

MARKET INSIGHTS:

A Comparative Index of Data Maturity for the Mid-Market:

How do you stack up?

Q3 - 2020



Data is the new oil

By now, most have heard this quote dating back to 2006 and credited to British mathematician Clive Humby, who helped launched the world's first supermarket loyalty card (for UK-based Tesco) in 1994.

Based on the insights from usage of its loyalty card, Tesco doubled its market share in less than a year.¹

Tesco's big data story, from the mid-nineties no less, is a good example of how data is generally perceived by most mid-market business owners: they know they should do something with their data assets because larger data-driven companies are evidently using theirs to generate larger profits, and more dominant market positions.

But, how do you start, and how do you get "there"? You must first know where you are.

A 'data maturity' framework: Assess current capabilities, then set future goal posts

Dell/EMC first proposed its 'Big Data Business Model Maturity Index' about five years ago², pleasantly acronymized as "BDBMMI"—the strategy staff at Dell/EMC obviously have a great sense of humour. BDBMMI measures how "**effective organizations are at leveraging data and analytics to power their business models**". We summarized the BDBMMI as succinctly as possible below:

Monitoring >> Insights	Insights >> Optimization	Optimization >> Monetization	Monetization >> Metamorphosis
Identify business decisions	Develop capability to measure quality of insights	Prioritize recommendations analytically	Create entirely new customers / markets / consumption models
Create analytics sandbox	Deploy prescriptive analytics (recommendations)	Codify 'insight packages' for others	Launch analytics
Build analytics profiles	Deploy data lake	Calculate ROI for 'insight packages'	Enable third-party developers on new platform
Deploy 'right-time' environment	Build tools to operationalize insights	Operationalize new products/services	
Drive adoption by business users	Measure decision effectiveness		
Capture insights			

A more relevant data framework for the mid-market

In this *Market Insights*, FirePower Capital's big data analytics and strategy team ("VMX") adapted the BDBMMI for mid-market companies, with \$5 million and \$250 million, the vast majority privately owned. For those firms, moving from "Monitoring" to "Optimization" is typically game-changing; further, given the perennially hungry M&A environment, few mid-market companies remain standalone entities beyond "Optimization". Therefore, we truncated the later stages, and added granularity in the early stages.

In Dell/EMC's tradition of complex acronyms, our VMX team named our adaptation the 'Comparative Data Maturity Score for the Mid-Market' or "CDMSMM".

There are three main objectives to our team's adaptation of the BDBMMI:

1. Providing more visibility into the earlier stages of the data maturity journey for an organization (as those steps are often the hardest to undertake);
2. Focusing on measures that are right-sized and salient for mid-market businesses,
3. Codifying it such that an organization's current state of data maturity can be easily measured and tracked over time, by the organization itself.

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The CDMSMM is as follows. In our experience, it is simpler to understand and better distributed across organizations than the BDBMMI. We developed a set of questions to rapidly assess and score a mid-market organization's current state.

Start >> Discovery	Discovery >> Monitoring	Monitoring >> Insights	Insights >> Optimization
Confirm buy-in from the top	Train business users	Attract talent / develop SMEs / update org chart	Evaluate relevance of generated insights
Reformulate key business questions <i>that data</i> can answer	Deploy automated dashboards	Create analytics sandbox	Deploy prescriptive analytics
Identify data assets and evaluate their state	Address low hanging fruits / get easy wins	Deploy 'real-time' environment	Deploy data lake
Assemble data 'task force'	Build analytics profiles and scores	Drive adoption by business users	Build tools to operationalize insights
	Document policies, rules, standards, controls	Capture insights	Measure decision effectiveness
			Refine ROI projections
0-10	10-40	40-80	80-100
CDMSMM Score			

Advancing through the CDMSMM framework

Here are a set of recommendations or actions to help mid-market organizations advance from one stage to the next. What actions do organizations need to take in order to become a more real-time, more predictive and prescriptive, and ultimately drive new profit centers?

Most organizations are stuck the Discovery >> Monitoring phase, in which they use basic tools to monitor, providing a retrospective, batch view of what has been accomplished. It is a critical foundation upon which to build big data capabilities, but those organizations know they have a long way to go.

1. Start to Discovery

The **Discovery** phase is about *deciding* to start down the data maturity path. Top management / ownership now believes in the importance of data, and is allocating internal and external resources to the initiative. Basic data education is being delivered. Strategic questions are recast such that data can help answer them.

- **Confirm Buy-In from the Top.** Validate the fortitude and pragmatism of executives to resource the initiative properly.
- **Identify Key Business Questions.** Identify and understand the decisions that the key business stakeholders need to make to support an organization's key business initiatives (e.g., "Reversing market share loss in core product line")
- **Identify Data Assets and Evaluate their State.** Catalog the various repositories of data in the organization, and rate their status, along the dimensions of completeness, accuracy, and up-to-datedness.
- **Assemble Data 'Task Force':** Gather a small team of internal staff who have an inkling for this kind of work; install an external coach to guide them along.

2. Discovery to Monitoring

The **Monitoring** stage is the phase where companies are deploying business intelligence, dashboarding, and data warehousing products to monitor on-going business performance. They also sense they have a grasp on their data assets, and can begin to envision what could be done with the new capabilities.

- **Train Business Users.** Train business users in a process to think about identifying data sources, questions, variables and metrics that could potentially be better predictors of business or individual performance ("Thinking Like A Data Scientist")
- **Deploy Automated Dashboards.** Build visualizations for most business users, which creates engagement. Send updates to these dashboards automatically to users periodically.
- **Address low hanging fruits / easy wins.** Choose one or two key business questions and start generating new insights, even if preliminary or incomplete—momentum early on is important.

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- **Build Analytic Profiles and Scores.** Create analytic profiles for the key stakeholders (typically, customers) based on demographic, behavioral and organizational / corporate data.
- **Document Policies, Rules, Standards, Controls.** Put to paper the basics of a data foundation, such that the analytics efforts that most users will 'witness' are soundly supported.

3. Monitoring to Insights

The **Insights** stage is about coupling the wealth of internal and external data with predictive analytics (and even machine learning) to uncover insights about the organization's key (internal) business processes, product and service attributes, and/or customer behaviors and sentiments. Key actions required to transition from the Monitoring to the Insights stage include:

- **Attract Talent / Develop Subject Matter Experts / Update Org Chart.** Define new roles and responsibilities, hire and rethink the organization, as the natural limits and bandwidths of staff who are not data specialists are reached at this stage.
- **Create Analytics Sandbox.** Provide an analytics environment that allows the data scientists to rapidly ingest data (as-is; no schema required), explore the data, and test the data for its predictive capabilities in a fail fast environment that includes:
 - o **Historical detailed operational and transactional data** at the most granular level
 - o **Internal unstructured data** about logged engagements and conversations
 - o **External unstructured data** from publicly available activities
- **Deploy Real-Time Environment.** Create a "real-time" data and analytics capabilities that can monitor stakeholders' live behaviors (across individuals' transactions, engagements, events, activities, etc.) to flag changes or insights that might be worthy of analysis.
- **Drive Adoption by Business Users.** Build new habits in users' day-to-day behaviours, such that their 'data' mindset strengthens
- **Capture Insights.** Capture and catalogue the insights that are being uncovered about your key business entities for review and assessment in the Optimization phase

4. Insights to Optimization

The **Optimization** stage applies prescriptive analytics to the customer, product, operational and market insights to deliver recommendations to front-line employees, partners and customers to improve effectiveness of the organization's key (internal) business processes. Key actions required to transition from the Insights to the Optimization stage include:

- **Evaluate Relevance of Generated Insights.** Train business subject matter experts to assess the potential value of each of the customer, product, operational and market insights using the **S.A.M.** test:
 - o Are the insights **Strategic** for the targeted business initiative?
 - o Are the insights **Actionable**?
 - o Are the insights **Material** (i.e., the value of acting is greater than the cost of acting)?
- **Deploy Predictive Analytics.** Leverage predictive analytics and machine learning to uncover stakeholders' relevant behaviors (e.g., engagement tendencies, propensities, preferences, patterns, trends, interests, passions, affiliations, associations, sentiment) and to deliver actionable recommendations
- **Deploy Data Lake.** Build a [data lake](#) that supports rapid data ingestion, data engineering, data exploration and analytic modeling. Key characteristics of a data lake include:
 - o Captures data from a wide range of traditional and new sources as-is (structured and unstructured)
 - o Enables you to store all your data in one environment for cross-functional business analysis
 - o Enables in-place predictive analytics to uncover new customer, product, and operational insights
 - o Enables prescriptive analytics to create recommendations that empower front-line employees and drive more profitable customer engagement
 - o Enables the integration of the analytic results (scores, recommendations, rules) into operational and management systems
- **Build Tools to Operationalize Insights.** Operationalize the recommendations by leveraging modern app/dev techniques to integrate the results with web-based, mobile app, dashboards, and reports. This delivers the recommendations, scores and rules in a way that lets the business stakeholders consume them easily.
- **Measure Decision Effectiveness.** Instrument or configure the recommendations in order to determine the effectiveness of the recommendations (i.e., did the recommendations work as predicted). Use the results of the effectiveness measurements to finetune the analytic models.

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- **Refine ROI Projections.** The data science team collaborates with the business SME's to determine if the analytics can be turned into new business opportunities (i.e., validate market size and market share potential, determine the analytic lift and range of ROI); determine how would these insights be used to identify and launch new market or revenue initiatives?

Driving insights from the CDMSMM

Mid-market firms will benefit from regularly answering the CDMSMM survey – the questions can guide them towards data maturity best practices. Data maturity is multi-dimensional; it is our view that a large number of people in an organization filling out an easy-to-complete survey, will on average yield a reasonable proxy for the current state of data maturity for that organization.

It is said that perception is reality. Staff members' perceptions of their company's data maturity are captured by the CDMSMM score; improvements to it over time should equate to tangible changes.

FirePower will regularly publish findings derived from the CDMSMM submissions it receives; in aggregated format, it will become a bellwether for the mid-market's data maturity levels.

RECENT TRANSACTIONS

OCTOBER 2020

Gap Debt

For

KOA

The undersigned is a lender to the company



OCTOBER 2020



Closed a committed pool of capital for lower-mid-market investments in its FirePower Equity I LP

OCTOBER 2020



Arranged a \$250 million co-investment commitment from a top 5 US bank for the Private Credit division of



SEPTEMBER 2020



Acquired

ARZOO

The undersigned acted as advisor to the seller



[1] <https://www.bbc.com/news/business-30095454>

[2] https://infocus.delltechnologies.com/william_schmarzo/big-data-business-model-maturity-index-guide/