Avoiding Project Failure and Achieving Project Success in NHS IT System Projects in the United Kingdom

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ABSTRACT

Although project success varies from business to business depending on different internally agreed success criteria, most organisations measure project success by analysing if the project delivered the planned project objectives within the set budget, schedule (project timelines), and quality. However, for some projects especially, development projects success goes beyond just meeting time frames and budget goals. In such projects and programmes, success refers to delivering the benefits coupled with the required expectations by stakeholders, beneficiaries, and funding bodies. This paper re-examines why the National Programme for IT (NPfIT), the largest public-sector IT programme that was ever undertaken in the UK, failed and how any future NHS National IT System implementations can be completed successfully.

INTRODUCTION

The UK National Health Service (NHS) suffered one of the most damaging IT project failures which has resulted in continuous and ongoing catastrophic financial implications for the NHS and the taxpayer (Chowdhury, 2019). However, irrespective of how large and complex the NHS systems are, and that they all operate independently, NHS England is accountable to the UK Government. This also means that Trusts nationally are accountable to NHS England who governs them in regard to their funding and function (Dhir et al., 2019).

The NHS organisational structure is influenced by government policies and practices. The NHS is a very complex entity with cultures driven at local level and this makes it difficult to implement anything, as all key decisions are made by the Parliament.

The entire bodies within the NHS from top level down have a social responsibility over the impacts their activities and decisions have on all areas of the environment, the staff, community and society (Schaefer, 2008). Irrespective of the political party in power, the UK government is officially committed to the sustainable development agreement signed in the UN conference in Rio-1992. Relevant legislation is clearly detailed in the Climate Change Act 2008 and the Public Services (Social

Value) Act 2012. These legislations highlight how the government should support NHS Trusts in regard to their socio-environmental responsibility. All Trusts understand social responsibility (SR) with the aim of having a positive impact on society by delivering a good service (Dhir et al., (2019). Trusts are supporting employees, communities and environment while doing good business and this drives SR to the core of NHS mandate. The main challenges that the NHS encounters nationally is the implementation of SR due to the complex organisational structures that are varied with often restricted and controlled resources. The paper is organised as followed: Next section briefly outlines the key contributions and the research approach used in this paper. Then, a brief background of the NHS NPfIT is provided. This is followed by a discussion on the reasons for the failure of this programme. A generalised analysis is then followed to discuss project failure, followed by a tailored analysis on the NPfIT failure.

KEY CONTRIBUTIONS AND THE RESEARCH METHODOLOGY

This piece of research utilises practice-based and academic literature relating to success and failure factors in projects, with the aim to address failure risk factors and have higher success probabilities in IT projects within organisations, especially in the healthcare context.

The four key published papers that will be extensively used to ensure the research question is answered will be:

- Shared Understanding Within Large Information Systems Projects (Lawson, 2016);
- The Critical Success Factors (CSFs) for IT Projects (Gheni et al, 2017);
- Critical Success Factors for The Implementation of Integrated Healthcare Information Systems Projects: An Organizational Fit Perspective (Hung et al., 2014); and
- Factors associated with success in the implementation of information management and technology in the NHS (Bowns et al, 1999).

The literature review starts by clearly examining the survey data available in regards to project success rates. This is then followed by explaining what could have been done to enhance NPfIT success in regards the identified eight contributing failure factors. Following an exploratory and descriptive research design, it has been attempted identify how the NHS can avoid future Information Technology project failures and achieve success. A critical review and analysis of the already existing studies from reliable and experienced authors was used to identify current IT project failures and the key critical factors required for success to be achieved (Dhir et al., 2019). Moreover, a focus has been placed on the cultural aspect of NHS to clearly outline and address the processes and activities (Baghizadeh et al., 2020).

NHS NATIONAL PROGRAMME FOR IT

On 18 February 2002, a more centralised IM&T strategy in the NHS vision was established. The Programme became known as NPfIT in the NHS. It was launched in 2002, with an initial budget of about £6.2 billion. The programme sounded extremely magnificent and arduous and ended up being the costliest IT project initiated by the government for the NHS (Bacon & Hope, 2013).

In craving for a centralised system this made the NHS NPfIT standout as the Programme had a large government funding injection and endorsement (Baghizadeh et al., 2020). The NHS would have been the shining beckon in Europe if the implementation had succeeded in view most countries like Sweden and Germany enjoined with local providers to facilitate messaging to support information communication for patients (Kuziemsky & Knight, 2013). The aim of the NPfIT was to bring the

NHS into the twenty-first century in its IT and revolutionise the way information is used nationally within the NHS (Baghizadeh et al., 2020).

The assumption by senior level was that this would greatly improve the quality of patient care. However, most NHS Trusts healthcare system users and Trust board executives had a different view to this vision. Any good governance demands consultations, and this would have benefitted the NPfIT. Local Trust Boards were not willing to invest purely on IT in view of their past experiences of failed NHS IT projects (Justinia, 2017; Brennan, 2001b & 2001c). Trusts professions outlined concerns about all the prognosticated difficulties in the requirements of changing working practices and cultures over short timeframes. A one size fit all implementation approach and system within the NHS entity was not ideal (Dhir et al., 2019). The NPfIT leadership disregarded all concerns raised and did not remodel the techniques accordingly or involve Trusts in decision making as highlighted by Brennan, 2002a. The decision makers declined to learn from past IT Projects which had failed (Brennan, 2001a) and proceeded to enforce a drastic and forsaken change upon NHS Trusts nationally (Computerweekly.com, 2007).

In September 2002 a new Programme Director was appointed to drive and lead the implementation of NPfIT. He had no NHS experience but had experience in other successful public-sector IT projects including the successful London congestion charge scheme (Collins, 2014). The comparison of a very simple organisation success to envisioning the new programme director would succeed in a complex organisation structure like NHS was not seriously looked at before appointment (Dhir et al., 2019). The new director was identified as the individual who shifted the procurement approach from local implementation with national standards (Baghizadeh et al., 2020). Local procurement had been working for Trusts as they all worked differently. He contributed to problems with teams and suppliers as he had a culture of intolerance within the department with unrealistic timelines and causing disputes with the Suppliers (Collins, 2014).

In less than a year of NPfIT being launched, a key individual in the programme resigned. This was then followed by other key visionaries and individuals of the programme resigning including the Senior Responsible Owner of NPfIT and the chair of the National Programme Board. This led to a constant rotation of leadership and senior management for the programme. This impacted the entire programme as corporate knowledge and leadership was lost through the dispersal of accountability and responsibility for NPfIT. The new programme director was the only person who remained in view of all the turnover of key individuals (Baghizadeh et al., 2020). In 2005 the organisation had de-merges of entities and this started to flag that the new programme director had been the wrong appointment to lead NPfIT. The serious concerns regarding NPfIT had previously not been exposed or witnessed because senior management officials had kept it all under control and under the carpet as they all worked under one entity at that point (King & Crewe, 2013).

In view that NPfIT was a big public-sector programme with many complexities, the accelerated speed in which procurement was achieved showed that the new programme director was a very forceful leader who did not have strong background on the procurement frameworks and the NHS (Brennan, 2005, p.193). In all planning, policymaking, procurement, implementation processes, strategies and methodologies for NPfIT the key stakeholders were not consulted.

A centralised model was embedded in all planning and implementation which did not consider what project methodologies and processes were being used at local level by Trusts already. There was no clear direction on how NPfIT would be implemented with clear remedies for any risks identified. Trusts had not been consulted to identify all risks NPfIT would encounter so that remedies were planned for to help reduce risk impact on project deliverables at local levels nationally. The planning lacked project management and exit strategies and this resulted in inevitable national system-wide failures.

All procurement was controlled from the top and the approach taken ended up excluding all smaller companies which already had on going relationships and serviced Trusts at local level. There was no open competitive bidding for NPfIT, and there was no clear outline why they had been chosen and approached. The questionnaires that were requested to be completed by each supplier approached

required them to confirm their ability to deliver the Programme. This meant no bid submissions were received and evaluated. There was no monitoring of supplier performance and financial condition or ability to deliver NPfIT. For such a Questionnaires for such a complex programme should not have been the only method used to award such huge contracts to suppliers.

In view of how critical this programme was, a robust financial risk assessment on suppliers chosen should have been done. This would have flagged that iSoft did not have a healthy financial condition to be taken on such a project. In 2006 iSoft's financial situation deteriorated and had a big loss of £344 million which had a negative impact on the programme deliverables. The supply chain became extremely complex as the awarded primary suppliers all had sub-contractors in order to deliver. This flagged a serious risk as all these sub-contractors had not been assessed and this long trail of hidden suppliers within the main suppliers flagged a disastrous risk for the programme. There was no proper procurement testing, evaluation strategy and adequate consultation with Trusts. Accenture was the main supplier and they decided to depart from NPfIT. As they were responsible for over 50% of the programme this had negative impact at national level for Trusts which resulted in new suppliers being sourced to continue and this raised other risks. The problems continued beyond procurement and suppliers departing (Bacon & Hope, 2013).

The NPfIT Halt

In January 2009 the death knell had started sounding for NPfIT. This was because the Public Accounts Committee had started critising costs and progress to date of the programme. The costs were escalating and there was no evidence of benefits regardless to NPfIT having been running for 7 years already (PAC, 2009). NPfIT was diminished by the resistance it had encountered due to major abuse of centralised power and authorities making decisions for all NHS Trusts. However, it was officially put to a halt while being deemed as the world's largest civil sector Programme. The disastrous catastrophe and ultimate collapse ignited so many questions and attention as to why it had resulted in such an outcome after so much money and time had been lost (Justinia, 2017). There was a clear shift of acceptance that the programme had failed. The programme was considered to have achieved some deliverables. However, as much as this was true, these were not the most important parts of NPfIT nor the most expensive. (MPA, 2011).

KEY FACTORS NPFIT FAILED

In most IT programmes it has always been outlined that success is only achieved by good strategy and planning (Chiemelie,2014). However, for maximum success to be achieved there are some key factors both internally and externally that should be incorporated into the planning and strategy of processes and procedures. It is important for a Project Manager to understand what exists within a project environment as this will help in designing and embedding the right processes on how to manage the project and stakeholders and achieve the required objectives that have been outlined. There are always external and internal factors (see Figure 1) which impact the success of any project. It is important that they are identified on how they will impact the project so that the right strategies are put in place to enhance success. (Drucker, 1999; Lynch, 2012 & Mullins & Christy, 2016).

There are many issues that can be identified in NPfIT as having been contributing factors to its failure. The combination of all these factors caused the ripple effect that escalated into NPfIT being a failed, disastrous and costly programme. There arenumerous prominent and obligatory yet unmistakable factors that contributed to the programme failure. The eight key factors identified are the following.

Organisational Structure

An entity can be structured in many ways and this depends on the organisation's objectives. The organisational structure outlines how the organisation will control project management ranks, the

Figure 1. Internal and external factors influencing project environment
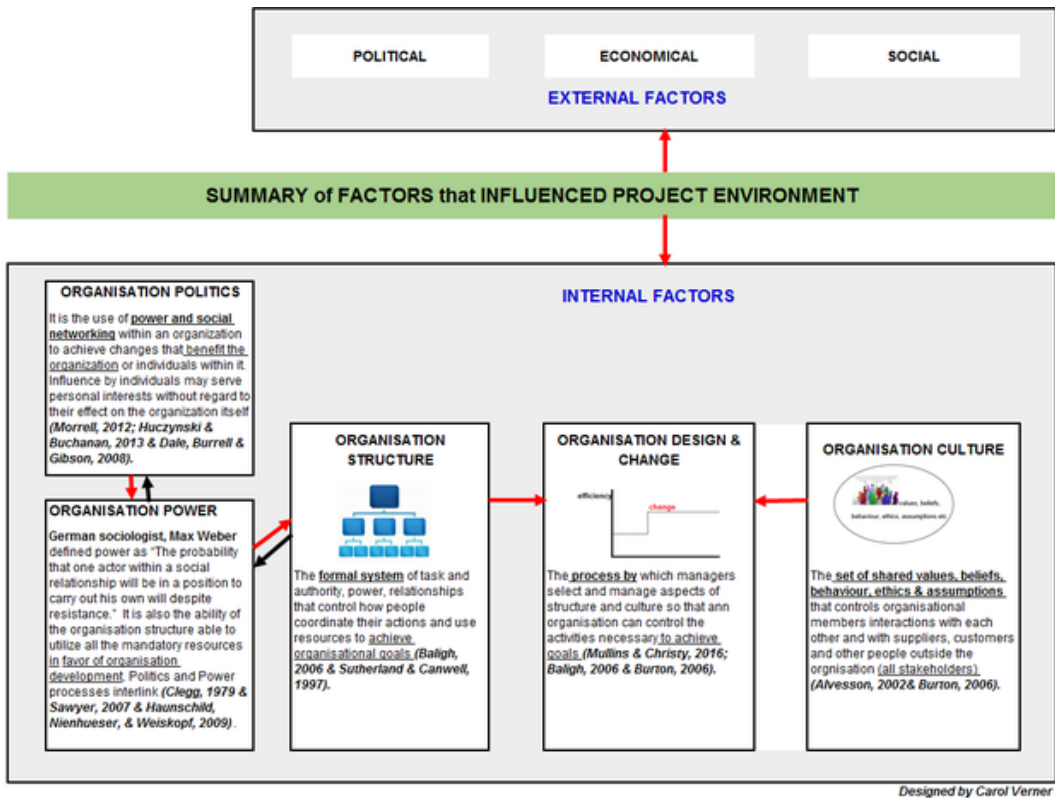
decisions makers, the influencers and the way in which the project vision, goals and tasks will be communicated (Baligh, 2006 & Sutherland, Canwell & Diane, 1997).

Power, Politics and Culture

Organisations and individuals use organisational structures to acquire power and identity. Power is the ability to get what one wants achieved. The way one can influence key stakeholders including decision makers in order to achieve required goal('s). This can be a positive or negative depending on who is driving this power and what their intentions are. (Haunschild, Nienhueser, & Weiskopf, 2009). Politics is a normal part of life for any organisation and is both internally and externally driven and influences the entire entity. Culture is the personality of an organisation. This is the shared values, norms and beliefs within divisions, departments, teams, an organisation and all different individuals or employees within an entity. The right culture within an organisation enables project success (Suda, 2007). All three interlink together and exist in any organisation at any given time but at variable levels depending on the business.

Poor Project Management and Leadership

If a project manager achieves successful implementation it does not mean they are a successful leader. By developing project management skills through knowledge of standard project management framework and acquiring experience in the best practices in implementing project management methodologies generates successful project managers.

However, to be a successful leader one is required to be a creative and innovative individual who ensures they continuously develop new abilities to merge with their current capabilities. Those who merge their leadership abilities with project management skills acquire leadership skills that enhance their project management skills, so they become effective leaders. In 2004, Cadwell said "management skills provide a foundation for developing leadership skills. Effective leaders have the ability to apply the appropriate skill at the appropriate time and in the appropriate place" (Cadwell, 2004).

Unclear Project Scope Management and Poor Planning

Project scope management ensures a clear scope with a detailed roadmap is outlined to empower managers on how to allocate workforce and costs necessary to implement project correctly. The processes involved in project scope management are planning, controlling and closing (Burke, 2013).

Lack of Project Methodology

Project methodologies are essential as they increase chances of project success while reducing project delays which are caused by unnecessary actions. These methodologies are standardised structures with guiding processes and principles that enable the project to be managed. They are different methodologies which all have different pros and cons (Gray, Larson & Desai, 2017). It is important project managers understand the organisation structure, culture and many other factors to ensure the right methodology is chosen that works within an organisation (Baghizadeh et al., 2020). The methodology also defines how the project is communicated within the organisation.

Bad Stakeholder Engagement and Management

It is important that the different stakeholders are identified, and their different needs are understood and how they want information and communication to be done. Communication is key (Akbar et al., 2019). Stakeholder engagement is a vital skill, it is the heartbeat of effective relationships within the project environment and enhances project success. This is a continuous process throughout the entire project lifecycle which helps to address any issues being faced by the project or organisation during implementation and all other project stages until the service or product is delivered (Akbar et al., 2019). Any project with bad stakeholder engagement has no chance to succeed as there is no platform to know who to communicate with and how to resolve any issues or concerns about end product or service.

Lack of Risk Management

A risk is an uncertain event, this is provoked by an internal and external factor and if it happens it can have a negative or positive consequence. The identification of risks is an agile process and is done throughout the entire project life cycle as issues differ at different stages of the project see figure 2.

An agile approach to risk management will ensure the risk map is re-evaluated periodically to ensure key risks are being managed effectively (Akbar et al., 2019). If there is no clear risk management strategy which is well planned and communicated, this increases chances of the unexpected happening from disasters to serious problems which can result in project failures. Risk Management helps to identify the best resilient approaches to be implemented within an organisation so that the project environment is enhanced to ensure project success - see Figure 3 (Leitch, 2010; Gray, Larson & Desai, 2017; Miller, 1992).

Lack of Social Responsibility

Social Responsibility has a positive impact when projects are being implemented as it ensures Project Managers identify any risks that will have a negative impact on all stakeholders. When identified this avoids having a ripple effect of a project where delays are encountered which can cause increased

Figure 2. Risk Management Process

Figure 3. Resilience approaches
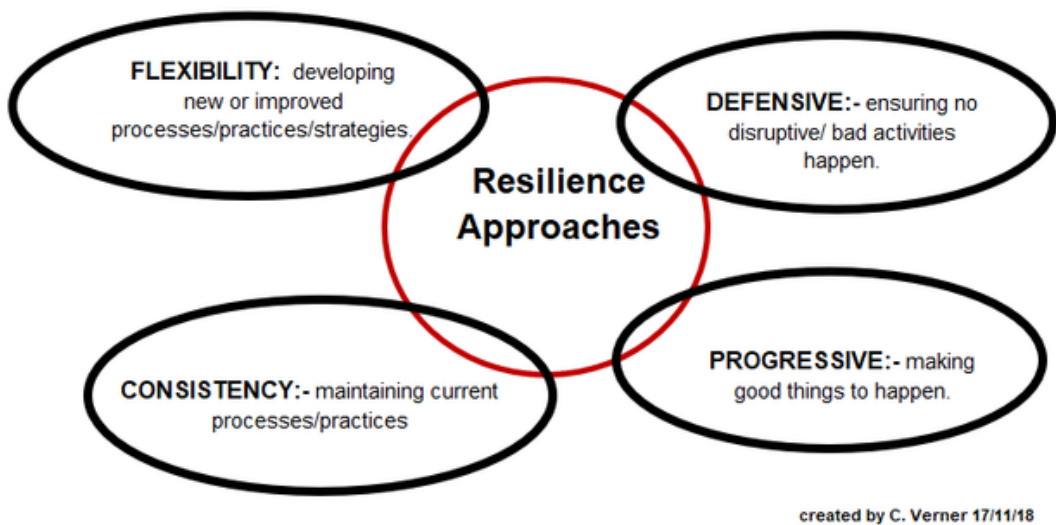
project costs and result in project failure as well as unhappy, disconnected stakeholders (Akbar et al., 2019). CSR helps to enhance managing stakeholders and getting them engaged in the project. For most public-sector entities that are government funded CSR helps to trigger organisations to work towards delivering good services. It also works to ensure the environment that the business and project functions in does not cease to exist.

ANALYSIS

Reported Project Success Rates From Survey Data

Several studies have attempted to the success rate of large IT project undertaken in public sector. The findings all seem to consistently reveal very poor project success rates. In 2002, White and Fortune conducted a survey of 236 project managers. In this survey, the results revealed that 41% of the projects were rated as having been a completely successful. There are it can be argued reports where projects have been extremely successful. White and Fortune then further explained that 46% of the projects for the entire survey caused a rise in unexpected risks of which 14% of it, was the projects considered as having been completed successfully (White & Fortune, 2002).

In 2003 a survey carried out by Sauer and Cuthbertson showed a successful outcome which was broader and looked at the four aspects of project performance (Sauer & Cuthbertson, 2003).

The four aspects:

- Variance against schedule
- Variance against budget
- Variance on scope/ functionality
- An outline of abandoned projects

The survey results showed the following for all four aspects:

1. Relating to Schedule:

Projects completed ahead of Schedule (early) = 3%
Projects completed to Schedule (on time) = 55%
Projects completed behind Schedule (late) = 35%

The other 7% was not reported upon on the schedule aspect.

2. Relating to Budget:

Projects completed using less of Planned Budget = 15%
Projects completed within the Planned Budget = 26%
Projects completed over the Planned Budget (overspent) = 59%

3. Relating to Scope:

Projects Achieved More than Original Project Scope = 5%
Projects Achieved the Planned Project Scope only = 41%
Projects Under Achieved the Planned Scope = 54%

However, the projects that were completely abandoned within the survey were only 9%.

In another study in 2009 conducted by Wright and Capps (2010) indicated that there was a clear agreement amongst the Auditors that 20% to 30% of all IT developing projects are deemed to have high failures, with 30% to 60% of projects with comparative failures.

The Standish Group 2015 Chao's report shows that 29% of projects are successful with 19% failing while 52% encounter challenges. The challenged projects were the ones that were late, over-spent or had reduced project scope (Akbar et al., 2019). The failed projects meant that the projects

were either abandoned or cancelled and the investment was completely lost. This is in terms of the triple project constraint triangle. This survey covered businesses in the U.S.A (58%) and Europe (24%). However, it is vital to be aware that the Standish Reports have been subject to criticism in regard to accuracy in the past.

In 2006, we had Jorgensen and Malokken-Ostvold declare that the Standish survey was deceptive, and this was outlined based on the wrong percentage rates that had been used for over-run costs for challenged. In view of the few research surveys analysed in this paper, it has been made clear that any project success is broad and differs substantially while encompassing countless success criteria's which vary based on the organisation, the industry and the actual project.

The success for most projects is measured based on the concept of the triple constraint also known as the iron triangle (i.e. Schedule, Budget, and Scope) (Judgev and Muller, 2005). This then needs to be analysed addressing factors within the project environment to ensure they do not trigger a negative impact to the Iron Triangle as this raise's probabilities of project failure. The most common element found in failed projects is that despite having a project manager or methodology and tools there can still be project failure experienced. As much as project management is a recognised discipline which has been in existence for a while it shows in research results that project success is never guaranteed (Lawson, 2016).

As the world at large is shifting towards a more eSystem driven environment with most day to day IT operations needed it is important that implementations are successful for organisations. It is important to understand that any IT projects in healthcare, like the NPfIT, are not just about implementing a new system within an organisation, but it is about significantly changing the way healthcare is delivered within the entire entity (Sittig et. al, 2002).

NPfIT would have had a higher probability of success by ensuring the 8 factors within the project environment where planned for and managed throughout the project lifecycle while ensuring there is no negative impact on the triple project constraint triangle elements. This means that the Standish Group Report can only be used as a guide to ensure risk management is done, being fully aware that IT projects have a higher probability of failure. Organisations should not be put off pursuing the implementation of IT projects because of the Standish report, as long as risks are identified and mitigated to avoid project failure (Akbar et al., 2019).

Project Framework/ Methodologies

In the last three decades intense research work has been undertaken to develop methodologies and frameworks for project management (Truex et al., 2000). This has given a rise in how projects are monitored and help to increase higher project success rates. It is important that Project Manager's understand the key differences in project methodologies and frameworks so that all elements which can work together are applied to maximize success of projects (Gupta et al., 2019). When different elements are incorporated together which are best suited for the size, type of organisation and project this ensures a robust project methodology is created which enhances project success (Joslin and Muller, 2015). In 2012, Wells outlined that many project methodologies had numerous shortcomings which clearly showed that since 1999 one of the top ten common reasons seen to contribute to project failure was project methodologies (Wells, 2012).
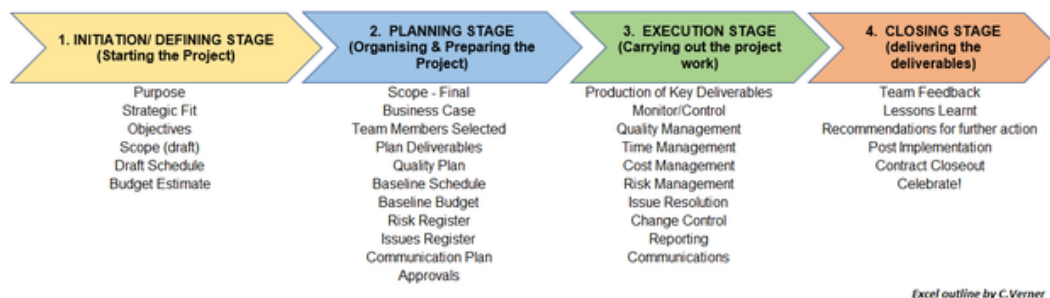
When evaluating which is the ideal framework/methodology to be used for each project there are several key factors to be considered as shown in Figure 4. It is important when selecting a project methodology or putting together different aspects of different methodologies together, that a project manager has clear understanding of the project life (see Figure 5) cycle, tools and techniques (see Figure 6) which are used by the project manager.

Project life cycle clearly show that the life span of any project is limited and there will be key predictable changes which require different levels of effort and focus during the life cycle of any project. By understanding the predictable changes within a life cycle of a project this enables the most effective methodology to be opted for which then raises the probabilities of success for that project

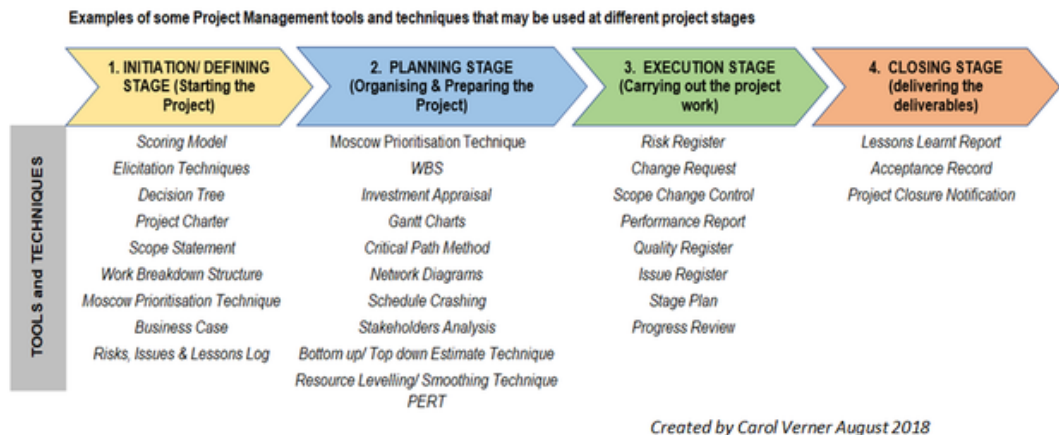**Figure 4. Factors to consider when selecting Project Framework/ Methodology**

Created by Carol Verner (July 2019)

Figure 5. Project Lifecycle

1. INITIATION/ DEFINING STAGE (Starting the Project)	2. PLANNING STAGE (Organising & Preparing the Project)	3. EXECUTION STAGE (Carrying out the project work)	4. CLOSING STAGE (delivering the deliverables)
Purpose	Scope - Final	Production of Key Deliverables	Team Feedback
Strategic Fit	Business Case	Monitor/Control	Lessons Learnt
Objectives	Team Members Selected	Quality Management	Recommendations for further action
Scope (draft)	Plan Deliverables	Time Management	Post Implementation
Draft Schedule	Quality Plan	Cost Management	Contract Closeout
Budget Estimate	Baseline Schedule	Risk Management	Celebrate!
	Baseline Budget	Issue Resolution	
	Risk Register	Change Control	
	Issues Register	Reporting	
	Communication Plan	Communications	
	Approvals		

Excel outline by C.Verner

(Bowns et al., 1999 & Gheni et al., 2017 & APMBOK, 2012). In order to deliver a successful project more efficiently and effectively different tools and techniques are crucial systematic procedures and practices that should be used at the right stages within the project life cycle (Milosevic, 2003).

NPfIT was implemented top-down by a Programme lead who had no experience or understanding of how complex the entire organisation was. In view that at local level all NHS Trusts have different operational executive boards, functions, organisational structures, cultures, sizes etc. any decision on what programme methodology was going to be used would have required the involvement of all Trusts (Gupta et al., 2019). The involvement of NHS organisations as key stakeholders would have ensured all factors (figure 6) for each Trust was incorporated in the decision making and ensure a well-tailored methodology was used in the implementation of NPfIT to enhance the probabilities of success.

Figure 6. Some tools and techniques during project life cycle

Examples of some Project Management tools and techniques that may be used at different project stages

	1. INITIATION/ DEFINING STAGE (Starting the Project)	2. PLANNING STAGE (Organising & Preparing the Project)	3. EXECUTION STAGE (Carrying out the project work)	4. CLOSING STAGE (delivering the deliverables)
TOOLS and TECHNIQUES	Scoring Model	Moscow Prioritisation Technique	Risk Register	Lessons Learnt Report
	Elicitation Techniques	WBS	Change Request	Acceptance Record
	Decision Tree	Investment Appraisal	Scope Change Control	Project Closure Notification
	Project Charter	Gantt Charts	Performance Report	
	Scope Statement	Critical Path Method	Quality Register	
	Work Breakdown Structure	Network Diagrams	Issue Register	
	Moscow Prioritisation Technique	Schedule Crashing	Stage Plan	
	Business Case	Stakeholders Analysis	Progress Review	
	Risks, Issues & Lessons Log	Bottom up/ Top down Estimate Technique		
		Resource Levelling/ Smoothing Technique		
		PERT		

Created by Carol Verner August 2018

The new programme director lacked understanding of this fundamental process of having a clear, well communicated and understood methodology for implementing NPfIT nationally. The lack of this one key aspect of project management initiated a vicious circle of failures in other areas which then impacted on the entire project success and benefits of NPfIT. It is clear in all research there was no methodology or framework used to manage, monitor and control the NPfIT life cycle. The right tools and techniques were also not used within the project life cycle to help reduce the failure risks and ensure they was higher probabilities for success.

Impact of NHS Organisational Structures on NPFIT Failure

Centralised organisational structures have decision making powers at the top layer of management (Gupta et al., 2019). It enforces at all levels of the entire organisational structure a focused vision and purpose. This clearly outlines it will not engage in clear stakeholder involvement to enable sub- organisations to contribute for success to be achieved (Gupta et al., 2019). This structure is not flexible and has tight control over all sub structures within the entire entity or organisation. It is not favourable for large organisations and has high risks of power misuse, low motivation, morale and the lack of environmental adaptation (Sutherland, Canwell & Diane, 1997 & Baligh, 2006).

NPfIT empowered the top and excluded key stakeholders who needed to be involved. Already there was a clear indication that it was the wrong structure for the implementation of this programme (Gupta et al., 2019). At national level organisations did not know who to report to and what processes where in place and this was because there had not been a clear organisational structure communicated at national level to all NHS Trusts. A structural outline would have ensured a communication process and path to follow for any programme issues with a clear line of command (Huczynski & Buchanan, 2013 & Morrell, 2012).

If NPfIT had a structural outline it would have had a positive impact on both the internal and external communication. If NHS England's structure had fostered inter-organisation and inter-division communication as well as frequent dialogue between all stakeholders and management, there would have been a greater chance of success. Most NHS Trusts exist in vacuity and each does not know what the other is doing, so this increases the risks of failure for projects implemented from top level. NPfIT would have benefited from an organisational structure that would have been set up to ensure communication is fostered within the structural process (Sutherland, Canwell & Diane, 1997).

De-Centralised Structures

On the other hand, de-centralised structures are more flexible and more favourable for large organisations which have different structures for the different sub organisations within the NHS. De-centralised structures allow a clear distribution of decision-making power to all structures within the entire organisational structure (Sutherland, Canwell & Diane, 1997 & Baligh, 2006). The NHS is a large and complex organisation and it is vital that anyone leading a national programme has this knowledge and understands that "one size fits all" is not possible for any national implementation especially if they want to achieve success.

NPfIT used a more centralised structure and this had a negative impact and resulted in contributing towards the failure of the entire programme. However, if NPfIT had been implemented with a more de-centralised approach, then key system users, clinicians, trust boards, CEOs and all key stakeholders would have been fully engaged. A de-centralised structure would have ensured the full potential of the programme was unleashed to the entire organisation and enabled the required specific requirements to be achieved.

Impact of De-Centralisation

A de-centralised structure would have also enhanced the success of NPfIT by:

- The motivation of subordinates;
- Growth and diversification;
- Quick decision-making during project life cycle;
- Efficient communication with all stakeholders and during the entire project life cycle;
- A better supervision and control of entire implementation during project life cycle; and
- The satisfaction of people needs (i.e. Social Responsibility).

The disadvantages of a de-centralised structure would have been addressed during planning and all additional costs considered. The increase in cost to have a de-centralised structure for the NPfIT would have been worth it in long run, in view that it would increase the probability of the programme being a great success. The NHS Trusts that NPfIT was a success all had similar organisational structures with less complicated sub structures within the business services (Gupta et al., 2019). This enabled the Trusts to have easy internal communication with all key stakeholders and address any at hand problems being encountered with an easy to follow command of authority which was more flexible and enabled the incorporating of new ways of working to the business as usual.

The other approach the new programme director could have taken was to group organisations based on organisational structures so that the implementation of NPfIT is tailored to manage the project and people for Trusts with similar factors rather than grouped based on locality as shown in the Select Committee on Health, 2007. This would have increased the chances of success for NPfIT (Kuzlowski & IIgen, 2006).

Power, Politics and Culture

Most organisations and individuals use organisational structures to have some identity and power they need to function within the entity. The top down approach which was used during the implementation of NPfIT was purely for political reasons. Policies and practices were driven from the top for all matters relating to NPfIT project life cycle including timeframes. On the one hand it was a good thing that such modernisation was being done in the NHS at this magnitude and implementation had strong political support. The downfall was that this support was being driven by selfish ambitious individuals who were in a hurry and had unrealistic timeline's and wanted NPfIT to succeed for them to benefit in the next elections. Government policies and practices overlooked the fact that most ICT projects had low probabilities of success and for NPfIT to have any chance of success, power was required to

be distributed to all stakeholders so as to ensure the full involvement of all Trusts (Gray, Larson & Desai, 2017 & APMBOK, 2012). The illegitimate political power used within NPfIT implementation was not for the greater good but was purely self-serving the visions of the politicians.

It was clear the organisational structure for NPfIT had helped to ensure the power was given to government bodies instead of the system users nationally in the different Trusts and Trust boards. The Hofstede's cultural dimensions highlights the importance of understanding the national culture to enhance strategies to increase success probabilities (Chowdhury, 2019). The large power distance within NPfIT disabled clear communication amongst the stakeholders. It can be argued that the power distance was intentionally created and it gave the new programme director and senior management too much power and authority (Haunschild, Nienhueser, & Weiskopf, 2009; Morrell, 2012 & Huczynski & Buchanan, 2013).

NPfIT encountered numerous obstacles and the frequent changes in leadership within the top level also had a negative impact and caused shift in power, political and culture behaviours within the entire programme from top to bottom of the organisational structure. To the optimistic people, changes in leadership within NPfIT seemed like a good thing and the programme had another chance to still be a success story (Gupta et al., 2019). However, the sad story was that regardless of the optimism these changes only had negative impact and there was no clear path or who had the power and was leading NPfIT and this caused the initial vision to be diluted.

Project Management and Leadership

In 2014, Chiemelie outlined in a study that most ICT projects required experienced and well skilled management and leadership in order to achieve success (Chiemelie, 2014). The understanding of the organisational structure is an added benefit during implementation in regards what decisions need to be made and on how new processes should be embedded within the organisation for BAU. The success of a project within an organisation is not just delivering the objectives and completing but also ensuring BAU can benefit from the new change (Gupta et al., 2019). While also ensuring the new culture and processes are welcomed in the business without causing any issues or problems to business operations.

To the one from outside the entity the appointment of the new programme director seemed like his new appointment gave him power however reality showed that he had none. He was required to acquire approval from Senior Executives. The chain of command restrictions led to the wrong decisions and processes being made during the programme life cycle (Gupta et al., 2019). This caused other serious restrictions which impacted in how he led and managed the programme team.

In view that NPfIT did not achieve the initially planned goals, this was a clear indication that the programme had not be managed successfully. the new programme director had a strong personality to play the political games with those who were anti-NPfIT. This was shown in how he had managed to keep the programme moving forward while they were already serious issues which were not being revealed. This trait caused serious risk as stakeholders needed to be kept well informed in view that the NHS is a public funded entity and NPfIT was being funded by tax-payers' money. If change was going to impact the system user and all service users, there was a need for the new programme director in understanding his social responsibility within the NHS for such a large project. In view of the 1997 Dickinson and Mackintyre's 7 step model it shows that the new programme director lacked an understanding of project management and the differences within the NHS Trusts. The vital skill he needed to drive the programme to be a success story he also did not show which was the understanding of emotional intelligence. This skillset would have helped him to resolve the discrepancies and issues that clinicians, system users, Trust boards were flagging (Gupta et al., 2019). However, he chose to ignore the concerns, and this became the biggest risk factor and contributor why NPfIT failed. The approach of indirect force to Trusts regardless of their concerns was indication that the new programme director lacked the knowledge and understanding that the end users needed to be heard

and their issues addressed if he was to be successful. This approach was very irresponsible in view that the impact would be to the entire nation (Hamlin et al, 2001).

The new programme director had the possibility of achieving success in managing and leading the NPfIT. However, his lack of understanding regarding the differences of all NHS Trusts from behaviours, personalities, individuals, organisational structures and cultures was his greatest weakness which contributed to the failure of NPfIT (see Figure 7). By bringing the complex giant into his realm and forming National Steering Information Groups that consisted of key stakeholders and end users from all the different Trusts would have helped him achieve the control and success he wanted.

The National Steering Information Group would have helped to harness success and given the new programme director a platform to understand, manage, control, monitor, resolve, share and motivate all the key stakeholders. The new programme director and other top-level decision makers for the programme, would have been greatly empowered by the NSIG in moving the NPfIT towards being a success story. Knowledge acquired would have ensured throughout the project life cycle there was an outline of all behaviours of individuals and groups within organisations and the treatment on how to address them to ensure NPfIT had a chance to succeed.

Procurement

The right procurement model can be used as a strategic step in a project which enables an organisation or business to improve quality and profitability. The procurement process helps to simplify processes, reduce raw material prices and costs and identify better and more favourable suppliers on the market. This also helps to reduce the "bottom line". It important to ensure procurement management is carried out for a project. This helps to establish and maintain relationships with providers or services and goods (Weigel & Ruecker, 2017; Waters, 2011; Chuan et al., 2016 & Yue Jin, Ryan & Yund, 2014)

A centralised approach to procurement for NPfIT was cheered on by supporters. Procurement was achieved quickly having the centralised approach while achieving the aggregation of services (Westfall, 2020). The NPfITs vigorous supplier competition saved £4.5 billion in terms of prices paid for services and goods (NAO, 2006). The approach lacked proper testing as well as consultation with NHS Trusts nationally, clinicians and patients who would be the actual end users of NPfIT. The NAO report also criticised strongly that the procurement for NPfIT had occurred before any clinical engagement and other key stakeholders (Westfall, 2020). The supplier binding contracts for NPfIT had vague specifications and this resulted in having about £30 million additional cost in legal

Figure 7. Overview of the Project Environment
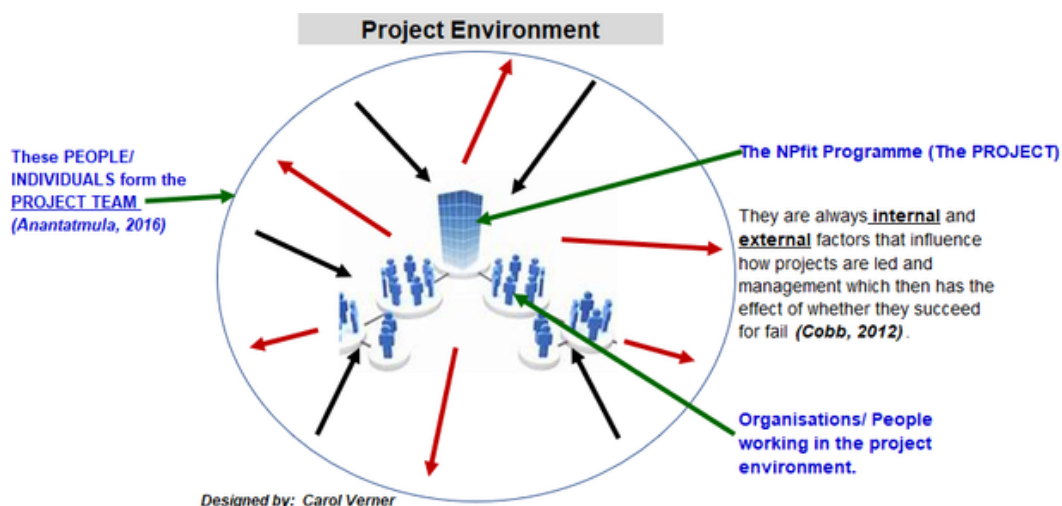
fees to the NHS to resolve. Dr Nowlan provided evidence to the PAC and outlined that "the haste to procurement was overriding due diligence over the healthcare value and achievability of what was being done" (PAC, 2009).

The exclusion of small local service providers that many NHS Trusts had built relationships with and used to be providers of their existing systems were lost because they could not bid for such large contracts. This was a high risk and suppliers who understood the needs of their local NHS Trusts was also lost (Chowdhury, 2019). The new suppliers who won the bids were not well versed to understand at local level the needs and working culture of the different NHS Trusts to be able to embed the new requirements to business as usual (BAU) nationally.

The new programme director, when appointing new contracts to the new suppliers for NPfIT, could have ensured all local existing suppliers were part of the service agreements with suppliers so as to ensure Trusts had the confidence that the gap that existed in having a new supplier who did not understand how their systems worked would be bridged by the existing suppliers who they trusted and had relied upon for a long time.

The new programme director wanted to avoid national extensive consultation which would have impacted on timelines and cost of delivering the programme. The procurement consultation would have slowed the entire process, but this would have contributed positively towards success probabilities. For NPfIT, a centralised approach was not the best way to manage procurement in view of how different each NHS Trust worked at local level. The approach taken failed Trusts as they had to deal with all the system issues and problems that resulted because of poor procurement management (Westfall, 2020).

Risk Management

A risk and resilience programme (see Figure 8) should have been done to ensure all risks and hazards were identified and their impact outlined within the organisation on how to apprehend and handle all flagged issues so as to help build a resilient organisation (Miles, 2012 & Redmond & Sinha, 2014). A resilient organisation has greater chances for project implementations to be a success.

Some of the key risk categories are: (Ioana-Veronica & Simona-Valeria, 2012):

Figure 8. Risk and resilience programme framework
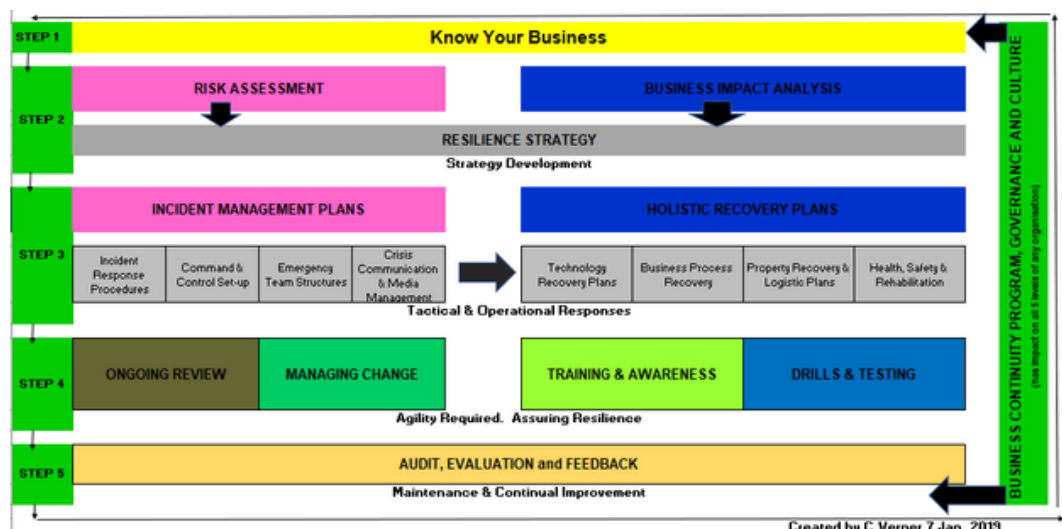
- Strategic
- Operational
- Financial
- People
- Regulatory
- Governance

Risk management should have been utilised to play a key agile role in ensuring it was contributing to the success of NPfIT. The lack of risk management empowered the new programme director, to cover up serious issues pertaining to NPfIT. He did not involve all key stakeholders because he wanted to hide what was already a poorly planned programme with low probability to succeed. He was a real risk taker who had no sense of SR and how his decisions impacted the Trusts and the communities NHS loyally serviced as well as the taxpayers who had funded NPfIT.

The lack of risk management in view of historic failures also showed that the new programme director lacked knowledge about the NHS in regard to failed IT projects and what threat NPfIT was up against in order to be successful. The new programme director lack of concern about risks was also because the government was also not bothered. In October 2006, the British Journal of Healthcare Computing & Information Management shared a dossier of documents, reports and letters by some university scientists who had raised concerns and risks about NPfIT to the Government, but this was ignored.

White and Fortune (2002) indicated that project success factors have risks associated with them, however an agile approach in risk management ensures all risks identified are mitigated which will help to enhance the success factors in any implementation. I believe that if risk management had been done, NPfIT would have been a successful story for the NHS and one which the government and the new programme director would have been proud of.

Social Responsibility

Milton Friedman a controversial critic, expressed that corporate social responsibility might ultimately hollow organisations goals against social goals, "There is one and only social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud" (Friedman, 1970). However, in view of this statement by Friedman one has to remember that the NHS is a public entity funded by taxpayers' money and its main aim is to be socially responsible towards providing different services to the residents of the UK including their own employees. Therefore, Friedman's understanding should never be the reason CSR is not taken serious in the NHS (Westfall, 2020). Ignoring CSR during implementation caused serious risks that outweighed the economic risks of NPfIT (Eccles, Newquist & Schatz, 2007). Porter and Kramer in 2006 outlined that "the more closely tied a social issue is to a company's business, the greater the opportunity to leverage the organisation's resources – and benefit society" (Porter & Kramer, 2006).

When the Project Manager understands that CSR can help them understand their key stakeholders and manage them well while meeting their CSR requirements which promotes motivated and interested stakeholders. CSR should be managed throughout a project's lifecycle. It is a win-win strategy that benefits society as well the organisation. The new programme director could have ranked all social issues that would have been raised by all NHS Trusts nationally. Then in the same way any project risks are ranked by probability and impact, the likelihood the social, environment or ethical issues will arise in the implementation of NPfIT, what will be the potential impact, not just to project success, but to employees, systems users, service users, NHS Trusts, communities and society. If The new programme director had integrated these into NPfIT planning and execution of the project the risks contributing to programme failure would have been reduced while social good was also being promoted to all stakeholders.

Stakeholder Engagement

In 2013, Beringer et al. claimed that the stakeholder behaviours and how that behaviour is managed is the main contributor to project success. The research by Toor and Ogunlana (2010) concluded that for all large public-sector development projects they went beyond the traditional iron triangle, to project success being the perception and satisfaction of stakeholders.

In view that the NHS is a complex and large entity it can only achieve project success when all key stakeholders are involved as contributors and decision makers. It is socially responsible for project managers to ensure they are managing and communicating with all stakeholders throughout the project lifecycle. If the new programme director had involved all Trusts this would have helped in creating a support network which would have enhanced knowledge and understanding of NPfIT. This would have worked in favour towards the success of NPfIT. (chang et al., 2013). In 2013, Chang et al. emphasised that effective stakeholder engagement and management relied on a Project Manager's ability to identify expectations from the start to the finish of project. A stakeholder engagement process would have had a positive impact on quality, time and cost of implementation. The lack of a clear stakeholder management process for NPfIT resulted in having no stakeholder expectations and satisfaction delivered. Any project manager who thrives to succeed in implementing projects in the NHS should depend on the engagement and management of stakeholders.

Project Planning and Scope

Well, regardless to Tony Stark in Iron Man having the belief that running is achieved before one can walk, in project management it is best to follow the correct process like in human development – crawling before running, walking or flying with your project (Akbar et al., 2019). Yes, planning a project is the most brainstorming task which many find frustrating and exhausting, but it is the most vital part to be done if the Project Manager wants to reduce risks and failure rate. If time had been taken to plan for NPfIT before the start of implementation the programme would have achieved (Gheni et al., 2017 & Bowns et al., 1999 & Gray, Larson & Desai, 2017):

- Clear objective
- Risk Assessment
- Milestones
- Resource Allocation
- Task dependencies
- Communication
- Avoid Unclear Project Scope
- The Bottom Line
- Stakeholder Commitment & Appreciation
- Training
- Contingency Plan

CONCLUSION

The researcher is of the view that NPfIT and any future projects in the NHS can be a success if the factors that have been outlined in this paper are handled in an agile approach during the entire project lifecycle and all the negative impact of risks are mitigated or controlled, as mentioned in previous sections (Gupta et al., 2019). Any project during the lifecycle has a high probability at any time of failing. It does not matter if it is within the UK or USA, whether it is a large-scale project or smaller scaled project. Moreover, it is important to note that it does not depend on the sector of the project, whether it is a healthcare sector or building industry or in the private or public sector (Chowdhury, 2019). Failure is contributed to by different factors which are key to enhancing the success of a

project if they are identified and all risks addressed to avoid the negative impact. To be fully aware of what the different factors are, there is need to understand the current operational strategies, processes and systems rather than studying what will work for such an organisation to ensure the project implementation will be successful(Westfall, 2020). A well-informed project manager makes wise decisions knowing the impact of his/her choices. Additionally, the new programme directors' appointment signifies that if he had not been appointed last minute and a year before implementation and given a period to familiarise and understand NHS Trusts his decisions would have been different (Baghizadeh et al., 2020). It is important that any future implementations ensure that those who do not have experience in NHS structures, there should be a familiarisation period given before planning begins so anyone appointed to such a role will make well informed decisions knowing the impact (Gupta et al., 2019).

The problems that we identified in this paper all interacted with each other and this caused the ripple effect which resulted in NPfIT failure. This means if the risks that would have a negative impact on the success factors were addressed the ripple effect would have been avoided and NPfIT would have had a chance to be a success (Baghizadeh et al., 2020). The politicians and senior programme management at the top level of the organisational structure had a similar way of thinking and vision. They also did not have an agile approach to allow other stakeholders within the organisation to challenge the project strategy and plan (Lynch, 2012).

The involvement of the government in this particular project has been a positive in that the project was well supported, regardless of the concerns. The downfall was that there was the lack of stakeholder involvement, lack of networking and lack of communication channels with senior and junior clinicians, NHS Trusts, system users and all other key stakeholders. The involvement of all stakeholders would have contributed to the success factors positively. NSG would have benefited from the top level in influencing, motivating, managing and understanding all key stakeholders and this would have enhanced progress and project success (Baghizadeh et al., 2020). The Black Mouton Grid on NPfIT showed results of an impoverished concern for people by the key decision makers at the top.

It is also clear that IT projects are more challenging and have higher risks to fail especially for complex large organisations like the NHS. However, a more phased out approach which increase the project timelines is best for such projects rather than unrealistic, haste timeframes. For any organisation like the NHS it is important to run larger pilot groups before the initial implementation is done (Westfall, 2020). This helps to identify risks in different organisations and the ways in which they are to be addressed to ensure success is still achieved for any implementation. Therefore, to manage and lead any IT or healthcare or a large or complex project to a success story an agile approach should be taken during the entire project lifecycle and all the key factors require a risk assessment so as to ensure all negative impacts are mitigated. Such projects require realistic timelines and should never be done in haste. This ensures all key stakeholders especially system users are involved in the decision making of the project for the entire life cycle.

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