

# Red Flags:

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How Politics and Poor Management Led to the  
Meltdown of HealthCare.gov



An Inquiry by the Senate Finance Committee Minority Staff  
and the Senate Judiciary Committee Minority Staff

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## Introduction

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From the beginning, the Obama Administration made it clear that a critical part of the success of the Patient Protection and Affordable Care Act (PPACA) was offering insurance to uninsured individuals through a modern website that was simple and easy to use. To that end, the Department of Health and Human Services (HHS) through the Centers for Medicare & Medicaid Services (CMS) invested hundreds of millions of dollars in developing the HealthCare.gov website (website) to make it the showcase of PPACA, since it would be the first tangible product the American public would associate with the law. Both metaphorically and factually, the website was designed to be the public face of President Obama's signature achievement.

However, the Obama Administration failed to task any one individual or entity within HHS or CMS with ensuring the success of the public face of Obamacare. While there were individuals and entities tasked with building and coordinating many of the business level components of the website, there was no central coordinator fully responsible for the development of the website, and no single contractor had the authority to direct other contractors. Furthermore, rather than delegate responsibility fully to HHS and/or CMS, the White House continually meddled in technical decisions and put pressure on CMS officials to launch the website on time, regardless of operability and security concerns. As a result, officials ignored countless red flags to launch a website with thousands of defects. In the end, the launch failed miserably, crashing on takeoff.

The incredible breakdown of the website undoubtedly came as a surprise to millions of uninsured Americans. President Barack Obama, HHS Secretary Kathleen Sebelius, and other high ranking Administration officials had assured taxpayers that potential enrollees would have access to a website that would work simply and efficiently, like Amazon.com. Right up until the night before the launch, officials, including Secretary Sebelius, repeatedly touted that the website would enable users to obtain health insurance quickly and easily.

Nevertheless, the breakdown was not a surprise to dozens of high level officials within CMS and HHS, nor to hundreds of individuals working for the contractors who had developed the code for the website. These individuals were aware for months of gaping holes in testing, critical security concerns, and failures under the most modest simulations. None of them were empowered to act on their knowledge of impending catastrophe. Instead, officials were pressured to launch the website at any cost. In fact, no level of failure was too low for the officials in charge of launching the website.

## CMS ignored countless red flags

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### *Early delays in regulations*

The success or failure of HealthCare.gov was dependent on more than just technology. One of the critical components of implementing PPACA required the Administration to issue a number of regulations that would outline how the federal exchange would work, such as what services must be provided to be counted as a “qualified health plan.” After the regulations were finalized, CMS turned the requirements into “business rules” to guide developers in designing a compliant website. Unfortunately, the Administration dragged its feet on finalizing regulations, particularly in the summer and fall of 2012. According to press reports, the Obama Administration may have deliberately held up controversial rules to limit bad press until after the elections. *The Washington Post* quoted administration officials as saying they were instructed to postpone controversial rules.<sup>1</sup> Issuing these regulations in a timely manner would have given CMS and its contractors the additional time needed to develop the business rules and the software for the website. In fact, some of the delayed rules were critical to building the website. For example:

- HHS issued rules on private insurance outlining Exchange and issuer standards related to coverage of essential health benefits and actuarial value. The final rules were issued on February 25, 2013.<sup>2</sup>
- HHS issued final rules for health insurance issuers on February 27, 2013 that clarified premium rules, who must be offered coverage, risk pools, and catastrophic plans. Again, these rules needed to be translated into business rules and then built into the website, giving developers a shortened window within which to operate.<sup>3</sup>
- HHS delayed the date by which states had to commit to either operating a state exchange, partnering with the federal government, or letting the federal government run the exchange. Initially, states had to decide by November 16, 2012 to submit a blueprint to HHS outlining how their state exchange would work, but HHS delayed the deadline until

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<sup>1</sup> Juliet Eilperin, “White House delayed enacting rules ahead of 2012 election to avoid controversy,” *THE WASH. POST*, Dec. 14, 2013, available at [http://www.washingtonpost.com/politics/white-house-delayed-enacting-rules-ahead-of-2012-election-to-avoid-controversy/2013/12/14/7885a494-561a-11e3-ba82-16ed03681809\\_story.html](http://www.washingtonpost.com/politics/white-house-delayed-enacting-rules-ahead-of-2012-election-to-avoid-controversy/2013/12/14/7885a494-561a-11e3-ba82-16ed03681809_story.html).

<sup>2</sup> PPACA; Standards Related to Essential Health Benefits, Actuarial Value, and Accreditation Final Rule, 78 Fed. Reg. 12,834 (Feb. 25, 2013) (to be codified at 45 C.F.R. pts. 147, 155, 156), available at <http://www.gpo.gov/fdsys/pkg/FR-2013-02-25/html/2013-04084.htm>.

<sup>3</sup> PPACA; Health Insurance Market Rules; Rate Review; Final Rule, 78 Fed. Reg. 13,406 (Feb. 27, 2013) (to be codified at 45 C.F.R. pts. 144, 147, 150, et al.), available at <http://www.gpo.gov/fdsys/pkg/FR-2013-02-27/pdf/2013-04335.pdf>.

December 14, 2012.<sup>4</sup> States still had until February 15, 2013 to declare that they would participate in a partnership exchange and submit a blueprint, but exceptions were granted.<sup>5</sup> For instance, CMS waited until May to approve Utah’s request to be part of the federally facilitated exchange.<sup>6</sup> To build HealthCare.gov, CMS needed to know which states were going to be part of the federal exchange. Postponing these decisions shortened the time that CMS had to build such connections.

- CMS set no date by which states needed to notify CMS whether the state would conduct Medicaid and CHIP eligibility determinations or delegate the responsibility to CMS. The Government Accountability Office (GAO) found that, as of May 2, 2013, none of the 34 states participating in the federal exchange had notified CMS.<sup>7</sup>

### *Early warnings from McKinsey*

In April 2013, McKinsey & Company (McKinsey) presented the results of a study it had been commissioned to conduct on the development of the federal exchange to the White House, HHS, and CMS officials. McKinsey briefed CMS’s Chief Operating Officer, Michelle Snyder, as well as Deputy Assistant to the President for Health Policy Jeanne Lambrew and U.S. Chief Technology Officer Todd Park. McKinsey made a list of “critical risks” to the system, including the risk that a system failure would render the marketplace unavailable.<sup>8</sup>

For its study, McKinsey examined the development of the federal exchange to see whether it was on track to deliver on the Administration’s promises. The consultants reviewed documents, interviewed officials, and participated in meetings to perform “‘pressure testing’ [of] the existing trajectory of the federal marketplace.”<sup>9</sup> The McKinsey team spent March of 2013 reviewing risks to the system that could lead to significant functional failures down the road when the website went live on October 1.<sup>10</sup> As a result of the review, McKinsey warned the Administration that the federal exchange was going south already, six months ahead of the scheduled launch. According to McKinsey’s findings:

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<sup>4</sup> Robert Pear, “U.S. Extends Deadline for States on Health Insurance Exchanges,” THE N.Y. TIMES, (Nov. 16, 2012), available at [http://www.nytimes.com/2012/11/16/us/states-deadline-extended-for-insurance-exchanges.html?\\_r=0](http://www.nytimes.com/2012/11/16/us/states-deadline-extended-for-insurance-exchanges.html?_r=0).

<sup>5</sup> U.S. GOV’T ACCOUNTABILITY OFFICE, REP. NO. GAO-13-601, 10 STATUS OF IMPLEMENTATION EFFORTS (2013), [hereinafter GAO Status of Implementation] available at <http://www.gao.gov/assets/660/655291.pdf>.

<sup>6</sup> *Id.* at 18.

<sup>7</sup> *Id.* at 20.

<sup>8</sup> McKinsey & Co., “Red Team, Discussion Document,” CMS 9 (Apr. 2013), [hereinafter McKinsey Discussion Document] (prepared for CMS by McKinsey & Co.) available at <http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/Hearings/OI/20131119/2013-CMS-Red-Team-Discussion-Documents.pdf>.

<sup>9</sup> *Id.* at 1.

<sup>10</sup> Interview with McKinsey & Co., Senate Finance Committee (Dec. 3, 2013).

- Less than six months from launch, the design of the final system was considered “open.”<sup>11</sup> Instead of following a fixed plan, developers were working on website features that might ultimately be discarded.
- There was insufficient time for testing because the window was continually shrinking, increasing the likelihood that there would be multiple defects after launch. This would make it difficult to resolve post launch issues quickly, because multiple defects make it difficult for developers to pinpoint the source of problems.<sup>12</sup>
- There was uncertainty about what the user volume would be, which increased the risk that the user volume would crash the website because scaling the website takes time.<sup>13</sup>

To address these concerns, McKinsey recommended:

- Officials should immediately lock down the design for “version 1.0” of the website so that developers could focus on one set of requirements at a time.<sup>14</sup>
- The government needed to lock down funding sources for year 1 operations to allow contractors to execute key tasks.<sup>15</sup>

McKinsey’s findings gave the White House, HHS, and CMS much of the information they needed to see the risks of the current trajectory of the website’s development. Unfortunately, it appears that those briefed did not implement McKinsey’s recommendations, and the report’s findings did not even trickle down to some of the government and contractor managers who were in the trenches. For example, key contractor leads and Henry Chao, CMS Deputy Chief Information Officer and Deputy Director of the Office of Information Services, stated that they did not hear of McKinsey’s recommendations until after the October 1, 2013 launch.<sup>16</sup>

### *Defects pile up*

The business model for most major government and private-sector IT projects is to hire an outside contractor to examine projects as they are being developed in order to give managers real-time performance information. These auditors evaluate the extent to which developers and testers follow best practices, as well as the rules and procedures established. The auditors are called Independent Verification and Validation (IV&V) contractors and their reports are an essential part of ensuring a project is progressing on schedule and on budget.

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<sup>11</sup>McKinsey Discussion Document, *supra* note 8, at 11.

<sup>12</sup> *Id.* at 9.

<sup>13</sup> *Id.*

<sup>14</sup> *Id.* at 11.

<sup>15</sup> *Id.* at 14.

<sup>16</sup> Testimony of Henry Chao before the House Committee on Energy and Commerce in answer to questions *Security of HealthCare.gov*, 113<sup>th</sup> Congress(November 19, 2013), available at <http://energycommerce.house.gov/hearing/-security-healthcaregov>.

CMS contracted with TurningPoint Global Solutions (TurningPoint) to perform several technical and managerial IV&V reviews as the federal exchange was being developed.<sup>17</sup> TurningPoint's findings chronicle a litany of red flags and warnings. Over the course of 12 months – from September 2012 to September 2013 – TurningPoint identified technical and managerial concerns that ultimately were key factors in the failure of the website. TurningPoint's findings should have been alarming to the key decision-makers involved, but it is unclear whether CMS ever shared the reports or whether the reports were even read by anyone outside of the group to which TurningPoint reported. TurningPoint reported to Kirk Grothe, Acting Director of the CMS's Consumer Information and Insurance Systems Group, which was within the Office of Information Services. Mr. Grothe was supposed to elevate key findings to decision-makers like Henry Chao. However, Mr. Chao did not report that he saw any of the contractor's findings.<sup>18</sup> When asked whether any issues identified by TurningPoint were ever elevated to Mr. Chao, CMS refused to answer and instead implied the reports were not useful or up to date.<sup>19</sup>

On July 17, 2013, TurningPoint noted serious deficits in cloud computing, such as "Current hardware server configurations and related processes appear to be inadequate. ...The current Cloud infrastructure (i.e., hardware) has deviated from the defined and approved security policy. ...The existing capacity planning is not adequate. The system's capacity to support future growth cannot be verified."<sup>20</sup>

Regardless of whether key officials saw the TurningPoint reports, at least some CMS officials were well aware of how precarious their situation was. On July 8, 2013, Jeffrey Grant of CMS's Consumer Information and Insurance Oversight (CCIIO) office emailed his superiors concerned about the status of the project of building HealthCare.gov, saying:

[Federal Marketplace] build appears to be way off track and getting worse. ...only 10 developers total working on the [federal marketplace] build. ...only one of these developers is at a high enough skill level to handle complex issue resolution. ...there has been no independent testing [of SBM]. ...We are one week out from production deployment, and we are being told already that it doesn't work. ...concerns about [lead

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<sup>17</sup> TurningPoint performed several independent reviews, but did not build any part of HealthCare.gov. To conduct the reviews, TurningPoint staff observed meetings of CMS and contractor developers, and reviewed documentation of testing and other activities documented in the Collaborative Application Lifecycle Management Tool (CALT) to determine the extent to which contractors and CMS followed *Institute of Electrical and Electronic Engineers (IEEE) standards*.

<sup>18</sup> Interview with Henry Chao, Deputy Dir. of the Office of Info. Servs. at CMS, Senate Finance Committee (Mar. 11, 2014).

<sup>19</sup> E-mail from CMS staff to Senate committee staff (April 22, 2013, 11:23 EST) (responding to questions from Senate Committees) (Exhibit 1).

<sup>20</sup> "FEPS IV V Executive Status Meeting," PowerPoint presentation, TURNINGPOINT at 9 (July 17, 2013) (Exhibit 2).

contractor for software development] CGI's ability to get the work done. ...We believe that our entire build is in jeopardy.<sup>21</sup>

Henry Chao called on others within the IT framework to respond to Mr. Grant's claims. In reference to CGI's questionable effort, Mr. Chao said, **"I just need to feel more confident they are not going to crash the plane at take-off."**<sup>22</sup>

At about the same time, an internal CMS presentation documented multiple date slippages and described the potential risks to the system that the changes imposed. For example:

- There would be a shorter testing window for upcoming deployments of certain units of code.
- As a result of slippages, developers would have shorter testing windows.
- The short testing windows could affect the quality of functionality at launch.
- "Cascading slippages may occur. If functionality planned for July slip, it may cause slippages in August where a lot more functionality is already planned."<sup>23</sup>

On July 27, 2013, CGI reported that the website was only 51 percent completed.<sup>24</sup> By late August, it was at 62 percent.<sup>25</sup> At this time, TurningPoint also reported weaknesses and significant deficiencies in "all aspects" of the federal exchange.<sup>26</sup> TurningPoint found that instead of decreasing, the number of defects actually increased as developers worked more.<sup>27</sup>

Furthermore, in late August of 2013 TurningPoint reported that:

- Contractors seemed to be focused more on fixing the system as it was rather than building the final system. This approach did not follow CMS's chosen "agile" methodology to deliver quality code at the end of each release.<sup>28</sup>
- There was no schedule or plan that addressed the content, development, and deployment of all planned federal exchange services. As a result, it was difficult to determine the final version of the various services in terms of the functionality that would be delivered to the end users.<sup>29</sup>

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<sup>21</sup> Emails between CMS and CGI, email from Jeffrey Grant to Sharon Arnold, 5 (July 8, 2013) (Exhibit 3) (obtained from House Energy & Commerce Committee).

<sup>22</sup> *Id.*, email from Henry Chao to Monique Outerbridge and others. (July 16, 2013).

<sup>23</sup> *Id.*, email attachment of CMS presentation, "PM Deployment: Schedule Impact of Slippages" (July 2013).

<sup>24</sup> Email from Lori Stone of CGI to undisclosed recipients (July 27, 2013) (Exhibit 4).

<sup>25</sup> Email from CGI to HHS and CMS officials (Aug. 24, 2013) (Exhibit 5).

<sup>26</sup> TurningPoint, "IV&V Assessment 11," Executive Summary (Aug. 30, 2013) (Exhibit 6).

<sup>27</sup> *Id.* at Defects.

<sup>28</sup> *Id.* at Release Mgt. The agile method of software development is characterized by developers working to complete whole segments of a project one by one, rather than work on all segments at the same time.

<sup>29</sup> *Id.*

- The lack of a clear system definition and detailed implementation plan prevented CMS from determining realistic cost estimates for future development, and presented a serious risk to CMS’s ability to develop and deploy the final system.<sup>30</sup>
- There was no way for the different groups of people working on the project to see the status of the development. They also did not have a list of planned activities or infrastructure changes.<sup>31</sup>

In early September, TurningPoint found that of 355,000 lines of code written for the Federally Facilitated Marketplace (FFM), 21,000 lines had defects.<sup>32</sup> In addition, the number of defects per line had not changed much since mid-August.<sup>33</sup> More and more code was being written, but those charged with testing and fixing the code were not able to keep up. As a result, the defects remained unresolved.

Before the launch on October 1, 2013, TurningPoint identified “critical findings.”<sup>34</sup>

- There were numerous critical and major code violations in the code for the financial management system.
- The percentage of defects per line of code was the same as the previous assessment.
- There was no strategy or contingency plan for dealing with critical defects in the system after launch.
- The IV&V Team had no guidance from CMS to determine how many defects would be acceptable at launch.<sup>35</sup>
- TurningPoint described the significance of 677 “serious defects” found in the system test: “It is expected that the highest number of defects should be in system test, but 677 serious defects less than 2 weeks before the October Go-Live is [a] high number.”<sup>36</sup>

### *Incomplete testing*

The lack of testing on HealthCare.gov has been widely reported in the months since its failed launch. QSSI was the contractor responsible for performance testing, and in 2011, CMS anticipated that QSSI would begin testing the federal exchange in January 2013.<sup>37</sup> However, the testing did not actually begin in earnest until May, five months late and long after the need for

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<sup>30</sup> *Id.*

<sup>31</sup> *Id.*

<sup>32</sup> TurningPoint, “IVV Assessment 12,” at Senate Committee Staff Analysis, (Oct. 23, 2013) (Exhibit 7).

<sup>33</sup> *Id.*

<sup>34</sup> *Id.* at Executive Summary.

<sup>35</sup> *Id.*

<sup>36</sup> *Id.* at Value Delivery.

<sup>37</sup> QSSI, “Federal Exchange Program System Data Service Hub Statement of Work,” 5 (Sept. 30, 2011) [SFC-0000000280] (Exhibit 8).

testing had begun.<sup>38</sup> By then, government and contractor officials knew that the amount of time remaining for testing was insufficient. In fact, GAO warned CMS on July 17, 2013, that:

We are concerned that final integration testing for all the agency systems. ...may not be completed before the start of the enrollment period in 2013. The lack of adequate testing could result in significant delays and errors in accepting and processing ACA applications for health insurance coverage.<sup>39</sup>

CGI also voiced concerns about the testing window. On September 6, 2013, CGI told CMS that “The timeframes for testing in [certain applications] are not adequate to complete full functional, system, and integration testing activities.”<sup>40</sup> One of CGI’s “highest priority” concerns was, “Due to the compressed schedule, there is not enough time built in to allow for adequate performance testing.”<sup>41</sup>

In late August, IV&V contractor TurningPoint found weaknesses in how testing was being implemented. The contractor reported, “Testing continues to be hampered by the lack of clear requirements. That is, the system is developed based on general descriptions of functionality; they are not a by-product of detailed design stemming from well-defined user stories. This makes it difficult for testers to plan and prepare test cases that completely test the implemented functionality.”<sup>42</sup>

As the project drew closer to launch, CMS’s David Nelson, Director of the Office of Enterprise Management reported on September 27, 2013, **four days before the website was to go live**, that:

*The facts are that we have not successfully handled more than 500 concurrent users filling out applications in an environment that is similarly in size to Day 1 production [Emphasis added]. We cannot proactively find or replicate actual production capacity problems without an appropriately sized operational performance testing environment. And, we have not even started looking for tuning issues in the plan select and enroll parts of the application.*<sup>43</sup>

Although officials have stated that each component of the website had been tested, TurningPoint found that at the time of launch, only 23 percent of the units of code had been

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<sup>38</sup> Interview with CGI officials, Senate Finance Committee (Dec. 18, 2013).

<sup>39</sup> GAO Status of Implementation, *supra* note 5, at 51.

<sup>40</sup> Attachment to email from CGI to CMS, 6 (Sept. 6, 2013) (obtained from House Committee on Oversight and Government Reform) *available at* <http://oversight.house.gov/wp-content/uploads/2013/10/Redacted-CGI-Monthly-Report-to-CMS-August-2013-2.pdf>.

<sup>41</sup> *Id.* at 7.

<sup>42</sup> Exhibit 6, *supra* note 26, at Release Mgt. Finding 4.

<sup>43</sup> Emails among CMS Officials, QSSI-ECC-0000036602 – QSSI-ECC-0000036603 (Sept. 27, 2013) (Exhibit 9).

tested,<sup>44</sup> when, according to TurningPoint, it should have been 100 percent.<sup>45</sup> TurningPoint further elaborated, “Low unit test coverage indicates that all the modules for [the final website] are not adequately tested. If low unit test coverage occurs, then the complexity and number of defects during testing will increase; therefore, introducing additional risks to successive test cycles.”<sup>46</sup> Put simply, testing was inadequate and would only lead to more defects.

### *Security concerns*

Both in late August and again one week before HealthCare.gov went live, MITRE, HHS’s security testing contractor, reported serious concerns to CMS about the website’s vulnerability to attack. These reports were so serious that CMS’s top IT security official, Chief Information Security Officer Teresa Fryer, recommended against signing the Authority to Operate (ATO),<sup>47</sup> which CMS needed in order to launch. According to federal laws, agencies need to obtain an “Authority to Operate” (ATO) for a website before it goes live. The ATO certifies that all the required steps have been taken to, among other things, protect the personal data contained in the website, and prevent hackers from being able to change the website or download information. In a draft memo written by Ms. Fryer on September 24, 2013, she outlined numerous security concerns. Other CMS officials also discussed security concerns both before and after the launch of the website. The security concerns included:

- Approximately 40 percent of security controls were not tested before launch.<sup>48</sup>
- Testing of the website focused primarily on functionality, and not on security.<sup>49</sup>
- Due to the limitations of the security testing, it was unknown whether the website would sufficiently protect personal identifiable information (PII).<sup>50</sup>
- Eligibility and Enrollment (E&E), Financial Management (FM), and Plan Management (PM) modules could not be tested in the same environment. This meant that consistent tests on key applications could not be performed.<sup>51</sup>

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<sup>44</sup> TURNINGPOINT, “Federal Marketplace Program System (FMPS) Independent Verification & Validation (IV&V) Assessment 10 Report,” 73 (Nov. 18, 2013) (Exhibit 10).

<sup>45</sup> Interview with TurningPoint officials, Senate Finance Committee. (November 25, 2013).

<sup>46</sup> Exhibit 10, *supra* note 44, at 73.

<sup>47</sup> Transcript, Interview of Teresa Fryer by the House Oversight and Government Reform Committee (Dec. 17, 2013), [hereinafter Fryer Interview] *available at* <http://oversight.house.gov/wp-content/uploads/2013/12/Teresa-Fryer-ATO.pdf>.

<sup>48</sup> CMS, Memorandum regarding Risk Decision for the Federally Facilitated Marketplace (FFM) (Sept. 24, 2013), [hereinafter “CMS Memo on Risk Decisions”], (obtained by House Oversight and Government Reform Committee), *available at* <http://www.scribd.com/doc/193553256/Draft-CMS-Obamacare-Security-Memo-9-24-2013>.

<sup>49</sup> *Id.*

<sup>50</sup> *Id.*

- Complete end-to-end testing of the exchange never occurred because of several factors:
  - Testing environments and modules were not completed in time for the security assessment.<sup>52</sup>
  - Valid test data was not provided to MITRE before testing.<sup>53</sup>
  - There were no testing environments designated for security testing, and as a result there were not always environments available.<sup>54</sup>
- Some aspects of the website could not be tested because they had not been built yet. In fact, CMS estimated that some parts of the system would not be tested until December 2013 because they were not complete at the time of launch.<sup>55</sup>
- Security controls were supposed to be embedded within the website prior to launch. However, in November 2013 CMS officials and contractors testified that they did not know whether the controls actually were embedded. One contractor from MITRE said he had “no way of knowing that.”<sup>56</sup>

After MITRE conducted its security compliance assessment, CMS tried to address some of the concerns. However, Ms. Fryer found them serious enough that she recommended against signing the ATO, and in December 2013 she testified that multiple security concerns were still unresolved.<sup>57</sup>

In a highly uncommon move, CMS Administrator Marilyn Tavenner signed the ATO against the recommendation of Ms. Fryer.<sup>58</sup> The ATO listed some “mitigation strategies” that CMS was taking to keep the website secure.<sup>59</sup> Typically an ATO would not have been signed until all of these had been addressed or were close to being addressed. Several of the contractors questioned whether the proposed mitigation strategies were sufficient. TurningPoint reported

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<sup>51</sup> *Id.*

<sup>52</sup> *Id.*

<sup>53</sup> *Id.*

<sup>54</sup> *Id.*

<sup>55</sup> Transcript of H. Comm. on Energy and Commerce, Subcomm. on Oversight and Investigations, *Security of HealthCare.gov* (Nov. 19, 2013) (testimony of Henry Chao), 82 (Exhibit 11).

<sup>56</sup> *Id.*, at 103.

<sup>57</sup> See Fryer Interview, *supra* note 47.

<sup>58</sup> *Id.*

<sup>59</sup> Memorandum to Marilyn Tavenner from James Kerr and Henry Chao (Sept. 27, 2013), [hereinafter Tavenner Memo to Kerr, Chao] (regarding “Federally Facilitated Marketplace—DECISION”) (obtained by House Oversight and Government Reform Committee), available at <http://oversight.house.gov/wp-content/uploads/2013/11/9.27.13-ATO-memo.pdf>.

that CMS did not have standards for what was an acceptable amount of risk to the system, or an acceptable level of performance for launch.<sup>60</sup> The bar was not just low, it was nonexistent.

*Publicly, officials represented that the website was on track*

Despite all the warning signs, CMS and HHS officials stated over and over again that HealthCare.gov would be ready for launch on October 1, 2013. The following are a few of the statements made by Administration officials echoing their belief that the website would be ready to go live on schedule:

June 19, 2013. Assistant Secretary for Legislation, Jim R. Esquea stated, “On October 1, 2013 a Health Insurance Marketplace will be open and functioning in every state. ...HHS is extremely confident that on October 1 the Marketplace will open on schedule and millions of Americans will have access to affordable quality health insurance.”<sup>61</sup>

July 17, 2013. Marilyn Tavenner and Henry Chao testified before a subcommittee of the House Oversight and Government Reform Committee. In response to the question, “So both of you are testifying today that these shortfalls that are in the [GAO] report that I mentioned are going to be 100 percent complete on October 1st?” Mr. Chao: “Correct.” Ms. Tavenner: “Yes sir.”<sup>62</sup>

August 1, 2013. Marilyn Tavenner testified before the House Energy and Commerce Committee, “Sixty days from now is the beginning of open enrollment when Americans will be able to compare and enroll in affordable health care coverage, and that implementation is on track. ...CMS is ready for October 1.”<sup>63</sup>

August 7, 2013. CMS spokesman, Brian Cook said, “We are on schedule and will be ready for the marketplaces to open on October 1.”<sup>64</sup>

September 10, 2013. Cheryl Campbell, Senior VP at CGI stated that CGI was “confident that [CGI] will deliver the functionality that CMS has directed to enable qualified individuals to begin enrolling in coverage when the initial enrollment period begins on October 1.”<sup>65</sup>

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<sup>60</sup> Exhibit 7, *supra* note 32, at Executive Summary and Risk Management.

<sup>61</sup> GAO Status of Implementation, *supra* note 5, at 46.

<sup>62</sup> H. Comm. on Oversight and Gov’t Reform, Subcomm. on Energy Policy, Health Care, and Entitlements Hearing, *Evaluating Privacy, Security, and Fraud Concerns with ObamaCare’s Information Sharing Apparatus*, 113th Congress (July 17, 2013), at 74, *available at* <http://oversight.house.gov/wp-content/uploads/2014/02/2013-07-17-Ser.-No.-113-66-SC-EP-HC-Ent.-Jt.-Hrg.-Evaluating-Privacy-Security-and-Fraud-Concerns.pdf>.

<sup>63</sup> Testimony of Marilyn Tavenner before H. Comm. on Energy and Commerce in answer to questions, *PPACA Pulse Check*, 113th Congress (Aug. 1, 2013), *available at*: <http://energycommerce.house.gov/hearing/ppaca-pulse-check>.

<sup>64</sup> Sarah Kliff, “Uh-oh: Obamacare security testing is months behind, report says,” THE WASH. POST, (Aug. 6, 2013), *available at* <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/08/06/uh-oh-obamacare-security-testing-is-months-behind-report-says/>.

September 19, 2013. Gary Cohen, Deputy Administrator and Director of CCIIO, testified before the House Energy & Commerce Oversight & Investigation Subcommittee about the steps CMS had taken to make sure the website was operational by the launch date: “CMS and our Federal partners have been hard at work drafting policy, implementing consumer protections, working with stakeholders, and building information technology systems that will enable Americans to shop and apply for health insurance coverage beginning twelve days from now, on October 1.”<sup>66</sup>

September 30, 2013. Secretary Sebelius stated, “We’re very excited about tomorrow, shutdown or no shutdown, we’re ready to go.”<sup>67</sup>

## Leadership shortfalls

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If there is one takeaway lesson from the failures associated with the launch of HealthCare.gov, it is that there was a lack of clear leadership from the beginning of the project. Although CMS was in charge of building the website, CMS relied on a broad “enterprise architecture” to make sure that all of the different offices were coordinating. Unfortunately, this approach made project management and accountability difficult. The ambiguity of responsibility gave all parties plausible deniability when things went wrong. Each contractor and CMS unit could point fingers at others when the meltdown occurred. Additionally, even though Secretary Sebelius, Administrator Tavenner, and others have publicly accepted responsibility for the post-launch breakdown, during the course of the project no single person had the authority to make major decisions.<sup>68</sup> The fact that no one was flying the plane was not a surprise to HHS or CMS leadership or to the White House. They had known for months.

### *McKinsey concerns*

As discussed earlier, in April 2013, McKinsey & Company presented the results of its review to multiple stakeholders. In addition to examining the development of the exchange, the

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<sup>65</sup> H. Comm. on Energy and Commerce, Subcomm. on Health, *PPACA Pulse Check: Part 2*, 113th Congress (Sept. 10, 2013) (Written Testimony of Cheryl Campbell, Senior Vice President, CGI Federal Inc.).

<sup>66</sup> H. Comm. on Energy & Commerce, Subcomm. on Oversight and Investigations, *Two Weeks Until Enrollment: Questions for CCIIO*, 113th Congress (Sept. 19, 2013) (Statement of Gary Cohen, J.D. Deputy Administrator and Director, Center for Consumer Information and Insurance Oversight, Centers for Medicare & Medicaid Services on Affordable Care Act Implementation).

<sup>67</sup> Kelly Kennedy, “HHS puts final touches on exchange sites before launch,” *USATODAY* (Sept. 30, 2013), available at <http://www.usatoday.com/story/news/nation/2013/09/30/new-federal-exchange-site-opens/2897245/>.

<sup>68</sup> *The Washington Post* reported that because the ACA provided no funding for establishment of federal exchanges, HHS could not afford to keep the office responsible for some parts of the exchange within the Secretary’s office. Amy Goldstein and Juliet Eilperin, “HealthCare.gov: How political fear was pitted against technical need,” *THE WASH. POST* (Nov. 2, 2013), available at [http://www.washingtonpost.com/politics/challenges-have-dogged-obamas-health-plan-since-2010/2013/11/02/453fba42-426b-11e3-a624-41d661b0bb78\\_story.html](http://www.washingtonpost.com/politics/challenges-have-dogged-obamas-health-plan-since-2010/2013/11/02/453fba42-426b-11e3-a624-41d661b0bb78_story.html).

Consultants examined the leadership risks that could lead to significant issues at launch. McKinsey briefed CMS Chief Operating Officer (COO), Michelle Snyder, and participated in meetings with the White House’s Jeanne Lambrew and Todd Park, Chief Technology Officer of the United States.<sup>69</sup> McKinsey’s report predicted some of the website failures that occurred months later:

- No one at the various agencies involved in the website development had visibility on all of the critical milestones that each different group needed to reach in order to complete the project successfully. McKinsey referred to this as “no critical path transparency.”<sup>70</sup> Furthermore, different groups did not understand how they were dependent on other groups reaching milestones.
- There was no single empowered decision-making authority. Instead, management from the various offices made decisions by consensus. For example, no one could make a decision across agencies about how identity proofing could or should be done.<sup>71</sup> On another function, McKinsey staff found that “everyone had a piece of this, but no one” was in charge of completing the project.<sup>72</sup>
- Leaders’ focus on enrollment, coupled with limited testing time and resources before launch, could lead to inaccurate or incomplete financial management systems.<sup>73</sup>

Reflecting on these findings, McKinsey recommended that a single Chief Operating Officer manage the process from the top-down, and start making decisions to enable developers to finish their jobs. McKinsey’s findings and recommendations gave the White House, HHS, and CMS the information they needed to avert much of the problems that ultimately caused disaster on October 1.

Unfortunately, administration officials did not follow McKinsey’s recommendations. No one was appointed to manage the HealthCare.gov process, or gained visibility on the entire process as it was being implemented across agencies. The lack of leadership was so severe that even when faced directly with the consequences, officials were unable to address the problem.

Recently, President Obama appointed someone to lead and coordinate future PPACA implementation. Kristie Canegallo will serve as deputy chief of staff in charge of working across

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<sup>69</sup> Interview with McKinsey & Co. Assocs., *supra* note 10.

<sup>70</sup> See McKinsey Discussion Document, *supra* note 8, at 10.

<sup>71</sup> *Id.*

<sup>72</sup> Interview with McKinsey & Co. Assocs., *supra* note 10.

<sup>73</sup> See McKinsey Discussion Document, *supra* note 8, at 9.

agencies to oversee the implementation. Her other duties will include education policy and withdrawal from Afghanistan.<sup>74</sup>

### *Uncoordinated leadership*

For large IT projects, management structure is key. HealthCare.gov did not have anyone in charge of the entire project. For example, COO Michelle Snyder oversaw CMS's Office of Operations, but HealthCare.gov was only one of her many responsibilities.<sup>75</sup> As Deputy Director of CMS's Office of Information Services and Deputy Chief Information Officer, Henry Chao is the name most-often associated as the CMS lead on the HealthCare.gov project. He was responsible for guiding the technical aspects of the federal exchange in accordance with all applicable laws and regulations,<sup>76</sup> but he had no control over the other offices that managed various aspects of the website. Mr. Chao was not the director of an office and could not command the cooperation of others in adjacent offices. In particular, Mr. Chao could not compel staff from CCIIO to supply needed information, nor the Office of Communications, who was in charge of the "look and feel" of the site, nor the Office of Acquisitions and Grants, which managed the technical requirements of the contracts (see Appendix I: CMS Organizational Chart). The result was that no one had visibility on the entire federal exchange, and managers working in the trenches with contractors to complete the build did not have the authority to make other offices meet deadlines or deliver products on a schedule. For example, in July 2013, IV&V contractor TurningPoint found that "There is no unified calendar for complete visibility to development teams, release managers and operations teams with a consolidated view of all planned activities as well as infrastructure changes."<sup>77</sup>

One solution to the problem of managing multiple contractors was to hire a general, or lead contractor. Large government IT projects are usually led by a general contractor, a single contractor that is responsible for completing the project. The general contractor has the ability to hold each of the other contractors accountable for completing their tasks within budget. Instead of hiring a general contractor or a systems integrator, CMS relied on its "enterprise architecture" with a "lifecycle framework" that helped them coordinate across divisions and

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<sup>74</sup> Reuters, "Obama names new deputy chief of staff to oversee healthcare" (May 16, 2014), *available at*: [http://articles.chicagotribune.com/2014-05-16/news/sns-rt-us-usa-obama-healthcare-20140516\\_1\\_deputy-chief-healthcare-gov-president-barack-obama](http://articles.chicagotribune.com/2014-05-16/news/sns-rt-us-usa-obama-healthcare-20140516_1_deputy-chief-healthcare-gov-president-barack-obama).

<sup>75</sup> See Chief Operating Officer, CMS.gov, [http://www.cms.gov/About-CMS/Agency-Information/CMSLeadership/Office\\_COO.html](http://www.cms.gov/About-CMS/Agency-Information/CMSLeadership/Office_COO.html) (last visited June 4, 2014).

<sup>76</sup> H. Comm. on Energy and Commerce, Subcomm. on Oversight and Investigations, *Security of HealthCare.gov* (Nov. 19, 2013) (testimony of Henry Chao), *available at* <http://docs.house.gov/meetings/IF/IF02/20131119/101496/HHRG-113-IF02-Wstate-ChaoH-20131119.pdf>.

<sup>77</sup> Exhibit 6, *supra* note 26, at Release Mgt.

offices within CMS. Mr. Chao felt that this was sufficient to take the place of a general contractor.<sup>78</sup>

Instead, the lack of a general contractor enabled contractors and CMS to point fingers at one another when the website failed. At a hearing, both CGI and QSSI blamed CMS for key decisions and a short testing window.<sup>79</sup> CMS has also blamed CGI for the poor quality of its software, and QSSI for failing to develop a quality “front door” that led to some of the initial freezes and blocks.<sup>80</sup> In an interview, Mr. Chao said that integration was one of the key website failures, something for which a general contractor would have been responsible.<sup>81</sup>

After the disastrous launch, CGI’s contract was not terminated, and QSSI was made general contractor. In January 2014, the Administration announced that it would not renew CGI’s contract. In place of CGI, Accenture will take over the primary role of software developer.<sup>82</sup>

### *Consistently poor communication*

The lack of leadership was the direct source of several problems that hindered contractors. Contractors were forced to change direction frequently, wasting time and money. One key contractor reported that changing priorities was the norm. McKinsey found in April 2013 that there were “evolving priorities” and “multiple definitions of success.”<sup>83</sup> A contractor reported that, early on, three different CMS offices—the Office of Communications (OC) and the Office of Information Services (OIS)—brought in their own companies to submit proposals to build the user interface. This lack of coordination was a blatant waste of time and money.<sup>84</sup>

Early on, TurningPoint identified concerns about leadership and communication. On April 19, 2013, TurningPoint reported that “decision points and communication processes need to be identified for testing activities.”<sup>85</sup> Later, in mid-June, TurningPoint reported disorganization and communication issues. For example, TurningPoint reported that the daily Consumer

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<sup>78</sup> Interview with Henry Chao, *supra* note 18.

<sup>79</sup> H. Comm. on Energy & Commerce, *PPACA Implementation Failures: Didn’t Know or Didn’t Disclose?* (Oct. 24, 2013) available at <http://energycommerce.house.gov/hearing/ppaca-implementation-failures-didn%E2%80%99t-know-or-didn%E2%80%99t-disclose>.

<sup>80</sup> H. Comm. on Ways and Means, *Status of the Affordable Care Act Implementation* (Oct. 29, 2013) (statement and Testimony of Marilyn Tavenner, Administrator, CMS) available at [http://waysandmeans.house.gov/uploadedfiles/102913\\_tavenner\\_testimony.pdf](http://waysandmeans.house.gov/uploadedfiles/102913_tavenner_testimony.pdf).

<sup>81</sup> Interview with Henry Chao, *supra* note 18.

<sup>82</sup> Christopher Weaver and Spencer Ante, “GI’s Contract to Help Run Health Site Won’t Be Renewed,” THE WALL STREET JOURNAL (Jan. 10, 2014) available at <http://online.wsj.com/news/articles/SB10001424052702303848104579312773581587370>.

<sup>83</sup> McKinsey Discussion Document, *supra* note 8, at 5.

<sup>84</sup> Interview with CGI officials, *supra* note 38.

<sup>85</sup> TurningPoint, “Federal Marketplace Program System (FMPS) Independent Verification & Validation (IV&V) Assessment 6 Report,” 16 (Apr. 19, 2013) (Exhibit 12).

Information & Insurance Systems Group/Terremark (CIISG/TM) Operations meeting “...doesn’t seem to be planned and organized. Contractors are asking for the status [updates]... and [the] Cloud Vendor is making decisions on the spot. Decisions are made verbally only to the people who are in attendance, and not documented anywhere.”<sup>86</sup>

In July 2013 TurningPoint reported:

It has been stated on more than one occasion that meeting participants have a lack of understanding of project-wide information, and therefore, some people are surprised at the tasks that still need to be performed. This high-level understanding should not just reside within a few of the [federal exchange] architects and senior managers. It should be shared, and the status should be communicated to all of the stakeholders on a regular basis.<sup>87</sup>

*The Washington Post* reported at length about how the lack of centralized leadership hampered communications across offices, culminating in a critical meeting of CMS officials and contractors on August 22 and 23.<sup>88</sup> It was a moment of clarity. A key individual who attended the meeting explained that participants were shocked when they found out what exactly others were working on.<sup>89</sup> Leaders across CMS and various contractors had little understanding of others’ goals or milestones.<sup>90</sup> The build was not on track and it was clear that many components would not be ready in time.<sup>91</sup> To address the problems, participants tried to determine what elements of HealthCare.gov CGI could deliver by October 1.<sup>92</sup> CGI walked through the items that could be ready and those that would not be ready. CMS then undertook its own “surge” to help CGI complete the key tasks before launch.<sup>93</sup>

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<sup>86</sup> TurningPoint, “Federal Marketplace Program System (FMPS) Independent Verification & Validation (IV&V) Assessment 8 Report,” 50 (June 10, 2013) (Exhibit 13).

<sup>87</sup> TurningPoint, “Federal Marketplace Program System (FMPS) Independent Verification & Validation (IV&V) Assessment 9 Report,” 5 (July 11, 2013) (Exhibit 14). Further reporting on the meetings that took place between federal exchange IT staff from July through mid-September 2013, TurningPoint stated, “On average, there is a considerable amount of information that the XOC Manager should be receiving from contractors, but contractors are not providing this information, e.g. statusing emails, Root Cause Analyses (RCAs), Change Requests (CRs), and Remedy tickets. On average, at least one contractor organizational representative did not attend when they should have attended.” Exhibit 7, *supra* note 32, at Communication.

<sup>88</sup> Amy Goldstein and Juliet Eilperin, “HealthCare.gov contractor had high confidence but low success.” *THE WASH. POST* (Nov. 23, 2013) available at [http://www.washingtonpost.com/national/health-science/healthcaregov-contractor-had-high-confidence-but-low-success/2013/11/23/1ab2c2b2-5407-11e3-9fe0-fd2ca728e67c\\_story.html](http://www.washingtonpost.com/national/health-science/healthcaregov-contractor-had-high-confidence-but-low-success/2013/11/23/1ab2c2b2-5407-11e3-9fe0-fd2ca728e67c_story.html).

<sup>89</sup> Interview with CGI officials, *supra* note 84.

<sup>90</sup> *Id.*

<sup>91</sup> Goldstein and Eilperin, *supra* note 88.

<sup>92</sup> Interview with CGI officials, *supra* note 84; Interview with QSSI officials (Feb. 21, 2014).

<sup>93</sup> Interview with Henry Chao, *supra* note 18.

The poor communication let important information fall through the cracks. For example, as CMS drew closer to launch, an important security finding from the MITRE security testing contractor bypassed Mr. Chao.<sup>94</sup> Instead of sending it to Mr. Chao, Tony Trenkle, CMS's Chief Information Officer sent the memo to another office.<sup>95</sup> Mr. Chao found out about the memo when he was questioned by Congressional investigators months after launch, indicating his surprise that he had not received it sooner.<sup>96</sup>

Poor communication may have also led to one of the most debilitating early website failures. Much has been made of CMS's pre-launch decision to turn off CGI's "window shopping" feature on the website. This would have allowed users to view insurance plans without registering and creating an account first. QSSI claimed the decision to scrap this function created a great deal of extra traffic to the feature handling the registration, the Enterprise Identity Management (EIDM) that QSSI built. Without the window shopping feature, the EIDM acted as a "front door" to the website and people could not access the site otherwise. The EIDM was not able to handle the increased traffic this caused, and so it shut down. Users were not able to get through the front door, and therefore could not access the rest of the website. CMS blamed these failures on the heavy volume of traffic, saying that QSSI's EIDM failed to handle all the interested users.<sup>97</sup> However, QSSI disclosed that it was not told of CMS' decision to turn off the window shopping feature until the day of the launch, so QSSI was unprepared for the volume.<sup>98</sup> Conversely, CMS claimed that it took steps to increase capacity for the EIDM before the launch, and that the EIDM failure resulted from issues unrelated to volume.<sup>99</sup> Even though CMS argued that the failure had nothing to do with traffic, CMS immediately told QSSI to increase the capacity.<sup>100</sup> It took QSSI developers eight days to fix the EIDM.

### *Post-launch changes*

After the disastrous launch, CMS's leadership failures came into focus. First, as QSSI scrambled to increase capacity on the EIDM, CMS simultaneously directed CGI to build an alternative EIDM

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<sup>94</sup> See Press Release, H. Comm. on Oversight & Gov't Reform, "Top Operational Official for Obamacare Exchange Calls Withheld Information about Security Flaws 'Disturbing'" (Nov. 2013) *available at* <http://oversight.house.gov/release/top-operational-official-obamacare-exchange-calls-withheld-information-security-flaws-disturbing/>.

<sup>95</sup> *Id.*

<sup>96</sup> *Id.*

<sup>97</sup> Comm. on Ways and Means. October 29, 2013 (Statement of Marilyn Tavenner, Administrator, CMS); *see also* Richard Pérez-Peña, Abby Goodnough and Robert Pear, "As Demand Stays High, Officials Try to Address Problems in Exchanges," THE N.Y. TIMES (Oct. 2, 2013) *available at* <http://www.nytimes.com/2013/10/03/us/problems-persist-on-second-day-of-insurance-markets.html>.

<sup>98</sup> Interview with QSSI officials, Senate Finance Committee staff. (Feb. 21, 2014).

<sup>99</sup> Interview with Henry Chao, *supra* note 18.

<sup>100</sup> *Id.*

in the event that QSSI was not able to scale its version quickly enough.<sup>101</sup> CMS’s decision to divert significant resources to a duplicate project is surprising, given the critical number of defects that needed fixing. Instead of repairing the thousands of defects in the website, some CGI coders were diverted to building an alternative EIDM that was ultimately never used since QSSI corrected the issues.<sup>102</sup>

On October 20, 2013, almost three weeks after the initial launch, HHS announced a “tech surge” to resolve problems with the website. It said it would bring in “the best and brightest from both inside and outside government to scrub in” and fix HealthCare.gov.<sup>103</sup> The tech surge was led by Jeffrey Zeints, the former Director of the Office of Management and Budget (OMB). Zeints resigned from OMB in April 2013, but was personally selected by the Administration to fix HealthCare.gov.<sup>104</sup> It was the first time in the entire process that the project had a clear leader who could make decisions.

One key contractor noted how the post-launch “tech surge” confirmed the shortcomings of CMS’s leadership. The contractor described how the tech surge introduced outsider experts who were empowered to make decisions and hold CMS and the various contractors equally accountable for the success of the website.<sup>105</sup> Instead of a diffuse and ambiguous group of leaders, the tech surge made it clear who was in charge, and made sure that all were working toward shared success. The website functionality improved significantly from that point on.

## **Political pressure trumped operational reality**

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From the beginning, HealthCare.gov was supposed to be the crowning achievement of the Affordable Care Act. President Obama promised that it would make buying health insurance as easy as purchasing a flight on Kayak.com.<sup>106</sup> The ability of average citizens to view a range of health insurance options and purchase one easily, at times with federal tax subsidies, was a modern concept. However, political leaders undermined the health exchange’s success by politicizing the process.

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<sup>101</sup> Interview with CGI officials, *supra* note 38.

<sup>102</sup> *Id.*

<sup>103</sup> “Doing Better: Making Improvements to HealthCare.gov,” HHS.gov, Oct. 20, 2013, <http://www.hhs.gov/digitalstrategy/blog/2013/10/making-healthcare-gov-better.html> (last accessed June 2, 2014).

<sup>104</sup> David Morgan and John Whitesides, “Obama turns to trusted aide for ‘tech surge’ to fix healthcare website,” *REUTERS* (Oct. 22, 2013), *available at* <http://www.reuters.com/article/2013/10/23/us-usa-healthcare-idUSBRE99K0M220131023>.

<sup>105</sup> Interview with CGI officials, *supra* note 38.

<sup>106</sup> Press Release, The White House, Remarks by the President on the Affordable Care Act and the Government Shutdown (Oct. 1, 2013) *available at* <http://www.whitehouse.gov/the-press-office/2013/10/01/remarks-president-affordable-care-act-and-government-shutdown>.

First, the White House's involvement sometimes kept CMS from completing its job on time. As discussed earlier, several insiders reported that they were directed by the White House to delay important, controversial Obamacare rules.<sup>107</sup> Doing so set the timeline back for website development. In addition, the White House weighed in on even small decisions. For example, in mid-March of 2013, CGI documents showed that the White House wanted to extend the deadline for when insurers could submit plans to be certified as qualified health plans, requiring CMS to issue a change request and delay information needed for HealthCare.gov.<sup>108</sup> In mid-April of 2013, CGI contractors were asked to rework the flow of the website to align the front-end and back end design. The directive came directly from the White House.<sup>109</sup> Even two days before launch, the White House was still involved. Todd Park, U.S. Chief Technology Officer, emailed Henry Chao on September 29 to ask how many users the website could handle and how quickly it would crash if that number was exceeded.<sup>110</sup>

Second, the fact that the website was the centerpiece of the Affordable Care Act dissuaded CMS officials who knew that the website would crash from voicing their concerns to decision-makers. All of the flaws and defects listed in this report had been reported to various officials at CMS, but we found few instances in which officials tried to draw attention to the deficiencies. For example, just days before launch, someone from CMS's Office of Information Services reported to multiple CMS officials that the results of testing was "Not good and not consistent at all. ...Transactions were taking a long time and eventually the system reached a breakpoint (in six minutes), after which everything started failing."<sup>111</sup> Although it seemed obvious that the website would not meet the October 1 deadline, officials and developers soldiered on, dropping functions like the Spanish language version of the site and the website for small businesses. Their sole focus was on propping up whatever functionality was possible instead of telling higher-ups in HHS and the White House that their highest priority was not going to work.

When it came time to certify the website as secure, political pressure again trumped technological reality. Normally, the job of approving a major IT project as secure would go to the Chief Information Officer of CMS, in this case Tony Trenkle. As discussed previously, his subordinate, Chief Information Security Officer Teresa Fryer testified that she recommended to at least four key individuals that the ATO be denied: Tony Trenkle, CMS CIO; George Linares, CMS Chief Technology Officer; Frank Baitman, Deputy Assistant Secretary for Information Technology and Chief Technology Officer at HHS; and Kevin Charest, Chief Information Security Officer for HHS.<sup>112</sup> Ms. Fryer was overruled. As a result of the controversy, CMS administrator

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<sup>107</sup> Eilperin, *supra* note 1.

<sup>108</sup> CGI, "Monthly Status Report," (Undated), at Agenda # 3, (Exhibit 15).

<sup>109</sup> CGI, Emails between CGI and CMS, at Proposed Change Request, (Apr. 15, 2013) (Exhibit 16).

<sup>110</sup> Exhibit 9, *supra* note 43, at QSSI-ECC-0000066582.

<sup>111</sup> *Id.*, at QSSI-ECC-0000023065.

<sup>112</sup> Fryer Interview, *supra* note 47.

Marilyn Tavenner herself signed the ATO, in a highly unusual move. In doing so, she certified the security of the website, and permitted the launch to proceed on October 1.

CMS managers clearly understood the extent of the risks to the system, but chose to launch anyway. In a meeting in March 2013 between CGI and CMS, participants noted that the greatest risk to the system was integration, because of the sheer number of contractors, officials, and components of the website that depended on each other. “Integration Risk with other software/vendors and dependent programs such as EIDM is the biggest risk with everything going live at the same time.”<sup>113</sup> When we interviewed Henry Chao in February 2014, he stated that the main failures with the website were integration, and “eligibility and enrollment,” the group of applications that began with EIDM. When asked if he was surprised at the failure of the website, Mr. Chao said he was not.<sup>114</sup>

Key officials from QSSI, CGI, and CMS informed us that no one ever discussed delaying the launch of HealthCare.gov.<sup>115</sup> When Mr. Chao was asked point blank whether he ever considered asking for more time, he said that was not a viable possibility.<sup>116</sup> Delaying the launch was never an option. Administration leaders never wanted to hear that the website was going to implode, so the contractors and staff building the website just did their best to get across the finish line with whatever they could cobble together.

## Conclusions

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As of the end of February 2014, the Administration had spent \$834 million on developing the website.<sup>117</sup> HHS’s total spending plan to support the federal marketplace for fiscal year 2014 is \$1.4 billion.<sup>118</sup> This is a staggering amount of taxpayer funds to enroll a few million people. In addition to the waste and inefficiency, the people forced to use the website had to waste time and effort dealing with a dysfunctional system.

As with any major endeavor, it is clear that CMS has many “lessons learned” as takeaways from their various efforts related to the launch of HealthCare.gov. Unfortunately, the lessons learned were too late to help several state exchanges that are still floundering over eight months after both the federal and state exchanges were originally launched. The federal exchange was

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<sup>113</sup> Exhibit 15, *supra* note 108, at Agenda # 7.

<sup>114</sup> Interview with Henry Chao, *supra* note 18.

<sup>115</sup> *Id.*; Interview with CGI officials, *supra* note 34; Interview with QSSI officials, *supra* note 98.

<sup>116</sup> Interview with Henry Chao, *supra* note 18.

<sup>117</sup> Sylvia Matthews Burwell, Nominee for Secretary of HHS, “Responses to Questions for the Record,” (May 18, 2014) (delivered to the Committee on Health, Education, Labor, and Pensions) (Exhibit 17).

<sup>118</sup> HHS, “Justification of Estimates for Appropriations Committees,” 349 (released March 4, 2014), *available at* <http://www.cms.gov/About-CMS/Agency-Information/PerformanceBudget/Downloads/FY2015-CJ-Final.pdf>.

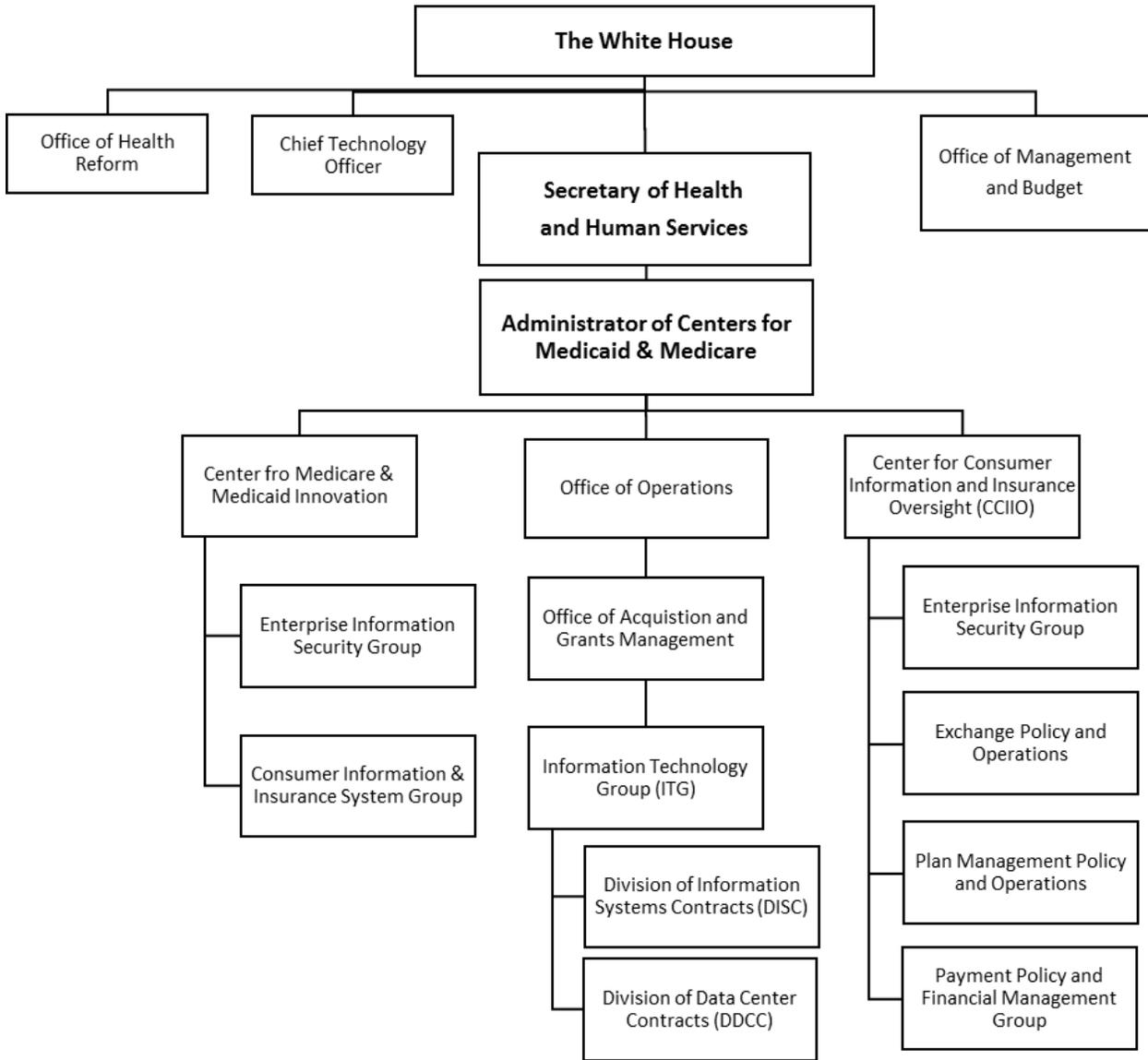
created because many states chose not to create their own exchanges. However, fourteen states and the District of Columbia opted for a state exchange. Seven of the states and the District of Columbia experienced issues similar to the problems that plagued HealthCare.gov. As of June 2014, four states have scrapped their websites after spending hundreds of millions of dollars on trying to fix them.

As HealthCare.gov prepares to enter its second open enrollment period, and a new secretary of HHS, Sylvia Mathews Burwell, takes the place of Secretary Sebelius, it is clear that CMS can learn from its past. To that end, the following are two key takeaways for CMS as a result of this report:

- First, centralized project management is key. CMS has the expertise to oversee the development of sophisticated websites; it manages Medicare.gov and other websites that serve millions of beneficiaries. Future disasters could be avoided by empowering selected leaders to make decisions across offices.
- Second, political concerns should not trump operational decisions. The Administration was unwilling to admit that it was not ready on October 1 despite dozens of reports—from TurningPoint, CGI, GAO, OIG, MITRE—telling the same story. Officials were neither asked nor volunteered to make a go/no-go decision on the final launch, or at any point beforehand. Everyone understood that launching on October 1 was the only option, and no one wanted to be the messenger who told the White House that its signature piece of legislation was going to crash at takeoff. The Administration prioritized political success over protecting taxpayer dollars.

Any endeavor of this size is prone to be plagued with issues. However, the issues that occurred with respect to the launch of HealthCare.gov were largely preventable if thoughtful consideration had been given to an overall implementation plan rather than a trial and error approach. The outcome is that millions of taxpayer dollars were spent unnecessarily, and potential enrollees endured unacceptably long wait times and the threat of not receiving coverage. In the first few critical months of what was supposed to be a signature domestic achievement, the public perception of the program was overwhelmingly negative, even among many of its supporters. By engaging in poor management, ignoring obvious red flags, and enforcing arbitrary deadlines over practical considerations, the Administration prioritized political success over protecting taxpayer dollars.

# Appendix I: CMS Organizational Chart



<b>Secretary of Health and Human Services</b>	
Kathleen Sebelius	Secretary of Health and Human Services
Frank Baitman	Deputy Assistant Secretary for Information Technology and Chief Information Officer
Kevin Charest	Chief Information Security Officer

<b>Centers for Medicare &amp; Medicaid Services (CMS)</b>	
Marilyn Tavenner	Administrator

<b>CMS Office of Operations</b>	
Prepares and presents recommendations to the Administrator, Principal Deputy Administrator, Chief Operating Officer, and other high-level CMS and Department officials on planning, leadership, implementation and policy issues concerning modifications to existing and proposed operating policies that will improve the administration and operations of programs and CMS as a whole.	
Michelle Snyder (since replaced)	Deputy Administrator and Deputy Chief Operating Officer
Susan Cuerdon	Deputy Director of Operations Management

<b>Office of Information Services</b>	
Ensures the effective management of CMS' information technology, and information systems and resources.	
Henry Chao	Deputy Chief Information Officer and Deputy Director
Tony Trenkle (since replaced)	Director and Chief Information Officer
Teresa Fryer	Chief Information Security Officer for CMS
Kirk Grothe	Director of Consumer Information and Insurance Systems
Hung Van	Government Team Lead for the Data Hub
Timothy Purcell	Government Task Leader for EIDM and IV&V
George Linares	CMS Chief Technology Officer

<b>Center for Consumer Information and Insurance Oversight (CCIIO)</b>	
Implements regulations relating to private health insurance	
Gary Cohen	Deputy Administrator and Director
Chiquita Brooks-Lasure	Deputy Center and Policy Director
Cynthia MacDonald	Deputy Center and Operations Director
Jeffrey Grant	Director of Payment Policy and Financial

	Management Group
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<b>Office of Acquisition and Grant Management (OAGM)</b>	
Plans, organizes, coordinates and manages the activities required to maintain an agency-wide acquisition program.	
Dan Kane	Director
Brenda Thew (since replaced)	Deputy Director
Andrew Mummert	Director of Division of Information Systems Contracts for Information Technology Group
Christopher Hagepanos	Director of Division of Data Center Contracts for Information Technology Group

<b>White House</b>	
Jeanne Lambrew	Deputy Assistant to the President for Health Policy
Todd Park	Chief Technology Officer

## Appendix II: Timeline of Events

<b>2011</b>	
<b>Sept</b>	QSSI signs contract with CMS to build Data Services Hub. <sup>119</sup>
<b>Sept 30</b>	CMS issues task order for CGI to build the FFM website and IT infrastructure. <sup>120</sup>
<b>2012</b>	
<b>Nov</b>	MITRE signs contract to perform Security Control Assessment (SCA).
<b>2013</b>	
<b>Jan, Feb</b>	MITRE conducts a security control assessment and finds multiple failures of QSSI's EIDM. <sup>121</sup>
<b>Mar 27</b>	Meeting between CGI and CMS: <ul style="list-style-type: none"> <li>• The White House wants to extend the qualified health plan window for re-submissions, so CMS will issue a change request.</li> <li>• "Integration Risk with other software/vendors and dependent programs such as EIDM is the biggest risk with everything going live at the same time."<sup>122</sup></li> </ul>
<b>Late Mar, early April</b>	McKinsey presents study on risks to the White House, forecasting that if certain processes are not completed, the success of the website is in jeopardy. Among McKinsey's recommendations, "Align on shared metrics for success," and "Agree to lock down open requirements by 4/30 and shift all other new requirements or changes to existing requirements into version 2.0." <sup>123</sup>
<b>Apr 17</b>	Secretary Sebelius asserts that exchanges will be ready at Senate Finance Committee hearing. <sup>124</sup>
<b>Apr 15</b>	CGI reports that the White House decided to align front-end and back-end design. <sup>125</sup>
<b>May</b>	Testing begins. <sup>126</sup>
<b>May 2</b>	None of the 34 states participating in the federal exchange had notified CMS as to whether or not they would conduct Medicaid and/or CHIP eligibility determinations rather than delegate this responsibility to CMS. <sup>127</sup>

<sup>119</sup> Jackie Crosby, "UnitedHealth deal draws concern," STAR TRIBUNE, (Nov. 9, 2012) *available at* <http://www.startribune.com/business/178249741.html>.

<sup>120</sup> CGI, "Response of CGI Federal Inc. to Additional Questions for the Record and Member Requests for the Record," 4 (Dec. 3, 2013) (Exhibit 20) (Obtained by House Energy & Commerce Committee).

<sup>121</sup> See Exhibit 11, *supra* note 55, at 76.

<sup>122</sup> Exhibit 15, *supra* note 109, at Agenda # 7.

<sup>123</sup> See McKinsey Discussion Document, *supra* note 8, at 9.

<sup>124</sup> S. Comm. On Finance, *The President's Fiscal Year 2014 Budget* (Apr. 17, 2013) (statement of Kathleen Sebelius, Secretary of the Dept. of Health & Human Services), *available at* <http://www.finance.senate.gov/hearings/hearing/?id=9b1917e6-5056-a032-5286-a7d3d5c31c13>.

<sup>125</sup> Exhibit 16, *supra* note 109.

<sup>126</sup> Interview with CGI officials, *supra* note 38.

<sup>127</sup> GAO Status of Implementation, *supra* note 5, at 20.

<b>June 10</b>	TurningPoint found, “The daily Consumer Information & Insurance Systems Group/Terremark (CIISG/TM) Operations meeting covers Cloud operations issues, but the meeting doesn’t seem to be planned and organized. Contractors are asking for the status on virtual machine (VM) configuration, change requests updates, Outages, and patches, and Cloud Vendor is making decisions on the spot. Decisions are made verbally only to the people who are in attendance, and not documented anywhere.” <sup>128</sup>
<b>June</b>	QSSI finishes coding the Data Services Hub. <sup>129</sup>
<b>June 19</b>	GAO reports that, as of mid-March, “much progress has been made in establishing the regulatory framework...Certain factors...suggest a potential for implementation challenges going forward.” <sup>130</sup>
<b>June 28</b>	CGI: Federal exchange 41 percent completed. <sup>131</sup>
<b>July</b>	<p>CMS PowerPoint slide details date slippages:</p> <ul style="list-style-type: none"> <li>• “Plan Transfer and Plan Preview initially scheduled for 7/15; potentially pushed back to 7/24</li> <li>• Shorter testing for upcoming Production and Test Deployments</li> <li>• Splitting releases increases regression testing cycles and possibility of errors, causing compression of other releases that come after them</li> <li>• Schedules for 8/15 release may be compressed and under pressure if any more slippages occur</li> <li>• Eligibility &amp; Enrollment Test Deployment 7/15 Slippages <ul style="list-style-type: none"> <li>• My account shifted to 7/31</li> <li>• Enrollment shifted to 7/31 and 8/30</li> </ul> </li> <li>• Schedule impact: shorter issuer testing time windows</li> <li>• Short testing windows may impact Quality of Day 1 functionality is being developed all the way up to 8/31 and 9/15</li> <li>• Cascading slippages may occur. If functionality planned for July slip, it may cause slippages in August where a lot more functionality is already planned.”<sup>132</sup></li> </ul>
<b>July 2</b>	Treasury delays employer mandate until 2015.
<b>Jul 8</b>	Jeffrey Grant (CCIIO) emails Mr. Chao and others with serious concerns: “FM build appears to be way off track and getting worse”; “only 10 developers total working on the FM build...only one of these developers is at a high enough skill

<sup>128</sup> Exhibit 13, *supra* note 86.

<sup>129</sup> H. Comm. On Energy & Commerce, *PPACA Implementation Failures: Didn’t Know or Didn’t Disclose?* 113th Congress (Oct. 24, 2013) (statement of Andrew Slavitt, Group Executive Vice President, Optum), *available at* <http://democrats.energycommerce.house.gov/sites/default/files/documents/Testimony-Slavitt-HE-PPACA-Implementation-2013-10-24.pdf>.

<sup>130</sup> GAO Status of Implementation, *supra* note 5, at 20.

<sup>131</sup> CGI, “Integrated FFM Schedule,” (June 28, 2013) (Exhibit 19).

<sup>132</sup> Exhibit 3, *supra* note 21, at Schedule Impact of Slippages.

	level to handle complex issue resolution”; “there has been no independent testing”; “We are one week out from production deployment, and we are being told already that it doesn’t work”; concerns about CGI ability to get the work done; “We believe that our entire build is in jeopardy.” <sup>133</sup>
<b>Jul 11</b>	TurningPoint: “It has been stated on more than one occasion that meeting participants have a lack of understanding of project-wide information, and therefore, some people are surprised at the tasks that still need to be performed. This high-level understanding should not just reside within a few of the [federal marketplace program system] architects and senior managers. It should be shared, and the status should be communicated to all of the stakeholders on a regular basis.” <sup>134</sup>
<b>Jul 16</b>	Mr. Chao: “I just need to feel more confident they are not going to crash the plane at take-off,” referring to lack of confidence in CGI. <sup>135</sup>
<b>Jul 17</b>	TurningPoint: In response to questions from Mr. Chao on cloud computing: <ul style="list-style-type: none"> <li>• Capacity is inadequate: evidenced in hardware server and VM shortages.</li> <li>• Capacity planning is inadequate: no formulas, models, methods; missing inputs.</li> <li>• Disaster Recovery: Insufficient processors, memory and storage to meet 24 x 7 operations of [federal marketplace program system] applications in October.<sup>136</sup></li> </ul>
<b>Jul 20</b>	Mr. Chao email to colleagues, “I wanted to share this with you so you can see and hear that both Marilyn and I under oath stated we are going to make Oct. 1.” <sup>137</sup>
<b>Jul 31</b>	CGI: Federal marketplace 51 percent completed. <sup>138</sup>
<b>Aug 1</b>	Marilyn Tavenner testified: “Over the last three and a half years, CMS and our Federal partners have been hard at work drafting policy, implementing consumer protections, working with stakeholders, and building IT systems that will enable Americans to shop and apply for insurance coverage starting just two months from now...CMS has been conducting systems tests since October 2012 and will complete end-to-end testing before open enrollment begins.” <sup>139</sup>
<b>Aug 5</b>	CGI email: Federal marketplace 52 percent complete. <sup>140</sup>
<b>Aug 6</b>	CGI reported to CMS:

<sup>133</sup> *Id.*, email from Jeffrey Grant, CMS, to Sharon Arnold, CMS, (July 8, 2013).

<sup>134</sup> Exhibit 14, *supra* note 87, at 5.

<sup>135</sup> Exhibit 3, *supra* note 21.

<sup>136</sup> Exhibit 2, *supra* note 20, at 11.

<sup>137</sup> Email from Henry Chao to CGI and CMS officials, 2 (July 20, 2013) (Obtained by H. Comm. on Oversight & Gov. Reform) *available at* <http://oversight.house.gov/wp-content/uploads/2014/01/Chao-and-Tavenner.pdf>.

<sup>138</sup> Exhibit 4, *supra* note 24.

<sup>139</sup> H. Comm. on Energy and Commerce, *PPACA Pulse Check*, 113th Congress (Aug. 1, 2013) (testimony of Marilyn Tavenner, Administrator, CMS), *available at* <http://energycommerce.house.gov/hearing/ppaca-pulse-check>.

<sup>140</sup> Email from Lori Stone (CGI) to CMS officials, “Updated FFM Integrated Schedule,” (Aug. 5, 2013), [CGI100003683] (Exhibit 20).

	<ul style="list-style-type: none"> <li>• open risks: 1 severe, 2 significant, 1 moderate, including: “The timeframes for testing in Dev and Test2 are not adequate to complete full functional, system, and integration testing activities.”</li> <li>• open issues: 4 highest priority, including, “CGI does not have access to necessary tools to manage[environments] in test, imp, and prod....We have repeatedly asked CMS and URS but have not been granted access.”</li> </ul> <p>Also, CGI stated: “Due to the compressed schedule, there is not enough time built in to allow for adequate performance testing.”<sup>141</sup></p>
<b>Aug 7</b>	Brian Cook (CMS spokesman): “We are on schedule and will be ready for the marketplaces to open on October 1.” <sup>142</sup>
<b>Aug 17</b>	CGI: Federal marketplace 55 percent complete. <sup>143</sup>
<b>Aug 23</b>	CGI: Federal marketplace 62 percent complete. <sup>144</sup>
<b>Aug 23</b>	MITRE Corporation conducts security risk assessment of Data Services Hub. <sup>145</sup>
<b>Aug 30</b>	<p>TurningPoint reports, “There are significant deficiencies and weaknesses in all aspects of the development of the Federally-Facilitated [sic] Marketplace (FFM), especially Individual Application, Plan Compare and My Account.”</p> <p>“According to the Agile methodology, defect resolution should decrease from one Sprint to another. In this case it increases.”</p> <ul style="list-style-type: none"> <li>• “Development practices focuses [sic] more on fixing a deployed system rather than building the final system. This doesn’t follow an agile methodology to deliver quality code at the end of each Release.”</li> <li>• “There is no overarching consistent updated schedule or plan that addresses the content, development, and deployment of all planned FMPS services. As a result, it is difficult to determine the final version of the various services in terms of the functionality that will be delivered to the end users.</li> <li>• “The lack of a clear system definition and detailed implementation plan prevents CMS from determining realistic cost estimates for future development, and presents a serious risk to CMS’s ability to develop and deploy the final system.</li> <li>• “Testing continues to be hampered by the lack of clear requirements. That is, the system is developed based on general descriptions of functionality; they are not a by-product of detailed design stemming from well-defined user stories. This makes it difficult for testers to plan and prepare test cases that completely test the implemented functionality.</li> </ul>

<sup>141</sup> Email from CGI to CMS, “FFE12-010 FEPS-FFM Monthly Status Report – August2013,” at Table 6: Open Risks [CGIHR00024875] (Sept. 6, 2013) (Exhibit 21).

<sup>142</sup> Sarah Kliff, *supra* note 64.

<sup>143</sup> Email from CGI to CMS officials, “Updated FFM Integrated Schedule,” (Aug. 17, 2013) [CGI100007942] (Exhibit 22).

<sup>144</sup> Exhibit 5, *supra* note 25.

<sup>145</sup> Letter to Rep. Bennie Thompson from Marilyn Tavenner, CMS, regarding testing of the data services hub (Sept. 10, 2013), *available at* <http://www.chsdemocrats.house.gov/sitedocuments/hhsletter.pdf>.

	<ul style="list-style-type: none"> <li>• “There is no unified calendar for complete visibility to development teams, release managers and operations teams with a consolidated view of all planned activities as well as infrastructure changes.”<sup>146</sup></li> </ul>
<b>Sept 5</b>	Planned White House demonstration. <sup>147</sup>
<b>Sept 6</b>	CMS authorizes Data Services Hub. <sup>148</sup>
<b>Sept 6</b>	A CGI “status report” warns CMS of four “highest” priority items that were all due to be completed before September. Items include, “Not Enough Time in Schedule to Conduct Adequate Performance Testing,” “Hub Services are Intermittently Unavailable,” and “CGI does not have access to necessary tools to manage [environments] in test, imp, and prod.” <sup>149</sup>
<b>Sept 6</b>	TurningPoint found that at this point, of the 355,000 lines of code, 21,000 had defects. Of these, 574 had “critical” defects. This “defect density” changed little since August 19 (from 5.79% in August to 5.81 in September). <sup>150</sup>
<b>Late Sept</b>	“CMS personnel decided not to include ‘anonymous shopper’ functionality in the October 1, 2013 roll-out of the FFM. Based on CGI Federal’s review and analysis of information to date, it appears that Mark Oh, Monique Outerbridge, Henry Chao, and Robert Thurston were involved in that decision.” <sup>151</sup>
<b>Sept 19</b>	Gary Cohen testifies before the House Energy & Commerce Oversight & Investigation Subcommittee that Americans will be able to shop for and apply for health insurance coverage through the exchanges “Beginning twelve days from now, on October 1.” <sup>152</sup>
<b>Sept 20 (approx.)</b>	CISO Teresa Fryer recommends to CIO Tony Trenkle and Henry Chao that the ATO be denied. <sup>153</sup>
<b>Sept 23</b>	CMS briefs COO Michelle Snyder. Recommended issuing the ATO. <sup>154</sup>
<b>Sept 23</b>	Teresa Fryer drafts a memo to CMS, outlining security concerns including: Documentation divulged some known functional limitations and omissions due to the software still being developed. MITRE was unable to confidently test the system is full. Environments were not vetted or tested prior to the onsite testing. <sup>155</sup>
<b>Sept 24</b>	HHS announces that the Federal marketplace would not be able to transfer Medicaid applications on October 1. <sup>156</sup>

<sup>146</sup> Exhibit 8, *supra* note 26, at Release Mgmt. Analysis.

<sup>147</sup> Exhibit 21, *supra* note 141, at 5 [CGIR00024874].

<sup>148</sup> Statement of Andrew Slavitt, *supra* note 129.

<sup>149</sup> Exhibit 21, *supra* note 141, at 7 [CGIHR00024876].

<sup>150</sup> Exhibit 7, *supra* note 32, at Senate Committee Staff Analysis.

<sup>151</sup> Exhibit 18, *supra* note 120, at 8.

<sup>152</sup> Statement of Gary Cohen, *supra* note 66.

<sup>153</sup> Fryer Interview, *supra* note 47.

<sup>154</sup> *Id.*

<sup>155</sup> CMS Memo on Risk Decisions, *supra* note 48.

<sup>156</sup> Louise Radnofsky, “Medicaid Applications Face Delay in Health Exchanges,” THE WALL ST. JOURNAL, (Sept. 24, 2013) available at <http://online.wsj.com/news/articles/SB10001424052702304713704579095201577628732>.

<b>Sept 24</b>	CGI successfully runs a test in which six test cases were able to sign up for insurance. <sup>157</sup>
<b>Sept 26</b>	Akhtar Zaman, within the Office of Information Services at CMS, reported to developers (and Mr. Chao) that multiple tests failed over a three-day-period with 2,000 virtual users. Zaman called the results, “Not good and not consistent at all.” Mr. Chao responded “I DO NOT WANT A REPEAT OF WHAT HAPPENED NEAR THE END OF DECEMBER 2005 WHERE MEDICARE.GOV HAD A MELTDOWN.” <sup>158</sup>
<b>Sept 26</b>	Officials announced that the roll-out of the Spanish-language website and the SHOP exchange would be delayed. <sup>159</sup>
<b>Sept 27</b>	David Nelson, Director of the Office of Enterprise Management at CMS, said the system was failing due to problems including defective code. “The scripts are failing due to issues like load balancing, inefficient and defective code, and inefficient queries. We have not been successful in moving beyond 500 concurrent users filling applications without income verification.” Though they developed a patch to fix the “bottleneck,” they have no way to test it. “The facts are that we have not successfully handled more than 500 concurrent users filling out applications in an environment that is similarly in size to Day 1 production. We cannot proactively find or replicate actual production capacity problems without an appropriately sized operational performance testing environment. And, we have not even started looking for tuning issues in the plan select and enroll parts of the application.” <sup>160</sup>
<b>Sept 27</b>	CMS officials send Administrator Tavenner an ATO memo noting that security testing of HealthCare.gov is only partly complete. CMS establishes a mitigation strategy that includes a dedicated security team, daily monitoring, and a commitment to an end-to-end security test within 90 days of going live. <sup>161</sup>
<b>Sept 29</b>	U.S. Chief Technology Officer Todd Park emails Mr. Chao asking about the protocol if website breached the maximum number of users. <sup>162</sup>
<b>Sept 29</b>	CGI: Outstanding issues include multiple concerns, such as Medicaid residency bugs, missing information on the insurance forms, and retaining attestations. <sup>163</sup>
<b>Sept 30</b>	CMS spokeswoman Julie Bataille: “The Medicare and Medicaid agency owes \$630 million for the work through September.” <sup>164</sup>

<sup>157</sup> CGI, Email between Monica Winthrop and CMS officials, “IMPLIA Status at 12:31AM on 9/24,” (Sept. 24, 2013) (Exhibit 23).

<sup>158</sup> Exhibit 9, *supra* note 43, [QSSI-ECC-0000023064].

<sup>159</sup> Sarah Kliff, “Part of Obamacare’s small-business exchanges to be delayed,” THE WASH. POST, (Sept. 26, 2013), available at <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/09/26/obamacares-federally-run-small-business-exchanges-to-be-delayed-administration-sources-say/>.

<sup>160</sup> Exhibit 9, *supra* note 43, [QSSI-ECC-0000036602 – QSSI-ECC-0000036603].

<sup>161</sup> Tavenner Memo to Kerr, Chao, *supra* note 59.

<sup>162</sup> Exhibit 9, *supra* note 43, [QSSI-ECC-0000066582].

<sup>163</sup> Emails between CGI and CMS officials concerning outstanding issues (Sept. 29, 2013) (Exhibit 24).

	<p>“Testing [of the Learn portion of HealthCare.gov] for the October 1, 2013 release of the Health Insurance Marketplace update project was completed on September 30th, 2013...Integration testing was attempted on [different environments] with limited success. Testers were, at times, unable to complete integration between the Gateway and the Marketplace when using Firefox and [Internet Explorer]. Testers were also unable to verify session timeout so this logic was removed from the Learn site just prior to the site launch.”<sup>165</sup></p> <p>Secretary Sebelius stated:</p> <ul style="list-style-type: none"> <li>• “We’re very excited about tomorrow, shutdown or no shutdown, we’re ready to go...Starting at 8 a.m., visitors to HealthCare.gov, the federal government’s health care website, will be able to navigate how to shop for and buy health insurance as part of the law.”<sup>166</sup></li> <li>• Secretary Sebelius stated, “We’re very excited about tomorrow, shutdown or no shutdown, we’re ready to go.”<sup>167</sup></li> </ul>
<p><b>Leading up to launch</b></p>	<p>TurningPoint identified numerous open findings. Of 412 open findings, CMS was responsible for 136, CGI 88, QSSI 60, Terremark 44, and IDL 43. TurningPoint’s “critical findings” in the run-up to launch:</p> <ul style="list-style-type: none"> <li>• “There are numerous critical and major code violations in the FFM code, impacting the maintainability of the code, and contributing to defects.</li> <li>• Code violation density is unchanged from prior IV&amp;V assessments.</li> <li>• No evidence of analysis being performed to focus resources for defect management.</li> <li>• CGI defect data was missing key data attributes which would have improved the defect analysis.</li> <li>• The IV&amp;V Team was unable to identify a mitigation strategy or contingency plan for open critical defects in the system at Go-Live.</li> <li>• The IV&amp;V Team was unable to ascertain the CMS acceptance thresholds for the numbers of open defects at Go-Live.</li> <li>• There is no indication of quality controls around migration of the builds</li> </ul>

<sup>164</sup> Alex Wayne, “Obamacare Plan Enrollments Exceed 250,000 in November,” BLOOMBERG (Dec. 11, 2013), *available at* <http://www.bloomberg.com/news/2013-12-11/obamacare-plan-enrollments-exceed-250-000-in-november.html>.

<sup>165</sup> CMS, “Health Insurance Marketplace Update, Test Summary Report, Learn/Help Center/Sprints 1.5 & 1.6,” 2 (undated) (prepared by Aquilent) (Exhibit 25).

<sup>166</sup> Kelly Kennedy, “HHS puts final touches on exchange sites before launch,” USATODAY (Sept. 30, 2013).

<sup>167</sup> Shushannah Walshe, “Even With Threat of Shutdown, Health Care Exchanges ‘Ready to Go.’,” ABC NEWS (Sept. 30, 2013), *available at* <http://abcnews.go.com/blogs/politics/2013/09/even-with-threat-of-shutdown-health-care-exchanges-ready-to-go/>.

	<p>between test environments.</p> <ul style="list-style-type: none"> <li>• There is no evidence of separation of duties in promoting code between development, test and production environments.</li> <li>• There is minimal adherence to the CMS Risk Management Plan.<sup>168</sup></li> <li>• It is expected that the highest number of defects should be in system test, but 677 serious defects less than 2 weeks before the October Go-Live is high number [sic]. The 146 serious defects found in UAT should be closed as soon as possible.<sup>169</sup></li> <li>• Minimum acceptable quality criteria doesn't exist for: requirements traceability to design documentation and user story completeness, development completeness, test/defect management, planned vs. actual test execution, change management effectiveness."<sup>170</sup></li> </ul>
<b>Oct 1 - Open enrollment begins</b>	
<b>Oct 1</b>	<p>Website experiences first signs of trouble shortly after midnight when 2,000 users attempted to complete the first step of the enrollment process.</p> <p>QSSI learns that the “window shopping” feature has been turned off, driving unpredicted traffic to the EIDM. CMS had not directed QSSI to add capacity in advance.<sup>171</sup></p>
<b>Oct 8</b>	<p>QSSI reports that the EIDM achieves near 0% error rate after struggling with volumes early in open enrollment.<sup>172</sup></p>

<sup>168</sup> Exhibit 7, *supra* note 32, at Executive Summary..

<sup>169</sup> *Id.* at Value Delivery..

<sup>170</sup> *Id.* at Risk Analysis Worksheet..

<sup>171</sup> Interview with QSSI officials, *supra* note 98.

<sup>172</sup> *Id.*