levels Of Big Data Maturity Among Italian Enterprises**

Companies Are Challenged By Talent Shortages And Lack Of Executive Support

![Bar Chart](chart.png)

**“What are the most critical challenges your organization faces when orchestrating your overall business intelligence/analytics application strategy?”**

<table>
<thead>
<tr>
<th>Challenge</th>
<th>First priority</th>
<th>Second priority</th>
<th>Third priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty in recruiting and retaining BI talent</td>
<td>21%</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>Insufficient BI budget</td>
<td>8%</td>
<td>11%</td>
<td>12%</td>
</tr>
<tr>
<td>Lack of alignment between IT and business</td>
<td>9%</td>
<td>13%</td>
<td>9%</td>
</tr>
<tr>
<td>Poor data quality</td>
<td>14%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Growth of data volumes</td>
<td>7%</td>
<td>5%</td>
<td>13%</td>
</tr>
<tr>
<td>Increasing complexity of the BI technologies and landscape</td>
<td>6%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Lack of business C-level executive support for the BI strategy and needs</td>
<td>16%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Inadequate relevant internal BI skills</td>
<td>5%</td>
<td>14%</td>
<td>2%</td>
</tr>
<tr>
<td>Lack of data standards</td>
<td>7%</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Data security and privacy</td>
<td>3%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>Fast-changing analytic and reporting requirements</td>
<td>5%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Legal and regulatory compliance</td>
<td>7%</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Lack of adequate user training</td>
<td>3%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Inadequate change management programs</td>
<td>4%</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Growth in number of data formats that must be dealt with</td>
<td>1%</td>
<td>3%</td>
<td></td>
</tr>
</tbody>
</table>

Base: 100 Italian enterprise professionals responsible for big data initiatives

Source: A commissioned study conducted by Forrester Consulting on behalf of Reply, November 2012
Enterprises Use Or Plan To Use Third-Party Resources To Aid In All Phases Of Big Data Initiatives

Reach Out For Help To Best Benefit From Big Data

<table>
<thead>
<tr>
<th>Project Phase</th>
<th>Currently Using a Consultant</th>
<th>Will Use a Third-Party Consultant in the Next 12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>22%</td>
<td>39%</td>
</tr>
<tr>
<td>Implement</td>
<td>28%</td>
<td>31%</td>
</tr>
<tr>
<td>Build</td>
<td>21%</td>
<td>38%</td>
</tr>
<tr>
<td>Post implementation support</td>
<td>19%</td>
<td>35%</td>
</tr>
<tr>
<td>Architecture</td>
<td>21%</td>
<td>29%</td>
</tr>
<tr>
<td>Business case</td>
<td>17%</td>
<td>32%</td>
</tr>
<tr>
<td>Outsourcing</td>
<td>24%</td>
<td>24%</td>
</tr>
<tr>
<td>Outsourcing offshore</td>
<td>16%</td>
<td>31%</td>
</tr>
<tr>
<td>Test</td>
<td>22%</td>
<td>23%</td>
</tr>
<tr>
<td>Feasibility analysis, study</td>
<td>15%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Base: 100 Italian enterprise professionals responsible for big data initiatives

Source: A commissioned study conducted by Forrester Consulting on behalf of Reply, November 2012
Reach Out For Help To Best Benefit From Big Data

Enterprises Plan To Use Cloud Technologies For Their Business Intelligence And Big Data Solutions

"What are your firm's plans to use cloud services (SaaS) for your big data initiative?"

<table>
<thead>
<tr>
<th>Plan Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Already replaced most/all with cloud BI SaaS</td>
<td>9%</td>
</tr>
<tr>
<td>Plan to use some cloud solutions for big data within the next 12 months</td>
<td>45%</td>
</tr>
<tr>
<td>Plan to use some cloud solutions for big data in a year or later</td>
<td>28%</td>
</tr>
<tr>
<td>Interested but no plans</td>
<td>15%</td>
</tr>
<tr>
<td>No plans to use any cloud solutions for big data</td>
<td>0%</td>
</tr>
<tr>
<td>Don’t know/does not apply</td>
<td>3%</td>
</tr>
</tbody>
</table>

82% already or will use cloud technologies.

Base: 100 Italian enterprise professionals responsible for big data initiatives

Source: A commissioned study conducted by Forrester Consulting on behalf of Reply, November 2012
Key Findings

- **Italian firms embrace big data.** The floodgates are open. The volume, velocity, variety, and variability of data available to enterprises are driving the adoption of technologies that enable enterprises to best take advantage of the insights that this data provides. Although only one-quarter of Italian enterprises have adopted big data technologies and solutions, another 68% have plans to adopt — indicating an even stronger trend than across Europe.

- **Yet most are not very mature in their big data strategies and operations.** Key goals focus first on data quality, followed by business objectives. The business cases that enterprises have developed do not measure concrete KPIs. And, Italian enterprises don’t push the envelope of the potential for big data.

- **Challenges, however, are not always technical.** When asked about the most critical challenges they faced when orchestrating an overall business intelligence application strategy, respondents replied that the top priority was difficulty in recruiting and retaining BI talent. With the sudden interest in data and analytics, demand for BI talent exceeds supply. A second concern is a lack of business C-level executive support for the BI strategy, which likely reflects the lack of maturity of technical teams in articulating business benefits.

- **Enterprises look to service providers and consultants to assist in all phases of big data adoption.** More than 70% of respondents expect to turn to a consultant or service provider for help in either defining strategy or preparing for implementation or outsourcing the whole solution and operation.

- **The vast majority of Italian companies will use cloud services for big data initiatives.** Although only 9% of companies have already implemented cloud for business intelligence, another 73% plan to use some form of cloud for their big data solutions at some point in the future. Given the sensitivity of business data, many businesses will likely embrace private or hybrid cloud solutions rather than entrusting their business intelligence to a public cloud infrastructure.

Source: A commissioned study conducted by Forrester Consulting on behalf of Reply, November 2012
Key Recommendations

• **Develop a solid big data strategy**, including specific information governance. Italian enterprises are overwhelmingly adopting big data initiatives, yet they still need to establish a holistic strategy to guide the process. That includes information governance — data security, quality, standardization, and life cycle. Information governance for big data is not necessarily the same as for other data analytics initiatives. Define data and process owners according to their business benefits.

• **Define KPIs to better align business and IT with executive sponsorship.** Big data projects should be driven by business to insure tight integration with and usage by the relevant business process owners. Start first with the desired business outcomes. Only by providing value to the business can big data professionals effectively team up with business partners to drive executive sponsorship.

• **Integrate the results into the business processes.** Don’t run big data projects as a standalone initiative — for example, within a small group of data scientists. For maximum impact and success, feed the results of your analysis directly into your business processes for users to make better decisions or for the automation and optimization of the business process.

• **Get the right expertise on board from day one.** Consider internal and external expertise and alternative deployment options and business models (e.g., cloud versus on-premises). More than most other analytics technologies, big data analytics needs the right skills to ensure not only high quality data input but also the appropriate models that fit the business scenario for accurate data output forecasts. Companies need to build, acquire, or involve external support to ensure that the appropriate skills are on board for successful predictive analytics projects from the very beginning.

*Successful big data is about products, processes, and people. Don’t get stuck on technical details. The success of big data projects requires some change management in processes and people’s behavior. Business intelligence is by definition about the business.*

Source: A commissioned study conducted by Forrester Consulting on behalf of Reply, November 2012
Thanks

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