Nicole Wozniak
4/5/2026
ITWP 2600 O1201 2026WI

Project 4 Case Study (Chapter 6)

The Case:

Lego Mindstorms Since 1947, Lego plastic blocks have been one of the world's favorite toys. Lego block kits let children build creations of their own design, or kids can follow instructions to build models of airplanes, cars, trucks, characters from movies and television shows, and robots. Lego uses its social networking efforts to stay connected to its customers in many ways. In 1998, Lego introduced its Mindstorms product, a programmable computerized brick that includes sensors and motors. Mindstorms was designed to be the basic building block of a programmable robot.

Although it is a toy, the Mindstorms product is also a powerful and functional robotics tool that allows people (young and old) to build robots without having advanced degrees in engineering and computer programming. In its current version, Mindstorms includes the programmable brick, several servo motors, a color sensor, a touch sensor, an infrared beacon, and several hundred building blocks to create more than a dozen different robots. The Mindstorms product comes with printed instructions and programming to build these basic robots, but the brick can be programmed and/or controlled by a personal computer or a mobile device (tablet, phablet, or smartphone) to create more robots. By adding additional Lego components, highly complex and large robots can be constructed and programmed.

Lego's Mindstorms social networking contains very little direct product advertising or promotion content, yet the company invests substantial resources in maintaining and developing its network of users. For example, Lego organizes in-person events and competitions where members can demonstrate their skills and learn from each other. An elite, invitation-only group called Mindstorms Community Partners tests new ideas, software, and hardware elements for the robotics system.

1. As a toy manufacturer, Lego must always be sensitive to the needs of its customers, both children and their parents, which requires the company to pay close attention to changing preferences and trends. Visit the Lego Mindstorms Web site and identify specific social networking features. Based on what you learned in this chapter, write about 200 words in which you describe current developments in social networking that Lego will need to understand as it decides whether to continue, remove, or modify the social networking features you identified. In your discussion, identify at least two specific social networking features.

2. Lego provides a complete set of instructions with this product for building the basic robots. In about 200 words, explain how a new owner of this product might learn how to build and program complex robots using social networking elements provided by Lego.

3. In this chapter, you learned how newspapers, magazines, and broadcasters are using participatory journalism to have their readers to create news items and stories. In 200 words, outline at least five specific ways in which Mindstorms community members create value for Lego.

The Answer:

1. Sadly, the Mindstorms product was discontinued but looks like Lego has taken part of the product line and used them within other areas and products like their STEM products. A few features Lego used or could use if they wanted to bring Mindstorms back are Virtual Learning Networks, and Open-Source Software.

   Using Virtual Learning Networks, Mindstorms products having a strong code focused feature would benefit from having a network for learning their products and coding. Providing a place to find all the learning you may need or be interested in would be a great feature to add for a product that has such technical aspects.

   Open-Source Software would be a huge benefit given the price point that this product line has fallen into. After spending that much on a product, offering their customers free software to be able to build their Mindstorms properly would be the best option. It also would be good to have this open source for those that would be interested in Mindstorms products and wanted to learn more about the technology before buying to ensure they could really enjoy their product. Lately, I've seen too many products that require software to use and its not free, so adding on to the price of the product itself is another fee you didn't expect – sometimes even being a subscription.

2. Going to their website for Mindstorms, there's a lot of information provided for consumers who may have gotten a product without knowing anything about it, or those interested in learning more. Even being discontinued, there are links to buying products (though they a listed as retried and you cannot purchase them). They have a linked video that introduces the Mindstorms products along with an overview of this line. A small breakdown with a bio for each 'character' or product within the line (GELO, RICKY, BLAST, MVP and CHARLIE). There is also a pdf you can download that has coding activities to help learn the tech elements of Mindstorms products, with information regarding each element that comes in the box (Motors, Color Sensors, Distance Sensors, and Hub and Battery). Direct links to app stores for the app used for these products, including a device checking option as well to test if you can handle the app. Lastly, Lego provides links to their STEM product lines as well as to their help page for further help and information.
3. Mindstorms have one example of ways that the Lego community has created value for the company, by working with a community panel on new versions and development of their products. How they could improve upon the Mindstorms line, especially after it was brought more by adults than their targeted audience, creating and listening to this community panel helped bring them new ideas. This community panel would be asked about a feature or product Lego planned on releasing and would receive a large amount of feedback, this involved things like sensors, ports, firmware, just for this product line

alone. Eventually when Lego saw the value that this community panel brought, they expanded it.

One of my favorite Lego products is another value, their Lego Ideas products are one's community members create, submit and vote on. This worked out in the sense that when a community member submitted an idea, they would need to share and promote it to an audience as large as they could, to get votes and become a product. This opens the door to new innovative ideas but also encourages their customers to be creative, while Lego works to handle the business side; securing licenses if needed for third-party IP creations.

There is a long list of product lines Lego has produced just in the 2000's with roots from the community itself. Lego Factory, Mosaic, Vikings, Studies, and Lead user Lab just to name a few. Lego organically created a community over their many years of business, which has helped them create relationships that build their products. User Groups, Online Communities (forum-based for example), Fan Media, and Conventions are just some of the ways the community bring Lego more value as the community can connect with others that share in their passion and help bring more members into the community. Eventually Lego launched the Ambassador program to create a direct way for the community and Lego to connect fast. This program eventually grew into an Ambassador Network as they aligned Ambassadors to smaller micro-communities to gather the most feedback and connection to help grow and adjust.

Resources:

Schneider, Gary P. (2017, 2015). Electronic Commerce (12th ed.). Cengage Learning US.

https://www.lego.com/en-us/themes/mindstorms/about

https://www.brothers-brick.com/2020/02/03/a-history-of-lego-education-part-3-mindstorms-over-matter-feature/

https://community.inc/deep-dives/community-growth-lego