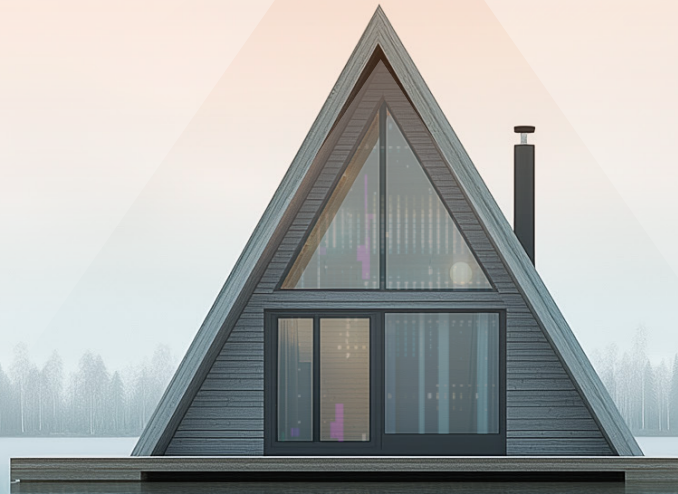


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CRAFTING YOUR DATA STRATEGY

EFFECTIVE DATA MANAGEMENT

Community banks and credit unions need to think about how they can use their data to gain efficiencies or grow.



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WEALTH ACCESS

Dear Reader,

Banks and credit unions are fortunate when it comes to data — at least, in one regard. They have an abundance of information about their customers at their fingertips. But financial institutions, especially smaller ones, are unfortunate in another way: Much of this data may be stored in a way that makes it unusable.

But technology continues to evolve at light speed, and more vendors are providing more products at increasingly accessible prices. That means even smaller banks and credit unions can access better data management and analytics tools, allowing them to get more from the information they already have on hand.

Still, for institutions just beginning to think about how to better utilize their data, the process is almost certainly overwhelming. This report, sponsored by Wealth Access, serves as a detailed guide aimed to help financial institutions craft an effective data management strategy. But as the experts in this report advise, the most important step is picking a straightforward data project and then just getting started.

In addition to that, you'll learn about the pitfalls banks and credit unions should avoid with their data management strategies and the governance that is required to ensure high-quality information is being analyzed.

All of this is incredibly important for community financial institutions looking to compete in today's world and remain independent. A good data management strategy can lead to a more efficient enterprise and stronger financial returns. Real-life examples from banks and credit unions are sprinkled throughout this report and demonstrate these possibilities. For instance, one credit union used its data to better target auto loans to members who might be in the market for a new car.

Finally, the report wraps up with a checklist of questions that banks and credit unions can use to guide their thought process as they embark on their data management journey.

If your institution is early in its data journey, I hope you'll find the inspiration to launch your own data management project in the coming months. For those further down the road, I hope this report gives you ideas of where your institution could go next.

Sincerely,

Jackie Stewart

Executive Editor

Bank Director

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WHY DATA MANAGEMENT MATTERS

By: Kiah Lau Haslett

The pace of technological innovation is accelerating. Creating and executing a data strategy today allows community financial institutions to be prepared for an uncertain future.

Community financial institutions have the potential to unlock greater labor efficiencies, new revenue opportunities and better risk management.

The key to achieving these outcomes? Data.

That's because better data can lead to better decisions, which can help executives achieve operating leverage and improve efficiency. But much of that data has been stored as entries that need to be cleaned and standardized in disparate, unconnected systems. The work to extract and format the data is akin to an archeologist who starts digging and then will need to survey, identify, extract and clean their artifacts so they can decide what's trash and what's treasure.

Creating and executing an effective data strategy is imperative for executives, given how technology is changing banking. Community financial institutions are at a pivotal junction: There is a daunting amount of work to be done, but there are untold possibilities on the other side. The data is there, the tools are available and there is even something of a play-book for institutions to follow to make the journey smoother.

"Smaller banks now have an opportunity to start seeing the big picture about their clients like big banks do," says Andy Zinn, chief innovation officer at Wealth Access, which helps financial institutions with their data and sponsored this report. "Even though they don't have the \$100 million-a-year tech budget, they're able to ... broaden the scope of what they can see within their own four walls."

Blind Spots

Sonata Bank in Brentwood, Tennessee, started its data journey early in its operation, after the institution was recapitalized by an investor group in 2022. This has arguably given the \$222 million bank, a unit of Sonata Financial Holdings, a competitive advantage among its peers.

Management knew that data was going to be a large part of its strategy and execution



“Smaller banks now have an opportunity to start seeing the big picture about their clients like big banks do.”

Andy Zinn, Wealth Access

— and could even be an area it potentially monetized, especially as they thought about how to serve their niche market of quick service restaurant owners and workers, says Will Rhoads, Sonata’s chief innovation officer. This focus comes as community financial institution executives across the U.S. have become more serious about utilizing their data over the past decade, he says. Still, Rhoads sees varying levels of maturity and sophistication across institutions.

“Many [community banks] today are leveraging data for things like risk management, fraud detection and compliance reporting, but they’re not using it for proactive decision-making,” he says. “They’re living in an environment where their data is siloed across all these different systems ... that makes it hard to really pull all [the data] into one location.”

In Bank Director’s 2024 Technology Survey, 34% of respondents reported that they were in the early stages of their data strategies, using data in just a few areas of operations, while 40% reported they use data in several areas of their institutions but still saw significant room for improvement. Sixteen percent reported not having a data strategy.

One reason why Rhoads thinks small institutions struggle is because their data is in a format or location they can’t leverage to create meaningful efficiencies or greater growth opportunities. Technology of yesteryear, it seems, has created many of the data problems that banks need to solve today. To that end, Sonata started a project in 2024 to bring all its data into a data lake house. A data lake house is a data architecture platform that combines the flexible storage aspects of data lakes with the structure and management of data warehouses.

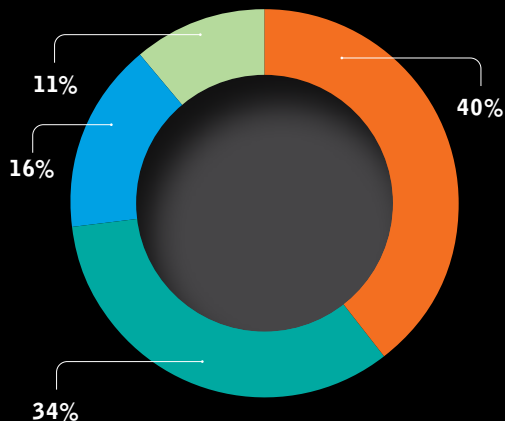
“A uniquely American challenge, I would say, is our banking architecture and systems are archaic relative to our peers in other jurisdictions,” says Mohammad Nasar, a principal in Crowe’s financial services consulting practice.

There is a “tremendous” amount of data stored in legacy systems, says James White, general manager of banking at customer relationship management software firm Total Expert. Older technology systems could only store data of a certain width, which meant that entries into these systems were constrained, and the rest was discarded. Some files still use 8-bit EBCDIC, or extended binary coded decimal interchange code, used in the IBM mainframe.

Compounding the technology limitations is that most financial institutions are organized through what Nasar calls “a financial product-centric architecture.” Regardless of whether an institution is using its core providers or leveraging third parties and fintechs, most systems are geared towards servicing a specific class of products and are not focused on a broad customer-centric view. Because of that, an institution’s lending division — commercial and consumer — may not be connected to the deposit group, the brokerage division or the trust department and wealth management. These systems store customer data in specific ways, creating information sets in a siloed manner that may have overlapping entries with slight differences that make the dataset unreliable for analytics purposes.

Take, for example, one pernicious data problem financial institutions face: their customer records. Technology companies — ranging from large incumbent firms like online retail giant Amazon.com down to nascent fintech startups — have demonstrated that understanding the customer is key to profitability.

How would you describe the maturity of your bank's data strategy?



- We use data in several areas of the bank but see significant room for improvement.
- We are in the early stages of our data strategy and have leveraged data in just a few areas of our operations.
- We do not have a data strategy.
- We use data in many of our decisions and areas of the bank, and believe our data strategy and execution exceeds our peers in the industry.

Source: Bank Director's 2024 Technology Survey

Financial institutions have long sought to cross-sell multiple products to existing customers to increase revenue and grow profitability. But multiple products also create multiple data entries across various systems in the bank: deposit accounts, mortgages, credit cards, car loans, wealth management and potentially even commercial accounts. These products may all have a separate customer record and potentially inconsistent information. For instance, one might require a middle name while another requires an initial, or one might use a shortened nickname while another uses the full name.

"The data of how I relate disparate data about an individual in these different systems to one person or profile or one legal entity can get really challenging and potentially problematic," Nasar says.

Advances in Technology

If technology created the information silos that banks and credit unions must break down, it will also be the solution for unifying, centralizing and leveraging the data. Small banks and credit unions can add the same capabilities as the biggest financial institutions and tech firms because of the growing number of partners offering data storage and management tools, integrated analytics and visualization applications.

And it's clear this is an area of growing importance to small institution executives — especially data analytics. According to the 2024 Technology Survey, 80% of respondents said their institution's leadership team and/or board had discussed allocating budget or resources to data analytics. Only 32% said their bank had upgraded or implemented data analytics platforms and capabilities in the 18 months prior to the survey period of June and July 2024.

These tools may not be new to the market, but they are now available at prices that appeal to community bankers. Executives increasingly believe that while the core stores the institution's general ledger, it may not be the primary technology partner for their data strategy given the difficulty or expense associated with extracting information from the core. And given the number of options available now, small institutions also don't have to build these tools in-house to own the process. These outside vendors can help financial institutions unify customer data from disparate systems into one location and then enrich it. The result is a richer, holistic customer profile that institutions can use to personalize their services and cross-sell more effectively. Platforms like

Use Case: Start With a Problem

“Start with a single problem,” says Dennis Klemenz, chief technology officer at Westbury, New York-based Jovia Financial Federal Credit Union. “Identify the data that you need to solve that problem, get that data into your warehouse and then solve the problem.”

Klemenz argues this narrow approach — tackling one defined use case at a time — produces better results compared with building out a data warehouse and populating it with every data element a company has before applying it to a use case.

“If people focus on just one problem at a time, they’ll be astonished at how much they can achieve over a very, very short period of time,” he says.

Shikhar Singh, chief technology officer at Fargo, North Dakota-based Choice Financial Group, agrees with that approach and stresses that executives should avoid “boiling the ocean” with their data initiatives. Knocking out a defined use case helps executives notch a win while building momentum for future initiatives. Executives can then take the lessons learned from addressing the previous use case and apply them to the next one. This approach pushes the institution’s data initiative forward a little bit each time.

“People like to understand the ‘why’ behind everything and what it means to them,” Singh says. “Our opportunity, when we go deep vertically, is to link everybody together to make them understand what the story is.”

Wealth Access allow institutions to analyze data faster and more broadly, meaning executives can make decisions that are more responsive, predictive and dynamic.

At the same time, there are risks that come from sharing bank or customer data with third parties. Executives will need to grapple with issues like data governance, customer privacy and cybersecurity when outsourcing technology services.

For an overview of the parts that make up a data strategy, go to [page 10](#).

Thankfully, smaller financial institutions aren’t wading into uncharted waters. Many financial institutions have executed

successful data projects, which creates a playbook for other institutions.

Shikhar Singh saw this firsthand when he left JPMorgan Chase & Co. as an executive director and joined Fargo, North Dakota-based Choice Financial Group as chief technology officer. Big banks like JPMorgan have a significant regulatory burden that requires large amounts of data. Over the years, they’ve invested resources and talent toward data governance, storage and analytics, and now benefit from a flywheel that has spun off applications and use cases.

In contrast, small banks may have historically relied on knowledge gathered through interactions with tellers and being involved in the community to understand their market and customers, with less of a focus on incorporating data

Over the past 18 months, has your bank's leadership team and/or board discussed allocating budget or resources to any of the following emerging areas?

Data analytics



Artificial intelligence



Banking as a service (e.g., payments as a service, lending service, deposits as a service)



Cryptocurrency/digital assets



Blockchain



Source: Bank Director's 2024 Technology Survey

in their decision-making. But this is not a sustainable model as an institution grows or expands its reach. That's what happened when Choice Bank, the \$5.6 billion bank unit of Choice Financial, expanded beyond its local customer base and began partnering with fintechs.

"[Community banks] say, 'Well, we know our customer,'" Singh says. "My question is, 'If a person is coming through a digital channel, through the fintech customer, do we really know them?'"

Singh's focus on how Choice Bank's technology stack integrates with other systems allows the bank to capture, store and use the data generated from these systems. Today, the talent at Choice Bank includes a leader of data analytics who reports to Singh and a data governance function that reports into the bank's second-line risk function.

"That, to us, was crucial because that's a good backbone," he says. "If you don't have that backbone, then things will crumble down."

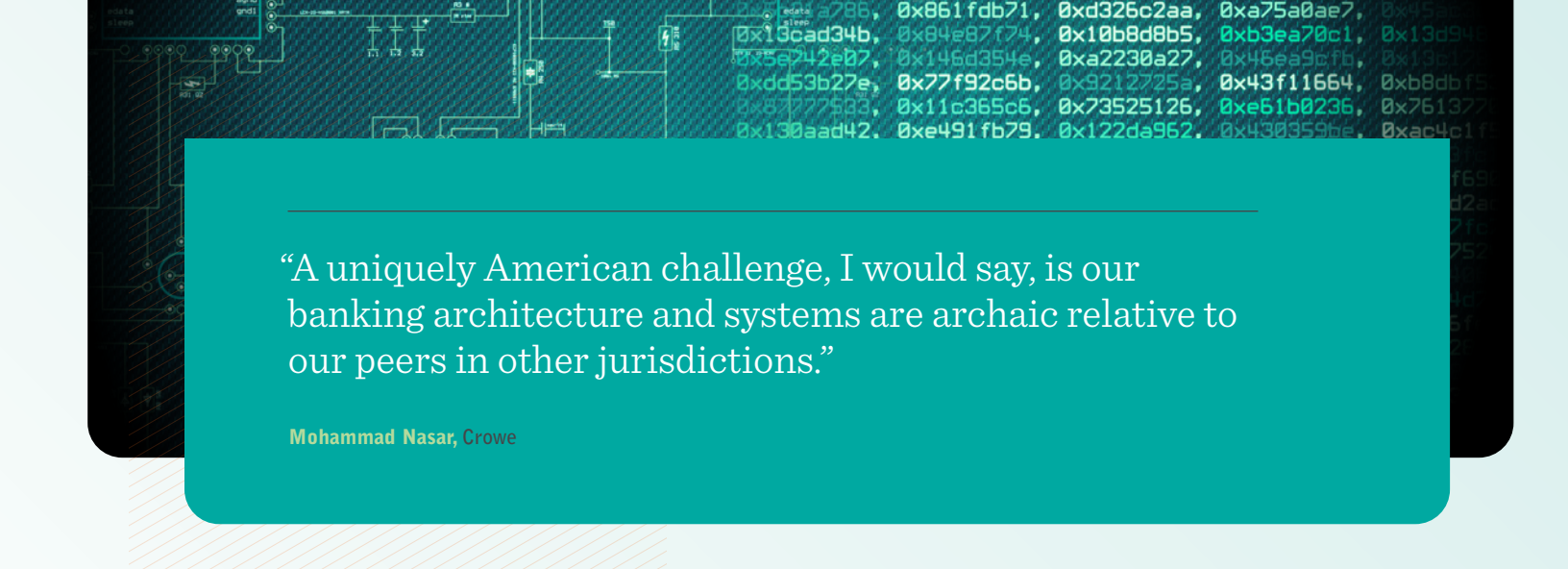
No Time Like the Present

Starting and executing a data strategy is a lot of work, and many smaller firms are early in their journeys. Data projects are too large and unwieldy to do well on accident. There are numerous pitfalls that can negate the return on investment. Putting together and executing a data strategy requires governance, commitment and diligence.

"You got to understand what you want to use these solutions for, whether it's data, customer relationship management or anything else, before you put the investment in," says Benjamin Maxim, chief technology officer at MSU Federal Credit Union, which has \$8.2 billion in assets and is based in East Lansing, Michigan. "And it is a cultural investment, not a technology investment."

Perhaps that's why only 11% of respondents to Bank Director's 2024 Technology Survey reported their institution uses data in many decisions and areas of their institution and believes their data strategy and execution exceeds peers.

Additionally, data strategies aren't ever "done" in the narrow project management sense. After implementing a strategy and standing up the data storage and capabilities, the ongoing work is



“A uniquely American challenge, I would say, is our banking architecture and systems are archaic relative to our peers in other jurisdictions.”

Mohammad Nasar, Crowe

iterative maintenance. Data breeds more questions, and all questions need more data, jokes Dennis Klemenz, chief technology officer at Westbury, New York-based Jovia Financial Federal Credit Union, which has \$4.5 billion in assets.

“Where are we on our data journey? I think we’re marching along,” he says. “I would say nobody’s ever done on their journey.”

Wayne Gniewkowski, a principal in Crowe’s financial services consulting practice who focuses on business process, risk and controls, advises clients and prospects about the long timeline that comes with data and analytics projects — especially if the institution isn’t familiar with its data. These projects are time-consuming and expensive, especially as datasets grow. They can become exponentially more complicated if an institution has a complex business line, like sponsor banking, or has engaged in mergers and acquisitions. That’s all the more reason for institutions to get started now, or to be more diligent in making progress on ongoing projects.

“I’m not saying you have to go supersonic speed with your data, but the longer you wait just to get started, you’re going to find out pretty quickly it’s a bigger lift than most organizations realize,” he says.

Back at Sonata Bank, Rhoads highlights the importance of small early wins that came from effectively using data analytics and visualizations to build a coalition of stakeholders across the institution. He says the bank’s data projects save employees numerous hours a month that would’ve been spent pulling information and creating reports — important but tedious tasks that aren’t related to deepening customer relationships or growing the bank.

Another catalyst behind the urgency to craft and execute

a data strategy is artificial intelligence. Financial institutions interested in leveraging AI should first have “a strong understanding and catalog” of their data, Klemenz writes in a follow-up email. Without those, institutions may reach the limits of their potential AI use cases or use it ineffectively.

“Data warehousing may seem like a 1990s project,” he adds. “But the data from that warehouse is what your AI and machine learning models will use for training.”

The imperative of AI driving data analytics projects speaks to the uncertain technological and operating future that financial institutions face. The pace of technology and innovation is accelerating. Creating and executing a data strategy today allows executives to be more prepared for an uncertain future.

Ultimately, data strategy is about executives defining an institution’s future and setting it up for success. Institutions already on this journey can use this report to gauge their progress, make refinements and think about future use cases. And institutions that haven’t started, or are in their earliest stages, can use it to inform or bolster these efforts. But they need to start — soon, if not today.

“The hardest part is getting started — gaining an understanding of your data, the talent you have, or don’t have, in your organization, and the technology you have or will need,” Gniewkowski says. “There is a lot to assess enterprise-wide.”

Kiah Lau Haslett is the banking & fintech editor for Bank Director.

THE SECRET TO SUCCESS IS STRATEGY

By: Kiah Lau Haslett

Executives from community financial institutions share how they started their data initiatives and addressed the challenges they encountered.

Before he joined the credit union space, Dennis Klemenz worked for a decade in helicopter aviation. When he joined Jovia Financial Federal Credit Union as its chief technology officer in the spring of 2023, the now-\$4.5 billion credit union had started building out a data warehouse that came with its new core banking platform.

Creating that data warehouse — which stores processed, transformed and structured data that's ready to be used in a model or report — was "pretty much" the data management strategy at the time, he says. While this was a major undertaking, his goal was to take the project a step further and develop a way for the Westbury, New York credit union to leverage its data — not just store it.

But that turned out to be easier said than done. Klemenz found that creating a data warehouse for a company that builds military helicopters — what he did in his prior career — was simpler than completing the same project for a community financial institution. The aviation data was tighter and the redundancy of different systems meant that the information effectively came from a single source, creating a more controlled data environment. In contrast, data extracted from a system at a financial institution needs to be reconciled to the general ledger, complicating the efforts to build a data warehouse.

"Ironically, in a company where we defied the laws of nature and gravity, it was easier to [configure a data environment] than it is in financial services," Klemenz says, comparing the two different industries.

Truly successful initiatives should help an institution think about itself differently, and a data strategy is no different. The goal for many institutions is to become a data-driven enterprise. That means the bank or credit union has integrated

analysis into its business and uses it to inform decisions and better serve customers. These initiatives should spur creativity and challenge how employees think about and solve problems.

However, these projects inevitably encounter challenges, as Klemenz found, which means they require the commitment of time and resources from the institution's board and management team to push them forward.

This commitment was essential at Sonata Bank, a unit of Sonata Financial Holdings, in Brentwood, Tennessee. Management decided early on they wanted to own the institution's data and processes so they didn't have to rely on a vendor, which meant prioritizing the necessary resources. Integrating fragmented systems can be cumbersome for small institutions, and the initial work to start these projects can be expensive.

"Making it a strategic priority at the board level — that data was going to be part of our DNA and was going to be how we operated — was really critical," says Will Rhoads, chief innovation officer at the \$222 million bank. "Being strategic about what [aspects] the bank owns and understands is one of the most important decisions it can make. To me, if data is not one of those, you're missing the boat."

Sonata set up an advisory technology committee that included directors, executive management and outside advisers. That committee educated the board about the work and resources the bank would need for a project. But the committee also helped build momentum, "galvanizing the entire board and senior management on why this is so important and why it's so critical to who we want to be," Rhoads says.

For some banks and credit unions, a successful data management project will also require a cultural and mindset shift.

"I don't think culture is one of those things that you can

Use Case: Cultivating Profitable Relationships

What makes a customer or member profitable? How can a financial institution become a consumer's primary banking provider? These are two questions that MSU Federal Credit Union addressed early in its data journey.

The first step was identifying the attributes of profitable long-term members, says Benjamin Maxim, the credit union's chief technology officer. They analyzed the financial performance of different member segments as well as the products those members had to understand what led to a member's longevity with the credit union. They settled on four

products and services: deposit accounts, auto, Visa cards and e-statements, known as DAVE.

The credit union, which now has \$8.2 billion in assets, then used member data to identify those who had three of the four products and services, and built marketing campaigns to communicate with those members. This included getting members to switch from paper to e-statements, bring their auto loan to the credit union or set up a direct deposit. Maxim says this use case was a success because it had specific, measurable campaigns, rather than a vague goal like

"increasing products and services to an average of two per member."

"This was our campaign to get us [to be a member's] primary financial institution; DAVE was how we would accomplish that," he says. "It gave us something to look at; it was easy to run campaigns and sales promotions for our employees."

Maxim points out that the DAVE initiative took place more than a decade ago, when it was still very routine for members to receive paper account statements. "The postage alone was worth the savings," he says.

just mandate," says Daniel Haisley, chief product officer at digital banking provider Apiture. "It is a [daily] honing of the blade based on the experiences that you have. You start with problems and use data to solve them, and that grows the contagion, which ultimately defines culture over time."

The cultural shift has been one of the biggest revelations during MSU Federal Credit Union's decade-plus data journey, says Benjamin Maxim, chief technology officer at the \$8.2 billion credit union.

The East Lansing, Michigan-based credit union's first steps in its data journey included creating a centralized business intelligence team that pulled these metrics together into a SharePoint site, which is a content and knowledge management tool from Microsoft Corp. This allowed business units to share data with other areas of the credit union, and the group eventually added household and membership information. But it also required Maxim to educate his colleagues working in legal, information technology and risk so they could understand why better data collection and analysis mattered.

Along the way, the credit union received an assist when it partnered with core and technology provider Jack Henry &

Associates on an early predictive analytics project. That partnership led to MSU FCU realizing that members were likely to buy their next car 22 months after they purchased their previous vehicle — an insight that gave the institution a timeline of when to reach out to members about auto loans. MSU FCU has added more data as it has grown and hired a vice president of data analytics to oversee these efforts.

Maxim realizes all this work, and all these conversations, "seem big and scary — but you need to start somewhere." He advises executives to pick a straightforward use case that can be solved with a discrete dataset and build from there — a process that will be laid out in the next section of this report. It's easier, he says, when executives are working toward a specific goal, versus a vague concept such as "using my data better."

"If you have something small, start small — but start," Maxim adds. "And then data quality, data governance, the sooner you bring in those things, the easier it'll be longer term."

Kiah Lau Haslett is the banking & fintech editor for Bank Director.

THE GAME PLAN

By: Kiah Lau Haslett

There are three main components of a data strategy that executives must decide: Where does the data live? How does the data come in? And what does the institution want to do with it?

Financial institutions are inundated with disparate data stored in siloed systems. The data that populates its financial records, customer transactions and risk management systems poses complications at every step of the journey, but especially at the start.

How can banks utilize this information to its fullest potential? Institutions should start by understanding the basics of their data and have a clear idea of how they will use it.

Benjamin Maxim, chief technology officer at \$8.2 billion MSU Federal Credit Union, says there are three main components of a data strategy: understanding where the data lives, how the data comes in and what the institution wants to do with the information.

Where Will the Data Live?

Data is generated by and lives within many places within a financial institution. Most institutions will opt for a centralized data repository to store information outside of these siloed systems and the core. Maxim calls that “one point of entry.”

Deciding what tools an institution will use is an important early step — one that executives may need to revisit as the institution grows in its data maturity, Maxim says. Of course, institutions could use a spreadsheet to hold this information, or they could leverage existing flexible structures that house a lot of information already, like digital banking platforms.

There are also several types of digital architecture designed to store data. A data lake can hold data of all types, including raw and unprocessed information that must be scrubbed and cleaned. By comparison, a data warehouse stores processed, transformed and structured data that’s ready to be shipped into a model or report. A data lake house combines these two types of architecture — the lake for unprocessed data and the warehouse with processed and structured information.

“I often joke there’s a fine line between building a data lake and a data swamp,” says Arjun Sud, a principal at audit and consulting firm RSM US. “I think clients should be very cog-

“The No. 1 risk is the quality of your data. You don’t want data getting pushed out that is inaccurate, and then people start making inaccurate decisions from it.”

Dennis Klemenz, Jovia Financial Federal Credit Union

nizant [of building] the right lake so that the analytics that comes out of it truly drives value for employees or customers.”

But in the earliest stages of an institution’s data journey, management may want to avoid the temptation to invest in fancy — and expensive — data repositories. While there are powerful tools available, these may be beyond the current skill or ambition of a small institution just starting out. Instead, the bank or credit union may just need a place where the data is accessible in an actionable format and consider upgrading as their maturity increases.

“There are a lot of new technologies out there, a lot of shiny distractions, and sometimes there’s just that eagerness to build a new report,” Sud says. “That leads to a lot of false starts because you may end up building something that does not drive value.”

How Will the Data Come In?

Just because a storage tool can hold a lot of data doesn’t mean an institution should do a massive extraction and data dump. Especially early on, it may be better to be selective about what goes into the database. That could look like an institution identifying an initial use case and the data they would need to address it, and then scrubbing and validating only that information.

No matter the source of data, the information being used must be high quality: complete, accurate, normalized and scrubbed. This translates into data governance that defines, oversees and validates the quality of any information an institution uses in analytics or modeling.

“The No. 1 risk is the quality of your data,” says Dennis Klemenz, chief technology officer at Jovia Financial Federal Credit Union in Westbury, New York. “You don’t want data getting pushed out that is inaccurate, and then people start making inaccurate decisions from it.”

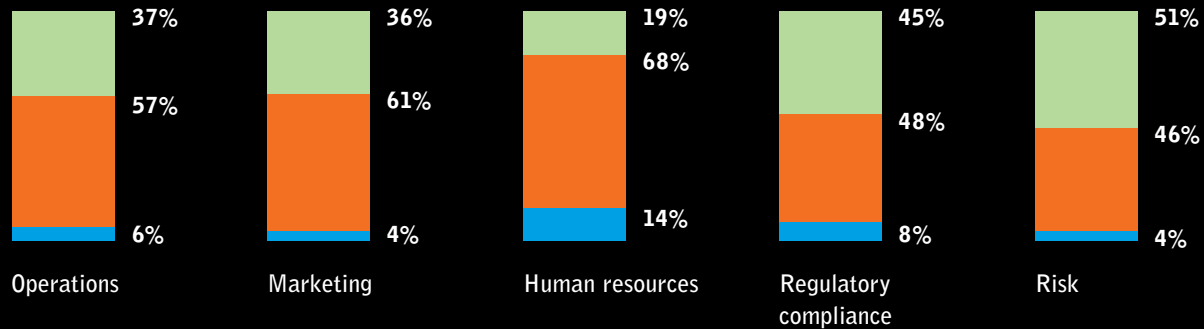
Data quality is something that institutions can fix, if need be. One way to ensure this is by implementing an ETL — extract, transform, load — process. ETL combines data from multiple sources into a large, central repository by applying business rules to clean and organize the raw data so it can be stored for future purposes. Daniel Haisley, chief product officer at digital banking provider Apiture, says companies can validate data when they apply a transformation to it, ensuring the data is both accurate and standardized. Standardizing data includes following a uniform style for all information. For instance, this could be spelling out the word “Street” for customer addresses rather than abbreviating it.

“Finding those sorts of conventions and then enforcing them across the database is really important,” he says. “Financial institutions broadly just haven’t done a great job of that because it is a knife fight every single day.”

Firms like Wealth Access can help institutions with this extraction and normalization, allowing institutions to create a universal customer record, says Andy Zinn, the firm’s chief innovation officer. An institution does this by applying the company’s intelligence layer to extracted data; the layer’s software is programmed to normalize the data and deposit it into whatever data storage architecture the institution selects. Zinn says it can be easier for institutions to first normalize the data as part of a customer record and then deposit it into a data lake, compared with putting all the data into the lake and trying to build the customer profile there.

Do you believe your bank effectively uses data analytics in the following areas of the bank?

Yes No Unsure



Source: Bank Director's 2024 Technology Survey

Fargo, North Dakota-based Choice Financial decided that data validation checks would occur when the data is created or comes into the \$5.6 billion bank from an external fintech partner. Chief Technology Officer Shikhar Singh says it's like air passing through a filter before entering the house.

"You want to catch that when it's entering," he says. "Otherwise, it's more expensive to catch later. It's almost impossible. We were very conscious about that."

Other governance issues that Choice Financial's governance group addressed included defining data quality as well as determining the data sources it wanted to capture. They decided that the group that owned the data would define data quality standards, meaning the business line that would ultimately work with it.

What Will Your Bank Do With the Data?

Once an institution decides where the data will live, how it will be fed and its initial use cases, executives can decide on what modeling or visualization tools are appropriate.

Community banks and credit unions are increasingly considering using data analytics tools to help with their data initiatives.

To push its data initiative along, East Lansing, Michigan-based MSU FCU hired someone to oversee business intelligence, leveraging a platform that could create reports and

dashboards from various data sources. Business intelligence platforms are data visualization tools that are layered on top of wherever the data is stored; popular providers include Power BI from Microsoft Corp., Tableau and Domo. Maxim says tech employees may have familiarity with some of these platforms. That may help an institution decide which one they want to use. Wealth Access' platform includes prebuilt analytics that provide clients with high-level insights from their data, which can be a good option for smaller institutions that lack technical skills.

Jovia Financial FCU opted to license two different data visualization platforms that serve different purposes, Klemenz says. Microsoft's Power BI is an entry-level, easy-to-use software program that many employees can leverage in their daily work. The other program, Looker from Alphabet's Google, is more of a data "excavator" and only a few people at the credit union who have been trained receive access to it, he says.

"I often joke there's a fine line between building a data lake and a data swamp."

Arjun Sud, RSM US

Use Case: Focus on Customers

It's not easy to become a wealth management customer of The Haverford Trust Co., which only accepts customers through referrals. That means once a customer is in, the Radnor, Pennsylvania-based firm distinguishes itself through a high level of service and attention, says John Supplee, the firm's chief operating officer. That includes how fast employees can find the information they're looking for while talking to a client, how quickly they can accomplish a task or how well they're able to support a colleague.

The firm, which has \$183.5 million in assets at its bank unit and \$15 billion in assets under management, leverages data within its business process management system, its customer relationship manager and its portfolio accounting system to "deliver data quickly and succinctly and eliminate blind spots," he says. The bank configured its business process management system to create

workflows and tasks that are automatically assigned to the correct team, based on the data. It also uses data to identify potential wealth planning clients and populate its client journey maps.

Another benefit of this data architecture and information flow is that it saves the bank from needing to pass information and documents through email. The firm has structured its business management and document management systems so that very few requests or tasks are communicated via email, further eliminating blind spots. Employees now receive succinct alerts and tasks that include relevant documents and action items, saving time and minimizing the possibility of mistakes.

"The more the client experience is enhanced, the more referrals you're going to get. That's a lot of how we've grown our business," Supplee says.

Maxim points out that data analytics providers can layer in relevant external third-party data from credit reporting agencies or card processors. Institutions that have created application programming interfaces, or APIs, that allow customers to connect their accounts to external providers can glean data from those connections as part of the "two-way street" of information.

Identifying meaningful use cases is also an important part of a data strategy. Use cases help executives scope out a project — what question is the institution trying to answer, why the answer matters and what data they'll need to answer it. It also helps executives calculate the labor and expenses

associated with a project, which allows them to measure the return on investment. James White, general manager for the banking industry at customer relationship management software firm Total Expert, says institutions can take the cost savings or additional revenue from a smaller prior use case and apply it to the next one. That approach can help prioritize different projects while controlling costs.

Financial institutions should think about use cases as drawing a box around which data they want to process and leverage, says Zinn at Wealth Access. Without parameters around what information to use, financial institutions can get "lost" in the ocean of their data.

Which of the following positions do you currently have on staff at your bank?

Respondents were asked to select the options that best align with their technology team's roles and responsibilities.

Chief information security officer or equivalent executive position

59%

Chief technology officer

51%

Chief information officer

47%

Developers/programmers

25%

Chief digital officer or equivalent executive position

18%

Chief strategy officer or equivalent executive position

14%

Data scientists

14%

Chief innovation officer or equivalent executive position

11%

None of the above

10%

Chief data officer or equivalent executive position

9%

Source: Bank Director's 2024 Technology Survey

"You have to have that quick win [so] you can take the next step," he says. "Some folks have these giant dreams, and then they're on year five of a three-year plan and they have no idea where to go from here."

Successful use cases create momentum and underline the value of a data initiative. Data strategies may involve tasking different business and reporting lines with data stewardship responsibilities to ensure or validate data quality. Other roles in a bank or credit union may need to adjust the way they work to incorporate more data analytics into their processes.

"Find a problem," says Haisley. "Don't fall in love with the tools. Don't fall in love with the splashy, hyperbolic names. Fall in love with solving a problem."


Who Supports These Initiatives?

Of course, these projects don't run themselves. Having the required talent to execute a data project is key to their success. Zinn says boards and executives need to make frank assessments of the institution's existing team's skills and figure out how they'll close any gaps.

Few community banks report having data personnel on staff, according to Bank Director's 2024 Technology Survey. Only 14% of respondents said they had data scientists and 9% said they had a chief data officer or an equivalent executive position.

Klemenz at Jovia Financial FCU says that in his experience, well-structured and supported projects have three layers of people: data architects, data analysts and business analysts. Together, these roles form an inverse pyramid: one architect, a couple of data analysts and a handful of business analysts.

Data architects design and administer an institution's data model, including importing it into the warehouse. They focus on the foundation of the data and the warehouse's performance. Data analysts are the "data geeks" of a data initiative, he says. These individuals are familiar with the institution's data model and know some programming languages, so they can query and extract data and put it into reports that are handed off to the business analysts. Business analysts work closely with different business lines to identify potential areas for analysis, answer operational and competitive ques-



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Andy Zinn, Wealth Access

tions and solve pain points. They also help identify what type of data should be used for an analysis and work closely with the data analysts to vet, extract and validate that information.

For a data strategy checklist, go to [page 19](#).

Klemenz thinks these distinct roles are important to operating a successful data initiative and says sometimes things go wrong when institutions blend the roles. Data analysts who query and pull data don’t always know what different business lines need and what information would solve their questions. Or they could become so focused on solving the data architecture and engineering issues that they’re too busy to pull queries for the business analysts.

Community banks starting an important data initiative may want to consider hiring talent from institutions that have a vision of what these projects look like and can accomplish, says Singh, who joined Choice Financial from JPMorgan Chase & Co. Executives from larger banks will have a sense

of how to construct and build these programs, what a good program looks like and what pitfalls to avoid.

But it’s one thing to come up with a plan and buy data storage and visualization solutions. It’s an entirely different challenge to put this plan into motion. These projects are complicated and complex; they carry large operational and management risks. There’s a reason why these projects are expensive and time-consuming; there’s also a reason why executives interviewed for this report say they’ll never end. Use cases beget use cases; data begets data.

The work doesn’t change once these plans are in motion: outline a strategy, execute it, use the data. Rinse and repeat.

Kiah Lau Haslett is the banking & fintech editor for Bank Director.

MANAGING DATA RISKS WITH GOVERNANCE

By: Kiah Lau Haslett

Financial institutions are used to the risks that come with keeping their data secure. But how do those risks change when they want to use or share that data?

While data analytics can help financial institutions grow customer relationships and improve profitability, executives must manage a number of risks and complications these initiatives create.

Banks and credit unions should already be following existing regulations and laws that govern how to secure their data. However, data analytics carries compliance concerns, such as cybersecurity configurations and access considerations.

Failure to properly maintain data security and privacy can lead to cybersecurity breaches, which can have financial and reputational consequences. Capital One Financial Corp.'s 2019 data breach impacted approximately 106 million individuals in the United States and Canada and stemmed from a vulnerability in its cloud firewall configuration. The bank received several enforcement actions related to the incident; it was fined \$80 million by bank regulators and settled with consumers for \$190 million. More recently, hackers breached more than 100 companies' data stored by the analytics firm Snowflake through a third party, in part because those companies didn't have multifactor authentication on their accounts.

In addition to security, executives need to oversee the process to clean, validate, store and leverage their institution's information. Using bad data can cause mistakes and have negative consequences. All of this makes governance a massive part of overseeing and managing the risks that can come with these projects.

How a Data Governance Committee Functions

One way institutions can fulfill these governance needs is with a council or committee that discusses issues and decides as a group how the institution will oversee data. A data gover-

nance committee oversees ownership, quality, validation process, definitions and standards, among other issues.

These councils or committees should meet at least quarterly and include leaders from the various business units that will use the data, says Arjun Sud, a principal at audit and consulting firm RSM US. It's important to have representatives on the committee from beyond the information technology group, including from the groups that are familiar with the data and will use it for analytics. That gives the committee a holistic perspective.

One important area for data governance committees to address is risks that stem from unclear data ownership, says Wayne Gniewkowski, a principal in Crowe's financial services consulting practice who focuses on business process, risk and controls. This means locating where all data is stored and then assigning responsibility for, and control of, that data to a business unit. Sometimes these assignments and locations are obvious; sometimes they are not, especially if multiple groups use that data. Those determinations help the institution set appropriate access controls and security around the data, including limits on who can edit the data to keep quality high as the institution moves to the data scrubbing and validation stage.

"We have to evaluate and assign risk, implement controls and establish processes to clean the data — after we know where it's at, who owns it and who has access to it and how it is used," Gniewkowski says.

The data governance committee at Jovia Financial Federal Credit Union in Westbury, New York, meets monthly to discuss data quality issues, says Dennis Klemenz, chief technology officer at the \$4.5 billion asset institution. He says the group is responsible for determining data quality for the institution, and that shared consensus helps stakeholders and

Use Case: "Pure Efficiency Play"

The biggest data-driven win at Brentwood, Tennessee-based Sonata Bank has been cutting down the time employees spend doing administrative tasks, says Chief Innovation Officer Will Rhoads. Instead of creating reports from spreadsheets, he says some employees at the \$222 million bank are using natural language data queries where they can type in a question and get an answer. Workers have dashboards that update automatically with the most current information, freeing them from having to make manual updates or worrying about

whether the information is accurate. He calls these gains a "pure efficiency play" and says the time saved helps producers focus on clients and grow loans.

"We have saved dozens of hours for departments, managers and members of the leadership team," he says.

"We're giving our producers time back; we're giving management time to be strategic instead of writing reports."

teams that use the data understand how and why they made those decisions.

At MSU Federal Credit Union in East Lansing, Michigan, governance meant developing a "true common language" and formal definitions of critical terminology that could be used across departments within the organization, says Chief Technology Officer Benjamin Maxim. For instance, an active customer might mean one thing to an employee who works in a branch compared with one in a call center or one who supports digital banking. The \$8.2 billion credit union now assigns ownership of certain data fields to particular employees or groups, who are then responsible for annually reviewing the data definitions for updates and certifying that they are accurate.

The Consequences of Bad Data

Data governance should leverage a risk-based approach to identify where an organization is "most vulnerable" to using bad data and what could happen as a result, Sud says. Incorrect information can lead to poor communications with customers or inaccurate or misleading results. Bad information also reduces the usability of the data and can make these initiatives less successful if employees don't trust it. After

identifying these areas, institutions can then prioritize allocating resources that will have the biggest impact on reducing the risks of using bad, incomplete or inaccurate data.


Maxim remembers one challenge MSU Federal Credit Union encountered early in its data journey was trying to figure out why so many members were listed as being born in 1969. That didn't make sense given that many of the credit union's members are college students at nearby Michigan State University.

"We're trying to pull demographic data about our members, and we had all these members born in 1969. That's weird," he says. "It turns out it's because someone left this data field empty and that's what [the system] defaulted to."

The credit union has also encountered seemingly all the ways someone could write the word "Michigan" as it attempted to validate data needed for lending applications. Maxim says there would be entries with typos, inconsistent capitalization and various abbreviations. All of that needed to be scrubbed and made consistent.

Effective Vendor Due Diligence

Data analytics projects may lead institutions to use their



“You cannot put implicit trust in a vendor for your security. You have to own your security. You have to manage your risk.”

Will Rhoads, Sonata Bank

data in new ways and with new applications. Most institutions will partner with a vendor for data storage, and many will use third parties to analyze that information. As a result, they may need to update their vendor due diligence to incorporate these new use cases. Financial institutions should ensure they remain compliant with customer privacy regulations, such as the financial privacy rule in the Gramm-Leach-Bliley Act. They may also need to update their customer privacy policies to ensure they legally disclose these uses and applications.

MSU Federal Credit Union risk-rates every vendor it uses to assess their data access: what data is sent to the vendor as well as where the outside firm transmits information, Maxim says. Vendors with the highest risk ratings must have certifications like SOC 2, which is a cybersecurity compliance framework, to ensure the data is safe. The credit union also refined its privacy policy over time to better reflect the kind of data sharing and marketing it was doing with fintech partners.

Ensuring Cybersecurity

Organizations can use a “least privilege access” approach when it comes to data access and permissions, says Andy Zinn, chief innovation officer at Wealth Access, the sponsor of this report. Data storage should include compartmentalization; data owners should be able to access only the information relevant to their functions. For instance, an institution may want to include employee salary information in a data lake, but give only certain members of the finance and human resources departments permission to access it. This is especially crucial as the dataset grows and an institution begins using more information in reports and dashboards.

“You need to have a reason to see the data. Make sure there’s a use case for the data, that it’s provisioned appropriately and that the access is maintained,” Zinn says.

Cybersecurity best practices also apply to data storage and usage. The Haverford Trust Co., which has \$183.5 million in assets at its bank unit and \$15 billion in assets under management, uses a third party to monitor its data in real time to detect anomalous activity, says Chief Operating Officer John Supplee. It also focuses on employee cybersecurity training to communicate the expectation that it’s everyone’s job at the Radnor, Pennsylvania-based firm to keep client data safe.

Brentwood, Tennessee-based Sonata Bank uses detection tools and dashboards that monitor its application programming interface, or API, connections, how they function and what they’re receiving and transmitting, says Chief Innovation Officer Will Rhoads. The \$222 million bank, a unit of Sonata Financial Holdings, also follows the cybersecurity framework from the National Institute of Standards and Technology, along with strong security controls and multifactor authentication.

“You cannot put implicit trust in a vendor for your security. You have to own your security. You have to manage your risk,” he says. “That’s what banks do, right? We manage risk. Applying that to technology and data is just as important as margin or rate sensitivity.”

Kiah Lau Haslett is the banking & fintech editor for Bank Director.

A DATA STRATEGY CHECKLIST

Strategic

- Is data analytics an area of strategic investment and operational focus for the bank? How does this relate back to our strategy?
- How will our institution oversee data governance, and who needs to be on that committee?
- How will we manage data ownership, stewardship, quality, security and compliance across our organization?
- What technologies and platforms support our data management, storage and analytics?

Tactical

- What is a straightforward use case we can use data to answer?
- Where is the data we will need to answer this question located? How will we integrate data across different business units to drive decision-making?
- What is the quality of this data? What work will we need to do so it's usable and accurate?
- Who are the external partners we'll need to use? Long term, what talent do we need to support this initiative to ensure its success?
- How will we measure the outcomes of these data projects?
- What initiatives are in place to foster a data-driven culture and continuously evolve our data capabilities over time?
- Do we think this data could be used in artificial intelligence applications?

Risks

- What cybersecurity protocols do we need to employ to make sure our data architecture is safe? What are our vendors' data privacy practices?
- Do we need to update information security and privacy policies to incorporate how we want to use or share this data?
- How will we validate data quality, and how can we make that process more efficient?
- Who is responsible for different datasets?
- What are our guidelines for data quality, and who determines that?
- What processes or metrics will we use to assess data accuracy, consistency and reliability?
- Who should be allowed to access or edit the data?

CONCLUSION



Banks and credit unions that want to become more competitive can start thinking about how they can better utilize their data. This information presents an incredible opportunity for organizations to better serve their customers by getting offers in front of them that they actually want and can use. Effective data management can also make the lives of employees easier by simplifying or removing mundane tasks. With the proliferation of vendors and technology solutions, implementing effective data management has never been more within reach for institutions of any size.



About Wealth Access

Wealth Access is the data unification platform for financial institutions. By transforming siloed data across core banking, wealth, and business systems into a single, enriched view, we help banks and credit unions deliver smarter experiences—across retail, business, and wealth clients. Financial institutions use Wealth Access to strengthen relationships, grow revenue through cross-sell, and gain actionable insights across their enterprise. Learn more at www.wealthaccess.com.



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