

The Worst Fiasco Ever: Britain's National Health Service's National Programme for IT (NPfIT)

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Li Chi Ching Jane
Tseng Ya Chi
Sun Zhiqiong

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Part 1: Introduction

Development of information systems, especially healthcare information systems, has increasingly become an IT investment target in public and private organizations. These systems are perceived to provide various benefits, as standardization and centralization of healthcare information among hospitals, clinics and healthcare facilities is expected to increase regional consistency and efficiency. However, several large scale failures suggest difficulty and complexity in implementation of such systems. Britain's National Health Service (NHS) serves as one key case for such healthcare information system failure, which National Programme for IT (NPFIT) has been described as "the biggest IT failure ever seen".

This paper will be divided into four parts. Part 1 will introduce the research topic and scope. Part 2 looks into the literature reviews on main definitions and theories adopted in this paper. A detailed introduction of NPFIT and Britain's continuous efforts of integrating IS projects into its NHS system will be provided in Part 3. Part 4 will be an analysis of the case's failure factors by using the selected frameworks, with recommendations for future similar IS projects.

Part 2: Literature review on IS project failures

2.1 Information System Failures

Despite the important role IS plays and the great efforts paid on developing IS, IS programs have a high failure rate. A number of studies and surveys have been conducted that highlighted problems and failures related to IT projects. The 1995 Chaos Report, the first survey conducted by Standish Group, showed that the success rate of IT projects was only 16.2%, while challenged projects accounted for 52.7% , and impaired (cancelled) for 31.1%. The 1997 KPMG Canada survey, which sent out to 1450 public and private sector organization and analyzed 176 completed questionnaires, found out that over 61% projects failed. The Conference Board Survey conducted in 2001 based on 177 interviews from companies that attempted Enterprise Resource Planning (ERP) implementations found that 40% of the projects failed to achieve their goals and the larger the project the more likely the failure. When it comes to the healthcare sector, this number is even bigger: around 50% of IS

implementation projects fail. Paré and Elam stated: “Research shows that many healthcare institutions have consumed huge amounts of money and frustrated countless people in wasted efforts to implement information systems.” (Paré, 1998). The same message could be found in Dodd and Fortune’s studies too. They pointed out that many electronic patient record initiatives have failed stating that if healthcare information systems (HCIS) try to change too much, it brings a risk of failure and, the more you change, the greater this risk is (Dodd & Fortune, 1995). Healthcare industry’s high failure is also partly due to the industry complexity. Avison and Young pointed out that healthcare industry is fundamentally different to other industries regardless of whether they belong to the public or private sector (Avison & Young, 2007). The complexity of this industry, according to Weeks and Wadsworth, stems from a number of facets including; 1) the healthcare industry caters to a broad and diverse customer base; 2) given this diversity and the nature of healthcare each customer is unique and at times unpredictable; 3) due to the uniqueness of each patient, treatments differ considerably, and an incorrect treatment can lead to a detrimental outcomes (2013).

2.1.1 Definition of IS Failure

The famous project management triangle, also called triple constraint or the iron triangle, has defined IS success as on Time, on Budget, and on Scope (features and quality). The Standish Group did not only publish failure and success rates, it also pointed to indicators for success and failure. Its first report identified three attributes which account for IS success: on time, on budget and on target, and divided projects into three distinct outcomes--three resolution types.

- “Project success”: completed on-time and on-budget, with all features and functions as initially specified.
- “Project challenged”: completed and operational but over-budget, over the time estimate, and offers fewer features and functions than originally specified.
- “Project impaired”: cancelled at some point during the development cycle.

Later the Standish Group redefined project success with six attributes, which are on time, on budget, on target (% requirements) and satisfied (very high to very low), value (very high to very low) and on strategic corporate goal (precise to distant). Figure 6 shows the summary of projects outcomes

from 2011 to 2015 using the new definition of success factors.

MODERN RESOLUTION FOR ALL PROJECTS					
	2011	2012	2013	2014	2015
SUCCESSFUL	29%	27%	31%	28%	29%
CHALLENGED	49%	56%	50%	55%	52%
FAILED	22%	17%	19%	17%	19%

The Modern Resolution (OnTime, OnBudget, with a satisfactory result) of all software projects from FY2011–2015 within the new CHAOS database. Please note that for the rest of this report CHAOS Resolution will refer to the Modern Resolution definition not the Traditional Resolution definition.

Figure 1: Modern Resolution for all software projects from 2011 to 2015 within the new CHAOS database

There are other definitions of failure and success, but most project failures causes, as Hamed Taherdoost mentioned in one of his paper (Taherdoost & Keshavarzsaleh, 2015), are those failed to meet the approved schedule, time and expected scope.

Thus in this paper, the commonly used definition of failure which is a project failed to meet time, budget and target expectations, is adopted as the criteria to analyze the NHS case.

2.1.2 IS Failure Factors: K.T.Yeo’s integrative triple-S system

After defining success and failure, the next job is to find out the significant differentiators that lead to successful or failed projects. According to the 1995 Standish CHAOS Report, the top five factors contributed to success are: user involvement, executive management support, clear statement of requirements, proper planning and realistic expectations, and the top 5 factors that lead to failure are: incomplete requirements, lack of user involvement, lack of resources, unrealistic expectations and lack of executive support. The 1997 KPMG Canada Survey identified that the main causes of project failure were poor project planning, weak business case and lack of top management involvement and support. The 1998 Bull Survey revealed the major factors that caused failure were breakdown in communications, lack of planning and poor quality control.

Mentioned in the previous part, the complexity of healthcare is one of the reasons that this

industry has a high IS failure rate. Beside that, politics has been seen as another trigger of failure in government-run healthcare IS projects. And according to McManus and Harper-Wood, in healthcare industry 65% of these failures are attributed to management issues, encompassing lack of top management support, poor project management and inefficient communication between all stakeholder groups. The remaining 35% of failures are attributed to technical issues, which includes poor system testing, and a lack of defined business requirements (2007).

Instead of simply having a checklist of failure factors, this paper will adopt a more integrative framework introduced by K.T.Yeo to analyze critical factors that may cause an information system to fail (Yeo, 2002). The triple-S framework shown below is suited for the strategic planning and change management for IS implementation, but here it served as a tool for analyzing possible factors that may lead to project failure. The three spheres of the framework lead to different aspects of analyzing an IS project. Process-driven issues are related to project management, content-driven sphere includes technological and business issues involved in a project while the context-driven issues discuss leaderships, cultures and politics. The three spheres of influence (SOI) are further operationalized into 10 main issues of influence (IOI). Based on the researches we have done on failure causes of an IS project and those especially related to the healthcare sector, our group consider the triple-S theory that looks into a project from the aforementioned three aspects to be the best analytical framework in this case.

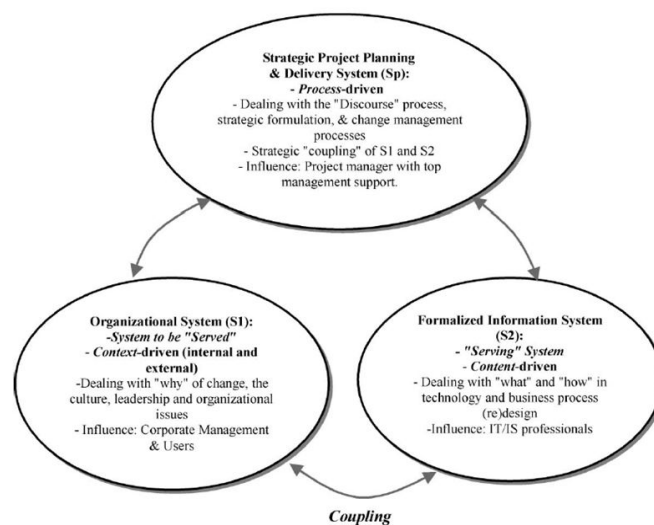


Figure 2: The Triple-S for IS planning

Defining 'Issues of influence' under the three 'Spheres of influence'

Sp Process driven issues	S1 Context driven issues	S2 Content driven issues	
<i>Related to</i> (1) Business planning (2) Project planning (3) Project management and control	<i>Related to</i> (4) Corporate culture (5) Corporate management (6) Users (7) Politics	<i>Related to</i> (8) Information technology (9) Business process and system design (10) IT/IS professional and knowledge sources	
Top 5 failure factors under Sp, S1 and S2			
Rank	Sp Process driven issues	S1 Context driven issues	S2 Content driven issues
1	Underestimate of timeline	Lack user involvement and inputs from the onset	Consultant/vendor underestimated the project scope and complexity
2	Weak definitions of requirements and scope	Top down management style	Incomplete specifications when project started
3	Inadequate project risk analysis	Poor internal communication	Inappropriate choice of software
4	Incorrect assumptions regarding risk analysis	Absence of an influential champion and change agent	Changes in design specifications late the project
5	Ambiguous business needs and unclear vision	Reactive and not pro-active in dealing with problems	Involve high degree of customisation in application

Figure 3: "IOI" and major failure factors under Sp, S1 and S2

Therefore, the two frameworks that we are adopting in the analysis on Britain's National Programme for IT (NPfIT) are the followings:

- The common definition on IS success and failure: On time, on budget, and on target
- K.T.Yeo's triple-S framework

Part 3: Case Description

The National Programme for IT (NPfIT) is not the first IT failure inside the National Health Service (NHS) system. The British government had tried continuously to integrate various IT components into its healthcare system since the 1960s. Before introducing NPfIT, this paper will give an overview of former NHS IT projects in which most failed.

3.1 Historical Programs in the NHS-- Their Common Failure

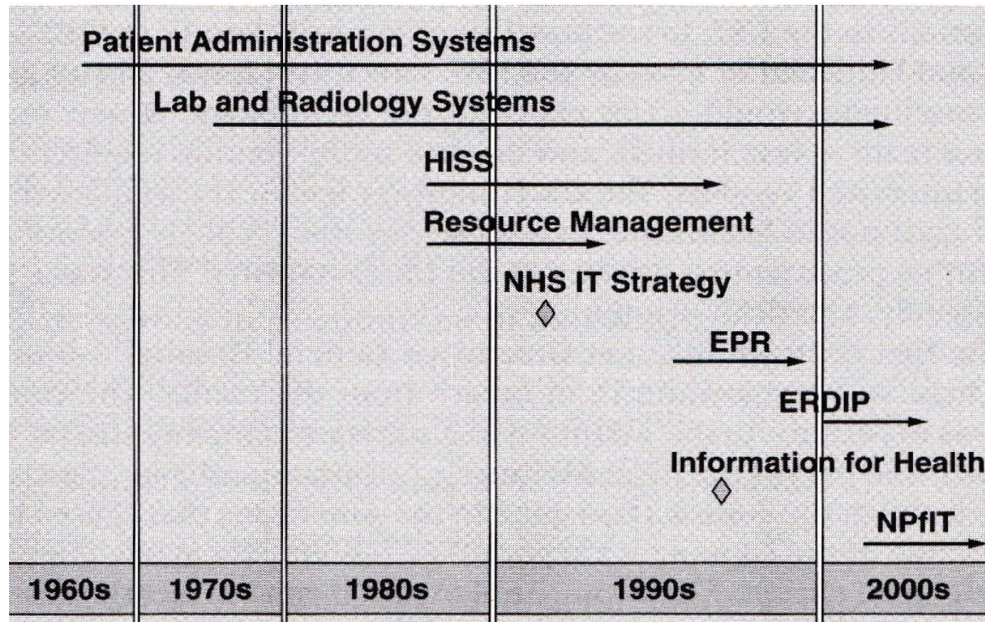


Figure 4: timeline of major NHS IT projects, 1960s-2000s (taken from Brennan, 2005, p.49, Figure 6.1)

The history of IT in the NHS is compound with a few remarkable successes intermixed with many failures. At the time of NPfIT's launch, an estimated 60 to 80% of all healthcare IT projects ended in failure (Brown, 2001).

During 1970s to 1980s, a number of individual NHS Trusts and hospitals have set up their own information systems. One of the key attempts is Wessex Regional Health Authority's (WRHA) Regional Information Systems Plan (RISP) in 1984. RISP was launched to develop an integrated, region-wide information system covering the areas of hospital information, personnel, estates, community care and accountancy (Brown, 2001). However, the project was eventually abandoned in 1990, due to poor management, missed budgetary controls and failure in delivering targets. The key lesson from this case was that the large, centralized IT schemes imposed on semi-autonomous NHS sites rarely work.

Another failure is the Hospital Information Support System (HISS), which was launched by the NHS Executive in 1988 (Brennan, 2005). The aim of HISS project was to collect, process and retrieve patient care and administrative information through using the network of computers. HISS

computerized the ordering of clinical tests and hospital-wide EPR systems. Yet, the HISS project suffered from severe delays and had achieved cash savings of only £3.3 million compared with the expected £10.4 million. Brennan (2005) blames this failure as ‘absurd diversification’ since the failure of this system was caused by too many companies trying to service too few hospitals.

Although the majority of historic IS attempts under NHS have ended in failure, there were systems or components which had been successful. Some of these include the EPR program under the 1992 IM&T strategy that was run in two hospitals for four years from 1994 to 1997 that enjoyed huge user buy-in at the local hospitals, and the Electronic Record Development and Implementation Programme (ERDIP), also under the 1992 strategy, which was designed to suit local needs and received broad user satisfaction. The 1992 IM&T was overall regarded as a missed opportunity that could have been successful if only it had a better business case and more specific targets.

3.2 Introducing the NPfIT

3.2.1 Initiation

The Programme was launched under then Prime Minister Tony Blair’s leadership in the Downing Street seminar on 18 February, 2001, which lasted for just 90 minutes. The PM was said to be present for only half of the time and no minutes were kept during the seminar. Shortly after, on 12 June 2002, Lord Hunt, the Parliamentary Under-Secretary of State for Health announced the proposed major IT reform to the NHS. At the same time, the Department of Health published the “Delivering 21st Century IT support for the NHS--National Strategic Programme” (NSP Plan). The NSP Plan was the forerunner of NPfIT. The aims of NSP Plan was to connect delivery of the NHS Plan with the capabilities of modern information technologies (DH, 2002).

On 18 February 2002, a more centralized healthcare IT strategy had been taken at the Downing Street seminar. NPfIT Program aims to use modern information system to strengthen NHS-delivered services, and improved the quality of patient care through these key elements:

- Electronic appointment booking (DH, 2016)
- An integrated electronic NHS National Care Record Service
- An electronic prescription system, which can support IT infrastructure with sufficient

capacity to support the critical national applications and local systems (DH, 2007).

NPfIT was a large-scale government project, and was designed to coordinate an enormous amount of data each day: 3 million critical processes and 30 million transactions. While in each week, the program would have to coordinate the followings (Sessions, 2008):

- six million patient visits to GPs
- more than 64,500 emergency calls by ambulances
- 360,000 patient x-rays
- 13.7 million prescriptions

With the initial £6.2 billion budget, the regional clinical information systems accounted for around 79%, followed by the infrastructure systems which took up around 18% of the budget (Sessions, 2008). Infrastructure was designed to bring security, and connectivity services to the project. Some infrastructure systems include New National Network (N3), which would bring network facilities, while the Spine would provide shared software facilities, for example directory services. Care Records Service (CRS) would coordinate shared patient records.

3.2.2 Strategic Aims of the Project

The core aim of the project is to make sure the information system can be used to help patients receive the best care possible. This will allow patient information to be given to NHS professionals to improve the public's health through providing the best care.

According to NHS Executives 1998, the strategic aims were identified as the followings (see Figure 5):

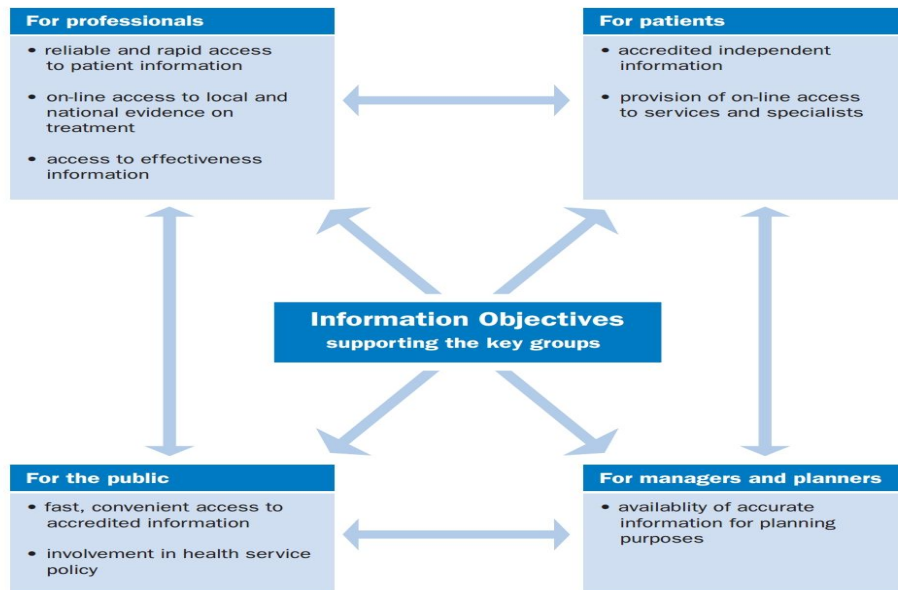


Figure 5: Information Objectives (taken from NHS Executive, 1998, p.19, Figure 2).

- To make sure NHS professionals deliver a rapid and reliable access, 24 hours a day, with the relevant personal information necessary to support patients care;
- To provide NHS professionals with online access to the latest guidance on treatment, and an evaluation system of the effectiveness of their work to support their professional development;
- Through providing online access of services, remove unnecessary travel and delay for patients; and
- To support public involvement in and understanding of local and national healthcare service policy development by providing fast, convenient access to the public to accredited advice on lifestyle, health and information.

3.2.3 Process

3.2.3.1 The Change of Leadership

In September 2002, Richard Granger was appointed to be the Director General of NHS IT, responsible for driving both the procurement and implementation of NPfIT. Richard Granger had previously managed several public sector IT projects, including the London congestion charge scheme. Granger shifted the procurement approach away from local implementation to one that emphasized

national standards.

Less than a year after the launch of the program, Lord Hunt, the Parliamentary Under-Secretary of State for Health resigned. The Senior Responsible Owner (SRO) for NPfIT and Chair of the National Programme Board (NPB), Sir John Pattison also quitted the program in December 2003. The replacement of John Pattison would not be complete until March 2004. At that time, Dr. Aidan Halligan, Deputy Chief Medical Officer, was made joint SRO with Richard Granger. The Department Group Director John Bacon was appointed to be the new Chair of the NPB. Before resigning in September 2004, Dr. Halligan stayed in this project as SRO for only six months. After six months, Alan Burns replaced Dr. Halligan's role. In March 2005, Alan Burns was replaced by Richard Jeavons.

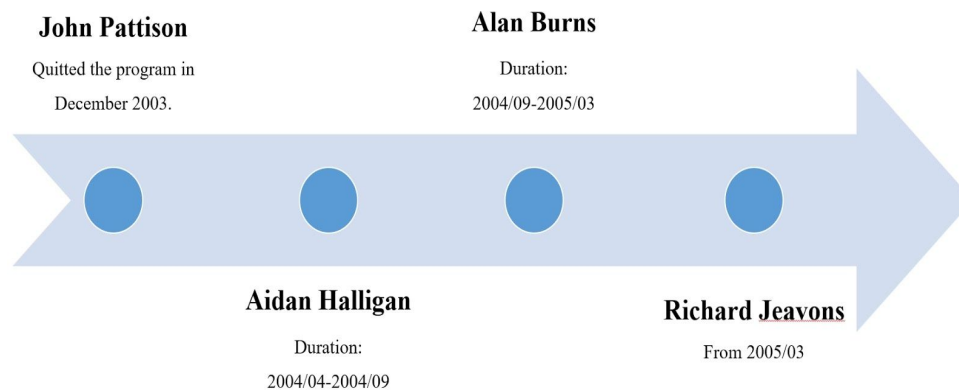


Figure 6: The Constant Change of Senior Responsible Owner (SRO)

Although the NPfIT timeline was difficult to be achieved in reality, under Richard Granger's leadership the procurement process was completed with remarkable speed for a vast, complex public sector program. However, problems began to arise due to the constant rotation of senior management in the NPfIT project.

3.2.3.2 Procurement Process

The NPfIT Programme is made up of a combination of Local Service Providers (prime suppliers) and subcontractors responsible for delivering the services in their respective part of the country. BT, Accenture, Fujitsu and CSC are the four principal suppliers supported by other subcontractors which are shown below:

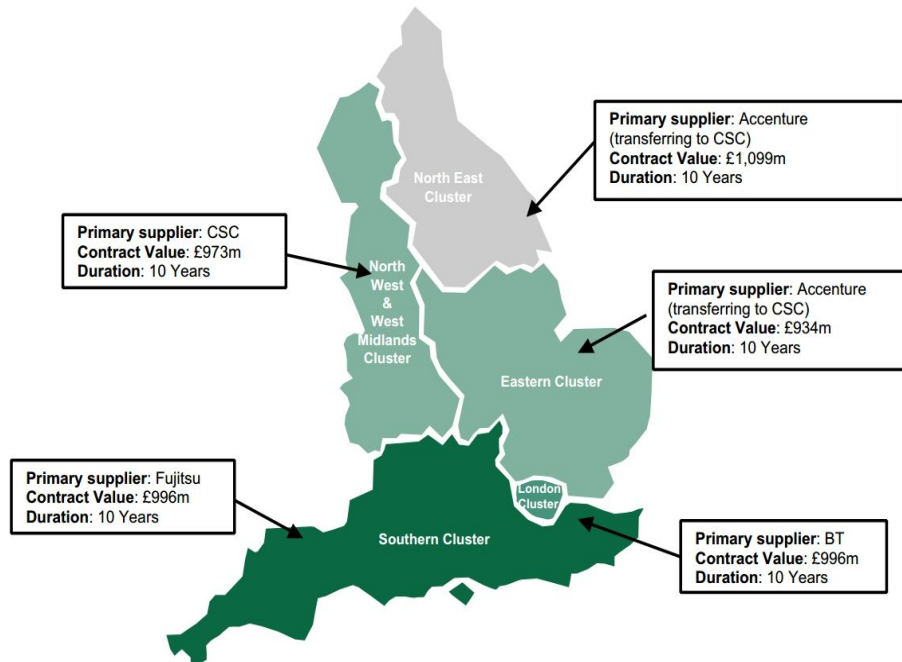


Figure 7: The five regional clusters and their local service providers (Shackman, 2007).

The NPfIT Programme's scale, vision and complexity is wider and more extensive than any ongoing healthcare IT development project in the world. Although other countries are seeking to use the elements of the services within the National Program such as electronic patient records (EPR), these are not being introduced on a country-wide basis.

The Service Providers, as prime contractors, have to decide how to best deliver the service specified by NHS Connecting for Health (NHS CFH) which is part of the Department of Health Informatics Directorate, and integrate software and other products from a range of sources to provide principal services (see Figure 8).

Service	Scope	What it does	Contractor	Date Agreed	Value (£m)
New National Network for the NHS (N3)	National	Fast and reliable network to enable communication within and between NHS organisations. The foundation of the rest of the NPfIT project.	British Telecom	Feb 2004	530
National Data Spine	National	Database which holds patient demographic information, national electronic patient record (Summary Care Record) and enables communication between national and local NPfIT systems.	British Telecom	Dec 2003	620
Choose and Book	National	Links GP and hospital systems to allow electronic booking of appointments.	Atos Origin	Oct 2003	64.5
NHSmail	National	NHS-wide e-mail service.	Cable & Wireless	July 2004	50-90
Local Service Provider - North East	Regional	Provision of NHS Care Records Service, new Patient Administration Systems and prescribing (ETP) systems across the region.	Computer Sciences Corporation (Accenture until Sep 2006)	Dec 2003	1,100
Local Service Provider - London	Regional	Provision of NHS Care Records Service, new Patient Administration Systems and prescribing (ETP) systems across the region.	British Telecom	Dec 2003	996
Local Service Provider - Eastern and East Midlands	Regional	Provision of NHS Care Records Service, new Patient Administration Systems and prescribing (ETP) systems across the region.	Computer Sciences Corporation (Accenture until Sep 2006)	Dec 2003	934
Local Service Provider - North West and West Midlands	Regional	Provision of NHS Care Records Service, new Patient Administration Systems and prescribing (ETP) systems across the region.	Computer Sciences Corporation	Dec 2003	973
Local Service Provider - South	Regional	Provision of NHS Care Records Service, new Patient Administration Systems and prescribing (ETP) systems across the region.	Fujitsu	Jan 2004	996

Figure 8: Principal services (Shackman, 2007).

The four main NPfIT contracts cover services to be provided nationally across the whole NHS such like the N3 network, National Data Spine, Choose and Book, and NHSmail. In order to provide services, NHS was divided into five geographical clusters. For each cluster, a different Local Service Provider (LSP) was contracted to be responsible for delivering wide range of services at a local level.

3.2.3.3 Overall Dismantled in September, 2011

The NPfIT project was launched in 2002 but suffered from technical challenges, change of specifications, and disputes with suppliers which led to this project being behind schedule and over budget. Ministers officially announced that they will dismantle the National Programme in 2011 but in order to rescue something from the failure, part of the components will be retained with separate management and accountability structures (Rajeev, 2013). The New National Network (N3) can connect all NHS organizations to support national applications such like Choose and Book and Electronic Prescription Service (EPS). The EPS gave a safer and more convenient way to make prescription. Besides, the real time referral system for GPs--Choose and Book has been successful and

NHSmail is fully operational, providing a secure and centralized service now (Rhys, 2011).

The House of Common's Public Accounts Committee (PAC) has revealed that the failed NPfIT project is likely to cost taxpayers more than £9.8 billion, and called it one of the worst contracting fiascoes in public sector history (Max, 2013). Although the NPfIT Programme was dismantled officially, the National Programme continues in the form of separate component programmes which are still racking up big costs.

Part 4: Case Analysis: Why it Failed?

4.1 Was it on time, on budget, and on target?

This project is an overall failure, being unable to be delivered on time, budget, and with the expected goals.

4.1.1 Failure to be delivered on time

Then PM Tony Blair requested NPfIT to be delivered in two years. Initiated in 2001, it was expected to complete by 2003. However, the delivery was postponed to almost ten years before an eventual "urgent" dismantlement in 2011. Accompanying such a massive degree of delay is the almost inevitable heavy overspend of expenses, leading us to the next point.

4.1.2 Budget overruns

The program has also failed to achieve its cost objectives. Originally budgeted at around £6.2 billion, which would cover the total life cycle cost of major contracts, the government found itself already having spent £5.1 billion by 2009, which according to Richard Bacon on the Public Accounts Committee, has been spent on "so little" (Collins, 2009). By the time it was dismantled, the budget creep has reached £12.7 billion. On top of that, contract transition and exit costs continued to accrue up to 2015, although no exact figure has been reported.

4.1.3 Failure to achieve project goals

With the dismantlement of the program, and the failure of installing the EPR, we can conclude that project goals have not been achieved, and related parties have not benefited by NPfIT.

4.2 Reasons for Failure -- Yeo's Triple-S Framework

Being an IS project as complex and massive as the NPfIT is, a large number of factors, interacted in a highly convoluted way to contribute to the overall failure. Here, we try to identify and single out some of the key reasons that carry the heaviest weight, with the help of Yeo's Triple-S framework.

4.2.1 SP - Process driven issues

4.2.1.1 Project planning: an unrealistic timetable

NPfIT is a highly complex and large-scope IS project that contains various technological systems, including the EPR, online booking services, computerized prescription systems, etc. 3 million critical processes and 30 million transactions per day were estimated to be coordinated by the NPfIT (Sessions, 2008). Yet this project was given a two-year-and-nine-months time constraint. Being an unrealistic timetable, together with insufficient preliminary work, the NPfIT was simply difficult to succeed.

4.2.1.2 Poor project outline: lack of clear business case

Along with the haste of pushing forward NPfIT, this project appears to carry the same and important weakness of historic NHS programs--a lack of clear business case. It has been criticized in a review of NPfIT that the project has occurred in the absence of published or measurable business case (Digital Health, 2007). Throughout the almost ten-year project, there was a lack of consensus on, or a constantly changing aim of the IS project. This created confusion among various stakeholders about the specific objectives, targets, and evaluation of such a program. Major Projects Authority (MPA) noticed that no documented business case existed for NPfIT, and the consequence of a lack of full stakeholder

understanding on project goal is that failure is highly likely (Major Projects Authority, 2011).

4.2.2 S1 - Context driven issues

4.2.2.1 Top-down approach: “One size fits all”

The top-down approach from the national level onto local hospitals is one key reason that led NPfIT into failure. Simply from initiator PM Tony Blair’s determination to complete the project in two years after a 90-minute seminar, the hint of a lack of space for discussion, together with a tint of haste and rash, was apparent. John Pattinson, Director of Department of Health, reported that he accepted a two-year delivery timetable while swallowing hard (Digital Health, 2008).

Another aspect of the top-down approach is that NPfIT sought to end the local ownership of ERP systems in hospitals where hospitals all use different datasets and operate differently all over the UK, by imposing a centralized, nationwide system. This approach, however, did not fit with the needs of end users, i.e. healthcare professionals and patients. Little attention was paid to the preferences of medical staff in local hospitals. According to the Health Committee (2007), the disregard was obvious through a lack of communication and consultation with end users. It was an IT program that “...wasted taxpayer’s money by imposing a top-down IT system... which didn’t fit their needs” (Mathieson, 2011). A lack of user involvement resulted in user resistance, as evidenced in the under-utilization of the Choose and Book system: despite being deployed to more than 7,000 locations by mid-2006, the system accounted for only a small 20 percent of general practitioner referrals (Campion-Awwad et al., 2014).

4.2.2.2 Politicization of NPfIT

Politics is also a big factor in directing this program onto a wrong path. As mentioned, this project was initiated by the PM, and throughout the NPfIT implementation process, it was clear that political interests constituted a large driving force. According to Heeks et al. (1999), large and ambitious healthcare IS have become targets of politicians and policymakers because of their high-risk, high-reward nature. Thus, often times these large, nationwide IS projects do not have their departure from the fundamental need of such an installation, but the potential benefits politicians could gain when

these IS succeed.

Notwithstanding politicization, if an IS project is able to bring benefits to end-users, politicization may not necessarily equal to bad IS practice. However, the rarity of such successes lies in that many politicians and ministers are inexperienced in IS's creation, challenges, and complexity. In this case, we can assume that PM Tony Blair was not an expert in IT. Yet, the inability for subordinates or project personnels to deliver opinions up the hierarchy, and the top-down enforcement that put political aims before end-user preferences, make politicized IS programs highly subject to failure.

4.2.2.3 Constant change in senior leadership

Constant change of senior leadership in the process made the coordination within the project all the more complicated. The Parliamentary Under-Secretary of State for Health, Lord Hunt, resigned from his role less than a year after the launch of the program. The position for Senior Responsible Owner (SRO) has changed several times throughout the project as seen in figure 6. This constant change of key leadership positions negatively affected NPfIT through a loss of knowledge, unclear accountability and diffusion of responsibility.

4.2.2.4 Poor relationship with LSPs and subcontractors

There was obvious complexity and difficulties experienced in maintaining communications with various local service providers (LSPs) and subcontractors. There appears to be a rather top-down relationship between NHS and the vendors, with NHS emphasizing that suppliers who fail to deliver on schedule, or who exit from the project would face penalties that could make up to 50 percent of total contract value (Campion-Awwad et al., 2014). Unfortunately, as the project unfolded, a number of suppliers or subcontractors were unable to complete the tasks NHS required. The first contract termination occurred in 2004 with EDS, because “the service... was not sufficiently reliable” (House of Commons Committee of Public Accounts, 2007). A few penalties were also issued to LSPs as a consequence of missed deadlines. iSoft, a main LSP, was troubled with permanent internal problems characterized by severe accounting malpractice. (House of Commons Committee of Public Accounts, 2007).

Apart from the above forced exits from the program, there were also voluntary exits, with some

suppliers rushing to get out of the deal. Accenture and Fujitsu, two of the four LSPs, decided to leave the program despite heavy penalties. Accenture could have been asked to pay up to £1 billion for its exit--the vast amount Accenture was willing to bear suggested serious problems in the project. Accenture made an official exit in 2006 by paying CSC a large amount to take over and Fujitsu followed suit soon after.

Thus, problems existed both between NHS and LSPs, and among LSPs and software subcontractors. Punitive relationships created poor interaction between the government and LSPs, and the pressure LSPs received from the government diffused downward to subcontractors, resulting in termination of several contracts. With such an unstable supply of services, it was hard to imagine how the project could be smoothly implemented.

4.2.3 S2 - Content driven issues

4.2.3.1 Confidentiality issues

Confidentiality of patient information has always been an unsolved fundamental concern for a centralized electronic patient record since the idea first came out in the early 1990s, since an EPR allows authority to collect and regulate the use of personal health data of all citizens. While it is inevitable that the need to protect patient privacy will come into clash with the benefits of a centralized and shared clinical information, it appears there has been a constant desire from the government to avoid addressing and resolving the problem. While the issue of confidentiality makes a genuine concern among the public, little government attention was focused on this ever since historic attempts in the 1990s. According to a 2007 House of Commons report, the EPR lacked clarity on how patient information would be protected, and there was “...little clarity about the main purpose of sharing their information” (Digital Health Age, 2016).

Public concerns about a centralized EPR system has grown rapidly after the UK government admitted that 25 million individuals’ personal records that included dates of birth, addresses, bank accounts, and national insurance numbers had been lost in November 2007. The fear has extended to the development of an EPR in the country that could lead to potential misuse of private healthcare information. In the same year, 50% of patients opposed the centralized EPR that gave them no right to

opt out (Medix UK plc, 2007). From the same poll, 76% of GPs agreed NPfIT will bring harm to confidentiality, and 50% said they will not upload patient details without specific consent. Some practitioners had even engaged in a campaign, initiated by practice manager Helen Wikinson, to provide opt-out leaflets for patients that can be downloaded from websites or picked up in waiting rooms (Anderson, 2008).

Thus, the serious concerns expressed from both the public and doctors, and a contradictory disinterest from the government on the issue of confidentiality, is another failure factor that created clashes between the government and its citizens.

SP - Process driven issues	An unrealistic timetable
	Lack of clear business case
S1 - Context driven issues	Top-down approach: “One size fits all”
	Politicization
	Constant change in senior leadership
	Poor relationship with LSPs and subcontractors
S2 - Content driven issues	Confidentiality issues

Table 1. Summary table of factors of failure using Yeo’s Triple-S framework

Part 5: Conclusion

In this paper, we have examined the failure of Britain’s National Health Service’s National Programme for IT. We started by looking into literature reviews, followed by a description of NPfIT throughout its almost ten-year lifespan, then analysed the key reasons for failure, and ended with a few recommendations that future projects should take into account.

The key causes for NPfIT’s failure are:

- An unrealistic timetable
- A lack of clear business case

- Constant change in senior leadership
- Poor relationships with LSPs and subcontractors
- Top down approach: “one size fits all”
- Politicization
- Confidentiality issues
- A centralist approach

While this is not the first electronization attempt that the NHS has undergone, it is unlikely to be the last. For future similar large-scale, nationwide information systems to be successfully implemented in the healthcare industry, it appears that there are various lessons that the government would be able to and should learn from this massive failure. Some of the recommendations for future implementations are as follows:

- A longer time frame should be allowed for a project of this degree of immensity
- Local components and user preferences should be incorporated into the system, given the semi-autonomous nature of the industry
- Develop a clear business case and make it across to all personnels involved in the implementation of the project
- Keep detail documentation as to mitigate the loss of knowledge in case of leadership changes
- Prudent choice in selecting suppliers, or a reduction in the number of suppliers and subcontractors could make project more manageable
- Increase end users involvement (hospital staff, doctors, patients), and allow communication and discussion
- To address confidentiality, use the minimum amount of patient-identifiable information necessary, and restrict access to these information by means of authorization

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