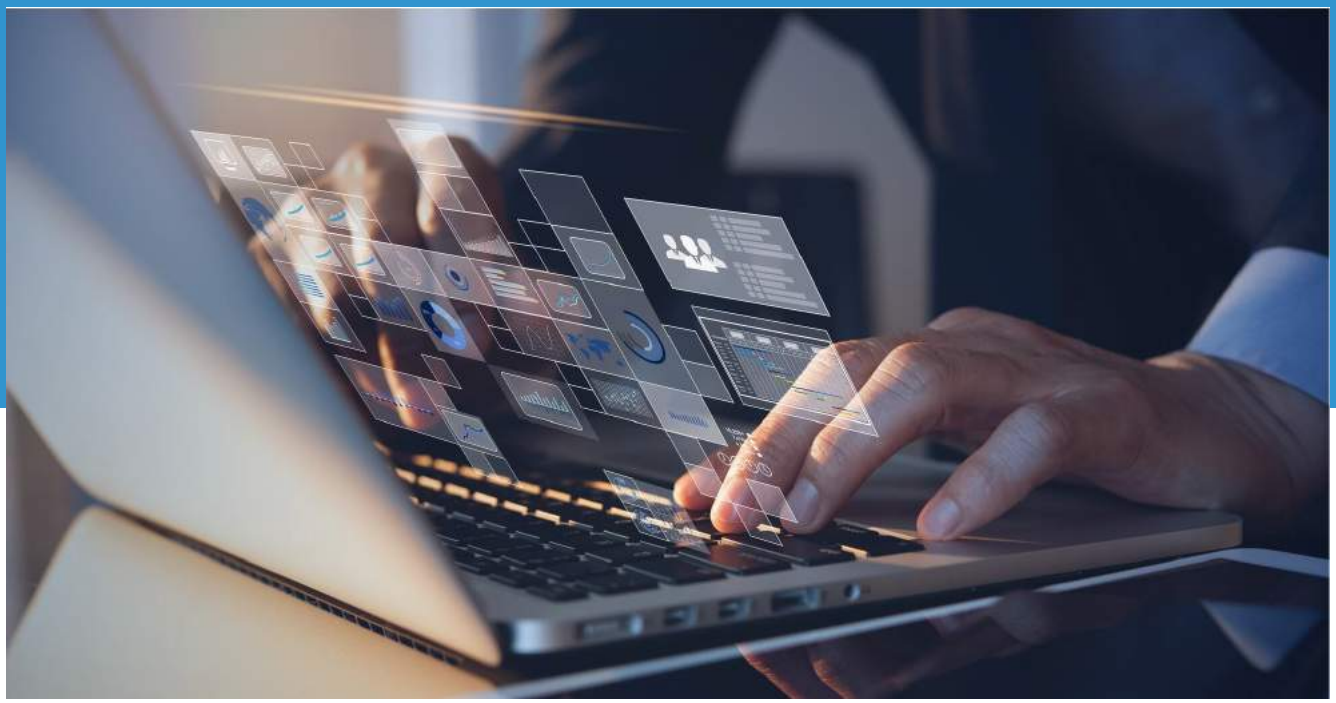
PATHWAYS INTERNATIONAL

Lead With Your Data

Small & Medium Enterprise Guide To Implementing Data Analytics

EDITOR'S NOTE

This guide is for small and medium-sized businesses who want to use data analytics improve their performance. We take a pragmatic approach that recognizes the goals and constraints of businesses of $10M to $500M, to target and achieve rewards that are both valuable and realistic. We go beyond technology into the business, because that's where the rewards are.



CONTENTS

INTRODUCTION

When it comes to data and analytics, organizations of moderate size typically face one of two challenges:

- With key data residing in multiple systems, it's hard to get the reports you need to run the business. Systems are siloed and Excel – formerly a solution but now a band-aid – is falling short. You wonder if the picture you're seeing is complete and accurate, let alone timely and consistent across the business.
- You've heard the hype about how business intelligence and advanced analytics (BI & AA) can help nearly everything and anything these days, and maybe you've tried a few things. But you also may wonder how anything beyond basic reports might make a difference. After all, analytics can be expensive and might not deliver as promised.

This guide outlines what's involved in building a strategic solution for using data and analytics to manage your business more efficiently and become a more effective competitor. Using proven practices and technology, the path forward may be more straightforward than you expect.

Defining Analytics

At its core, analytics is investigating data to understand what is going on in and around your business, and potentially what could happen in the future. The business uses and techniques can vary widely, ranging from basic math with bar charts to inferential statistics, complex algorithms and sophisticated visualizations. Analytics can look backward to discover historical patterns (e.g., sales by product and sales by customers), or forward, such as how might those patterns change in response to pursuing a new market or type of customer.

The business case for BI & AA is becoming ever more compelling and accessible. The pandemic forced changes in customer behavior that rippled from consumers across the supply chain to businesses in nearly every industry. Traditional responses of trial and error take too much time and expense, which is why all but the smallest niche businesses – including your competitors – have moved beyond strategic reporting to use data and analytics to compete and scale.

These Pathways clients, all in the $50-100 million range, started from scratch to produce initial results in less than 3 months.

An agricultural-testing lab developed new data-driven processes to streamline its testing of animal samples, monitor and track positive and negative results, identify needs for additional tests, and automate the reporting of results to clients. The lab's lead veterinarian estimates 15-20% gains in throughput, reliability and operating efficiency through improved data management and data-driven processes. On-going analytics of test results help to identify disease outbreaks as they emerge in the region.

A wholesale, high-volume commercial printer had the "second-worst problem in business:" more demand than it could handle without sacrificing quality and delivery dates. Three key steps enabled it to restore production to the level needed to meet customers' high expectations and provide headroom to grow further: 1) data consolidation, integration and strong reporting; 2) optimization of scheduling and process design; and 3) implementation of new data-driven processes.

A mid-sized player in the legal-cannabis industry was able to consolidate its data from multiple POS, supply chain, inventory and on-site retail systems to identify top- and bottom-selling products by store and time frame. Based on net profitability and popularity, it defined new product strategies in light of per-store sales patterns.

Sounds great, but how did they do that, and how did they get started?

HOW TO GET STARTED

The purpose of analytics is to understand what's going on and why, and then make changes to improve performance.

Let's examine the 3 ways analytics can improve any business

Improve performance, in the form of more profit (higher revenue, lower cost, or both)

Reduce many forms of risk (customer, operating, financial, legal, etc.)

Improve brand image and build customer engagement.

All benefits from analytics fall into at least one of these three categories. Non-profit organizations can improve their performance against their mission statement, as well as lower cost, reduce risk and improve brand and donor base.

Content Data and Meta Data

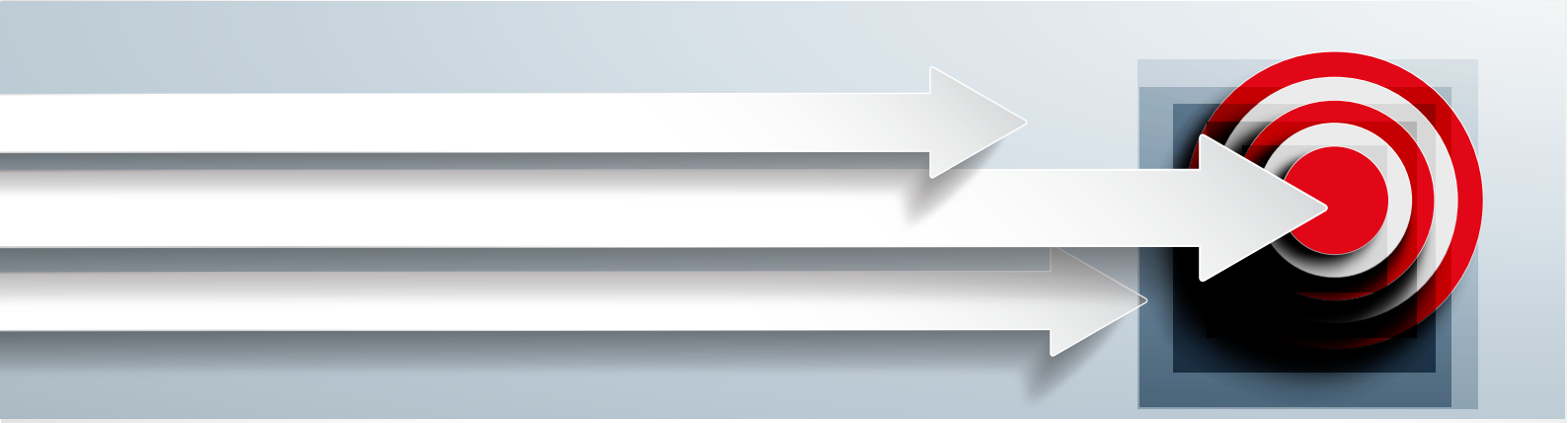
All of the many types of data in the world fall into two classes: **content**, such as measurements and samples, and **meta data**, which describes the content. Content could be counts and amounts from business transactions; meta data is the definition of the counts and amounts (e.g., units such as multi-packs vs individual pieces, and gross vs. net revenue). For a phone call, content would be "unstructured" - the sounds (spoken words and background audio); meta data would be the originating and called numbers, duration, location of parties, etc. Both data and meta data can be valuable when analyzing a business.

THE SIX CORE PRINCIPLES FOR ANALYTICS VALUE

Six principles should guide the analytics programs of businesses of all sizes, starting with the Why, What and Who before jumping into the 3 elements of How.

01 CLEARLY DEFINE THE GOAL – THE WHY

Be clear from the start: analytics is not about technology. It's about a business investment to produce a positive return; technology is one of many inputs. Even with that understanding, it's tempting to want to get a lot done quickly because business demands speed. However, trying to do too much too soon is a good predictor of failure. Focus on one key business metric to improve at a time, and **make sure it is news you can use.**



For example, while it may be helpful to know last-month's sales, there's nothing you can do now to improve them. More actionable measures may be the expected value of the sales pipeline and the sales-closing rate.

Deeper analytics would identify patterns of closed sales vs. lost sales, to stimulate doing something different to get better results.

CLEARLY DEFINE THE GOAL – THE WHY CONT...

Set the project scope only large enough to give you the one piece of actionable information you really need. **To that scope you must add critical context to ensure that you're not creating harm elsewhere.** For example, the sales team can increase discounts to boost their closure rate and increase the pipeline's expected value, but doing so would erode net margin.

In practice, setting the proper scope means that your project will include one key metric plus 3-4 others (pipeline expected value plus net margin, product quality, product-return rate) – not 5 or 10 other metrics. Subsequent projects will expand the breadth and depth of your analytics portfolio.

02

KNOW WHAT YOU'RE GETTING INTO – THE WHAT

Many people, including the leading consultancies and vendors, believe that analytics are all about creating "actionable insights." That is just the first step. **Unless you take action, you've made an investment with no potential for ROI**.

KNOW WHAT YOU'RE GETTING INTO – THE WHAT CONT...

Here's what's involved:

• Developing the analytic to produce the metric result. Let's call this the "**What**."

• Interpreting the result, including hard truths: "**So What**" does it mean?

• Assessing the implication: If we continue on our current course, what is likely to happen? This is the "**Then What**" will occur if we stay on the current course and make no changes. (Alternatively, if the analytic is a simulation or model of a future scenario, this would be the expected outcome after making a change.)

• Defining a course of action: "**Now What**" should we do to achieve a better result in the future?

• Implementing the change, including new processes, suppliers, markets and potentially new staff roles and skills. The changes should take you to the "**New What**" – your goal in the first place.

Collectively, these components represent your total investment in both time and money.

03

ASSIGN A SMALL CROSS-FUNCTIONAL TEAM – THE WHO

Small is important because it enables speed, from clearly defining the goals to putting the results in practice via a pilot or trial. Cross functional is important to ensure a holistic, corporate perspective: all teams affected – not just sales but production, customer support and IT.

04

COLLECT RELEVANT DATA, AND ACTIVELY MANAGE IT (THE HOW, PART 1)

Data is an asset. Like any physical asset, your business must actively manage and maintain its data to get value from it. Serious analytics require data that are organized and cataloged so that people can find what they need and use it properly.

Organizing the data usually means putting it all in one place, such as a data hub or data warehouse. The good news is that hubs and warehouses can be virtual: software can make data appear to be in one place, even though it may reside physically in different databases or locations.

Enter the data catalog. The catalog contains meta data – not the data itself – such as a clear definition of each data element, where to find it, its intended usage, its sensitivity for security controls, and other key information about the data. Most businesses know this information, but it's tribal knowledge (all in people's heads), which inhibits scale and creates introduces mistakes and misunderstandings. Tribal knowledge also disappears when people leave your organization, leaving behind the potential for more confusion and disruption.

05 SELECT TECHNOLOGY (THE HOW, PART 2)

Let's keep it simple and group tools into five classes:

1. Data collection and cataloging
2. Data cleansing and integration
3. Data analysis
4. Visualization
5. Special purposes

You may be tempted to say "Wait – Excel can do all of that." Yes; it just doesn't do it very well, and it's hard to get numbers consistent across workbooks, let alone across departments. Serious analytics requires more capability.

There are over 250 options in the market today just for analysis. The popular tools are popular for a reason: they perform key tasks well, are relatively easy to learn and use, and they're priced for value. That's why you hear a lot about PowerBI from Microsoft, Tableau and QlikView. Platforms such as SalesForce, Google, AWS and SAS are more capable in many ways, but usually higher on the maturity and cost curves for most businesses.

06 NOW Start Development (THE HOW, PART 3)

The first 5 points establish the strong foundation before coding a solution. It's a worthy investment against near-certain failure..

BUILD & ADOPT IN INCREMENTS

You don't have to collect all of the data to conduct a pilot. If you have multiple sales teams, each with its own pipeline, you may be able to get started with just one. Use Agile techniques to get a workable pilot or component in place in 2-3 weeks, then add more data and/or more analysis every 2-3 weeks. The adoption aspect – which is also incremental and can use prototype or trial tech – demonstrates the path forward and how much you can gain. These early trials allow you to learn and adjust as you go.

EXPLOIT EXPERIENCED TALENT

It's best to use internal staff. However, if you're not sure that you have the expertise in-house, hire a contractor who:

- Follows best practices and adhere to contemporary standards.
- Tailors their work to your needs (no hammers looking for nails). Your solution must fit your unique business and competitive strengths.
- Includes workable plans for your business to adopt new data-driven processes. Building the tech is just a means to an end.
- Trains your staff to become self sufficient. Make their last payment contingent on it.

PLAN FOR & ACTIVELY MANAGE, CHANGE

Building analytics is often easier than getting people to adapt their daily routines to become more data driven. Encourage, coach, re-organize, incentivize – whatever it takes. Human nature resists change, so make a plan to ease the way.

ONE FINAL POINT

Take measurements of before and after. You'll want to know how much improvement you gained by each new analytic. Include the often-hidden cost of assembling data using the old techniques, and the time it took. And there's another benefit: you can assign a value to obtaining better, more complete and more trustable data on a more timely basis. Although that value may be intangible, it is very real, powers a lot of business growth, and facilitates a good night's sleep.

CONCLUSION

Conventional wisdom used to say that businesses run on labor, capital and raw materials. Contemporary businesses now exploit data analytics as the fourth factor of production. Numerous success stories for businesses of all sizes indicate that the technology and practices have matured and that failures are avoidable. In fact, with data analytics so accessible at reasonable cost, there are few other ways in which businesses can compete more effectively or grow more efficiently.

Companies that used analytics to build customer engagement include Vail Resorts, Strava, Sephora and Ulta. They and others increased sales by 7%, brand loyalty by 8% and garnered double the number of referrals compared to companies that used only traditional engagement techniques.

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THE SIX CORE PRINCIPLES FOR ANALYTICS VALUE

CLEARLY DEFINE THE GOAL

Choose the part of the business you want to improve, and which one KPI is best to assess the improvement.

KNOW WHAT YOU'RE GETTING INTO

From preparation to development to decision to action – and don't under estimate the cultural changes required to get all staff on board with using data.

ASSIGN A SMALL CROSS-FUNCTIONAL TEAM

All parts must mesh together, including front office, back office, leadership, front line operations, and technology.

COLLECT RELEVANT DATA & ACTIVELY MANAGE IT

Your data is unique to you, and is thereforea precious competitive asset. Manage it that way.

SELECT TECHNOLOGY

To collect, catalog, integrate, analyze & visualize your data. With all due respect to Excel, it is at root a single-user tool, and your business needs more power.

START, DEVELOP & PILOT INITIAL RESULTS

Starting on the foundation above reduces risk, enhances quality and enables speed. Increments deliver value faster and enable learning and adjustments.

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