Google’s innovative search technologies connect millions of people around the world with information every day. --About Google Inc.

Firms take different approaches to continuously develop valuable innovations. As we have seen, firms successfully innovate when they effectively integrate entrepreneurial actions and strategic actions. Google is an excellent example of a company that has strong innovative capabilities and uses all three approaches to innovation.

First, Google has an internal innovation system that can be characterized as the “Parent Strategy,” or incremental gradualism. In other words, Google has developed an operating system that is scalable, meaning that when a new application is present, the flexibility built into the system allows Google to simply download the application. Once in the system, the application can address the large, varied content database. Google has also made huge investments in data movement and database management tools that accelerate the product development life cycle. Its data versions evolve over time and can be improved and customized based on continual customer feedback.

Overall, these internal innovation capabilities allow the firm to continuously develop new products such as Google TV. Billed as an “open platform that adds the power of the Web to the television viewing experience,” Google TV allows users to expand their search capabilities to access content from multiple sources including the Web, TV providers, their personal content libraries, and mobile applications. Autonomous driving technology is another recent internal innovation. Saying, “Your car should drive itself; it just makes sense,” Eric Schmidt, Google’s CEO, recently announced that the firm is test marketing its technology that drives cars. Initially however, there are questions about the financial viability of this internally developed innovation.

Second, Google’s basic software and operating capability allow cooperative relationships with third-party creators. Such relationships created services such as Gmail, Google Maps, Google AdWords, and Outsense (an advertising placement system). For instance, Zillo.com, by displaying elements on Google Maps for customers, provides high-quality data on real estate properties for sale, which benefits the third-party provider as well as Google. Similar combinations are available from housingmaps.com, a service that combines data from Craig’s List and Google Maps for those seeking apartments for rent or houses for sale plotted on a map of a local area. Comparable software applications, available for advertisers as well as content providers, allow Google’s system to create working relationships with consumers, innovators, advertisers, and content providers in an “innovation ecosystem” that facilitates cooperation among all parties.

Newly developed partnerships with Dish Network and Sony Corporation also demonstrate how Google uses strategic alliances to innovate. (Yahoo! And Google are evaluating the possibility of forming a partnership that would find themselves working together in Japan. This is yet another potential relationship with which Google may become involved.) The relationship with Dish is one through which Google TV is being seamlessly integrated with Dish’s content to provide users with multichannel television and rich Web media content. Through the second partnership, Sony Internet TV is becoming the world’s first TV to incorporate the Google TV platform, which makes it possible for users “…to search and access content from their TVs and across the Internet.”

Third, when Google executives realize they do not have critical capabilities or information management tools needed, they seek to obtain them via acquisitions such as Picasa for photo management, YouTube for online videos, DoubleClick for Web ads, Keyhole for satellite photos (now Google Earth), and Urchin for Web analytics (now Google Analytics). At the end of the first three quarters of 2010, Google had already completed 23 acquisitions, a total that exceeded the combined number of acquisitions Google made during the three previous years combined. This level of activity in 2010 suggests that Google was identifying technologies and capabilities in other firms that it believed had the potential to support its ongoing efforts to continuously innovate.

Google’s culture supports its efforts to innovate. For example, the firm’s engineers are allowed to focus 20 percent of their time on new ventures they would like to see developed further. Managerial personnel too are encouraged to spend some of their time on innovation. Thus at Google, innovation is literally built into job descriptions for all working in the firm. “Managers spend 70 percent of their time on core business, 20 percent on related but different projects, and 10 percent on anything else. Technical employees spend 80 percent of their time on core business and 20 percent on projects of their own choosing.”

In summary, Google has built an internal culture focused on innovation and has developed the infrastructure (such as the ability for employees to devote some of their time to innovation-related activities and projects) that is necessary to support this culture. Additionally, the company has built a structure so that it can cooperate with customers and strategic partners, advertisers, and content providers to facilitate innovation. Finally, as mentioned previously, when Google does not have an application that it needs or foresees as a new development opportunity, it partners with others or acquires a firm that has the capabilities to develop a new product or service. Collectively, all of these efforts make Google a “true innovation machine.”