



BUSINESS ANALYTICS

Innovation Needs Numbers

(Unless You're Leonardo Da Vinci or Steve Jobs)

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Too often, our culture treats invention as the work of solitary geniuses like Leonardo Da Vinci or Steve Jobs. But that's not accurate. Product innovation is much more like making a film than writing a novel: it's a collaborative process requiring constant refinement and preparation. And the best way to prepare is through analytics. In all forms of innovation, data is making a difference, though in some realms more than others.

Admittedly, innovation is always going to be reliant on an invention process – no algorithm can create the next great product, because of the complexity involved. But this doesn't mean we should wait around. Instead, we use analytics to prime the pump of inspiration.

We must also shift our view and recognize that invention is a process, not a single moment. It's a blend of art and science. For example, in fashion, innovation is often the work of a lead designer at the center of the process. That person has a vision for what the market wants and invents new styles that requires an artistic viewpoint. But then the science view is applied, historical and predictive sales patterns are considered and new styles are further refined by the designers' team before going commercial.

Often people call Steve Jobs an artist, but a close reading shows that he worked tirelessly to create a vision and refine it with the help of his team. Larry Ellison said at one point he would no longer come to lunch with Jobs if he had to take another trip through the prototype Apple Store because he was so tired of seeing the process of invention rather than the results.

Product innovation is a collaborative process requiring constant refinement and preparation



In video games and film, there are usually some central visionaries, but then a huge team that carries out that vision. Kubrick is not Kubrick without the input of all the actors, musicians, crew, and cinematographers with whom he worked.

In all these realms, there is a balance between vision and refinement for the purpose of execution. In some realms, like fashion, vision is paramount. In others, like Apple products, the vision sets the stage and thousands of people put their creativity to work serving it. In short, we need tacticians as much as innovators for invention to occur.

Analytics will play a different role in each industry, depending on how much vision guides the overall invention process. In a virtuoso realm like fashion, the analytics may be pointed at the customer and the market. What is selling? What behavior changes are happening? The virtuoso designer can be informed by this data and inspired to consider new ideas.

In a highly data-driven market like video games, data may set the agenda. After the launch of a game, hypotheses about what users will do will be confirmed or proven false. The designers of each level, of the characters and weapons, all have results. The team of designers can then invent new solutions, put them in place, and run more trials.

Most of our businesses fall between these two extremes. The key thing is to understand the personality of your product innovation and determine how analytics can help.

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Here are some types of analytics to consider in your quest for innovation, both for creating net new products and improving existing products.

- **Product usage analysis.** Depending on the product, sources may include web analytics, app data, viewership information from set top boxes, logs from computer components, IoT devices and more.
- **Sentiment analysis** on product reviews, social media, blogs, articles, and analysis of searches to uncover the types of products and features that customers want to buy.
- **Product attribute analysis.** Determine which product attributes are driving acceptance by early adopters and make sure that this information is available to incorporate in design and engineering moving forward.
- **Competitive influences analysis.** Analyze the products that compete with yours and assess the impacts of factors such as pricing, features, and design. Make sure that you validate your assumptions about the products with which you compete.
- **New product churn analysis.** Perform detailed analysis around new product introductions and if the product is not going to be successful, allow it to fail fast.



These analytics inform product innovation in different ways. Collaboration, both internal and external, often sparks new ideas for your product innovation pipeline. Consider holding an innovation event, such as an internal hackathon where you bring together people from across the business, including brand leaders, product managers, customer service, and data analysts, to explore data and come up with fresh ideas. Great ideas can also come from outside your organization using crowd-sourcing. Use analytics to explore and refine the new ideas you harvest, following a data-driven path to innovation. It's a rich process in which you drive innovation rather than waiting for a eureka moment to strike you.

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