

SCOTT TAYLOR – *The Data Whisperer*

# TELLING YOUR DATA STORY



*Data Storytelling*  
for *Data Management*

**99% BUZZWORD  
FREE!**

Published by:



2 Lindsley Road, Basking Ridge, NJ 07920 USA

<https://www.TechnicsPub.com>

Edited by Sadie Hoberman

Cover design by Lorena Molinari

Cover Photo by Edwin van Wijk, courtesy of Stibo Systems

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or by any information storage and retrieval system, without written permission from the publisher, except for brief quotations in a review. In addition, electronic versions of this book cannot be posted for download, offered for purchase or free, or shared in any form or by any means without permission from the publisher.

The author and publisher have taken care in the preparation of this book but make no expressed or implied warranty of any kind and assume no responsibility for errors or omissions. No liability is assumed for incidental or consequential damages in connection with or arising out of the use of the information or programs contained herein.

All trade and product names are trademarks, registered trademarks, or service marks of their respective companies, and are the property of their respective holders and should be treated as such.

First Printing 2020

Copyright © 2020 by Scott Taylor

ISBN, print ed.	9781634628952
ISBN, Kindle ed.	9781634628969
ISBN, ePub ed.	9781634628976
ISBN, PDF ed.	9781634628983

Library of Congress Control Number: 20209465

Order 28478 by Kara Joyce on January 21, 2021

# The Current State of the DATA Management Story



Data Storytelling and Data Literacy are probably the hottest non-technical trends in the technology-related space. Neither of them directly supports data management. That has to change.

---

*There are two kinds of Data Storytelling: Stories WITH data (to support the use of analytics) and stories ABOUT data (reinforcing the importance of data management).*

---

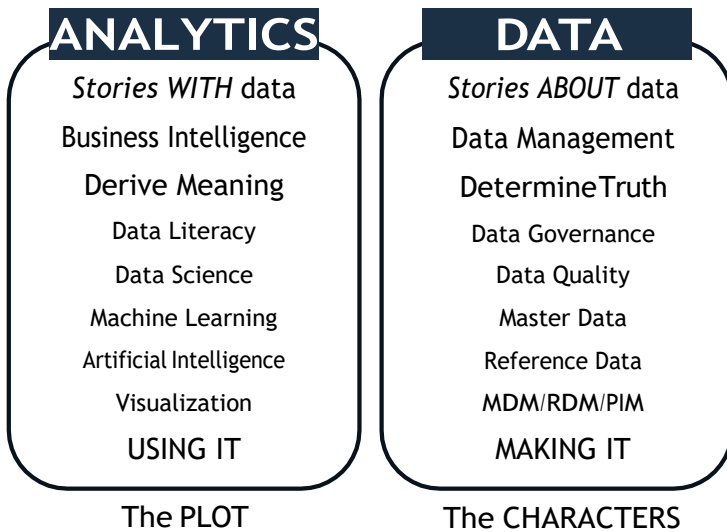
Keep in mind that there are two types of data storytelling. The most popular type of *data storytelling* is generally about Analytics. It guides the use of insight to drive business action. Many excellent experts and thought leaders have created content to help analytics and data science professionals. Coupled with data literacy, these efforts go a long way to assist in the effective delivery and use of insights in an enterprise. Industry experts like Kate Strachnyi, Nancy Duarte, Cole Nussbaumer Knaflic, Mico Yuk, Brent Dykes, Jordan Morrow, and Zack Mazzoncini all lead formal practices in how to better communicate with data through graphics, display, visualization, dashboarding and business-building techniques. It is a deep and vital knowledge area of crucial importance to every data-driven organization.

It is time, however, to expand the realm of Data Storytelling to recognize the role of data management. It is the story about why data is vital to an organization and why it needs to be managed strategically. While an analytics data story is storytelling *with* data and using it, the data management story is *about* data and making it. Both are important. They are connected. Segmenting these two data storytelling types helps clarify your focus and purpose. Every organization needs to do both.

When I read Gartner's definition of data literacy—*the ability to read, write, and communicate with data in context*—I don't see anything about data management. The majority

of time and focus in the field of Data Storytelling and Data Literacy is spent *explaining analytics*.

For more context, I see two big buckets in the broader data space: data (meaning data management) and analytics (some sort of business intelligence). *Analytics*, and the extended capabilities based on business intelligence, such as artificial intelligence, machine learning, data science, and data visualization, focus on making data more useful for an organization. This is where you derive MEANING. The activities around data management ensure data is trustworthy for an organization: data governance, data quality, data catalogs, business glossaries, master data, reference data, metadata, MDM, RDM, and PIM. This is where you determine the TRUTH.



**Figure 3** There are two kinds of Data Storytelling.

Data Storytelling is not just about analytics. But if you look at the content published about data storytelling, it is devoted to tips on visualization, dashboards, charts, graphs, and other ways to explain analytics. Analytics can bring all sorts of value to an enterprise as long as the data is trustworthy. Devoid of data management, however, analytics data storytellers have no story to tell—analytics create the *plot*, but the *characters* come from data management. Here's a simple example of an analytics data story headline:

---

*Our market share is down in our top regions, so we need to increase promotional pricing.*

---

Through analytics, this storyteller has proven that market share in certain regions is down and recommends that incentivizing prospects with a new offer will help drive volume and potentially lead to share increases. All the characters in this story come from data management. Calculating *market share* requires a clear definition of categories and competitors. *Sales* is an aggregated form of transactions. Transactions are made up of the intersection of a *customer* record and a *product* record at a given time for a particular price—essentially a *relationship* and a *brand*. Data management governs the definition of customer and product. Standardized market definitions are agreed upon through the work of data management. Yes, the business

has input into the definitions, but the story falls apart if those entities are not clearly defined. Questions abound: What do you mean by top regions? Which customers? What products?

Every enterprise has a data story to tell. They must tell it for two particular reasons: First, investment in data management is a crucial component for the success of the business. This investment should be an on-going, strategic initiative, not a one-time ad-hoc project. Most C-Level business executives, company boards, and business stakeholders don't understand that. It is not because they aren't smart or aware—they simply haven't been exposed to the need for data management in a business-accessible way with a strategic perspective. To get their attention, they need to hear a narrative that captures their hearts and minds and convinces them that data management is not an option.

Secondly, the louder, cooler, and in many cases, “sexier” trends fail without proper data management. Many massive investments are woefully underperforming. The value of every digitally transformative customer-facing initiative, every data science and analytics-based project, every as-a-service offering, every foray into e-commerce, and every enterprise software implementation is inextricably linked to the successful output of data management efforts. Although it is a simple function of

*garbage in garbage out*, that slogan rarely serves to drive any sustainable executive action.

We need to speak up. How many of you sit silently when a BI thought-leader boasts, “without analytics, data is just a cost center” or “data has no value unless it is made into analysis.” That is your work! A baker would never say, “flour is worthless unless I make it into bread,” because they have respect for the ingredients. There is no doubt that business intelligence provides incredible capabilities, but without proper data management, those efforts are futile. Challenge the analytics community to end this type of zero-sum portrayal of data vs. analytics value. It doesn’t help either group gain executive support.

The need for data management has never been greater. The convergence of social, mobile, cloud, and information patterns are driving new business scenarios within the macro-trend of digital transformation. This transformation unlocks untapped value, innovative experiences, and disruptive business models. In a digitally-transformed organization, data moves seamlessly from workflow to workflow and between external partners. Users can spend their time improving their relationship experience rather than questioning the data.

The road to data management ruin is paved with good intentions, both strategic and tactical. Business Stakeholders, at all levels, may have limited exposure to



the critical importance of enterprise data management. Typical data management program failings include, but are not limited to:

- Data management funded as a project instead of a program
- Failure to show immediate value
- Expanding scope with unclear definitions
- Lack of compliance and support from other departments
- Underestimating the cultural mind-shift, organizational support, and change management required for success
- Lack of direct Return on Investment(ROI)
- Unrealistic scope definition—often referred colloquially in retrospect as “boiling the ocean”
- Execution as an IT- and technology-led effort
- Cultural apathy, siloed behavior, skunkworks analytics, and a general disregard for data governance requirements

You defined the use cases, worked on the implementation plan, and provided a clear return on investment. You thought you proved it all. But you did not break through

to the people with all the money who have no time to hear you out.

To evangelize data management programs, leaders must create a compelling narrative. In a recently published declaration, *Data Management Has Failed!*, Tom Redman, John Ladley, and a host of other long-time leaders from DAMA, the international data management association, drafted a call-to-action recommending “bold, powerful moves” needed to secure business leader support for data management. They suggest: (1) remove technology from the conversation, (2) focus on outcomes, not minutiae, and (3) earn genuine senior-level engagement. These are indeed worthy actions, but perhaps the real crux of the problem lurks deep in Redman and Ladley’s observation that “as a community, we have failed to educate our leaders...and craft messages that people will listen to.”

They are correct. There is too much tech talk that makes data management *messaging* very hard to listen to. The current data management sales pitch simply isn’t convincing. There are multiple reasons why data management programs may fail, yet an overwhelming majority suffer from an inability to demonstrate and communicate business alignment.

It doesn’t help that data management efforts aren’t considered exciting, innovative, or “cool.” Meanwhile, business intelligence, in all its iterations (artificial

intelligence, machine learning, AutoML), enjoys a disproportionate amount of exposure, limelight, and support. The elevation of these practices to near-heroic stature continues to overemphasize business intelligence over data management.

Hot trends give the cold shoulder to data management. Where is the active voice of data management in data storytelling, data literacy, and data visualization? I don't hear it. Data Science, in all its sexiest-profession glamour, glosses over the core value of data management. We seem numb to claims that data scientists spend 60-90% of their time *munging* and *wrangling* data. Those cute terms mask the real issue. Having access to better-managed data will avoid much of that munging and wrangling—data free of duplicates, with a well-governed, expertly-stewarded structure for hierarchies, taxonomies, and geographies.

Additionally, McKinsey Digital identified six data management best practices in their paper *Designing Data Governance That Delivers Value*:

- 1. Secure top management's attention**
2. Integrate with primary transformation themes
3. Prioritize data assets and focus data leadership accordingly
4. Apply the right level of governance
5. Choose iterative and focused implementation
- 6. Generate excitement for data**

The first and last items support the need for better storytelling. To capture top management’s attention and generate excitement for data, you must tell a compelling data story about data management.

## **The story of foundational DATA**

If you have a problem related to technology, it is usually associated with three things: hardware, software (and I’ll include any form of coding in there), and data. Before you start yelling about “people and culture and process,” just go with me on this.

Let’s say your CEO’s quarterly reports aren’t correct, or your customer experience is in shambles. Where is the problem? Is it the hardware? Probably not. You have a reliable and secure cloud vendor. Is it the software? Doubtful. Commercial software pretty much does what it is supposed to do. Is it the data? Most likely. And within the data, is it the analytics? Sometimes. But analytics in production is usually well-tested. Where is the problem? The root cause tends to be in the underlying data representing the structure of the output: master data, reference data, metadata—all in the scope of data management. If your customer hierarchy is wrong, your reports are untrustworthy, and your Customer Experience

is a mess. If there is a data breach, odds are someone, somehow, falsified their identity. Authenticated identity is a crucial benefit of highly-structured data.

---

*When your data is good, it is very, very good, and when it is bad, it is horrid.*

---

The classic disruptors in every industry, Airbnb, Uber, Amazon, for example, all thrive on well-managed data. Their services fail without the master, reference, and metadata that fuels them. When you tap your thumb on the phone, a car arrives. When you search for a product, you may be served with new alternatives. It isn't magic. Of course, it takes systems, but without the foundational data, it will not work.

How do you start to articulate the value of this kind of data? Here are a few ideas:

- It is a *common language* for your organization. A common language for common definitions for the most important relationships of your business: customers, vendors, partners, prospects, and your brands, products, assets, and services.
- It is about *rows and columns*. If you think about a nifty data visualization technique, let's call it a "table" or a basic chart. People are good at columns, but they are not good at rows. That is the

master data part—all those rows. The data that makes up the rows is what the data in the columns is about. Adding columns is easy—aligning rows is hard.

- It is about *truth and meaning*. It isn't chicken or egg here. It is egg and omelet. Data is the primary ingredient for analytics. You have to determine the truth in your data before you can derive any meaning from analytics.
- It is about *caring for your relationships*. How do you grow and improve and protect your business? And I know there are some other things that people do in their business, but if you think about it—growing, improving, and protecting your business—that is most of what you do. Structured data can help you do all three at the same time.
- It is about *making good decisions*. That's all businesspeople want to do is make good decisions. *But good decisions made on bad data are just bad decisions you don't know about...yet.*

## **Your DATA story is ABOUT your DATA PAIN**

Data management can equal pain. I have been in this business long enough to notice people do not use cute little business euphemisms like “we have a challenge” or “we

have a hurdle.” They talk about *physical pain*. I learned this early in my career when I was selling to a sales organization, and the head of sales said, “You know Scott, we can slice and dice our data any way we want to. All I have to do is push a button?” Then this courageous sales analyst at the end of the table stood up and said, “Sir, I’m the button.” You are probably “the button” in your organization. That hurts.

I’m going to share an example of pain. Be prepared. I call it naked data. There’s no way to hide from it:

The New York Times Media Group	NESTL	7 11
The New York Times Company	NESTL <sub>IF</sub>	7 - 11
New York Times Co.	NESTL <sub>IF</sub>	7.11
New York Times, The	NESTL <sub>LE</sub>	7/11
The N.Y. Times	Nestle	7/11
New York Times	NESTLE	7/11
N.Y. Times	NESTLÉ	7=11
NY Times	NESTLE'	7-11
NYTimes	NESTLE-	SEVEN ELEVEN
Nytimes	NESTLE/	SEVEN/ELEVEN
	Nestl@	SEVEN-ELEVEN
	NESTl@-	
	NESTRAD	

**Figure 4 Separate processes produce duplicate records with inconsistent naming conventions.**

That’s the problem. These examples are from embarrassingly large global enterprises who don’t know what they are doing with the *New York Times*, can’t figure out a way to consistently input Nestlé, don’t know how to report on 7-Eleven. And this last column here came from a manufacturer that put people into stores. They had a retail location file with over 275 different configurations of the 7-Eleven Banner name—lots of creativity in the field, none of

it selling products. If you think the software is always going to solve the problem, you put this in Excel, and you get July 11<sup>th</sup> (except for those of you from the EU who get November 7<sup>th</sup>.)

7-ELEVEN - SOUTHLAND	7-ELEVEN MKT	7-11 FT.W#20427	7-11 MARKET	7-11	7 ELEVEN FOOD STORE
7-ELEVEN # 10285	7-ELEVEN MKTS	7-11 #23873	7-11 MINIT MKT	7-11	7 ELEVEN MARKET
7-ELEVEN (CORP)	7-ELEVEN ROLLAND	7-11 #13035	7-11 MKT	7-11 #20472	7 ELEVEN MKT
7-ELEVEN (CORPORATE)	7-ELEVEN STOR	7-11 #30285 CITGO	7-11 NO 25448	7-11 STORE	7 ELEVEN MKTS
7-ELEVEN (F)	7-ELEVEN STORE	7-11 #30479 (CITGO)	7-11 QUICK MART	7- ELEVEN	7 ELEVEN NO.14174
7-ELEVEN (FRANCHISE)	7-ELEVEN STORE 11449	7-11 (18668 F	7-11 SBR INC	7- ELEVEN #11335	7 ELEVEN STORE
7-ELEVEN (GARBKOW#16)	7-ELEVEN STORES	711 18563 F	7-11 SEVEN ELEVEN	7- ELEVEN #11337	7 ELEVEN STORE 10950
7-ELEVEN (I)	7-ELEVEN STORES INC	7-11 C #1115-816	7-11 SOUTHLAND	7- ELEVEN #23682	7 ELEVEN STORES
7-ELEVEN /C	7-ELEVEN SUE + PAT	7-11 D2171-13979	7-11 SOUTHLAND CORP	7 & ELEVEN-SOUTHLAND	7 ELEVEN#29530
7-ELEVEN /F	7-ELEVEN TONY	7-11 DIST 1104-17031	7-11 ST #27790	7/ ELEVEN	7 ELEVEN,
7-ELEVEN 10660	7-ELEVEN#13322	7-11 DRIVE IN	7-11 STORE	7/ ELEVEN,	7 ELVEN
7-ELEVEN 17661F	7-ELEVEN#GARKO #11)	7-11 DRIVE INN	7-11 STORE #22477	7/ ELEVEN	7 EVEN FOOD SHOP
7-ELEVEN 17867 FR	7-ELEVEN #32247	7-11 ELEVEN	7-11 STORE 20792	7-11	7. ELEVEN # 26636
7-ELEVEN 19903 FRAN	7-ELEVENIC			7-11 #57711	7.11
7-ELEVEN 20151#3643	7-ELEVEN/F			7-11 CHRISTY	7.11 #29008
7-ELEVEN 20337	7-ELEVEN-13140			7-11 15036	7/11
7-ELEVEN 2112-19200	7-ELEVEN#30127	7-11 FD STORES	7-11 #2371-11123	7-11 CONV	7/11 FT.W#24638
7-ELEVEN ASIF	7-ELEVEN-F	7-11 FOOD	7-11#1862-23295	7-11 FOOD STORE	7/11 FT.W#25762
7-ELEVEN -C	7-ELEVEN-SOUTHLAND	711 FOOD STORE	7-11.#32620	7-11 GROCERY	7/11 FT.W #18746
7-ELEVEN CITGO	7-ELEVEN			7-11 MKT	7/11 - 32570
7-ELEVEN D2175-21402	SEVEN ELEVEN			7-11 SOUTHLAND CORP	7/11 32577
7-ELEVEN DAVE	SEVEN ELEVEN #54101			7-11 STORE	7/11 # 2201-20220
7-ELEVEN DELI SHOPPE	SEVEN ELEVEN C STORE	7-11 FR	7-11S	7-11 STORE	7/11 #141
7-ELEVEN DENNIS	SEVEN ELEVEN STORE	7-11 FR #11549	7-ELEVEN/QMART#30407	7-11 STORES	7/11 CHRISTYS
7-ELEVEN DIST-2571	SEVEN ELEVEN STORE I	7-11 FR 11536	7ELEVEN	7-11 STORES	7/11 STORE
7-ELEVEN F	SEVEN ELEVEN STORES	7-11 FR# 11628	7-ELEVEN	7 EAVEN	7/11#1
7-ELEVEN /F	SEVEN ELEVEN#54134	7-11 FRANCH. # 11716	7-ELEVEN #13469F	7 ELEVEN	7/11, TH
7-ELEVEN FD STORE	SEVEN ELEVEN-SHAMS	7-11 FRANCH. #11730	7-ELEVEN #15968	7- ELEVEN	7/ELEVEN
7-ELEVEN FOOD SHOP	SEVEN-ELEVEN	7-11 FRANCHISE	7-ELEVEN #18020	7 ELEVEN #16432	7/ELEVEN #27054
7-ELEVEN FOOD STORE	SEVEN-ELEVEN	7-11 FRANCHISE#25595	7-ELEVEN #15127	7 ELEVEN STORE	7/11
7-ELEVEN FOOD STORES	SEVEN-ELEVEN #54129	7-11 FRANCHISE	7-ELEVEN #26796	7 ELEVEN # 15910	7=ELEVEN 2513-11086
7-ELEVEN FR 20935	SEVEN-ELEVEN FD MART			7 ELEVEN # 11161	7-11
7-ELEVEN FRANCHISE	SEVEN-ELEVEN HAWAII	7-11 GARB-KO #227	7-ELEVEN 13647	7- ELEVEN #18608	7-11
7-ELEVEN FRANCHISE	SEVEN-ELEVEN HI INC	7-11 HAWAII	7-ELEVEN F	7- ELEVEN 100	7-11 FT.W#26560
7-ELEVEN MARKET	SEVEN-ELEVEN INC	7-11 JUNGR#26923	7-ELEVEN - F		

July 11  
November /

**Figure 5 Example of the lack of data governance. The software doesn't always fix it.**

Find or create an example like this from your own organization's data. Although I am always talking about the high-level conceptual, strategic approach, anchoring it with examples of physical reality has a potent effect. You cannot talk your way out of this sort of bad data. Malcolm Hawker of Gartner calls it *the shame report*. "Sometimes you need to rub people's nose in their bad data," he says. Put that in front of your business stakeholders who don't understand why you can't get the right kind of analytics. It works because it hurts.



## The Golden Rule of Data

GIGO—*Garbage In, Garbage Out*. Some know this as *rubbish in, rubbish out*. Every data professional learns this on their first day. It is an inescapable reality, as inevitable as Newtonian physics. What goes up must come down. What goes in must come out. This has become a standard answer. It is almost a throwaway comment mumbled by a senior analyst in the back of the room.

“Why are these reports wrong?” someone asks

“GIGO,” the analyst grumbles.

I’d like to reposition and refresh this thinking as—*The Golden Rule of Data*. Do upon your data as you would have it do upon you.

No matter what the Persona at the C-level, no matter what the department and the prevailing system that drives that department, all of them need structured managed data content. So, garbage into Customer Relationship Management (CRM)? You get a bad customer experience and missed opportunities. Garbage into Enterprise Resource Planning (ERP)? You have sub-optimal resource planning. Garbage into a FinTech system? You may get a visit from the regulators. Garbage into ML? You get bad robots. Garbage into BI? *BS*. Garbage into AI? *AS!* Artificial Stupidity! No matter how you slice it or dice it, *The Golden Rule of Data* prevails.

## Once upon A time

Your data management story begins with why your company exists. What does your business do? At its essence, every business wants to *deliver value to their relationships through its brands at scale*. Whether you are in banking or manufacturing or a media company or a digital startup, that is what you are trying to do. You have relationships, and you have brands. You want those brands to bring value to your relationships. That is the whole point of business.

Now take that apart and ask: do we have the data behind those ideas? How good is the data you have for those relationships? Customer, vendor, partner, prospect, citizen, patient, or consumer. On the brand side, it is a product, service, offering, banner, asset, or location. Those are all classic master data domains. So instead of saying, “we need to improve the quality of our customer and vendor master,” turn the conversation around. Focus on the initiatives you have in the organization to build and strengthen your relationships, transform your customer experience, or move to an as-a-service offering.

These big ideas often require the approval of the executive team. As a data management leader, you have to show that you need the data to back those up. Do you want to transform your customer experience? Let’s talk about that. What does that mean to you? Better, deeper engagement?

Predictive assortment? Dynamic pricing? Whatever that means, there is a data piece to it. There is data on customers that probably is not very good because you have duplicates. There is data on brands and products that are spread all over the organization and incomplete. If the organization's strategic intent is to grow through new transformational experiences, you cannot do it unless you have the data foundation.

Most data management messaging focuses on features rather than benefits. Reduce duplicates, improve poor quality data, create a golden record, build a 360-view of the customer or product. Better decision-making, regulatory compliance, effective prioritization, increasing shareholder value—these are nice, but frankly, they can sound generic. Most business stakeholders don't care about these features. They always have the same question:

---

*Why should I care?*

---

## **Why you need A DATA story ABOUT Why**

In his book, *Start with Why*, Simon Sinek states, “People don't buy what you do; they buy why you do it.” Sinek didn't come up with the idea of WHY, but he did a great job popularizing it. His audience is mostly consumer marketers and brands, but the same holds for enterprise

leadership that needs to support the use of data. Although *WHY* is the most crucial question in business, data discussions at enterprises tend to be predominantly about the *HOW*: *how* something will be architected, *how* this API connects to that one, *how* it all works. When a business leader asks about *why* something will drive their business, the data person will invariably show them a massive architectural schematic, a bursting chrysanthemum visualization, or a dizzying array of flow diagrams—which rarely explains *WHY*.

There is a balance, but there is also an order. If you want to understand or articulate the value of data for your organization, and you can't express the *WHY* first, then the *HOW* will never matter.

I have had CEOs interrupt me and ask, “why are you telling me this?” Beware of the most show-stopping question of all—*Why should I care?* If this happens to you, you better be ready with an answer.

If you are like most data leaders, you are frustrated that your management doesn't understand. The industry analysts may confound you. Tool vendors and consultants may have burned you. You are sick of banging your head against the wall. And when your time finally comes to make your case, you blow it.

So, let us start over. Once upon a time...