

After 'Eureka!' Sharing Value to Drive Commercialization of Innovation

"Eureka!" The word even looks thrilling. In all human endeavors, there is no moment more exhilarating than a new discovery. The business context is no exception. Developing an innovative technology leads to great excitement about the potential created. But what comes after the eureka moment is just as important – turning the new technology's potential into value.

In today's complex business environment, a company that develops a new technology can rarely bring it to market on its own. Collaboration is essential. A technology innovator may need help upstream in the value chain to obtain raw materials as well as downstream to reach end customers. In many cases, participating companies will need to be convinced to change or adapt their current modes of operation or production.

The need to mobilize an ecosystem of stakeholders applies to a broad range of innovators and technologies, from pure-play startups to incremental innovation by market incumbents. Building an adoption ecosystem is especially critical for technologies that would require significant changes across the value chain – adoption cannot take hold in these situations without support from other stakeholders.

Take Protean Electric, an automotive technology firm, for example. This developer of in-wheel electric motors is currently partnering with automakers, component manufacturers

and government agencies so it can bring its breakthrough technology to full commercial realization.

The same cooperative value sharing approach ranges across all kinds of innovation, from high tech to clean energy, from semiconductors to bio-based chemicals. Solazyme and Verenium are both examples of technical innovators who revolutionize industrial processes. Solazyme utilizes algae to produce

Innovators can maximize success by following a systematic and flexible approach to sharing potential value.

renewable oils and food ingredients, while Verenium uses high performance enzymes to improve industrial processes. In these cases, the technical innovator needs both the primary process holder – the oil ingredients company or the industrial processor – to achieve commercial success.

Although many innovators recognize the need to build an ecosystem of stakeholders, the lack of follow through often leads to a dead end. Innovators frequently fall into the trap of trying to retain too much value for themselves, ending up with a high share of the revenues from a small sales volume. They also may not invest enough in business development or in educating potential business partners about an innovation's value, leaving

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stakeholders unenthusiastic about adoption. In some cases, they fail to involve a key stakeholder who ultimately obstructs adoption. It is especially common to overlook influential parties outside the traditional value chain such as regulators, service organizations or even competitors.

Five Steps to Commercializing New Technologies

Leading companies have avoided mistakes like these and maximized their chances of success by taking a systematic approach to commercializing their new technologies. They identify the key stakeholders in the adoption ecosystem and determine how to share the value created to fairly compensate them for their risks and roles in promoting adoption. By sharing some of the benefits with stakeholders, leading firms are able to create and capture much more value than they could alone. This systematic approach can be broken down into five steps (see Figure 1).

1. Prioritize Promising Applications

Because a new technology may have many potential applications, it is essential to prioritize which ones offer the most significant commercialization opportunities.

All too often, developers overlook this critical step and either get sidetracked by the classic innovator's curse of continual, unending improvement instead of focusing on a quicker first and best use of their innovation.

2. Map to Stakeholders

With the most valuable market targeted, the innovator can then map to all the players in the relevant adoption ecosystem. Companies should consider both the direct value chain and any adjacent stakeholders on whom adoption depends.

The most inclusive way to identify all stakeholders and understand their roles is to move backward through the value chain – starting with the furthest downstream stakeholder that directly serves end customers.

After mapping all stakeholders, an innovator needs to understand each one's ability to control or influence the new technology's adoption. "Gatekeepers" that control access to the market can assert the greatest power. For example, a leading component supplier for consumer electronics manufacturers would control market access for a new technology related to its component. "Pass-through" entities lie at the other end of the spectrum. Although they must adopt the new technology in order for the ecosystem to capture the potential value, these entities may be indifferent to the specific technology used and will likely follow the lead of more influential stakeholders in the value chain. There may also be other secondary market players who need incentives to participate.

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3. Value the Technology's Worth

Identifying the stakeholders that comprise the ecosystem and their role in adoption provides the basis for valuing the new technology.

Each stakeholder has value-creation opportunities as well as potential costs relating to adoption. Factors influencing the upside include the premium that the stakeholder could capture from a new technology and how much of the premium it would

Figure 1
Systematic Approach to Commercializing Innovative Technology



need to share with its suppliers and distributors. To understand the potential costs, an innovator needs to evaluate the risks a stakeholder would take as an early adopter and the investments it would need to make to switch to the new technology.

To gather information for these analyses, an innovator should systematically evaluate the technology's benefits and discuss them with each downstream stakeholder. All parties can then better understand how the technology will impact their business in terms of pricing, sales volume, market share and profitability. Accurate analyses of the potential upsides and costs for each stakeholder require understanding distinctions among different types of market participants. For example,

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some end customers may traditionally take the lead in adopting innovations while others follow a wait-and-see approach. An industry's innovation leaders may be more aware of the current technology's limitations and thus more willing to pay a premium on performance-enhancing technology. They may also have greater flexibility than their competitors to pass on higher costs to their customers (who expect the latest innovations from them).

4. Determine Value Allocation

While all parties in the stakeholder ecosystem play vital roles in the commercial success of a new technology application, determining who gets how much of the revenue pie depends on the varying levels of risk and benefits each stakeholder sees. While it stands to reason that gatekeepers receive a higher share than pass-through entities, value allocation is more of an art than a science. There is no pre-determined formula but instead a careful balance factoring industry benchmarks, risk assessment and degree of marketplace influence that can affect value allocation.

As the technology becomes established in the market, the innovator should adjust the value-sharing approach to reflect the opportunity to share less value with late adopters. Late adopters typically pay higher licensing fees for a new technology because they are assuming less risk and may have no choice about adoption. Further down the road, however, the eventual loss of intellectual-property protection will diminish the innovator's ability to charge a premium for its technology.

5. Decide How to Implement the Value-Sharing Approach

After the parties agree on how much value to share, they need to determine how best to implement it. There are three primary models for implementing and monetizing new technology

roll-outs. First, you can license the technology, which may be based on various metrics such as a percentage of volume sold or usage-based. Second, ecosystem participants can independently sell products into the value chain. Third, they can make the intellectual property freely available, and

benefit from network effects as a participant. Here are a few examples of how value has been shared:

- Small biotech companies often license new drug discoveries to large pharmaceutical corporations so they can reach a broader patient population through already established global sales and distribution channels.
- Gualapack, a world leader in flexible packaging solutions for the food and beverage and personal care industries, has driven rapid growth in the stand-up pouches segment of the packaging market by building strong relationships with co-packers and tailoring equipment to meet customer needs.
- Lastly, a more radical approach to creating technology shift has recently been taken by Tesla Motors, which decided to grant open access to its patent knowledge to other auto companies, encouraging infrastructure investment and market growth.

The selected approach should be optimized to "grow the pie" by presenting minimal friction to adopters, while preserving fair value for the innovator.

Apply a Systematic Approach, But Remain Flexible

The excitement of conceiving a new, potentially high-impact technology must be tempered by a thorough self-assessment from innovators to determine if they have the comprehensive capabilities to develop, launch and promote new technologies.

Although commercializing new technologies is challenging and complex, an innovator can increase its chances of success by applying a well-informed, systematic and flexible approach to sharing the potential value. Innovators should also be mindful of the need to accommodate other influential parties, such as regulators or service providers, to ensure that they do not introduce obstacles into the adoption process. By following a well-conceived approach, innovators stand the best chance of realizing the full potential from the initial eureka moment.

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