

The Analytical Advantage: Strategies for the Analytics Lifecycle

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Abstract

An organizations' analytics culture is becoming a differentiator in how organizations attract donors, stakeholders, customers, and employees. Organizations that have successfully integrated their analytic capabilities with strategy are seeing the benefits of evidence-based decisions that drive results. Most organizations' analytical culture fall into one of five phases of maturity ranging from Analytic Infancy where an organization has little leadership support, limited analytical skills, and lacks processes to an Analytical Competitor where an organization has a C-Suite-supported, integrated, enterprise-wide system that aligns data with strategic actions. Each developmental phase has a distinct culture, challenges, and strategies for driving results. This paper will examine each developmental phase and provide employees, project managers, and other stakeholders with the understanding of how to deliver results and growth in each analytical phase.

The Analytical Advantage

From the social sector competing for funding to Fortune 500 companies competing for customers, data has become the lifeblood of many organizations' competitive advantage. Nonprofits use data to more effectively meet their mission, target donors, and showcase results to stakeholders, prospective donors, and foundations. Government agencies use data to isolate and mitigate risks, and determine resources to more effectively meet their mission. The private sector is using data to better serve customers, target key markets, and grow their profits. Each sector has its own incentives. Fundamentally, each organization is seeking to differentiate themselves from their competition for donors, funding and resources, or customers' dollars.

Organizations that have effectively fused their data analytics capabilities with strategy are rocketing ahead of the competition. These organizations are using analytics to continue to do more – impact more people, meet greater mission needs, better reach customers – with less by using data to focus resources on the areas that will best drive strategic results.

When stepping into an organization as an employee, project manager, consultant, or stakeholder, it is critical that one gains an understanding of where the organization is with its analytical culture. Evaluating the organization upfront can lead to savings in time, cost, and resources by enabling one to understand who to communicate to and what message to deliver, what processes and tools to leverage or develop, and how to balance meeting the organization where it is while pushing the organization towards the next developmental stage of analytics.

The Analytics Lifecycle

Most institutions' analytical prowess can be traced on a spectrum from limited reliance on metrics to an integrated, enterprise-wide system for making evidence-based decisions. At each phase, there are cultural changes and tools and techniques that must be developed to hasten adoption. With any organizational change effort, an emphasis on value-add, results, and “quick wins” must be communicated to reinforce change and build momentum towards greater developments. Evaluating where you are in the analytics lifecycle can enable you to more adeptly manage the risks, challenges, and shortfalls of the organizations' analytical capabilities.

Most organizations' analytics development can be qualified into one of five phases. These phases often align with how strategically aligned and developed an organization is.

Does the organization have a documented strategic plan with defined goals, objectives, enabling actions, and performance measures?

Does the organization have consistent definitions of their performance measures and standard processes for capturing, reporting, and interpreting data?

Do personnel have the skills in place to capture, analyze, and interpret data?

Does leadership champion analytics and have a desire to use data to make evidence-based decisions?

These are all key questions that can be used to evaluate where an organization stands in its analytics lifecycle and can help inform and guide decisions when managing projects for that organization. Thomas Davenport and Jeanne Harris’ “Competing on Analytics: The New Science of Winning” provides a useful framework (which I have interpreted and paraphrased below) for evaluating where an organization resides. This framework can be adapted to identify symptoms and accompanying actions to help manage projects for each phase and support change management efforts.

Phase ¹	Objective	Process	Skills	Champion
Analytic Infancy	Emphasis on “gut-based” decisions	Does not exist	Limited	None
Localized Analytics	Desire for more objective data	Disconnected, narrow focus	Pockets of analytics skills	Middle management
Analytic Aspirations	Coordinated metrics	Standardizing processes	Aware and developing skills	Some executive support
Analytical Organization	Building integrated analytics providing enterprise-wide insights	Some embedded standardized processes	Exist and are aligning across organization	Broad executive support
Analytical Competitor	Develop strategic insights to better meet goals	Fully embedded and integrated standards	Widespread, recognized, and aligned	Executive leadership-driven

¹ Davenport, Thomas and Harris, Jeanne, Competing on Analytics: The New Science of Winning

Organizations range in analytical maturity. Those on the developmental side have little leadership support, limited skills to execute data collection and trend analysis, and unclearly defined systems, processes, and standards. As such, these organizations often make decisions based on more qualitative factors or “their guts.” More analytically mature organizations have strong leadership support for data, programs that are held accountable to meeting targets, and use data to tell the story of their programs. Standards and process are established, integrated, and embedded across the organization so that communication is clear, consistent, and resources are aligned to strategic objectives. Each phase has its own risks, challenges, and approaches for optimizing results.

1. Analytic Infancy

“So you just want me to count more widgets?”

“We don’t have any way to track that. There is no point to tracking that anyways.”

“I know my program better than anyone and I don’t need numbers to tell me how to manage it.”

Culture: Organizations in Analytic Infancy have a fierce pride on making “gut-based” decisions. They have few processes in place for collecting data, likely have no documented definitions of the data that is being collected, and their use of data may be more to report a number rather than to show changes or inform decisions. Tracking, consolidating, and reporting data is likely a very manual process (spreadsheets) that is subject to human error. Leaders may not be actively engaged in tracking metrics and are just concerned with “things getting done.”

Challenges: There are a numerous challenges that need to be prioritized. These challenges can be divided into People (the role personnel play), Process (the presence or absence of systems and structure), and Technology (support systems). Many of these challenges will be occurring simultaneously so it is important to isolate which challenge may be the root cause or the one having the greatest impact.

- **People Challenges:**

- **Knowledge:** Personnel may not know which metrics are important, how to develop systems to track performance, or how to make decisions based on this data. This can lead to resistance or lack of support for analytics.
- **Skills:** Personnel may not have the technical or analytic skills to collect the data, conduct the trend analysis, and think strategically about the impact of the data. This can lead to limited impact of the metrics or half-hearted efforts to collect the information without the skills to actually use the information to add value.
- **Attitude:** Personnel may actively resist data as this forces change, needing to learn new skills, and may spotlight problems. This can lead to detractors who stall efforts.

- **Process Challenges:**

- **Data Definition:** Standards may not be in place for how to define metrics leading to inconsistent capture, understanding, and people talking past each other. This can lead to frustration, communication breakdowns, as well as data integrity issues.

- **Process Development:** Processes for capturing the “right data” at the “right time” for the “right audience” may not be in place. This can lead to limited accessibility of data, which challenges the legitimacy of the effort.
- **Reporting:** Reporting communicates data, enables dialogue on the findings and alerts to prospective gaps or risks. Lack of a reporting structure can lead to limited use, awareness, or leadership support.
- **Technology:**
 - **Systems Integration:** Tracking systems may not exist or may not “talk” to each other leading to disconnected or incomplete data. This has the potential to foster data integrity issues that erode confidence in analytics.

Strategies for Results: There are a number of levers that can be pulled. Determine the one that may have the greatest impact. While some of these can be pulled concurrently, many of your initial focus should be on changing hearts and minds before building the systems.

- **People:**
 - **(Over) Communicate:** Methods may vary depending on the audience. To build capacity for data analytics, leadership needs to be invested in the concepts. Educate leaders by benchmarking against competitors, showing how other organizations have successfully leveraged data, and showing the benefits of this culture. Begin to develop a guiding coalition by giving stakeholders, managers, and other staff a seat at the table. Provide them with a forum to share their perspectives and offer feedback on the subject. Identify resistance points and provide information that may counteract incorrect assumptions about data.
- **Process:**
 - **Create a Starting Block:** Gain an understanding of the data ecosystem. Determine how data is currently governed and reported. Identify existing gaps in documentation of policy, processes, and collection. This will help evaluate which data analytics phase the organization currently resides in and will help shape a roadmap for future development.
- **Technology:**
 - **Build a Business Case:** Technology cannot be fully optimized without the hearts and minds of personnel and governing processes. In the Analytic Infancy phase, review how data is captured to gain a deeper understanding of how people are currently leveraging technology. This should help illuminate gaps and begin to build a business case for greater analytics.

Organizations in Analytic Infancy lack the awareness of analytics and the importance of data. Investing the organization begins with understanding and educating all levels of the agency. Helping the organization realize that “business as usual” is causing the organization to fall

behind competitors will help to build the business case. Additionally, showcasing the use cases of organizations who have successfully built an analytics culture will highlight the benefits of an analytical culture.

2. Localized Analytics

“We’re different over here. In our division, we have another way of tracking data. I wish everyone did it our way.”

“That would be helpful if we could trust the data. They have a different standard than us.”

“We’re still just counting widgets here. This has just added more to my already full list of responsibilities.”

Culture: Organizations in Localized Analytics have pockets of analytics taking place and may have some personnel who have a stronger capacity for analytics. Certain divisions may have some processes for collecting data and have an innate understanding of what that data is telling them. However, they likely lack documented, defined processes and standards. There is likely a wide variance between people, processes, and technology across the organization. While there may be some leadership involvement or interest, the division likely takes on the culture and personality of middle management overseeing the division.

Challenges: Much like Analytic Infancy, there are numerous challenges that need to be prioritized and addressed. While an organization in Localized Analytics is further along in its analytic maturity, developmental differences will be more pronounced throughout the organization.

- **People Challenges:**

- **Knowledge:** In addition to some personnel lacking the knowledge on how to appropriately use data and metrics, there may be others who have come from more developed analytical cultures. This has the potential to exacerbate discrepancies, create “golden children,” and enhance silos or rivalries.
- **Skills:** Discrepancies in skills may become more pronounced leading some personnel to become detractors as they recognize the divide between their skillset and the skills of those leading the charge. This could lead to attrition in the short-term.
- **Attitude:** Competition, rivalry, and active hindrance can threaten progress and development of an analytics culture.

- **Process Challenges:**

- **Data Definition:** Standards may vary as different areas operate on different ends of the spectrum. Variance leads to difficulty holding personnel accountable, cultural gaps, and data integrity issues.
- **Process Development:** Processes are likely not documented and may not always be followed or replicated. Variance also increases cultural divide.

- **Reporting:** Leadership may receive different reports with incomplete or inaccurate data depending on who is overseeing the data. This de-legitimizes the effort and may lead to limited future investment by leadership.
- **Technology:**
 - **Systems Integration:** Tracking systems may not exist or may capture distinct definitions of data. Personnel may have different interpretations of the data or may challenge the system's validity of the data leading to low-confidence data and resorting back to "gut-based decisions."

Strategies for Results: Localized Analytics has diamonds in the rough that can be used as models for building analytical capacity and capabilities. Finding those diamonds can help to extend the culture beyond local pockets of analytics.

- **People:**
 - **Recognize and Incentivize:** Amplify those success stories and pockets of analytics by broadcasting them across the organization. Leverage leaders who have prioritized analytics efforts by having these leaders champion efforts, recognize and reward personnel, and create incentives to entice more personnel towards these localized areas.
- **Process:**
 - **Share Best Practices:** Build on those localized pockets by capturing existing processes, policies, and best practices for review and codification. Begin to refine and document these best practices so that they can be provided to less analytically mature sectors of the organization.
- **Technology:**
 - **Celebrate Quick Wins:** Continue to build momentum by recognizing and promoting quick wins that have occurred on the people and process side. Empower personnel to model success by sharing their methods and approaches. Capture these approaches to support developing a more integrated data architecture.

Organizations that have evolved to Localized Analytics have the beginnings of analytic proliferation. These pockets of analytics need to be supported, recognized, and capacity needs to be built in order to extend the culture and enter the next phase of development.

3. Analytic Aspirations

"If finance could provide me with these numbers by the end of the month, I could build better forecasts and prioritize my resources more efficiently."

“We are working with operations to streamline this process so that we can reduce the bottleneck and get the product to the customer faster.”

“My boss is holding me to this target. We need to adjust workload in order to make sure that we hit it.”

Culture: Organizations with Analytic Aspirations are further along the developmental spectrum. These organizations are beginning to coordinate resources, sharing data and information, and making more collective decisions. Processes are being developed and standardized for collecting and reporting data and the organization is aware of the skills needed to become a more analytically mature organization. The organization is recruiting or training personnel to demonstrate these skills. Some executive leaders are leveraging data to make decisions and are providing the structure, resources, and removing barriers to building this culture.

Challenges: Challenges come primarily in taking best practices and coalescing these best practices into an integrated, cohesive data ecosystem. Organizations with Analytic Aspirations may still be suffering from legacy systems and adjusting to silos from the Localized Analytics phase. The emphasis in this phase should be on integration and standardization.

- **People Challenges:**

- **Knowledge:** There may be a divide between the “old guard” who witnessed the evolution of the organization and “new guard” being hired into the organization. Personnel may be coming from different perspectives which can hinder integration and collaboration.
- **Skills:** In-house or outsourced training may need to be developed as the organization establishes its approach to data analytics. This may require resources, staffing, and time away from regular duties for training and indoctrination into the organization’s approach.
- **Attitude:** Roles and responsibilities may shift across the organization as data analytics becomes more normalized. This will require people adapting to changing expectations.

- **Process Challenges:**

- **Data Definition:** Standards need to be defined across divisions as silos are broken down. This will require bringing disparate leaders of the organization together to establish consistent understanding, roles, and responsibilities.
- **Process Development:** Integrating processes will require identifying the standard system, tools, and guidance for the organization. This could require a high level of effort to standardize and integrate efforts.
- **Reporting:** Guidance and communication will need to be enhanced to ensure that the right processes, tools, and methods are utilized and results are shared.

- **Technology:**

- **Systems Integration:** Requirements need to be developed to establish an enterprise approach to managing data.

Strategies for Results: Organizations with Analytic Aspirations have identified those diamonds in the rough and are now polishing them so that a refined model can be built. These organizations must continue the momentum and set clear targets for success.

- **People:**

- **Form a Guiding Coalition:** A C-Suite Executive needs to champion this effort and drive integration by establishing a forum for further development. Leaders from across the organization should be involved in providing input, sharing efforts, and driving the organization towards greater analytical development.

- **Process:**

- **Align Strategy:** Actions need to align with strategic initiatives. Data needs to be reviewed and verified to establish feasible and relevant targets. Incentives need to be put in place to appropriately align efforts and foster collaboration.

- **Technology:**

- **Develop Requirements:** Elicit requirements for buying or building the appropriate system(s) to manage data needs across the organization. End users need to be involved in requirements elicitation so that the appropriate needs are captured and incorporated into an integrated system.

Organizations with Analytic Aspirations have the aptitude and capability to become an Analytical Organization. In this stage, the focus should be on integration and aligning actions across the organization to meet organizational strategy.

4. Analytical Organization

“Our donations increased last month. I’m reviewing our marketing campaign to see if there was one approach that was more effective than others and I am reaching out to events to see if there was an event that drove the increase.”

“We were behind on our invoices last month because we ended up receiving more than we had forecasted. We will continue to track and will increase overtime if needed so that we can complete invoices on time next month.”

Culture: Analytical Organizations are working towards an integrated, enterprise-wide solution. Personnel are coordinating and there is often a shared goal or incentive between divisions. Processes are becoming more consistent and standardized, and data is becoming less disparate and more consolidated across a system. Personnel are confident in the data and comfortable using the data to make strategic decisions. Executive leaders are actively involved in setting targets and holding personnel accountable to meeting these targets.

Challenges: Challenges come primarily in the form of developing the systems that foster collaboration, communication, and integration and ensuring that these systems do not exacerbate internal rivalries and competition.

- **People Challenges:**

- There may still be remnants of a divide between an “old guard” and “new guard.” There may also be internal rivalries that develop between divisions or managers building a business case for resources, promotion, or greater responsibility.

- **Process Challenges:**

- Executive leaders need to ensure that they have enacted the appropriate structure that recognizes collaboration and performance, facilitates communication, and aligns incentives with results. As the organization moves towards an enterprise-wide solution, it will need to involve personnel in the development and standardization of processes for capturing, communicating, and analyzing data.

- **Technology:**

- Wide-scale change necessitates conversations and involvement at every level. If a new system is being designed, staff at all phases should be involved in the development process to ensure that requirements are appropriately incorporated.

Strategies for Results: Analytical Organizations need to continue to nurture their culture by providing structures that foster communication, collaboration, and integration and that recognize and reward performance.

- **People:**

- **Incentive and Recognize:** Executive leaders need to make sure the right performance structure is in place so that there are not perverse incentives that create zero-sum gains between divisions. The culture needs to recognize performance and also celebrate all of those involved in exceeding targets.

- **Process:**

- **Develop Feasible Targets:** Targets need to be feasible and grounded in quantitative and qualitative analysis. These targets need to be linked to strategic objectives. When results are communicated, Executive leaders need to be able to reward when targets are met and remove barriers when targets are not met.

- **Technology:**

- **Engage Personnel:** Systems should be regularly reviewed and updated. Enterprise systems should be developed with staff input so that staff are invested in the solution, engaged, and end users are able to identify and mitigate risks upfront.

Analytical Organizations still have room for improvement and need to continue to build a culture that uses data across divisions, aligns efforts towards organizational goals, and recognizes collaboration and integration.

5. Analytical Competitors

“Not only did we exceed our targets this quarter, we captured market share from our main competitor. Our greater emphasis on customer service is one factor that lead to this success.”

“The foundation cited our detailed breakdown and analysis of how funding is used for our programs as the main rationale for us earning the grant over the 100+ other organizations that applied for it.”

Culture: For Analytical Competitors, data is a way of life. Data is used both inwardly to manage internal operations, forecasts, and risks, and outwardly to differentiate against competitors in the market. Analytical Competitors are well-integrated with an enterprise-wide system. Targets are known and Executive leaders are very involved in setting those targets and managing progress.

Challenges: Just because the organization resides in the most analytically developed phase, does not mean that it is without challenges. There is always an opportunity for continuous improvement and better analysis and the organization should continue to benchmark and plan for the future.

Strategies for results: The organization should focus on attracting, training, and retaining top talent and identifying opportunities for continuous improvement.

- **People:**

- **Refine Human Capital:** Continue to refine hiring methods to attract, select, and retain people with the right knowledge, skills, and abilities. Continue to build a culture of integrated goals to prevent internal rivalries from metastasizing. Build on foundational talent through training, mentoring and coaching, and succession planning.

- **Process:**

- **Foster Continuous Improvement:** Build on analytics by recognizing efforts for continuous process improvement. Identify metrics that may not be telling the full story or build metrics that may better capture the information needed to inform decisions.

- **Technology:**

- **Assess Technology:** Continue to assess current technology and developing technology to stay ahead of the curve and ensure that analytical culture continues to use the best tool to meet organizational needs.

Analytical Competitors must continue to build and maintain their culture in order to not only defend their competitive advantage, but also to stay ahead of the competition. Now that a strong foundation has been built, Analytical Competitors will need to fortify that foundation through refining processes and technology, and ensuring the right people are joining and leading the effort.

Delivering Results

Recognizing the organizations' analytical phase is the first step to developing strategies for mitigating challenges and evolving the culture. In order to be most effective, one must adapt approaches to where the organization resides in the analytics lifecycle. Identifying the people challenges, process limitations, and technology gaps upfront will limit re-work and lead to greater time, resource, and financial efficiencies. This recognition will not only drive results, but also help build a roadmap for further analytical development.

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Evan Piekara currently works in management consulting as a Senior Manager for BDO Public Sector. Evan supported the launch of BDO's Public Sector Management Consulting practice helping government and nonprofit organizations develop strategic plans, performance metrics, and manage change efforts. In this capacity, Evan has collaborated with a range of executive leaders and managed diverse teams to deliver results to complex challenges often under tight timelines. Evan currently holds over 8 professional certifications including Project Management Professional (PMP), Change Management Specialist (CMS), Certified Conflict Manager (CCM), Six Sigma Lean Professional (SSLP), Total Quality Management Professional (TQMP), and a Strategic Organizational Leadership Certification (SOLC).

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