TAMING THE DATA SEA

FIVE KEY QUESTIONS FOR A SUCCESSFUL DATA STRATEGY

Feeling awash in a sea of data? You’re not alone. Data has become ubiquitous. We collect it, store it, sort it and try to make use of it. Regulators demand it. Investors ask about it. Many organizations feel overwhelmed by it. Fortunately, it is possible to tame it. But first you need to develop a strong data strategy for your business, and identify a champion to oversee it.

Our recent research (see Helping Asset Managers Navigate the Data Sea at right) showed that, while overall organizations were finding ways to create tangible benefits from the vast quantity of data at their disposal, only 13% felt they were maximizing their data’s value. As we explored this further, it became clear that the biggest difference between firms that were successfully making the most of their data and those that were floundering was this: successful firms had a focused data strategy under the guidance of effective and informed leadership.

21ST CENTURY DATA STRATEGIES

While the importance of a data strategy sounds obvious, actually designing and executing an effective one can be a challenge. In our survey, among organizations that said they had a data strategy:

- Only 27% felt it was entirely successful in helping them meet their current challenges and opportunities.
- Even fewer (13%) felt their strategy was entirely flexible in supporting future challenges and needs.

So if you’re struggling to create a data strategy, you’re not alone. It’s a recurring theme in our discussions with clients. While there is no “one size fits all” approach to building an effective strategy, we repeatedly see a common theme among those who stumble: they are starting at the wrong end of the process.

Helping Asset Managers Navigate the Data Sea

In 2015, Northern Trust sponsored a global study conducted by the Economist Intelligence Unit, aimed at learning how asset managers are dealing with the increasing volume of data they face. The survey included responses from 201 asset managers and insurance companies. All respondents were involved in decisions regarding data sourcing, management and strategy. A review of the survey results can be found at www.northerntrust.com/datasea
Years ago, data was limited, acquiring it was manual and managing it was expensive. Organizations would acquire what data they could afford and try to maximize the value from there.

Today, that equation is reversed. The amount of available data has exploded, and the technology to support it has gotten both cheaper and more powerful. Today’s successful data strategies start at the end: by identifying the business goals you want to achieve or problems you wish to solve, and then letting the data work for you.

BUILDING A COMPREHENSIVE DATA STRATEGY

While it seems obvious, it’s helpful to clarify specifically what we mean by “data strategy.” Many data initiatives revolve around achieving a desired result through data (e.g., enhancing management reporting), but a true data strategy is much broader. In simplest terms, a true strategy for data is a holistic review of how data is used and acted on across an organization, identifying and deploying specific tactics to enhance data’s role in achieving business objectives.

In this context, a data strategy is much bigger than any one report or database. It’s really about examining the big picture in all of its complexity and finding the best means of putting all the moving parts together.

DATA TYPES
- Capital Activity Data
- Counterparty Data
- Investor Data
- Market and Reference Data
- Positions and Transactions
- Unstructured Data (e.g., e-mail, documents, contracts)
- Valuation/Pricing

DATA CONSUMERS
- Analysts
- Investor Relations
- Legal and Compliance
- Management/Directors
- Operations
- Portfolio Managers
- Risk Managers
- Sales and Marketing

BUSINESS FUNCTIONS
- Compliance
- Front Office
- Fund Accounting
- Middle Office
- Performance and Risk
- Reconciliations
- Strategy
- Transfer Agency
ESSENTIAL QUESTIONS FOR BUILDING A DATA STRATEGY

So where to begin? While each organization must define a process that makes sense based on its culture, needs and resources, a sound strategy starts by answering some key questions.

Question #1: Who’s steering the ship?

People are as important to the success of your data strategy as the data itself. In both participant responses and interviews, our survey revealed the critical importance of having a designated “champion” with the power to implement and enforce the data strategy.

So who should “own” your data strategy? The answer is different for every organization, but we’ve noticed some common themes among the most successful firms:

• **Choose someone senior and visible:** Data strategy is as much about change management as it is about data. The overall success of a data strategy requires a leader with the authority to help drive change. He or she must also have a cross-functional perspective, because a successful data strategy requires bringing together stakeholders from a wide variety of areas and thinking holistically about the organization’s goals.

• **Choose someone with a business role, rather than a tech role:** Data strategy is not an IT-driven function. It should be a business-driven function implemented with the help of IT. Business leadership of the process helps ensure that the strategy meets overall business objectives rather than becoming a technical solution based on the data itself.

• **Document and share:** Your entire organization should understand who owns the strategy and the process for providing feedback or input into strategy development.

While one individual may have ultimate accountability, building an effective strategy will require input and participation from many different stakeholders in your organization. Consider forming a working group with members from across the business to assist with strategy development. These same people can support governance and execution of the strategy itself as you move into implementation and beyond.

A Note on Governance

Any discussion about data strategy leads to questions about governance – how will you keep things on track? What’s the process for altering or re-evaluating your strategy? What is the timing for review and adjustment, and how does it align with how you manage the rest of your business? The answers to these questions are largely dependent on the strategy itself. But documenting a governance program is a key initial step in executing your data strategy.
Question #2: What goals do we want to achieve?

A sound strategy starts with a clear vision for what you want to accomplish. What are your overall business goals? What problems are you facing in your business that you want to address? Start your process by looking at the big picture. Many times you will have more needs and opportunities than you will have resources with which to address them, which makes prioritization critical.

Every organization will have its own list of priorities, but our survey revealed a strong focus on these five areas:

- Improving investment decision-making
- Managing risk
- Modeling or assessing risk
- Improving internal reporting
- Improving external reporting

To identify your list, start with an assessment of your organization’s business goals and priorities, and evaluate them against key questions:

1. Which of our goals can be effectively addressed with data?
2. Of these, which are needs and which are nice to haves?
3. Which initiatives will have the greatest overall impact on our business?
4. How many of these initiatives can we realistically implement and support?
5. What does success look like, and how will we measure our progress?

Spelling out your goals will help you sort out which data to focus on, and how to integrate that data into your operations.

Keeping Your Data Strategy on Track

Some of the most important factors in a successful data strategy have less to do with the data than with the process the data enforces. For example, setting goals is an important means of measuring progress. But equally important is having a regularly scheduled process to evaluate progress against the target. These "check points" offer the opportunity to identify gaps and make mid-course corrections to achieve the goal.
Question #3: What data can help us solve these problems or achieve these goals?

Organizations often already have access to the data they need to tackle their problems. But not all data is created equal. By specifying the business priorities you want to address, you can then focus your efforts on the right kinds of data, rather than trying to manage all of it equally.

With data, it can be hard to take a high level objective and draw a straight line to the specific action(s) you need to take to achieve it. Start with "top down" analysis of strategic needs, but be sure to follow with a "bottom up" review of the specific types and sources of data you will need so you can fully understand what it will take to achieve your goal.

Top Down

DATA NEEDED TO MAKE DECISION

STRATEGIC GOAL: GROWTH THROUGH GEOGRAPHIC EXPANSION
- Build global investor base
- Develop new trading expertise
- Diversify product set
- Expand into new markets

Bottom Up

DATA NEEDED TO MAKE DECISION

OPERATIONAL ANALYSIS: WHAT DO WE NEED TO EXPAND?
- Build/modify fund structures
- Assess legal/regulatory gaps
- Identify markets with potential
- Identify market and trading requirements
- Map out investor trends/demands

DECISION: ESTABLISH A, B AND C-TYPE FUNDS IN MARKETS X, Y AND Z
So how do you determine which data is the right data? Some needs, like meeting regulatory requirements, may be spelled out for you. Others, like making better investment decisions, require more careful analysis. As you evaluate data priorities, keep the following best practices in mind:

- **Understand the current process:** Map out processes as they exist today. What data is currently used? Who uses it? What are their frustrations/pain points? What data would make their jobs easier?

- **Evaluate the needs of both producers and consumers of data:** The people who compile and cleanse data have different needs and challenges than the individuals who actually consume that data. Make sure you are evaluating the entire process.

- **Consider accuracy requirements:** Some things – like net asset values and cash balances – demand exacting precision, while other things – intra-day pricing or estimated valuations – do not. Recognizing the difference can reduce time and money spent on unnecessary levels of precision.

- **Determine timing requirements:** As with accuracy, not all data needs require the same timing. Some things need to be in real time while others can be supported periodically. Determine which is which, and allocate your efforts accordingly.

- **Quantify what success looks like:** When setting your goals at the outset of your process, spend some time ensuring that they are measurable. Then establish processes for measuring your progress against those goals – and for adjusting course if you’re falling short of your target.

- **Look to the future:** Don’t restrict your analysis to immediate needs. Think about potential future needs as well. Even if you can’t build solutions for future needs, you can build solutions that allow for enhancements in future years. This is particularly important when it comes to data sourcing: look for data providers that can be flexible with your requirements and can change their deliverables quickly and easily.

**Thinking Strategically to Anticipate the Future**

It’s not always possible to account for future needs, but thinking strategically about your situation can help. Regulation provides a useful example. In this article, Northern Trust outlines how thinking holistically about regulations and their common objective of investor protection can help managers better anticipate future requirements even while the regulations themselves are being finalized.
Question #4: What are the technology requirements to support our priorities?

Too often, organizations start with this question before laying the proper groundwork. However, it’s far easier to map out an effective technology solution if you’re doing so in the context of your business goals and data demands.

Again, this is an exercise where starting with the widest angle lens and then zooming in is helpful. Look across your organization and your priorities and ask yourself:

- Are there duplicative processes that we can consolidate?
- What types of data serve the needs of multiple groups?
- How do the needs (timing, accuracy, delivery method) of those groups align or diverge?
- What formats and tools does your organization use to deliver data? Are they suited for the purpose?
- What are the outliers – are there ad-hoc or one-off processes that can be standardized?

At this point, you’re likely to find gaps or limitations in your current IT systems that will keep you from processing or delivering the data you need. It’s important to remember that designing a technology solution should not be exclusively an IT exercise. While IT often leads the effort, decisions about systems have a tangible effect on how your business operates, so input from business leadership is crucial for building a system that meets your needs.

To address IT infrastructure needs most effectively, consider these factors:

- **Buy, build or partner?** The power, flexibility and cost effectiveness of vended and outsourced solutions have grown considerably in the last decade – so consider vended solutions or outsourcing partners that can help you achieve your goals. Building “home grown” solutions should be considered a last resort.

- **Storage and processing:** Advances in cloud computing and distributed storage and processing solutions represent a significant initial investment, but their processing power, scalability and lower total cost of ownership can provide long-term benefits.

- **Delivery:** The best data strategy is useless if it fails to deliver information in a way people can use to make decisions. This can make things complicated because the needs of your end users – even those requiring the same data – aren’t always going to align. Taking the time to understand what your end users need, and providing it to them in a way that ensures they’ll be able (and willing) to use the data you’re providing is crucial to a successful data strategy.
Question #5: What operational and cultural changes are necessary to maximize the data's value?

Business goals, data and systems all affect an organization and how it goes about its daily business. Chances are your target data strategy won't just plug in seamlessly with your existing practices. It's far more likely that you'll need to change current operating practices to maximize the value of the data.

Data selection and systems design provide a crucial foundation, but realizing the benefits of a data strategy requires good analytical models that help translate data into actionable information. For these purposes, a “model” is any practice or procedure used by your organization to translate data into information people can act on. Examples of models and the kinds of questions you should be asking include:

- **Performance**: What are the right calculation methods and benchmarks to give us the most useful perspective?
- **Risk**: Which scenarios or methodologies make the most sense for us to employ?
- **Reference data**: What’s the appropriate threshold/tolerance for variance between sources?
- **Accuracy**: What is the appropriate data and frequency for reconciliation to give us confidence in our data?

**Key ideas when considering analytical models:**

- **Simplicity is best**: Aim for the least complex model you can build and still accomplish your goals; unnecessary complexity will add more risks than benefit.
- **Tie it back to people**: This is a recurring theme in data strategy. Just as with selecting your data and your systems, analytical models don't function in a vacuum. Keep your tools intuitive and aligned with people's needs.
- **Ask for help**: Outside perspective can be very helpful when trying to build analytical models that really work: don't be afraid to look to consultants or analytics firms to help refine your thinking.

The overarching objective of these questions is to identify explicitly how your organization can translate data into information that people can act on.
FIVE KEY QUESTIONS FOR A SUCCESSFUL DATA STRATEGY

Managing Cultural Change

Changing your data strategy can affect your organizational culture as well as your operating model, particularly if you are introducing data-driven tactics to functions that once had been more qualitative. Be aware of these potential effects and consider in your strategy how you will:

• **Communicate**: Explain strategic rationale for the changes to your employees.

• **Outline the benefits**: Be clear about how the organization and the employees will benefit from taking advantage of data.

• **Be transparent**: Be open about the effect new data strategies will have on job descriptions, organizational structure and staffing levels.

BETTER DATA: A VOYAGE, NOT A DESTINATION

Building an effective data strategy requires time, effort and a commitment from senior leadership. Both our survey results and our experience with clients have demonstrated that the most successful firms are those that make early investments, and understand the complex relationship between their data, their business practices and their long-term business objectives.

The coming years will bring new technologies and even larger volumes of information to be captured, sorted and analyzed. Building a sound and flexible strategy – with governance and measurement to refine that strategy over time – will be a deciding factor in which firms ride the big data wave to success, and which become lost at sea.

Learn More

If you would like to learn more about our research into firms’ data management practices, or what our experience working with clients over the years has shown to be best practices, please contact your Northern Trust representative, or e-mail us at asset_servicing_updates@ntrs.com.
APPENDIX 1: KEY FINDINGS FROM THE EIU/NORTHERN TRUST 2015 ASSET MANAGER DATA SURVEY

In September 2015, The Economist Intelligence Unit (EIU) conducted a global survey of asset managers, sponsored by Northern Trust, to shed light on how they are dealing with the increasing volume of data they face. The EIU surveyed 201 asset and insurance management executives. All survey respondents are involved in decisions regarding data sourcing, management and strategy. About half work for firms with assets under management exceeding US$5 billion. The firms are evenly split between the United States and Europe, with about 15% of respondents based in the United Kingdom.

EXHIBIT 1: HOW WELL DO YOU FEEL YOUR ORGANIZATION IS ABLE TO CAPTURE THE OVERALL VALUE FROM ITS USE OF DATA?

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2%</td>
<td>Entirely</td>
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<tr>
<td>13%</td>
<td>Fairly well</td>
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<tr>
<td>44%</td>
<td>Somewhat well</td>
</tr>
<tr>
<td>41%</td>
<td>Not well at all</td>
</tr>
</tbody>
</table>

SOURCE: Economist Intelligence Unit (EIU) 2015 Asset Manager Data Survey

EXHIBIT 2: TOP GOALS RANKED AS MOST IMPORTANT IN DEVELOPING THE COMPANY’S STRATEGY

% of respondents citing each option as one of their top three goals

<table>
<thead>
<tr>
<th>Goal</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving investment decisions</td>
<td>54%</td>
</tr>
<tr>
<td>Managing risks</td>
<td>43%</td>
</tr>
<tr>
<td>Modelling or otherwise assessing risk</td>
<td>34%</td>
</tr>
<tr>
<td>Improving internal reporting</td>
<td>23%</td>
</tr>
<tr>
<td>Managing cost</td>
<td>21%</td>
</tr>
<tr>
<td>Improving external reporting</td>
<td>21%</td>
</tr>
</tbody>
</table>

Excluding responses under 20%

SOURCE: Economist Intelligence Unit (EIU) 2015 Asset Manager Data Survey
EXHIBIT 3: TOP REASONS FOR ORGANIZATIONS TO INVEST IN NEW DATA SOURCES
% of respondents citing each option as one of their top three reasons

<table>
<thead>
<tr>
<th>Reason</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responding to new regulatory requirements</td>
<td>51%</td>
</tr>
<tr>
<td>Improving customer satisfaction</td>
<td>43%</td>
</tr>
<tr>
<td>Meeting new business goals</td>
<td>33%</td>
</tr>
<tr>
<td>Reducing costs</td>
<td>30%</td>
</tr>
<tr>
<td>Expanding efficiency through more comprehensive sources</td>
<td>25%</td>
</tr>
<tr>
<td>Responding to individual manager requests</td>
<td>19%</td>
</tr>
<tr>
<td>Improving controls</td>
<td>19%</td>
</tr>
<tr>
<td>Tracking demographic trends of customers</td>
<td>14%</td>
</tr>
</tbody>
</table>

SOURCE: Economist Intelligence Unit (EIU) 2015 Asset Manager Data Survey
FIVE KEY QUESTIONS FOR A SUCCESSFUL DATA STRATEGY