HARVARD BUSINESS REVIEW

Analytics And Data Science

Use Data to Answer Your Key Business Questions

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February 24, 2020

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Summary. Many organizations are investing billions of dollars in analytics with minimal return — hardly a recipe for success. Oftentimes, this disconnect stems not from faulty data science, but from an organization's failure to consider the...

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According to Gartner, the global analytics and business intelligence software market reached $21.6 billion in 2018. The firm has also predicted that, "through 2022, only 20% of analytic insights will deliver business outcomes." That means that organizations are investing billions of dollars in analytics with minimal return — hardly a recipe for success.

Oftentimes, this disconnect stems not from faulty data science, but from an organization's failure to consider the activation-readiness of their approaches to real-world applications of analytics. For many organizations, activation, or the art of leveraging data to do something meaningfully different in the market, is the missing piece that bridges the divide between insight and business value.

While most mature organizations understand how to leverage analytics for knowledge discovery, far too few are able to consistently aim this discovery in the right direction. This results in undeniably impressive analytics that are functionally useless.

To avoid this trap of analytics for analytics' sake, organizations should take the following steps when designing and evolving their analytics processes:

Prioritize High-Value Key Business Questions (KBQs) Over Pipe Dreams

In a previous HBR article, I introduced a process for arriving at the kinds of key business questions (KBQs) that set organizations up for analytics success. KBQs are forward-looking questions that establish a framework for what an organization will *do* with the insights produced by analytics. For instance, "Can we identify customers who churned after we discontinued one of our services, and frame our remaining services in a way that will win them back?" Or, a KBQ I encounter frequently in my line of work, "Can we map the referral relationships among healthcare providers and use our understanding of these relationships to better tailor our communications with each provider?"

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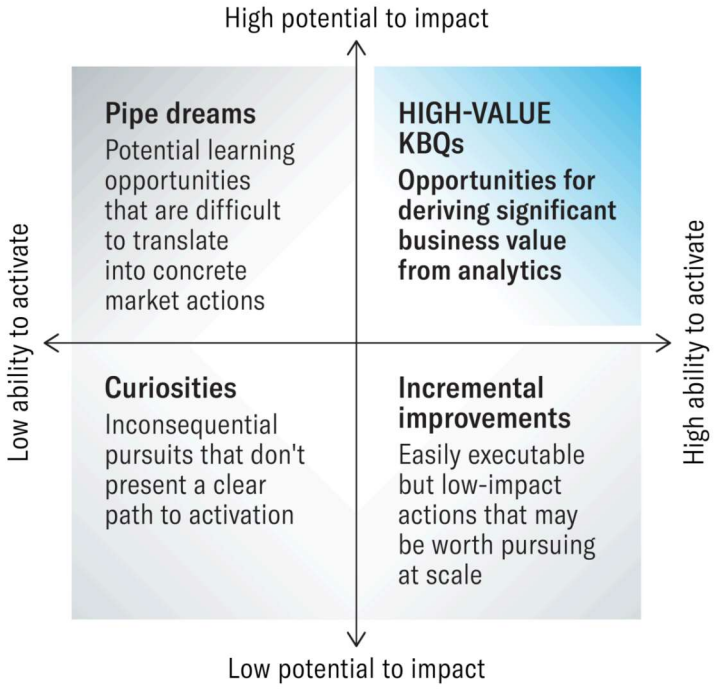
Situating the KBQ-generation process in a broader discussion about activation-readiness requires taking a deeper dive into the process' final step: prioritizing your KBQs. Once you have compiled an exhaustive list of your KBQs, you should assess them along two axes: "ability to activate" and "potential to impact the business." (See figure below.)

The Key Business Question Grid

The KBQ grid is a heuristic that helps organizations prioritize their business questions.



Source: Publicis Health HBR

Organizations that, at a minimum, understand how to leverage analytics for knowledge discovery typically end up pursuing KBQs that fall within the upper-left (pipe dreams) and upper-right

(high-value KBQs) quadrants of this grid. High-value KBQs are the North Star of activation-ready analytics. Pipe dreams are questions whose answers possess immense potential to impact your business, but are difficult to act on in the market.

If you're attempting to reduce customer churn, one of your KBQs might be, "How can we drive organic growth for our business by increasing our average customer lifetime value?" From an analytics perspective, answering this question is fairly straightforward. Armed with the right data, your analytics team can create a probabilistic scoring model that predicts the likelihood that you're going to lose a customer early in their customer journey. However, while this model amounts to an analytics solution to a critical business question, its mere existence does not qualify the question as a high-value KBQ.

A data-driven churn prediction model is only valuable if it enables you to change what you're doing in the market in a meaningful way — that is, if you're able to *activate* on the insights the model produces. If you don't have the right CRM and tech infrastructure in place, you'll be unable to put your model into play in the market, and your original question will end up as a pipe dream — its potential business impact is high, but your ability to realize this potential is effectively nonexistent.

Build Cross-Functional Teams Capable of Translating Insight into Action

Bridging the divide between insight and business value — and, in so doing, moving from knowledge discovery to activation-ready solutions — almost always requires a shift in team structure. To understand why, we must dig deeper into what activation entails.

A sophisticated example of activation might involve using transactional data to develop an algorithm that determines your

customers' propensities to make certain kinds of purchases, feeding this algorithm data in real time to make predictions, and deploying these predictions to an activation platform to drive customer-specific offer targeting at scale.

Beyond an analytics team capable of training a reliable algorithm, this level of activation requires both the data and IT infrastructure to maintain and transmit customer data in real time. It also needs marketing technology capable of taking the insights produced by the algorithm, translating them into strategic offers, and autonomously delivering these offers in the market. As such, organizations need to assemble cross-functional teams of domain experts that understand *all* of the considerations that factor into activating with data in the market — not just the analytics considerations.

In other words, activation-ready analytics requires analytics teams to collaborate — and even share decision-making responsibilities — with colleagues whose expertise rests *outside* analytics disciplines. As a result, organizations may encounter internal resistance, as members of cross-functional teams may be hesitant to cede authority over their domain of expertise.

There are several steps you can take to minimize this resistance:

- Acknowledge that this is a new process for everyone, and that you don't expect your cross-functional teams to get *everything* right immediately.
- Explain *why* each domain expert is present. If your analytics team doesn't understand why you invited your IT and marketing teams to sit in on analytics planning sessions, it's likely to view this as an encroachment on its territory.

- Regularly engage your team. Building an activation-ready analytics program is a collaborative endeavor, and you need to actively solicit feedback from every member of your cross-functional team(s).

Use Process Formalization as a Stand-in for Someone Who Can Translate Analytics

In addition to the steps above, ensuring analytics teams, business teams, IT teams, marketing teams, and partner vendors understand each other's strengths, limitations, and priorities involves performing multiple acts of translation at every juncture of the analytics process.

As has been articulated in other HBR articles, having an "analytics translator" who can orchestrate analytics professionals' operations and make them intelligible to nontechnical stakeholders can dramatically improve your odds of analytics success. That said, McKinsey estimates that the domestic demand for analytics translators could reach 4 million by 2025. To meet this demand, between 20-40% of the country's STEM graduates would have to pursue this kind of work, but currently, only 10% do.

This shortage of translators is already stark, but its severity increases exponentially when considered against the backdrop of the kinds of cross-functional teams described above. If activation-ready analytics is the goal, organizations need translators who are *multilingual*, not just *bilingual*.

Finding such translators can feel like a fool's errand, which is why most organizations need to consider alternative approaches to facilitating communication and collaboration within their cross-functional teams. This typically involves the formalization of

processes that create spaces for active, ongoing communication among domain experts. This begins with drawing up both a team charter that demarcates divisions of responsibilities and extensive analytics briefs for each project that include:

- KBQs to which the project is responding.
- Metrics that will be used to monitor the project's progress.
- Analytical approaches that will be leveraged at each project stage.
- Market action(s) that will be taken in response to various potential analytics outputs.
- Test-and-learn plans that establish activation-oriented next steps.

If, through this collaborative brief drafting process, accounting for activation becomes part and parcel of how you perform *all* your analytics, your team may never feel the absence of a domain polyglot.

Bringing It All Together: A Layered Approach to Activation-Ready Analytics

Ultimately, bridging the divide between analytical insight and business value is less a stepwise process than a layered one. It involves selecting the right high-value KBQs, assembling cross-functional teams to ensure activation is considered from the start, and formalizing the analytics process in a way that enables collaboration across disciplines.

Imagine that you're leading global marketing for a hotel chain whose revenue has decreased steadily over the last several quarters. A preliminary analysis shows that while new guest

acquisition is on the rise, a drop in repeat stays by formerly loyal guests is the primary culprit of declining revenue. To guide the stabilization of your revenue, you might pose KBQs like, “Can we predict when customers are at risk of churning and deliver incentives that will solidify their loyalty?” or “Can we implement real-time pricing optimization that will enable us to be the most affordable option for customers?”

These are good questions to ask, but taking the right next step(s) will require input from a diversity of stakeholders. While your analytics team may understand how to answer the second question, your IT team may inform you that your website is not built to support real-time pricing adjustments — even if you pinpoint the optimal room price for each customer, you don’t have the IT infrastructure to actually *offer* customers these prices. In other words, the second question is a pipe dream.

Further, if your analytics team locates a customer who was once a monthly patron but is now a quarterly patron, how should you incentivize the customer to remain loyal? Offer the customer double points on any stays in the next three months? Pilot a “stay nine nights and your tenth night is free” program with the customer? Give the customer a complimentary room upgrade during their next stay? Everyone from marketing to IT to accounting will have valuable input on the feasibility of these activations, and it’s critical that you create a forum (in the form of an analytics brief) for these various streams of input to coalesce into collaborative innovation if you’re going to drive changes to customers’ behavior that will bolster your bottom line.

All three of these layers are interdependent — and all of them must be in place for activation-ready analytics machinery to work at scale. In my view, this complexity is a large part of the reason so many organizations struggle to translate data-driven insight into

business outcomes. But while activation-ready analytics can initially be something of a juggling act, once all the pieces start to fall into place, the returns can be game-changing.

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