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THE NLSH DECISION MAKING PROCESS COMPARED WITH THEORETICAL DECISION MAKING MODELS

Hans Gústafsson

Paper presented as part of requirements for the
degree of Master of Project Management (MPM)
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ABSTRACT

Abstract

The wait for construction of the new hospital, NLSH (Nýr Landspítali Háskólaskjúkrahús), has been long. From the time the Landspítali and Borgarspítali were merged, in the year 2000, number of committees have operated and speculated about the future of NLSH. For a long time it has been known that the hospital will be built at only one location and this location is where the former Landspítali stands at Hringbraut. Nevertheless, the development has been slow and it was just recently that the decision to proceed with the project was reached. The aim of this research was to look in to the decision making process of the NLSH and compare it with a theoretical decision making models to see if that could clarify why it has taken such a long time. This comparison reveals how complex this process has been and how this complexity has led to certain scope creep. It is also shown how effective use of decision making models could aid a process of this scale and help keep it in scope and on track.

Útdráttur

Biðin eftir nýjum Landspítala (NLSH) hefur verið löng. Frá því að Landspítalinn og Borgarspítalinn voru sameinaðir árið 2000, hafa nokkrar nefndi starfað um framtíð spítalans. Í lengri tíma hefur það verið vitað að byggja ætti spítalann á einum stað, þ.e. við Hringbraut, þar sem gamli Landspítalinn er. Samt sem áður hefur ferlið tekið langan tíma og aðeins nýverið var ákveðið að hefjast handa við framkvæmdir. Marmiðið með þessari rannsókn er að bera saman ákvörðunar ferlið vegan NLSH saman við kenningar og módel um ákvarðanir og athuga hvort þessi samanburður gæti varpað einhverju ljósi á af hverju þetta ferli hefur tekið svona langan tíma. Þessi samanburður leiðir í ljós hve flókið þetta ferli hefur verið og hvernig þessi flækja hefur leitt til þess að umfang verkefnisins hefur þanist út. Þessi samanburður sýnir einnig að notkun ákvörðunar módela gæti hjálpað til við að halda umfangi svona verkefna innan marka og á réttri braut

Keywords: decision making, decision making process, Functional decision making model, decision making style, Vroom, Simon, NLSH, bounded rationality, implicit favorite, decision making prerequisite.

1. INTRODUCTION

No one is building a new national hospital in Iceland! This is kind of strange since it was already concluded in the year 2000, when the two largest hospitals in Iceland were merged, that there would be a growing need, in the near future, for new buildings for the Icelandic National Hospital (LSH) so it would be able to fulfill its role (Pálmadóttir, Þórisson, Pétursson, Skúlason, & Haraldsdóttir, 2002). However, we are still waiting for the development to begin. At this moment, in May 2013, it is still not certain when the project will start. The last building to be constructed for the LSH was a children's hospital, which was completed more than a decade ago. That building was made possible by the generosity of Hringurinn, a women-run charity society. This situation evokes several questions. For example; was the population forecast made by the Danish consulting company Ementor and published in a report from 2001, accurate (Pálmadóttir, Þórisson, Pétursson, Skúlason, & Haraldsdóttir, 2002)? In this report Ementor estimates how the population will grow and how larger portion of the population will be in the older age groups, hence leading to a demand of a different hospital. Or were the assumptions drawn from this report wrong? If we assume that neither of these matters were incorrect, it is interesting to look at the events since the two hospitals were merged.

This case study research analyzes this dilemma, by focusing the decision making process that seemed to be the key source leading to a lengthy and confusing process, characterized by opposing positions of parties with disagreeing objectives. The goal of this study was to see how an actual public sector project decision making process, used to support go or no-go decisions for such a large development projects, compares with theories of decision making models.

2. LITERATURE REVIEW

Before we go any further it is wise to look at what a "decision making process" is, before any conclusions are made in that regard. It could be taken a little further and considered what a "decision" is. The simple fact that you got out of your bed this morning is based on a decision. That also tells us that it is probably hard to get through the day without constantly deciding. The interest in this article is a "decision" as a prerequisite for a project and a "project" defined here as a set of tasks of a particular goal that is delivered within given time constrains, cost limits and predefined quality requirements. This actually means that a "project" could not exist except as a result of a "decision". This is not reciprocal. We cannot say: "there is no decision without a project", for the simple reason that all kinds of decisions can be made without ever being implemented. On the other hand it is very hard (actually very, very hard!) to see a project being carried out without previously being decided. It is, for example, very hard to envision that the construction of the Great Pyramid of Giza was not decided. To do this kind of work, with all its complexity, someone must have decided it should be done in the first place, whether the decision was made with an advanced decision making process or not. The implementation of this decision was put in action and a good project management must also have taken place, otherwise, probably no pyramids would have been constructed. This example, absurd as it might be, tells us two things: the Pyramids did not form by some coincidence and it tell us that projects and project management are at least as old as the Pyramids. We can therefore assume that a decision making for projects is also at least as old as the Pyramids. This is true even though no certified Project Managers did exist at the time and the world had to wait for more than three thousand years for the first of them to emerge.

2.1. **Bounded Rationality**

Herbert Simon was one of the most influential American social scientists and an important researcher in the field of decision making. He rejected the rationality approach in decision making and proposed instead the concept of "bounded rationality" (Campitelli & Gobet, 2010).

In the late 1940's, Herbert Simon said, that if a person could be perfectly rational in the decision making approach, the decision should always be the same, just as if he had used the rules of logic and probability. Others should therefore, when dealing with similar conditions, reach the same conclusion, if they are using the same perfect rational decision-making method. However, Simon found out, the problem with the "perfect rationality" is that it had never been confirmed experimentally. In contrast, people steadily make decisions that differ from what might be expected.

People live in a complex environment and have a limited mental ability, it is therefore impossible for them to be perfectly rational and hence, come to the "right", thoroughly thought out, conclusion. Instead, Simon suggest, they "satisfice", that is they do not evaluate all options nor do they carry out full benefit analysis of all the alternatives, but instead settle on what could be considered "a satisfactory decision"; a decision that will fulfill a sufficient standard. In other words, people settle on what is a "good enough" decision, but not necessarily, the "best" option. The essence of Simon's theory, of the "bounded rationality", is that with a sensible amount of calculation, done with half-finished statistics, a reasonably good decision can be reached, without analyzing all alternatives. Such thorough analysis, Simon concluded, would presumably be impossible or at least highly impractical in most situations, with regards to time and cost. Simon proposed a model (Picture 1) for decision making. The first step is "intelligence", where a problem is detected. Today this step is usually called "Observation". The next step is "design", the actual process of gathered information and potential alternatives. The final step is "choice", which today is called "decision". This process is an iteration process, that is if a good enough solution is not found, the decision maker should either start all over again or go to the design step, gather more information or look for other alternatives.

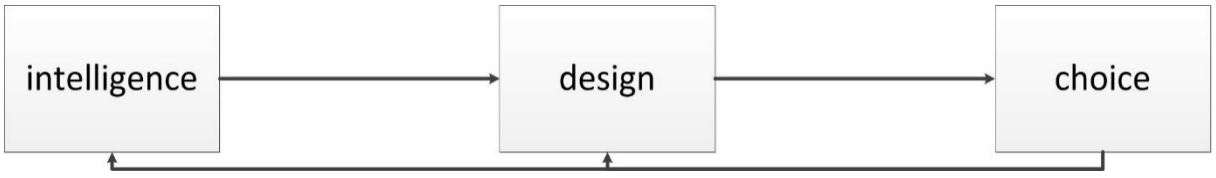

Figure 1 - Simon's Model of decision process

Variations of Simon's model used today are for example "The Satisfying Model" and "The Administrative Model". What these models have in common is the sequence of the steps in the decision making process. These steps are: identifying the problem; examine the alternatives; limit the criteria for the decision making; limited range of alternatives are examined; when the first satisfactory option is found it is chosen (a decision is made) and finally the decision is implemented.

2.2. **Vroom's decision-style model**

In the beginning of the eighties Victor Vroom et al, studied how leaders made decisions (Vroom, Educating managers for decison making and leadership, 2003). The product of their researches is the "Vroom decision-style model" and it is a normative model of decision making. The model is a tool for leaders to help them find out what kind of decision making approach they should use. Vroom focuses on the effectiveness of group-

centered, consultative, and autocratic decisional procedures across a number of group settings.

Leaders could have enough information to make a decision on their own if the task is relatively simple and small and they have all the information they need. On the other hand if the matter is very complicated and information needed is in various specialization field and out of the leaders scope, or it is too much work for the leader to evaluate, it can be wise for the leader to delegate the decision making process to the specialists.

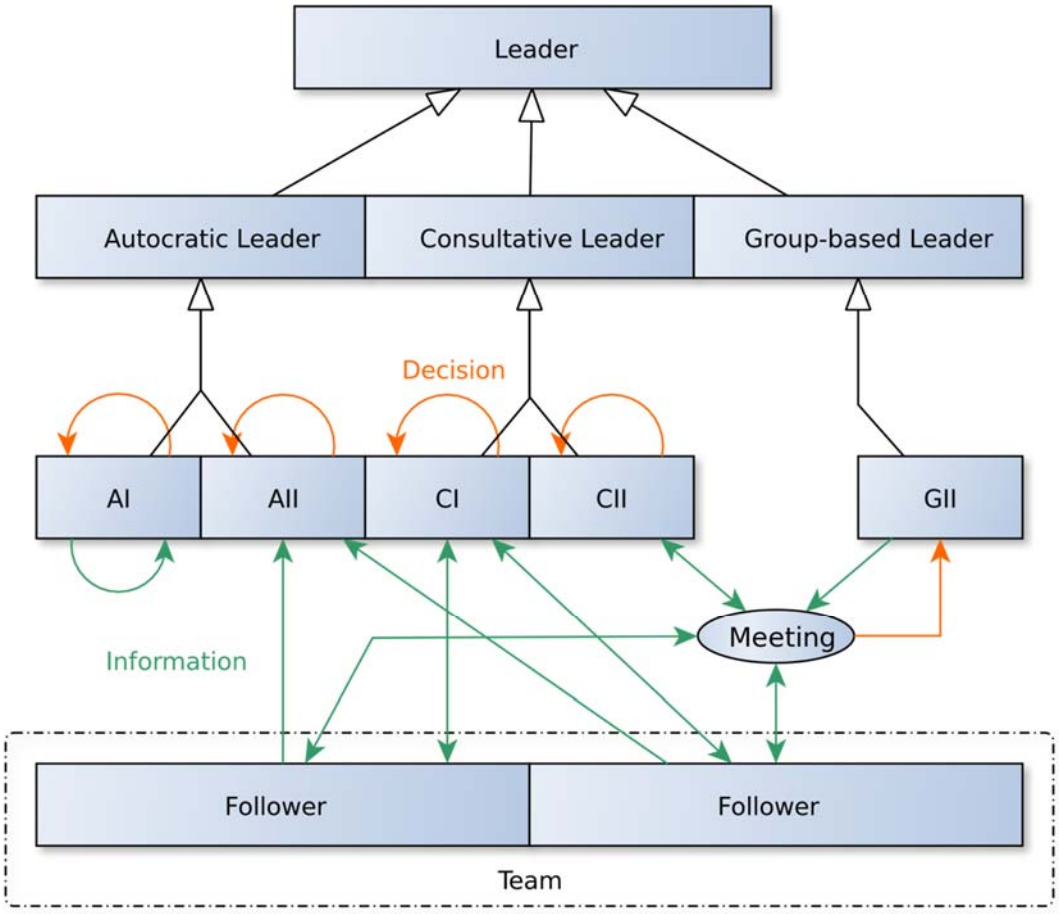

Figure 2 - Vroom's decision-style model

Vroom's Decision Making Styles

Autocratic I (AI)	Leader has all the information and decides unaided
Autocratic II (AII)	Leader gets additional information from the group, decides unaided
Consultative I (CI)	Leader consults with individual members of the group, decides alone
Consultative II (CII)	Leader consults with the group but makes the decision alone
Group II (GII)	Leader directs the discussion but the group makes the final decision

2.3. The Functional Decision Making Model

Forsyth's Functional Decision Making Model is a prescriptive model designed for leaders' decision making to aid them in their decision making (Forsyth, 2009).

Observation – a problem is discovered or assessment of a situation leads to the conclusion that an action is needed.

Orientation - When an outcome of an observation leads to the conclusion that an action is needed, the formal decision making process begins. The first phase is the orientation phase. In the orientation phase the group reflects on what was observed and forms a mutual understanding of the task ahead. Then the group should form a plan for the process of how it is going to deal with the task. At the end of this phase the group should understand and agree what it is supposed to do and how.

Discussions - The second phase. In this phase the group collects and extracts the information they need to evaluate the alternatives and find which one is the best. It is important that the group gathers only the relevant information they need to avoid wasting their time on irrelevant work. It is also wise for the group to delegate the work, to increase the efficiency of the group. A part of this delegation could be, for instance, that members of the group divide the responsibility of specific factors of the information in such a way that at least two of them represent each aspect of the information. When the group has evaluated all the possible alternatives they try to find out which of them serves best the solution they are seeking. When they reach an agreement they make their decision.

Decision – can be made in several ways; it could be done by voting and a single majority is accepted or the group could be committed to reach a unanimous decision. When a decision is reached the conclusion is *Implemented*.

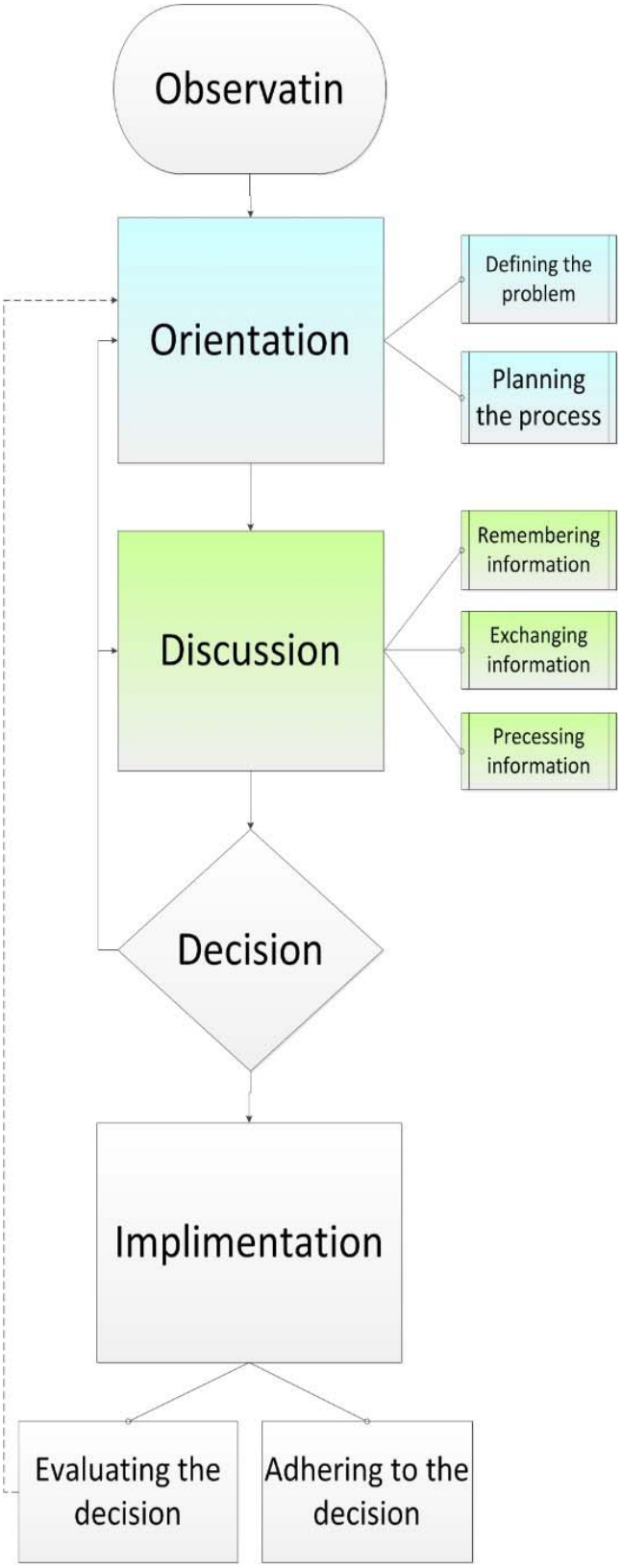

Figure 3 - Functional decision model

2.4. **The Implicit Favorite Model**

The implicit model is descriptive as it describes what is actually done. Similar to Herbert Simons “Bounded Rationality”, the decision making process is simplified by choosing an “implicit favorite”. That is done before other options have been considered. The decision maker could be doing this subconsciously or presumably because he has some hidden agenda. This happens because the decision maker is neither rational nor unbiased. When this “favorite” has been selected the decision maker wants the decision to look like it is both objective and rational. He therefore develops criteria that fits his decision and then evaluates and compares other options. This is done in a biased way to guarantee that his “favorite” is superior to other alternatives. This way the “favorite” can be justifiably selected as the best option. The Implicit Model is therefore just a way to justify or confirm an irrational and speculative decision that has already been made, before the decision making process began. In figure 4 the process of an Implicit Favorite.

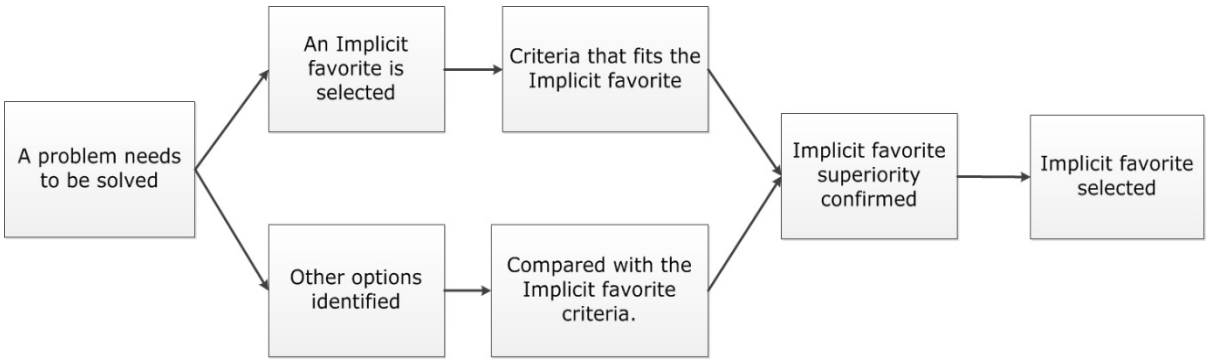

Figure 4 - Implicit favorite model

3. **RESEARCH PROJECT**

In this research it was examined how a real decision making process, for a complicated governmental project, is executed. The project in question is the New Icelandic National Hospital (NLSH), a project that has been years in preparation but has not yet been implemented. Furthermore, there are certain signs that there will still be some time before this project will proceed. The question that evoked the curiosity for the NLSH project, is why the initiation of the construction has not yet been started, even though it was insisted in several reports, prior to the decision making process, that there was a growing need for a bigger, more efficient and more technical hospital. It is therefore not unreasonable to assume that there is a certain necessity to find out where in the decision and preparation process it got derailed. This research will hopefully shed some light on the matter, though it is clear that a project of this scale needs much more effort and resources for a thorough investigation. The method used for this research is essentially a case study.

3.1. **Research methodology**

This research is a comparison case study, where the case is the actual decision making process of the NLSH and it compared with both descriptive and prescriptive theoretical decision making models. The information used for this comparison were gathered from the NLSH homepage, www.nyrlandspitali.is.

3.2. **Research approach**

Initially, the aim of this research was to compare the decision making process of a governmental elected committee, that was effective from 2004 to 2006, with a Functional Decision Making Model as it is presented by R. Forsyth. The purpose was to try to find out if there was something in the process that could explain the delay, or resistance, of getting the project started. On the NLSH projects homepage (www.nyrlandspitali.is) an abundant amount of information can be found. There, a great deal of material is saved; documents, papers and reports dating back to the year 2000 and up to today. Among them are all the focus-groups and need-analysis reports (more than forty of them!) done for the 2004 – 2006 committee, the bidding documents, local plans and expert opinions, and reports of later events. It should therefore be clear, that there exist a lot of information to work with and to investigate.

The first step for this research was to figure out the various connections and the flow of information from and to the 2004 – 2006 committee. It soon became apparent though, that the complexity of the work done by and for the committee was so excessive that it would be very hard to constrain the scope of the research. Even though the scope of this research was in danger, it is interesting to see how the decision making process of the committee compares with the Functional Decision Making Model as it is suggested by Forsyth (Figure 5).

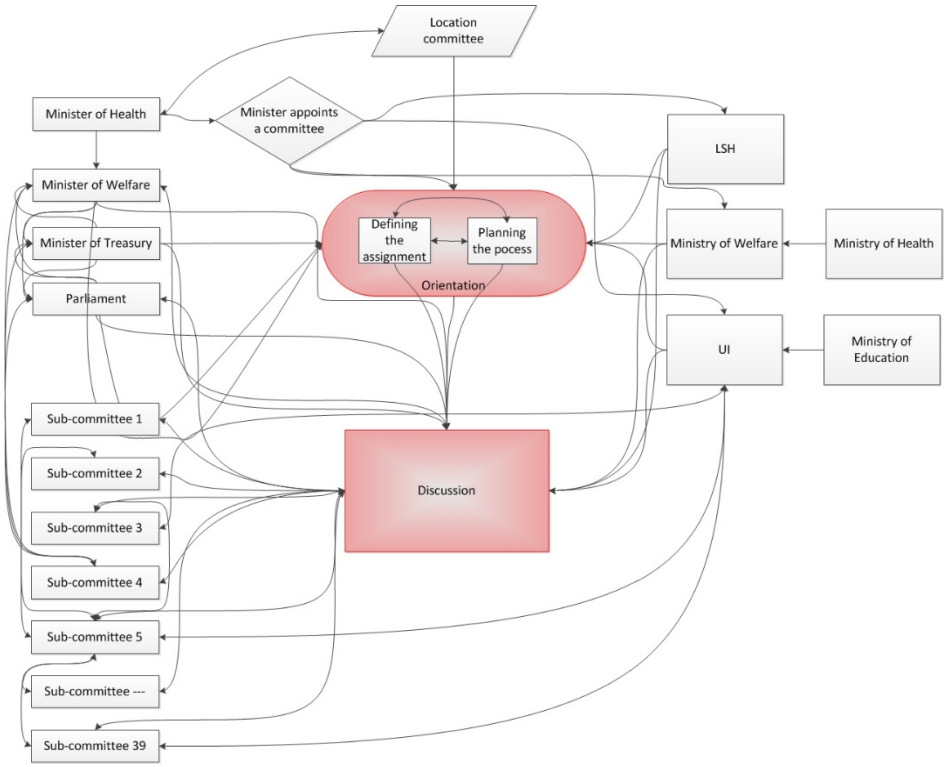

Figure 5 - The complexity of the 2004-2006 committee process

Apart from the fact of the complexity, another factor is clear: the committee is just doing part of the whole decision making process, namely only the Orientation and the Discussion phases. The Observation phase, which will be addressed later in this article, partly took place in a 2002 – 2004 committee, another part came from the University of Iceland and still another part form the Ministry of Health. The concluding phases in the decision making process where not on the agenda of 2004 - 2006 committee, as the results and suggestions from the committee were sent to the Ministry of Health and from there to the Icelandic parliament. There, the Decision phase should take place.

It is clear that the committee and all it sub-committees and focus-groups were doing their job according to the description they were asked to follow by the Ministry of Health (Gunnarsson, o.fl., 2008). This method, using just two of the phases, is clearly a deviation from a consistent flow of the decision making process, as Forsyth proposes. How much this affects the outcome of the committee or the quality of its work is hard to say. On the other hand, it shows how fragmented the whole process has been and when the changes in the government and parliament are added to the picture it could be hard to hold the course to a set goal.

When compared to Vrooms decision making style, it can be said that it more or less follows his model (GII); the leader (Minister of Health) delegates part of his complex and technical decision making process to specialists and forms his decision on the outcome from his decision making group (the committee). However it is not clear from the documents if that was a conscious decision based on a theory or if it is simply the way it shall be done in the governmental administration.

Back to the Decision itself; for whole seven years no decision was made and it was not until on the last day of the parliament this winter (2012/2013) that it was decided to carry on. Well, not completely! One of the political parties in the opposition insisted there should be a clause in the legislation for the NLSH project. This clause states that the project should not start until after the 30th of September 2013. It is, therefore, not clear at this moment (May 2013) if the construction project of the new hospital will start this autumn or not.

A question remains; if we assume that the committee was doing an acceptable job, why is it then so hard to get this project started? Consequently, if it is hard to find a fault in the work done by the 2004-2006 committee, another question arises; could it be that the prerequisites for the committee were flawed? It is therefore necessary to look at what material the committee got to work with and where it came from. First of all, it got the outcome from another committee (effective 2002-2004) which sole purpose was to evaluate the location for the new hospital (Pálmadóttir, Þórisson, Pétursson, Skúlason, & Haraldsdóttir, 2002). The committee had also a report done by the Danish consulting firm Ementor, on population forecast and change in age distribution and finally, an evaluation from the hospital itself of the current situation. Added to these documents are then the requirements of the University of Iceland (UI).

4. RESEARCH RESULTS

The actual observation phase for the 2004-2006 committee occurred before it began its course. The committee got handed down decisions like the location of the new hospital, that there should be just one hospital and estimates of superior efficiency of operating the new hospital. In the observation can been found factors that are questionable to take in account, for instance that the hospital is situated near the Reykjavík airport, even though there are plans to close the airport in 2024. This and other statement, hint at implicit favorite. Mapping of the decision process of the committee, shows the complexity of the process as displayed in figures 5 and 6. This support the suggestion, that using

tools like the Forsyth model (see 2.3) could be useful to constrain a scope creep, for example, of such a difficult projects.

4.1 The initial observation phase

It is clear, when reading through the reports and papers published before the 2004 – 2006 committee started, that very soon an opinion emerges, that the NLSH should be in one place. It is also apparent very early on that the UI wanted to be a great part of this new and technical hospital. Based on these two conditions, the 2002 – 2004 committee concludes that the best location for the hospital would be where the old Landspítali is. It is as if the only alternative that was looked into was the location of the hospital. It cannot be seen from the documents available from the NLSH site that any other alternatives were looked into. It is insisted, in these reports, that the operating and the economic efficiency would be so much greater with the hospital at one location, that it ruled out all other possibilities. It seems like the only arguments taken into account are the financial ones; how much savings could be gained. One of the missing arguments is for example the security of having another big hospital in the Greater Reykjavík region, a hospital that could serve as a redundancy hospital for the other one. From the patients point of view that could easily be a valid and valuable argument.

The argument of the benefits of the closeness of the UI and the NLSH is valid. It does however not rule out the existence of another hospital. There is nothing regarding an existence of another hospital that eliminates the UI plans of future development at Hringbraut road. There have been concerns about the traffic from and to NLSH and UI. The only answers given by the NLSH is that they plan to change the habit of their employees as to how they travel to and from work. Noble intention, but it must be questioned if it is realistic. They also insist that if they would not build the new hospital at Hringbraut road, other buildings will be built there, with associated traffic. That could be right, but that traffic could easily go away from the city center during the rush hours instead of heading towards the city center. Future development of residential buildings in the Greater Reykjavík area is aimed to be further away from the city center which will in the future lead to even more problems with the efficiency of the street network leading towards the hospital.

4.2 Signs of an Implicit Favorite

The city airport has also been mentioned as playing a big role in the location planning for the NLSH, even though there is no agreement for the location of the airport after 2024. On the contrary, the city of Reykjavík wants to close down the airport in Vatnsmýri. The distance from the Reykjavík airport to Borgarspítali hospital is not much greater than to Hringbraut road. It is therefore not unreasonable to say that both hospitals could easily serve as ER's for ambulance flight. On the other hand, the access to Borgarspítali hospital is better for flights landing at Keflavik airport, or at Hólmsheiði, where city of Reykjavík wants a new airport to be built instead of the one in Vatnsmýri.

The cost saving, for the new hospital, is expected to be around 2,5 Billion ISK (Einarsdóttir, Guðnason, & Ásmundsson, 2008). It is hard to see how this amount is going to hold as there must be a great uncertainty regarding the operating cost of the new hospital, both the buildings and the high tech equipment that are planned to be installed there. One major number is also missing in the calculation and that is the construction expenses. It is stated again and again by the NLSH administration that this cost will be much less than the expected savings. This is simply wrong! The cost for the whole construction is estimated to be around 70 Billion ISK. If using NLSH own

assumption that the interest rate will be around 4% annually, the installment and interest will be around 3 Million ISK for forty years, for an annuity loan. However, the amount of 70 Billion has been seriously doubted, for example by Þórður Víkingur, professor at the University of Reykjavík. He has estimated that the cost could be up to 70% higher. He gets this number by comparing the initial estimated costs of other governmental projects with the final costs of these same projects, over long period of time. If that will be the case then the annual cost for the whole project will rise to 5 Billion ISK, which is double the estimated savings.

Here the prerequisites have been stated as they can be found in the NLSH documents. It should therefore be safe to determine that no other alternatives were looked at or any other research conducted. The only option considered regarding the future hospital was the location for it, but not if it would be wiser to run it at two locations. Of all the analyses and researches done in the preparation for the NLSH, there can be no documents found, or any other information, that the customers, that is to say the future patients and their relatives, have been asked. It wasn't even tried to find out what the customers value most in their health service. It is as it had slipped the minds of all the focus groups and all the committees, the simple fact that if there were no patients, then there wouldn't be any hospital. In Iceland there are at least thirty two patients organizations or groups, for instance FAAS, MND and SÍBS, just to name few of them. Of the 250 or so members of these focus-groups for the 2004 – 2006 committee, it cannot be seen that any of these patient organizations had a representative in the focus- or needs-groups! (Gunnarsson, o.fl., 2008)

These bits and pieces can point to an implicit favorite. It is not the purpose of this article to proof this but as the telltale signs point in this direction, it is evaluated that this hunch should not be overlooked. It could be interesting to do further studies of this. Especially as these facts were handed down as prerequisites for the 2004-2006 committee for their decision making process.

4.3 The use of the Decision Making Tools

As the flowchart of the complexity of the actual process of the decision making process for the NLSH shows (figure 5), the degree of complexity of this process is very high. The Functional Model draws this complexity out and it is helpful to use it to see the whole picture. The Functional Model aims at clarifying and making a framework for a decision making process in a fashion for the whole process is descriptive and effective. The various phases should be carefully carried out and finished before the next phase and the output (handovers) from each phase to the next one should be elaborated in a valuable way to make the work in the next phase meaningful and effective. In the NLSH instance it shows clearly how various phases of the decision making process are torn apart to such a degree that it is like they are not connected at all. H. Simons puts a great weight on the Observation stage (he names it "intelligence"). He proclaims that the quality of the final decision rests on the thoroughness and accuracy of the Observation phase. In the NLSH instance the Observation phase is somewhat vague and the boundaries for the initial Observation phase and the Orientation phase are not clear. For instance, it is not clear if the work of the 2002 – 2004 committee was an Observation phase for the 2004 – 2006 committee or if was it a preliminary Orientation phase of the latter committee. The Discussion phase of the 2004 – 2006 committee then somehow grows and expands, with threads to great number of sub-committees. It is actually so overwhelming in the whole process that it dwarfs the preceding phases. The Forsyth Functional Decision Making Model clearly shows this and if the work and effort of the first three phases are shown

proportionally (Figure 6 - not scientifically accurate though) it is obvious that the bulk of the work happened in the Discussion phase. This indicates a scope creep of this phase.

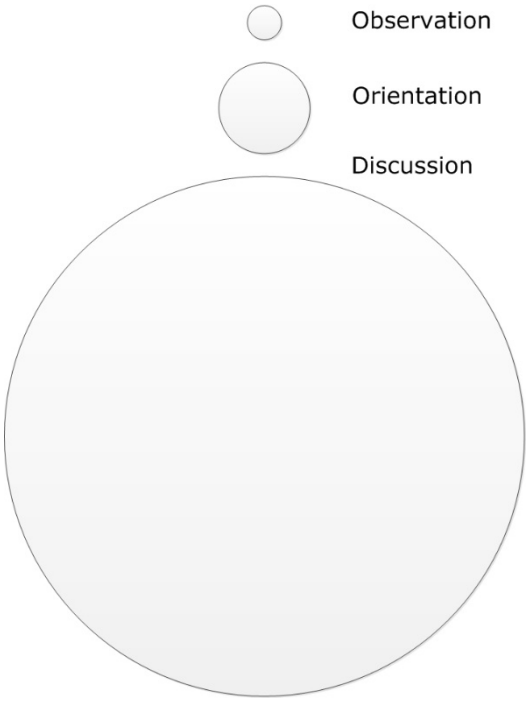

Figure 6 - Phases proportion

The Functional Model can be an effective tool in keeping the whole process on track. As it expects each phase to be clearly finished before the next one starts, it makes the accountability of those who are responsible for the handovers, from one phase to another, greater. It also insists the handovers to be comprehensible to the degree that in the next phase there should be little or no necessity to redo the work done in the former phases. However, the model expects use of iteration as a norm of the whole process. As the model is a framework for the whole decision making process, it postulates that the process should be a distinct project. In the NLSH case this is hard to see as there are at least three committees that seem to work in an isolated zone, one after the other, with an uncertainty of the flow of the whole process. The process becomes therefore fragmented and the responsibility of the handover and the follow up becomes unclear and, furthermore, a useful iteration becomes very difficult. The Functional Model could thus be a helpful tool in the way of looking at each phase as a part of the same process and hence in a context with the work done in the other phases. The Model should also be helpful in seeing if a scope creep is taking place by drawing a flowchart that maps all the processes that are taking place. If the complexity starts getting so great that this flowchart becomes incomprehensible it could indicate that scope creep is taking place.

5. **Conclusion**

It should not be a surprise that the NLSH project is a complicated and complex one. Just looking at the decision making process reveals that and the scale of the whole project emphasizes that even further. There are though few facts that this little study does underline. The first thing that comes to mind is how erratic the whole process has been. The flow in the overall process is uneven and there is somewhat a lack of consistency in the responsibility through the whole decision making process. There have been three committees functioning throughout the process, up to the decision making itself, which is in the hands of the Parliament. None of the committee members have been in more than one committee. This means that there is no personal follow up from one committee to another. Moreover, there have been three general elections and four governments, over the period, and even more numerous Ministers of Health, or Minister of Welfare as it is called today. When a committee has handed over their work their job is done. Even though this is so, it seems like the later committees rely greatly on the outcome of former committees and do not question their outcome or perform any iteration. For example, it cannot be seen that the 2004 – 2006 committee doubts the conclusion of the 2000 location committee. This fragmented process means also that those who have decided something, somewhere in the process, do not follow their decision through, as new people have taken their place in the decision making process. To complicate things even further, the final say is in the hand of the politicians. This simply means that even

though all the committees are in total agreement and their conclusions are in line with one another, the politicians are not bound by the outcome of the committees and can simply axe the whole project if they want to.

6. ACKNOWLEDGEMENT

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