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HEALTHCARE.GOV: A RETROSPECTIVE LESSON IN THE FAILURE OF THE PROJECT STAKEHOLDERS

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ABSTRACT

The purpose of this research is to examine the technical and business/social issues that resulted in the demise of the initial roll-out of HealthCare.gov. In essence the disconnect between the White House website team and the IT leadership in the White House resulted in an implementation that was characterized by a large number of technical flaws and business stakeholder issues that have been identified in the literature as contributing to project failures. Ultimately, many of the White House stakeholders lost or vacated their positions. Issues are examined, and it is recommended that practitioners and researchers study this project to help to avoid project failures. These are two primary objectives of this paper. From a practitioner's perspective, this paper cautions information systems professionals on the issues related to project failure, and the disruptive influences of failed projects on the businesses that they serve. From a pedagogical perspective, this paper serves as a learning guide to instructors and students in terms of the social/business issues critical to effective project delivery, team membership and project management.

Keywords: Project Failure, Stakeholders, Project Management, Business Case, ObamaCare

INTRODUCTION

The Failure of HealthCare.gov

Despite the fact that the Affordable Care Act, or ObamaCare, will likely be the one of the most significant social, medical, political, and historical contribution of his administration, Barak Obama intuitively understood that a great challenge of his health care reform program was in the implementation of the technology to support it. The President would conclude each meeting of his White House team prior to the roll-out of the national website with the admonition "I want to remind the team that this only works if the technology works" [2, p. 36]. Unfortunately for the President, his team, and the nation, the implementation of the web site, HealthCare.gov, provided a classic example of technology and business stakeholder problems that are known to contribute to information systems project failure.

At the time of its inception all but 17 states used or planned to use heathcare.gov for health care enrollment for individuals and businesses. This has grown to 36 states in January 2015 [27]. The United States government contracted with more than a half a dozen vendors to design, implement, and host that website [10]. Launched on 10/1/13, only two and a half weeks later, the White House ordered the formulation of a special team to address the viability of the site, and considered shutting it down permanently [2].

What was remarkable about the HealthCare.gov implementation was that it was plagued by nearly every project weakness that research has identified – technical and business/social. An examination of the events and behaviors leading up to the web site failure will reveal how many of these technical and social/business issue were present in this project, and how this plethora of problems inevitably led to the demise of the initial roll-out.

PROJECT FAILURE

It is well documented in information systems literature that the majority of systems development and technology implementation projects are unsuccessful. Failures can be due to projects being delivered late, over-budget, abandoned after significant time and resource investment, or failing to achieve desired results [15, 17]. Approximately half of the information systems projects implemented each year are considered failures [12, 32]. These failed projects cost billions of dollars annually [6, 26]. In fact, the Standish Group found that only 6.4% of projects costing more than $10 million could be considered successful, meaning that they were finished on time, met the user requirements, and stayed within budget [30]. Project failure is not a recent phenomenon [4]. Tiwana and Keil [31] reported that $1 trillion of the $2.5 trillion spent on information systems projects implemented between 1997 and 2001 was spent on underperforming projects, which, for the most part, ultimately failed. Failed project cost companies in the United States alone in excess of $75 billion annually [17].

More often than not, the failure of a project is not due to technical issues, but due to social and business-related problems. These issues can include a communication breakdown and lack of participation by project stakeholders; lack of a business case and success criteria for a project; failure to review project status, delays and revisions; and unrealistic schedules [1, 5, 7, 13, 14, 15, 25]. In short, insufficient feedback and communication mechanisms between project team members and clients contribute to project failure. Kaplan and Harris-Salamone [13] reported that symposium participants cited technological issues contributed to project success and failure, and that experts estimate that 40% of information systems projects are not successful in terms of meeting business requirements, experience time overruns, or are abandoned. The authors also reported that between 60% and 70% of large systems purchased from vendors meet the same fate. Symposium participants also pointed to a lack of client involvement, insufficient business support, and a lack of clarity in requirements as risks to projects. In contrast, participants claimed that success can be attributed to business executive support, client involvement, clear objectives and scope, and experienced project management. Other studies have demonstrated significant patterns of information systems project failures that are the result of poor communication, inadequate collaboration skills, lack of association with business needs and ineffective knowledge construction [5, 7, 13, 14, 25, 32]. Garg [6] reviewed literature for critical factors in project failure for enterprise research planning projects and found 20 frequent failure factors. In 95% of the failures, lack of top management support was evident, and in 88% of these projects there was a lack on middle management support. 90% of the projects that failed were perceived by the business as technology, and not business, projects; in other words, the business case was not evident. Poor project management and poor consultant effectiveness accounted for over 90% of project failure.

THE INITIAL ROLL-OUT OF HEALTHCARE.GOV

Steven Brill's stunning expose in Time Magazine presents us with a remarkable view of the issues leading up to and following the initial roll-out of HealthCare.gov. Seventeen days after the roll-out of the web site, on October 1, 2013, President Obama and his Chief of Staff Denis McDonough's pulled together a team to attempt to address the website and the management of the web site team. They included individuals from private industry who were familiar with planning, testing, deploying technology for firms like Google, and Civis Analytics, and who have intervened to assist Twitter and Palm when technical problems plagued those firms. By the end of 2013, the site was stabilized [2]. In the initial ObamaCare roll-out, the technology and technology management issues are simple to see, and were remarkable from the perspective of the disregard for the basic rules of enterprise system architecture, such as hardware resiliency and redundancy, software performance design and testing, and conventional maintenance practices.

A primary issue with the initial roll-out of HealthCare.gov was the long response times experienced by clients. For performance purposes, it is common practice to utilize cache, both on servers and workstation, to store recently accessed information, so that every request for information does not have to access the databases of a system. This dramatically improves performance for clients [28]. On the other hand, frequent, unnecessary requests to a database creates contention, traffic, and unnecessary delays. HealthCare.gov was implemented without the use of cache. Five days into the roll-out of the web site, the site "crashed" with 50,000 simultaneous users. The team that was assembled to redesign the web site indicated that the site could never have handled more than 2,000 users. No serious stress testing of the system could have taken place [2, 23]. Another major design flaw was the fact that the subscriber ID generator for the database did not contain enough digits to meet insurance company needs, so this needed to be redesigned. The lack of hardware resiliency was realized when a data storage unit and a switch, which failed during routine maintenance, stopped work for a total of nearly five days. In most production environments that cannot afford "down time", high availability options, such as duplication of critical hardware components, are built into the design to serve as a "back up" when critical elements fail or are interrupted [2, 11].

The information systems dashboard is a management tool that provides a real time snapshot of metrics for senior management in an organization, so they can get a current status of the critical measures of a system or organization [22]. In the case of the ObamaCare website there were no dashboards to give the people implementing and managing any quick idea of how the system was performing, what people were doing on the website, and where the "bottlenecks were". On the first day that the new team was working on the site, they implemented dashboards. Through hardware and software improvements the site was able to improve from 43% "uptime" to 95% by the end of November 2012, 400 errors were addressed, and the site had stabilized to be able to handle 50,000 or more simultaneous users [2].

PROJECT STAKEHOLDERS

While the technology was ultimately managed by making the right choices and scaling the environment to meet the demand, the leadership or lack of it, as reflected by the social and business issues of collaboration, communication, and people management were less obvious, but more insidious, to the demise of the initial roll-out. As Mike Abbot, one of the chief architects and managers of the intervention, indicated, a staged roll-out, testing, observation, and remediation could have reduced the initial technical problems. In fact, the technical teams were cooperative in retrofitting their methodology to this approach. What was lacking in this project was leadership, accountability, and a sense of urgency. The fact is that the lack of stakeholder involvement created the foundation for this "national joke" [2].

Project stakeholders are members of an organization or business partners who have a vested interest in the success of an information systems project. This includes the technology and business unit sponsors of a project, such as technical team member, project managers, and customers. Stakeholders often can play a key role in the success or failure of a project [3]. A great deal of research indicates that having business stakeholders in information systems projects is a key to success; or failure, if the business leaders are not involved. Lesca and Caron-Fasan [16] studied 39 strategic projects looking for factors that contributed to failure and termination of systems. The results suggested that key issues involved failure of business stakeholders to engage in the project, weaknesses in the management project system, as well lack of strategic alignment to the business as key issues in project failure.

Project failures in health care have been examined with regard to communication issues with project stakeholders. The failure of the initial implementation of London Ambulance Service Computer Aided Dispatch System in 1992 cost the city of London 2.3 million dollars and resulted in the loss of 20 lives [19]. Paré, Jaana, and Girouard [21] conducted a literature search that precipitated a survey among 21 subject matter experts in clinical information systems in Canada. The purpose of the study was to investigate risk factors in health information technology projects. The authors identified 23 risk factors and the consensus was that the lack of a project champion in the business presented the highest risk factor. The second highest factor was lack of stakeholder commitment and lack of perceived usefulness of the system. The authors concluded that these findings support findings that technological risk factors are secondary to social, organizational, and business issues.

In their landmark study Kappelman, McKeeman, and Zhang [14] surveyed 55 IT project managers to find the top warning signs of project failure. The authors ranked warning signs, classifying the top people and process related risks. The number one overall risk was "lack of top management support"; ninth was "communication breakdown among stakeholders"; number ten was "no stakeholder involvement and/or participation"; and number 13 was "no business case for the project". All of these issues were manifested in some form in this case study. We will see in this project that IT Senior Management was disconnected by design from this project, stakeholders were disengaged or had no intelligence relative to the health of the web site, and the "business case" became a political mission, with complete disregard for the delivery system critical to the project's success.

Standing, Guilfoyle, Lin, and Love [25] interviewed 116 project managers, team members, and executives in Australia to determine factors attributable to success or failure in information systems projects. The authors found that in successful projects over 70% of those interviewed contended that success factors included effective project management and leadership, effective planning, executive sponsor commitment, and organizational commitment. In the failed projects, there was commonly insufficient communication and no discernible return on investment relative to a business need. In most of these cases an IT department that is sponsoring a project cannot get the attention and endorsement of "the business". In the case of HealthCare.gov, this breakdown was evident.

White House Stakeholders and Information Flow

Various examples of communication breakdown among stakeholders and lack of stakeholder involvement and/or participation can be seen in the structure of the meetings of the senior management White House team. Indeed the faulty composition of the team and the lack of the information sharing were evident from the beginning of the project. The committee that met with the President to report on progress and provide technology updates was made up of Health and Human Services Secretary Kathleen Sebelius, CMS administrator Marilyn Tavenner, White House health-reform policy director Jeanne Lambrew, and policy people on the marketing and political side concentrating on the challenges of enrollment. Brill reported,

> No one in the White House meetings leading up to the launch had any idea whether the technology worked. Early on, Lambrew, highly regarded as a health care policy expert and advocate for medical care for the poor, kept (White House Chief Technology Officer Todd) Park off the invitation list for the planning meetings, according to two people who worked on the White House staff prior to the launch" [2, p 30].

Research has shown that organizations where technology officers play a key role in business endeavors are more likely to be "high achieving", in terms of profit before taxes. Similarly, organizations who do not view the IT organization as having a role in the use innovative technologies to support business strategy are more likely to be "low achieving" [8, 9, 33]. Although profit-making is not a variable for success in the case of the Obamacare website, the implicit disregard for IT shown by the White House team reflected the same characteristics within an organization that leads to poor performance in a private organization or a government agency.

The consensus of those involved with HealthCare.gov was that Obama and team could never get "actionable intelligence" about the state of the technology before the initial roll-out and the existence and causes of the performance issues after the initial roll-out. This should be no surprise, based on the exclusion of the highest ranking technology officer in the White House as a key stakeholder in meetings and planning. Throughout all of the project teams, this lack of leadership manifested itself with disorganization within the project, and was evident within the technical teams. With six contractors and three "war rooms", the inability to gauge the capacity, feasibility, and functionality of the web site was no surprise.

"Those meetings drove the President crazy," said one White House senior adviser who was there. "Nobody could even tell us if the system was up as we were sitting there, except by taking out laptops and trying to go on it". As one White House source reported "they were, in fact, not making improvements, except by chance, much as you or I might reboot or otherwise play with a laptop to see if some shot in the dark somehow fixes a snafu" [2, p. 28] .

The new team implemented steps to corral and take advantage of real time performance information. In one room they built a control center with dashboards, using Stand-Up meetings to examine and act on immediate issues and problems. The meetings were economical and effective, since they addressed only imminent problems, and the participants were engineers who understood the most about the issues. This "bottom up" methodology was extremely effective in clearing "punch lists" and moving forward technically, but did not provide a methodology for addressing the broken senior leadership issues [2].

THE TWISTED BUSINESS CASE

Another fatal flaw in this roll-out had to do with a twist of the recognition of the business case for the project, or, more specifically, the strategy needed to implement the business case. Any information system project should go through a business case, to determine the explicit observable quantitative befits to the implementation of a system. The analysis is oriented toward the needs of the business, in this case the roll-out of affordable health care. It should consider the performance aspects of the technology needed to support this implementation, including risks. The business case for a project is quantitative and measureable; not a marketing issue. [8, 9, 22, 33].

Without doubt the success of the health care roll-out was a political and marketing challenge. As the President stated in his White House speech on 4/1/14, as the first open-enrollment period came to an end, "I've got to admit, I don't get it. Why are folks working so hard for people not to have health insurance?" [29]. Certainly the Administration had to focus on this legislation and its associated roll-out in much the same way that a national election is regarded. As a matter of fact, all of the data analysis for the year leading up to the web site roll-out was concerned with "getting the right people to show up" for the enrollment. The Chief of Staff spent a great deal of his time focused on the communications and outreach planning rather than the technology. As Brill observed,

> It turns out that … (they) were working the wrong side of the house… Behind that world-class data crunching is a world-class technology team. Indeed, the key mistake made by President Obama and his team … is that they had turned only to the campaign's marketing whiz kids instead of the technologists who enabled them" [2, p. 30].

Despite the fact that business analytics, "big data", and business intelligence are key focuses of enlightened information systems organizations, the Obama administration failed to develop a data-based strategy and overlooked

the fact that some of the data analysis should have been used to understand and develop a plan to address the risks associated with this critical technology roll-out [22, 33].

CONCLUSION

In April of 2014 "the resignation" of Secretary Sebelius was cited to be due in great part to her mishandling of the web-site roll-out, including the handling of Todd Park. Todd Park was replaced as CTO in September of 2014 [24]. Marilyn Tavenner resigned in February 2015 [18].

In his 4/1/14 speech, Barak Obama predicted, "There will be days when the website stumbles- I guarantee it. So, press, there will be some moment when the website is down – and I know it will be on all of your front pages. It's going to happen. It won't be news" [29]. Perhaps the fact that this much publicized project failure was big news could help to shine the light on a problem that has plagued information systems projects for decades. The federal government spent $300 million on a site that was never going to work as designed and implemented. This failure should become the quintessential example of nearly all of the issues to avoid in project implementation. It is apparent that despite the significant exposure of project failures and best practices cited in research, practitioners have not been able to apply the lessons and best practices to their work. The incidence of failure and the toll on our productivity and economy persists. All information project professionals, stakeholders, can benefit from recognizing the characteristics of HealthCare.gov in their projects in development.

REFERENCES

1. Bourne, L. (2010, February) *Beyond reporting the communication strategy*. Paper presented at the proceedings of PM Global Congress Asia Pacific 2010, Melbourne Australia.
2. Brill. S. (2014, March 10). Code red. *Time*, 135, 27-36.
3. Chen, C., Law, C., & Yang, S. (2009). Managing ERP implementation failure: A Project Management Perspective. *IEEE Transactions on Engineering Management, 56* (1), 157-170.
4. Dalcher, D. and Drevin, L. (2003, September). Learning from information systems failures by using narrative and ante-narrative methods. Proceedings of the 2003 annual research of the South African institute of computer scientists and information technologists on Enablement through technology, Pretoria, South Africa, 137-142.
5. Fabriek, M., van den Brand, M., Brinkkemper, S., Harmsen, F., & Helms, R. (2008, June). *Reasons for success and failure in offshore software development projects*. Paper presented at the 16th European Conference on Information systems, Galway, Ireland.
6. Garg, P., (2010). Critical failure factors for enterprise resource planning implementations in Indian retail organizations: An exploratory study. *Journal of Information Technology Impact, 10 (1), 35-44.*
7. Huang, S., Chang, I., Li, S., & Lin, M. (2004). Assessing the risk in ERP projects: Identify and prioritize the factors. *Industrial Management & Data Systems, 104, 8 -9.*
8. IBM. (2009). *The new voice of the CIO: Insights from the Global Chief Information Officer Study.* Somers, NY: IBM Institute for Business Value.
9. IBM. (2011). *The Essential CIO: Insights from the Global Chief Information Officer Study*. Somers, NY: IBM Institute for Business Value.
10. Isidore, C. (2013). *Obamacare website: 6 biggest contractors.* Retrieved from http://money.cnn.com/2013/10/21/technology/obamacare-website-contracts/
11. Jackson, S. (2010). *The Principles of infrastructure resilience.* Retrieved from http://www.domesticpreparedness.com/Infrastructure/CIP-R/The_Principles_of_Infrastructure_Resilience
12. Jackson, P., & Klobas, J. (2008). Building knowledge in projects: A practical application of social constructivism to information systems development. International Journal of Project Management, 26, 329–337.
13. Kaplan, B., & Harris-Salamone, K. (2009). Health IT success and failure: Recommendations from literature and an AMIA Workshop. *Journal of the American Medical Informatics Association, 16,* 291-299.
14. Kappelman, L., McKeeman, R., & Zhang, L. (2006). Early warning signs of it project failure: The dominant dozen. *Information Systems Management, 23(4), 31- 36.*
15. Latendresse, P., & Chen, J.C.H. (2003, July). The information age and why IT projects must not fail. Paper presented at the *2003 Southwest Decision Sciences Institute Conference*, Orlando, Fl., 221-225.
16. Lesca, N., & Caron-Fasan, M. (2008). Strategic scanning project failure and abandonment factors: Lessons learned. *European Journal of Information Systems, 371–386.*

17. Michaels, P. (2015, January 12). *Calculating the cost of failed software projects*. Retrieved from CompterWeekly.com at http://www.computerweekly.com/Articles/2008/05/06/230115/Calculating-the-cost-of-failed-software-projects.htm
18. Millman, J. (2015, January 16). *CMS administrator Marilyn Tavenner is stepping down*. Retrieved from http://www.washingtonpost.com/blogs/wonkblog/wp/2015/01/16/cms-administrator-marilyn-tavenner-is-stepping-down/
19. Mukherjee, I. (2008). Understanding information systems failures from the complexity perspective. *Journal of Social Sciences*, 4(4), 308-319.
20. *Obama administration resignations and firings*. (2015, January 16). Retrieved from http://www.cnn.com/2014/10/01/politics/gallery/obama-administration-resignations-firings/index.html
21. Paré, G., Sicotte, C., Jaana, M., & Girouard, D. (2008). Prioritizing the risk factors influencing the success of clinical information systems. *Methods of Information in Medicine, 47*(3), 251–259.
22. Pearlson, K., & Saunders, C. (2013**)** *Managing and using Information Systems*. Hoboken, NJ: John Wiley and Sons.
23. ProIQ (2013). *Project management takeaways from the Obamacare IT failure*. Retrieved from http://proiqsolutions.com/project-management-takeaways-obamacare-failure/
24. Shear, M. (2014, April 10). *Sebelius resigns after troubles over health site.* Retrieved from http://www.nytimes.com/2014/04/11/us/politics/sebelius-resigning-as-health-secretary.html?_r=0
25. Standing, C., Guilfoyle, A., Lin, C., & Love, P. (2006). The attribution of success and failure in IT projects. *Industrial Management & Data Systems, 106*(8), 1148-1165.
26. Stanley, R., & Uden, L. (2012). *Why projects fail from the perspective of service science* in Uden, L., Herrera, F., Pérez, J. B., & Rodríguez, J. M. C. (2012). 7th International Conference on Knowledge Management in Organizations: Service and Cloud Computing. New York: Springer Publishing Company, Incorporated
27. *State Health Insurance Exchange: State run exchanges*. (2015, January 26). Retrieved from http://obamacarefacts.com/state-health-insurance-exchange/
28. TechTerms.com (2013). *Cache*. Retrieved from http://www.techterms.com/definition/cache
29. The White House: Office of the Press Secretary. (2014). *Remarks by the President on the Affordable Care Act.* Retrieved from http://www.whitehouse.gov/the-press-office/2014/04/01/remarks-president-affordable-care-act
30. Thibodeau, T. (2013, October, 21). *Healthcare.gov website 'didn't have a chance in hell.'* Retrieved from http://www.computerworld.com/article/2486426/healthcare-it/healthcare-gov-website--didn-t-have-a-chance-in-hell-.html
31. Tiwana, A., & Keil, M. (2004). The one-minute risk assessment tool. *Communications of the ACM, 47*(11), 73-77.
32. Warkentin, M., Moore, R., Bekkering, E., & Johnston, A. (2009). Development project risks: An integrative framework. *The DATA BASE for Advances in Information Systems, 40*(2), 8-27.
33. Weill, P., & Ross, J. (2009). *IT savvy*. Cambridge, MA: Harvard Business Press.