

BLAZECLAN TECHNOLOGIES: CLOUD COMPUTING ADOPTION IN INDIA

Professor Easwar Krishna Iyer and Dr. Jayanthi Ranjan wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

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Version: 2015-01-30

In July 2013, the biggest dilemma facing Gurmeet Singh, who headed the Marketing and Inside Sales Department of the nascent firm BlazeClan Technologies (BlazeClan), which was situated in Pune, India, was slow cloud adoption in the Indian market. This tardiness resulted in longer and slower sales cycles for the company, which provided strategic cloud roadmap consulting for various industries. Singh was confused about the total lack of understanding of cloud offerings in the Indian market despite an all-out effort by his company. The market was familiar with buying computers but showed resistance to the idea of buying “computing.” While the rest of the world was migrating towards services, Singh was bemused by the local cloud market’s inertia. BlazeClan invested a lot of marketing dollars in educating its potential customer segment in India by doing customer events, webinars, social media campaigns and talking at important industry forums. Yet, the momentum that was badly needed to push cloud adoption to the next level was not building up. Singh knew he had to do something drastic for his company prospects to look positive but wasn’t really sure how to go about achieving the desired results.

BLAZECLAN TECHNOLOGIES: BACKGROUND

BlazeClan Technologies was founded by Singh, Varoon Rajani, Veeraj Thaploo and Supratik Ghatak in 2010 (see Exhibit 1). Three of them had known each other from their engineering days and two of them — Ghatak and Thaploo — worked together in the United Kingdom. All four were fascinated by the current cloud computing euphoria. After all, cloud was the buzz word in 2010 with the nascent technology literally topping the Gartner hype cycle only a year earlier. Focusing on cloud computing, BlazeClan offered consulting, migration, bespoke application development and services for enterprises of all sizes and had operations in Singapore, India, the United States and Canada. Its customer base included large enterprises in the sectors of engineering, banking financial services and insurance, information technology (IT) and health care. It was also one of the largest advanced consulting partners for Amazon Web Services (AWS), the leader in cloud computing services. BlazeClan’s financial numbers had steadily been building since its inception¹ (see Exhibit 2).

¹ Robin Waters, “The Cloud Computing Stratosphere (Infographic),” April 6, 2011, www.virtualization.com/2011/04/06/the-cloud-computing-stratosphere-infographic/, accessed December 31, 2014.

Initially, the four founders had the idea of developing an online training platform (BriSkGap.com), which would be available over the Internet to start-ups and large organizations alike to help them streamline their internal training. The team had the strategy and the technology skills required but were short of the capital investments needed to set up the infrastructure. They came across the AWS platform, which offered computing power as a service.² BlazeClan developed the product and integrated a learning management system, a video conferencing system and online coding tutorials.³

AWS offered computing power, storage and networking as a utility, the way Google offered email services on the Internet. It charged for the amount of technology consumed by the hour and helped companies to set up their tech infrastructure in hours rather than weeks or months as had been the case. BlazeClan understood the value proposition that it could bring by playing the role of an intermediary between AWS, the utility vendor, and the client who needed a solution that was free of capital expenditure, had a minimal set-up time, was elastic and had low operations expenditure and variable computing load. Singh and his friends decided to build customized cloud solutions for their clients using AWS as their backend.

Taking their cue from AWS's pricing strategy, BlazeClan offered the market a pay-as-you-go cloud service. The company tested its platform to make sure that it supported scalability and flexibility since a large number of clients would be using it simultaneously. At an individual level, no single user could conjure up the same degree of scalability or flexibility using traditional platforms. It was here that the AWS plus cloud offering became relevant. BlazeClan quickly tasted success and saw enquiries coming in for its cloud expertise. It started consulting and implementation for its customers on AWS Cloud. Slowly, the Indian cloud market experienced a rise in cloud computing adoption, and many start-up firms started coming to the market to offer an assortment of cloud solutions. Clients did not want to invest huge amounts of money and time in buying and setting up their technology infrastructure, hence they preferred cloud, where they could go for large-scale deployments without any upfront investment. BlazeClan's first customer was someone who wanted an online trading platform, which it created in cloud space; the customer was happy with this choice.

OVERVIEW OF THE EMERGENCE OF THE CLOUD COMPUTING MARKET

What the Internet did to data access in the 1990s, cloud computing did to data processing and storage at the turn of the millennium — it democratized availability. Until the arrival of cloud, acquisition, processing and storage of data required a significant capital outlay. The scene changed when markets were able to buy computing instead of computers. Cloud offerings broke the capital expenditures (CAPEX) requirement barrier and levelled the playing field between developed and emerging economies.⁴ A multi-tiered market evolved, in which players at many levels mixed and matched offerings ranging from infrastructure to platform, applications, software and storage.⁵

² "Amazon Services," www.aws.amazon.com/, accessed December 31, 2014.

³ Venkatesh Ganesh, "Cashing on the Cloud," August 30, 2013, www.thehindubusinessline.com/features/weekend-life/cashing-in-on-the-cloud/article5075421.ece, accessed December 31, 2014.

⁴ "Cloud Computing and Its Levelling Impact between Developed and Emerging Economies," *International Journal of Computer Communications & Networks [IJCCN]* 3.3, August 2013, p. 13-24.

⁵ "The Cloud Computing Stratosphere," www.pinterest.com/pin/495958977685012219/, accessed December 31, 2014.

The market created acronyms around these transactions, and phrases such as infrastructure as a service (IaaS), platform as a service (PaaS) and software as a service (SaaS) were born. The market leader in both “completeness of vision” and “ability to execute” in the infrastructure lease-out space was AWS.⁶

Legend goes that Amazon, the world’s largest e-retailer, built capacities at the turn of the millennium that were far in excess of its online portal requirements. It decided to strategically carve out its excess capacity and sell it as leased computing services. By bringing out products such as Elastic Cloud Compute and Simple Storage Service, Amazon introduced a fine granularity⁷ in computer lease offerings. Taking a cue from Amazon, excess capacity players such as Microsoft and Google jumped onto the cloud bandwagon. Amazon Web Services [AWS], as per Gartner reports, outstripped its key rivals in creating capacity. It did infrastructure building at a lower cost too.⁸ Superior capacity building, visionary understanding of cloud adoption requirements, granularity of offerings, simplified service level agreements, adaptability and elasticity — these were the cornerstones on which AWS built its IaaS empire.

OVERVIEW OF THE INDIAN CLOUD COMPUTING MARKET

Any substitution offering was a suboptimal solution to existing markets and an optimal one for new markets. When modular kitchens first hit the market, people who owned a house with a traditional kitchen found the switch to modularity a suboptimal solution since it would necessitate reconstruction. In the same vein, when electric cars eventually come to the market in a big way, faster acceptance might be by populations who are not saddled with an internal combustion engine car. An echo of this behaviour had been observed in the cloud market also. Cloud had caught the imagination of emerging economies more than developed markets because there were less aggregate sunk infrastructure costs in the emerging market biosphere. Cloud had found wider acceptance among the small and medium enterprise sectors in contrast to large enterprises for the same reason.⁹

Hence, while AWS concentrated the development of its data centres in niche and strategic locations only, its marketing efforts were more globally focused. India, the second fastest growing emerging economy after China, was high up on its priority list. There were predictions that 2015 would be the year in which the aggregate Indian cloud market would touch its first US\$1 billion in revenues.¹⁰ Seizing this growth opportunity, AWS started developing a multi-layer partner network to co-deliver value to the Indian market.¹¹

To create the right synergy, AWS divided its partner network into consulting and technology partners. Together, they created the ecosystem labeled the AWS Partner Network. Consulting partners found architectural solutions and technology partners created and maintained the “up-in-cloud” configurations

⁶ This statement has been made on the basis of published and internet sources. The interpretation and perspectives offered are those of the case authors only. They do not in any way reflect the views of Amazon or any of its employees. See “Gartner IaaS Magic Quadrant Leaders — Summarized Version,” January 24, 2013, www.1cloudroad.com/gartner-iaas/, accessed December 31, 2014.

⁷ The huge complex meta-system of cloud at the back end has been reduced to a finely granular (small yet distinguishable) combination of offerings at the front end to the end customer.

⁸ Mat Asay, “Gartner: AWS Now 5 Times the Size of Other Cloud Vendors Combined,” August 21, 2013, www.readwrite.com/2013/08/21/gartner-aws-now-5-times-the-size-of-other-cloud-vendors-combined, accessed December 31, 2014.

⁹ David Linthicum, “3 Barriers Between Amazon Web Services And Businesses,” www.infoworld.com/article/2612427/cloud-computing/3-barriers-between-amazon-web-services-and-businesses.html, October 8 2013, accessed December 31, 2014.

¹⁰ Denise Holland, “India Cloud Computing Market Poised For Big Growth,” www.crmsearch.com/india-clouds.php, accessed December 31, 2014.

¹¹ AWS, “Partner Directory,” www.aws-partner-directory.com/PartnerDirectory/PartnerSearch?type=SI, accessed December 31, 2014.

for their customers. With CAPEX entry barriers reduced by at least two scales (this meant that one need not spend the money that had gone into the creation of India's IT giants such as WIPRO and Infosys to become an AWS partner; but could recreate the same value delivery), many starry-eyed youngsters came to this new market. With a glocalization (globalized offering, localized solution) philosophy, they cropped up in cities such as Pune, Gurgaon, Bangalore, Hyderabad and Chennai, the new bases of India's growth. One of the most promising newcomers was BlazeClan, who entered with the punch line "Cloud IT better."

BLAZECLAN: CURRENT BUSINESS STRATEGY

BlazeClan's client base started with multi-billion dollar NASDAQ-listed corporations and moved all the way to large enterprises in India and start-ups in Singapore, the United Kingdom and India. In India, BlazeClan helped a large life and general insurance company to move its digital marketing assets to the cloud. In the United States, the company helped a customer to migrate a large-scale download infrastructure (supporting 13 million annual downloads of its software) from a traditional set-up to the AWS cloud. The project commissioning and deployment was done within a very stringent timeline.

BlazeClan came up with one more product offering on the cloud, namely, Cloudlytics.com, a big data analytics tool available as a service. It helped in gaining insights on customer engagement patterns by analyzing the log files of the customer's content distribution networks and storage and giving detailed analysis of access requests for its online assets. These products laid the platform for BlazeClan to aim towards consistent revenue and cash flow management.

For every company that adopted cloud technology, there were others that were not convinced about what it could do for their business. They had issues with security (what will happen if data was leaked or sold to unauthorized entities?), ownership (does it make sense to keep paying monthly payouts when a business could claim depreciation benefits over the lifespan of equipment?) and service agreements (who would take the blame when things went wrong?), among others. While adoption grew, BlazeClan realized that not every client would be able to start using cloud computing on its own but would need help to ensure that it started the right way. For sophisticated managers who understood the concept of mobility and were willing to reap the benefits of cloud computing, an increasing number of young, vibrant companies such as BlazeClan offered a helping hand to make the transition.

BlazeClan served businesses of all shapes and sizes and boasted of ready-to-deploy solutions and frameworks that helped its clients to quickly adapt to cloud computing in a seamless manner. The company established an international clientele spanning Asia, Europe and North America. It provided not only industry-oriented strategic cloud roadmap consulting but also automated vulnerability assessment with pre-built solutions that made "time to market" quicker. Clients praised BlazeClan for its fault tolerant and secured solutions. In the meanwhile, to gain collaborative momentum, BlazeClan entered into partnerships and memberships with meta market fraternity players such as The Indus entrepreneurs, Singapore Infocomm Technology Federation, Nasscom India and Eucalyptus.

BLAZECLAN TECHNOLOGIES' DILEMMA: CLOUD COMPUTING ADOPTION IN INDIA

BlazeClan was at the right place at the right time, since the cloud market in India still had a long way to go to reach a critical absorption mass. With every client requirement being very different, the set-up process involved and the associated costs were significant. Since it was promised as a pay-as-you-use service, clients were hesitant to pay for the initial customization. Since they did not end up owning

anything, there was a pronounced hesitancy to pay for any intangibility. Singh candidly mentioned to one of his associates, "Some part of the promise was an experience and the rest was just credence. How can you monetize credence?" The biggest dilemma still unanswered was why the sales cycle in the Indian cloud market was so long and slow. BlazeClan was unable to pinpoint the exact reason why the cloud market had not shot up as expected. Singh had read about the "100th monkey effect": one needed a critical mass of adoption within the whole community for it to get behind an idea. Had India reached this adoption level? Had Asia touched that critical point? BlazeClan participated in several customer events, webinars and social media campaigns to educate customer segments. The footfalls were good, yet conversions did not pick up. Singh remembered the attention, interest, desire and action framework that he had learned in his marketing classroom when he was a student at the Great Lakes Institute of Management, Chennai, India. Attention was reasonable; interest was difficult to gauge; desire had too many obstacles and there was not really enough action: that was the cloud adoption story even four years after BlazeClan started the evangelization saga. Initially, the company presumed that customers lacked knowledge of cloud adoption and had serious security concerns. Data, despite its intangibility, had a sense of security and privacy when it was locked into an on-premise system. But here, the distance and the "cloudiness" created a perception of a lack of security. Though BlazeClan tried its best to convince customers on the security angle, the buy-in was seldom complete. In addition, the companies that had not adopted the cloud were happy with what they currently had. As Singh once wryly observed, "There is no anti-incumbency syndrome for technology. It only applies for governments!" BlazeClan realized that companies were happy to maintain their status quo instead of experimenting with new and untested cloud solutions. This posed a huge challenge.

Because of its small size and associated reduced overheads, the price point offered by BlazeClan was 30 per cent less than competitive market prices. Yet customers went to big companies for cloud adoption. BlazeClan wondered where it could fix its price discrimination point to boost profits. There were also issues related to Internet connectivity, especially with companies that had a heavy Indian presence. Sensing a dip in the cloud market in India, BlazeClan was worried over its plans to develop more products. It wanted to expand its intellectual property base and also set up channels in North America and Asia Pacific Region but was unsure if this would yield profits.

Another plan was to hire a sales team exclusively for North America. As significant capital had already been sunk in creating visibility within the Indian cloud market, BlazeClan was now forced to look for alternative funds to feed its global aspirations. The company planned to raise money through the operational revenue route by expanding its sales and investing more in the development of additional solutions and products.

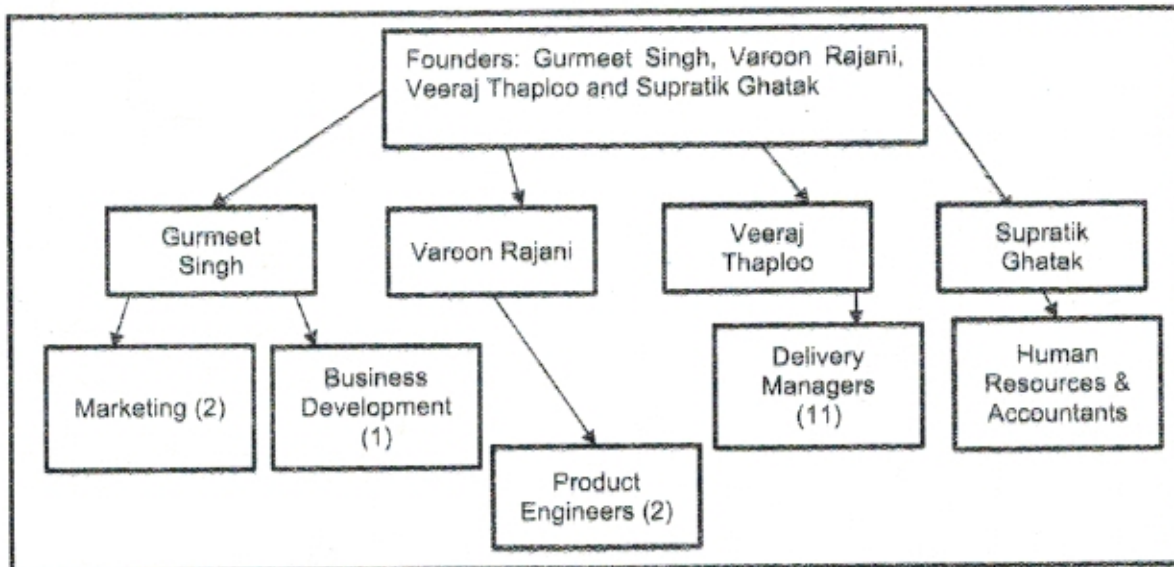
AWS had a huge lead in the cloud market through clever marketing and had made a public cloud that worked, scaled and lived up to expectations that made both customers and partners loyal to it. BlazeClan was well aware that even AWS, despite its scale, technology, brand power and global presence, faced problems with large enterprises on many issues. A large company preferred a good and clear deal. When the principals (e.g., AWS) themselves found big-ticket penetration a major hurdle, one can only imagine the difficulties of an associate network (e.g., BlazeClan). Most of the big enterprises needed a flexible contract and wanted to rewrite agreements to protect themselves. Technology providers such as BlazeClan normally signed such flexible contracts only after consulting with their business law experts, a sometimes expensive added cost.

BlazeClan's worries were not just limited to big enterprise conversions. Even small enterprise clients of BlazeClan were primarily worried about security aspects in the nebulous cloud space. Also, since the industry was new, there were unspoken concerns on vendor reliability which manifested as lock-in with a

given vendor on proprietary formats. This resulted in an inability to switch vendors. Potential cloud customers could also feel that the gains purported by the new technology might not be sustainable unless the operating costs stayed low. To cap all this, there could be genuine efficiency issues such as cloud latency. Can an intermediary player like BlazeClan cope with such a range of potential dissatisfiers for cloud adoption?

Singh's team faced a lack of referrals to enhance adoption. There were inherent fears in the market on which BlazeClan had little control. Cloud adoption exposed the customers to a slew of risks — some real and the rest perceived. Any new technology adoption clearly involves a tradeoff between a set of risks and a set of returns. Which of the cloud adoption risks were preventable? Were there a set of risks that were strategic — risks consciously taken by the technology adopter to gain some strategic leverage? Was there a set of risks that were purely external and hence outside the control of BlazeClan? Singh was convinced that a Dissatisfier Mapping of the cloud space and a Risk Mapping of the cloud environment were the two strategic steps that he would have to undertake to move his firm — BlazeClan — to the next orbit of growth.

EXHIBIT 1: ORGANIZATIONAL STRUCTURE OF BLAZECLAN TECHNOLOGIES



Source: Provided by the company.

EXHIBIT 2: FINANCIALS OF BLAZECLAN TECHNOLOGIES (INR IN MILLIONS)

Parameter	Units in INR Million				CAGR*
	2010	2011	2012	2013	
Net Revenue	1.5	4.5	20.8	45.2	210%
Operating Expenses**	1.3	4.1	14.6	29	180%
Other Income***	0	0.1	0.5	0.8	—
Net Income****	0.2	0.5	6.7	17	340%

Notes

*CAGR: compound annual growth rate. The high CAGR for net revenue is because it is a nascent technology and a new market and hence growth was expected to be exponential in the initial years. The CAGR would presumably taper down when measured after another three or four more years.

**BlazeClan being a start-up firm, the founders were not taking their market salaries in the initial years, and hence the operating expenses were low. From 2012, the four founders had started moving gradually towards their full market salaries. This explains the high CAGR of operating expenses.

***The other income is primarily the bank interest on the surplus revenue generated.

****Given some amount of fixed expenses, the net income was practically non-existent in the initial years. This explains the unusually high CAGR for net income. As mentioned for net revenue, the net income CAGR will presumably taper down when measured after another three or four years.

Source: The financial data of BlazeClan has been shared with the authors by the company.