
Innovation Metrics and KPIs: Are You Getting What You Pay For?



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Everyone's pushing hard for innovation in science, technology, logistics and business planning but how do you know you're getting the best return on your investment?

Global R&D spending reached US\$1.6 trillion in 2014, about half of the estimated total spend on all innovation activity worldwide. While the private sector accounts for the largest share of this investment, governments are also significant players as they search for innovative ways to optimise economic growth and development. But are organisations – private or otherwise – getting the best return on investment in science, technology and innovation, and how can they analyse whether it's money well spent?

Performance metrics may seem the obvious answer, but as innovation is a somewhat intangible concept it has to be measured indirectly. And therein lies the risk of error and poor quality information.

It is impractical to try to identify and record every moment when a scientist or product developer has a flash of insight that leads ultimately to an important break-through. So performance metrics often rely on indirect measures of more specific activities, such as the number of patents created in a given setting, to act as a measuring stick of how much innovation actually occurred. However, while counting patents is a reasonable indicator of innovation, patent productions is also a product of other factors such as working conditions, equipment quality, social and political stability. For this reason well-developed performance metrics are usually based on multiple “proxy measuring sticks” of related activities to ensure that the overall metric is as accurate as possible.

A secondary issue in the use of performance metrics is that while they can be a powerful tool for change, organisations and individuals can sometimes lose focus of their real world goals and become side-tracked with activities they believe will affect their own score on a metric.

Measuring return on investment in innovation (ROI)

Considering that the main objective of innovation for a firm is to have a positive financial return, it often helps to use accounting metrics such as “R&D budget as a percentage of annual sales”, “Shareholder returns”, or even the correlation of a firm’s public value with its R&D activities. Such financial tools are used not only to judge the success of innovation, but also to assess the feasibility and the potential of an innovation project in its early stages.

The problem with these financial indicators is that they do not show *how* or *why* a company achieved a particular result. It is better to use financial measures specific to innovation to answer this deeper question, such as the ratio of successful ideas to total ideas generated, or the revenue generated by new ideas.

To go beyond “pure financial” return, it is also important to monitor the pace of development efforts, for instance the time to market. This is particularly useful in industries such as electronics where development cycles are short.

Using financial metrics alone to measure innovation success, may be dangerous. For example, calculating the value of a proposed investment by comparing the status quo with the potential outcome can be misleading at best (if you consider that without the innovation a company could stagnate and end up worse off). There is also the possibility that financial tools may be short-sighted and fail to adequately capture the long-term success of any given innovation.

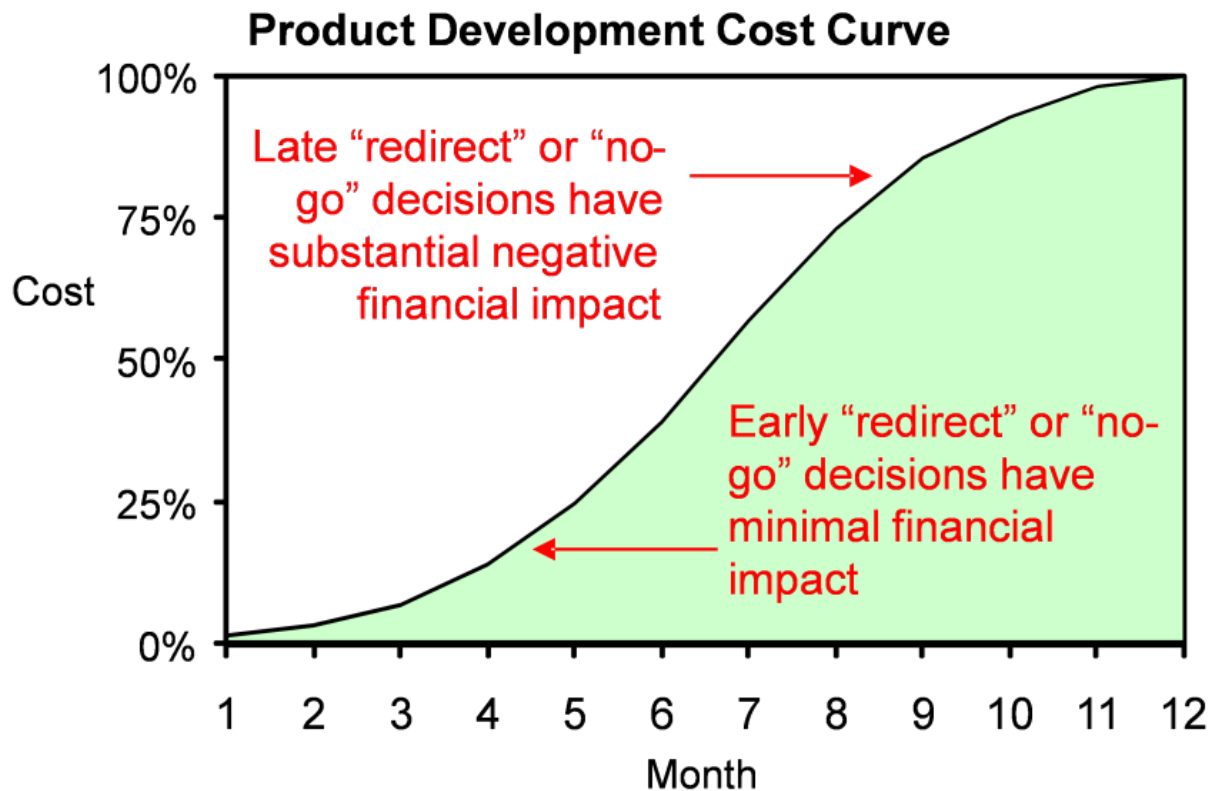
Some of these challenges can be avoided when decision-makers assess the projected value of innovation against a range of scenarios using a full set of both financial and strategic key performance indicators (KPIs).

KPIs for the future

When measuring innovation success, decision makers should bear in mind that some of the most successful innovations are often the most disruptive ones. Accordingly, companies ought to embark on roads less travelled in order to innovate radically and capture unique advantage. Beyond metrics alone, disruptive innovations might need to be incubated in a separate entity. Nespresso, for example, wasn't an instant hit (its patent was filed in 1976) until Nestle decided in 1986 to create a separate entity to give its project team a better more agile environment to grow and develop the concept for market.

The main challenge, especially for large companies, is to be able to maintain the track of their existing successful business model, while allowing some disruptive innovations to flourish within their umbrella – this dual objective clearly calls for a broader set of KPIs. This is not only a measurement issue but a governance one as well. A useful approach would be to set up a 'pipeline governance team' which has a mandate to periodically evaluate an entire project portfolio as well as authority to re-direct or even terminate projects - or reallocate resources in times of constraint or if priorities change. The pipeline governance team helps to optimise the value obtained from product development resources by ensuring that early "redirect" or "no-go" decisions can be made (cf. figure below).

Early vs Late Decision re. lost product development spending



Source: AlixPartners

A framework for success

To support the decision-making of this team, a set of measurement tools has to be put in place, and most importantly a unified and standard way of assessing projects. Companies should define a scoring methodology that takes into account financial, strategic and risk perspectives to support and standardise the evaluation of projects. Setting up this measurement framework needs to be undertaken jointly by the various business, innovation/development and finance functions that supply different aspects of the required information.

Performance metrics are powerful tools for insight and decision-making, but they are not ends in themselves. Metrics would never be able to exactly represent innovations or its outputs. The design and implementation of measurement frameworks can be a major challenge. Hence the most important step is to articulate clearly the intended results for the company's innovation-based strategic objective.

This article is based on [Are You Getting Your ROI in Innovation?](#), an [INSEAD Innovation & Policy Initiative innovation](#) brief in collaboration with AlixPartners.

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