Analytical Storytelling: From Insight to Action

By applying the age-old principles of storytelling and the new tenets of data journalism, organizations can evolve their analytics practices from gut-wrenching exercises of “guesstimation,” to a fact-based art of storytelling that not only informs and inspires meaningful decision-making but keeps key stakeholders aligned and engaged.
EXECUTIVE SUMMARY

There will be a tenfold increase in the amount of data that exists in the world between 2014 and 2020, according to IDC research.¹ Data is the “new air,” as ubiquitous as air itself. In the world of business, data is everywhere - and easier and cheaper than ever to gather and analyze. Business insights derived from data are becoming an essential part of corporate survival and success in the digital world.² Yet despite the profusion of data, research suggests that executives do not leverage it when making key decisions. Moreover, in an increasingly complex corporate landscape there is often a communication gap between data professionals and business stakeholders.³

The last step in bridging the gap between insights and action and creating a pervasive data-driven decision-making culture is analytical storytelling. Simply stated, this is the process of bringing data to life to tell a well-constructed narrative - one that ultimately connects with the hopes, fears and motivations of each stakeholder to encourage and guide a change in behavior. Such storytelling enables companies to shift from being instinct-driven to being insight-driven in their decisions.

Navigating the needed change in corporate culture is inseparable from the quality of the corporate decisions themselves; both halves need to progress in support of each other, and analytical storytelling links them together. This white paper will help your organization convert the concepts of analytical storytelling into practice and reap meaningful results.
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THE STATE OF DECISION-MAKING AND THE CASE FOR STORYTELLING

In a BARC Market Research survey on “Information Culture,” only 24% of managers and 22% of executives felt their decisions were based mostly on data, although 48% claim that information is highly valued as an asset - illustrating a disconnect between decades of IT investment and actual consumption.\(^4\) A similar result was highlighted in “Fostering a Data Driven Culture,” a report by the Economist Intelligence Unit.\(^5\) This suggests that, at best, data is being used when making decisions only four out of every 10 times. Such numbers accord with our experience, where the results on this track have not been encouraging: we have seen increased investment in data and analytics, but without increased effectiveness in decision-making.

Other literature suggests that instinct or “gut based” decision-making creates a sense of romanticism while fostering a feeling of importance in the decision-maker.\(^6\) It reinforces the decision-maker’s feeling that their gut is very wise, and hindsight also reinforces others’ trust in that individual’s gut.\(^7\) Yet this behavior creates tension with the continued enterprise investments in data.

A gap exists between the way humans were designed to understand information and how people are expected to consume data today. Since the early days of humanity, stories were used as a tool to communicate information passed down through generations. The neuroscience of storytelling suggests that humans physically respond better to stories than any other form of information consumption. Listeners identify better with the speaker, they translate the story into relatable ideas, and information is processed and recalled with greater accuracy by switched-on recipients.\(^8\)

We interviewed numerous industry experts in fields centered around storytelling including data journalism, communications and strategic consulting. The common thread that emerged was that the empathy evoked by storytelling is unmatched. This provides a clear opportunity to leverage narratives and frameworks associated with storytelling to explain data and ultimately drive data’s place in decision-making.
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THE EMERGENCE OF STORYTELLING

Before a decision can be made, the facts and situation should be documented and clarified. Only then can organizations apply “analytical storytelling” to bring the recommended action forward to the key stakeholders. This preparatory process is often called data journalism. According to author and data journalism trainer Henk van Ess, “Data journalism can be based on any data that has to be processed first with tools before a relevant story is possible.”

Data journalists can serve an important role in organizations. Nike famously ran a job advertisement for a role much like this in 2013, initiating an emerging wave that has been joined by a number of companies since.

The Essence of Data Journalism

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Figure 1

Data journalism can be likened to investigative reporting. The goal is to ultimately “expose” the real story and to uncover a single version of truth. According to industry experts, professional data journalists are encouraged to not share their work until there is evidence to support their findings. While data journalism assists in finding and developing the true narrative, it does not require the author to inspire action but merely to present the facts. Therefore, data journalism alone is insufficient when attempting to shift from instincts to insights in decision-making.
CORPORATE CHANGE AND ACTION

Analytical storytelling is the process of bringing clarity to a call to action, inspiring that action with persistent follow-through, and infusing all the people within the organization with a determination to learn from the actions, bad and good.

Why is a call to action needed? Corporations evolve to fit their historical needs; therefore, all shocks caused by new problems and new decisions made to address them cause stress to organizational memory and the informal methods of decision-making. As an adage among military historians goes, “Generals always fight the last war.” Analytical storytelling recognizes the need to connect multiple ideas with multiple stakeholders and, at times, force organizational change to compel analytical maturity where the current organization needs to rethink. Storytelling brings together a clear definition of the situation and problem, a description of the use cases and scenarios that would benefit from solving the problem, and an alignment of those benefits and expected actions from various stakeholders. All this is packaged in a personalized story that connects with each listener’s personality, decision type and corporate culture. Thus, multilevel storytelling is needed: First, for the business decision itself to be accepted and acted on, and next for the management of the organizational change...
necessary to absorb and act on the business decision. Both the need for organizational change and the process of such change require analytical storytelling as a means of connecting insights to action.

To kick-start an analytical storytelling initiative, intensive stakeholder analysis is required. Understanding the problems, priorities, perceptions and personalities (the four P’s) of each stakeholder or interest group becomes critical in determining the most effective way of communicating with them. The problem can be classified by difficulty and size; for example, is it easily reversible as in a pricing change, or strategically committed as in an acquisition? The priorities need to be mapped; since they could potentially raise awareness, revenue, profit or the personal standing of the decision-maker. Perceptions, both past and present, matter – and must be anticipated by the storyteller. The stakeholder’s personality must also be mapped; is the listener risk-adverse or adventure-seeking, for example, and how is the story altered to recognize this personality? Thus, the same analytical story could be presented in very different ways depending on the four P’s.

A strategy is then developed, resulting in segmented communications that address all participants in the decision-making audience, from key executives to populations of scale (e.g., communicating an initiative to an entire corporation or to partner/supplier networks). Focusing specifically on executive stakeholders, once their four P’s are understood, the next step is to develop a well-constructed narrative designed specifically for them. The output or mode of delivery during this step can vary, from a lunch conversation to a formal presentation. The timing and sequence of data and other information is critical to delivering a near-perfect narrative that will drive decision-making and inspire action.

Analytical storytelling can be applied in two distinct ways:

- To drive organizational change management and alignment.
- To communicate within the context of the customer lifecycle.
Effecting Organizational Change Management

We partnered with a large North American insurance company to illustrate the principles of analytical storytelling from start to finish. The engagement began with a recognition that the company needed to embrace a data-driven decision culture in making key insurance and actuarial decisions, as well as the related marketing and engagement decisions. The company was wedded to a decades-old organizational model for business analytics that assumed a high level of skill was needed to produce even basic reports. This was in keeping with the widely-held notion (at the time) that business leaders were unwilling (or unable) to get their hands dirty creating reports and applying analytical tools to raw data. Today, even the busiest executives are accustomed to the continuous flow of data, often in hyper-personalized and highly analytical forms rushing past them in their personal lives (think eBay, Amazon, Facebook or any of the born-digital financial services players). They are ready to take a more hands-on approach to data-driven decision-making. The old organizational model based on “ask and we will assign someone to answer” is now obsolete; in its place is a self-service model for core work that makes experts and their analyses available for most complex business challenges. Because analytics functions were often seen as too reactive and administrative, “shadow” analytics teams were created by certain lines of business (LoBs) to fulfill their own customized analytics needs. Over time, due to the long tenure of some employees and the lack of relevant trainings, the client’s analytics team was perceived as unable to meet business demands in the face of technological and organizational model changes.

The first task was to reduce the existing workload of the specialized programmers and analytical staff, to ensure they could retrain and focus on big challenges while leaving routine report-writing to the business. The next task was to equip and train business users with a new type of report-writing and visualization tool that allows them to manage routine tasks and gain control over their workloads. The analytical storytelling process was essential in laying out a

Developing a Well-Constructed Narrative

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Figure 3
comprehensive story of the problem, solution, benefits and resulting transformation. An intensive stakeholder analysis was conducted, resulting in a strategic and segmented communication plan. More importantly, each major stakeholder in the process was approached with a personalized “analytical story” that spoke to their anxieties and their aspirations. Using storytelling principles, we helped the company look at different dimensions of the situation:

- What parts of the story are most meaningful to this stakeholder, and in what measure? It might be cost savings, revenue creation, error reduction, government compliance, etc.
- What method of engagement is most meaningful for this stakeholder? E-mail, in-person meetings, team presentations with peers, lunch, etc.
- What method of progress tracking is most meaningful to this stakeholder and his or her team?
- What communities of interest can be encouraged to provide mutual self-service as a community exercise, breaking from the traditional hub-and-spoke support system and encouraging a more holistic approach (such as “Amazon style,” with reviews and replies) to engagement and support?
- What definition of success will each stakeholder have, and how can all be reminded of the continuous march to progress based on this definition?

After presenting the analytical narratives to various stakeholder groups (analytics team, key business stakeholders, corporate staff, etc.), a new set of data was collected to understand current sentiments in the organization, which reshaped the overall analytical storyline. For example, it became clear that the perception of the existing analytics organization across the company needed to be addressed so change could be enacted. Roles were consolidated from 12-plus to four distinct ones where titles changed as well as job competencies. An easy-to-understand three-step vision for the analytics organization was created to reinforce priorities in every internal circle. Trainings (both technical and behavioral) were launched to equip staff with the tools to move from reactive report generators to insightful analytics managers. Regular feedback was gathered from LoB stakeholders to understand how they were embracing change, and the construction of narrative-shaping was further modified to match the degree to which perceptions had changed. Their personality and role
determined how these shifts were communicated and what data was needed to address their problems effectively.

By applying analytical storytelling, this company was ultimately able to transform the way it looked at a problem, shifting from cost reduction to value creation. Moreover, top executives of the organization were viewed as heroes for inspiring change across multiple stakeholder groups, from the analytics team itself to key business stakeholders.

**Corporate Storytelling in a Customer Lifecycle Context**

Let’s take an example of a company that primarily sells high value manufactured goods to consumers. The path to analytical storytelling for corporate acceptance is built on the following principles:

- Building the core story that pivots around customer delight – and the subsequent revenue that validates that impression.
- Tying the core story into an understanding of the touchpoints and decisional journey that customers make, and how the company can capture and illuminate the data from these points.
- Connecting the benefits of the core story to different functional and organizational points within the company’s internal and external ecosystem, including point-of-sale channels and suppliers and supply-chain infrastructure.

Benefits include:

- The company will understand the lifecycle and gaps in consumer engagement: when customers choose (or don’t choose) a particular delivery channel, when they switch channels, and when they have gaps in purchases, which suggests that a competitive substitute or alternative is used at different stages in the lifecycle.
- Customers can be kept motivated by engagement in a continuous experience of maintenance, discussion and new model conversations and enthusiasm.
- The company can identify customers who relate to certain marketing efforts and sponsorship efforts that align with the company’s products. Automotive companies can sponsor or track enthusiasm for auto sports; sportswear companies can understand the recreational habits of their customers who choose to participate in shadow versions of such sports such as marathons or outdoor adventures, etc.
- Customers and partners alike will benefit from the company maintaining a cross-channel, multipoint view of sales and decision-making.
Parties who benefit from these insights include:

- The company’s product managers, who can analyze a combination of softer elements – social sentiment, comments scraped from news articles, customer call logs, maintenance logs and the precise purchasing behaviors across channels – to understand product functions and features in a real-world context.
- Company planners, who can anticipate demands and peaks in maintenance, parts supply and other features.
- Channel partners and touchpoint owners, who can benefit from comprehensive contextual information provided about their target audience to supplement their records.
- Company strategists and marketers, who can respond quickly to social trends, competitive actions and emerging government issues or trends relevant to their success.

**LOOKING AHEAD**

Story-telling is probably as old as humankind itself. We know that strong leaders tell stories to convey information and motivate listeners. Storytelling is applicable in many fields – for example, scientists also tell stories to help listeners retain more information and understand complex concepts and relationships. For a business striving to make fact-based decisions, approaches such as those built around data journalism have emerged to narrow the knowledge gap by creating strong data narratives. However, a crucial step is typically missed: making the narrative relevant to the four P’s of the audience.

Striving to be fact-based in our decisions will improve the likelihood of success, but such an aspiration confronts human biases and situations. The tools of data journalism and analytical storytelling, when mapped to audience attributes, can help anyone or any company clarify their thinking, improve their decision quality and inspire action – including the motivation to bring such action to completion and repeat the learning cycle. Individuals and companies who embrace the guidance of facts while also satisfying the human need for storytelling will have a competitive advantage. Ultimately, the story of the storytelling company will have a happy ending.
FOOTNOTES


Karthik is the Senior Vice President and the Global Head of Cognizant Digital Business’ Analytics & Information Management (AIM), Interactive, and Intelligent Products and Solutions Practices. In his 18-year tenure at Cognizant, he has held numerous key positions in the company’s leadership, business development and strategic planning. In his current role, Karthik has a strategic focus on creating digitally-enabled and analytically-driven solutions, transforming Cognizant’s clients as they strive to expand human experience and satisfaction through innovation. As an author and public speaker, his current area of thought leadership and focus is in the emerging area of analytical storytelling and the human connection, powering organizations to reimagine their business outcomes in the digital world and align insights to actions. Karthik can be reached at Karthik.Krishnamurthy@cognizant.com | www.linkedin.com/in/karthik-krishnamurthy-8117424.

Melissa has spent the last decade helping organizations align people practices and pillars with business outcomes. She has held various roles in client-facing talent leadership and has served as a consultant to Cognizant clients with a focus on organizational change management within the data and analytics space. As a leader in Cognizant’s Analytics and Information Management (AIM) Strategic Initiatives group, Melissa’s focus is on chief data officer advisory services, analyst/partner relations, branding/thought leadership, and organization change and transformation oriented to customer engagements/interests. Her greatest passion is in giving back to society and she regularly volunteers her time both locally and abroad with a specific focus on education and empowerment of children. Melissa can be reached at Melissa.Morello@cognizant.com | https://www.linkedin.com/in/melissa-morello-33185492.

James is Vice President and Practice Leader of Cognizant’s Analytics and Information Management (AIM) Strategic Initiatives group. His career has provided perspective and variety to understand the anxieties and aspirations of ambitious companies, with industries ranging from manufacturing to software to consulting, and in roles including programming, product management, sales and practice leadership. James’ current interest is helping clients manage the inevitable disruption – and its opportunity – that comes with artificial intelligence and its applicability to safety and decision-making. He can be reached at James.Jeude@cognizant.com | www.linkedin.com/in/james-jeude-b84672.
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