

빅데이터를 위한 집단자료 설계

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Modeling of Crowd Source for Big Data

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● 요약 ●

We can picture a workforce that extends beyond your employees: one that consists of any user connected to the Internet. Cloud, social, and collaboration technologies now allow organizations to tap into vast pools of resources across the world, many of whom are motivated to help. Channeling these efforts to drive business goals is a challenge, but the opportunity is enormous: it can give every business access to an immense, agile workforce that is not only better suited to solving some of the problems that organizations struggle with today but in many cases will do it for free. In this paper, we research on factors to design an organizational crowd source for Big Data.

키워드: Big Data; Crowd Source; Modeling

I. Introduction

The increasing pressure to rapidly deploy new technology is accentuating some of an enterprise's biggest pain points: market insight, innovation, and a need for highly specialized skills. These are areas for which crowdsourcing solutions are well suited. Communities of shared interest have organically formed or are forming around almost every product, service, and idea that can be imagined. Crowdfunder, Spigit, and Mechanical Turk are just a few of the collaboration platforms that are rapidly evolving to enable and orchestrate efficient solutions. Some of the biggest market disrupters, such as Facebook and large enterprises including GE, are currently using crowdsourcing services to solve their most complex problems, and everyone is taking notice.

More and more digital platforms are available that make it easier to connect to what Accenture calls the expanded workforce. All of these can be considered online labor markets. They help companies that have tasks that need to be accomplished connect with resources that have the right experience, ability, and time. Although many organizations are experiencing the benefits of digitally enabled forums such as innovation exchanges and crowdsourcing platforms, few executives yet fully grasp the idea of being able to access a truly liquid workforce-pools of premier talent gathered in virtual communities and coalescing around specific business problems. This expanded workforce likely offers not only expertise that is not immediately available inhouse but also real scale. It can be leveraged to solve problems that may be too large or too expensive to solve internally.

II. Digitally Connected Platform

Kaggle is just one of these; others include Amazon's Mechanical Turk, along with services such as Elance and oDesk.

III. Expanded Workforce

The current workforce is not going away, of course; not every problem will be well suited to crowdsourced solutions. It will be essential that borderless enterprises work to harness the

energies and enthusiasm of the expanded workforce. However, it is no longer enough to rely only on groups of in-house individuals to drive market research, innovation, and product-development activities. Digital technology has brought a global voice to those functions. It is pushing out the boundaries that previously defined the enterprise workforce. It's not an overstatement to say that business leaders now need new perspectives on the nature of work itself. The expanded workforce is already changing the way companies market their products and services. Technology platforms that promote comments, user interaction, and even consumer investment are giving consumers a direct voice with which to communicate with the marketing department. In doing so, these platforms create a porous membrane between paid employees and the expanded workforce. Consumers are providing richly detailed information, giving companies an unprecedented level of insight into their products, how they're used, and the consumers that buy them. With the right digital tools in place, producers can predict better than ever how the market will react to their products and who will buy them. They can segment markets more discretely and test premium feature sets to see who will pay for them. The new approach trades abstract market projections for data-driven market decisions; consider the difference in outcomes between running small focus groups city-by-city and running a crowdsourcing contest to solicit customer input.

Innovation is now at or near the top of the C-suite agenda in every organization. But it remains difficult to execute- difficult to scale up and to ramp up fast, and hard to ensure that the results are of the quality expected. Yet innovation is happening organically everywhere, whether business leaders are aware of it or not; communities of shared interest have formed or are forming around almost every product, service, or idea that can be imagined. The open-source community is the original expanded

workforce- the trailblazers, united by ideas and interests, who helped write the rules and define the tools for freeform ways of developing software. Collectively, these impassioned individuals make up a global army of developers who are creating and improving free software, bringing worldwide benefits server by server, device by device, for free. This expanded workforce has touched every organization in some way. Witness the widespread use of two outputs of open-source projects: Hadoop and Linux. The first is the engine that is powering the Big Data era; the second is the kernel operating system embedded in 23 percent of installed enterprise servers, over 80 percent of smartphones shipped, and countless other systems ranging from embedded sensors to supercomputers.

IV. Conclusions

The strengths of these services can also be their limitations. Given the relative immaturity of these crowd-based services and platforms, there's still much to be learned. However, although there are no clear lines or absolutes when employing the expanded workforce, there are already some useful guiding principles for planning and implementing platforms for crowdsourcing.

References

- [1] R. Benjamin and R. Wigand. "Electronic Markets and Virtual Value Chains on the Information Superhighway," Sloan Management Review, Winter, 1995.
- [2] B. Brown, M. Chui and J. Manyika, "Are You Ready for the Era of Big Data," McKinsey Quarterly, No. 4, pp. 24-35, 2011.
- [3] J. B. Quinn, and E.S. Strategy, "Strategic Outsourcing: Leveraging Knowledge Capabilities," Image, 2013.