Woo can tell me what I'm looking for?

"An in-depth study on the Information Search Process that is part of Freedom of Information request handling at Ministries of the Dutch National Government"

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TU Delft

Woo can tell me what I'm looking for?

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Acknowledgments

Dear reader,

With this thesis, I conclude the Master Complex Systems Engineering & Management at the TU Delft and my time as a student. I look back on that time with a smile upon my face and can truthfully say that I have learned a lot, both inside and outside of the university's buildings.

This research was performed in combination with an internship within the team of the Government Commissioner Information Management at the Ministry of the Interior and Kingdom Relations. This has allowed me to directly observe the hard work that some people provide day in and day out for Dutch citizens. The effort that many civil servants put into the facilitation of a more open and transparent government is inspirational. The times during which this thesis was written has seen the rise of citizens' distrust towards their government as the world deals with immense crises such as war and climate change. Therefore, I hope that the findings of this research can contribute to even the slightest improvement in citizens' trust in their government. I feel that only with this trust the government shall be able to face these crises together with its citizens.

At times I was baffled by the complexity of my research subject, struggling to keep an overview of the many interrelations and influences I found in the seemingly simple Woo-request information search process. Luckily, the skills I have learned during my bachelor of Mechanical Engineering, and the CoSEM master program, have allowed me to deal with this complexity. However, it could not have done all this alone, which is why I would like to thank a number of people.

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Enjoy reading,

K. (Kees) Keulemans
Amsterdam, November 2022

Executive Summary

The "Wet open overheid" or Woo is a law that facilitates access to government information for Dutch citizens and states that *"everyone has the right to access government information without having to show an interest in it, subject to the limitations provided for by this law."* This law is the Dutch embodiment of a Freedom of Information (FOI) Act. Facilitating citizens with access to government information is an essential promotor of an open and democratic society. Furthermore, it allows citizens to hold their governments accountable for their actions and make informed political decisions. The proper execution of this right to government information is essential, however, it was found that processing the information requests directed to Ministries of the Dutch Government takes an average of 161 days, where the law states a maximum handling term of 42 days. This delay impedes the citizens' access to government information and should be addressed. While previous research has been performed towards improving "Woo-request processing," there is little known about the process itself, nor what the direct causes of delay are. Information management is suggested as a possible culprit. Yet, there is little known about its effects, which are likely to be noticeable in the information search process (ISP) that is part of Woo-request processing. Therefore, the objective of this research is to identify how the existing Woo-request ISP is executed at Ministries of the Dutch National Government and what influences it in order to define improvements for said process in relation to its facilitation of an open and transparent government.

The main research question posed to achieve the research objective is as follows: *What information search process strategies can improve the Woo-request handling process of Ministries of the Dutch National Government for Woo-requestors?* In order to answer this question, it is important to identify how the process is currently executed and what influences shape the process. As a basis for this research, a literature review is performed that provides this research with background information on FOI-requests and Information Search Process Models. Based on this literature review, two models are used to create an ISP analysis framework that is suitable for the analysis of the Woo-request ISP. These models are the Big Six Skills model by Brand-Gruwel et al. (2012) and Marchionini's ISP model (1996). The first of these models presents what skills are required to perform a successful information search, whereas the second shows what steps are taken in an ISP that takes place in electronic environments.

With use of the ISP analysis framework, the *embedded single case study* approach is employed to analyze the Woo-request ISP of individual ministries of the Dutch National Government. This case study employs desk research on previous Woo-request ISP research and guidelines, followed by semi-structured interviews conducted with employees from different ministries of the Dutch National Government. This case study analysis provides an overview of the Woo-request ISP that is generalized for Ministries of the Dutch National Government, showing that there are three main phases to be identified in the process. The first phase is that of the Woo-request *reception and interpretation phase*, where the initial request is interpreted in order to define a search task. Once this interpretation is finished, the second phase is started, the *information locating phase*. Two locating strategies are observed. Of which the first strategy is named the *organizational search strategy* (OSS), which makes use of the human knowledge (content experts) in the organization in order to locate and select information relevant to the request. The second strategy is called the *centralized search strategy* (CSS), where a centralized

search tool is used that is connected to multiple information sources, performing a metadata-based search. After this information locating phase, the third phase of *information evaluation* is started. For the CSS, a relevance judgment is made of all search results provided by the search tool. This relevance judgment is inherently present in the OSS, as the content expert selects the information deemed relevant to the request based on its knowledge of the information's contents. After the set of relevant information is composed, it is checked for completeness, and if found to be incomplete, a new search for the missing information is started. In order to identify what is defined as a negative influence, it is important to state what the Woo-request ISP process goals are, which were identified as *speed, completeness (of information set), and traceability of the search process.* The influences identified to create strong dependencies within the process are *the scope of the request, interpretation of the request, metadata quality and fit, insufficient authorization/access, judgment of information relevance and completeness, and the requestor's cooperation and trust.*

These influences were used as input for the *problem-centered expert interviews*. The semi-structured interviews consulted experts with different backgrounds related to the Woo-request ISP, asking them to define strategies to resolve the negative influences identified. It was found through these interviews that the three main improvement themes related to *increased interaction between requestor and handler, facilitation of iterative learning for the requestor in the Woo-request handling process, and lastly, the search methods used for locating information.* These improvement themes were then evaluated during a *focus group discussion* in which experienced Woo-requestors participated. The most important finding of this focus-group discussion is that the participants showed a strong feeling of distrust towards the handlers of their request. Therefore, providing the Woo-requestor with more insight and control of the search process and a selection of the relevant search results was found to be most beneficial for the improvement of the process for the Woo-requestor. Additionally, according to the focus group participants, the information locating stage should operate in such a way that completeness is guaranteed.

This research concludes that the Woo-request ISP is a complex process that is influenced by many factors. Whereas the ISP described by academic literature portrays multiple iterative steps, the Woo-request ISP *hardly portrays any iterative steps* in relation to an improved definition and understanding of the information problem. As a result, the requestor cannot learn from the search itself and the information found throughout it. Combined with a possible lack of prerequisite knowledge of the requestor, this means that requests are likely to remain broadly defined and vague due to a fear of missing out on information caused by the requestor's distrust. Therefore, this research suggests that through *increased informative interaction* between the requestor and the handler, supported by search and content experts, specification of the requests should be facilitated, which is expected to improve the search process. This also builds a relationship of *trust* between the parties involved, which is expected to increase the chance of a *requestor's cooperation*. Furthermore, the Woo-request ISP as it is does not guarantee completeness nor traceability of the search performed. Therefore it is suggested that the information locating phase makes use of a *metadata-based centralized search tool* that is operated by experienced and trained personnel who are able to access all information applicable to the Woo. However, providing access to all this information should not be taken lightly and is bound to face *resistance from within the government*. The Dutch government will have to consider whether that is how far they are willing to go to facilitate an open and transparent

government. Lastly, it is found that a metadata-based search will still rely on the quality of the metadata, which should therefore be enhanced by automated metadata generation.

Whilst the suggested improvements are likely to have a positive influence on the existing process; there are large hurdles to be overcome. It must be noted that some problems or dependencies might in fact never be overcome. For example, the realization of a centrally accessible archive might never see the day of light, as it conflicts with government tasks and values other than openness and transparency. Additionally, it must be noted that the existing *"document definition"* used by the Dutch government is incredibly broad. This broad definition encases that if the government is to adhere to its laws, almost all currently produced information must be searchable by Woo-request handlers. Especially in a government where a policy rarely stands on its own, it can be challenging to define the end of relevance to a request. Lastly, it must be noted that some requestors might never be pleased with the outcomes of their Woo-request.

The *scientific contributions* of this research stem from the fact that FOI is typically analyzed as a law and legal discourse, causing academic literature to lack in-depth knowledge on the processing of FOI-requests and the operationalization's effect on its outcomes. By performing an in-depth analysis of one of the process steps of the FOI operation, this research reflects on the influence and limitations that the operationalization of FOI has on the higher-level goals of an open and transparent government that it aims to facilitate. The *societal contribution* of this research focuses upon the improvements that are recommended for ministries of the Dutch National Government in order to improve the Woo-request ISP. This can provide improved accessibility of government information for citizens and contributes to a more open and transparent government. Lastly, this research can serve as a critical reflection on the commitment required from a government and its civil servants to operationalize that open and transparent government together with its citizens.

One of the limitations of this research is that it is mainly focused on the Woo-request ISP process, whilst there are more parts of this process of which its exact functioning and influence are still unclear. It is recommended that the exact operation of these other parts, such as the redacting and approval phases, are also analyzed in order to see what can be improved here. Furthermore, active monitoring of Woo-request processes is recommended in order to be able to actively manage the process, as is not possible in the existing situation. Lastly, the influence of the operationalization of government openness and transparency, as well as the information as a facilitator of citizens' trust, are interesting notions that should be further explored.

Table of Contents

List of Figures

List of Tables

Glossary

AZ	Ministry of General Affairs
BZ	Ministry of Foreign Affairs
BZK	Ministry of the Interior and Kingdom Affairs
CSS	Centralized search strategy
DEF	Ministry of Defence
DMS	Document Management System
EZK	Ministry of Economics and Climate Policy
FGD	Focus group discussion
FIN	Ministry of Finance
FOI	Freedom of Information
I&W	Ministry of Infrastructure and Water Management
IO&E	Inspectie Overheidsinformatie & Erfgoed
IS	Information System
ISP	Information Search Process
J&V	Ministry of Justice and Security
LNV	Ministry of Agriculture, Nature and Food Quality
LR	Literature review
MRQ	Main research question
OCW	Ministry of Education, Culture and Science
OSS	Organizational search strategy
PCEI	Problem-centered expert interview
RDDI	Rijksprogramma voor Duurzame Digitale Informatiehuishouding
SQ	Sub-question
SSI	Semi-structured interview
SZW	Ministry of Social Affairs and Employment
TCA	Tax and Customs Administration
VWS	Ministry of Health, Welfare and Sport
Wob	Wet openbaarheid van bestuur
Woo	Wet open overheid

Chapter 1 - Introduction

This introductory chapter sets out the goal for the research performed as well as its scope. It provides an overview of the context and the motivation for this research in section 1.1., after which the knowledge gaps are presented in section 1.2. The problem statement identified from the context, combined with the knowledge gaps, provides the research scope in section 1.3., elaborating on the research objective and the research questions created to achieve this objective. This section finally concludes on the societal relevance of this study, after which section 1.4. presents the reading guide for this thesis.

1.1. Context

In recent years, several scandals have plagued Dutch politics, causing the public to question the integrity of Dutch politicians, forcing some of them to resign or even forcing the entire Cabinet to resign. Scandals such as the "Teeven deal," in which a multi-million guilders deal was made with an alleged drug dealer without the parliament being fully informed of the amount that was transferred (RTL Nieuws, 2017). Or the Toeslagenaffaire, which drove thousands of parents into financial hardship and has even caused children to be placed out of their homes (Hederscheê, 2021; Parlementaire Ondervragingscommissie Kinderopvangtoeslag, 2020; Rijksoverheid, 2021). A more recent affair was the "Mondkapjesdeal," where van der Lynden secretly made a multi-million euro profit by offering to supply much-needed face masks in the Covid-19 crisis, which involved the Minister of Health at that time (Redactie Trouw, 2022). Lastly, the most recent scandal is prime-minister Mark Rutte's practice of removing text messages from his phone, only archiving the ones he deemed most relevant, a practice that was found to be unlawful by legal experts (Volkskrant, 2022).

All these scandals have in common that essential information was not immediately available to the public or parliament. This critical information was acquired via what was called a "Wob-request." Such a request allows citizens to ask for government information based upon the "Wet openbaarheid van bestuur" or Wob (Dutch Government Publicity Act). With the Wob entering into force in the 1980s, the Netherlands was a leading country in the field of transparency and open government (Tweede Kamer der Staten-Generaal, 2012). Since that year, many other countries across the globe, from South Africa to China and even various post-communist countries, have adopted Freedom of Information (FOI) Acts (Luscombe & Walby, 2017). These acts facilitate citizens' right to request information from their governments and are a type of "open government initiative" (Luscombe & Walby, 2017). This FOI movement ought to be crucial for the proper functioning of a democracy, as a democracy should not endure secrecy which hinders citizens from making well-informed choices (Tweede Kamer der Staten-Generaal, 2012). Whilst the Netherlands was a guiding country in 1980; it has fallen behind on FOI law developments, leading to the revision of the Wob. Therefore, on May 1st, 2022, a new law was instated to replace the Wob, called the "Wet open overheid" or Woo (Open Government Law). This Woo aimed to revive the once-open government of the Netherlands with additional legislation on the active publication of government information. In contrast, the Wob focused solely on the passive publication of government information.

Passive publication of government information starts with what academic literature describes as a "Freedom of Information (FOI) request." In the Netherlands, this is nowadays called a

"Woo-request."[1] These are the same requests that were able to provide the citizens or journalists with additional information on the previously mentioned scandals. The Woo states that "everyone has the right to access government information without having to show an interest in it, subject to the limitations provided for by this law" (art 1.1. Wet open overheid). With that, the Woo gives every citizen access to government information within their interest via a "Woo-request," unless there is a legal reason for which it cannot be provided. This information provided to the public via FOI requests promotes an open and democratic society in which citizens can hold the government accountable for their actions and make informed political decisions (Carter & Stratton, 2021). Therefore, proper functioning of this means is crucial towards establishing government transparency and accountability, and in the end, citizens' trust in their government.

For handling Woo-requests, a maximum handling term is dictated to ensure citizens are provided with timely answers to their requests. For its predecessor, the Wob, this term was eight weeks. However, in January 2022, the report "Unbearably Slow" was published by the Open State Foundation and the IMI, which brought to light the slow processing times of Wob-requests (Open State Foundation & Instituut Maatschappelijke Innovatie, 2022). The Open State Foundation (2022) reports that the average duration over the measured period of time was 161 days, which excluded Covid-19 related requests, which assumingly take longer to process than said average. Over this period from October 2020 until September 2021, the maximum handling term of a Woo-request was exceeded in over 80% of the cases, making it harder for citizens and investigative journalists to obtain their requested information in time, and exercise their right to government information. With the arrival of the Woo, an even shorter maximum handling term is dictated. Now, an information request needs to be handled by the government within four weeks, with a possible prolongation of to weeks, bringing the maximum total to six weeks instead of eight.

An essential part of Woo-request processing is for the government body to search for the requested information. This information search process takes place within a digital environment as the Dutch government has undergone a digitalization process. In the relatively early stages of the Dutch government's digitalization process (2005), the concept of a "dementing government" was mentioned in a report by the State Archives Inspectorate (2005). The report stated that a hole was being created in our collective memory due to the uncareful digital information storage, causing issues for generations after the current. The IO&E once more reported on "the dementing government 2.0" in the year 2021, stating that the current digital landscape still creates additional risks that could potentially block the transparency and reliability of the government (Inspectie Overheidsinformatie en Erfgoed, 2021). In this report, the IO&E (2021) reflects on the increased pace of digitalization, the changing landscape of information storage, and the increased importance of timely, reliable, and complete information provided to serve a society of critics, for example via FOI requests (Inspectie Overheidsinformatie en Erfgoed, 2021).

Based upon the delays that were quantified by the work of the Open State Foundation & IMI (2022) and the notion of a dementing government, an interest in the possible improvement of the information search process as part of Woo-request processing was sparked.

[1] Previously Wob-request

1.2. Knowledge Gaps

As part of this research, both academic and grey literature was consulted, which served as a basis for the research on the Woo-request information search process. It has also allowed for the identification of *knowledge gaps* that are addressed in this research. First of all, the identified previous research that has been performed on Woo-request processing at the Dutch National Government takes a quantitative approach to portray the problems with respect to the delayed publication of Woo-requests. The report "Unbearably Slow" analyzes the number of days the processing of a Woo-request takes and the number of documents that are delivered but does not provide an insight into the execution of Woo-request handling (Open State Foundation & Instituut Maatschappelijke Innovatie, 2022). Due to the lack of insight into the process itself, it is currently challenging to point out specific causes for the delay in the processing times that have been identified. Another recent report on Woo-request processes at the Dutch National Government is the research of IMI & Berenschot (2021). It performs qualitative research and has investigated what information management practices can contribute to improved processing of Woo-requests. But it lacks an in-depth view of how the Woo-request handling process is executed. Furthermore, the report of IMI & Berenschot (2021) states that improved information management[2] can contribute to an improved Woo-request handling process. The report poses that, amongst others, the information search process could benefit from "good information management practices," yet it does not identify the leading causes of delay or how the information search process is performed. The following knowledge gaps related to the information search process that is part of Woo-request handling are identified:

- *No direct causes for the delays within the Woo-request handling process are identified, making it difficult to explain how identified solutions can contribute to improving the information search process.*
- *There is a lack of qualitative research on the Woo-request handling process that provides insight into the workings of the Woo-request processing at Ministries of the Dutch National Government.*

The last knowledge gap refers to the perspective applied in the identified previous research on Woo-request handling at the Ministries of the Dutch National Government. This perspective bases its goal for the Woo-request handling process on the laws and norms for government openness and transparency. However, the influence of the operational capacity that is to facilitate these laws and norms is disregarded, identifying the last knowledge gap:

- *The identified literature mostly reasons from a judicial and normative perspective. In contrast, little is known about the influence of the operation on the facilitation of the prescribed laws and norms toward an open and transparent government.*

Based upon these identified knowledge gaps, the scope and objective of this thesis are described in the next section.

[2] Dutch: "informatiehuishouding"

1.3. Research Scope

This section elaborates on the scope of this thesis research performed on the *Woo-request information search process of Ministries of the Dutch National Government*. Based on the context that was provided, a problem statement is phrased in section 1.3.1. Hereupon, the scope of this research is presented in section 1.3.2, which also serves to direct the research questions that are explained in section 1.3.3.

1.3.1. Problem Statement

The Netherlands was once a leading country in government transparency and openness. But despite that, one of the citizens' most potent tools facilitating their right to request information from their governments is failing. This right was previously embedded in the Wet openbaarheid van bestuur, which the Wet open overheid has replaced, and can both be categorized as Freedom of Information (FOI) Acts (Luscombe & Walby, 2017). These laws are found to be crucial for the proper functioning of a democracy, as democracy should not endure secrecy that hinders citizens from making well-informed choices (Tweede Kamer der Staten-Generaal, 2012). The delay of Woo-request handling at the Ministries of the Dutch National Government impedes this right and hinders Dutch citizens from obtaining timely answers to their information requests (Open State Foundation & Instituut Maatschappelijke Innovatie, 2022).

1.3.2. Research Objective

Based upon the problem statement and the identified knowledge gaps, the objective of this research is: "*To identify how the existing Woo-request information search process is executed and what influences said process in order to define improvements for the Woo-request information search process.*"

1.3.3. Research Questions

To address the identified knowledge gaps and to ensure that the object of this research is achieved, this thesis answers the following main research question:

> ***MRQ:*** *What information search process strategies can improve the Woo-request handling process of Ministries of the Dutch National Government for Woo-requestors?*

The main research question explicitly mentions the improvement of the process, as merely accelerating it without taking other process goals into account can lead to the deterioration of the existing process. Furthermore, the main research question specifies an improvement for the Woo-requestor, as the information search process that is part of Woo-request handling aims to serve the requestor's legal right of access to government information. Subsequently, multiple sub-questions are phrased to provide a structured approach toward answering the main research question. The first research question is as follows:

> **SQ1:** *How is the existing information search process as part of Woo-request handling at the Ministries of the Dutch National Government executed?*

This research question is aimed at obtaining insight into the practices concerning the Woo-request ISP of the Dutch National Government. By first performing a literature review, a framework for the analysis of the ISP is created, and background information on FOI requests is obtained. The results of this literature review are presented in Chapter 3. Based on the

findings from the literature review, a case study is performed on the Woo-request ISP. The data for the case study is obtained from previous research and guidelines on Woo-request processing and conducting semi-structured interviews. These interviews are conducted with civil servants from different Ministries of the Dutch National Government, who are involved in various roles within the Woo-request ISP. This case study provides an answer to SQ1 and simultaneously answers the second sub-question, which analyzes what influences are found to affect the Woo-request ISP:

> **SQ2:** *What positive and negative influences shape the existing information search process as part of Woo-request handling at the Ministries of the Dutch National Government?*

Based upon the qualitative data that is obtained in the form of interview transcripts, qualitative data analysis is performed using coding frameworks in Atlas.ti. The deliverables of this analysis are both an answer to SQ1 in the form of a process flow diagram and an answer to SQ2, which is an overview of the influences on the process related to the process goals that are identified from the case study. Both deliverables on SQ1 & 2 are presented in Chapter 4. Having identified the influences on the process, these are then discussed during problem-centered expert interviews (PCEIs) that provide strategies for improvement of the Woo-request ISP. In doing so, it answers the next sub-question.

> **SQ3:** *What strategies can improve the existing information search process as part of Woo-request handling at the Ministries of the Dutch National Government?*

The transcripts that stem from the PCEIs are once more analyzed via qualitative data analysis. The strategies derived from this analysis are presented in Chapter 5 and reduced to a set of improvement themes. These themes serve as input for the final sub-question:

> **SQ4:** *What are the Woo-requestor's considerations on the envisioned strategies for Woo-request information search process improvement at the Ministries of the Dutch National Government?*

By applying the focus-group discussion research methodology, the improvement themes are discussed by a small focus group of experienced Woo-requestors, providing an insight into the Woo-requestors considerations concerning these strategies. The data obtained from the focus-group discussion is once more qualitative, which encases focus group discussion transcripts and assistant notes. This is then analyzed using a three-element coding framework, of which the findings are presented in Chapter 6. An overview of the research questions, methods, and deliverables is shown in Table 1 (p.6).

Table 1 – Research questions and their related data collection methods and deliverables

Research Question	Data Collection Methods Used	Deliverable
1. How is the existing information search process as part of Woo-request handling at the Ministries of the Dutch National Government executed?	Desk Research & Semi-Structured Interviews	Woo-request ISP Flow Diagram
2. What positive and negative influences shape the existing information search process as part of Woo-request handling at the Ministries of the Dutch National Government?	Desk Research & Semi-Structured Interviews	Overview of Woo-request ISP Influences
3. What strategies can improve the existing information search process as part of Woo-request handling at the Ministries of the Dutch National Government?	Problem-Centered Expert Interviews	Strategies & Solutions for Woo-request ISP improvement
4. What are the Woo-requestor's considerations on the envisioned strategies for Woo-request information search process improvement at the Ministries of the Dutch National Government?	Focus-Group Discussion	Woo-requestor's Considerations with respect to Woo-request ISP improvements

1.3.4. Societal Relevance of the Study

The context provided in section 1.1. attests that the existing Woo-request handling process exceeds the legal handling term (Open State Foundation & Instituut Maatschappelijke Innovatie, 2022). Due do this exceedance, citizens' access to government information is hindered. As this research sets out to find improvements for the Woo-request information search process, involving the acceleration of this process, it contributes to a positive revision of the existing situation. With an improved and accelerated procedure, the accessibility of government information is expected to increase, which can, in turn, contribute to a more open and transparent government. This type of government stimulates citizens' informed decision-making processes and citizens' ability to monitor the government's work, allowing the public to discover and act on discrepancies.

Not only the citizen might benefit from said improvements, but the government itself can also benefit. Since 2020, the Volkskrant (a Dutch newspaper) alone has filed almost 50 lawsuits against the Dutch government in order to obtain the information they had requested from the government (NOS, 2022). These lawsuits can result in a judge imposing a penalty on the government body for the delay or negligence in providing the information. One reporter of the Volkskrant claimed that it had received an estimated one hundred thousand euros from Dutch Ministries that did not adhere to its own laws (NOS, 2022). The improvements found by this research can contribute to a decrease in the number of times a handling term is exceeded, and it can contribute to a reduction in the number of lawsuits and penalties that need to be paid. Additionally, insight into the Woo-request ISP can facilitate a better understanding of the existing difficulties, stimulating potential furthere innovation aimed at improvement.

1.4. Reading Guide

Table 2 provides an outline of the thesis, which serves as a reading guide, showing the contents of each chapter and its objective and relation to the research questions posed.

Table 2 – Thesis Reading Guide

Chapter	Content	Description	Research Question
1	Introduction	Provides an introduction to the problem and knowledge gaps that are addressed in research, as well as the research scope, research questions, and societal relevance.	-
2	Research Design	Presents the research design taken on to answer the research questions. An explanation of each research method used is provided, as well as substantiation for that methodology. Additionally, the limitations of that method and the precautions to mediate the influence of these limitations.	-
3	Research Background	Provides a knowledge base for the research, based upon a literature review on ISP and FOI-requests. The frameworks used for the analysis of the Woo-request ISP are presented.	-
4	Case Study Analysis: the Woo-request ISP & Influences	The methodology and findings from the case study research are presented in this chapter. The Woo-request ISP is presented after which the influences that can hinder the existing process are analyzed.	**SQ 1 + SQ 2**
5	Problem-Centered Expert Interviews towards Woo-request ISP Improvement Strategies	The methodology and findings of the problem-centered expert interviews are presented in this chapter. The strategies that aim to improve the Woo-request ISP are analyzed, after which the chapter concludes with the presentation of the three improvement themes.	**SQ 3**
6	Focus Group Discussion on Woo-request ISP Improvement Strategies	The methodology and findings of the focus-group discussion are presented in this chapter. A discussion on the improvement themes from the Woo-requestors point of view is analyzed, after which the reflections of the researcher on this discussion are presented.	**SQ 4**
7	Discussion	A reflection on the results of all previous chapters is given, elaborating on the Woo-request ISP dependencies and improvement strategies related to increased informative interaction and facilitation of a complete and traceable search.	-
8	Conclusion	Addresses the research questions and presents the scientific and societal contributions, as well as the limitations of the study, directions for future research, and the link to the CoSEM master's program.	**MRQ**

Chapter 2 - Research Design

This chapter presents the research design that is created to answer the main research question. Section 2.1. of this chapter provides the research approach, elaborating on the methods used to answer the sub-research questions. The choices for these methods are explained, as well as the limitations of these methods and the preventive measures that aim to mediate these limitations. This chapter concludes with section 2.2. where an explanation of the interrelatedness of the research design is presented and visualized in a research flow diagram.

2.1. The Research Approach

The research takes on a qualitative approach, described as "*a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem*" (Creswell, 2014, p. 4), which suits the main research question. This qualitative approach is selected, because of its ability to deal with high levels of complexity, whereas quantitative approaches tend to reduce said complexity (Benbasat et al., 1987). This ability to deal with high levels of complexity ought to be suitable for this research since the problems observed are of a complex nature. Namely, the researcher has to analyze human behavior that, amongst others, involves interaction between others and information systems and is influenced by the institutional setting in which the search takes place. A reduction of complexity within this research could lead to overlooking potential problems or solutions. This research employs four research methods:

- *a literature review (section 2.1.1.);*
- *an embedded single case study (section 2.1.2.);*
- *problem-centered expert interviews (section 2.1.3.);*
- *and, a focus group discussion (section 2.1.4.).*

For (part of) the embedded single case study and the problem-centered expert interviews, data collection has been performed by conducting *semi-structured interviews (SSIs)*. The methods used to prepare and conduct these interviews are elaborated on in section 2.1.5. Furthermore, the data collected from the methods are of a qualitative textual nature. The method used for the *analysis of this qualitative data* is explained in section 2.1.6.

2.1.1. The Literature Review

The literature review serves as a well-structured overview of the literature available within the research area. Literature research allows the researcher to extract meaning from multiple sources, generating more substance and quality for the analysis performed later on (Onwuegbuzie et al., 2010). Moreover, it allows the researcher to identify knowledge and research gaps that can be addressed within the research at hand (Wee & Banister, 2016). The transparency and traceability features of literature reviews form an essential link to previous academic research. The first *goal of the literature review* that is performed is to observe what research has been conducted on Freedom of Information requests in relation to the search process. Furthermore, the literature review identifies models or frameworks from academic literature that facilitate a structured analysis of the information search process at hand. The latter allows this research to create a framework for the analysis of the Woo-request ISP in the embedded single case study.

Although the literature review is a suitable method to identify a sound knowledge base for further research and research gaps, it is crucial to be aware of the inherent flaws within this methodology and mediate the potential biases that arise. First, a literature review heavily relies on the sources available to the researcher. If the researcher is unaware of other literature available, a consequence is that this literature is left out of the research (Mallett et al., 2012). Therefore, the literature review that is conducted as part of this research searches and addresses multiple sources. Secondly, a selection bias might be present in the selection of results due to the researcher's potential bias in this qualitative methodology (Haddaway, 2020). This puts objectivity at risk due to human selection of relevant literature, which is to be mediated by clearly defined inclusion and exclusion criteria and a retraceable selection process (Mallett et al., 2012). Involving others in the process and evaluating the initial literature-based typology with experts in the field avoids the influence of these biases and guarantees completeness. Therefore, the supervisors of this thesis were asked to check the queries used in the literature review and the selected literature. The systematic procedure followed throughout the search for academic literature is presented at the start of Chapter 3.

2.1.2. The Embedded Single Case Study

After the literature review, this research moves on to conduct a case study. The problem at hand is that of a large and complex sociotechnical nature, for which the case study approach is found to be suitable according to the definition by Yin (2018, p. 45): *"a case study is an empirical method that investigates a contemporary phenomenon (the "case") in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident."* The *goal of this case study approach* is to answer SQ1 and 2, identifying and analyzing the existing Woo-request information search process as well as the influences on the process.

The type of case study approach applied in this research is the *embedded single case study*. The *context* of the single-case study is that of the "*Slow processing of Woo-requests at the Dutch National Government,"* for which *the case* is more specifically defined as the *information search process that is part of Woo-request handling at Ministries of the Dutch National Government*. The selected *embedded units of analysis* are the different *Ministries* within the given case and context, as depicted in Figure 1 (p.10). This selection of ministries as a definition of the embedded units of analysis stems from the notion of Ragin & Becker (1994), where formally defined objects, such as organizations, can serve as a definition for the unit of analysis. One of the criticisms of case study research is that it lacks rigor due to potential sloppiness or not adhering to systematic procedures (Flyvbjerg, 2006; Yin, 2018). In order to guarantee a systematic approach and prevent bias, data is obtained from two sources, grey literature and semi-structured interviews (section 2.1.5.). The grey literature focuses on analyzing previous research on Woo-request processing and guidelines for the process that serves as the basis for the case study interviews. The diversification of data sources is aligned with the idea of Benbasat et al. (1987), which states that case study research aims at investigating phenomena within their natural context by applying various methods of data collection (Herbst & Vom Brocke, 2012).

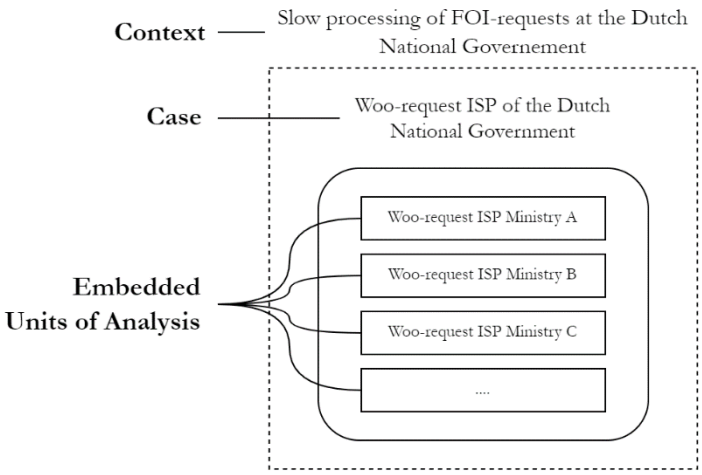

Figure 1 – Embedded single case study design

Due to the limitation of time, not all possible ministries are observed, which could introduce a sample bias, hindering the researcher from being able to generalize the results (Collier & Mahoney, 1996). Since this case study approach aims to describe the information search process used within the Ministries of the Dutch National Government, a sample bias poses a severe threat to the validity of the research outcomes (Flyvbjerg, 2006; Yin, 2018). The embedded units of analysis are selected based on Woo-request handling term performance described in the Open State Foundation & IMI report (2022) to minimize the risk of a sample bias. This selection includes relatively good, average, and bad performers in relation to the entire population of ministries.

Lastly, Crowe et al. (2011) note that it is important to consider the likely risks associated with participation for those who partake in the case study in advance of their involvement. The case study interviews discuss how the interviewees perform their jobs, which is regarded as sensitive data. Therefore, measures have been taken to minimalize the risk to the participants of this case study research by anonymizing the data derived from the interviews. The transcripts of the interviews in this research are therefore not publicly available but can be provided upon request, with the consent of the interview participants. The case study presented in Chapter 4 finally draws lessons from the individual units of analysis, composing a Woo-request information search process model and overview of the influences on the said process, representative for the Ministries of the Dutch National Government.

2.1.3. Problem-Centered Expert Interviews

After the case study, the influences that were identified in Chapter 4 are discussed during *problem-centered expert interviews (PCEIs).* The goal of these interviews is to identify possible strategies that can deal with the influences identified in the case study and answer SQ3 by finding Woo-request ISP improvement strategies. This method combines *problem-centered interview*s and *theory-generating expert interviews*, a combination that addresses a constructivist perspective that understands expert knowledge is not merely limited to the insights of science or disciplines (Döringer, 2021). It bears practical, local knowledge which emerges from professional and private experiences related to the Woo-request information search process (Döringer, 2021). Based upon the analysis of the Woo-request ISP and the influences, expert backgrounds are identified in Chapter 5. These backgrounds serve as a guideline for the recruitment of interview participants. Due to the expert's specific expertise in combination with their experience of the Woo-request ISP, it is judged that the PCEIs are also

a form of validation for the case study. The inherent limitation of this method is that a possible sample bias might occur due to a limited number of interview candidates. Furthermore, their expertise can inflict a large interviewee bias, as they reason from their personal experience and their viewpoint of what the Woo-request ISP should look like. It is therefore important to have a critical reflection on the posed strategies, which is why the improvement themes are evaluated in the focus-group discussion that follows the PCEIs (section 2.1.4.). The interviews are prepared according to the semi-structured interview approach that is presented in section 2.1.5. The data obtained from these interviews is analyzed according to the qualitative data analysis methodology described in section 2.1.6.

2.1.4. The Focus Group Discussion

The final research method that is used is the *focus group discussion* presented in Chapter 6. This method serves to answer SQ4 and obtain the Woo-requestor's considerations concerning the identified improvement themes for the Woo-request ISP. A focus group discussion is a qualitative approach that is frequently used to gain an in-depth understanding of social issues (Nyumba et al., 2018). As part of this method, data is obtained from a purposely selected group of individuals, being citizens of the Netherlands who have previously submitted Woo-requests to the Dutch National Government. Nyumba et al. (2018) present guidelines for the design of focus-group discussions, based upon which the focus group discussion is designed (section 6.1.). This method allows the researcher to obtain multiple opinions at once, which is beneficial due to the limited time available. Due to the limited size of the focus group, one cannot come to any conclusion on the representativeness of the answers provided. Yet, this focus group discussion offers an initial insight within the limited timeframe available to the researcher.

Morgan (1988) mentions that discussion and interactions within these groups also lead to better results than the sum of individual interviews. The focus group discussion was led by a short presentation of the research and the findings up until that point to provide the participants with sufficient background information on the research. After that point, the interactive part started, involving closed-answer questions gathering individual opinions, which also served as discussion themes. That way, throughout the session, both individual opinions are collected apart from the audio and video recordings of the group discussions. In doing so, the risk of *group speak* is limited as individual participants can anonymously provide their thoughts and answers (Nyumba et al., 2018). The recordings of the discussion are transcribed for them to be analyzed together with the ethnographic data that is recorded in the form of notes made by an assistant present during the meeting. This qualitative analysis is performed in line with the method presented in section 2.1.6.

2.1.5. Semi-Structured Interviews

As part of the embedded single case study, s*emi-structured interviews (SSIs)* are conducted, providing additional insight into the case study, as part of the case study interviews. Additionally, SSIs are performed as the data collection method for the problem-centered expert interviews that aim to obtain strategies for improvement of the identified Woo-request ISP. Semi-structured interviews can better use the knowledge-producing potentials of dialogues compared to structured interviews, as they allow for more leeway to follow up on angles deemed necessary by the interviewee (Leavy, 2014). Since little is known about the existing Woo-request ISP, the SSI method is considered the most suitable inquiry form. A disadvantage that could arise from using SSIs is that the sample size is likely to be limited due to limited resources in terms of interviewers and time (Acocella, 2012; Adams, 2015). An additional limitation of

this research method can be found in the influence of the researcher's bias in questions or interpretations (Dearnley, 2005). Therefore, it is essential to be aware of this potential bias and implement peer review steps before finalizing the initial interview questions. These steps are taken by discussing the interview protocol and questions regularly with the supervisors of this research.

According to Longhurst (2003), the design of semi-structured interviews is typically divided as *1. Formulating questions; 2. Selecting and Recruiting Participants; 3. Choosing a location; 4. Transcribing the data*. This build-up in terms of SSI design is adhered to and presented in section 4.2. (case study interviews) and section 5.1. (problem-centered expert interviews). All interviews were conducted through Microsoft Teams due to their recording and transcribing abilities. The data derived from the interviews are Dutch-spoken transcripts that are drawn from the automated transcript function in Microsoft Teams. While the interviews could have been conducted in English, it was chosen not to do to allow the interviewees to speak more freely in their native and professional language (Dutch). The often flawed transcripts were revised based on the interview recordings, after which these were translated to English, assuring that within the translation, little or no original meaning was lost. After transcription and translations, these transcripts were analyzed.

2.1.6. Qualitative Data Analysis

The data retrieved from the SSIs (case study & PCEIs) and the focus-group discussion are qualitative data in the form of interview and discussion transcripts that can be difficult to compare and draw a conclusion from (Gorden, 1998). Consequently, this data needs to be structured and evaluated to map the discussed search process, including the influences on said process. The textual analysis method has become easier with the invention of digital tools facilitating the analysis of qualitative data. "Atlas.ti" is a commonly used tool at Delft University of Technology and is therefore chosen as the preferred tool for this research. In preparation for the qualitative data analysis in Atlas.ti with the use of coding, the guidelines prescribed by Linneberg & Korsgaard (2019) were used. This coding methodology allows one to acquire deep insights into the data while providing a better overview of what is found to be relevant information.

In its most basic form, the *qualitative text analysis coding methodology* identifies segments of meaning within the data and labels them with a code (Linneberg & Korsgaard, 2019). The first step is to examine the research questions and objectives, providing literature and background information that substantiates the coding analysis. According to Linneberg & Korsgaard (2019), the next step is to decide whether an inductive or deductive coding approach is taken on. The *inductive approach* is described as deriving codes "directly" from the data that is found instead of deriving it from theory or the vocabulary of the researcher, that way staying close to the data (Linneberg & Korsgaard, 2019). This approach is practical when no theoretical concepts are immediately available to help you grasp the phenomenon that is being studied. Yet, in this research, theoretical knowledge is available based on the framework that was created to analyze ISPs, presented in Chapter 3. Furthermore, the output from the case study serves as input for the PCEIs, and the output from the PCEIs finally serves as input for the focus group discussion. This upfront availability of a theoretical framework can be used for a *deductive approach*, which implements coding according to a pre-defined list of codes in a so-called *coding framework*. Linneberg & Korsgaard (2019) mention that a sole focus on either the inductive or deductive approach can give in to the weaknesses of these approaches.

Therefore, *abduction* was adhered to for all data analyses, cycling back and forth between data and theory throughout the analysis process. This analysis builds from the initially available knowledge in the form of deductive coding, adding inductive coding per round. The coding frameworks are presented in section 4.2.4 for the embedded single case study interviews analysis, in section 5.1.3 for the problem-centered interview analysis, and finally in section 6.1.5 for the focus group discussion analysis.

For the focus group discussion, a "three-coding framework" (Morgan, 1988) is used to analyze the data, as recommended by the paper of Nyumba et al. (2018). The first part of creating said three-coding framework involves data coding of the transcript, in which initial coding takes place, creating numerous category codes without limiting the number of codes. In the second phase, focused coding takes place, in which the researcher eliminates, combines, or subdivides the coding categories identified in the first step. In this phase, attention is drawn to the recurring ideas and overarching themes that allow the researcher to connect the codes. Finally, the ethnographic analysis is included as part of the triple coding framework, which encases the observational data in the form of notes and links them to the previously coded transcript data. Combining the two allows for a deeper understanding of the qualitative data (Morgan, 1988; Nyumba et al., 2018).

2.2. Research Flow

The combination of the research methods described in the previous section can be divided into two parts. The first part encases the embedded single case study section (Chapter 4) that analyzes the Woo-request ISP and the influences on this process. The second part is an evaluation of this process and its influences via the PCEIs (Chapter 5) and FGD (Chapter 6). This twofold approach aims to improve the *transferability of the case study* to the broader context of Ministries of the Dutch National Government. The problem-centered expert interviews not only aim to create strategies for improving the Woo-request ISP but also serve as a reflection on the existing situation. In turn, the focus group discussion helps to verify and evaluate the envisioned improvements with its intended target group of Woo-requestors. The iterative and reflective nature of the research design strengthens its findings by observing multiple stakeholder perspectives. Lastly, it reduces the risk of potential biases present in the applied qualitative methods.

The steps taken throughout this research to answer the research questions and the interrelations of these steps are visualized in the Research Flow Diagram depicted in Figure 2 (p.1410).

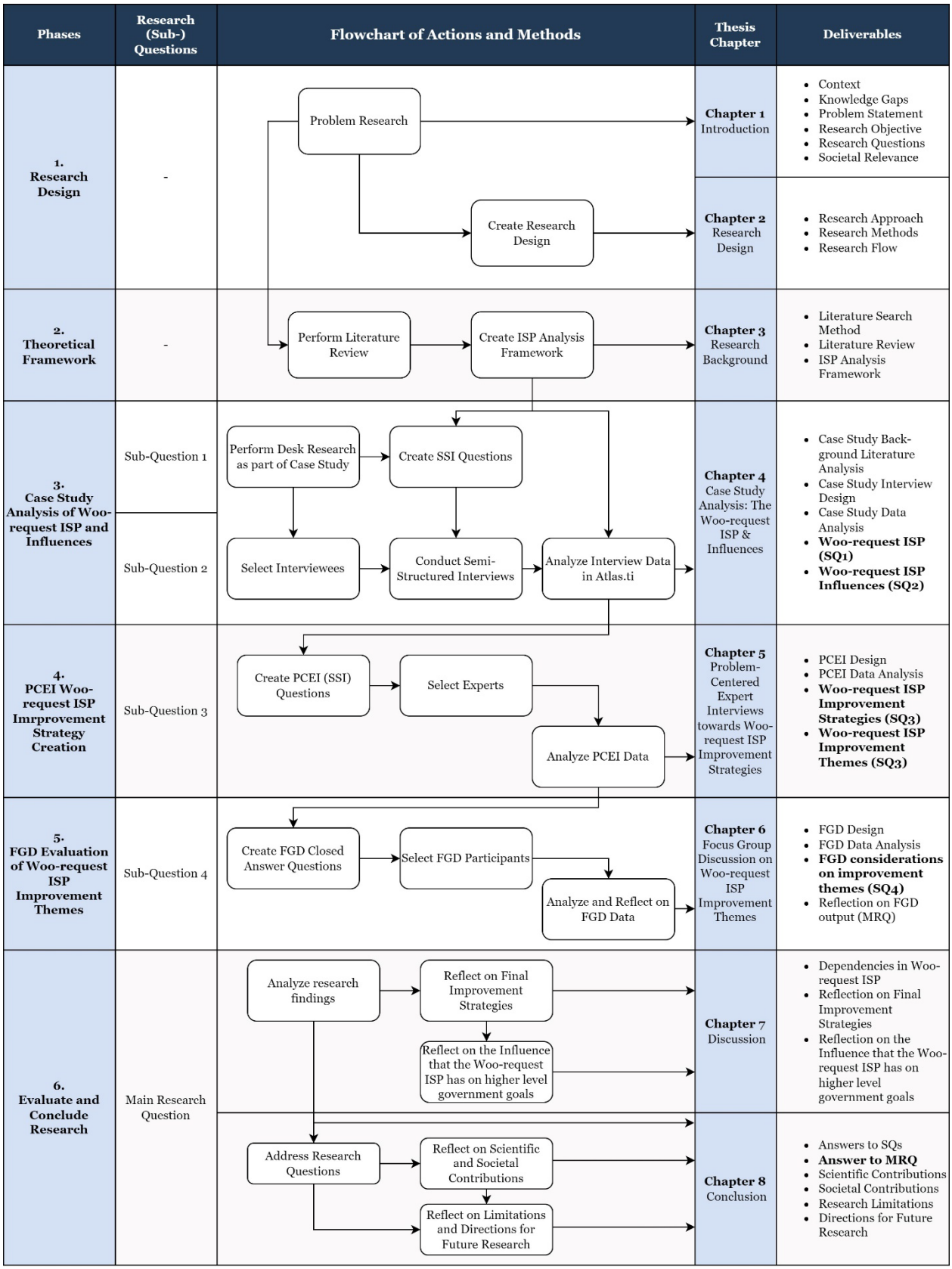

Figure 2 – Research Flow Diagram

Chapter 3 - Research Background

The goal of this chapter is to identify existing research on FOI requests as well as to identify information search literature that helps to understand and analyze the information search process of Woo-requests. In doing so, a literature review is performed on Freedom of Information (FOI) Requests as well as Information Search Processes (ISP). First, the method used for the literature review is presented in section 3.1. After that, the literature review findings are discussed per research field in section 3.2. (Freedom of Information Requests) & 3.3. (Information Search Process and Models). Lastly, section 3.4. presents the framework that was created for the Woo-request ISP analysis. This framework is based on the ISP models that were identified from the literature review, and it is applied in the case study analysis of Chapter 4.

3.1. The Literature Search Method

Two research themes are defined based on the previously identified problems and scope of the research presented in Chapter 1. The two themes are specified below:

1. Search processes or strategies for information retrieval and information systems
2. Freedom of information requests and information systems

The search themes are made more specific by adding the term "information systems" in order to focus on the FOI-request information search process in digital information systems. The information search process is expected to occur within digital information systems caused by the digitalization of our society and the Dutch government. This specification aims to reduce the number of possibly irrelevant and outdated literature that focuses on information searches within physical archives. The search query that was defined for the first research theme is the following:

> *(("information search strategy" OR "information search process" OR "information retrieval process") AND (ict OR "information system"))*

This search was performed in Scopus on the 28th of June, 2022. The selection criteria that were applied excluded emergency-related papers and papers that were not freely accessible. For the second research theme, the following search query was used in Scopus on the 15th of June, 2022:

> *("freedom of information request" AND (government OR "public sector") AND (ict OR "information system"))*

Due to the limited amount of results, the only exclusion criterium applied is that of accessibility. Both literature searches for the research themes are depicted in the PRISMA flowchart visible in Figure 3 (p.16). An overview of the selected articles is provided in Appendix A.

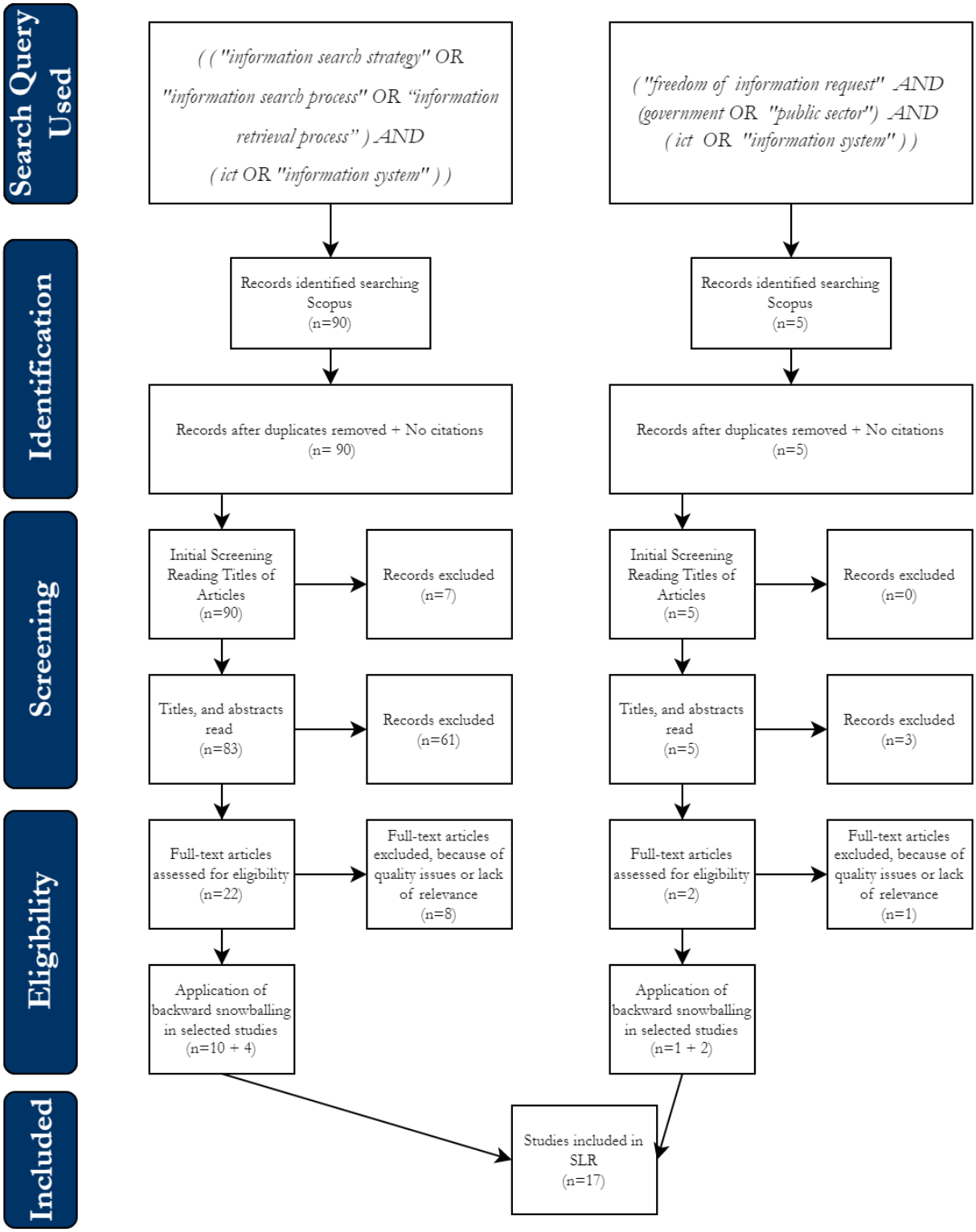

Figure 3 – PRISMA Systematic literature review flow chart

3.2. Freedom of Information Requests

The Woo can be categorized as a *Freedom of Information (FOI) Act*. FOI laws exist in over a hundred countries across the globe, the Woo just being one of them (Luscombe & Walby, 2017). FOI is generally discussed in relation to supporting democratic processes and making government actions visible to citizens (Carter & Stratton, 2021). The provision of government information is described as active when citizens do not have to ask for it and passive when citizens have to request it explicitly. Therefore, information provision via an *"FOI-request"* is identified as the passive counterpart of government transparency and information provision. With that, Woo-requests are the Dutch embodiment of FOI-requests and are a form of *passive information provision* from the government to its citizens. While FOI-requests play an important role in government oversight, it remains largely untheorized (Carter & Stratton, 2021). Additionally, Luscombe & Walby (2017) mention that FOI is often analyzed as a law and a legal discourse but that reflections on how to theorize FOI processes and their relation to state power and information are lacking in research.

When providing citizens with government information, that information needs to be retrieved from the archives, which in the modern day have become increasingly, if not fully, digitalized. The following definition for *information systems* is used, based upon the work of Steven Alter (2008): *"an information system (IS) is a work system whose processes and activities are devoted to processing information, that is, capturing, transmitting, storing, retrieving, manipulating, and displaying information"* (Kirikova et al., 2010, p. 171). The work of Carter & Stratton (2021) explores the influence of information systems on the mediating role they play in shaping and affording access to government records and how this influences FOI process outcomes. Luscombe and Walby (2017) mention several negative influences of digitalized information systems on FOI-request outcomes, such as *bad electronic records management, disclosure of information in "unworkable formats," and making digital records unsearchable.*

This influence also describes the element of power over information provision, which is brought up by the work of Swartz & Cook (2002), named "*Archives, records, and power: the making of modern memory."* The design of record-keeping systems presents enormous power over memory and identity and the fundamental ways in which society seeks evidence (Schwartz & Cook, 2002). Based upon this previous notion, the power of information selection as part of FOI-requests becomes more clear. Namely, obfuscation is identified as one of the potential frames for FOI-requests, where governments use the provision of information as a "veil of legitimacy for an illegitimate political system" (Luscombe & Walby, 2017, p. 381). This obfuscation frame for FOI is guided by normative ends such as state power and legitimacy, maintaining the status quo, and manufacturing consent. This is regarded as the most negative frame for FOI-request processing in terms of government transparency and accountability. Another frame for FOI presented by Luscombe & Walby (2017) is that of the *live archive*. Information for FOI-requests is drawn from this live archive which is also the civil servant's working environment. This frame is closely related to the statement that public memory and accountability start with the creation of these records (Schwartz & Cook, 2002). If citizens can obtain information from the "live archive," they can gain insight into real-time decision-making processes. This promotes norms such as accountability, transparency, open government, and institutional memory.

The live archive frame indicates that information-type and how it is stored influences the outcomes of the FOI-request processing. Consequently, making the stage in which information, or record, is produced influential. This record production involves the use of information

systems for production and retainment, which IS are later exerted for information retrieval as part of the information search process. Therefore, the production stage is included in Luscombe & Walby's (2017) overview of the FOI process, portrayed in Figure 4. This overview was composed by combining the findings of both Luscombe & Walby's (2017) paper and that of Carter & Stratton (2021). The negative influences stated in Luscombe & Walby (2017) within the information search process as part of FOI-request handling note that the processing can involve barriers, obfuscation, bargaining, contestations, and controversy. The latter means that in analyzing the information search process, it is essential to be aware of potential other influencing factors than the direct search influences.

3.3. The Information Search Process & Models

Kuhlthau (1991) is one of the earliest researchers of what she calls the *Information Search Process (ISP)* and has performed this research from the user's perspective. In the context of her research, the ISP is defined as:

> *"the user's constructive activity of finding meaning from information in order to extend his or her state of knowledge on a particular problem or topic"* (Kuhlthau, 1991, p. 361).

The information search starts with the user's problem, by which the gap between the user's knowledge about said problem or topic and what the user needs to know to solve the problem is meant. This is known as the user's *information need* (Kuhlthau, 1991). In *information seeking*, a distinction is made between different seeking modes, only one being considered as "searching" (Bates, 2002; Guthrie, 1988; Marchionini, 1996; Savolainen, 2016). The different

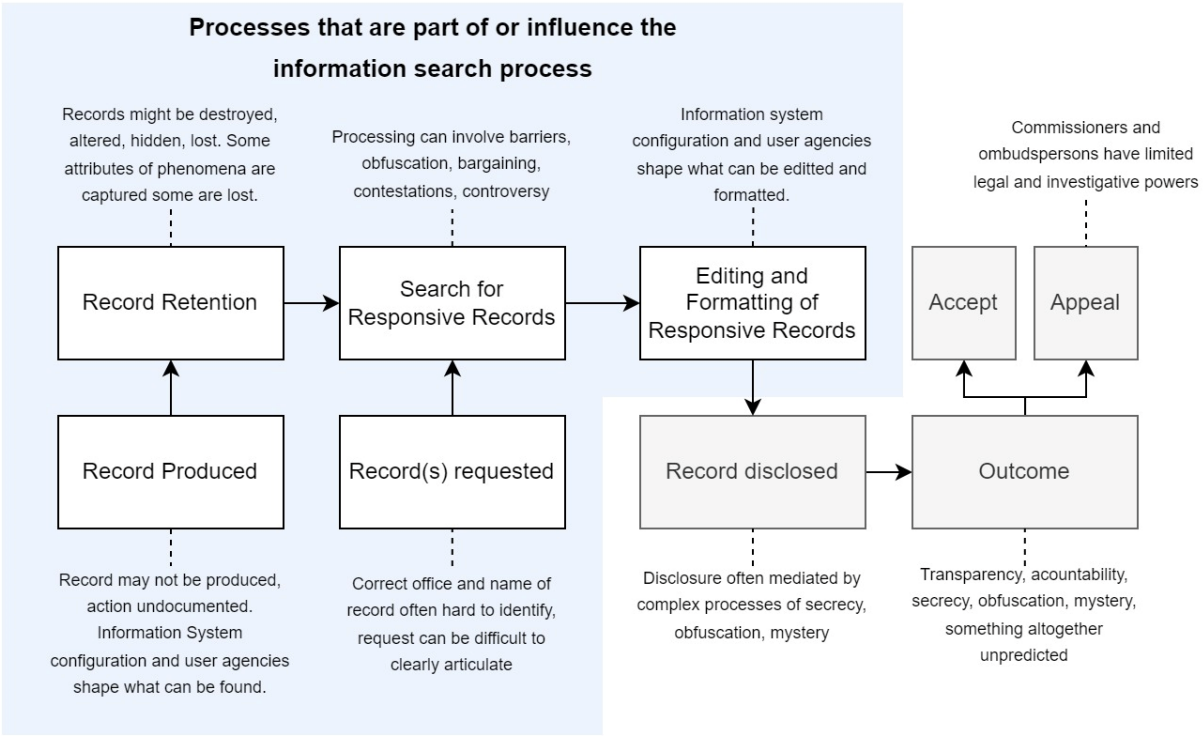

Figure 4 – Flowchart of FOI processes and steps, with potential negative externalities and influences. Based upon Luscombe & Walby (2017) and Carter & Stratton (2021).

types of information seeking are presented in Figure 5, which shows that the combination of *active and directed information seeking* is regarded as *searching*. The change in the user's ability to articulate their request throughout the process, as their level of understanding evolves, is an essential part of the ISP, reflected by the iterative nature of the process. Kuhlthau (1991) mentions that it may even be nearly impossible for the user to specify what information is needed to satisfy their information need. Showing that learning is part of the ISP allows the searcher to identify what it needs to fulfill its information need.

> *"What is relevant at the beginning of a search may not be at the close and vice versa"* (Kuhlthau, 1991, p. 363).

The paper from Dinet et al. (2012) presents a historical overview of the development of multiple information search models. The first category of models that are identified within the paper of Dinet et al. (2012) is the information science-oriented model, which investigates information search behavior from a generalist view (Dinet et al., 2012). Kuhlthau's six-step information process model can be categorized as such. However, though Kuhlthau's model can be regarded as fundamental in ISP research, it is not the only model describing the information search process (Subasic et al., 2013). *"The Marchionini's Model* (1996)*"*, visualized in Figure 6 (p.20), encases eight steps. Due to Marchionini's ISM focus on the human behavior involved within the electronic/digital environment, it is selected as the framework used to analyze the Woo-request ISP. The steps of this model do not just present a linear process but show a process of a highly iterative nature. This iterativity is a reflection of Marchionini's viewpoint of the information search as a fundamentally interactive process within an information environment. This interaction between the two establishes and reveals the actual information-seeking strategies of the user (Dinet et al., 2012).

In comprehending the information-searching process, understanding the information environment is as important as understanding the searcher's psychological processes (Dinet et al., 2012). Apart from Dinet et al.'s (2012) information science-oriented models, such as Kuhlthau's and Marchionini's, cognitive models are presented that focus on the cognitive processes involved in the information search activity. These cognitive models investigate mental processes concerned with the ISP and allow researchers to explain difficulties and predict performance, which are essential to consider when analyzing the process (Dinet et al., 2012).

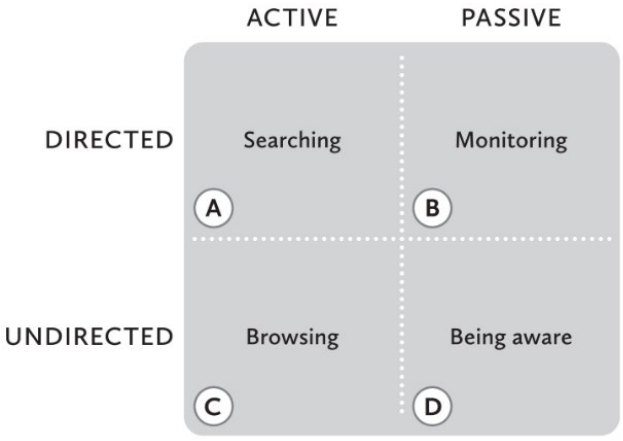

Figure 5 – Information seeking modes (Bates, 2002)

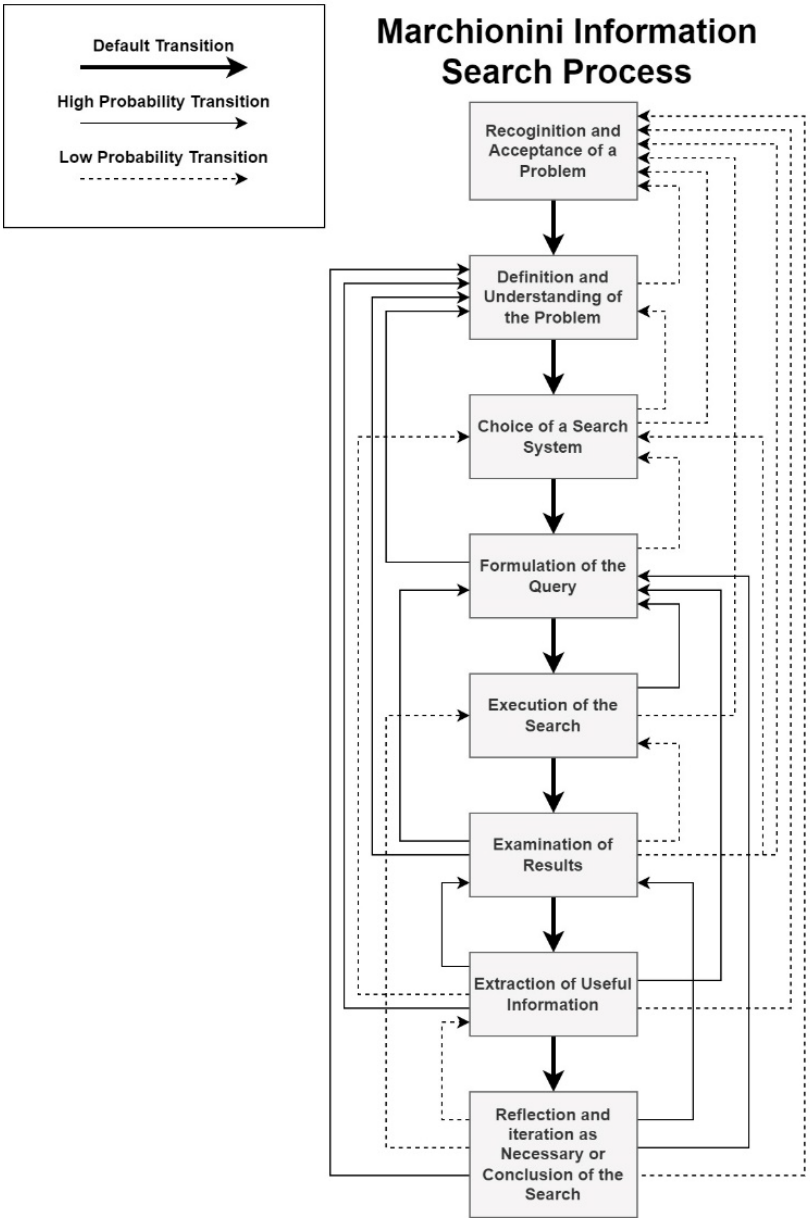

Figure 6 – Information Search Process model by Marchionini (1996)

One of these cognitive models is the *"Big Six Skills"* model of Brand-Gruwel et al. (2005), which is a decomposition of the skills required for information problem-solving. This model is portrayed in Figure 7 (p.21), where the parts involved within the information search as part of FOI-request handling are colored blue. The Brand-Gruwel et al. (2005) model is interesting because it describes in precise terms the skill involved in information seeking (Dinet et al., 2012).

As early as 1988, Marchionini and Shneiderman outline several factors that impact the information searching process: *information seeker, task, capabilities of the search system, domain, setting, and search outcomes.* In this, the information seeker is the human who defines the task, controls the interaction with the system, examines and extracts relevant information, assesses outcomes, and determines when the process is complete (Marchionini & Shneiderman, 1988). The information seeker's knowledge about the domain, experience, computer skills, and cognitive capabilities are several factors that play a critical role in the behavior and strategies

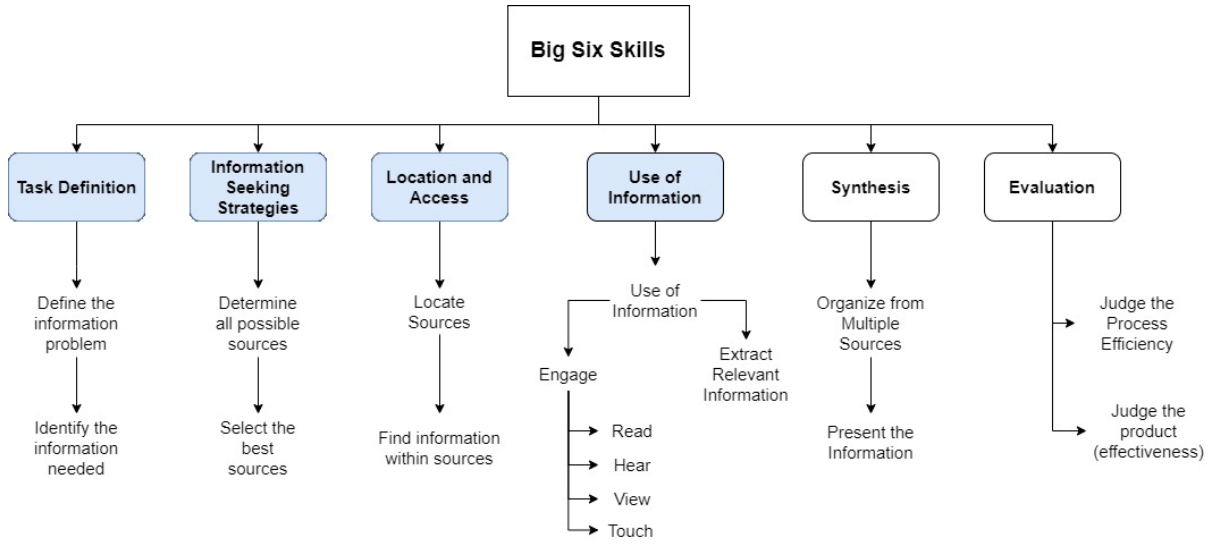

Figure 7 – The Big Six Skills and their relationship with information search activities according to Brand-Gruwel et al. (2005) (Dinet et al. 2012)

exhibited by the human during the information searching process. The experience of information seekers is said to significantly influence the effectiveness of their (information searching) activities (Kuhlthau, 1999). Experts spend more time on the primary skill of "defining the problem" and more often activate their prior knowledge, elaborate on the content, and regulate their process (Brand-Gruwel et al., 2005), showing the influence and importance of this phase (step 2) within Marchionini's (1996) model. Lastly, it was found that the experienced searcher can often make better relevance judgments (Theng & Sin, 2012). These considerations related to expertise are to be considered within the Woo-request ISP case study analysis.

3.4. Information Search Process Analysis Framework

As mentioned at the beginning of this chapter, one of the goals is to be able to analyze the information search process of Woo-requests itself and the influences on that process. Based upon the literature review that was performed, it is concluded that the analysis of an information search process such as the Woo-request ISP can be complicated. This complexity arises because this process observes human searching behavior within a sometimes in itself complex information system or landscape. In the scenario of the Woo-request, the user with the information need does not perform the search itself, adding to the situation's complexity. The latter makes that the ISP models identified are most likely not directly suitable for the analysis of the Woo-request ISP and that it is, therefore, necessary to derive a new framework from the previously identified ISP models.

Therefore, an *ISP-analysis framework* is created that aides the analysis of the researched Woo-request ISP. In section 3.3., two models were found to be helpful in doing so. The first model is that of Marchionini (1996), which provides an overview of the steps taken in the process. As part of the process analysis performed in Chapter 4, this can be used in order to try and analyze if and how comparable steps are taken in Woo-request processing and the order in which they take place as observable behavioral steps. Since this model describes behavior, it is used in the case study analysis as the coding framework that identifies the Woo-request ISP, answering SQ1. The second model is the Big Six Skills model of Brand-Gruwel et al. (2005), which

portrays what skills are required in order to perform an information search successfully. Identifying what skills are present with the searcher later allows for a judgment of the quality and effectiveness of said process and identification of the influences that might stimulate or hinder it. This model is used for the qualitative data analysis and coding framework aimed at answering SQ2.

The framework presented in Figure 8 is used for preparing the case study interview questions (section 4.2.2.) and the analysis of the case study interview data (section 4.2.4.). The combination of the two ISP models into this framework is expected to allow the researcher to analyze the steps taken throughout the process (Marchionini, 1996) and the influences on the process (Brand-Gruwel et al., 2005).

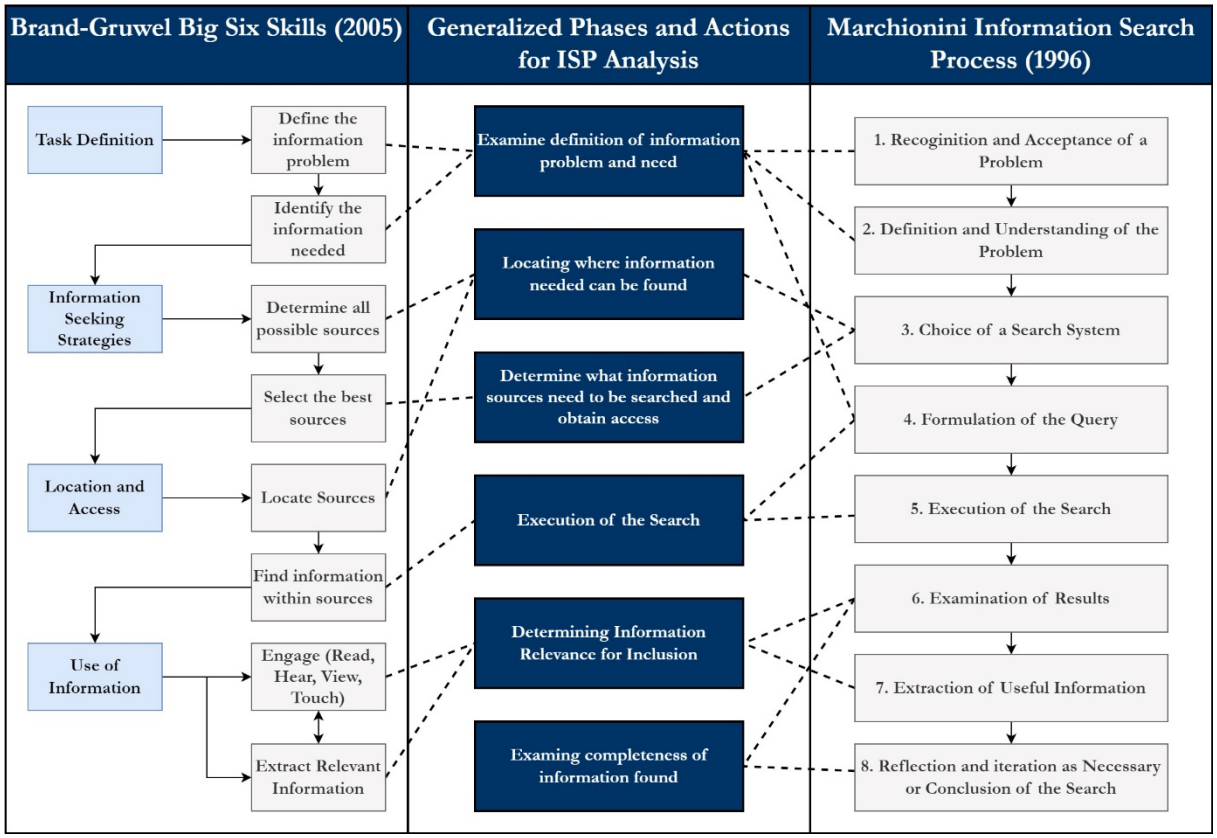

Figure 8 – ISP Analysis framework based upon Brand-Gruwel's Big Six Skills Framework (2005) and Marchionini's ISP model (1996)

Chapter 4 - Case Study Analysis: the Woo-request Information Search Process & Influences

In this chapter, the case study that was performed in order to answer sub-question 1 & 2 is presented:

SQ1: *How is the existing information search process as part of Woo-request handling at the Ministries of the Dutch National Government executed?*

SQ2: *What positive and negative influences shape the existing information search process as part of Woo-request handling at the Ministries of the Dutch National Government?*

First, the case study background literature that was consulted is presented in section 4.1. including the method used for the selection of this literature. Then, the methodology used for the case study interviews is explained in section 4.2. This is started by substantiating the selected embedded units of analysis (ministries) for the case study that are most suitable for generalizing the results found for all ministries of the Dutch National Government. After that, the interview questions and the interviewee selection protocol are presented, and finally, the qualitative data analysis coding framework. Based upon the data collected and analyzed by the case study, an analysis of the Woo-request ISP is portrayed in section 4.3. This finally results in the Woo-request ISP model and process goals presented at the end of that section. Next, an analysis of the influences on the process is performed in section 4.4., leading to the identification of 5 problematic influences. Lastly, section 4.5. presents the conclusions of this chapter, which act as input for the problem-centered expert interviews in Chapter 5.

4.1. Case Study Background Literature

This section starts off by explaining how the literature analyzed as part of this case study was selected. Since this research revolves around the "Wet open overheid," it continues to summarize the most important rulings of the Woo as a law with respect to the passive publication of government information. It then highlights the most important findings of previous Woo-request research, focusing on the information search process. Afterward, a summary of the guidelines for the Woo-request ISP is provided. This section concludes with an overview of all literature that is analyzed here and states what information is used in the case study interviews.

4.1.1. Background Literature Selection

In order to provide a structured approach in terms of case study literature inclusion, the search involved contacting the Government Program for Sustainable Digital Information Management (RDDI)[3]. Due to their involvement in the creation of the Guidelines for Passive Publication of

[3] The Government Program for Sustainable Digital Information Management (RDDI) supports the central government in putting the digital information management system in order throughout central government and making it sustainably accessible.

Government Information (RDDI, 2022), they are expected to possess an overview of the information available on Woo-research. They proposed that, apart from their guidelines, two reports are essential related to Woo-request research. These articles were selected because they do not focus on one individual ministry but perform research that is broadly applicable to Ministries of the Dutch National Government, in line with the case study context (section 2.1.2.). The grey literature included in this section, apart from the Woo (as a law), is presented in Table 3.

Table 3 – Literature consulted for the Woo-request ISP Case Study Analysis

Author	Title	Year	Description
Berenschot & Instituut Maatschappelijke Innovatie	Verbeterpunten in de informatiehuishouding voor een tijdige en kwalitatief goede afhandeling van Wob-verzoeken	2021	Provides an overview of the good practices in the government's information management that can contribute to timely and qualitatively good handling of Wob-requests.
Open State Foundation & Instituut Maatschappelijke Innovatie	Ondraaglijk traag, analyse afhandelingen Wob-verzoeken	2022	Presents results of a quantitative study on the actual processing times and sizes of Wob-requests. Furthermore, recommendations for improvement of the process are provided.
RDDI	Handreiking – Passief openbaar maken ondersteun je zo!	2022	Presents guidelines for the processing of Woo-requests, stating the should-be situation and providing tips for improvement.

4.1.2. The "Wet open overheid"

The Woo can be regarded as the law which regulates both the active publication of government information as well as the passive disclosure of information (*Wet Open Overheid*, 2022). In this research, we focus on the *passive disclosure of government information*, as the problems that are experienced in terms of the answering times of Woo-requests at the Ministries of the Dutch Government consider this passive form of government information disclosure (Open State Foundation & Instituut Maatschappelijke Innovatie, 2022). Therefore, this section clarifies the rulings of the Woo that dictate the passive disclosure of government information.

As was previously mentioned, the Woo states that "everyone has the right of access to government information without having to show an interest in it, subject to the limitations provided for by this law" (art 1.1. Wet open overheid). A Woo-request can be submitted on government information that rests with a demarcated set of public bodies, namely: *governing bodies, the Chambers and the united assembly of the States General, the Council for the Judiciary and the College of Delegates, the Council of State (unless it exercises royal authority and with the exception of the Administrative Jurisdiction Division), the Algemene Rekenkamer (Netherlands Court of Audit), and lastly the National Ombudsman* (art. 2.2. Wet open overheid). Having described *whose* information can be requested based upon the Woo, it is essential to consider *what* information can be requested as part of the Woo, formulated in the law as "documents." This is not the old-fashioned concept of a document but is specified as *"every written document or other set of recorded information that was drawn up or received by a public body, which is by its nature related to the public task of that body"* (art. 2.1. Wet

open overheid). This definition is rather broad, and one could say it applies to almost all information present within governments. The Woo further states that the term in which an administrative authority decides on the request should be as soon as possible, but at most within four weeks, counted from the day after the reception of the request (art. 4.4. Wet open overheid). The administrative authority may adjourn the decision for a maximum of two weeks if the scope or complexity of the information justifies an extension (art. 4.4. Wet open overheid). If so, the applicant should be informed in writing of the adjournment before the end of the first term.

A request can be submitted either verbally or in writing and can be submitted electronically via the way that is indicated by the public body(art. 4.1. Wet open overheid). The requestor needs to mention the affair or the documents it wishes to obtain information on and does not need to provide the interest of its request. If a request is deemed "too generic," the receiving body can ask the requestor to specify it within two weeks, and the requestor should participate in this specification process (art. 4.1. Wet open overheid). If the requestor does not help, a request can be rejected, meaning that it won't be processed and no information shall be provided. Also, if a request applies to information that is rested in another governing body, the receiver can direct the requestor to that other governing body (art. 4.2. Wet open overheid). If the request is "too large" to handle within the stated term of 28 days, the requestor and receiver will discuss the priorities within the request in order to provide essential information first. Lastly, if the requestor has clear other goals than to obtain information or if the request clearly does not concern an administrative matter, the receiver can also decide not to process the request.

The next question is one of *how* information should be provided to the requestor, which is also described in the law (art. 2.4. Wet open overheid), namely:

- The governing body should take as much care as possible to ensure that the information that is provided in accordance with the law is accurate, comparable, and current.
- The governing body should publish the information to the interested citizen in a commonly accessible manner:
    - In an electronic form, in a machine-readable open format, together with the metadata linked to the information piece;
    - in case the above cannot be facilitated, it should be provided in another electronic and searchable form;
    - and in case electronic provision cannot be facilitated, a copy of the literal content of the information should be provided;
    - lastly, if a copy of the literal contents cannot be provided, an extract or summary of the contents needs to be provided.

But not all information is merely provided. Specific information can be exempted from the request based upon a set of defined exemption grounds within the law, leading to documents being excluded from publication or parts of the documents being redacted (Chapter 5, Wet open overheid). For example, when the publication of the information could endanger the unity of the Crown or could harm the security or safety of the State. But primarily, it applies to the protection of personal data, or other types of data that can be traced back to individuals, or data that was shared with a public body in confidence.

4.1.3. Previous Research on Woo-request Handling

The report Unbearably Slow confirms that the FOI legislation facilitates citizens' access to public government information and provides them with a means of control towards the government (Open State Foundation & Instituut Maatschappelijke Innovatie, 2022). Through the disclosure of government information, the citizen can see whether the government executes its task as it should, making it essential for the citizen's trust in the government. As mentioned in section 1.1., the average processing time of Woo-requests directed to the Ministries of the Dutch National Government currently exceeds the legal limit (Open State Foundation & Instituut Maatschappelijke Innovatie, 2022). It was identified in their report that little quantitative research was performed; therefore, the Woo is difficult to judge in terms of performance, which is why their study was conducted. In doing so, the size of the delays was first made quantifiable by the research of the Open State Foundation and the "Insituut Maatschappelijke Innovatie (IMI)" (2022). The *average processing time* found by the Unbearably Slow report is *161 days*, whereas the legal maximum stated by the Wet open overheid (Woo) is currently 28 days, with a possible elongation of 14 additional days (Open State Foundation & Instituut Maatschappelijke Innovatie, 2022). An overview of the average processing time per Ministry is depicted in Figure 9. Most ministries are said to receive between 100 to 200 Woo-requests per year, which is relatively minor when comparing it to, for example, the 51,507 information requests the central government of the United Kingdom received in 2021 (Cabinet Office United Kingdom, 2021). The *average number of pages* provided as part of a Woo-request is *135 per request* over all ministries. The share of Woo-requests to be considered large (>250 pages) is just 14%, while even "small requests" are found to exceed the maximum term often. Though these are the numbers that are delivered, more documents are generally considered but excluded since they are not within the scope of the request or if an exemption ground can be applied. An important note is that the number of pages provided does not represent the complexity of a request, as a specific document can be deeply hidden within the caverns of the Dutch information systems, making it difficult to find it (Open State Foundation & Instituut Maatschappelijke Innovatie, 2022). Recommendations of the report focus on aspects of culture (more openness), standardization of the government's *information management*, and more regulation and stronger implementation forces. However, it leaves open how this is achieved and, more importantly, to what problems within the existing process these solutions are causally connected.

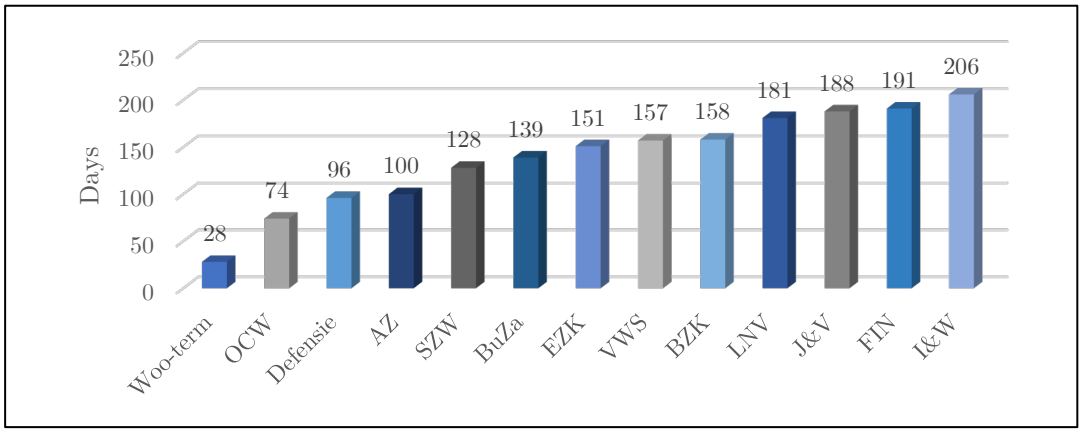

Figure 9 – Average Woo-request handling term per Ministry (Open State Foundation & Instituut Maatschappelijke Innovatie, 2022)

The other research consulted on Woo-requests, is that instated by the RDDI and executed by IMI and Berenschot, which carries the name "Improvements in the information management for a timely and qualitative handling of Wob-requests" (2021). The report mentions that it does not provide an exhaustive overview of how Wob-requests are being handled but that it mentions good practices in information management for "better, faster, and more effective handling of Wob-requests" (Instituut Maatschappelijke Innovatie & Berenschot, 2021, p. 9). The report from IMI & Berenschot aligns with the previously identified notion of the importance of open government information in relation to the functioning of a democracy and the importance of the Woo. It states that a good and timely processing of Wob-requests isn't easy and directs itself towards information management-based solutions that are able to facilitate the Woo-request handling process, yet little research was performed on the implementation practice of the Wob. According to IMI & Berenschot, the Wob-request handling process can be split into seven steps, as depicted in Figure 10. The identified solutions relate to changes in information management, where recommendations such as *file creation, completeness checks, coupling information sources and systems, and labeling information* are brought up. These are all solutions that ought to facilitate what the report calls "surefire hits" in the search and retrieval process, though it remains unclear in the report what this search and retrieval process looks like (Instituut Maatschappelijke Innovatie & Berenschot, 2021). Furthermore, the solutions should reduce the workload in interpreting, selecting, and organizing information.

4.1.4. Guidelines for Woo-request Handling

The Dutch Government Program for Sustainable Digital Information Management (RDDI) has prescribed how the process that leads to the passive publication of government information ought to take place, or otherwise, the Woo-request handling process (RDDI, 2022). The steps within this guideline are depicted in Figure 11 (p.28), highlighting the steps related to the information search process. The guidelines also describe what experts are expected to be involved in each step of the process; the experts involved in the actions related to the information search process are presented in Table 4. Whilst these guidelines provide an insight into the process as it should be, it is important to note that these guidelines prescribe what *should be* but not necessarily *what is.*

The initial step of a request is started with the *"acknowledgment of receipt and an intake*," during which government officials try to converse with the requestor and determine what

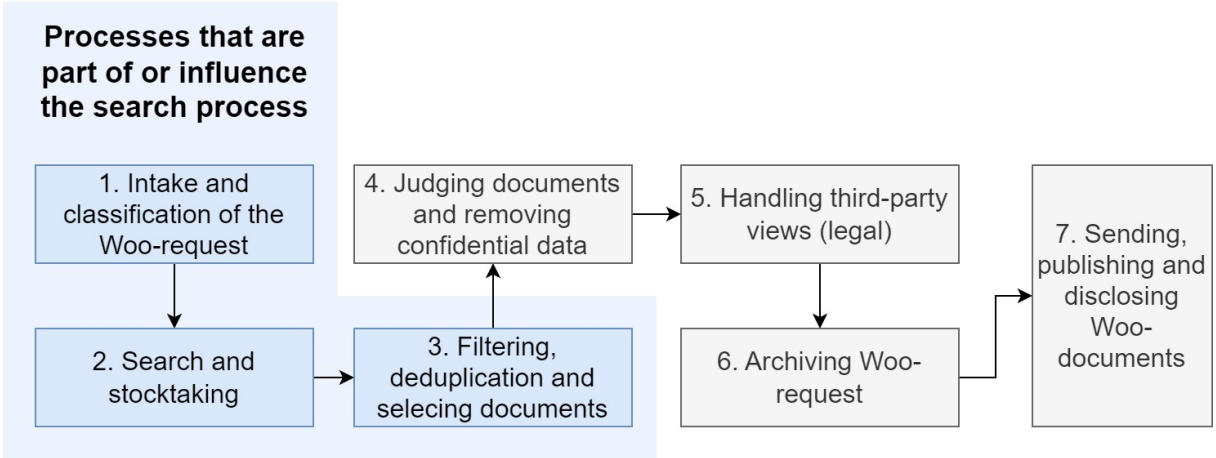

Figure 10 – Woo-request process flow according to Berenschot & IMI (2021)

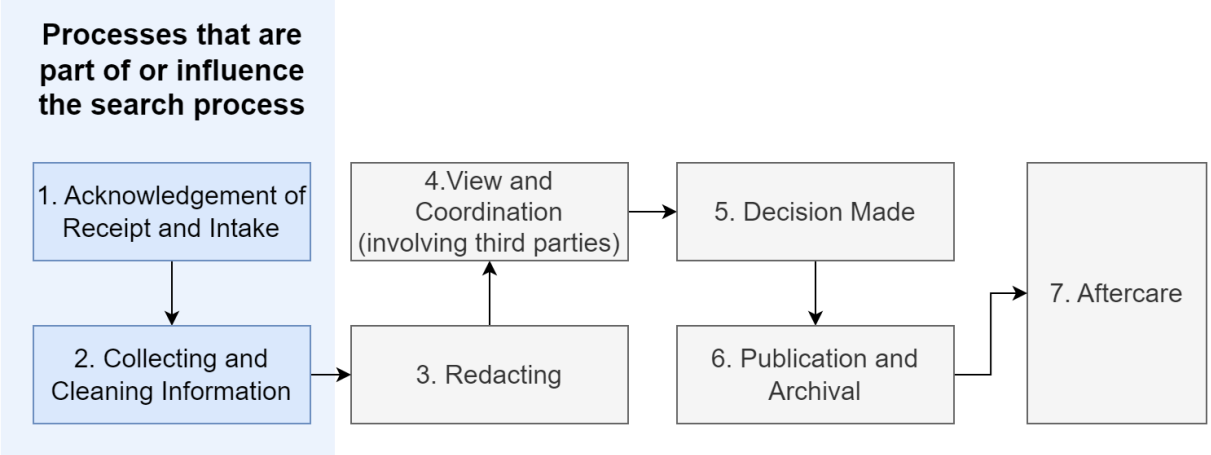

Figure 11 – RDDI guidelines process flow for the passive publication of government information (RDDI, 2022)

information is precisely requested. This interpretation is then used as the input for the *"search and selection phase,"* during which the archives and information systems are searched for relevant information. These information sources can be *document management systems, databases, e-mail archives or servers, network disks (both personal and organizational)*, and in modern days even mobile devices such as *mobile phones* store crucial decision-making information in, for example, *messaging apps* (RDDI, 2022; Volkskrant, 2022). The information found is then collected and cleaned, during which, amongst other things, duplicates are removed. Following this, the information is redacted, meaning that all information that has legal grounds not to be released to the public is redacted. The redacted version is presented and discussed, after which the information is published and archived.

Table 4 – Expert roles involved with Woo-request processing and their descriptions (RDDI, 2022)

Expert Role	Description	Process Step Involvement
Information Management Specialist	Expert in the design and steering of information management and has an insight into the metadata fields that should be present with respect to certain values. This person should also have an insight into the way that information is organized in the respective organization receiving the Woo-request.	• Collecting and Cleaning Information [2] • Publication and Archival of Request [6]
Content Specialist	Has expertise on the content involved with the subject of the Woo-request, with that the person determines whether the information is inside the scope of the request and can decide if some information would fall under an exemption ground.	• Collecting and Cleaning Information [2] • Redacting [3]
Process Coordinator	The person that is directly responsible for the handling of Woo-requests, and makes sure that the process flows from step to step.	• Acknowledgment of Receipt and Intake [1] • Collecting and Cleaning Information [2] • Redacting [3] • Judgment and Coordination (3rd Parties) [4] • Formal Decision [5]

		• Publication and Archival of Request [6]
System Specialist	Has advanced knowledge of the design of processes within information systems, the adding of metadata fields and metadata values, and settings of supportive software adaptations for all users.	• Acknowledgment of Receipt and Intake [1] • Collecting and Cleaning Information [2] • Redacting [3] • Publication and Archival of Request [6]
Woo-jurist	Someone with legal knowledge regarding the Woo (e.g. with respect to exemption grounds), knowledge of and experience with the Woo-handling process in different scenarios (rejection, adjournment, etc).	• Acknowledgment of Receipt and Intake [1] • Redacting [3] • Judgment and Coordination (3rd Parties) [4] • Formal Decision [5]
Search Specialist	Expert in finding, categorizing and filtering information, as well as setting up queries for databases and other information systems.	• Acknowledgment of Receipt and Intake (1) • Collecting and Cleaning Information (2)

4.1.5. Summary of Case Study Background Literature

On a higher level, the process that is sketched by the report of Berenschot & IMI (2021) and the prescribed process steps in the RDDI (2022) guidelines are comparable. This shows that there is reason to assume that there is a *generalizable approach to Woo-request processing* that overarches the individual ministries of the Dutch National government. The report of the Open State Foundation & IMI (2022) presents an overview of the performance of individual ministries with respect to the average handling times of their Woo-request processing, which is used for the selection of embedded units of analysis as part of the case study, presented in section 4.2.1. Possible improvements for the Woo-request handling process identified in this literature relate to a change in culture, (standardized) information management, and improved process management. However, it remains unclear what problems these changes resolve and, with that, how they contribute to an improved process. Additionally, there is little in-depth knowledge of the information search process that takes place as part of Woo-request processing; therefore, the case study continues to perform case study interviews to get that insight.

4.2. Case Study Interview Design

This section elaborates on the design of the semi-structured interviews that was created as part of the case study. The case study interviews use embedded units of analysis (ministries), which cumulatively represent the case, to gain more in-depth knowledge of the Woo-request ISP and the influences that shape it. Therefore, the selection of these embedded units of analysis is first substantiated, after which the selection of individual interviewees is presented. The section then explains the creation of the interview question according to the interview protocol presented in Chapter 2 and the ISP analysis framework that was introduced in section 3.4. Finally, it shows the coding framework created to analyze the qualitative data that stemmed from the interviews and the ISP analysis framework.

4.2.1. Selection of the Case Study's Embedded Units of Analysis

It is important that the selected embedded units of analysis, the ministries, are a good representation of the broader case. This selection aims to facilitate the generalizability of the data for all Ministries of the Dutch National Government (Mohd Ishak & Abu Bakar, 2014).

Due to the limitation of time, it was chosen to analyze four ministries out of the 12 ministries of the Dutch National Government. As the only available indicator of a ministry's performance in terms of Woo-request processing is currently expressed in terms of average days required to process a request in the Open State Foundation & IMI report (2022), this served as a selection basis. Initially, the Woo-coordinators of all ministries were contacted to check their availability and willingness to participate in this research. In order to create an accurate representation of the entire case, one ministry at the lower end, two in the middle, and one at the higher end of the handling term spectrum were to be analyzed (Figure 9). Table 5 shows the ministries that were finally selected. This selection is also based upon the availability of personnel at the contacted ministries; as once more, time was a driving force making sooner contact preferable whilst still adhering to the identified sample representation criteria.

Table 5 – Selected ministries (embedded units of analysis) for the case study interviews

Embedded Unit of Analysis	Ministry of...	Abbreviation	Average Handling Term per Woo-request
1	General Affairs	AZ	100 days
2	Health, Welfare and Sports	VWS	157 days
3	The Interior and Kingdom Relations	BZK	158 days
4	Agriculture, Nature and Food Quality	LNV	181 days

4.2.2. Interview Questions & Protocol

The creation of the interview questions was based on the work of Longhurst (2003), as presented in section 2.1.5. Using the Woo-request ISP analysis framework that was presented in section 3.4., interview questions were composed that reflect the generalizable search skill and steps portrayed in the framework. The questions posed during the interviews were aimed at identifying the following:

- *How is the search task defined based on the information problem and need?*
- *How does one find out where the needed information can be found?*
- *How does one select the information sources to be accessed and obtain that access?*
- *How is the search itself executed (locating the information)?*
- *How is information extracted and judged* on relevance and completeness?

Additionally, questions were added that provide relevant information on the interviewee's background and its function or role within the Woo-request handling process, as well as the experience that person has related to the Woo-request ISP. Finally, a direct question was included that asks what they observe as the most considerable influence on the Woo-request ISP. The exact interview questions are presented in Appendix B.

4.2.3. Interviewee Selection

For each ministry, one interviewee was selected, which ought to be able to present a representative overview of the Woo-request ISP of that ministry. Additionally, the RDDI guidelines explicated what roles should be involved in the Woo-request information search (RDDI, 2022). The process roles involved with the information search process are:

1. Information Management Specialist
2. Content Specialist
3. Process Coordinator

4. System Specialist
5. Woo-jurist
6. Search Specialist

The selection of interviewees ensured that all process roles mentioned by the guidelines were represented in order to present the involved employees' multiple perceptions of the process. In addition to the employees of individual ministries, a member of DocDirekt's[4] centralized search teams was identified, which was found to be a valuable addition to the interviewees. This team has performed information searches at multiple ministries, allowing for a broader view of ISP practices at these ministries. The final set of the *five interviewees* is presented in Table 6. The description of the interviewees leaves out their function within the organization but describes them according to their RDDI roles and experience with Woo-request processing in order to guarantee their anonymity. This anonymity is provided based upon the data protection impact assessment, where it was found that part of the interview considers their job performance, possibly harming the interviewees.

Table 6 – Overview of Selected Case Study Interviewees

Organization	RDDI Process Roles	Experience
Ministry of Health, Welfare and Sports	• Search Specialist • Systems Specialist • Information Management Specialist	6 years
Ministry of General Affairs	• Woo-jurist • Process Coordinator • Content Specialist	12 years
Ministry of the Interior and Kingdom Affairs	• Woo-jurist • Process Coordinator	2 years
DocDirekt	• Search Specialist • Systems Specialist • Information Management Specialist	21 years
Ministry of Agriculture, Nature and Food Quality	• Woo-jurist • Process Coordinator • Content Specialist	2 years

4.2.4. Qualitative Data Analysis of Semi-Structured Interviews

As described in Chapter 2, the qualitative data analysis of the translated interview transcripts was performed through abduction, cycling back and forth between data and theory throughout the analysis process. This involves a deductive coding framework that was set up before the analysis took place, based on the ISP model of Marchionini (1996). And the inductive codes that were created in vivo throughout the coding rounds as these were found useful for the

[4] DocDirekt is a Shared Service Organization (SSO) of the Dutch Central government. It supports their clients in the creation of an accessible, timely, and transparent information provision that is able to adhere to existing law and regulations. Apart from the management and processing of paper, digital, or hybrid archives, they also structure and order the information processes within the Dutch government.

delineation of the process (strategies) and the identification of influences. This resulting coding-framework is presented in Table 7.

Table 7 – Case study interview qualitative data analysis coding-framework

Deductive codes (Marchionini, 1996)	Recognition and acceptance of a problem
	Definition and understanding of the problem
	Choice of a search system
	Formulation of the query
	Execution of the search
	Examination of the results
	Extraction of useful information
	Reflection and iteration as necessary or conclusion of the search
Inductive codes	Strategies
	Positive Influences
	Negative Influences

4.3. Case Study Results for the Woo-request Information Search Process

This section elaborates on the identified Woo-request ISP that stems from the qualitative data analysis of the case study interview transcripts. Three different phases are identified, which are sequentially discussed in this section: *the "Woo-request reception and interpretation phase"* (section 4.3.1.)*, the "information locating phase"* (section 4.3.2.)*,* and finally, *the "evaluation of information phase"* (section 4.3.3.)*.* The end of this section presents the final process flow model, which is a representation of the Woo-request ISP model for ministries of the Dutch National Government. Additionally, the goals that were identified for the process during the interviews are presented. These goals serve as input for the analysis of the process influences in section 4.4.

4.3.1. Woo-request Reception and Interpretation

The first step of Woo-request handling is logically for the request to be *received by the handler*, who is almost always a Woo-coordinator of the organization to which the request was sent. It was mentioned that this request does *not have any predefined form*, nor does it arrive in one way, as it can be sent via post, email, or even via unrelated forms on the website.

> *"It is either always a letter sent by e-mail or not, or it is someone who asks a concrete question with the fact that they are making a request on the basis of the Woo. So it's quite different from time to time."* [I5]

Once a request has been received, it is upon the Woo-coordinator to *determine whether the request is indeed applicable to the Woo*. All interviews mentioned that the Woo-coordinator has a legal background or expertise. If the request is not applicable to the Woo, it is immediately rejected and not processed. For the requests that apply to the Woo, the *interpretation* of the request starts. Initially, the Woo-coordinator, who has received the request, shall try to interpret the information that is requested. However, the Woo-coordinator is rarely an expert regarding the content of the requested information. It is noted that this step

often involves the Woo-coordinator obtaining initial knowledge of the content, either via contact with the content expert involved with the subject of the request or via a broadly defined search in the Document Management System (DMS) of its organization. One of the interviewees was involved as a policy officer and mentioned the following:

> *"Because you are so involved with the content at hand, you can certainly make that assessment of the content and information much better.... If I had to do this on another team, I'd be much worse at my job because I just don't have a feeling for what's happening on files."* [I2]

In the scenario presented above, this initial knowledge allows the coordinator to specify the request and check with the requestor. When no information is found in this initial screening, the request is rejected due to the notion that there would be no information to be provided. After the Woo-coordinator has obtained some initial knowledge, either via content experts or the exploratory search, the requestor is contacted in order to try and *specify their request* and to check the initial interpretation of the request. This contact is also performed if the request is identified as being "unclear," meaning that the Woo-coordinator was even unable to perform an initial search.

> *"So we are not too quick to make our own interpretation unless the letter is very clearly formulated. Yes, then you do interpret the letter, according to how you read it, of course, but if it is vague, we will always contact [the requestor]."* [I5]

The case study interviews identified that the contact that is aimed at obtaining a better interpretation or understanding of the request is often performed by phone. It is a conversation held between the requestor and the Woo-coordinator or a lawyer. After the specification of the request, a *final interpretation* is made, based upon which the process moves on toward the actual search, which involves locating the information. No further iteration takes place from this point on out.

4.3.2. Locating Information

Based upon the interpretation of the request, the information that is relevant to the request needs to be *located*. The case study interviews identify *two strategies* for locating that information:

1. **The Organizational Search Strategy (OSS)**
   This strategy involves content experts (e.g., policy officers) locating the information they think is relevant to the request.
2. **The Centralized Search Strategy (CSS)**
   In this scenario, a centralized search tool is used that is connected to predetermined information sources. A search query is entered in the tool for which the tool searches upon the metadata, tags, or indices that have been attached to the information stored. In doing so, it locates information.

For the OSS, the Woo-coordinator initially locates the department or organization part that is responsible for the subject(s) of the request. After which, often the managers of the said department are able to locate which employee had been responsible for or has worked with the

information that is requested and ask that person to retrieve all information it can find related to the topic:

> *"Often it is colleagues who are on this file, which is why they also process the request, because then they can say: "Hey, I know this, so I also know which documents are relevant and which are not." And then they are often able to supply their own mailbox or to list the colleagues that were also involved, so they also supply the mailbox of those colleagues as well."* [I5]

As can be read in the quote above, you see that the OSS is not only a search for information but also a search for personnel who were involved and who might be able to locate other relevant information to the request, taking on the role of content experts. The personnel that becomes involved in the search is then asked to locate all information relevant from their request from multiple information sources, performing an initial relevance judgment themselves. This is depicted in Figure 12 (p.35). The document management systems (DMS) and information storage systems (e.g., shared working spaces, network disks, and local disks) are also searched by the content experts, apart from their personal "conversational information" via phone or email. The content experts who were once involved with the matter at hand have access to all information they aim to find, which therefore prevents possible authorization or access issues from arising.

> *"People themselves also search in their telephones when it comes to SMS, WhatsApp, Signal, et cetera. It depends on what messaging media they use."* [I4]

The information that is found and selected by the content experts involved is then gathered and handed over to the legal department (or Woo-coordinator), which is ultimately responsible for the redacting process.

The CSS is the lesser-used strategy that is primarily used for parliamentary inquiries[5]. This strategy makes use of centralized search tools. One of these tools is provided by DocDirekt to multiple Ministries and is called "Zoek&Vind." This tool needs to be connected to the relevant information sources up front in order for them to be searched, where a direct connection to phones is not possible. This tool, therefore, relies upon the fact that relevant information from phones is transferred to searchable sources first. The search requires a query to be formulated which fits the metadata of the documents that need to be found.

> *"Ultimately, the translation of "what exactly is being asked to what kind of search query fits what is being asked," that is what we are actually going to do there."* [I1]

The creation of a query requires content knowledge of the topic at hand, for example, for stating synonyms or familiarity with "government language." Whilst a Woo-coordinator could locate the information via this search tool themselves, this is often not the case. Formulating a fitting search query (with Boolean operators) requires both search engine expertise and content expertise. Some involvement of content experts will still be necessary, even when searching with this tool. For search expertise, centralized search teams are sometimes used, which are provided by DocDirekt. This means that the centralized search team formulates the

[5] In the Netherlands, a parliamentary inquiry is a means that the Senate and House of Representatives can use to obtain information on a particular subject.

best possible query, finally providing information from the sources connected to Zoek&Vind. An overview of this search strategy is portrayed in Figure 13.

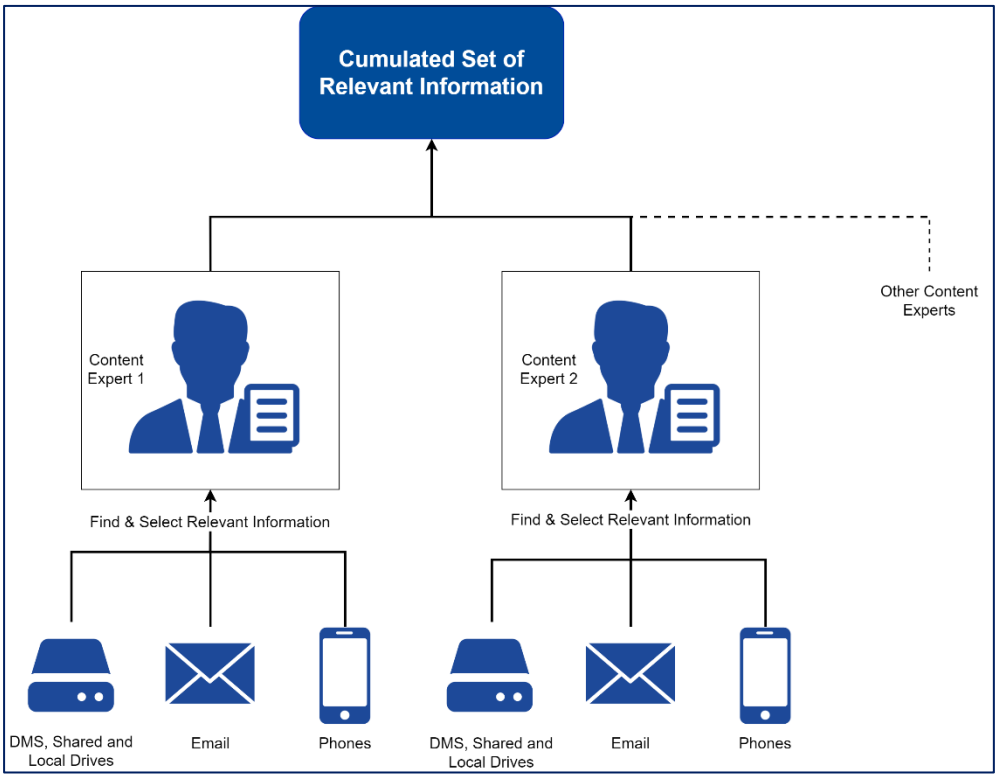

Figure 13 – Visualization of Organizational Search Strategy information retrieval and information sources used

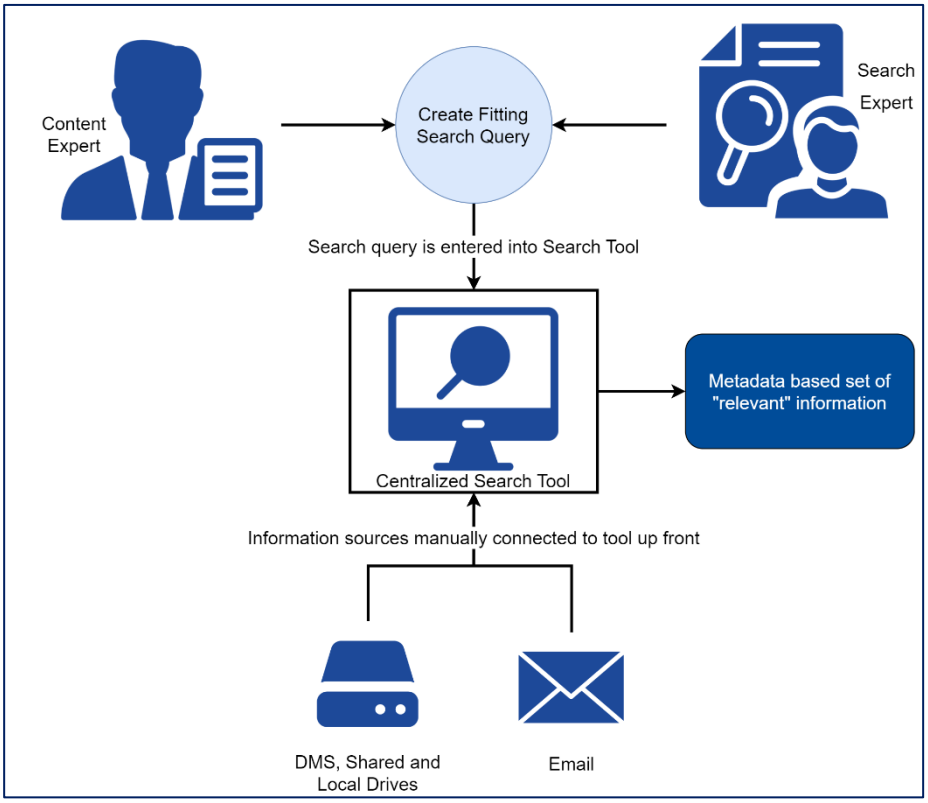

Figure 12 – Visualization of Centralized Search Strategy with involved personnel and connected information sources

4.3.3. Evaluation of Information Found

The first evaluation of the information found is that of a relevance judgment. What was found by the case study interviews is that the OSS already implements a form of relevance judgment, as content experts select the information that they deem relevant to the request based on their knowledge. Yet, for the CSS, this relevance identified by the tool is metadata based. Due to the often poor quality of the metadata fit, this requires further screening of the information in order to judge what information coming from the search query is genuinely relevant. For the CSS, the relevance judgment is often performed by Woo-lawyers [I2, I3, I4, I5]. This relevance check is performed by reading all documentation and becoming acquainted with the contents of the information.

Once only the information "relevant" to the Woo-request remains, a check for completeness is performed based on the content of the information. In the information that is found, references to other conversations or documents can be identified, based upon which missing information can be detected. Additionally, it is mentioned that this completeness check also heavily relies on the knowledge of government processes of the person that is checking for completeness.

> *"I think you can only do that on the basis of common sense and experience with how government processes work... Someone who indeed sees: "Hey, this is illogical, or why is that management communication absent? Someone who can say: I only see two policy officials here conversing with each other; why are they never accompanied by a head of the department? Or why has this never gone to a director? Because I do have a letter to parliament about this, so we are not missing an exit in this file. One does that on the basis of experience but also simply on the basis of common sense. Just reading and comprehending what it says here, wondering whether it is logical?"* [I4]

If documents are missing, specific searches for that information are performed in order to locate them. Once these "white spaces" have been filled, the set of information is handed over to the legal team for the redacting process. This handover finalizes the information search and selection process that is part of the Woo-request handling process.

4.3.4. The Woo-request ISP Model and Process Goals

An overview of the Woo-request ISP is presented in Figure 14 (p. 37), based on the case study interview data analysis. This model encases the different steps and strategies that can be observed throughout the Woo-request ISP. In one of the interviews, the goals of the Woo-request ISP were named, meaning what should be facilitated by this process.

> *"...to make the process faster, more complete and to provide better traceability and accountability for the process..."* [I1]

Based upon this quote and after reflection, these principles of ***speed, completeness, and traceability*** are chosen as the leading goals for the Woo-request ISP. The speed stems from the Woo as a law, which states Woo-requests need to be processed "as soon as possible" (art. 3.3. Wet open overheid). Furthermore, by law, all information related to the request should be provided. Therefore, the search should aim for completeness. Lastly, traceability is identified due to the fact that the government should be able to justify how certain information was found to validate that the set information provided to the requestor is, in fact, complete.

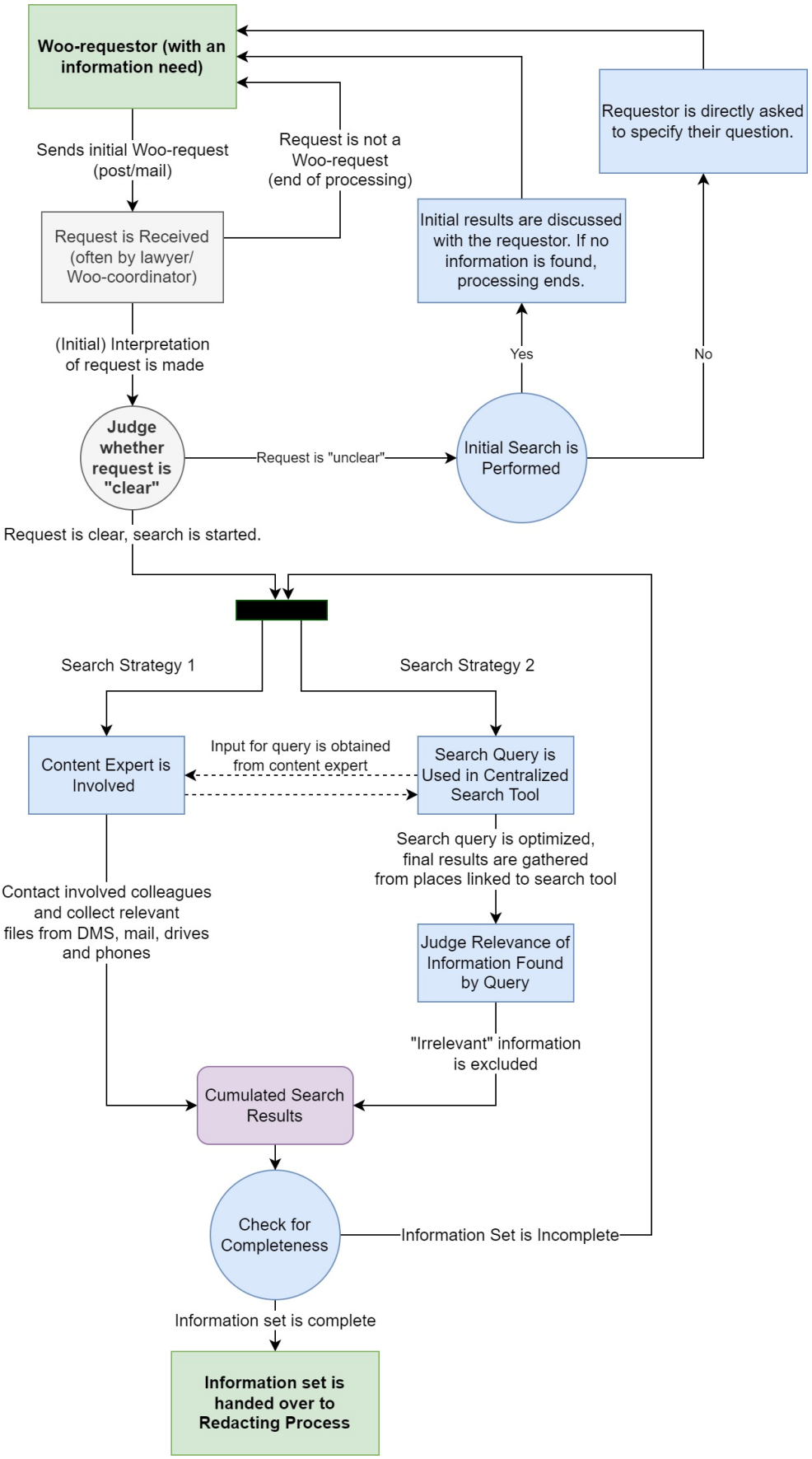

Figure 14 – Woo-request Information Search Process flow model

4.4. Influences on the Woo-request ISP

Having defined what the information search and selection process looks like, we move on to describe the factors that influence the existing process derived from the qualitative data analysis of the case study interviews. These can be both positive as well as negative influences, identified as "dependencies" within the process, which have been categorized into five themes:

1. The Request Itself
2. The Request Interpretation
3. Information Locating & Authorization
4. Determination of Information Set Relevance & Completeness
5. Requestor Cooperation and Trust

These five themes allow for a structured analysis of the influences present. These influences are identified in relation to the previously identified Woo-request ISP goals in section 4.3.4.

4.4.1. The Request Itself

First of all, the request itself logically determines what information needs to be searched as well as the volume of information that needs to be searched. It is comprehendible that the request has a great influence on the process that follows it. More documents that need to be located and processed naturally require more time. For example, all information found needs to be judged on its relevance, which is often done via reading, after which the relevant set of information that needs to be redacted is often read once more by lawyers for the redacting process.

If a request is defined as being "small," meaning that it does not involve a lot of information to be searched and delivered, processing said request is *easier*. Additionally, processing of requests is also found to be easier when the request refers to a specified and limited time frame. Lastly, when a request is "concrete" in terms of subject matter, it is easier to retrieve information related to that certain subject or event.

> *"If it is limited in terms of a time frame and concrete in the subject matter. I think those are the two criteria of why something is easy when it comes to delineation."* [I4]

What makes a request *difficult to process* is when information is requested on communication between parties, difficulties are said to arise due to poor metadata quality. Other factors involve the coordination between organizations which might arise from requests that stretch organizational boundaries. Contrary to small requests, large requests in terms of both scope, as well as a lack of specificity cause the handling process to become more difficult. The existing process tries to limit large requests by contacting the requestor and asking it to make its request more specific (with that smaller). A method that is used for the requests that are identified as difficult to process is Woo-coordinators stating to the requestor that the processing of their request as it is will take a very long time and that specification would also be advantageous to the requestor. Another method that deals with requests that require a large number of documents to be delivered, is to split a request into multiple smaller pieces. This does not speed up the process but spreads it out into multiple smaller parts, each with its own handling term.

4.4.2. Request Interpretation

Tightly coupled with the influence of the request itself is the interpretation of that request. In order to provide the requestor with the information that satisfies their information need, it is important to understand what information they are looking for.

> *"Ultimately, it takes most of the time to assess whether the information you have in front of you is actually the information the requester is asking for."* [I2]

One way to do so is to have a conversation with the requestor, during which often the Woo-coordinator asks it to further specify their request, something which is performed in an unstructured manner. This conversation is, in *very rare cases,* performed with the content expert at the table. Such a conversation allows the requestor and the content expert to have a substantive conversation that could lead to the specification of what the requestor is looking for. This process allows for the requestor to gain an initial insight into the information and, with that insight, specify what exact part of the shared information is of interest to them. The difficulty in this respect is that the content expert is not ought to be capable of knowing what they can or cannot say based on the exemption grounds that might need to be applied to information verbally shared.

Yet, due to *distrust* towards the government or the process itself, it regularly occurs that a requestor is not willing to speak with the handler(s). This hinders the handler from discussing its interpretation with the requestor and, with that, hinders assuring that the search is indeed looking for the information relevant to the requestor. Furthermore, in the interpretation step, the opinion of the Woo-coordinator is that a requestor is not looking for *all* information that is delivered based on their initial request.

> *"It would be nice if people only ask for the information they want. I don't think anyone can reasonably expect a sea container of information."* [I2]

A complicating factor mentioned is that it can be difficult for a requestor to specify what it is asking for without having extensive knowledge of the subject of their request or without knowledge of government workings.

> *"Because he has a completely different information need but does not know how to formulate that information need."* [I2]

If a requestor does have more elaborate knowledge on the topic related to its information request, this might mean that a request is better specified. If not, this could result in "difficult to process" requests. This might not be the requestor's intention but stems from an inability to make it more specific based on their lack of knowledge.

4.4.3. Information Locating and Authorization

As was presented in section 4.3., the Woo-request reception and interpretation phase is followed up by the information location phase, which applies either the OSS or CSS. For the CSS, using the "Zoek&Vind" search tool, it is mentioned that the information search can greatly benefit from the use of information search specialists, such as the centralized search team of DocDirekt. This mediates the lack of information searching skills that the Woo-coordinator, lawyer, or content expert might not possess.

> *"...if you were to work with a dedicated search team in the searching process, and that assumes people with the right authorizations, with the right skills, and of course with the right sources connected to Zoek&Vind, you could create a huge acceleration in the process."* [I1]

A complicating factor is that for Zoek&Vind to guarantee completeness, it requires all information sources to be connected upfront and for the searcher to have the *authorization* to access and examine all information present in these sources. Something which is complicated due to the *large variety of information sources* existent within the government. Due to privacy regulations and other authorization mechanisms implemented within organizations, information is not consistently retrieved via the search tool, or if it is visible, one might not have access to it. The first hindering completeness of the search, the latter delaying the search as authorization needs to be requested to access that information. A way to mediate this delay or this lack of completeness is to have someone within the search team that has access to all information, yet, facilitating the right and lawful authorization is complex and likely to encounter resistance within the organization.

A facilitating factor for the search tool are the *metadata, tags, or indices* added to information or documents. The tool relies on the metadata attached to information objects and uses these to select whether information fits a query or not. However, suppose metadata is too broadly or generically defined. In that case, searches will come up with vast amounts of information that need to be processed (read for relevance judgment and redacting) later, severely delaying the process. On the other hand, if metadata is missing or incomplete, possibly relevant information might not surface, failing to provide completeness in handling the Woo-request.

If one observes the OSS, one could find that it requires the involvement of personnel that does not have handling Woo-requests as their primary function and therefore do not prioritize these requests or might not have the time to handle these parallel with the main activities of their jobs. One of the case study interviews mentioned that good practice is to have regular meetings between the Woo-coordinator and the responsible content expert to check on progress:

> *"...that's why I also started scheduling teams meetings with policy officers to go through the documents together because the Woo is not a priority for them."* [I2]

Searching for large requests will remain time-consuming for content experts, meaning that the process largely depends on the time available of the involved personnel. A note is that the CSS also uses the content expert's time to create a query, yet this is not as extensive as for the OSS.

4.4.4. Determination of Information Set Relevance & Completeness

For the OSS, the relevance is judged by the content expert, who ought to be familiar with the topic at hand and knows what documentation is available and should be handed over to answer the request. Yet again, this calls for a human selection of "relevant" information, opening the door to a bias or, even worse, maleficently leaving out bits of sensitive information. So if there is something going wrong that a handler discovers while answering a Woo-request, this selection allows the handler to leave it out, facilitating possible methods of obfuscation (Luscombe & Walby, 2017).

> *"...but as long as you have not deliberately done something wrong, then there is no reason to withhold information."* [I2]

Another important notion that arose throughout the interviews was one of completeness: how can the request handler know when it has all information regarding the request?

> *"We also have Wob-lawyers, or nowadays Woo-lawyers, who I think have had the illusion that they could always reach everything. Well, that's definitely not true. In my opinion, for the past 20 years, BZK has always delivered only a fraction of what it should have delivered because [the coordinators] just didn't know there was more. And now that is the biggest barrier."* [I1]

What can be read from the quote above is that, once more, access plays an important role in completeness. For completeness of information, one should be able to search every single bit of information.

> *"The first lesson I have ever learned on search tool technology is that if you haven't found something, there's no proof that it is or isn't there."* [I1]

Completeness is currently strived for by reading all documents and seeing whether any document refers to another that is not yet included in the set. Or by having years of experience within the government and knowing what types of documentation or communications should typically be in place at certain stages of a process. Yet, one can imagine this being a laborious process, prone to human error. The alternative is the method that is currently being used to handle the Covid-19-related requests directed to the Ministry of Health, Welfare, and Sports. They initially collected all information related to Covid-19 or one of its synonyms in information sources they deemed sufficient regarding the topic, after which they "cleaned" the information obtained. They then search this set by formulating queries, which ultimately provide a collection of information that is directly sent to the lawyers for the redacting process.

> *"Well, the selection must ultimately come from the search query. We really go on until our search query puts together exactly the set, which we then deliver to the lawyers."* [I3]

Yet, this is still dependent on which information sources were connected, the metadata applied to the information, and the quality of the query. Therefore, completeness, in an absolute sense, remains challenging to achieve.

4.4.5. Requestor Cooperation and Trust

The last identified influence is that of the requestor's cooperation and trust. It is noted by multiple interviewees that requestors often do not want to communicate with the handler, for example, to clarify their request.

> *"Sometimes the applicants don't want to talk to you."* [I2]

> *"I would really appreciate it if we could just sit down with the requester much more often to indeed look at what exactly is [the requestor's] information request. And that we don't get some sort of standard distrust."* [I4]

Knowing that the requestor's trust might be lacking while its involvement in the process could be beneficial, it is important to consider the influence that cooperation can have on the process. Request handlers mention that they sometimes aim to provide a transparent process to try and gain the requestor's trust. More importantly, search logs are sometimes provided to the requestor to show how the search has been performed and that serious effort and thought have been put into the search [I1].

4.5. Conclusions

The goal of this chapter has been to provide answers to sub-question one and two; therefore, a case study was performed. This embedded single case study has used grey literature by consulting previous research, as well as data obtained from the semi-structured interviews. These interviews were conducted at individual ministries that serve as embedded units of analysis that are expected to be a good representation of all ministries of the Dutch National Government. For the interviews, personnel involved with the Woo-request ISP process was interviewed identified from the RDDI guidelines (2022). This final section of the chapter reflects upon the case study and provides conclusions regarding the research questions posed.

4.5.1. The Woo-request ISP

The first question the case study aims to answer is the following:

SQ1: How is the existing information search process as part of Woo-request handling at the Ministries of the Dutch National Government executed?

The Woo-request ISP model portrayed in Figure 14 (p.37) answers the first research question and shows that the Woo-request ISP can be divided into three parts. The first part is the *Woo-request Reception and Interpretation phase,* during which the initial request is translated into a usable search task. In order to do so, the requestor is sometimes consulted to specify their request until the request is deemed "clear" enough to start the search for information. Sometimes, a request is split up into multiple parts that are all handled separately with their own maximum handling terms. This still requires a clear task definition for the individual parts. After the interpretation phase, *the information locating phase* is started, which builds upon the interpretation of the request in the previous stage. Throughout this phase, two search strategies are identified by the case study interviews: the organizational search strategy (OSS) and the c*entralized search strategy (CSS)*. The OSS involves searching for the employees who are or have been involved with the subject of the request (*content experts*) for them to gather the information related to it. The CSS performs a search for information via a *centralized search tool*. This tool is connected upfront to the relevant information sources, after which a search query is created with the help of the content experts. The search query is entered into the tool, performing a metadata-based search for related documents. Once the relevant information is located and accumulated, the third phase of *evaluating the information* is commenced. During this phase, the *relevance of the information* found is judged via reading the information. For this "relevant" set of information, the *completeness is checked* based on references to

documentation in the information provided or based on the handler's knowledge of government procedures and adjacent information.

By putting an abstracted version of the Woo-request ISP next to Marchionini's ISP model (1996) in Figure 15, we can see that the Woo-request ISP has significantly fewer iterative (backward) steps. Marchionini's model shows many iterations back to a renewed definition and understanding of the problem based on the search that is performed. Whereas the Woo-request ISP sees the interpretation and search and selection phase as two separate parts, currently not allowing for an improved definition and understanding throughout the search process.

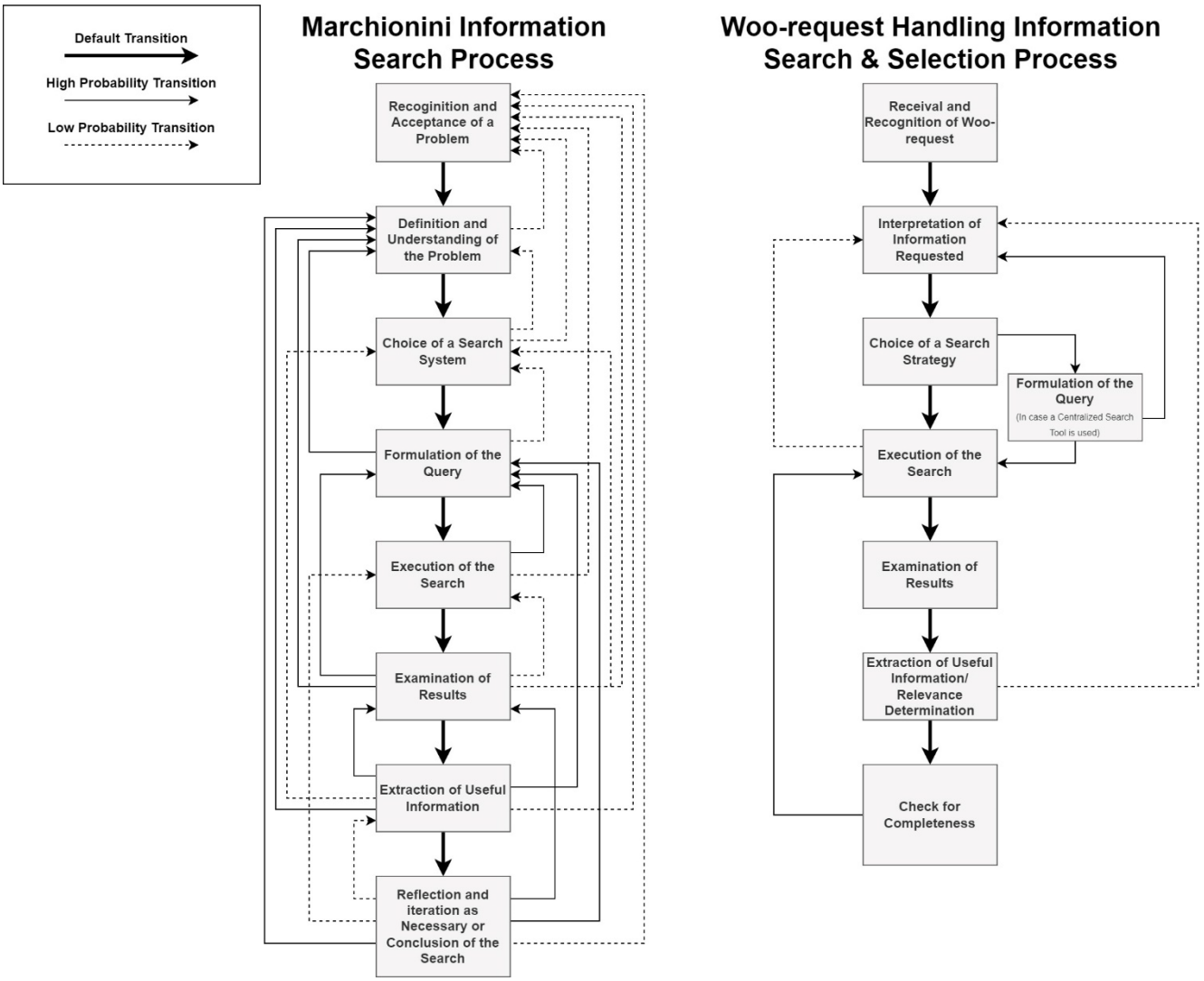

Figure 15 – Comparison of Woo-request ISP to Marchionini's ISP model (1996)

4.5.2. Influences on the Woo-request ISP

The final question answered by the case study performed in this chapter is:

SQ2: What positive and negative influences shape the existing information search process as part of Woo-request handling at the Ministries of the Dutch National Government?

Section 4.4. identifies multiple influences that shape the way the Woo-request ISP is performed. The influences are analyzed in relation to the identified Woo-request ISP goals of *speed, completeness, and traceability (of the process)*, of which an overview is presented in Table 8. For example, whether *the scope of a request* is broad or specific can make a search more manageable by providing it with a more detailed search direction and having to process fewer documents. This is found to influence the speed as well as the completeness of the Woo-request ISP output. Furthermore, if a request is easily interpretable, the search phase can be started more quickly. If not, the *interpretation of a request* can take up time and might be more challenging to get right in terms of relevance, with that influencing speed and completeness, but also traceability of the process. The metadata attached to information is also a significant dependency since information with a good *metadata fit* related to the query is more likely to be retrieved than a poor fit, influencing completeness. Then, the possible insufficient *authorization and access* to information hinder the process as access sometimes needs to be gained during the search process, which slows it down. A potential lack of authorization could also mean that some information is not located at all, influencing the search's completeness. Another influential factor is the judgment of information relevance and completeness, which was identified as difficult by the case study interview, affecting the process's speed, completeness, and mostly traceability. In the existing situation, the request handler is unsure whether the information set is relevant and whether it is complete. Lastly, it is found that due to distrust, requestors can sometimes act uncooperatively, hindering the request's processing. This mostly affects the completeness as an uncooperative requestor makes it more difficult to verify what the request means. The primary influences identified from the case study analysis (Table 8) are used to create questions for the problem-centered expert interviews in Chapter 5.

Table 8 – Influences found from the case study analysis and their relation to the Woo-request ISP goals

Influences	Speed	Completeness	Traceability
Scope of the Request	X	X	
Interpretation of the Request	X	X	X
Metadata Quality and Fit		X	
Insufficient Authorization/Access	X	X	
Judgment of Information Relevance and Completeness	X	X	X
Requestor Cooperation (Trust)	X	X	

Chapter 5 - Problem-Centered Expert Interviews towards Woo-request ISP Improvement Strategies

This chapter sets out to answer sub-question three via problem-centered expert interviews and identify strategies for improvement of the Woo-request ISP retrieved.

SQ3: What strategies can improve the existing information search process as part of Woo-request handling at the Ministries of the Dutch National Government?

First, the approach for the problem-centered expert interviews is illustrated in section 5.1. Interview questions are defined based on the influences identified in Chapter 4, and suitable experts are selected for the interviews. Then the data analysis method is explained. This analysis allows for the identification of strategies that are part of the information search and selection process portrayed in section 5.2. The chapter continues to present a reflection on these strategies in section 5.3., based upon which the main themes of the proposed improvements are identified. Finally, a conclusion of the problem-centered expert interviews is provided in section 5.4. that also serves as input for the focus-group discussion in Chapter 6.

5.1. Problem-Centered Expert Interview Design

The problem-centered expert interview (PCEI) combines the problem-centered interview and the theory-generating expert (Döringer, 2021). This combination benefits from both the expertise that the experts have in their individual fields as well as their previous experiences. The PCEIs use semi-structured interviews (SSIs) as a form of data collection, for which the method described in section 2.1.5 is used.

5.1.1. Problem-Centered Expert Interview Questions & Protocol

Interview questions were drafted based on the influences identified in section 4.5.2. These influences that were identified are strong dependencies within the Woo-request ISP. Therefore, the interview questions were created to ask the experts to develop strategies that limit the influence of these dependencies or resolve the problems that stem from these influences. These influences are once more presented below:

- *Scope of the Request*
- *Interpretation of the Request*
- *Metadata Fit*
- *Insufficient Authorization/Access*
- *Judgment of Information Relevance and Completeness*
- *Requestor Cooperation (Trust)*

The final interview questions based on these influences are presented in Appendix C.

5.1.2. Problem-Centered Expert Interviewee Selection

Five categories of experts were identified: *legal, government information, Woo-request ISP (process expert), search technology, and government transparency and openness.* A description of these areas of expertise is presented in Table 9. Based on these expert categories, a network search was performed via LinkedIn and, once more, consulting the RDDI to find suitable interview participants that fit the expert profiles. Multiple experts were contacted, asking for their willingness and availability to participate in this research. The responding experts were then selected as such that each category of expert is represented, but also based upon their availability, which was a criterium due to the limited timeframe of this research. The final selection of the *nine experts* that were interviewed is presented in Table 10 (p.47).

Table 9 – Overview of expert backgrounds to be involved in problem-centered expert interviews and their descriptions

Expert Group	Expertise Description
Legal	Individual who is well known with the Woo as law and know what is possible within the boundaries of said law, as well as knowing what should be facilitated to adhere to the law.
Government Information	Expert who has advanced knowledge of the information types stored in the government's information systems. Additionally, they know what information sources or systems are present within the Ministries of the Dutch government.
Woo-request ISP (process expert)	An individual who has advanced experience with the search process that is performed as part of Woo-request handling.
Search Technology	A person who has far-stretching technological expertise with respect to possible search technologies and methods that could be implemented.
Government Transparency and Openness	An individual or organization representative who is well known with the Woo (previously Wob) from a requestor's perspective and looks at it from an open government point of view.

Table 10 – Selection of problem-centered expert interviewees and descriptive information

Name or Organization	Expertise and Experience	Expert Group(s)
Adviescollege Openbaarheid & Informatie-huishouding	Advises the government and parliament on publicity and information management.	Legal / Government Transparency and Openness
Leiden University (Constitutional Law)	Constitution Expert and renowned Wob-/Woo-critic	Legal / Government Transparency and Openness
Ministry of Education, Culture and Science	This ministry performs relatively better than others, their expertise with respect to that process might provide new insights on success factors.	Woo-request Search Process
Open State Foundation	Far-stretching experience with corruption investigation and is co-author of report on the slow processing times of Woo-requests (Open State Foundation & Instituut Maatschappelijke Innovatie, 2022)	Government Transparency and Openness
Ministry of Health, Welfare and Sports	Has experience with the data-driven processing of Covid-19 related Woo-requests.	Information / Woo-request Search Process
Wob-/Woo-expert (Lawyer)	Has supported over 7000 Woo-requests and is part of several international FOI advisory boards.	Legal / Government Transparency and Openness
Ministry of the Interior and Kingdom Relations (CIO Rijk)	Is involved with the implementation of active publication of government information and has far stretching expertise on government information.	Government Information
IBM (NLP & Data Science Expert)	Is portfolio manager of IBM's tools which are implemented at the Dutch Government. Amongst which Woo-request support tooling.	Search Technology
Instituut Maatschappe-lijke Innovatie	Co-author of the report on slow processing times of Woo-requests (Open State Foundation & Instituut Maatschappelijke Innovatie, 2022)	Government Transparency and Openness / Woo-request Search Process

5.1.3. Problem-Centered Expert Interview Data Analysis

Each interview was recorded, and transcripts were drawn from the interviews. These transcripts were analyzed through a coding framework, following the procedure of abduction as mentioned in section 2.1.6. This framework categorizes the proposed strategies and solutions. The first coding category relates to the interview questions posed, and as they were created upfront are a series of deductive codes. The second set of coding is of the inductive form and was created "in vivo" by labeling the proposed strategies and solutions mentioned. This allowed for a broad range and overview of solutions. The final coding framework used for the analysis of the problem-centered expert interview transcripts is presented in Table 11.

Table 11 – Coding Framework used for the analysis of the problem-centered expert interview transcript data

Deductive codes (interview question based)	Access and Authorization
	Completeness
	Government Information Alignment
	Information Need Interpretation
	Metadata
	Misuse
	Relevance
	Request Scoping/Specification
	Requestor Trust
Inductive codes (result from coding rounds)	Active Publication of Government Information
	Authorization Regime Design
	Clustering/Sorting Information
	Confidential Access
	Customer Service
	Experienced and Trained Staff
	Full-Text Search
	High Level/Managerial Support/Priority
	Information Storage (Guidelines)
	Iterative Search Process
	Metadata Standardization
	Monitoring
	Openness and Vulnerability & Culture
	Public Document Register
	Requestor Consultation
	Search Result Register
	Search/Process Log
	Store/Sort Information by Subject
	Substantive Conversation
	Substantive Negotiation
	Timelines

5.2. Overview of Identified Strategies for Woo-request ISP Improvement

Multiple strategies were identified, also outside of the scope of this study. Therefore, the strategies portrayed in this section are limited to those that are directly related to the Woo-request ISP itself. An overview of the strategies that were proposed is presented in Table 12, with the number of times it was mentioned as applicable to one of the identified influences. The research that was performed to obtain the results presented here stems from qualitative data collection. The presentation might suggest a quantitative approach, but due to the qualitative operationalization, this analysis does not imply anything about the importance of the strategy in a larger population. Yet, it was found that portraying the times a strategy was proposed for a certain influence allows for categorization and prioritization of the data.

Table 12 – Number of times an identified strategy is mentioned to have a positive effect on a Woo-request ISP influence

Strategy/Solution	**Scope of the Request**	**Request Interpreta-tion**	**Information Access**	**Information Relevance & Complete-ness**	**Requestor Trust & Cooperation**	**# of Times a Strategy is mentioned in relation to influence**
Substantive Conversation with Requestor	7	7	0	7	4	**25**
Requestor Consultation	6	7	0	5	3	**21**
Experienced and Trained Staff	6	4	0	4	3	**17**
Confidential Insight into Government Information	3	3	0	2	0	**8**
Search Result Register	2	2	0	2	0	**6**
Honesty (process and findings)	0	0	0	0	5	**5**
Timelines	1	0	0	3	0	**4**
Informal Contact	0	0	0	0	3	**3**
Search process log	0	0	0	0	3	**3**
Unlimited access for set of people within department	0	0	2	0	0	**2**
Full-text Search	0	0	0	2	0	**2**
Iterative delivery of information and searching	0	0	0	2	0	**2**
Customer Service	0	0	0	0	2	**2**
Document relevance ranking based on times accessed	0	0	0	1	0	**1**
Interaction with high-level content experts	0	0	0	0	1	**1**
# of Strategies Identified for a Problematic Influence	**6**	**5**	**1**	**9**	**8**	**-**

5.3. Reflection on Woo-request ISP Improvement Strategies

This section reflects the strategies that were mentioned throughout the problem-centered expert interviews. It aims to provide a deeper understanding of why certain strategies were mentioned and whether the experts share their views on the influences identified by the case study analysis. Firstly, the strategies that were found for improved locating of and access to information are analyzed in section 5.3.1. In section 5.3.2., the strategies related to more interaction between the requestor and the handler are analyzed. Finally, the strategies related to iteration and the interpretation of a request are discussed in section 5.3.3. The conclusion on the PCEIs is provided in section 5.4, which presents the three improvement themes identified from this analysis.

5.3.1. Locating and Accessing Information

When asked about the way information is located and selected as part of the search, most experts referred to the problematic information management of the Dutch National Government.

> *"The Netherlands is a developed country, which is great. At the same time, this also has its challenges, because we have actually been using computers in government land since the 1960s. There are quite a few systems that are dated and that just bothers you. There are also examples of, among others, a number of Baltic States where the digitization of the government only started in the 1990s. Those countries do not have a number of problems that we do, namely legacy systems."* [E3]

Experts suggest that outdated systems, so-called "legacy systems," must be replaced to improve the way information is stored, especially for information to become sustainably accessible and for information to be easily located. One of the experts, as portrayed in the quote below, stated that even small requests are difficult to process.

> *"Very small Wob requests often have the size of about ten documents, but they often have the same degree of delay as large Woo-requests. I dare to say that it has nothing to do with the size of the request or the laboriousness."* [E9]

It must be mentioned that this quote refers to the number of documents that are eventually delivered but does not provide information on how these ten documents were located. This might be complicated if you have to locate them in one of the multiple outdated information sources, which could cause records to be accidentally left out.

> *"If you don't have information architecture in order and if you don't know where things are or if you haven't created judgment there, you also get these kinds of accidents that are real accidents!"* [E5]

The experts suggest a more robust search method to replace the human factor present in most searches as part of the organizational search strategy. Since, for every request, another content expert might become involved, which brings on a large dependency on that *content expert's skill level* that is different from time to time and creates a large dependency in that process, over which the process coordinator does not necessarily have any control.

> *"And then you depend far too much on whether you happen to meet a Woo-official who knows the archive to some extent and who has some knowledge of how search strings work. This shouldn't be a factor. If you have a good system, the human factor is less drastic."* [E9]

Therefore, a search tool is proposed as the most effective and unbiased way of searching. However, it was found that the existing tool faces multiple problems. One of these is the possible *bad metadata fit*, which might prevent relevant information from being located. This problem was also recognized by the experts, one of them stating the following:

> *"Perfection cannot be achieved, partly due to poor or imperfect metadata, caused by semantics."* [E1]

One of the ways presented to overcome this poor metadata fit is a *full-text search*:

> *"You prevent this by offering the option of full-text search. Well, technologically, there is that possibility today. Twenty years ago, it was a different story, and you had to fall back on metadata because that was a much faster search method."* [E3]

This full-text search involves artificial intelligence to find what is relevant to a query, which with modern technology, can be phrased as a regular question [E3]. Designing your system such that you could directly feed in the requestor's letter, identifying their information need from it, could prevent one from having to interpret it, providing the same procedure for every requestor. So if it is assumed that a full-text search allows you to find the information, the searcher would still have to gain access to it. These authorization regimes are said to differ per ministry [I4]. One way to address the authorization difficulties is not necessarily part of an improvement in the search itself but involves a change in the way of thinking:

> *"..you are paid by the ministry, it is work mail, so I assume you only handle work there. And if you use it for your private use, then you shouldn't complain; you should do that in private time via private mail."* [E4]

This presented the possibly far-stretching notion that the work you do is funded by the public and that it should therefore be accessible to them. Not necessarily to anyone on the street, but at least for someone to search it and check whether it should be included in a Woo-request after redaction. This quote supports the final strategy that was named related to the search, allowing a limited set of individuals to obtain access to all information present within their organization. Only *trained and experienced staff* should be allowed to operate this tool and obtain broad information access rights. The advantage of said personnel is that they are more skilled in searching and have additional knowledge on the archive of the organization, helping the information locating and accessing process.

5.3.2. Interaction with the Requestor

The improvement strategies mentioned in the previous paragraph aide in locating and accessing information. These are operations that are strongly dependent on the initial request and the interpretation of the request. For a good Woo-request ISP, it is essential to understand what is meant by the request and what needs to be searched to fulfill the requestor's information

need. In case a "difficult to interpret" request comes in, meaning it is broad or vaguely formulated, experts found that a conversation with the requestor is the best way to provide clarity on the request.

> *"Otherwise, it becomes a kind of "hineininterpretierung" of the text. And that seems to me to be a complicated exercise that has in any case less chance of success than simply consulting with the [requestor]."* [E4]

> *"Sometimes that just really requires a conversation to determine what the requestor is actually looking for? We would really like to help [the requestor], but as [they] have formulated it now, you really get thousands of documents, but that may not be what [the requestor] want[s] at all."* [E6]

As is shown in the last quote, a conversation can even help the handler to limit the scope of the request by stating that the way they formulate their request has negative consequences for the government and also the requestor itself. The requestor is likely to be flooded with information which will most likely be delivered rather late. Such a conversation limiting the scope does require *substantial argumentation* and, more importantly, *skilled and trained personnel.* One of the experts from the Ministry of Education, Culture, and Science mentioned that the substantive conversation is already implemented in their organization [E6]. This ministry was found to perform relatively better compared to other ministries (Open State Foundation & Instituut Maatschappelijke Innovatie, 2022). Below are two more examples of the benefits of the substantial conversation that were mentioned by two of the experts.

> *"Well, there are at least a few people at [the Ministry of Defence] who seem to be good at that. Incidentally, you can also see in our figures that the volume of requests from [the Ministry of Defence] in terms of the number of documents supplied is considerably smaller than from other ministries."* [E4]

> *"I've seen it at for Groningen gas, very big requests. It melts away with a phone call."* [E5]

The quotes above show that interaction based upon the contents of the request not only has the potential to facilitate trust and cooperation of the requestor but, at the same time, is a means for limiting the scope of requests and reducing their vagueness. Multiple experts confirm that it is a skill that some people are just better at than others since it also requires some form of *informal contact* combined with knowledge-based confidence, knowing what information is stored in the archives. This knowledge on the subject of the request provides you with sufficient confidence to combat possible misuse of the Woo.

> *"If you, Kees, were behind the desk, and I were to ask you: may I know something about the sexual scandal of minister Kaag in 2020. Then everything goes on tilt, even if [there was no scandal] at all. As a handler, you have to be able to look back at your archive, see there is nothing, and just say: no, we don't have any of that on the shelf about that."* [E5]

Both of these facilitate trust within the interaction between the requestor and handler, which experts mention is crucial for the cooperation of the requestor in specifying its request. Continuing on the knowledge of the requestor, it is not likely that one Woo-coordinator has

knowledge of everything within the organization. Therefore, having the suggested *substantive conversation* with the requestor in order to specify requires some initial searching to obtain insight into the information requested.

5.3.3. Iteration and Interpretation of the Information Need

The experts confirm that it can be difficult to determine what information is needed based on the request itself. One thing that makes the interpretation requests more difficult is the insufficient knowledge a requestor has about the topic.

> *"In the Netherlands, you are always condemned to ask something along the lines of: tell me everything about so-and-so."* [E9]

This quote brings up the importance of the *requestor's prerequisite knowledge*. An interesting example that was provided on the potential effects of such a lack of knowledge, though not a Dutch example, is this story that was mentioned by one of the experts:

> *"There was once a request from a historical society that asked the Ministry of Defence after the iron curtain had fallen, may we know the positions of all Russian tanks during the time of the war. And then they got an answer to that, but according to their knowledge, it was only one-third of all Russian tanks. So they objected to that answer. They then met a committee of generals and colonels, who were all laughing together. They said: you may think that the decision is not in order and that there were many more, but this was it really. There were, however, a lot of dummy tanks to fool NATO. You should have asked about tanks or things like that."* [E9]

It is a silly story, yet it shows that a requestor might not be able to ask for the information it requires since it does not yet know what that information is exactly. The latter might even be part of the reason why the request was sent in the first place. Therefore, consulting the requestor, which was discussed in subsection 5.3.2., is frequently named as a possible strategy for improvement. Experts think this will allow the handler to gain *insight into the requestor's knowledge* and possibly provide some initial *information that enables it to specify their request* and their information need. This information need is closely linked to the notion of *relevance*, as this information need determines what information is useful and what isn't. However, when relevance determination was brought up during one of the interviews, some experts reacted with discontent.

> *"I always go on tilt when I hear the word relevant. It is not up to the government in any way to engage in a relevance assessment. The government can ask the applicant: Is this what you mean? The word relevant must be banned in The Hague with 10 km around it in the context of the Woo."* [E9]

> *"And so look at the moment that such a log says: Hans, the expert, thought this was relevant and that it was not. Then I would have my doubts. Because how can Hans judge what is relevant to me or not?"* [E3]

It shows that the government should provide more transparent ways to select information based on relevance. Therefore, *search result registers* were raised as a possible solution for this

problem of relevance judgment. Where the results that were drawn from the search are described but not fully accessible, allowing the requestor to select the documents it wants to view. This form of iteration is also closely related to the suggested *confidential preview of government information* that allows the requestor to freely search through archives or through all results of a previously performed search. Based on the information it obtains from that preview, it can select what information it would like to receive as part of its Woo-request, delivered to them in the redacted form. However, all information that they have seen but that is not delivered through the Woo-procedure must remain secret under the confidentiality agreement. The former methods appear to suggest that based upon an initial set, the requestor might be able to learn from the initial information provided, therefore, specifying their request to a limited set of documents instead of the entire set. This methodology of *"iteration facilitated specification,"* where the requestor is provided with information in bits to learn about the content of their request and specify it, is a possible direction toward the improvement of the Woo-request ISP in the eyes of some experts.

Introducing iteration does change the existing goal of a Woo-request. The current goal is to provide all information related to the requestor's question. Through an iterative approach, bits of information are provided that facilitate the specification of the request towards a potentially smaller set of information. This approach was already somewhat taken on by the Ministry of Education, Culture, and Science:

> *"We, therefore, complete the initial request, and if you still have questions after that, we will look further within a new request, and then we will continue. So that they never have the feeling that we don't want to meet that information need, but that we want to be very fast and give them as much as possible."* [E6]

Just searching in bits, based upon what the requestor provides the handler with, puts some of the responsibility for correctly processing their request in the hands of the requestor.

5.4. Conclusions

The problem-centered expert interviews were conducted in order to identify multiple strategies that can improve the Woo-request ISP and answer sub-question 3:

SQ3: What strategies can improve the existing information search process as part of Woo-request handling at the Ministries of the Dutch National Government?

What was found is that most of the strategies presented focus on the enhancement of the (prerequisite) knowledge of the requestor through *iterative* information provision, aiming to allow the requestor to better articulate their information need. This is expected to lead to more specific requests. An important facilitator of this iteration is the *interaction* between the requestor and the handler(s) involved, which also need to build a relationship of trust in order to obtain a more cooperative requestor. Lastly, as the Woo-request ISP does involve a search for where information is located, the *locating of information* would be improved by facilitating access to all information sources by a limited set of individuals. Additionally, the risk of a poor metadata fit could be overcome by the implementation of full-text search. These improvement themes, related to *interaction, iteration, and the search methodology,* are used in the next chapter in order to gain insight into the Woo-requestor's considerations with respect to the suggested improvements of the existing Woo-request information search process.

Chapter 6 - Focus Group Discussion on Woo-request ISP Improvement Themes

This chapter presents the final research method that was employed for the improvement of the Woo-request ISP process. The goal of this chapter is to provide a form of evaluation of the improvement themes that were identified in Chapter 5 for the Woo-request ISP. As described in Chapter 2, the final methodology of this study encases a focus group discussion (FGD) aimed at answering sub-question 4:

SQ4: What are the Woo-requestor's considerations on the envisioned strategies for Woo-request information search process improvement at the Ministries of the Dutch National Government?

Section 6.1. of this chapter presents the focus-group discussion design that was created based on the paper of Nyumba et al. (2018). After that, the focus group discussion results are presented and analyzed per improvement theme (*interaction, iteration, and search methodology*) in section 6.2. Based upon the explication of the focus-group results, a final reflection on the improvements and the focus-group considerations is provided in section 6.3. Finally, section 6.4. concludes on the focus group discussion output.

6.1. Focus Group Discussion Design

For the focus group discussion design, the paper by Nyumba et al. (2018) is used, which evaluates and presents guidelines for the design of focus group discussions. This section first explains the objectives and key questions of the focus group discussion. Then, the process of the identification and recruitment of the participants is presented, after which the identification of a location and facilitation of the meeting is discussed. Finally, the data collection and analysis methods of the focus-group discussion are presented.

6.1.1. Objectives of the Focus Group Discussion

First, the study's objectives for which the focus-group discussion method is used must be defined (Nyumba et al., 2018). These include the purpose and key questions of the discussion. Based on sub-question four and the findings of the previous chapter, the purpose of the session is formulated as follows:

> *To identify the considerations of the Woo-requestor with respect to the Woo-request ISP improvement themes of iteration, interaction, and search methodology.*

The key questions of the discussion are divided into two closed-response statements and one closed-response question, shown in Table 13 (p.56). Participants were able to submit their responses using the "Mentimeter" tool that allowed this data to be stored per participant. After one minute, participants were asked an open-ended question, *"What are your reflections on the previous question/statement?"* Focus group participants were allowed 3 minutes to submit multiple responses. After this time, these responses were anonymously displayed on the screen and served as input for the focus group discussion. Due to the limited time available for the

focus group discussion, the discussions held per statement/question were limited to 15 minutes. The planned duration of the session was 1.5 hours. This takes into account the guidelines set by Nyumba et al., which state that the discussions should take 1-2 hours to prevent participants from getting fatigued (Nyumba et al., 2018).

Table 13 – Key questions for focus group discussion

Improvement Theme	Statement or Question	Closed Answers
Interaction	*More interaction between the requestor and request handler contributes to an improvement in the processing of my Woo-request.*	• Agree • Disagree • No opinion
Iteration	*I favor a more iterative approach where information is delivered in parts for further specification of my request.*	• Agree • Disagree • No opinion
Search Methodology	*Which search strategy has your preference as a requestor?*	• Strategy 1: Organizational Search Strategy (OSS) (involvement of content experts) • Strategy 2: Search with a Centralized Search Tool (CSS) (metadata-based) • A combination of both

6.1.2. Identification and Recruitment of Focus Group Discussion Participants

After articulating the purpose and structure of the discussion, the paper by Nyumba et al. (2018) states that the next phase is that of identifying and recruiting participants. Due to the limited time frame of this thesis research, only one focus group was formed, with a maximum number of participants set at 8 to allow for a manageable discussion. As mentioned in section 4.1.2, a Woo-request can be submitted by any citizen. However, it is difficult to approach those citizens who have submitted a request in the past due to privacy regulations. Attempts were made to contact citizens through the Ministry of the Interior and Kingdom Affairs, but only one citizen was found suitable for approaching (without violating privacy regulations or causing any upheaval) and willing to participate. Therefore, another more common and experienced group of Woo-requestor was identified, namely investigative journalists, who frequently use Woo-requests as a means of gathering information, as was illustrated by the examples in section 1.1. Through a search on the Internet (LinkedIn), ten well-known investigative journalists were approached and contacted. In addition, one of the previous interviewees, the Wob-/Woo-laywer, was identified as a suitable participant due to their extensive experience in submitting Wob-/Woo-requests. After one last-minute cancellation, this resulted in a total of 7 participants willing to participate in the discussion. These participants are presented in Table 14 (p. 57).

Table 14 – Focus group discussion participants and references

Participant
Wob-/Woo-lawyer
Citizen
An investigative journalist from the "Volkskrant"[6]
An investigative journalist from the "NPO"[7]
An investigative journalist from "Follow the Money"[8]
An investigative journalist from "Investico"[9]
An investigative journalist from the "NRC"[10]

6.1.3. Identification of Location and Facilitation for Focus Group Discussion

The next step in designing focus group discussions is that of "location and facilitation" (Nyumba et al., 2018). A meeting room at the National Archive of the Netherlands was selected as a suitable location. This room facilitates hybrid meetings via Microsoft Teams, which allows the researcher to record the session via cameras and room microphones. In addition, the room offered the possibility to set up a large screen that was used for the presentation as well as for displaying the Mentimeter questions and answers that served as input for the focus group discussions. The researcher assumed the role of discussion moderator. Nyumba et al. (2018) recommend that an assistant is present during the discussion, for which a fellow intern was recruited. Their role was to take notes of the discussion and focus on data collection for the later ethnographic analysis.

6.1.4. Focus Group Discussion Data Collection

Pre-session preparation is essential in terms of presenting the data to be collected. A script for the presentation was prepared, which first gave the participants an overview of the research conducted so far and the goal of the session. This script was also reviewed with the assistant while explaining what to focus on, specifically when taking notes. The recording capabilities in the room were tested in advance to verify that the visuals and audio would be recorded appropriately. During the final recording, it was found that the visuals were not recorded as they should have been and that the audio was not always as audible as had been hoped, making the final data analysis difficult. The final data were therefore shaped by the assistant's notes, the moderator's notes, and the audible portions of the focus group discussions, as well as the Mentimeter inputs, similar to the main methods of data collection during the focus group discussion described in Nyumba et al. (2018). These "raw data" can be made available upon request and with participant consent.

6.1.5. Focus Group Discussion Data Analysis

The data, in the form of both qualitative (transcribed portions of the record) and corresponding observational (notes) data, is analyzed according to the prescribed "three-coding framework"

[6] The Volkskrant is a newspaper.
[7] The NPO is a Dutch public broadcasting network.
[8] Follow the money is a platform for radically independent investigative journalism.
[9] Investico is an independent non-profit platform for thorough and structural journalistic research.
[10] The NRC is a newspaper.

as described in section 2.1.6. (Morgan, 1988; Nyumba et al., 2018). This coding is done per statement and its respective discussion. The final coding is presented in Table 15, which served as the basis for the analysis of the FGD results presented in section 6.2.

Table 15 – Focus group discussion coding framework with initial and focused coding per discussion subject

Subject	Initial Coding	Focused Coding
Interaction	No substantive conversation	Interaction on Content of Requests
	No search performed before interaction	
	Control over Process	Transparency on and Steering of Search Process
	Trust Creation	
	Interaction Partners	Law-guided interaction with authorized personnel
	Formal Interaction	
	Lack of Authority	
	(Deliberate) Mistakes	Risks within Interaction and Search Process
	Broken Agreements Promises	
	Delay by Interaction	
	Information Management Influence	Influence of Government's Information Management
Iteration	No search performed before interaction	Iteration should be valuable for requestor (content and action based)
	No substantive conversation	
	Delay by Iteration	
	Learning what is relevant	Iterative Learning Based upon Search Results
	Relevance based reduction	
	Confidential Preview of Information	
	Control over process	Transparency on and Steering of Search Process
	Trust Creation	
	Interaction Partners	
Search Method	Splintered Information Storage	(Poor) Information Management Influence
	Combination of Methods Required	
	Information Management Influence	

6.2. Focus Group Discussion Results

This section analyzes the data of the focus group discussion in order to get an overview of the focus group considerations with respect to the statements and questions that were posed. The data that was obtained from the Mentimeter survey are portrayed in Appendix D.

6.2.1. Focus Group Considerations with Respect to More Interaction

The concept of interaction between the requestor and handler is a colored notion. A strong feeling of mistrust was noted throughout all focus group participants based on their previous experiences with Woo-requests. Partially they felt that the interaction they had in the past did not serve their rights as a requestor. In some cases, they found that interaction was merely a strategic tool for delay, not helping them as the requestor.

> *"I always want to talk about the content of the request, but what I notice now is that the conversations are actually being used to [delay] the decision period, to proceed to*

phasing a request, to immediately proceed to gross curtailments, without giving real insight into [the information] that is currently available." [P4]

Additionally, requestors are often in doubt about whether the handlers they interact with have good intentions or attempt to obfuscate information. They realize that with the existing information management landscape of the government, it is not easy to retrieve information, but sometimes they are not sure whether a mistake is actually a mistake.

> *"...have they forgotten the documents or are they deliberately withholding something."* [P6]

> *"Too often, I experience that promises that are made or things that are said simply do not add up or are not realized, and that also means that I start contacting that official with suspicion. From that point on out, I'm going to pay very close attention to my words, and I want to see this 23 times on paper because otherwise I'm just, phrased impolitely, being screwed."* [P6]

The two quotes show that there is a large amount of mistrust present within the interactions that take place, which can complicate the interaction itself and, with that, the processing of a request. In addition to what is actually being delivered, there is also the process itself, during which mistrust arises since promises are broken. Participants state that if an interaction is to take place, this interaction should have certain preconditions related to with *whom the interaction takes place* and *what is discussed during the interaction*. Based upon the first preconditions, the participants mention that interaction should always take place with a government *employee who has the authority* to guide and steer the Woo-request handling process [P5]. The participants mention that by having someone present who has control and authority over the process, legally binding agreements can be made instead of the hollow promises in some of the existing situations. Additionally, the participants agree that the processing of their Woo-request is not just a friendly conversation but an interaction that should be guided by the law that protects them.

> *"I'm not really that much in favor of "informalization," because then you simply waive the procedure, whilst the procedure somewhat safeguards the rights you have as a requestor."* [P3]

The second precondition for interaction is that it is *performed based on the contents of the information related to the request*. The focus group participants feel that most of the time, the conversation is just held because the government is by law required to do so or because it allows for a justified delay of the process. Therefore, the government should facilitate that those with knowledge of the request's subject are present next to the authorized personnel. The participants think that only those employees are able to have a substantial conversation with the requestor.

> *"The person handling the request must be present at all of the conversations. But of course, there is a team working on that search and processing the request. If you want to have a substantive conversation, I would also prefer to have someone from ICT join us to see what you have searched for, what came out of it, and how I can clarify things so that we can actually move forward in this process."* [P4]

The quote above shows that the content expert can provide value, and the employee involved with the search or who has expertise on how information is archived can be of great value. This employee can provide a requestor with insight into how the search is performed. Suppose this search strategy is discussed with a requestor. In that case, this allows the requestor to comment on said strategy and potentially redirect it toward their information needs, allowing the requestor to gain some control over the process, which increases their trust.

> *"This creates trust; a ministry says: there are so many hits coming out, we don't get it, come and have a look with us to see how we can solve this."* [P4]

This shows that the information on the search process does not just merely provide the requestor with information but can also be a *facilitator of trust* due to the control the requestor might gain by said information.

6.2.2. Focus Group Considerations with Respect to Iteration

The most important belief within the discussion surrounding iteration is that it is expected only to delay the process, not making it a beneficial change for the requestor.

> *"If it's a very frequent return to what's your question, and we've now found this, then I don't think the process will be any faster."* [P7]

However, one form of iteration which was brought up during the discussion was that of "the confidential preview of information" [P5]. This concept encases access for a Woo-requestor to the government information systems or a selected set of information that has been found under a confidentiality agreement. The requestor can then specify the documents it would like to receive outside of the confidentiality agreement via a Woo-request. This preview is found to give the requestor control over the search process, as it enables the requestor to search where it wants to and, with that, provide a search that they deem to be finished or complete.

> *"It often happens that a client says during the confidential preview, we have to go there too, and then the Woo official says: I hadn't thought of that at all, that we should also look there."* [P1]

> *"What also became apparent during a confidential preview was that the handler had only searched until the level of the Secretary-General. Yet, we did want to search levels of the SG and higher as well, but was told that the handler did not have authority to do so."* [P1]

In addition to providing the requestor with an overview of the places where the handler has searched, it can sometimes be a confrontation of where the handler did *not* look or was not able to look. This can be an honest mistake or misunderstanding of the information need, or it can be a form of negligence based upon a lack of authority on insight within information systems. Furthermore, another important aspect of the confidential preview is that it allows the requestor to select what it finds relevant to their request [P4]. This *control over the process* that can be facilitated throughout the learning nature of the confidential preview and the guiding nature within the search performed by the requestor during the preview are interesting ideas to consider. This preview immediately facilitates a substantive conversation based upon

a search that has already been finished or is being performed as the confidential preview takes place.

> *"If you sincerely enter into a consultation, you must have a clear understanding of the problem as a government, and you must be clear that you have already searched and that you, therefore, know what the request is about."* [P1]

Yet, there is a downside to the confidential preview, as it does not necessarily mean that all documents that are requested are delivered via the Woo-request or can mean large parts are redacted. Due to the confidentiality agreement that is part of the preview, the requestor is not even allowed to act upon its knowledge of what is underneath the redacted parts it might have seen. This was found to be difficult and even scary for the investigative journalists who had used this method before [P7].

6.2.3. Focus Group Considerations on a Preferred Search Method

The focus group discussion finally asked the requestor how they would like the search to be performed. The participants stated that both the organizational search strategy as well as the centralized search tool are required in the existing situation:

> *"A combination of the two search methods is necessary because we need to know who was involved in a case so we can connect their mailboxes and drives. There have been many DMS systems: you have to have someone who has knowledge about it. Human knowledge is needed."* [P4]

> *"As long as the preconditions are not met, we cannot rely on a central search system. At the same time, we cannot rely solely on the substantive experts because they also change constantly, and they do not have full knowledge of what is and what is not there."* [P5]

Participants mentioned that their answer is based upon the fact that the current information management of the Dutch central government is not able to be searched by the centralized search tool or accessible via one central archive. The splintered information landscape of the government renders one unable to perform the search via what is regarded as the "most objective" search method, the centralized search tool. The preconditions of what is called a *centrally accessible archive* are not met. This precondition is not only beneficial, it is mandatory, as presented by the Woo-lawyer during the discussion, who stated that a judge assumes the archives are in order but that even the state attorney knows that is not the case, making their work more difficult as well:

> *"Let me put it very nicely when you go that deep with the judge, judges say with some regularity; I judge this case assuming the Ministry has its archives in order. Then the state attorney explodes because that is a ******** mess."* [P1]

What else can be derived is that the focus group prefers both methods as it aims to maximize the completeness of what is published in relation to their request. They want to know everything there is to know regarding their request so that they can finally judge what is useful to them. In order to obtain completeness, their opinion is everything possible should be done in order to adhere to that mandatory completeness.

6.2.4. Summary of Focus Group Discussion Analysis

The requested information is retrieved from the government's information systems which are observed by the focus group discussion participants as the first hurdle within the Woo-request ISP. The solution that the focus group posed was that of a *centrally accessible archive*, which allows for all information to be searched via one medium. The latter would preferably be done via a search tool, which guarantees a more *objective approach* compared to manual selection by government employees. The focus group participants expressed their preference for more interaction between the requestor and the handler, provided that their preconditions are met. The preconditions named were that the conversation should be performed *after some form of initial search* has been performed, enabling this to be a *substantive conversation with the content expert* and a *conversation on the search method* that was used. However, all interaction that takes place should have *authorized personnel* present that has an influence on the process and can ensure that the processing of the request takes place as mandated by law. Participants find that interaction is currently used as a tool for delay and as a way for the government to simplify the processing of a Woo-request to be able to deal with their own lacking information management. Furthermore, participants state there is *no wish to have multiple iterative steps* within the process; they view iteration solely as a strategy that causes delay. Yet the *learning* that was facilitated through a confidential preview appeared to be a positive experience. This method enables a requestor to personally *determine what information is relevant* and *control the search process*, reflecting upon where and how the search was performed and possibly steering it during the confidential preview. Lastly, both search strategies identified in Chapter 4 should be used according to the participants due to the limitations of the individual strategies. These limitations are a *lack of completeness* (centralized search tool) and *potential bias* (organizational search method). An overview of the requestor's considerations is presented in Table 16.

Table 16 – Conclusions of FGD with downsides of themes, suggestions per theme, and their benefits

	Downsides	Focus Group's Suggestions	Benefits of Suggestions
Interaction	Strategy for delay	Search performed before interaction	Specification on content basis
	Currently a non-substantive conversation	Interaction preconditions: ○ Authorized handler present ○ Substantive conversation on search method and results with content/search expert	Control over search process
Iteration	Strategy for delay	Confidential Preview of Information	Requestor determines what is relevant
			Control over search process
Search Method	Organizational approach is biased and is prone to human error	Centrally accessible archive	Completeness by accessing all information at once
	Centralized search tool is not connected to all sources	Search via search tool (most objective)	Objective search method

6.3. Reflection on the Focus Group Discussion

The focus group discussion evaluated the improvement themes from the perspective of the Woo-requestor. However, it is important to also reflect on the outcomes of the focus group discussion from a broader perspective, which also includes possible government motivations as to how the Woo-request ISP should be performed. Therefore, this section presents a critical reflection on the FGD findings, highlighting some of the barriers that can be identified.

6.3.1. Reflections on a Centrally Accessible Archive

Reducing the Woo-request ISP to its core, it is about retrieving all relevant information from the information systems of the Ministry to which the request is directed, adhering to the principles of: *speed, completeness and traceability of the process* (Chapter 4). Whilst a centrally accessible archive might be logical in order to guarantee completeness and is likely to speed up the search itself, there are some serious considerations here, of which an overview is provided in Figure 16 (p.64). First of all, the Dutch national government creates *vast amounts of information*; in 2018, it was mentioned that over one billion emails a year are sent (RDDI, 2018). These emails can contain attachments and can be multiple highly intertwined conversations that are difficult to extract. Some are not at all relevant to Woo-request, as they regard the birthday of John, for which there is cake in the pantry. Storing these vast amounts of information in a sustainably accessible fashion is a complex task and requires serious storage capacity. Additionally, this raises the question of whether all information should be archived and searched as part of a Woo-request, such as John's previously mentioned birthday cake. If one opts for all information to be searched, this means that vast amounts of information are stored within the centralized archive, and it also increases the likeliness of more irrelevant information being found.

Continuing, the information that is stored needs to be provided with *fitting metadata* in order for it to be retrieved via the existing metadata-based search tools. If that is not the case, the relevant information will still not show when searching all information sources, or lots of irrelevant information might come from queries. In a government where *everything is connected to everything*, and policies rarely stand on their own, it can be difficult to separate all information from one another via metadata. The realization of a metadata standard applied to information, that facilitates the "surefire hits" that were mentioned in the report of IMI & Berenschot (2021), is difficult, if not impossible, to realize. Because of this, the Woo-request ISP should either accept a lack of relevant or an overdose of irrelevant information retrieved by the search tool. Or it should implement other methodologies that are able to overcome these metadata-related issues.

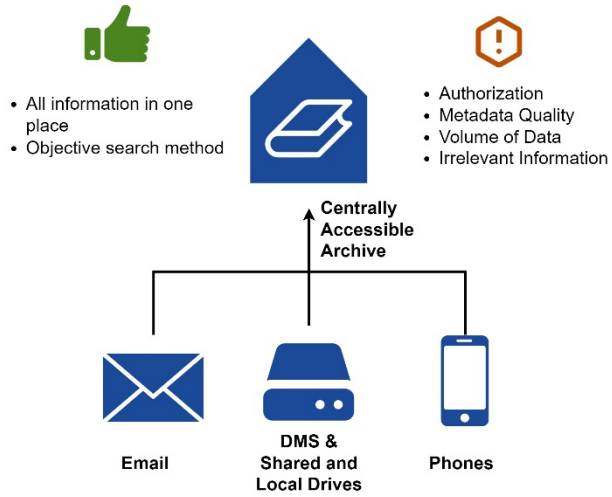

Figure 16 – Visualization of considerations with respect to the centrally accessible archive

But suppose one is to overcome the issues in terms of data volume (relevance) and metadata quality. In that case, there is the possibly even more significant question of *authorization* concerning the centrally accessible archive. Apart from the privacy considerations, where one would not want some colleagues to be able to view their email boxes, there is also the matter of information that is not allowed to be viewed by everyone, such as state secrets or politically sensitive information. Therefore, it is clearly not a desirable situation for individuals to have access to all information within an organization. And if executed would require a strict authorization regime, giving Woo-request handlers (temporary) access to all information applicable to the Woo for it to be searched. In some way, an authorization regime should be able to deal with this complexity. Lastly, the human knowledge currently needed to create a suitable query expires over time, as personnel changes jobs or fall ill, and responsible individuals might be hard to track down. A perfect information search protocol that finds all possibly relevant information to a requestor's information need may, therefore, never be realized, which is something to consider seriously.

6.3.2. Reflections on a More Iterative Woo-request ISP

Iteration is not found to be beneficial by the participants, yet, can a requestor reasonably expect a request that spans hundreds of documents to be extracted from multiple information sources, all judged for relevance and redacted in one go within the legal term? Questioning whether a requestor can be held responsible for the long processing times, which are partially caused by their requests. This is also mentioned by one of the experts that was interviewed in Chapter 5:

> *"Transparency has its price, but if you can also put 5 teachers in front of the class for a year from [the costs of] a Woo request, you can also scratch your head and ask yourself: am I doing the right thing [as a requestor]?"* [E4]

So if the scope of a request causes an inevitable delay, would iteration, that might also cause delay, be a feasible methodology to use within the Woo-request ISP? Experts mention that iteration can lower the workload of the redacting process and can result in smaller batches of

documents that might still fulfill a requestor's information need, possibly making iteration-facilitated specification the most suitable method for handling a large request. At the same time, with the recent experiences of the requestors portrayed in the focus group discussion, their concerns seem validated as they mention iteration as solely a strategy for delay, reducing their trust. Iteration could also be a potential obfuscation strategy (Luscombe & Walby, 2017), only showing the "favorable" bits of information initially, guiding the requestor in that direction. Therefore, it is difficult to have a helpful iteration if it is still biased by the initial perception of the government official's relevance judgment, as true relevance can be fluid and, above all, can only be determined by the one who holds the information need. The confidential preview allows a requestor to look at all information available and make their own selection for what is delivered as part of a Woo-request. In doing so, the requestor is in control of the search and able to determine relevance on their own. Yet, what was already mentioned during the focus group discussion, is whether this is possible for every Woo-requestor:

> *"We have to realize that we are here with the creme de la creme, the small elite of Wob journalists, and the people who support us. What you are saying is a good method for that group. I think this can be part of the solution, but for citizens, this is not a solution and therefore, it cannot be a sustainable or the only solution." [P5]*

6.3.3. Reflection on Increased Interaction between Requestor and Handler

Interaction takes place between government actors and the requestor, meaning that both can influence it and that there are dependencies present, as depicted in Figure 17 (p.66). Consequently, this interaction cannot occur without *the requestor's cooperation.* Suppose the requestor behaves in an uncooperative fashion and refuses to interact in favor of the processing of their request. Can the requestor then reasonably expect speedy and qualitative handling of the process? As it is the requestor itself, who does not contribute to the necessary boundary conditions of informative interactions. Furthermore, if the requestor is *unable to adequately specify their initial request*, possibly based upon a lack of information available to them, this might make the scope of the request broad and difficult to execute in terms of the search itself. With that, the competence of the requestor becomes a dependency within the Woo-request ISP. Ultimately it delivers many more results than might be necessary to fulfill the requestor's information need. As mentioned in section 6.2., the focus group is supportive of more interaction but mentions that interaction is to take place with a single authorized person that acts according to the law and keeps up their promises. Such a person would have to be well-known with the procedure and the organization, but no matter how skilled or experienced, they are unlikely to manage everything about the processing of a request. For example, they are not in charge of the agenda of the personnel to be involved with the search and the personnel that is considered a content expert. Yet, they are heavily dependent on these schedules and their efforts in order to facilitate a speedy process. Another precondition for interaction is that it gives an insight into the search process and results, allowing for control over the search process and specification based on the information. Because of this, the content and search experts who ought to be present during the conversation need to be prepared upfront. If the preparation is not performed correctly, it could result in possible unwanted or illegitimate disclosure of information. This requires extra capacity from the content experts and dependence on said capacity, which could lead to delays within the Woo-request ISP.

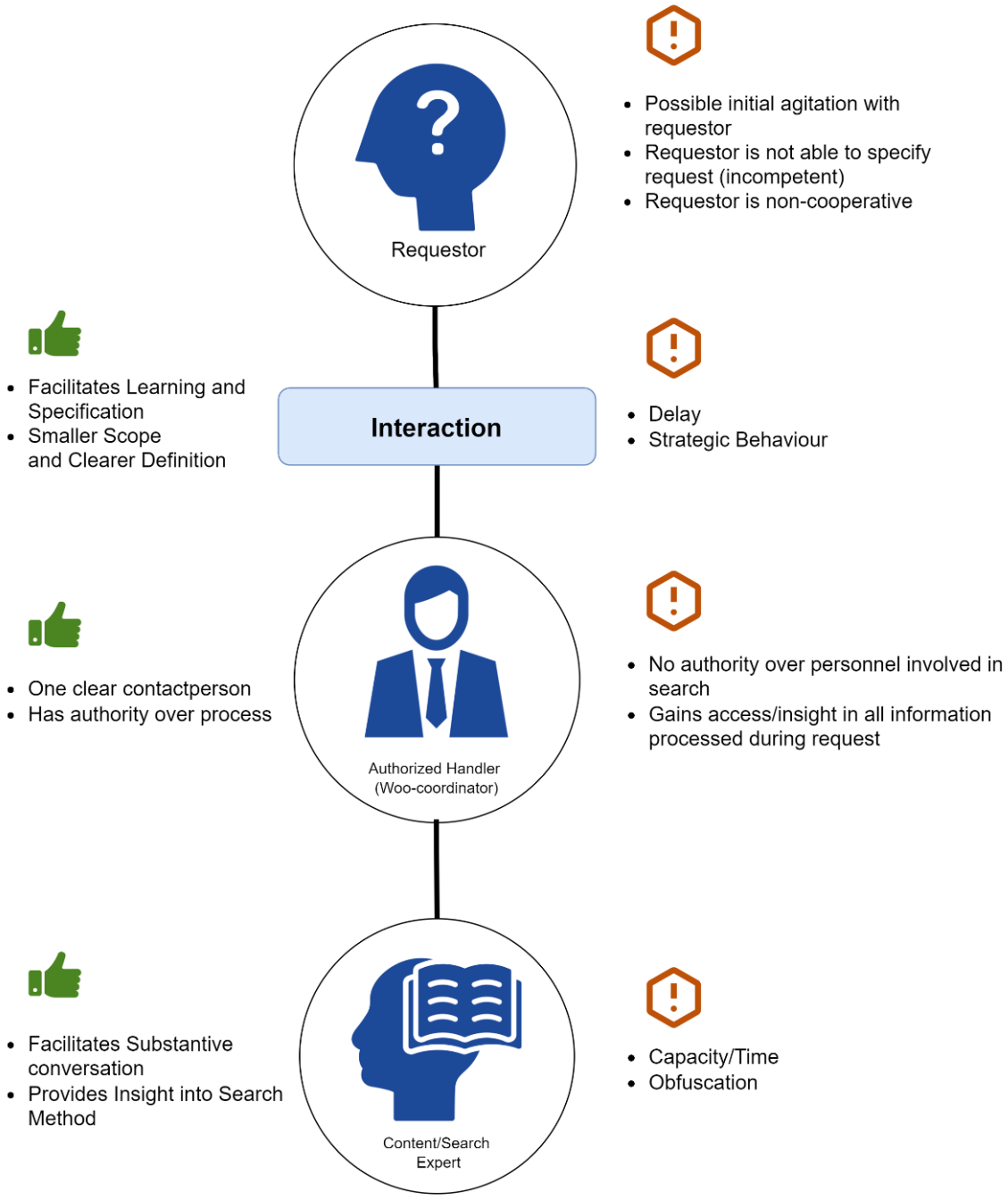

Figure 17 – Considerations within increased informative interaction between handler(s) and requestor

6.4. Conclusions

The focus group discussion has provided insight into the considerations on the improvement themes of *interaction, iteration, and search methodology* taking place in the ISP of their Woo-requests, providing an answer to the fourth research question:

SQ4: What are the Woo-requestor's considerations on the envisioned strategies for Woo-request information search process improvement at the Ministries of the Dutch National Government?

Most importantly, a feeling of distrust was noted throughout the discussions, based upon negative past experiences with obfuscation practices and broken promises, which needs to be addressed by the process improvements. For example, most courses of interaction or iteration within the process were found to be *strategical instruments for the delay*, increasing said *distrust*. This distrust can result in an *uncooperative requestor*, which complicates the process. The focus group discussion participants mentioned that this distrust could be mediated by the requestor gaining more *insight into the search procedure* itself and an overview of the search results, all guided by an *authorized handler* who upkeeps its promises. However, there are several dependencies and complications identified within this interaction. First of all, if more interaction is to take place, this requires *additional capacity of civil servants* and requires more skill and preparation. Secondly, if a requestor is *unable to specify their request* due to a lack of competence, this will encase a large and complicated search process, inevitably slowing down the Woo-request ISP.

Additionally, the importance of *completeness* was highlighted since, according to the focus group participants, the search method applied is to do whatever is possible in order to find as much relevant information as possible. In the context of the existing *splintered information landscape* caused by the government's bad information management, the centrally accessible archive was proposed as a solution. That would allow a Woo-request handler to access all information applicable to the Woo at once. The realization of a *centrally accessible archive does curtail significant barriers*, for example, with respect to the authorization given to individuals within the organization to obtain access to all possible information. This could have far stretching negative political influences and bears privacy and security-related issues as well. Lastly, it was noted that relevance could only be judged by the requestor itself, as was found beneficial in the confidential preview of information, but a practice that was not found to be broadly applicable.

Chapter 7 - Discussion

This chapter presents a discussion of the results that were found throughout the research. It is essential to do so as all previously presented chapters are separate parts of a complex puzzle, the Woo-request ISP. The findings of this research are not just improvements of the Woo-request ISP at Ministries of the Dutch National Government, but more importantly, allow for insight into the process and a reflection on the factors that currently influence it. In section 7.1. a review of the dependencies present within the process is presented. After which section 7.2. elaborates on the two identified improvement directions: *Increased Informative Interaction,* and *the Optimization of a Traceable Search*, as well as the considerations and dependencies in their implementation. Finally, section 7.3. which is called *"Dilemmas in the Operationalization of Government Openness and Transparency,"* reflects on the influence that the operationalization of the Woo-request information search process has on the higher-level goals of an open and transparent government, which the Woo aims to facilitate.

7.1. Dependencies within the Existing Woo-request ISP

What was found by the case study is that the Woo-request ISP is dependent on *many actors* that are involved in the information search process, as well as *many different information systems* from which the information needs to be retrieved. First and foremost, the request itself determines what types of information are requested and what volume of information is considered. How well this request is phrased is related to the competence of the requestor to articulate its information need and the prerequisite knowledge it has.

The Requestor's Prerequisite Knowledge and Competence

In the existing situation, the amount of actively disclosed government information is limited in the Netherlands. This means that a citizen is not able to gain information that might already provide the answer to their information need, urging them to have to send a request. But what is more, in preparation for submitting a request, the requestor might not be able to adequately specify what it is asking for, resulting in vague and broadly defined requests. For example, if a requestor knows of the existence of a certain document on heat pumps and wants to know what is written in that document, they are able to request that exact document. But if a requestor does not know such a document exists and that the information they would like to obtain is presented in that document, a request could be phrased as "give me information about heat pumps." Such a request encases much more information than the document that would fulfill the requestor's information need. This dependency found is the *prerequisite knowledge of the requestor* and also influences the interpretation of the request.

Cooperativeness of the Requestor

The interpretation phase identified as part of the Woo-request ISP is, in some form, the translation of the request to an executable and clear search task. Sometimes, a check is performed in order to see whether the interpretation fits the request; for this check, the requestor is contacted. The case study showed that this requestor is sometimes hesitant in this interaction, which shows the dependence on the *cooperativeness of the requestor* for this interaction to take place. Making it difficult for the handler to verify whether its interpretation is in line with the requestor's information need. Furthermore, distrust and a fear of missing out

on potentially relevant information caused by the specification of their request appear to drive a hesitation for specification, as was found during the focus group discussion.

Experience and Skill of the Woo-request handler

The personnel involved in the search are identified to influence the process considerably. This personnel aims to create a fitting interpretation, after which the search and selection of information are performed. A strategy that was proposed frequently in Chapter 5 is that of *more experienced and trained staff*, indicating that this might not be the case in the existing situation. This did not come forward in the case study interviews, as it would mean the interviewees themselves had to mention they should be better at their jobs. The example of the Ministry of Defence was given by experts, where the handlers are able to specify the requests and make them smaller, based upon their knowledge of the organization but also their negotiation tactics in doing so—indicating the dependency on the *experience and skill of the Woo-request handler.*

Content Expert's Skill, Capacity, and Bias

Based on the case study interviews and the additional information obtained from expert interviews and the focus-group discussion, the Organizational Search Strategy is the most commonly used strategy. This strategy initially searches for the civil servants involved with the subject of the request in order for them to select all information that they deem relevant to the request. This search strategy involves personnel that is most likely occupied with their daily work, and that is not necessarily an expert in terms of information searching. The latter is a big influence on the success of an information search process (Dinet et al., 2012; Kuhlthau, 1991; Marchionini, 1996; Russell-Rose & Chamberlain, 2017). This availability and search expertise dependencies present the *content expert skill & capacity dependence.* Another factor to consider is that content experts might incorporate a *(un)willing bias* in the search, possibly excluding politically sensitive information from the search results. This initially happened with the "Memo Palmen," which contained crucial information on the government's awareness of the problems surrounding the Childcare Benefits Scandal but which was first obscured (Parlementaire Ondervragingscommissie Kinderopvangtoeslag, 2020; RTL Nieuws, 2021).

Sustainably Accessible Information Storage

Lastly, we move down to the level of information and information systems. Multiple types of information can be requested, as the term document used within the Woo is broad: *"every written document or other set of recorded information that was drawn up or received by a public body, which is by its nature related to the public task of that body"* (art. 2.1. Wet open overheid). This variety of information is stored in different places, such as DMSs, local drives, shared drives, email applications, and even phones. As was mentioned at the start of this section, a request determines what information types need to be extracted and from which of these source information should be extracted. Each source requires its own retrieval methods and with its related difficulties. The handlers of Woo-request, including the searchers, mention that they often do not have sufficient access to all these information sources and that it is difficult to achieve completeness. As was presented in the reports of the Inspection of Government Information and Heritage[11], this diverse way of storing information has the potential for distorting the information retrieval process hindering sustainable access to government information, creating a "dementing government" (Inspectie Overheidsinformatie en

[11] Dutch: Inspectie overheidsinformatie en Erfgoed. Formerly known as the "Rijksarchiefinspectie".

Erfgoed, 2018, 2021; Rijksarchiefinspectie, 2005). The way that government officials store this information affects the retrievability of said information, creating a dependency on *sustainably accessible information storage.*

Overview of Dependencies
In order to create an improvement within the Woo-request information search process, it is found that new strategies should take into account these dependencies, which are once more listed below to provide an overview.

- *The requestor's prerequisite knowledge and competence*
- *Cooperativeness of the requestor*
- *Experience and skill of the Woo-request handler*
- *Content expert's skill, capacity, and bias*
- *Sustainably accessible information storage*

Based upon the problem-centered expert interviews and the focus-group discussion, the two main improvements that were found are discussed in section 7.2.

7.2. Identified Woo-request ISP Improvements

In this section, the two main improvements found from this research on the Woo-request information search process are described and discussed. First, the concept of *increased informative interaction* is described in section 7.2.1., after which the *optimization of a traceable search* is discussed in section 7.2.2. These descriptions elaborate on the main elements of the prescribed improvements and their advantages but also explain what dependencies will most likely remain, which serves as input for the final section (7.3.) of this chapter.

7.2.1. Increased Informative Interaction

Based on the research that was performed, the first improvement that is suggested is that of *increased informative interaction.* This interaction takes place between the requestor and an authorized Woo-request handler, who is able to guide and control the handling process as described by law. Furthermore, the informative aspect of this interaction is facilitated by the presence of a content expert, who is or was involved with the subject of the information requested, and a search expert, who is involved with the search process itself. In order for such interaction to take place, it is important that an initial search has taken place that facilitates the *informative aspect* of the interaction. The initial search and its results are to be discussed during the conversation, allowing a requestor to learn from that information and reflect on their information need in order to specify their request. The latter aims to *enhance the requestor's (prerequisite) knowledge.* But not only can it enhance a requestor's knowledge, but it was also found as a potential facilitator of trust, which was found to be important for the requestor's cooperation. The *traceability of the process* that is provided by informative interaction, and the requestor's personal relevance judgment that facilitates a check for *completeness*, provides the requestor with a form of control over the process and is said to increase their *trust*. This interaction also allows the government to show a friendly side, providing *good customer service* coming from *experienced and skilled personnel*. This also aides the government in better understanding a requestor's information need, reducing the difficulty of the request interpretation phase.

Chapter 4 compared the identified Woo-request ISP to Gary Marchionini's ISP model (1996), observing significant differences in terms of the processes' iterativity. Another influential ISP researcher, Carol Kuhlthau, states the importance of this iteration and learning as part of the information search in the following quote: "*What is relevant at the beginning of a search may not be at the close and vice versa.*" (Kuhlthau, 1991, p. 363). Throughout the information search process that is described in academic literature, the users are able to move through different levels of information need and stages in an information problem, likely to change their judgment of relevance whilst reflecting on their personal knowledge of the topic and their understanding of the problem (Kuhlthau, 1991; Saracevic, 2017). Yet, the case study analysis found that the current Woo-request process only provides the Woo-requestor with the requested information at the end of the process. Therefore, the requestor is not enabled to specify their request based upon knowledge acquired throughout the process and reflect upon their *information need*. The process is, therefore, solely aimed at answering the initial request and is not guided by the search itself, which could possibly change or influence the initial request. The latter is in line with Marchionini's ISP model (1996), which shows that a more iterative search process serves as input for continuous (re-)defining and understanding of the information problem.

Yet, it must be noted that notable dependencies can hinder this improvement's success. The first is that a Woo-requestor might simply not want to cooperate or interact, leaving this improvement pointless. For that, it must be noted that the Woo, as a law, provides the means to end the processing of the request due to a lack of cooperation towards the specification of the request (art. 4.1. Wet open overheid). But it remains difficult for a government that already endures distrust to simply reject citizens' requests since it is an act that is bound to cause upheaval. Furthermore, the presence of the content expert is identified as a dependency due to a potential lack of its capacity in terms of time, but also possibly skill. Knowing what you can and cannot say requires a content expert to have knowledge of the law and the topic at hand. For the subject of one request, a more skilled and knowledgeable content expert might be found than for another, possibly causing differences in the effectiveness of this method. Lastly, the knowledge to be obtained in an early stage that serves as input for the informative interaction is reliant on the way the relevant information was once stored. If it remains difficult to locate and retrieve information, one might not be able to have increased informative interaction. Therefore, the next improvement is aimed at improving the location and retrieval of information.

7.2.2. Optimization of a Traceable Search

No matter how specific a request is, if the executed search cannot locate the requested information, there is no use to that specification. Academic literature shows that information searching is a skill that comes with experience (Dinet et al., 2012; Kuhlthau, 1991; Marchionini, 1996; Russell-Rose & Chamberlain, 2017). Therefore, the first recommendation to facilitate a complete and objective search is for it to be executed by *appointed search professionals within a ministry* instead of the content experts or Woo-coordinators. This also ensures that there is a *decreased dependency on the time and capacity of the content expert*. Decreased is mentioned on purpose, as it is likely that a content expert will have to be involved in some way to provide the search expert with relevant background information to perform its search task. The search professional would have to know how the available search tools work, as well as how the information (archive) is organized within the ministry that it is employed. Additionally, the

search professional's lack of involvement with the creation of information is expected to make them *less prone to politically motivated biases or errors*.

Next, the search professionals that operate within a ministry should be able to search all "documents" of that ministry that are applicable to the Woo, which requires *access* to these documents. This definition of document used for the Woo is broadly defined; therefore, almost all information that is recorded or drawn up should be retrievable by law and accessible by the searchers. It was found from the problem-centered expert interviews and the focus group discussion that it is best to facilitate centralized access to the information to reduce the complexity of the existing splintered landscape of the Dutch government. Therefore, it is suggested that a *centralized search tool* is connected to as many information sources as possible. Amongst these sources are, most importantly, the DMS, (local & shared) drives and email boxes. "As many sources as possible" is explicitly mentioned since, in the existing situation, connecting information sources such as phones is not possible. This information would still need to be transferred to, for example, the DMS for it to be searched. The search tool would have to facilitate the search professional to locate, retrieve, and finally access the information. This increased accessibility through centralization is expected to *optimize the completeness of the search*, which was found to be important by the focus group participants and defined as a process goal in Chapter 4.

This method that makes use of a centralized search strategy was described as the Centralized Search Strategy (CSS) in Chapter 4. Experts and focus group participants stated that it would allow for *a more objective and retraceable search*, as it reduces the human factor, which was found to be a potential cause of bias within the output of the request. Furthermore, the search queries can be communicated and discussed with the requestor, and the outcomes of the search could be presented to the requestor in the shape of a *search result register*. A register can contain generalized descriptions of the documents retrieved with the search tool, allowing it to be presented to the requestor after redacting the register based on applicable exemption grounds. This register allows the requestor to select the information they would like to receive. This control and insight into the search were confirmed by the focus group participants to facilitate *trust*, which in its turn stimulates the cooperation that is required for the *interaction* within the process itself.

The search methodology that was recommended by the experts is that of full-text search. However, this is not applicable to information that *is not stored in a readable format*. Therefore, it is recommended that the search method applied by the centralized search tool makes use of metadata in order to be able to search non-readable information objects as well. A negative influence that was identified in this research is that the metadata search is reliant on the quality and fit of metadata that was added to information in its creation. The responsibility to admit the right metadata to information currently lies with the creator of this information, who is not an expert in archiving. Therefore it is recommended that the *metadata admittance is largely automated* and regularly checked by information experts to increase the sustainable chance of retrieving relevant information via the search tool.

Whilst an optimized and more traceable search is advantageous when wanting to adhere to the Woo, there are serious other considerations to be made outside of that. First of all, it would require a large change within the existing authorization regime of ministries whilst still adhering to the intricate net of privacy and security regulations. But apart from this mere practicality,

there are far more complex reasons that question the feasibility of a centrally accessible archive. It is stated by the work of Schwartz & Cook (2002) that archives are not just passive resources but are, in modern days, active sites where social power is negotiated. This social power is also represented in Sir Francis Bacon's famous quote: "knowledge itself is power." If individuals within ministries are to obtain access to all information that falls under the Woo's definition of "documents," these individuals would become powerful actors within ministries. This change is, therefore, likely to encounter strong (political) resistance from all layers of the organization. The strongest resistance might come from those who are able to implement this change. Furthermore, the employees whose, amongst other information sources, mailboxes are accessed will most likely experience this access by others as an invasion of their privacy and that this is an infringement on the civil servant's daily work. Therefore, it would be beneficial if only the information to which the Woo applies is accessed. Yet, the rather broad definition of "document," as defined in the Woo (art. 2.1. Wet open overheid), would mean that a lot of information must be included and accessed. Leading to a significant reduction in the privacy of government employees.

7.3. Dilemmas in the Operationalization of Government Openness and Transparency

On paper, a Woo-request can be conveyed as a process where a citizen formally asks for information from the government and receives this disclosure package from their government. However, it was found from this research that the seemingly mundane and bureaucratic workings of Woo-request processing are, in fact, a rather complex process. Rightfully so, the paper of Luscombe & Walby (2017) calls for the theorization of the FOI operation due to this disjuncture between FOI in official discourse and in practice. Therefore, this section reflects on the operational dilemmas of an open and transparent government. These dilemmas are derived from the research that was performed on the information search process that is part of Woo-request processing.

First of all, it is important to reflect on the goals of Freedom of Information Acts, under which the Woo can be categorized. The goals of FOI are strongly associated with the concept of an open government and the promotion of democratic participation and oversight (Carter & Stratton, 2021). It is stated that making public information accessible is not a government favor but a citizen's right that enables them to control the government, exercise their fundamental rights, and create economic and cultural value (Tweede Kamer der Staten-Generaal, 2012). We conclude that the goal of citizens' rights of access to government information embedded in these laws is crucial in order *to monitor the government's work, allowing the public to discover and act on discrepancies* (Carter & Stratton, 2021). This raises the question of what information is required for citizens' ability to perform their democratic tasks.

As it is, the Woo states that citizens can request *"every written document or other set of recorded information that was drawn up or received by a public body, which is by its nature related to the public task of that body"* from Ministries of the Dutch government, except from those who apply to exemption grounds (art. 2.1. Wet open overheid). In the modern-day government, where more and more information is recorded and drawn up, this definition of "a document" is far broader than it might have been in the 1980s when the digitalization of the Dutch government had not yet taken place. Due to the capability of information technology to

register and store a broad variety of data (and documents), it might be time to narrow down this document definition. The Netherlands can take an example of countries such as Sweden, which excludes internal messaging from documents that can be requested, as well as memoranda, concepts, and presentations (Bruins Slot, 2022). Or maybe Germany, where the requestable documents are limited to information that will be permanently kept in the archive or information that becomes part of an official file (Bruins Slot, 2022). This more specific definition of documents can make the ocean of information that needs to be searched now a bit more shallow. Additionally, it might limit the information sources that need to be accessed as part of Woo-request handling.

To narrow down the document definition, it is required to have a specification of what information is needed by Woo-requestor to be able to monitor its government and act on discrepancies that might personally affect requestors. In finding this definition, the government and its citizens will most likely have to work together to find it and provide meaning to government transparency and openness. Something which was nicely phrased by Luscombe & Walby (2017):

> *"An equally valuable path to overcoming access challenges and accountability deficits will be for FOI users and archives staff to work together with an activist mentality, communicating to those in the live archive that they can, should, and ought to produce and retain records for the good of democracy."* (Luscombe & Walby, 2017, p. 382)

The interaction between citizens and their government is the true facilitator of an open and transparent government, instead of sending "the complete set" of information into a void. The government is regarded as the party with a more powerful position due to the information inequality between the parties and should therefore engage and facilitate the interaction. One way of starting such interaction is by the provision of actively published information. A practice that was recently started and is also mandated by the Woo's active publication component. This actively published information could prevent Woo-requests, as some information of interest might already become to a citizen, but also has a chance to enhance the requestor's prerequisite knowledge, leading to better-specified requests. It is important to understand that a Woo-request is often not the start of a requestor's search for information and that some frustration lies within its previous inability to locate or access that information.

As was found in this research, a requestor or citizen might be hesitant to engage in this interaction or might never be pleased with the information that is provided to them due to mere distrust of their government. The distrust that can come from citizens might be justified by the large number of scandals and crises the government of the Netherlands has found itself in lately. The distrust that results in a lack of cooperation is found to be a large dependency when aiming to achieve a good Woo-request ISP. If the requestor starts with distrust, and this distrust causes the requestor to refuse to cooperate, this can also limit the requestor itself as it impedes the Woo-request handling process. It might be difficult to please every single person, and it must be accepted that some requests are bound to exceed the legal term, potentially caused by incontrollable conditions such as a lack of the requestor's cooperation or an insatiable information need.

Finally, it was stated during the case study interviews, problem-centered expert interviews, and the focus group discussion that the existing splintered information landscape of the

government hinders the ISP that is to facilitate a complete search. Based upon that, a centralized archive that encases all information recorded by the government seems to be a suitable solution for the facilitation of a "complete" search. Nevertheless, the risks and the downsides associated with the operationalization of such a tool might not outweigh the benefits in terms of transparency and government openness. Large privacy and power issues arise from providing individual employees access to a broad range of information within an organization (Schwartz & Cook, 2002). The extent to which high-ranked officials are willing to provide access to information that can also consider their own emails and texts is a major influence on the extent to which the government can be open or transparent.

Lastly, the government has to deal with a large variety of matters, which might be highly interrelated. It is difficult to say where relevance stops since, in some cases, *everything is connected to everything*. Government policies rarely stand on their own, and with a bit of creativity, one might be able to link information to many more topics than considered at first. When one of the interviewees of the case study was asked: *How do you know when you have found everything?* They provided the following answer:

> *"You never know. Lesson one I ever have learned on search technology. If you haven't found something, there's no proof that it isn't there." [I1]*

Based upon the reflection presented in this section, it is concluded that, whilst the improvements mentioned in the previous section are likely to contribute to an improvement for the Woo-request ISP, the perfect Woo-request information search process does not and will not exist. Only a requestor can judge whether it has received all information needed based upon personally having seen all information and personally having executed the search. This situation will likely never arise and might not even benefit the requestor itself. Therefore, it is argued by this research that the best possible outcome of the Woo-request handling process is for a requestor to say that its information need was satisfied within the legal handling term. At the same time, it must be concluded that for some requestors, their information need might never be satisfied.

Chapter 8 - Conclusion

As this is the last chapter, a conclusion naturally follows based on the research that was performed. Section 8.1. first addresses the sub-research questions that were posed in this research and provides answers to these questions. Next, section 8.2. addresses and answers the main research question. Afterward, the scientific contributions (section 8.3.) and the societal contributions of this research are discussed (section 8.4.). Then, the limitations of this research are discussed in section 8.5., after which an overview of the directions for future research is provided in section 8.6. Lastly, the research's relevance to the CoSEM MSc program is substantiated in section 8.7.

8.1. Addressing the Sub-Research Questions

8.1.1. Sub-research Question 1

How is the existing information search process as part of Woo-request handling at the Ministries of the Dutch National Government executed?

The case study background literature, in combination with the case study interviews presented in Chapter 4, has shown that the Woo-request ISP can be divided into three phases. The answers that were provided by the multiple separate units of analysis that were part of the case study showed strong similarities. This similarity makes it likely that the identified Woo-request ISP process, based on this case study, is representative of other ministries of the Dutch government. The first phase encases that in which the request is *received,* and an *interpretation* is made by the handler of the request. This sometimes involves the consultation of the requestor for them to specify that request. Once an interpretation of the request is made, the next phase of the process is started, which concerns *locating the information*. Two different strategies are identified as part of this locating step. The first strategy is named the *organizational search strategy (OSS).* Initially, it involves the search for the personnel that is or was involved with the topic at hand, called the *content expert(s)*. These experts manually search their shared and personal disks, as well as their personal communication media, for information relevant to the request. The second strategy is named the *centralized search strategy (CSS),* which uses a search tool that searches multiple connected information sources based on metadata. Formulation of the search query used for the CSS involves the knowledge of the content expert to create a query that can locate the relevant information when entered into the search tool that retrieves information from the connected information sources. Then, the third and final phase takes place, which is the *evaluation of the information found*. Not all information found via the CSS is necessarily relevant due to the dependence on *metadata fit*. Therefore, this method still requires reading the information to judge the relevance of all search results and make a selection. For the OSS, the relevance of the information is already determined by the content expert in the information location process itself due to its knowledge of the content. After relevance is judged, the total set is examined for completeness once more by reading it. This completeness check is based upon references to missing documents within the information found or knowledge on government operations and related information that should have been created. If the set is found to be incomplete, the search is once more performed to locate the missing information. Once complete, the information set is handed over to the redacting process, which concludes the Woo-request ISP. It was finally observed that compared to

Marchionini's ISP model (1996), the Woo-request ISP encases much less iteration with respect to the definition and understanding of the problem based on search results.

8.1.2. Sub-research Question 2

What positive and negative influences shape the existing information search process as part of Woo-request handling at the Ministries of the Dutch National Government?

The case study background literature, in combination with the case study interviews presented in Chapter 4, show that the Woo-request ISP is influenced by multiple factors, which limit the established process goals of *speed, completeness (of information), and traceability (of the process).* The first influence is *the request itself*, as a request can be identified as easy or complex to process. The easy requests often specify a limited timeframe, a subject that is contained within one organization, and do not include communication-related information. The difficult request is vague, broadly defined, involves multiple organizations, and involves communication between parties. The latter also influences another stage within the process, *the request interpretation* phase, which was also found to be an influential factor. As part of the interpretation, the requestor is often required to participate in order to ensure that a search is performed towards fulfilling the requestor's information need. Yet, it is found that due to *distrust*, the requestor sometimes *does not cooperate*, influencing the interpretation stage and not allowing for a refinement of the request. Additionally, it could occur that whilst a requestor is cooperating, it is *not competent* to adequately phrase its information need. This will leave the request to be formulated as broad and vague, which might not be necessary to fulfill the requestor's information need. Next, *the search itself* was also found to be a possible limiting influence within the process concerning the *authorization* required to access information (sources). Often, the ones performing the search are not able to search or to see all information available, limiting the completeness of the information set delivered. This is partially caused by the fact that there are *multiple splintered information sources* in the Dutch government, already complicating the search, but which also requires separate authorization for them to be accessed and searched. Related to the information sources is the information production in terms of metadata, as the CSS depends on *a good metadata fit* for all relevant results to be found. Suppose the metadata that was applied does not suit the query that was formulated. In that case, information will not be found, or excessive irrelevant information might be found, making the metadata fit an influential aspect of the CSS. Furthermore, the determination of *the information set relevance* and completeness is found to be a complicated process, as it is not clear what information fulfills the information need of the requestor. There currently is no action in the process that checks this with the requestor. The notion of relevance is also strongly connected to *the completeness*, as all relevant information should currently be included in order for the information set to be complete. A summarization of the influences identified is presented in the list below:

1. The Scope of the Request
2. The Interpretation of the Request
3. The Metadata Quality and Fit
4. Insufficient Authorization/Access
5. Judgment of Information Relevance & Completeness
6. Requestor Cooperation (Trust)

8.1.3. Sub-research Question 3

What strategies can improve the existing information search process as part of Woo-request handling at the Ministries of the Dutch National Government?

Based upon the problem-centered expert interviews presented in Chapter 5, which were performed based upon the previously identified influences (SQ2), it was found that multiple possible strategies can contribute to an improvement of the Woo-request ISP. The first strategies are directed towards *improved search methods* that involve search tools that use full-text search in order to prevent metadata dependency. These search methods were said to allow for a more objective selection of information than the selection performed within the OSS. Parallel to this search method is the requirement of authorization for all information for it to be searched. Experts mentioned that a limited set of people should have access to all information to guarantee the completeness of the information delivered to requestors. Apart from the search methods, most strategies identified were based on giving the requestor some form of initial insight into the information related to their request. A strategy that was proposed is the provision of a search result register, with basic descriptions of the documents found, allowing the requestor to learn what information has been retrieved by the search and to themselves select what is relevant. Additionally, the confidential preview of government information was said to give a requestor insight into all information found without it being redacted, after which the requestor can ask for the information that is found to be relevant during this preview. Lastly, the *iterative delivery of information*, where information is delivered in waves followed by the specification of the request based upon said information, was found to be a strategy involving iteration based on knowledge. This was thought to stimulate the learning of the requestor, allowing it to gain more knowledge on what is relevant to their information need, more in line with Marchionini's ISP model (1996). As part of this iteration, *interaction* was found to be a crucial factor in establishing a requestor's trust and, with that, cooperation in the process. Without cooperation, interaction would not be possible. This interaction should be *substantive*, meaning that it is based upon the contents of information related to a request and should be conducted by *experienced and trained staff*. This staff ought to be honest and provide transparency on the process that is identified. It could even engage in more *informal contact*, offering forms of *customer service* as well to stimulate trust. Another form of trust would be the *handler's confidence*, potentially shaped by their high rank within the government or their knowledge of the information that is, and, more importantly, is not present within their organization's archives. The most important improvement strategies identified from the problem-centered expert interviews were categorized into three themes: *interaction between the requestor and handler, iteration that enhances the requestor's knowledge to facilitate specification, and the applied search methodology.*

8.1.4. Sub-research Question 4

What are the Woo-requestor's considerations on the envisioned strategies for Woo-request information search process improvement at the Ministries of the Dutch National Government?

The last sub-research question was answered via the focus-group discussion methodology, presented in Chapter 6. Throughout the focus group discussion, the notions of interaction, iteration, and search methodology, which were found by answering the previous research question (SQ3), were discussed by a select group of Woo-requestors. One of the most important

observations made throughout the focus group discussion is that the participants approached the process with a strong feeling of distrust towards the handlers of their request. Most participants felt optimistic about the confidential preview of government information as a form of *iteration*, as this gives them control over the search process and allows them to determine what is and is not relevant. *Increased interaction* between the requestor and handler ought to be a plausible improvement, with the right preconditions of the substantive conversation with the *content expert* and *search expert* guided by the *authorized handler*. The experts present during these interactions can facilitate insight into the search process, as well as for the requestor to gain initial knowledge on the topic at an early stage of the request processing. This insight into the search process that provides control and the provided knowledge throughout the interaction shows parallels with the positive aspects of the confidential preview. Lastly, *completeness* was found to be of great importance, as the search method would need to guarantee all information is searched through, no matter how that goal is achieved. In the existing information landscape of the Dutch government, this would require the implementation of *both the OSS and the CSS*, but it was proposed that access to all information should be centralized to facilitate true completeness. Therefore, the main conclusion of the focus group discussion was that improvements as part of the Woo-request process should allow requestors to *gain insight into and control over the search process*, allowing them to *determine relevance themselves* and, lastly, to *guarantee completeness* by searching all information.

Since these suggestions only represent the Woo-requestors perspective, Chapter 6 also provides a reflection on the suggested improvements from a government perspective. The biggest concern regarding the proposed alterations that stem from the focus group discussion comes from the proposition of a centrally accessible archive. This concept would mean that individuals within ministries are to obtain great power due to their broad access, which is something that is likely to face resistance from all layers within the government. The other suggestions posed by the participants were found to be labor intensive, requiring large capacity in terms of processing from civil servants that are not primarily concerned with the processing of Woo-request. Both factors indicate that there is a likely limit to the extent to which a government can be open and transparent based on the effects the operationalization of these goals might have on competing values.

8.2. Addressing the Main Research Question

Throughout this research, an understanding was gained of the Woo-request ISP process and the influences that shape the process. This identification and reflection on the process allowed for the creation of strategies for improvement that were drafted by experts and finally evaluated by a focus group of Woo-requester. In doing so, an answer was provided to the sub-research questions, which allowed this research to answer the main research question:

What information search process strategies can improve the Woo-request handling process of Ministries of the Dutch National Government for Woo-requestors?

Based on the literature review that was performed at the beginning of this research, it was found that, in academic literature, the information search process is described as highly iterative. Yet, it was found that the Woo-request ISP *hardly portrays any iterative steps* in relation to an improved definition and understanding of the information problem. At the same time, it was found that a requestor, due to a lack of *prerequisite knowledge*, might not be able to adequately specify their request, leading to *broad and vaguely defined requests*. These

requests then impact the information search process, as it requires a ministry to deliver many more documents than might necessarily be related to the requestor's *information need*. In order to facilitate more iteration in the process that allows the handler and requestor to specify a request, *increased informative interaction* on the search process and results is proposed between the government and requestor. This was found to be likely to *increase the trust and cooperation of the requestor*, as it gives the requestor some *control over the search* whilst at the same time being provided with *initial information* on their request. The information allows them to reflect upon their information need and possibly specify it. In this interaction, there is a *large dependence on the requestor's cooperation*, yet, article 4.1. Woo provides a means to end the processing of the request if the requestor is unwilling to cooperate in said interaction. However, due to the existing distrust of some citizens towards their government, rejection of information requests might cause upheaval and is not a simple choice to be made.

An additional finding of this research is that the Woo-request ISP is often dependent on *content experts* to locate information from various sources to which they might not always have *access*. The dependence on the content expert *takes up time* from civil servants who might not have sufficient time to perform the search or might not have *experience* in searching for information, which negatively influences the outcome and speed of the information search. Therefore, it is suggested that the information that is applicable to Woo-request is made centrally accessible via an integrated search tool. To this tool are linked: the DMS of the organization, as well as (local) drives, are linked, including mailboxes. The authorization of access to all this information should not be taken lightly and is bound to face *resistance from within the government*. The Dutch government will have to consider whether that is how far they are willing to go to facilitate an open and transparent government. Suppose they opt for a centrally accessible archive. In that case, a fitting authorization regime will need to be designed that ensures compliance with privacy regulations and limits the potential infringement in the civil servants' day-to-day work. Additionally, it must be noted that the *"document definition"* used by the Dutch government is extensive. This broad definition encases that if the government is to adhere to its own laws, this information needs to be searchable by Woo-request handlers.

Furthermore, the search via this system should be executed by *experienced and trained search and information experts* within the organization (ministry). Searching via this tool provides *better traceability* of the search and *more objectiveness* concerning the selection of information. Additionally, this tool can facilitate a redacted search result register to the requestor, from which it can select a limited amount of documents to be provided. It is recommended that this search tool operates based on metadata to be able to search non-readable information objects as well. This metadata search relies heavily on the *quality and fit of metadata* adhered to information, which brings up the final recommendation of *automated metadata generation*.

8.3. Scientific Contributions

The literature review conducted in Chapter 3 shows that the research field of FOI-requests is still active, with a recent publication of Carter & Stratton in 2021. Yet, FOI is typically analyzed as a law and legal discourse, causing academic literature to lack in-depth knowledge on the processing of FOI-requests and the operationalization's effect on its outcomes (Luscombe & Walby, 2017). The case study that was performed as part of this research has given an overview of the Woo-request ISP, which also contributes to knowledge of the FOI-request ISP since the Woo is a form of FOI Act. In relation to the FOI research field, it can be found that the objectivity of the information provided through this process can be influenced by the

boundary conditions of, in this case, the information search process. Therefore, this research was able to reflect on the influence and limitations that the operationalization of FOI has on the higher-level goals of an open and transparent government which it aims to facilitate.

While ISP modeling is a relatively old research field, with the models of Kuhlthau and Marchionini ranging back to 1991 and 1996, no literature was found that elaborated on a search performed by a third party. This research aimed to analyze and improve the information search process executed by the government to satisfy the information need of the citizen. In this frame, the government acts as a third party who executes the search for the requestor with an information need. The framework created to analyze said search processes performed by third parties can enable future researchers to analyze information search processes that do not fit the ISP as described in previous academic literature. Lastly, this research highlights the importance of the iterative nature of the information search process, based upon the importance of iteration that was also found in the relatively new "third-party searching mode."

8.4. Societal Contributions

Freedom of Information (FOI) law, such as the Wet open overheid, is crucial for democratic oversight, promoting an open and democratic society (Carter & Stratton, 2021). A citizen's right to request government information supports their decision-making based upon the fact that it makes government actions visible, therefore allowing them to hold the government accountable for their actions (Carter & Stratton, 2021; Raad van State, 2020). In the existing situation, the Woo-request processing is not performed in a timely manner, hindering citizens' access to government information. This research, which aims to improve the Woo-request process by improving the ISP that is part of it, stimulates easier access to government information for citizens. Therefore it contributes to a more open and transparent government.

Additionally, this research could help the government itself as well, as it is, to my knowledge, the first research that provides a more in-depth analysis of the information search process employed within the Dutch National Government. The long processing times of Woo-requests are sometimes framed as a symptom of the government's bad information management. Whilst this research found that this does influence the process, it must be noted that the problems observed in the process are more complex. Amongst these problems is the distrust of the citizens who send these requests, which was observed during the focus group discussion. Therefore, the inclusion of citizens within this research could be a leading example for government improvement plans, as it is the citizen for which the customer provides these "services."

Lastly, this research can serve as a critical reflection on the commitment required from a government and its civil servants to facilitate an open and transparent government. While higher-level goals of openness and transparency are essential for a well-functioning democracy, a balance must be found between these goals and the potential adverse effects that its operationalization might have on the many other tasks and values of the Dutch National Government.

8.5. Research Limitations

One of the choices that were made as part of the scope of this research is that a focus is put on the improvement of the information search process, which is part of Woo-request handling. Yet, there is no clear indication that this is the phase that causes most of the delay in the

process. Therefore, increased monitoring of the process is proposed in section 8.6. in order to be able to determine the process steps that generally cause most of the delay.

Another limitation stems from the embedded single case study approach that was taken on. The selection of units of analysis was substantiated based on their average Woo-request handling term in order for the selected ministries to represent the larger population. However, one cannot be sure that the selected ministries are indeed a representative sample of the population and that the identified Woo-request ISP and influences are applicable to all Ministries of the Dutch National Government. Whilst the methods of problem-centered expert interviews and focus group discussions did provide the possibility for a reflection on the identified process, the representativeness of the case is still not guaranteed. This possible lack of representation could also be of influence the focus group participants' representativeness for the "average Woo-requestor." It was already noted throughout the discussion that investigative journalists are not an accurate representation of all Woo-requestors since the Woo-request also serves many "normal" citizens. The reflections provided in this discussion should therefore be critically regarded with respect to the capacity and motivations of the non-professional Woo-requestor, as suggested in the directions for future research.

The general approach applied in this study is of the qualitative kind, as all data is collected via interviews or a discussion setting. Whilst this qualitative approach has allowed this research to go more into depth on the issues at hand, the processing of said data is a time-consuming matter. Additionally, the data obtained from the interviews and discussion rely heavily on the participants, which could provide biased, unrealistic, or simply untrue answers. Especially for the case study, it is presumable that the interviewees describe the process as it should be but not necessarily as it is. This dependence affects the reliability of the data coming from the data collection methods. Moving on to the data analysis of the transcripts, derived from all interview methods, this type of qualitative analysis relies on the researcher's interpretation of the data, which is prone to bias. This was mediated by reflecting on the case study results with experts and reflecting on strategies with the focus group discussion, yet, it cannot be assured that no bias is present within the results of this study. For example, the improvement-oriented approach of this study could also mean that possible interesting aspects of the data found are overlooked if they were not ought to be important for improvement. The latter was mediated by the involvement of critical reflection of peers and the supervisors involved in this research.

Lastly, the high level of complexity provides a large challenge for the researcher in order to keep an overview of all data accumulated and the meaning of this data. The researcher's capacity to cope with this level of complexity, therefore, influences the eventual quality of this study and the recommendations for improvement of the Woo-request ISP.

8.6. Directions for Future Research

Based on the findings that stem from this research, the following directions for future (academic) research are identified. As part of the knowledge gaps that were identified, it was noted that there is limited research on the operationalization of FOI-request processes and the influence of these operations on the outcomes (Carter & Stratton, 2021). Therefore, it is recommended that the effect of the operationalization of FOI is further explored in relation to its effects on FOI outcomes. Another interesting research direction that was brought up in the discussion of this research is to research the effect that information provided to citizens has on citizens' trust in their government. Additionally, this can provide guidelines for the operationalization that is able to facilitate said trust. Lastly, it is found important that research is performed on what information types are required to establish a government that is sufficiently open and transparent from a citizen's perspective.

From a practical perspective, this research has clarified some intricacies of the Woo-request handling process, yet, the information search process scope applied in this research is just part of the process as a whole. Therefore, it is urged that research is performed on the redacting process as well as the approval practices that are part of the process. Once the entire process of the Woo-request is mapped, this allows for monitoring of the process, tracking the performance in terms of time for each of these identified steps. This brings continuous monitoring as the second suggestion for future research. Without knowing what parts of the process cause the biggest delays, one will not be able to significantly reduce the process from an average of 161 days to 28 days, tackling the biggest pains first. The suggested alterations to the process have not yet been tested in terms of their feasibility and effectiveness. Therefore I suggest that the improvements for the Woo-request ISP are tested in pilot settings, for which the previously mentioned monitoring is essential, as a measure of success. The overall monitoring of the process should not just be focused on the number of days but should also include the customer satisfaction of the citizen who has submitted their requests.

8.7. Relevance to the Complex Systems Engineering and Management MSc Program

This thesis is conducted as the final part of the Complex Systems Engineering and Management (CoSEM) program, therefore, it is important that it reflects the lessons that were learned throughout it and shows that these learnings were applied in the research. CoSEM teaches students how to design complex socio-technical settings within their institutional setting. The Woo-request information search process that is researched in this thesis can be considered a complex socio-technical system. Within this system, multiple stakeholders operate with varying values and goals, whilst all are guided by the institutional setting of the Dutch Government as well as the Woo as a law. The values of government transparency and openness, as well as citizen trust, are to be provided by the process which is analyzed in this research. Based upon this analysis, suggestions for improvement are provided. These consider how information systems should be used and, what's more, how the human interaction between this information and communication technology should be designed in order to facilitate an improved process. The research design that was created involves qualitative research involving a case study, problem-centered expert interviews, as well as a focus group discussion, which are exemplary methods for the CoSEM studies. This design was created in order to systematically analyze the existing process whilst including outsider views from experts as well as the Woo-requestor target group. Showing that the multi-actor perspective was integrated within the research that

is designed, also assessing the impact of the improvements for one of the stakeholders. Being able to analyze and oversee the complexity present in the Woo-request ISP proves to me that I was able to apply the lessons learned in my CoSEM master's program within this research.

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Appendix A
Literature Review Results

This appendix provides an overview of the literature that was included in the literature review presented in Chapter 3. Appendix A1 first offers the literature from search theme 1, related to the Information Search Process. Appendix A2 portrays the literature included regarding FOI-requests.

A1 – Results from Search Theme 1

Table 17 – Search Results from search query 1

Authors	Title	Year	Source	Key Terms
Savolainen, Reijo	Elaborating the conceptual space of information-seeking phenomena	2016	Scopus	-
Subasic, Anthony Perrin, Estelle Danesi, Frederic	Towards a computer-based information retrieval systems process	2013	Scopus	Computer human interaction; Information retrieval; Information visualization; Knowledge; Methodology; Search engines; Trade
Theng, Yin Leng Sin, Sei Ching Joanna	Analysing the effects of individual characteristics and self-efficacy on users' preferences for system features in relevance judgment	2012	Scopus	-
Herbst, Andrea Vom Brocke, Jan	Information seeking strategies in organizational information architecture	2012	Scopus	Information-seeking strategies; document management; information-seeking constraints; organizational file server
Dinet, J. Chevalier, A. Tricot, A.	Information search activity: An overview	2012	Scopus	Information searching; Models; Cognitive and affective factor
Kirikova, Marite Finke, Anita Grundspenkis, Janis	What is CIM: An information system perspective	2010	Scopus	-
Alter, Steven	Defining information systems as work systems: Implications for the IS field	2008	Backward snowballing from Kirikova et al. (2010)	Definition of information system; IS discipline; IT antifact;

				Information system; Work system
Bates, Marcia J.	Toward an integrated model of information seeking and searching	2002	Backward snowballing from Savolainen (2016)	-
Kuhlthau, Carol Collier	The role of experience in the information search process of an early career information worker: Perceptions of uncertainty, complexity, construction, and sources	1999	Scopus	-
Cole, Charles Cantero, Pablo Sauvé, Diane	Intelligent information retrieval: Diagnosing information need. Part II. Uncertainty expansion in a prototype of a diagnostic IR tool	1998	Scopus	-
Bailey, William Tendulkar, Juee Naryanam, S Daley, Raymond Wilson, Karen Pliske, Daniel	Modeling Information Seeking in a Corporate Environment	1998	Scopus	-
Marchionini, Gary	Information Seeking in Electronic Environments	1996	Backward snowballing from Bailey et al. (1998)	-
Kuhlthau, Carol Collier	Inside the search process: Information seeking from the user's perspective	1991	Scopus	-
Marchionini, Gary Shneiderman, Ben	Finding Facts vs. Browsing Knowledge in Hypertext Systems	1988	Backward Snowballing from Bailey et al. (1998)	-

A2 – Results from Search Theme 2

Table 18 – Search Results from search query 2

Authors	Title	Year	Source	Key Terms
Carter, Daniel Stratton, Caroline	Information Systems as Mediators of Freedom of Information Requests	2021	Scopus	Freedom of information; Information systems; Open government data
Luscombe, Alex Walby, Kevin	Theorizing freedom of information: The live archive, obfuscation, and actor-network theory	2017	Backward snowballing from Carter et al. (2021)	Access to information; Actor-network theory; Freedom of information; Live archive; Public records; Secrecy; Transparency
Schwartz, Joan M. Cook, Terry	Archives, records, and power: The making of modern memory	2002	Backward snowballing from Luscombe & Walby (2017)	Archival theory; Archives and power relationships; Identity formation; Representation and reality; Social memory

Appendix B
Embedded Single Case Study Interview Questions

This Appendix portrays the interview questions that were posed during semi-structured case interviews that are part of the embedded single case study. These interview questions are based on the ISP analysis framework that is presented in section 3.4.

- **Introduction of the Interviewee**
  1. At what organization do you work?
  2. How would you describe your function within the organization?
  3. What roles do you fulfill within the process of handling Woo-requests?
  4. How long have you had experience with the information search and selection related tasks you perform within your function?
- **General Problem Identification**
  5. What takes up the most time during the information search and selection stage of the Woo-request handling process?
- **Search Task Definition (Brand-Gruwel)**
  6. In what way is a Woo-request handed over to you?
  7. How do you define what information needs to be searched and selected?
  8. What characteristics of a Woo-request make a request "easy" to process?
  9. What characteristics of a Woo-request make a request "difficult" to process?
- **Information Seeking Strategies (Brand-Gruwel)**
  10. How do you determine where information can be found?
  11. In what places do you search for information, and how do you do that?
  12. Do you have access to all information? And in the scenario where you do not have access, how can you still obtain access to that information?
  13. Who do you cooperate with within the information search and selection process that is part of Woo-request handling?
  14. What are the difficulties that you experience during the information search and selection process that is part of Woo-request handling?
- **Extraction of Relevant Information (Brand-Gruwel)**
  15. How do you determine whether the information is relevant to the Woo-requestor?
      a. *If you think you have found relevant information, do you discuss this with the Woo-requestor?*
      b. *If information is of inferior quality (e.g. unreadable), do you still present the Woo-requestor with that information?*
  16. When do you know whether you have found all information related to the Woo-request and that the information search and selection stage is finalized?
- **Closing**
  17. How can the existing information search and selection process that is part of Woo-request handling be improved?

Appendix C
Problem-Centered Expert Interview Questions

This Appendix portrays the interview questions that were posed during the problem-centered expert interviews. The questions were created based on the Woo-request ISP influences that were identified by the embedded single case study, portrayed in section 4.5.2.

- **Introduction of the Interviewee**
  1. At what ministry/organization are you employed?
  2. How would you describe your position within the organization?
  3. How do you describe your expertise regarding the passive disclosure of government information in the context of the Wob/Woo?
- **Scope of the Request**
  4. How can the size or scope of a Woo request be limited without compromising the requestor's information needs?
  5. How can Woo-request abuse be prevented?
- **Interpretation of the Request**
  6. How can a request be interpreted more quickly in line with the requestor's information need?
  7. How can one ensure that a request is more in line with the information that is actually present within the information systems of the government?
  8. How can the relevance of the information found be ensured or tested in the search process itself?
- **Locating and Accessing Information**
  9. How can one determine at an early stage which sources of information should be consulted based on the request?
  10. How can one solve the problems arising from insufficient access to information sources prevent or happen?
  11. How can one overcome the problems caused by incorrect or imperfect metadata/tags/indexes? (e.g. not being able to find, finding irrelevant things)
- **Trust & Cooperation of the Applicant**
  12. How can the applicant's trust and cooperation be strengthened during the processing of his application?

Appendix D
Focus Group Discussion Mentimeter Output

This appendix shows the output of the Mentimeter survey that was provided by the focus group participants. It involves both the closed question/statement answers and the considerations that were provided by the participants related to their closed statement/question answers.

- Appendix D1 portrays the output of the Mentimeter survey regarding the interaction statement.
- Appendix D2 portrays the output of the Mentimeter survey regarding the iteration statement.
- Appendix D3 portrays the output of the Mentimeter survey regarding the search method question.

D1 – Mentimeter Output of Interaction Statement

Statement: More interaction between the requestor and request-handler contributes to an improvement in the processing of my Woo-request.

Table 19 – Mentimeter data regarding interaction

Closed Answer	***Agree***	***Disagree***	***No opinion***
	4	***2***	***1***
Considerations	I agree if the conversation is really about the content of the request. The conversations are often only used to talk about phasing the process or containment of request's scope, without providing insight into the results of the initial search or some inventory.	We can talk about more interaction, but if the processor fails to act upon what is discussed in that interaction, it makes little sense to do so. Deadlines are, as it is, not met and promises are often not kept. One is making up much more documents as a result of the search than are actually there in order to limit the scope of a request.	The preface to this question is more important, namely, it is primarily important that there is only one practitioner and therefore not a constantly changing one. Furthermore, that handler should be accessible and made known up front, so with a name [and not e.g. Woo-desk] and there needs to be a direct telephone number [these are ordinary Awb requirements]. Lastly it should be a person with the right authorization because otherwise all contacts with legal consequences such as e.g. limitation of the request or partial decisions are considered to be "floating" in the eyes of the Awb.

	This provides a better explanation of request, as well as additional insight into the search, but above all allows for having a bigger influence on processing of my request.	The person you are in contact with has too little influence on the speed or proceedings of the request handling. Agreements are not fulfilled.	
	More interaction can be helpful in clarifying both the scope and the limitation, if it is accepted by the applicant.		
	Allows you to narrow/specify/prioritize your request. It provides a better insight into when a final decision on the request will be made. Lastly it facilitates consultation about any embargo or allows one to find out whether there are other applicants.		

D2 – Mentimeter Output of Iteration Statement

Statement: I favor a more iterative approach where information is delivered in parts for further specification of my request.

Table 20 – Mentimeter data regarding iteration

Statement	***Agree***	***Disagree***	***No opinion***
	0	***5***	***2***
Considerations		Distributed provision is unattractive for a number of reasons: multiple partial decisions against which you have to appeal, chunks of information that do not paint the whole picture, risk that certain information will already become public while you are working on a story.	Highly dependent on the nature of the request. The more precise the request, the more: no consultation please, just deliver.
		That will be an endless process. That is already a fundamental objection. Only possible if a full inventory is started quickly Based on experience so far low expectations.	This is very situation dependent, therefore "no opinion"
		Phasing is often unnecessary. Only done to give administrative bodies more time.	
		This invites to extend the process. Not a fan of it.	
		This question assumes that working to e.g. specification, or phasing, or curtailing could honestly. Do you look at the implementation plans such as e.g. are discussed in the IWO, this is not the case [see e.g. unilaterally imposing restrictions or being able to resort to exclusion from treatment without good substantiation]. As soon as the processing of Woo requests is done with integrity and comes close to the Woo and Awb, I can talk about this question.	

D3 – Mentimeter Output of Search Method Question

Question: Which search strategy has your preference as a requestor?

Table 21 – Mentimeter data regarding search method

Statement	***Search based upon Organization***	***Search with a centralized search tool (Metadata based)***	***A combination of these methods***
	0	***1***	***6***
Considerations		More objective, better to check.	Not a very substantiated opinion on this. A combination of both search systems seems to me the most optimal option, because it allows one to search both in metadata and based upon the knowledge of individuals within the organization. Yet again, the latter is no search specialist, so this remains a difficult question.
			The basis must be a good search system, but I think it will always have to be supplemented with knowledgeable content experts.
			A combination is needed.
			Both search strategies contribute to finding documents [therefore they should both be used.
			Simple: in the first instance, as much as possible must be found [in any way possible].
			This question also has a pre-requisite: If the archiving of an organ complies with the Archives Act, then there are one, at most a few, centrally accessible search systems, e.g. DMS in which all docs including all emails are addressable [GGTS] and searchable [free text and possibilities for strings and queries]. If that is the case, then there is automatically a question of searching

			along both options posed in the questions