

Teaching Case
**GlobePort Faces Challenges in Its Technology
Transformation**

Biswadip Ghosh

Recommended Citation: Ghosh, B. (2021). Teaching Case: GlobePort Faces Challenges in Its Technology Transformation. *Journal of Information Systems Education*, 32(2), 106-114.

Article Link: <https://jise.org/Volume32/n2/JISE2021v32n2pp106-114.html>

Initial Submission:	12 December 2019
Accepted:	14 October 2020
Abstract Posted Online:	13 March 2021
Published:	9 July 2021

Full terms and conditions of access and use, archived papers, submission instructions, a search tool, and much more can be found on the JISE website: <http://jise.org>

ISSN: 2574-3872 (Online) 1055-3096 (Print)

Teaching Case

GlobePort Faces Challenges in its Technology Transformation

Biswadi Ghosh

Computer Information Systems
Metropolitan State University of Denver
Denver, CO 80217, USA
bghosh@msudenver.edu

ABSTRACT

Established retailers are facing growing competitive pressure from pure internet startups that are leveraging eCommerce marketplaces hosted by Amazon, Facebook, Alibaba, eBay, etc. Some traditional retailers, such as Best Buy, Macy's, and Walmart, have created an effective competitive response to these pure eCommerce startups by adapting their customer experience and effectively integrating their physical infrastructure with their online presence and making online shopping easier than ever for consumers. GlobePort, a nationwide sporting goods retailer with 200+ locations, \$1+ billion in annual revenues, and \$100+ million in profits, recognized this trend and established an eCommerce site using an outsourced IT provider. Despite having the flexibility of their brick-and-mortar stores for in-person sales/service and the internet site for eCommerce sales, GlobePort is facing profitability issues from their internet sales channel as a result of poor support from their IT provider. Their problems are further compounded by incomplete customer information and the lack of strategic integration between their physical and internet channels. Recently, GlobePort executives have come to recognize that their internet sales are lagging industry norms and have begun to take steps to improve their eCommerce systems. However, any systems changes would require additional in-house IT staff with new skillsets and necessitate close teamwork throughout their widespread organization. More importantly, a technology transformation project would lead to new and redesigned customer-facing and operational business processes and the collection and integration of customer data/knowledge across their traditional organizational silos.

Keywords: Emerging technologies, Architecture, E-commerce, Change management, Knowledge management (KM), Strategic alignment & deployment

1. CASE SUMMARY

GlobePort was locked into a 10-year hosting contract with an eBay subsidiary that managed their online eCommerce platform. Although the site had been up and running for over five years, GlobePort's board of directors saw the potential for more internet sales revenue and profits than what their current eCommerce site was delivering. The board was also aware of the transformations that GlobePort's competitors were implementing to adopt an omni-channel retail strategy, where physical stores, internet sites, and mobile apps worked seamlessly (Josevski et. al., 2019). There were also many ongoing issues stemming from the outsourcing of their eCommerce platform. It took GlobePort several days to make fairly simple changes to the internet site, and communicating with the eBay subsidiary was very difficult. Multiple parties would need to get involved to make routine changes, such as implementing a marketing campaign or even a product pricing change. A simple price change would take a minimum of 24 hours to show up on their website, which did not allow for quick reaction to market events. As an example, one Black Friday, a

pair of boots was mistakenly priced at \$0.01. The site sold out of 5,000 pairs resulting in a loss of \$45,000 and a potential revenue loss of \$250,000. This was unacceptable to senior management of GlobePort. The board also questioned the lack of profitability on the eCommerce side of their business and the poor merchandise management across the internet and physical channels. It was evident to the board that GlobePort needed to adapt its operational processes and integrate internet and physical channels in order to transform their customer experience like other retailers.

2. INTRODUCTION

The popular omni-channel integration model represents the enablement of customers to shop across physical, mobile, and social media so that information and consumer decision-making steps can progress from one to another media seamlessly (Brynjolfossen, Hu, and Rahman, 2013). This approach allows personalized interactions between the retailer and the individual customer and the convenience of not encountering device and/or physical barriers as customers move from one media to

another. Board members also felt that GlobePort's currently outsourced eCommerce technology architecture and IT processes would pose a serious hindrance to GlobePort if they proposed to implement an omni-channel business strategy to deliver new seamless and integrated customer experiences. GlobePort's eCommerce hosting contract with the eBay subsidiary had been in effect for over half a decade. However, in the last two years, eBay had branched out and now had several different companies that offered the same type of products as GlobePort. GlobePort had never established a contract clause that would restrict eBay from offering similar products from competing companies, such as the pure online retailers, who relied on selling "generic" products at the lowest price. As eBay brought more and more such resellers on board, when a purchase was made, the product was sold based on availability, price, and shipping costs. Essentially GlobePort now had only a 10% chance (1 of 10 companies currently selling similar products through the eBay eCommerce site) of completing the transaction in any search scenario.

Moreover, GlobePort's current eCommerce platform had several functional deficiencies. Some major retailers, such as Best Buy, allowed customers to open an interactive chat as they browsed their internet site to get product questions answered. But there was no way for GlobePort to interactively engage with the customer using the eBay platform and provide additional information to differentiate their superior products and services. Moreover, GlobePort's customers were using a variety of devices, such as smartphones and tablets, to access the internet site, to research products, and to collect information before placing orders. Mining this knowledge about how, why, and when customers used various devices to shop online could also help shape GlobePort's response and offers to their customers (Zhang et. al., 2010). But due to the outsourcing contract, GlobePort was also not able to collect detailed information about their customer's online behaviors and then use analytics to track and engage these customers using the traffic data from their eBay site. eBay always sought the expansion of their platform using the spread approach ("tipping") by bundling and tying technical features to the acquisition of adjacent market share and limiting customizations (Gawer and Cusumano, 2008). This hindered GlobePort's ability to create personalized experiences and customized offers for their customers (McLean, Al-Nabhani, and Wilson, 2018). Even after the customer's search session had ended, retailers like Macy's were able to continue to engage their customers through iPhone/Android store apps with reminders and information on the products that they had searched. This type of customer engagement was particularly important as GlobePort's most profitable products are "niche" and had features that needed to be experienced. Without these interactions, GlobePort was resigned to competing on a "commodity" basis with other pure online retailers.

3. BACKGROUND INFORMATION

GlobePort has always based its brand on not being the lowest priced provider, but rather offering more innovative products paired with reliable customer service. "We cover a majority of the shipping costs, and we have a no-questions-asked process of making any situation right and an upfront return policy.

There is no way to provide the customer experience that we want to deliver with the eBay platform," thought Joe Miller, CEO of GlobePort.

GlobePort was increasingly competing with digitally native stores who create value by being nimble and eschewing the long term value proposition. So first-time, price-conscious customers were not able to understand the value of GlobePort's excellent customer service. When making a purchase, most consumers were going with the vendor that gave them the lowest cost per item. This left GlobePort with reduced sales from competing with these "pure digital" companies who were eroding their own profits to gain a sale.

As Joe Miller stated, "We will not engage in a price war to increase sales. We will continue to win over customers because of our excellent customer service and speed to market with product innovations." A perfect example recently happened where a competing company went into bankruptcy after offering deep discounts on a variety of eCommerce marketplaces (Ewen, 2016). They did this to gain new customers with the wrong assumption that they would gain some sort of customer loyalty with only a low price offer and without any need for branding or building a customer experience (Williams, 2016). Unfortunately, most customers are only loyal to the lowest price, and they moved on to the next vendor when the discounts were no longer being offered. The vendors competed away their entire profit margin in a futile attempt to gain business without also making necessary investments into improving key internal processes such as more efficient order fulfillment (Skolnik, 2001).

eBay also controlled what items were listed on their website and included many items that GlobePort did not carry in their brick and mortar stores. Items such as stuffed animals and hardware tools would be shown on the same screen, and this was diluting the GlobePort brand image. GlobePort began to see that the eCommerce sales were also cannibalizing brick-and-mortar sales from their physical stores, and their IT middleman, eBay, was profiting from this transformation. GlobePort's board of directors knew it was time for a change. They realized that their customers wanted to use a variety of devices to interact, communicate, and purchase from them. Present-day customers increasingly use different types of devices and different apps or touchpoints on those devices based on their situational characteristics, such as their location, their present state of mobility, and their physical and/or social surroundings. Smartphones and apps are used when time is critical or in a period of time that would otherwise go unused, whereas at the office, a computer web browser touchpoint was preferred and popular (Wang, Malthouse, and Krishnamurthi, 2015). Moreover, for partner-owned transaction touchpoints (e.g., a Google search), customer-owned touchpoints (e.g., a customer's own product review blog), and social/external touchpoints (e.g., a product review on Yelp or TripAdvisor), the retailer was not even able to control the customer's experience, such as the usability or certain features of a mobile app (Wagner, Schramm-Klein and Steinmann, 2017).

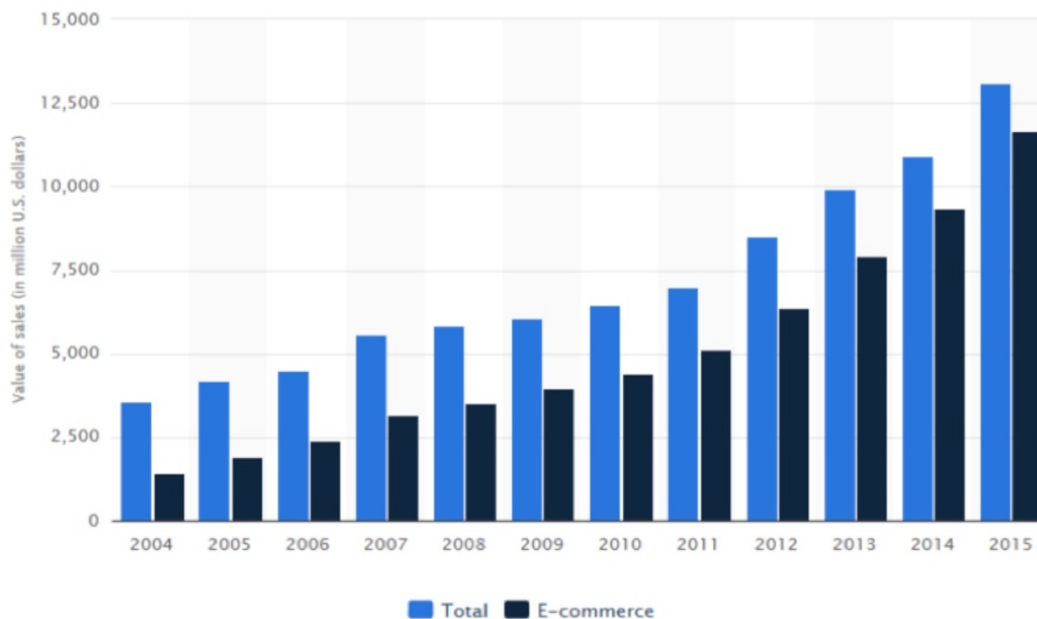


Figure 1. U.S. Online and Mail-Order Sales of Sporting Goods, 2004-2015

Halfway through their 10-year outsourcing contract, GlobePort’s board decided to break their eCommerce agreement with eBay and pay a \$35 million fine (based on forfeiture of site hosting discounts and commissions on projected transactions that eBay would not earn over the next 4+ years) so they could bring their eCommerce platform in-house and get better control. However, Joe Miller did not feel comfortable bringing the platform in-house from the beginning. He had been in the retail industry for 30 years but had very limited technology experience. He had been pressured by the board of directors to make a change due to the stagnation of their eCommerce business and declining sales for the last several years despite the overall growth in the sporting goods retail industry. In the last board meeting, one of the directors brought in sales figures from a sporting goods retail competitor. The competitor was earning 20% of their sales from eCommerce and 5% from mobile site sales, compared to the 8% and 2%, respectively, for GlobePort. On average, other retailers were earning 18% of their net revenues from the eCommerce channel. The board members were all presented the chart in Figure 1 which demonstrated that the sporting goods industry is growing, especially in the eCommerce channel. It was evident

that GlobePort was not keeping up with competitors and was losing its customer base. GlobePort’s 40% profit margin was much higher for eCommerce sales compared to 15% for their brick-and-mortar sales. GlobePort’s board was convinced that a 10% year-over-year sales growth in the eCommerce channel was possible without cannibalizing brick-and-mortar sales. That would allow GlobePort to target 14% revenues from eCommerce in 5 years.

At the strong urging of the board, Joe Miller agreed to tackle their eCommerce site problems. He knew that eBay would press for stiffer terms if they tried to renegotiate the contract midstream. Achieving significant growth in eCommerce sales revenue and quickly moving into a new omni-channel business model would also be very difficult if they continued with eBay. The best option was bringing the platform in-house and reorganizing their IT department to manage the website, pricing, inventory, and integration with brick-and-mortar stores and other business partners. Miller thought it would be best to run everything under their CIO, Cory Williams (Figure 2).

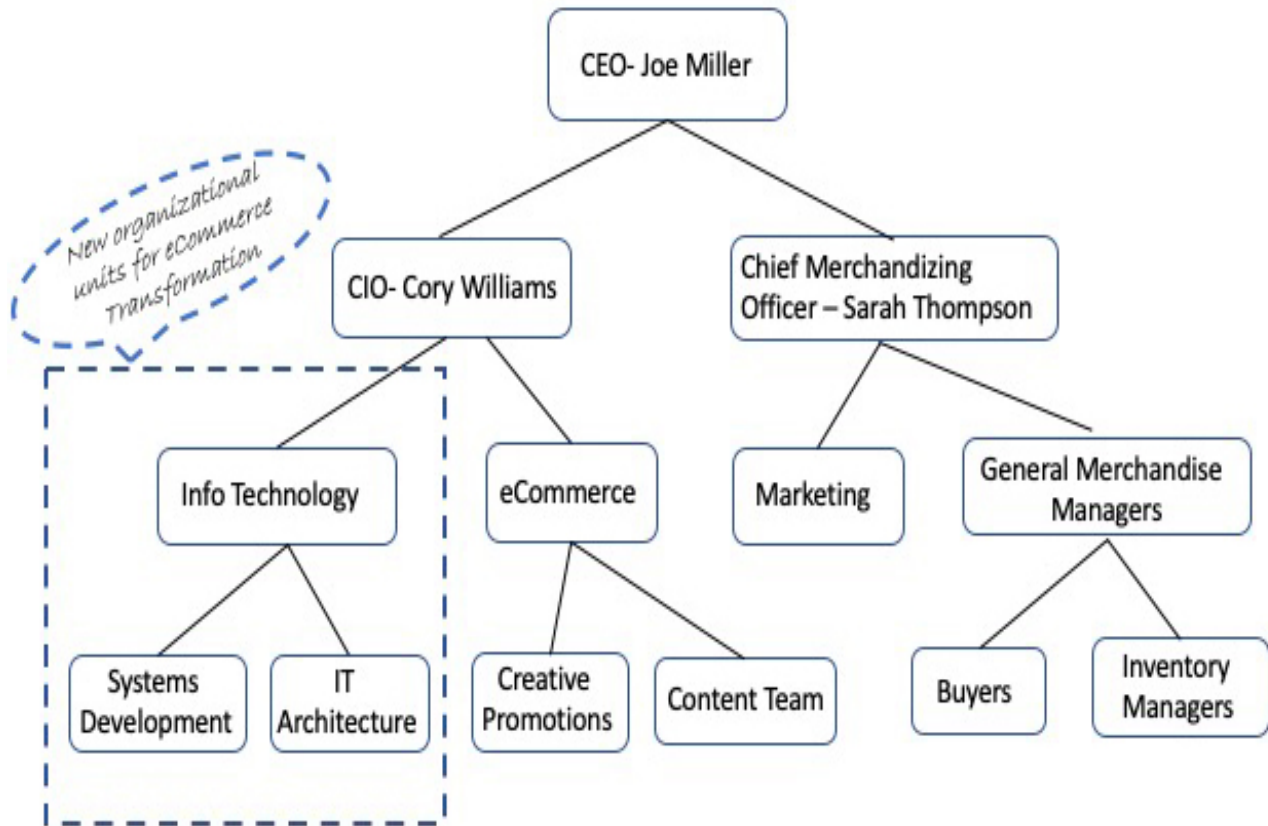


Figure 2. GlobePort Company Organization Chart

3.1 Technology and Methodology Challenges

Cory Williams knew that recruiting and adding 20-25 new staff to his IT department with advanced skillsets to design, develop, and support their new eCommerce technology platform would not be easy. GlobePort’s business displayed seasonal fluctuations, regional spikes, multiple inventory zones, and wide variation in product and supplier mix by each brick-and-mortar location. He was certain that the eCommerce site would need to be on a cloud platform, such as Azure or AWS (Amazon Cloud), so that computing capacity could be dynamically administered. Site update cycles needed to be shortened by adopting continuous software development and deployment methodologies (O’Connor, Elger, and Clarke, 2017). Finding IT talent who understood modern IT architectures and GlobePort’s business model and could also work with cloud technology was not trivial. He looked for potential employees who had previous experience hosting a website and started to assemble IT skillsets.

Williams knew that there was no way that he could build and support an eCommerce infrastructure from scratch with a relatively small internal IT development team. Cory had learned about the possibility of leveraging software services, such as customer login authentication, third party product databases, credit checking, and financial functions, already available on the internet using server-less IT architectures that incorporate third-party services. “Backend as a Service” (BaaS) IT architecture is all about running backend code on the client side and not building and managing monolithic servers internally

(Fowler, 2020). In this type of architecture, GlobePort could still deploy any custom code via “*managed containers*” that would run seamlessly on diverse computing devices (servers or otherwise) and operating systems, thus making their platform device agnostic. Adopting this model of IT architecture would allow the distribution of some of the eCommerce technology development work to GlobePort’s business partners and cloud service providers and enable its business partners to develop and deploy event driven software to automatically respond to online events from their customers. For example, if a customer posted a product comment in any online forum, the new architecture would detect and generate an alert for an instantaneous response.

Cory knew that server-less architectures would allow GlobePort to run their eCommerce site with significantly reduced long-term operational cost, complexity, and engineering lead time, but at a cost of increased reliance on vendor dependencies and comparatively immature support services. A full BaaS architectural implementation would have no server to maintain, all custom code would be executed in the clients, and it would perform operations more quickly on mobile devices. But drawbacks exist for full BaaS architectures, such as security breaches and difficult orchestration challenges, and a mitigation of both of these is possible with FaaS (Function as a Service) or some other kind of lightweight server-side component to move sensitive logic back onto an internal server. Using a FaaS scheme, GlobePort could have better control of their custom code and still avoid the high costs of maintaining

“always on” servers. Cory estimated that designing, developing, and deploying the new IT architecture and their initial eCommerce site would be a 30-headcount project over 15-18 months. The price tag would be approaching \$20 million dollars with internal staff, equipment, consulting, and training of their business partners (e.g., retail stores and suppliers). Operating the site on AWS or Azure would cost another \$5 million a year based on projected customer transaction volumes in addition to the salaries of the two dozen IT staffers that would be added to their eCommerce IT department.

3.2 IT and Business Policy Issues

Joe Miller held a company-wide conference in January, announcing the start of the project to move their eCommerce site in-house, their new organization chart (Figure 2), and the impending business transformations to follow. The goal was to have a functioning, in-house eCommerce site up and running before the summer buying season. However, neither Joe Miller nor Cory Williams initially addressed how this transformation supported their overall organizational strategy. The brick-and-mortar store managers had many questions which remained unanswered from the kickoff meeting:

How would the new expansion in eCommerce play alongside their brick-and-mortar strategy? Who would decide what was promoted on the website and how would they still be able to maintain their product mix for their local markets? How would the fulfillment of online orders come out of their store’s product inventory and be delivered by the brick-and-mortars? How would all this figure into their internal merchandising operational processes?

The bigger questions (about the new eCommerce platform) came from GlobePort’s business partners – their suppliers and product development houses. They were completely shut-off from any direct access to market/customer data and the potential for launching market experiments and data gathering using the eBay platform. The dynamic sporting goods industry demanded that GlobePort’s suppliers and manufacturers be given a secure means of engaging with GlobePort’s vast customer base to create trial releases, test product innovations, and get early access to local markets using the new eCommerce platform. Cory Williams mentioned the development of an API (application programming interface) gateway so that applications (mobile or otherwise) developed by business partners can securely access GlobePort’s digital resources, such as data sets about customer history, market performance, trends, and reviews. The business partners saw this as a much needed

platform enhancement that only a well-established sporting goods retailer, such as GlobePort, could provide to them.

Over the next four months, the IT development and the content teams worked on porting the website platform in-house and taking over from eBay. One of GlobePort’s existing warehouses was turned into a specific eCommerce fulfillment center in April. The new warehouse would begin to store and fulfill additional inventory. However, other business transformation items remained unaddressed just as the spring/summer buying season was ramping up for seasonal goods. Traditionally, the buyers were given a brick-and-mortar budget that they could spend on their department’s goods. The buyers would plan the season’s purchases working with inventory management and planning. This information would then be approved by the general merchandise managers and disseminated to marketing so they could plan promotions.

The current summer season would be the first that buyers were given additional budget to purchase for the eCommerce channel. Though very little direction had been given by Joe Miller regarding strategy, Cory Williams put pressure on the chief merchandising officer, Sarah Thompson, to have her teams purchase enough to have a successful season. Cory said, “this is an opportunity to expand your selections and offer more colors, sizes, and products, that maybe you have considered risky before.” Sarah was also requesting forecasting models specifically for eCommerce sales. Cory told Sarah that her team would have to forecast based on last year’s summer eCommerce sales, which they had access to. There was no time for the buyers to work with the eCommerce team, so they had very little opportunity for interaction before the new site would go live in May.

4. CURRENT SITUATION

As the first full summer season of the integrated business model kicked off at the end of May, executives requested daily reporting in a dashboard (Figure 3) to quickly read facts. They requested eCommerce specific sales data broken down by a supplier. Executives also requested in-depth inventory analysis with forecasting. Since the eCommerce sales could be fulfilled from the brick-and-mortar inventory, it was important to be on top of fluctuations in inventory and to share knowledge and operational business results between these two channels (inventory scorecard in Figure 3). Cory had his IT team build a dashboard with multiple views (Inventory, Merchandising, and Supplier) that would query and run fresh data every morning, and a link to it was emailed to the executives.



Figure 3. GlobePort's Interactive Dashboard

4.1 Current Problems with the Beta Trial

Problems quickly started to mount in the midst of the busy summer season. First, there was a big discrepancy between what brick-and-mortar stores were carrying versus the online platform. The marketing department would be running one advertisement in print and the creative marketing department another online (merchandising scorecard in Figure 3). The content team, which was responsible for data integrity, had product descriptions and pricing incorrect on items causing major suppliers to get upset and claim that GlobePort had violated contract agreements. Employees and customers started to report issues with the product being shown on the website, stating it was available in-store, but the item was not carried in "that" store.

Williams became worried that these platform problems were symptoms of modularity issues in their server-less architecture. Cory started scrolling through items on the website and noticed that all items said available in-store, but that was not *really* possible and indicated that the development team definitely had missed business requirements. After reviewing

dashboard results, executives commented that eCommerce sales were being fulfilled from brick-and-mortar stores, but store inventory was not declining as expected. The inventory management team also started to describe discrepancies in sales and inventory. When online sales were fulfilled from a store location, it was not being taken out of the store's inventory.

Executives also noticed some key suppliers missing from the supplier scorecards (Figure 3). The eCommerce team was still working with the model of two big, isolated channels of business instead of the omni-channel supply chain model that GlobePort's board of directors, Joe Miller, and Cory Williams were trying to achieve. Williams met with the leaders of his eCommerce and IT team and realized a huge problem. The eCommerce development project team had failed in involving the content team in much-needed discussions and meetings. They had not fully integrated the inventory databases, partly because they never met with that team. Cory put his IT team into crisis mode, but they told him it would take several months to fix all the system issues.

4.2 eCommerce Development Methodology

GlobePort's business partners, suppliers, and the store management teams were frustrated with the delays in implementing the promised API, without which they could not deploy the live solutions that they had created in-house and tap into online activity of existing and potential customers. The same suppliers and product designers had already adopted DevOp's methodology (CI/CD) that allowed them to release code continuously (O'Connor, Elger, and Clarke, 2017). While other large, omni-channel retailers could integrate code changes instantaneously, GlobePort was still running longer code update cycles frustrating GlobePort's business partners.

Cory questioned the development methodology and change management approach that his IT development team had adopted. "Our response to market changes needs to be in days not months by involving our business partners early and continuously. We have to migrate our monolithic logic into small and focused micro-services that can be easily updated." In addition to the technology architecture selection in a transformation project, the organizational dimensions are also very important for capturing the complexity of large eCommerce systems implementations which represent a complex third order change (O'Hara, Watson, and Kavan, 1999; Nguyen and Mutum, 2012). Enterprise wide system implementations incorporate the most disruptive behaviors to affect a company's structure. GlobePort's newer cloud-based platform is a server-less architecture that allows the integration of third party and business partner applications that can both feed in data as well as read and process collected and stored data from GlobePort's internal databases. This calls for a strategic business change and new data policies along with knowledge management practices.

When companies need to adopt new mission-critical enterprise systems like eCommerce and enterprise management, they need to identify and speak with numerous stakeholders to determine what can and cannot be done within the established systems implementation plan (Wagner and Piccoli, 2007; Pozza, Goetz, and Sahut, 2018). Stakeholders needed to come up with ideas about what options they need in the enterprise system to be able to accomplish their plans and business processes. The implementation team needs to figure out how best to manage these stakeholder's needs and deploy and implement the IT architecture that supports them. Joe Miller asked Cory Williams, "who was responsible for bringing all the stakeholders onboard the new eCommerce platform?" and got no answer. GlobePort also had not rolled out training to brick-and-mortar store personnel on the new systems to bring their business partners fully onboard for their beta trial in May.

5. OTHER TRANSFORMATION CHALLENGES

When strategic systems (such as sales/inventory or eCommerce) supporting core processes are outsourced to a vendor and later brought back in-house, complex and customized knowledge management systems need to be deployed across the business to quickly re-establish and support those processes (Carmel and Agarwal, 2002). While modularized tools and procedures can easily support non-core processes, such as human resources or benefits management (Lacity and Willcocks, 1998), supporting core processes often requires differentiated procedures and the integration of tacit

knowledge from multiple stakeholders and departments to run effectively. Extensive tacit knowledge needs to be utilized in the case of complex, multi-channel (internet and brick-and-mortar) sales and marketing processes such as what GlobePort corporate needed to operationalize in their eCommerce transformation project. Knowledge sharing needs to be established by GlobePort for several situations, such as: (1) addressing unexpected situations when codified explicit knowledge (in the IT system) does not exist to handle an emergent business operational issue and (2) learning to understand the complexity and interdependency of various market scenarios – i.e., becoming fully mindful of the undocumented "ripple effect" of various marketing offers and nuances of each product's features/capabilities. As Sarah became aware of the difficulties, she stated:

Our business goals were to improve the experience of our customers, while at the same time improve our profitability for our product lines. In our dynamic, multi-channel environment, new market developments occurred constantly. It is impossible to get that knowledge to all the stakeholders through the eCommerce system or any of our current enterprise systems.

6. OPTIONS TO PURSUE

After the summer season's difficulties, board members started to question Joe Miller about the lack of results. Joe also doubted the board's decision to bring their eCommerce platform in-house, "this was a bad idea as we are not in the technology business but rather in the sporting goods business." He had to pay money to break their outsourcing contract and now their new IT systems have put the company in a worse situation. In addition, GlobePort is now faced with several difficult scenarios. Revenues are also quietly diminishing and competition is increasing.

GlobePort's business strategy remains sound and Joe Miller stated:

We are not going to lower our profits for a short-term gain by selling our items at a discounted price. Our biggest revenue generator is still the brick-and-mortar presence we have. We are not getting as many orders because we are not the lowest priced provider. As many customers as we lose, we actually get back more, because the other companies do not provide the same quality of customer service. But there is always going to be those consumers that will buy from a competitor because of a lower price. Those consumers need to look out for their own best interests. Once a problem occurs, those same consumers return, because they understand the value that we provide.

There are options to increase these lost sales. One way was to integrate local presence into the global eCommerce system along with changes to business processes to integrate knowledge in a timely fashion. A knowledge sharing system (KMS) is the basis for competitive advantage under dynamic market conditions (Grant, 1996). While the decision to end the eCommerce outsourcing contract was already made, several

other issues loomed large for Joe Miller. “How does GlobePort succeed and thrive without discounting their inventory and undercutting their own profits?” Integration of knowledge, processes, and technologies is going to be needed from multiple stakeholders very quickly to keep the company growing in this dynamic marketplace. Joe is going to be tested on what his company’s software team is capable of delivering and how he can address the challenging management issues that they currently face (Comuzzi and Parhizkar, 2017).

7. CASE STUDY QUESTIONS

After analyzing the situation posed in the case study, answer the following questions:

1. Create a SWOT and/or SOAR Analysis for GlobePort’s business situation.
2. Reflect on Joe Miller’s insistence on not being the “low-cost” provider. Is it possible to achieve this using electronic marketplaces such as eBay or Amazon?
3. What business and IT strategies are necessary in response to the SWOT/SOAR analysis?
4. Research and recommend an IT Architectural platform to support GlobePort’s business transformation project.
5. Did GlobePort need a knowledge management strategy? How should customer data have played into their transformation project?
6. Cory Williams expanded the IT department to support the technology transformation project. What other suggestions regarding IT project methodology and IT development processes would you recommend?
7. Develop a feasibility analysis of GlobePort’s eCommerce transformation project using economic, organizational, operational, and technological factors.

8. REFERENCES

Brynjolfsson, E., Hu, Y. J., & Rahman, M. S. (2013). Competing in the Age of Omnichannel Retailing. *MIT Sloan Management Review*, 54(4), 23-29.

Carmel, E. & Agarwal, R. (2002). The Maturation of Offshore Sourcing of Information Technology Work. *MIS Quarterly Executive*, 1(2), 65–77.

Comuzzi, M. & Parhizkar, M. (2017). A Methodology for Enterprise Systems Post-Implementation Change Management. *Industrial Management & Data Systems*, 117(10), 2241-2262.

Ewen, L. (2016). How Sports Authority Went Bankrupt – And Who Could be Next to Fall. Retrieved August 28, 2020, from <https://www.retaildive.com/news/how-sports-authority-went-bankruptand-who-could-be-next-to-fall/415343/>.

Fowler, M. (2020). What is Serverless? Retrieved May 25, 2020, from <https://martinfowler.com/articles/serverless.html#WhatIsServerless>.

Gawer, A. & Cusumano, M. A. (2008). How Companies Become Platform Leaders. *MIT Sloan Management Review*, 49(2), 29-30.

Grant, R. (1996). Prospering in Dynamically-Competitive Environments: Organizational Capacity as Knowledge Integration. *Organization Science*, 7(4), 375-387.

Jocevski, M., Arvidsson, N., Miragliotta, G., Ghezzi, A. & Mangiaracina, R. (2019). Transitions towards Omni-Channel Retailing Strategies: A Business Model Perspective. *International Journal of Retail & Distribution Management*, 47(2), 78-93.

Lacity, M. C. & Willcocks, L. P. (1998). An Empirical Investigation of Information Technology Sourcing Practices: Lessons from Experience. *MIS Quarterly*, 22(3), 363-408.

McLean, G., Al-Nabhani, K., & Wilson, A. (2018). Developing a Mobile Applications Customer Experience Model (MACE) – Implications for Retailers. *Journal of Business Research*, 85, 325–336.

Nguyen, B. & Mutum, D. S. (2012). A Review of Customer Relationship Management: Successes, Advances, Pitfalls and Futures. *Business Process Management Journal*, 18(3), 400-419.

O’Connor, R. V., Elger, P., & Clarke, P. M. (2017). Continuous Software Engineering – A Microservices Architecture Perspective. *Journal of Software: Evolution and Process*, 29(4), 1-12.

O’Hara, M. T., Watson, R. T., & Kavan, C. B. (1999). Managing the Three Levels of Change. *Information Systems Management Journal*, 16(3), 63-70.

Pozza, I. D., Goetz, O., & Sahut, J. M. (2018). Implementation Effects in the Relationship between CRM and its Performance. *Journal of Business Research*, 89(8), 391-403.

Skolnik, R. (2001). Discount Retail Profitability: A Harbinger for e-Commerce. *Journal of Business Strategies*, 18(2), 1490-158.

Wagner, E. & Piccoli, G. (2007). A Call to Engagement: Moving beyond User Involvement in order to Achieve Successful Information Systems Design. *Communications of the ACM*, 50(12), 51-55.

Wagner, G., Schramm-Klein, H., & Steinmann, S. (2017). Consumers’ Attitudes and Intentions toward Internet-Enabled TV Shopping. *Journal of Retailing and Consumer Services*, 34(1), 278–286.

Wang, R. J.-H., Malthouse, E. C., & Krishnamurthi, L. (2015). On the Go: How Mobile Shopping Affects Customer Purchase Behavior. *Journal of Retailing*, 91(2), 217–234.

Williams, D. (2016). A Shifting Retail Landscape: A Closer Look at Sports Authority. Retrieved August 28, 2020, from <https://retailtouchpoints.com/features/executive-viewpoints/a-shifting-retail-landscape-a-closer-look-at-sports-authority>.

Zhang, J., Farris, P. W., Irvin, J. W., Kushwaha, T., Steenburgh, T. J., & Weitz, B. A., (2010). Crafting Integrated Multichannel Retailing Strategies. *Journal of Interactive Marketing*, 24(2), 168–180.

AUTHOR BIOGRAPHY

Biswadip Ghosh is an associate professor of computer information systems at Metropolitan State University of Denver. Ghosh received his Ph.D. in computer science and information systems from the University of Colorado. His research interests are in cloud computing and digital transformation, enterprise systems, and end-user training. Prior to joining MSU Denver, he had worked in the telecommunications industry with AT&T/Lucent/Avaya for over 19 years on multimedia messaging solutions, global service delivery processes, and expert systems in multiple roles, such as systems/business analyst, project manager, and software architect/developer. His research has been presented and published in AIS, IEEE, ACM, and IFIP sponsored conference proceedings and journals, such as *MIS Quarterly Executive*, *Communications of the Association for Information Systems*, *International Journal of Technology Management*, *Journal of Information Systems Applied Research*, *IEEE Transactions on Information Technology in BioMedicine*, *IEEE Networks*, and *Information Systems Management*.





STATEMENT OF PEER REVIEW INTEGRITY

All papers published in the Journal of Information Systems Education have undergone rigorous peer review. This includes an initial editor screening and double-blind refereeing by three or more expert referees.

Copyright ©2021 by the Information Systems & Computing Academic Professionals, Inc. (ISCAP). Permission to make digital or hard copies of all or part of this journal for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial use. All copies must bear this notice and full citation. Permission from the Editor is required to post to servers, redistribute to lists, or utilize in a for-profit or commercial use. Permission requests should be sent to the Editor-in-Chief, Journal of Information Systems Education, editor@jise.org.

ISSN 2574-3872