



A Data Analytics Plan: Do you have one?

Five factors to consider on your analytics journey

Overview

Both the technology operations and business side of your organization may be talking about streaming Big Data, Fast Data or Smart Data. But are these overhyped buzzwords actually resulting in data-driven business strategies within your organization or are they leading to analysis paralysis and complaints of data delivery shortfalls?

The reality is that most organizations only manage to leverage a small piece of their data for better insight and strategic decisions.

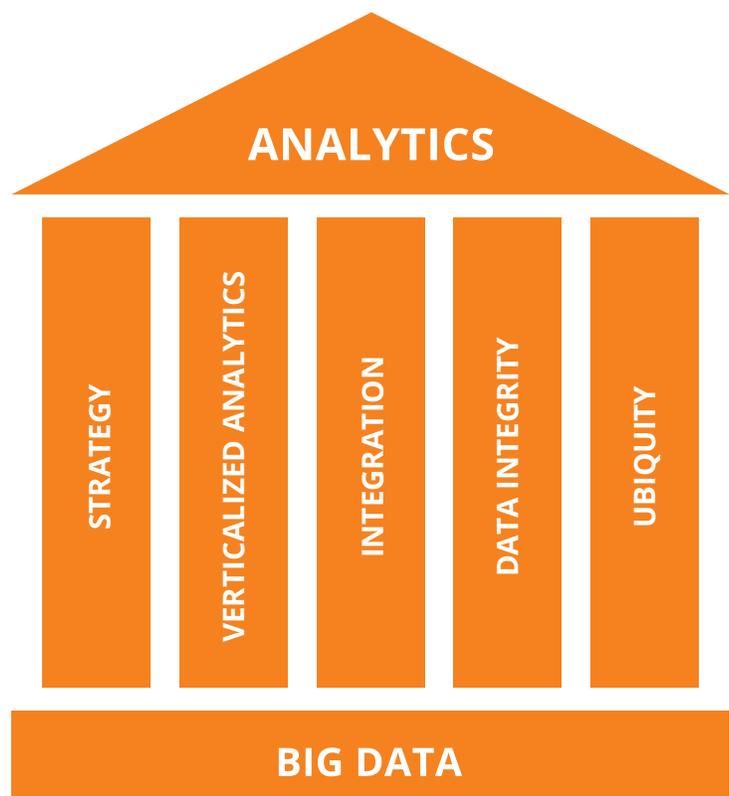
And this is why you need a data analytics plan.

This whitepaper provides a blueprint for an analytics strategy that works. Outlined are five main factors to consider when embarking or refining your organization's analytics journey. Although they are all key individual components, an integrated approach will speed up your ability to conduct real-time decision making, spot actionable insights, and get your analytics plan on-track today.

5 key considerations for implementing an analytics strategy that works:

- 1. Begin with your strategy in mind and make it scalable** – The big picture is always a good place to start
- 2. Verticalized analytics** – Industry specific vertical analytics means you leverage prevailing expertise
- 3. Integrated solutions** – Critical in your approach and you can hit the ground running; an example we will call upon for multi-channel and omnichannel banking environments is INETCO Analytics™
- 4. Data journey and lineage** – Maintain and adjust for data accuracy throughout its life cycle
- 5. On-demand access and distribution** – Analytics for everyone at all levels of the organization; it's time for a user-driven analytics strategy

In the next sections, we will dive into each of the five topics above and share recommendations to help guide your data analytics plan.



1. Begin with your strategy in mind and make it scalable

Every organization, every industry, every individual is looking or should be looking at self-improvement through better understanding of the plethora of data available to them. That's a very tall order and can be a daunting endeavor. Here are some simple steps to get started:

- **Start simple and with clear goals** - The journey will be lengthy and at times arduous, so pick something small. Articulate the desired outcome in a clear way and experiment. Look at different approaches to the problem and don't pick a direction just because you've seen it done a particular way. Solutions and technology are evolving at an almost daily rate and last year's good idea could easily be obsolete today.
- **Identify an internal champion** - Any initiative no matter the size needs a vested, accountable and responsible person driving the cause forward. Make certain that you task someone to ensure your success and give them the support and priority they need to make it happen. Whether it is an individual champion or a data governance structure that is put in place, this is a key element in making your data strategy successful. A data governance structure is out of the scope of this whitepaper, however, we cannot stress enough that having a clear uniform understanding and strategy across the organization is a key pillar to its success.
- **Enable future growth** - With every step you want to focus on the small, tangible goals but never lose sight of the big picture. As you select technologies, establish processes, and make choices, always do so in the context of flexibility and future growth.

2. Verticalized analytics

As the analytics domain is maturing, there are many forays into approaches that work. One such strategy that can provide a head start in achieving your analytics goals is based on vertical analytics. More and more organizations are aligning themselves with analytics that are built from the ground up, aligned with their industry and problems in mind. Ben Kepes makes a similar argument below:

"...Gaining (general consumer financial) insights has traditionally been a big IT job – it required the creation of data warehouses, the wrangling of some pretty intense analytics querying solutions and a bunch of technicians to make it all work. INETCO is trying to collapse that all into a single product... Vertical specific analytics is going to be a big trend. INETCO is offering the banking sector something valuable here."

BEN KEPES, FORBES CONTRIBUTOR

(<http://www.forbes.com/sites/benkepes/2015/01/15/more-vertical-analytics-solutions-inetco-goes-analytical-on-atm-data/>)

Additionally, choosing to work with a vertical analytics vendor means that you can leverage industry learnings and share in the benefit of the experience they have in the vertical. As important as those things are, it is crucial that your vision aligns with that of your vendor in driving performance, customer satisfaction and future-proof analytics.

3. Integrated solutions

As we discussed previously, a major factor that can fast-track you through your analytics journey is to collaborate with an organization that has created an integrated offering. This integrated offering should include various aspects of data and analytics such as:

- **Data source access**
- **Data integration**
- **Data automation**
- **Data availability**
- **Data extraction, parsing and cleaning**
- **Data security**
- **Data redundancy**
- **Scalability and responsiveness**
- **Reporting and interactivity**
- **Data distribution**
- **User access**
- **Predictive analytics**
- **Etc.**

In the following subsections, we review the components of **INETCO Analytics** and some of the benefits associated with this type of design and architecture. We'll discuss some of the components listed above and how these challenges are solved. The key components to identify below are shown in the dotted lines:

- **Data Subscriber - Connect to various sources**
- **Analytics Engine - Algorithms and data transformations**
- **Data Store Cluster - Enable scaling of the data**
- **Visualization Server - Provide diverse access and reach**

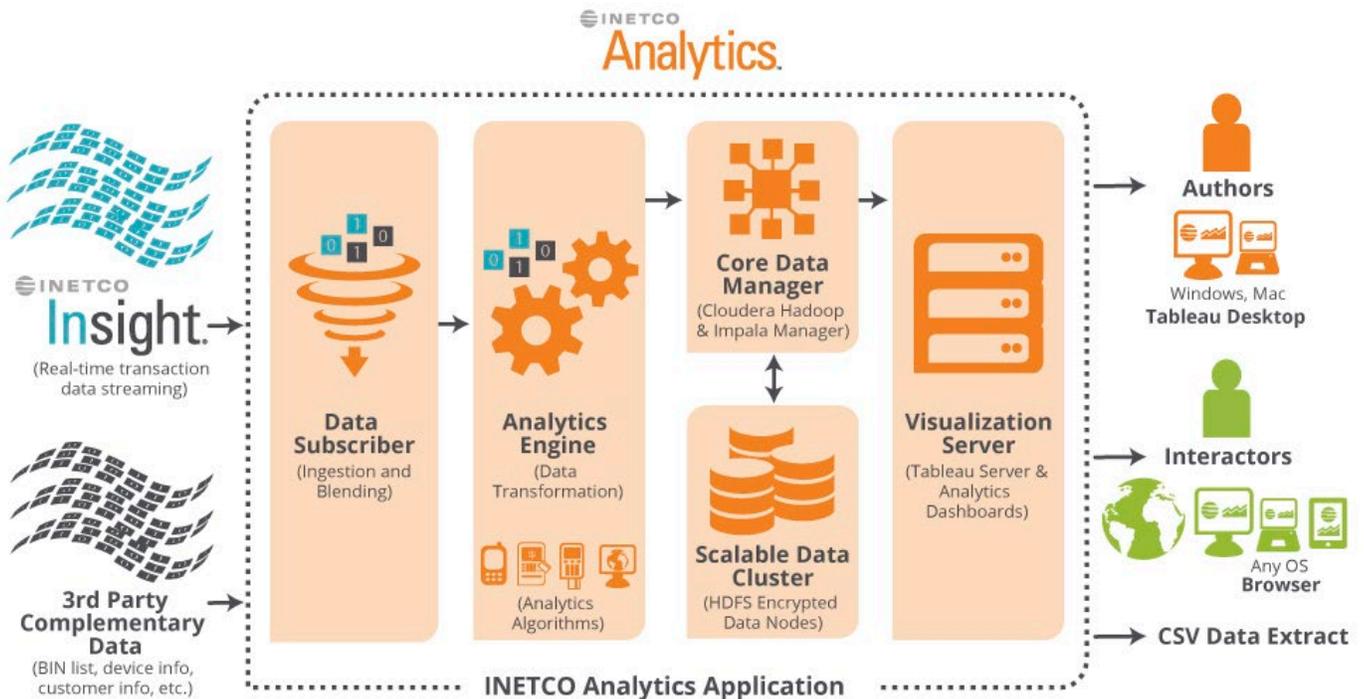


FIGURE 1: INETCO Analytics architecture

Data sources

Data presents so many challenges along with so many opportunities. Some valuable tenants to keep in mind are:

- **Use diverse data, not just more data** – With a robust data subscription engine, your solution should allow for easy ingestion of various data sources, such as transaction data in addition to the primary data that we deem necessary today.
- **Maintain one copy of your data, not multiple** – As detailed in the next section: *Data journey and lineage*, data is hard enough to maintain and clean that there should only be ONE master data set being streamed in from trusted data feeds.
- **Regardless of what you recognize today, plan for exponential growth** – This is the data era where there is data everywhere you look and what might seem inconsequential today may become something you rely on tomorrow.

Any robust and integrated solution should deliver these minimum requirements to ensure that you have the flexibility through your data journey.

Vertical algorithms

As we saw in the previous section, diverse data can hide within it gems that can only be uncovered through analytics and predictive algorithms. The faster you analyze the data, the faster the predictive value. Ensure that your solution has the ability to run simple to complex algorithms that identify patterns, trends and recommendations that could not be possible in data isolation. As you look at data in more integrated and correlated ways, you will be surprised. Data has more value than you may have initially anticipated.



Future-proof data store

The integrated data source must provide the ability to support your modest goals today but provide a roadmap to grow with the speed of your organizational analytics. INETCO Analytics uses Cloudera Hadoop, a “distributed storage and distributed processing of very large data sets on computer clusters built from commodity hardware.” Some of the benefits of using Hadoop are:

- **Scalable** – It is a highly scalable storage platform, because it is built on clusters of servers. As more storage is required, the cluster can be grown to provide more storage and processing. Rather than being locked to a single server, a Hadoop cluster can grow to thousands of nodes and run zettabytes (10007 bytes) of data.
- **Cost effective** – Due to the inherent architecture in Hadoop and leveraging distributed commodity hardware, it has essentially reduced the cost of storage by a factor of 100. In the past, the cost of storage traditionally became a business concern and regularly resulted in only summarized data being stored. Hadoop removes that expense and means that all your granular data can be stored indefinitely.
- **Flexible** – Hadoop enables easy access to both structured and unstructured data sources. As a result, organizations can start to incorporate data from exploding sources such as social media channels, metatags and advertising information, opening up a myriad of new purposes for the data.
- **Fast** – Given Hadoop’s design, it has the ability to find data quickly and map to it wherever it may be. Distributed processing capabilities mean that the inexpensive computing that houses that particular data will also have the tools and capacity to process the data much faster than a centralized approach. The power of distributed computing results in scalable data storage delivered with scalable processing.
- **Resilience** – Fault tolerance is inherent in the Hadoop architecture. Data is not only distributed throughout the cluster, but it is also replicated for disaster recovery in the event of a failure. As the cluster grows, this provides data protection from both single and multiple simultaneous failure events.





Finally, given the massive movement in the open-source community, there are new tools all the time that improve the Hadoop ecosystem. With the growing need for data, these advantages are only going to improve with time.

Visualization server

Data is a gold mine only if you can retrieve it in a timely, cost-effective way. A visualization server that allows easy, organization-wide access to your data is paramount. Your organization must have wide-spread usage and adoption of this system to ensure that they are becoming data-driven in all aspects of their decision making. INETCO Analytics uses Tableau as its visualization server. Tableau has proven to be a leader in the visualization platforms space as seen in the 2015 Gartner Magic Quadrant:

Tableau has continued to drive forward the principles of analytics and visualization by being on the forefront of delivering products that are:

- **Easier to use** – Tableau has strived to deliver analytics for real business data and real business users. They pride themselves on the single click operation, leveraging the users' ability to recognize trends and patterns in a simple and intuitive way. Every member of an organization can become data-driven with this mindset.
- **Fast interactive visualization** – Tableau translates pictures of data into optimized database queries, making the ideation, analysis and visualization meld into one fluid, interactive activity. In addition, Tableau's fast data engine and in-memory architecture means that the analytics become a seamless activity.
- **Accessible to everyone** – Regardless of where the analytics is done and the stories and dashboards created, Tableau boasts robust file sharing to Tableau readers, server interactive, online web publishing and mobile distribution. This makes the power of the data accessible to everyone in your organization.
- **Simple to integrate with existing systems** – Tableau provides over 40 data connections to various systems from Cloud-based sources to personal data files on existing systems.

Other benefits that Tableau boasts can be reviewed at www.tableau.com and include aspects such as:

- Visual analysis in a click
- Deep statistics
- Metadata management
- Best practices built in
- Data engine
- Mapping

4. Data journey and lineage

Managing master data and tracking data life cycles can be a significant challenge. Data can lose its integrity as it moves through different stages of its life cycle. Ensuring that this lineage is well defined, controlled and maintained can greatly reduce the need to regularly clean, maintain and monitor the evolution of your data. In INETCO Analytics, the critical data pieces come from the **INETCO Insight** transaction feeds. Transaction data is pulled directly off the network in real-time which ensures timeliness, accuracy and integrity. These streaming Big Data feeds are then stored and maintained in a single data source for their entire life cycle. Additional data sources are also maintained in the same manner as they are ingested through the data subscriber.

An understanding of the vertical, automated cleansing algorithms within your solution will add another level of integrity to the data that can be used for critical business decisions.

5. On-demand access and distribution

According to “The Forrester Wave™: Agile Business Intelligence Platforms, Q3 2015” by Boris Evelson, business user self-service is the key differentiator in the agile business intelligence market:

“As enterprise business intelligence driven by technology management becomes commoditized, features that empower business users to be self-sufficient will differentiate software providers. Vendors that can deliver business user self-service features without sacrificing essential enterprise capabilities will position themselves to deliver the best business intelligence platforms to their customers.”

The best results from analytics are when you combine data, technology and people to get the most insight. As we discussed in the *Integrated solutions* section, “people” refers to every individual within an organization and not a select few data scientists. A pragmatic, user-driven analytics strategy gets both technology management and business professionals aligned in order to win, serve and retain customers.

Data in the hands of every level of the organization, from executives to field personnel, extends the distributed paradigm of storage and processing to include distributed analytics and distributed value. Providing on-demand access to data and leveraging collaborative technologies will result in a transformation and create more analytically connected people in the organization. No longer should data be isolated to particular scientific silos. It should become the foundation of building a data-driven culture through ubiquitous access.



Conclusion

The next transformation in how businesses are run is fueled by streaming Big Data, Fast Data and Smart Data concepts. With the plethora of mobile devices being connected every day and the ever-growing adoption of wearables and the Internet of Things, being able to make data an integral part of your organization is going to be crucial when it comes to staying ahead of the competition.

Investing in an integrated analytics solution that will align with your strategy, handle data variety, and deal with the explosive rate of data volumes will be required to stay competitive. INETCO Analytics is a proven solution that delivers on all 5 of the key considerations explored in this whitepaper. It is an integrated solution that delivers the blueprint for an analytics plan:

- 1. A scalable big picture data strategy**
- 2. Verticalized, industry specific focus and expertise**
- 3. Integrated solutions for diverse data sets**
- 4. Data journey and lineage**
- 5. Easy, on-demand data visualization and distribution**

For more information on the INETCO Analytics software, contact analytics@inetco.com.

About INETCO®—Every transaction tells a story®

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