ANALYTICS MATURITY ASSESSMENT AND ROADMAP

IMPROVING ANALYTICS EXECUTION TO MAXIMIZE RETURN ON INVESTMENT

Provides a customized appraisal of the analytic maturity within an organization. The assessment compares current analytic activities and processes to industry best practices, prioritizes data-centric business goals, and identifies opportunities to employ analytics to maximize return on investment.

ASSESSMENT OBJECTIVES

- » Determine the analytic readiness and maturity of an organization
- » Focus on the convergence of data, technology, and people needed for success with analytics
- » Prioritize business goals to maximize return on analytics investment
- » Provide actionable roadmap for improving the value of analytics

DELIVERABLES

- » Comprehensive assessment report with scoring details
- » Roadmap of prioritized analytics opportunities
- » On-site presentation of results to key stakeholders

INDUSTRIES

- » Insurance
- » Healthcare
- » Consumer Products
- » Financial Services
- » Retail Banking

Planning for Success with Analytics

Small analytics teams embedded within a larger organization must be successful to survive, but analytics is a disruptive technology, and many organizations fail the first time they attempt a major analytics initiative. Analytics create value by building upon several layers of technology working in concert with trained individuals to solve specific business problems (Figure 1).

Breaking down silos and navigating organizational changes throughout the analytics life cycle can be difficult. Success requires a thorough understanding of technological and organizational capabilities, limitations, and opportunities and then building a common vision for analytics throughout the organization.

Elder Research has worked with over 200 organizations in different stages of analytic maturity. Our approach combines the best practices for data mining embodied by the Cross Industry Standard Process for Data Mining (CRISP-DM) with the best practices for Agile and Lean software development. Following this Agile Data Science methodology creates an efficient process of exploration where possible improvements to the overall process are carefully considered and continuously evaluated.
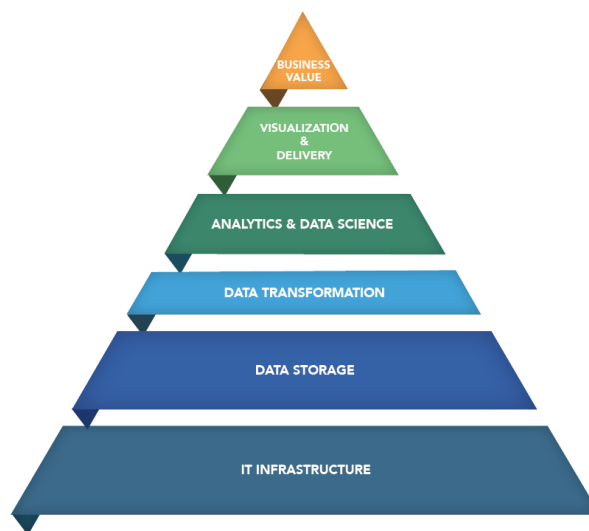

Figure 1. The Analytics Value Pyramid

ELDER RESEARCH
— DATA SCIENCE · AI · MACHINE LEARNING —

Developing a Roadmap for Success

In our client engagements, we seek to "teach to fish" — to help our clients build their internal capabilities to ensure their continued analytic success. During the assessment, we seek out and record a roadmap of possible opportunities to improve the status quo across the organization. This analytics roadmap ranks each opportunity along three dimensions: Cost (both direct and indirect), Return on Investment, and Actionability (Figure 2). Our goal is to help identify low-cost, high-return actions that will help build analytic momentum.

Building on lessons learned from two decades of experience, our proprietary assessment methodology focuses on the five capability areas that are necessary to achieve operational analytics excellence: Analytics, Culture, Process, People, and Infrastructure.

Within each category are four or five key sub-areas, defining specific capabilities that need exploring.

ANALYTICS

The assessment of analytics measures the sophistication and rigor of the existing analytics approaches. Nearly every organization is already doing analytics in some form; however, each varies significantly in their sophistication and the types of tools used.

We use a ladder of analytic sophistication called the "Ten Levels of Analytics" (developed by Drs. Fast and Elder). Each level increases in sophistication, either by asking a more complex question or by adding more sophisticated algorithms. Not every analytic approach is appropriate for every problem, so we consider appropriateness as well as sophistication.

CULTURE

Having an analytics-ready culture is the single best indicator of future analytics success. Though analytics is a technical discipline, technology alone is not sufficient to deal with the unexpected discoveries that are a routine part of data analysis work.

As with most endeavors, success starts at the top. Successful an-alytics organizations have an executive or senior manager who is a champion of analytics work. A champion is needed to create a shared vision for analytics among the team members, build consensus on what constitutes a success, and ensure that the process is not abandoned prematurely.
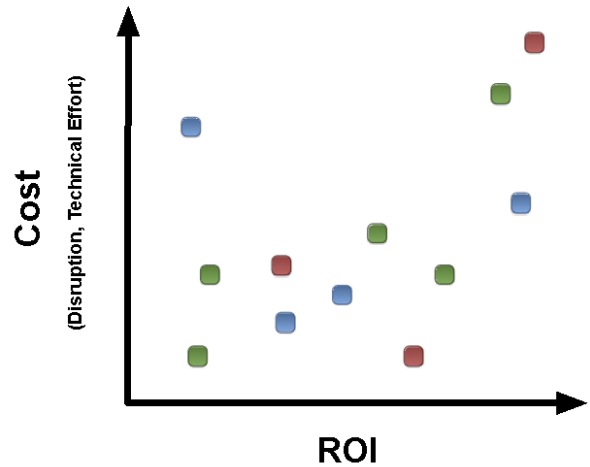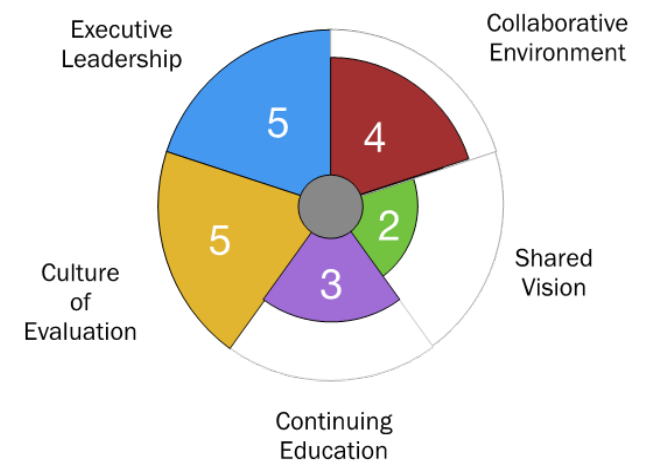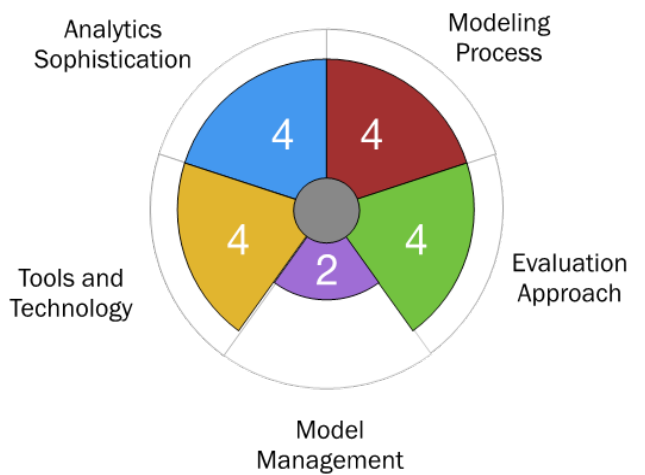

Figure 2. Ranking Analytics Opportunities

PROCESS

Building successful analytics processes is essential for enforcing analytics culture and allowing technical successes to be repeated over time.

Analytics cannot succeed without collaboration between stakeholders across the organization, so it is best to formalize this collaboration between departments through explicit policies and procedures. Successful models will persist within an organization, requiring maintenance and updating as the data platforms change. Adhering to a documented process ensures that future staff can quickly and easily refresh models as needed. Oversight and compliance is necessary in industries with regulatory requirements, and oversight is useful in every case to avoid potentially harmful situations that might arise from a solely data-centric view of the world.
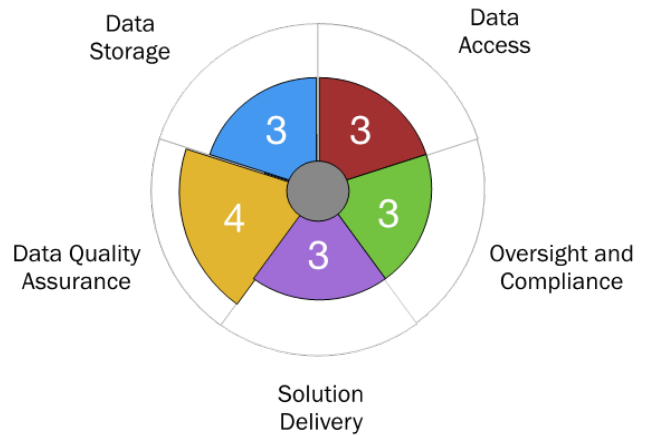

PEOPLE

No organization can function properly without the right personnel. Data science activities require curious, analytically minded people who are technical enough to deal with the different information technology aspects of data science, mathematically minded enough for the statistics, and creative problem solvers. It is rare that any one individual starts with all of those skills, so a commitment to continuing education is a valuable organizational trait.

Every analytics team needs access to expertise in IT infrastructure, data storage, data transformation, analytics, and data visualization. Though a single individual rarely has skills in every area, it is helpful for every team member to have some exposure to each of the areas so that they are able to "speak the same language" when talking about data.
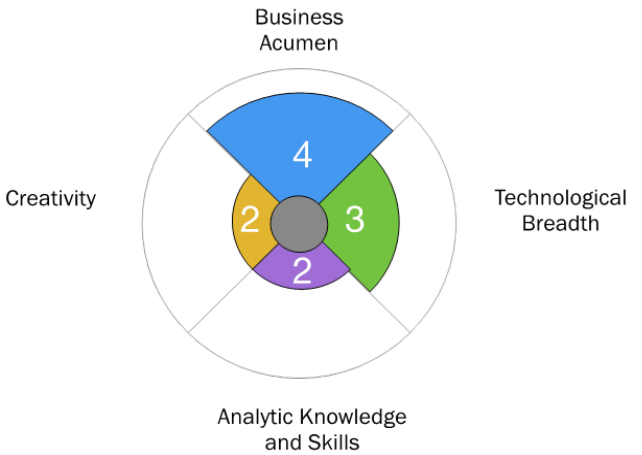
INFRASTRUCTURE

Analytics does not fit within the usual information technology paradigms. Processing requirements and data loads usually grow after starting an analytics project, leading to significant space constraints on storage area networks or database servers. Data transformation ensures data are stored in a format that is most efficient for analytics. As analytics permeates an organization, the value of visualization and discovery increases. A successful organization enables non-technical users to access and apply complex analytic results to their work. By bridging the gap between the technical and operational staff visualization greatly increases the value of analytics.
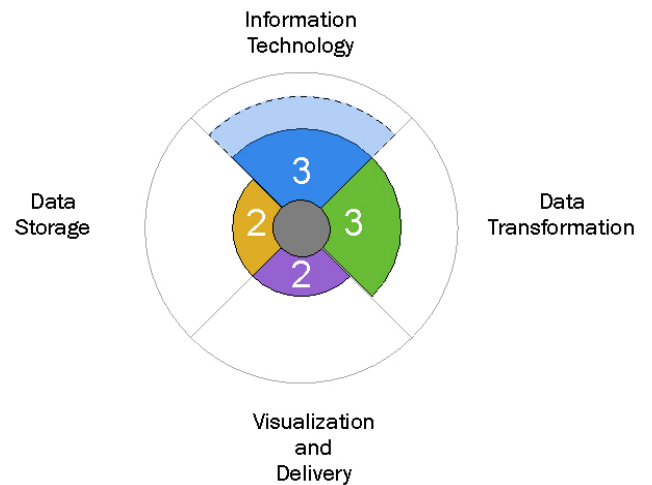
ASSESSMENT TIMELINE AND DELIVERABLES

The assessment involves an initial preparation phase and on-site meetings with key stakeholders.

Assessment Timeline
Initial Preparation (2–3 weeks before on-site meeting)
» Preliminary Questionnaire » Background Material on Existing Analytic Strategy (optional) » Planning Meetings with Leadership
On-site Meeting Agenda (2 days)
Day 1: » Introductory Session » Business Overview » Reporting Overview » Operational Systems Overview **Day 2:** » Data Deep-Dive » Functional Breakouts » Initiative Focused Sessions
Deliverables (4–6 weeks after on-site meeting)
» Final Report and Presentation » State-of-Analytics Report » 23-point Maturity Assessment » Analytics Roadmap

At the end of the process we provide a comprehensive report and an on-site presentation of our findings and recommendations with an opportunity for discussion and questions. The report provides scoring details for each capability area and rankings relative to industry best practices (Figure 3).

The analytics roadmap highlights possible business process changes, technical pathways, and obstacles for success.

To learn more about Elder Research and how we can support your company's analytics initiatives, please visit our website or contact us at our Charlottesville, VA headquarters at (434) 973-7673.
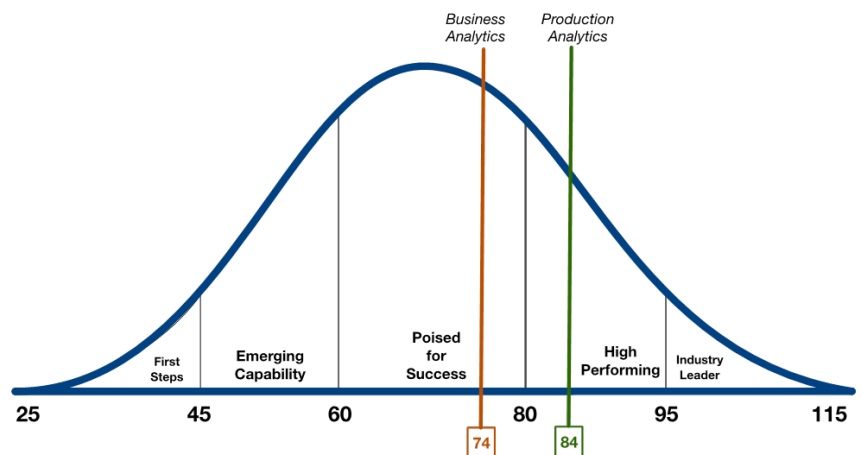

Figure 3. Example of Analytics Maturity Ranking Relative to Industry Best Practices